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SITE ASSESSMENT REPORT FOR SITE 289 WITH TRANSMITTAL LETTER NS MAYPORT FL
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July 31, 2013

Project Number 112G03576

Naval Facilities Engineering Command, Southeast
ATTN: Mr. Dana Hayworth (OPC 6)
Remedial Project Manager
135 Ajax Street North, Building 135
Naval Air Station Jacksonville
Jacksonville, FL 32212-0030

Reference: CLEAN Contract Number N62470-08-D-1001
Contract Tack Order Number JM60

Subject: Final Site Assessment Report, Revision 2, Site 289
Naval Station Mayport, Jacksonville, Florida

Dear Mr. Hayworth:

Tetra Tech is pleased to submit the final Site Assessment Report, Revision 2, for Site 289 at Naval Station (NAVSTA) Mayport, Jacksonville, Florida. This report was prepared for the United States Navy, Naval Facilities Engineering Command, Southeast (NAVFAC SE) for the Comprehensive Long-term Environmental Action Navy Contract Number N62470-08-D-1001 under Contract Task Order (CTO) JM60. Members of the NAVSTA Mayport Installation Restoration Tier I Partnering Team reviewed the draft-final report with no comments.

If you have any questions with regard to this submittal, please feel free to contact me at (904) 730-4669, extension 226, or via e-mail at David.Siefken@TetraTech.com.

Sincerely,

David R. Siefken
Project Manager

DRS/lc

Enclosure

c: John Winters, FDEP (electronic only)
Paul Malewicki, NAVSTA Mayport (hardcopy, CD)
RDM. Tetra Tech (unbound copy, CD)
NAVSTA Mayport Administrative Record (electronic only)
CTO JM60 Project File

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Site Assessment Report
for
Site 289

Naval Station Mayport
Jacksonville, Florida

Naval Facilities Engineering Command Southeast

Contract Number N62470-08-D-1001
Contract Task Order JM60

July 2013

SITE ASSESSMENT REPORT
FOR
SITE 289

NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Naval Facilities Engineering Command Southeast
NAS Jacksonville Building 103
Jacksonville, Florida 32212

Submitted by:
Tetra Tech
234 Mall Boulevard, Suite 260
King of Prussia, Pennsylvania 19406

CONTRACT NUMBER N62470-08-D-1001
CONTRACT TASK ORDER JM60

JULY 2013

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Naval Facilities Engineering Command
NAVFAC SOUTHEAST

The information contained is based on the geologic investigation and associated information detailed in the text and appended to this report. If conditions are determined to exist that differ from those described, the undersigned geologist should be notified to evaluate the effects of any additional information on the information described in this report. This Site Assessment Report was developed for Site 289 at the Naval Station Mayport, Jacksonville, Florida and should not be construed to apply to any other site.

July 31, 2013
Richard D. McCann, P.G.
Florida License Number PG-2358

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ACRONYMS

bls	below land surface
°C	degree Celsius
CTO	Contract Task Order
DPT	direct-push technology
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Residual Petroleum Organic
GAG	Gasoline Analytical Group
GCTL	Groundwater Cleanup Target Level
KAG	Kerosene Analytical Group
mgd	million gallon per day
mg/kg	milligram per kilogram
msl	mean sea level
MTBE	methyl tertiary-butyl ether
NAVFAC SE	Naval Facilities Engineering Command Southeast
NAVSTA	Naval Station
NTU	Nephelometric turbidity unit
OVA	organic vapor analyzer
PAH	polynuclear aromatic hydrocarbon
PVC	polyvinyl chloride
SA	site assessment
SAR	Site Assessment Report
SCTL	Soil Cleanup Target Level
SOP	Standard Operating Procedure
TOC	top-of-casing
TRPH	total recoverable petroleum hydrocarbons
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VOC	volatile organic compound

EXECUTIVE SUMMARY

Tetra Tech, Inc. has completed a site assessment (SA) at Site 289, Naval Station (NAVSTA) Mayport, Jacksonville, Florida in accordance with the requirements of Chapter 62-770, Florida Administrative Code (F.A.C.). This Site Assessment Report is being submitted to the Florida Department of Environmental Protection for approval.

To complete this SA, Tetra Tech performed the following:

- Reviewed available United States Navy documents to
  - Identify potential sources and receptors for petroleum hydrocarbons in the vicinity.
  - Identify private and municipal potable wells within a 1-mile radius of the site.
  - Locate nearby surface water bodies.
  - Evaluate surface hydrology and drainage.

- Performed a soil vapor survey in the unsaturated zone to delineate areas of excessively contaminated soil, if present.

- Advanced 19 soil borings on-site using direct-push technology from which soil samples were collected for analyses of contaminants of concern by a fixed-base laboratory.

- Installed four temporary piezometers using direct-push technology to evaluate the general direction of groundwater flow across the site.

- Installed one deep and four shallow permanent monitoring wells and collected groundwater samples for laboratory analyses to evaluate groundwater quality in the area of the former underground storage tank (UST).

- Installed two temporary monitoring wells and collected groundwater samples for laboratory analyses to evaluate groundwater quality in the area of the stormwater ditch south of the building that reportedly received a surface diesel fuel spill.

- Referenced and obtained appropriate aquifer data from the United States Geological Survey and National Resource Conservation Service to calculate aquifer characteristics at NAVSTA Mayport.

Tetra Tech's investigation was focused on the former UST located immediately west of Building 289 and the stormwater ditch located south of the building, which is commercial property that is the location of the NAVSTA Mayport Housing Center. According to previous environmental reports (IAP-HILL, 2010), in

March 2010 approximately 40 gallons of diesel fuel leaked out of the fill port of an abandoned UST at Building 289, reportedly caused by rain water filling the tank. According to a site sketch drawing, the release flowed first in a southerly direction across the asphalt parking lot into a storm drain and then east toward the stormwater ditch that extends east to west along the southern property boundary. Approximately 300 gallons of diesel fuel and 200 gallons of an oil/water mixture was pumped out of the tank. The parking lot was scrubbed with absorbent material, and 30 cubic yards of contaminated soil was removed. All waste was disposed of at the on-site facility. Soil samples were collected to determine if the soil near the tank was hazardous by characteristic analyses. Subsequently, the area was backfilled with the empty tank in place.

According to previous environmental reports (Martin Environmental Solutions, Inc., 2011), in February 2011, one estimated 500-gallon capacity non-regulated UST was removed and closure assessment activities were performed. The UST was located in the asphalt-paved parking area on the western side of Building 289 and had previously stored heating oil used to heat the building. The tank had been reportedly taken out of service approximately 15 years ago (based on the 2011 report). The tank and associated piping were constructed of bare steel with single-wall construction. The tank was empty except for a small amount (approximately 2-inches) of residual liquid, which, according to the closure report, appeared to be primarily water with a strong petroleum odor. The date of installation of the tank was not determined. Upon removal, the UST was noted as being rusted and in generally poor condition. Associated piping was removed to the extent possible, but fuel piping extended beneath the on-site building and could not be completely removed. This piping was cut adjacent to the wall of the building, evacuated, and permanently sealed. Only soils required to facilitate the tank removal activities were excavated.

Sampling results during the closure assessment, which included organic vapor analyzer soil screening and confirmatory soil and groundwater sample collection, revealed indications of the presence of soil contamination at the site. Soil samples collected during the closure assessment showed total recoverable petroleum hydrocarbons (TRPH) in excess of Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs) for residential direct exposure scenarios and potential leachability to groundwater. All groundwater samples showed concentrations less than the applicable FDEP Groundwater Cleanup Target Levels (GCTLs).

The results of the subsequent SA revealed the following:

- Soil samples collected adjacent to the former UST location showed concentrations exceeding the FDEP SCTLs for TRPH. However, shallow and deep interval groundwater samples collected from permanently installed monitoring wells in the same approximate area as the impacted soil samples contained TRPH, but at concentrations less than the FDEP GCTL.

- Soil samples collected in the stormwater ditch trending north to south along the eastern property boundary showed no contaminants of concern exceeding FDEP SCTLs.

- Groundwater samples collected from two temporary piezometers and five permanent monitoring wells showed no contaminants of concern exceeding FDEP GCTLs.

Based on current soil and groundwater quality results and the action levels set in Chapter 62-777, F.A.C., Tetra Tech recommends discussing options with the Navy to prepare a Remedial Action Plan to address soil contamination in the area of the former heating oil UST at this site.

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

Tetra Tech, Inc. performed a site assessment (SA) at Site 289, Naval Station (NAVSTA) Mayport, Jacksonville, Florida, for the Naval Facilities Engineering Command Southeast (NAVFAC SE) under Contract Task Order (CTO) JM60 of the Comprehensive Long-term Environmental Action Navy Contract Number N62470-08-D-1001. The data collected during the investigation were used to prepare a Site Assessment Report (SAR). Information from the field investigation has been assimilated into this SAR to provide a characterization of site conditions from which to base future courses of action.

The purpose of SA was to determine if subsurface soils and groundwater at Site 289 had been impacted by a former heating oil underground storage tank (UST) and an accidental diesel fuel release that migrated on the asphalt surface to a storm drain and ultimately to the adjacent stormwater ditch. This investigation was initiated because sampling results from previous environmental investigations indicated residual impacts to soil at this site. A summary of the site investigation history is provided in Section 1.8.

Based on information provided by NAVSTA Mayport personnel, a diesel fuel release and removal of an abandoned heating oil UST occurred at this site in 2010 and 2011, respectively. Laboratory analytical results following previous investigations indicated impacts to soils in the unsaturated zone – determined to be from land surface to approximately 6 feet below land surface (bls). The scope of the investigation included the following:

- Determine the presence or absence and vertical and horizontal extent of any soil impacts. Based on information provided by NAVSTA Mayport personnel, a diesel fuel release occurred in 2010 and an abandoned heating oil UST was removed in 2011. Residual soil contamination was documented in the area of the former UST.

- Determine the presence/absence and extent of groundwater impacts (horizontal and vertical) through the installation of temporary (direct-push technology [DPT]) and permanent monitoring wells.

- Evaluate soil and groundwater quality through fixed-base laboratory analyses of soil and groundwater samples.

- Compile a SAR complete with recommendations for future courses of action, if needed.

A copy of the Site Assessment Summary Sheet for Site 289 is presented in Appendix A.

1.2 FACILITY AND SITE LOCATION

NAVSTA Mayport is located within the corporate limits of the City of Jacksonville, Duval County, Florida and is approximately 12 miles to the east-northeast of downtown Jacksonville and adjacent to the Village of Mayport. The Station complex is located on the northern end of a peninsula bounded by the Atlantic Ocean to the east and the St. Johns River to the north and west. NAVSTA Mayport occupies the entire northern part of the peninsula except for the Village of Mayport, which is located to the west between the Station and the St. Johns River.

The area of investigation at NAVSTA Mayport is adjacent to the west of Building 289. The focus of the investigation was a former 500-gallon UST that had previously stored heating oil and from which an accidental release of diesel fuel was documented. The investigation area is a relatively flat area of the Station located northwest of the intersection of Mayport Road and Moale Avenue adjacent to the golf course and south of the Turning Basin. Figure 1-1 shows the location of the site on the NAVSTA Mayport facility.

1.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

Northeastern Florida is underlain by two main aquifer systems: the surficial aquifer system and the Floridan aquifer system. The surficial aquifer system near NAVSTA Mayport includes sediments of the Upper Hawthorn Group, upper Miocene and Pliocene deposits, and Pleistocene and Holocene deposits (United States Department of Agriculture [USDA], 1978). These undifferentiated surficial deposits extend from land surface to the top of the Hawthorn Group about 50 feet bls (United States Geological Survey [USGS], 1992).

The surficial aquifer system consists of fine-grained sands near the surface interspersed with thin (less than 1 foot) clay lenses, and generally grades to a mixture of sand and coarse shell fragments from 30 to 50 feet bls. The base of the surficial aquifer system is its contact with the underlying intermediate confining unit, which is a sequence of marine clays and discontinuous limestone stringers (Spechler, 1994).

The Floridan aquifer system is the principal source of groundwater for public drinking water in most of northeastern Florida. In the area of investigation, the system is comprised of (from youngest to oldest) the Ocala Formation, the Avon Park Formation, and the Oldsmar Limestone. The Hawthorn Group, a confining unit between the surficial aquifer system and Floridan aquifer system, unconformably overlies the Floridan aquifer (USDA, 1978).

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DRAWN BY S. STROZ	DATE 08/26/11	SITE LOCATION MAP BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER
CHECKED BY T. DECK	DATE 08/26/11		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 1-1 REV 0

1.4 POTABLE WATER WELL SURVEY

The potable water supply information presented in this report was obtained from the Florida Department of Health on-line database system (http://www.doh.state.fl.us/environment/water/petroleum/saindex.html). Potable well information is summarized on Table 1-1. The locations of the potable wells are depicted on Figure 1-2.

Table 1-1
Potable Water Well Survey Results

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida

Well Identification	Approximate Distance from Site (miles)	Diameter (inches)	Depth of Well (feet bls)	Status
#1	0.11	16	988	Active
#2	0.27	16	092	Active
#3	0.34	16	988	Active
#4	0.46	10	700	Active

Four potable water supply wells are located within a 1-mile radius of Site 289. The closest supply well, #1, is located approximately 0.11 mile to the west. The water is treated by the Base water treatment plant prior to distribution.

1.5 TOPOGRAPHY AND DRAINAGE

NAVSTA Mayport is located in the Southeastern Coastal Plain physiographic province. The topography is mostly low, gentle to flat, and composed of a series of ancient marine terraces. NAVSTA Mayport is located within the Silver Bluff Terrace. The average land surface elevation at NAVSTA Mayport is between 8 and 10 feet above mean sea level (msl) (USGS, 1992).

Site 289 is virtually flat with the exception of a stormwater drainage ditch located along the eastern site boundary parallel to Moale Avenue.

1.6 LAND USE IN SITE VICINITY

Land uses near the site consist of a golf course adjacent to the north, followed by the Turning Basin and associated support services, and large areas with Station living quarters adjacent to the south. A Site Location and Vicinity Map depicting Site 289 and its nearby surroundings is provided as Figure 1-3.

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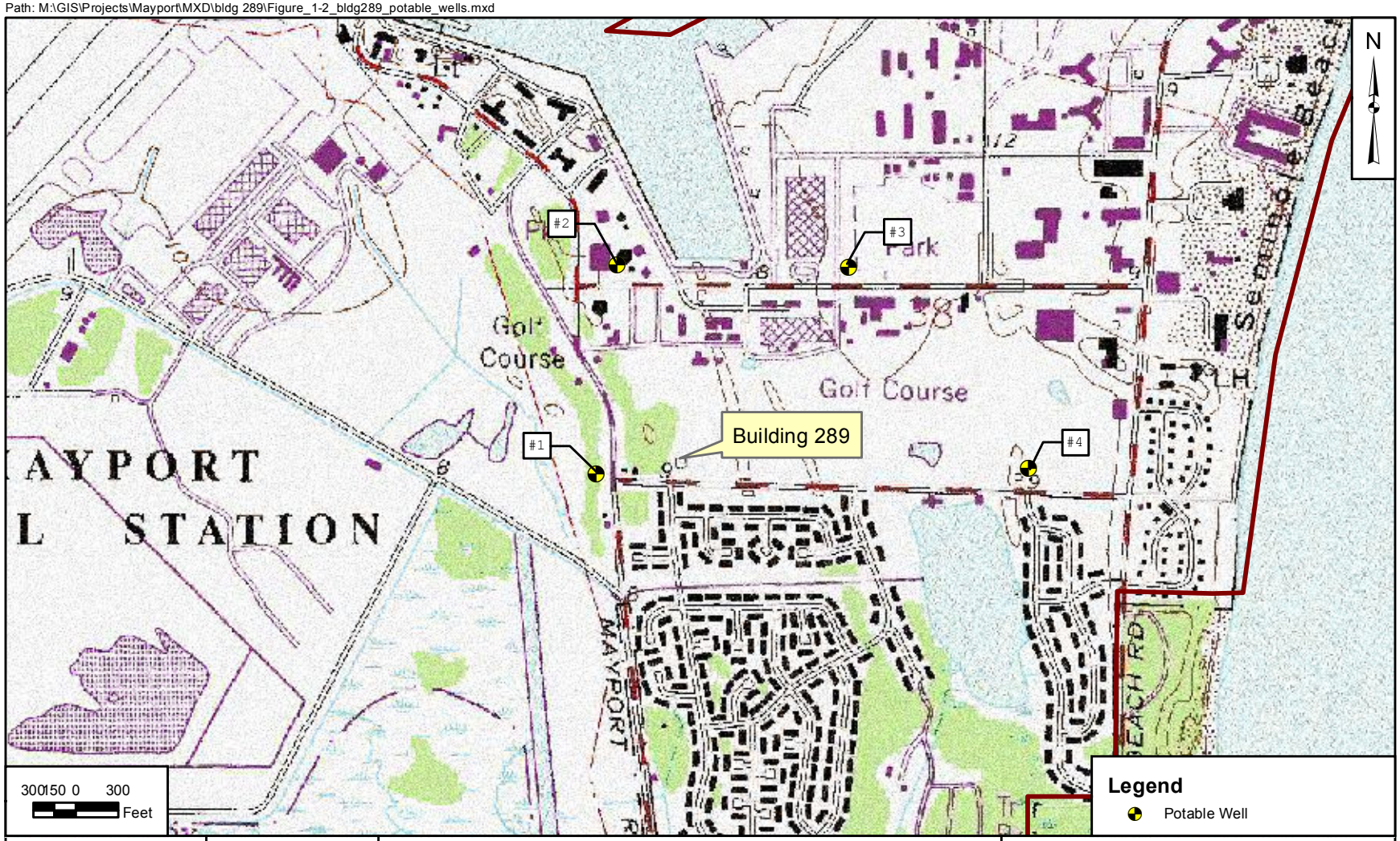

DRAWN BY S. STROZ	DATE 08/26/11	POTABLE WELL SURVEY MAP BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER
CHECKED BY T. DECK	DATE 08/26/11		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 1-2 REV 0

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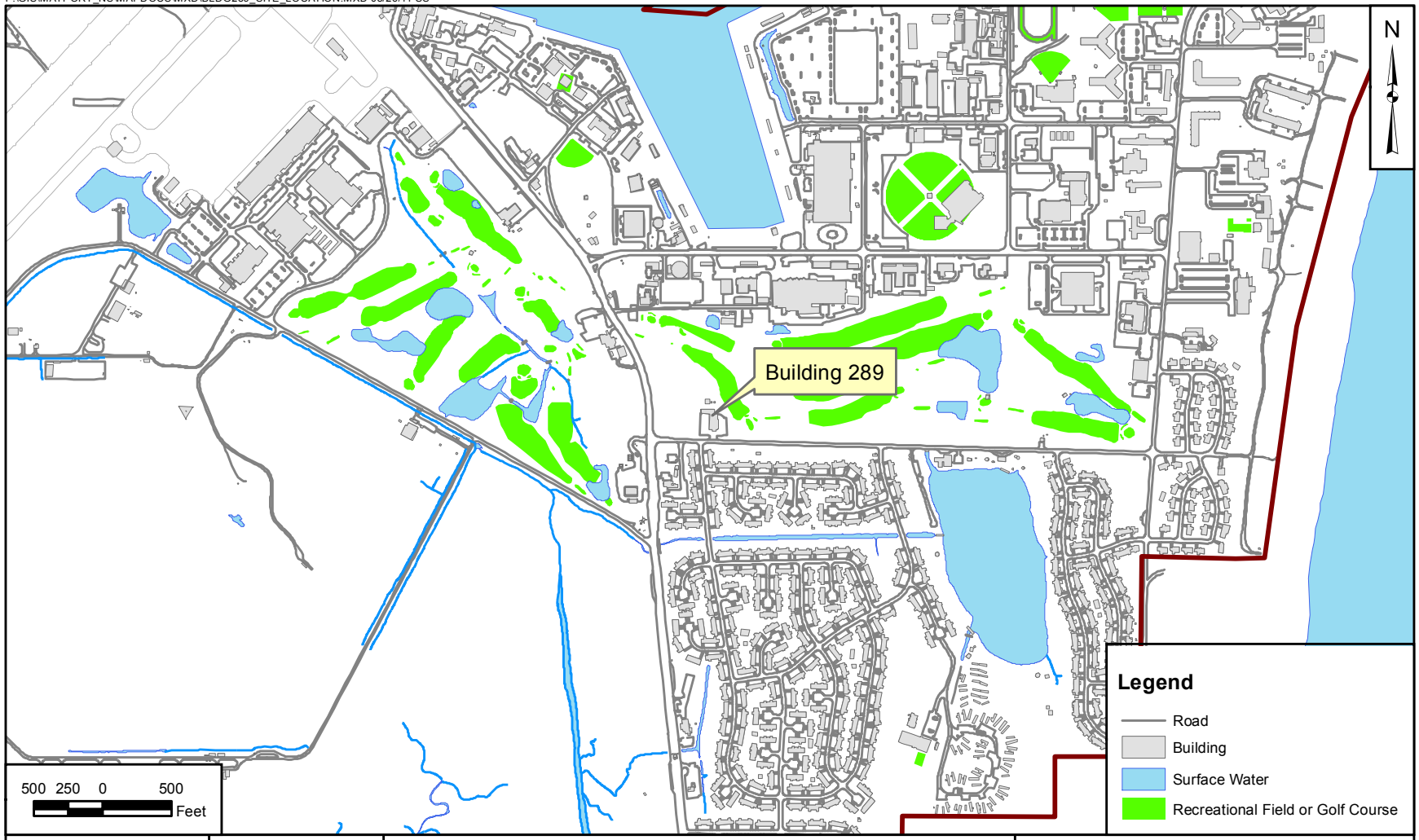

DRAWN BY S. STROZ	DATE 08/26/11	SITE LOCATION AND VICINITY MAP BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER
CHECKED BY T. DECK	DATE 08/26/11		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
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1.7 SITE DESCRIPTION

Site 289 is a commercial property that is the location of the NAVSTA Mayport Housing Center. The investigation area is a relatively flat area of the Station located northwest of the intersection of Mayport Road and Moale Avenue adjacent to the golf course. A Site Map of Site 289 is presented as Figure 1-4.

1.8 SITE HISTORY

According to previous environmental reports (IAP-HILL, 2010), in March 2010 approximately 40 gallons of diesel fuel leaked out of the fill port of an abandoned UST at Building 289, reportedly caused by rain water filling the tank. According to a site sketch drawing, the release flowed first in a southerly direction across the asphalt parking lot to a storm drain and then east toward the stormwater ditch that extended east to west along the southern property boundary. Approximately 300 gallons of diesel fuel and 200 gallons of an oil/water mixture were pumped out of the tank. The parking lot was scrubbed with absorbent material, and 30 cubic yards of contaminated soil was removed from the ditch area. All waste was transported to the NAVSTA Mayport hazardous waste storage facility for further disposal. Soil samples were collected to determine if the soil near the tank was hazardous by characteristic analyses. Subsequently, the ditch area was backfilled with the empty tank remained place.

According to previous environmental reports (Martin Environmental Solutions, Inc., 2011), in February 2011, one estimated 500-gallon capacity non-regulated UST was removed and closure assessment activities were performed. The UST was located in the asphalt-paved parking area on the western side of Building 289 and had previously stored heating oil used to heat the building. The tank had reportedly been taken out of service approximately 15 years ago (based on 2011 report). The tank and associated piping were constructed of bare steel with single-wall construction. The tank was empty except for a small amount (approximately 2-inches) of residual liquid, which, according to the closure report, appeared to be primarily water with a strong petroleum odor. The date of installation of the tank was not determined.

Upon removal, the UST was noted as being rusted and in generally poor condition. Associated piping was removed to the extent possible, but fuel piping extended beneath the on-site building and could not be completely removed. This piping was cut adjacent to the wall of the building, evacuated, and permanently sealed. Only soils required to facilitate the tank removal activities were excavated.

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DRAWN BY J. ENGLISH	DATE 08/08/12	SITE 289 SITE ASSESSMENT REPORT SITE MAP BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER ___ / CTO NUMBER ____
CHECKED BY D. SIEFKEN	DATE 08/08/12		APPROVED BY ___ / DATE ___
REVISED BY ___	DATE ___		APPROVED BY ___ / DATE ___
SCALE AS NOTED			FIGURE NO. FIGURE 1-4 / REV 0

Sampling results during the closure assessment, which included organic vapor analyzer (OVA) soil screening and confirmatory soil and groundwater sample collection, revealed indications of the presence of soil contamination at the site. Soil samples collected during the closure assessment showed total recoverable petroleum hydrocarbons (TRPH) at 3080 milligrams per kilogram (mg/kg), which is in excess of the Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Level (SCTL) of 2700 mg/kg for industrial direct exposure. Groundwater samples showed concentrations less than the applicable FDEP Groundwater Cleanup Target Levels (GCTLs).

Copies of pertinent tables and figures from the closure investigations are provided in Appendix B.

1.9 PURPOSE OF CURRENT INVESTIGATION

The objective of the SA was to assess the extent and magnitude of soil and/or groundwater contamination, if present, at Site 289. The data collected during the investigation was used to prepare this SAR as required by Chapter 62-770.600, Florida Administrative Code (F.A.C.). This SAR provides a characterization of site conditions from which to base future courses of action.

2.0 SUBSURFACE INVESTIGATION METHODS

2.1 QUALITY ASSURANCE

The site investigation was conducted in general accordance with the FDEP-approved Standard Operating Procedures (SOPs) DEP-001/92; United States Environmental Protection Agency (USEPA) Field Branches Quality System and Technical Procedures, dated November 1, 2007, Section 2.21 (USEPA, 2007); and FDEP SOPs 001/01: FS3000: *Soil Sampling* and FS1000: *General Sampling Procedures* (FDEP, 2004).

2.2 ASSESSMENT STRATEGY

For the purpose of this investigation, impacts to the soil and groundwater, if present, were evaluated in the following two areas: 1) the ultimate destination of the diesel fuel released to the asphalt surface and flowed to the stormwater ditch south of the building, and 2) the former heating oil UST located adjacent to the west of the building.

Soil and groundwater quality was assessed at the site in two phases: a screening phase (Phase I) in which soil and groundwater grab samples were collected by hand augering methods and analyzed by a fixed-base laboratory, and a second phase (Phase II) during which five permanent monitoring wells were installed based upon Phase I analytical results. Soil samples were collected during Phase II based on the screening results, and groundwater samples were collected from the wells for analyses of the constituents listed in the Gasoline Analytical Group (GAG) and Kerosene Analytical Group (KAG) in accordance with Table B in Chapter 62-770, F.A.C., at a FDEP-approved fixed-base laboratory.

2.3 DETERMINATION OF GROUNDWATER GRADIENT

On November 1, 2011, four piezometers (PZ01, PZ02, PZ03, and PZ04) were installed using hand augering methods at the boundaries of the site in order to verify the direction of groundwater flow. Each piezometer was constructed with sufficient screen interval to bracket the water table and penetrated as deep as possible below the static water table. The top-of-casing (TOC) elevation for each piezometer was surveyed in reference to an on-site arbitrary benchmark with an assigned elevation of 25 feet. The vertical elevation of each piezometer casing was surveyed to the nearest 0.01 foot using standard rod and transit survey methods. Depth-to-water was measured from the TOC of each piezometer using an electronic water level indicator. The relative water table elevation at each location will be calculated by subtracting the depth-to-water measurement from the surveyed TOC elevation. All data was recorded in the appropriate site-specific field logbook and on groundwater level measurement field forms. Depth to

groundwater measurements, gradient, and flow direction during the initial phase of work are discussed in Sections 3.1.2 and 3.1.3.

2.4 SOIL QUALITY ASSESSMENT

2.4.1 Soil Borings

Locations of 38 soil borings completed during the initial phase of the assessment are shown on Figure 2-1. Soil borings were advanced to a depths ranging from approximately 3 feet to 7 feet bls using a stainless steel, 3-inch inside diameter hand auger assembly for the purpose of locating utilities and collecting soil screening samples. Boring logs are provided in Appendix C.

2.4.2 Field Screening Procedures

Soil samples were collected from each location at depths of 0 to 6 inches, 6 inches to 2 feet, 2 feet to 4 feet, and at continuous 2-foot intervals to boring termination at the top of the water table. Samples collected above the water table were screened in the field using an OVA equipped with a flame ionization detector. Soil vapor analyses were performed in accordance with the headspace screening method described in Chapter 62-770.200 (2), F.A.C. Soil displaced during the investigation was placed in 55-gallon steel drums and transferred to the centralized drum storage area for subsequent disposal.

During field soil sampling, field observations were conducted to assist in the determination of the presence or absence of petroleum impacts. The areas of the former UST and the stormwater ditch that received the surface spill of diesel fuel were of special importance because it was documented that impacts remained in these areas. The soil screening locations are shown on Figure 2-1. Results of the soil vapor screening survey conducted at Site 289 are discussed in Section 3.2.

2.4.3 Soil Sampling Strategy for Fixed-base Laboratory Analyses

Based on the initial assessment (Phase I), 19 soil samples were collected and submitted to Empirical Laboratories, LLC in Nashville, Tennessee, a fixed-base laboratory, for analysis of GAG/KAG constituents, which include volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and TRPH. Soil samples submitted for fixed-base laboratory analyses are typically based on field screening results; although, for this site, the screening results were all equal to background levels. The basis for the sample collection was then determined on possible locations of contaminant releases.

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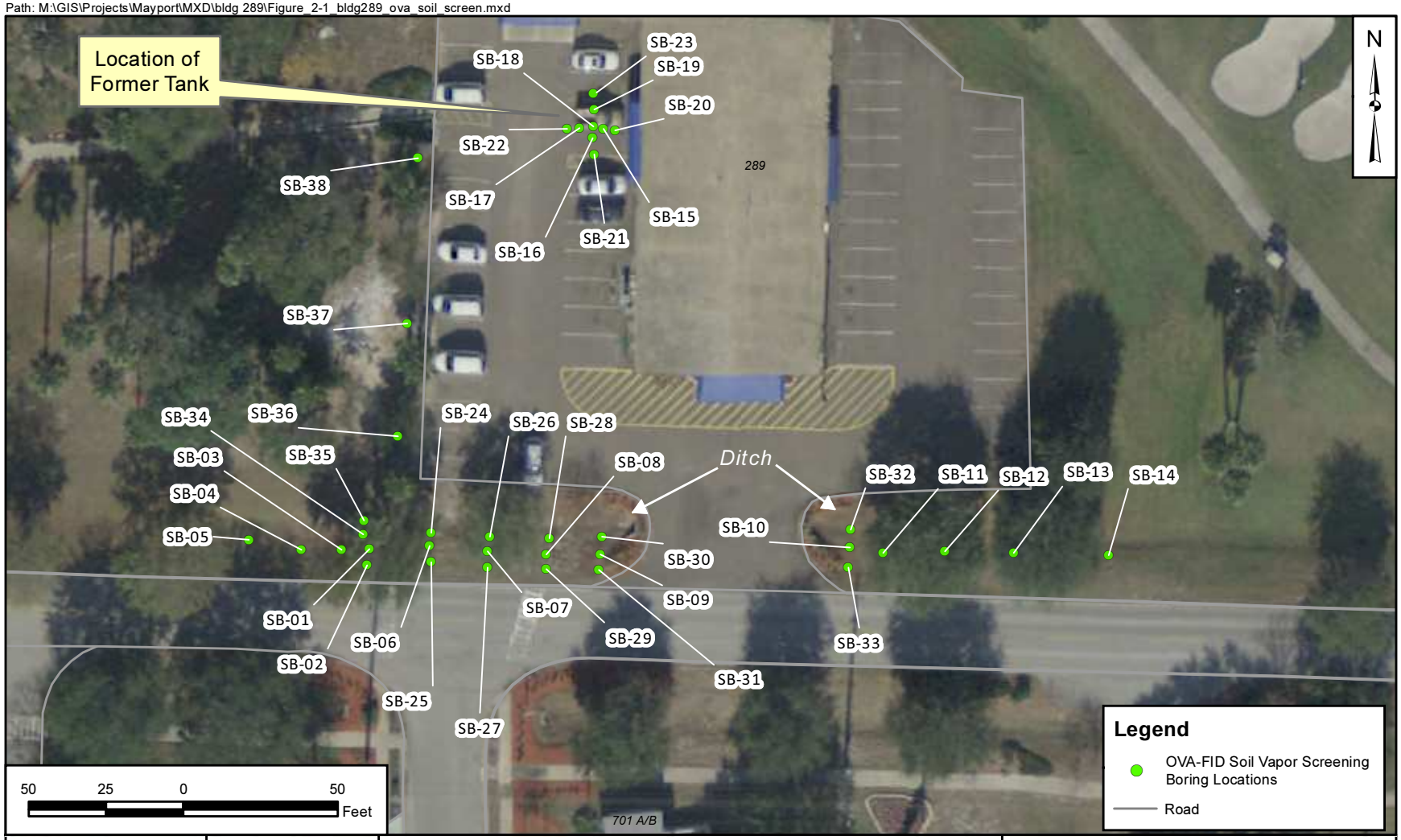

DRAWN BY C. TULLEY	DATE 11/23/11	OVA-FID SOIL VAPOR SCREENING BORING LOCATIONS BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER
CHECKED BY D. SIEFKEN	DATE 11/23/11		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
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On January 24, 2012, 11 soil samples (SS-01 through SS-11) were collected along the stormwater ditch south of the building at Site 289 for laboratory analyses of VOCs, PAHs, and TRPH. Soil samples collected at soil borings SS-01 through SS-07 were from approximately 4.0 feet bls. Soil samples collected at soil borings SS-08 through SS-11 were from approximately 3.0 feet bls. The water table fluctuated from approximately 3 to 4 feet bls in the area of these 11 soil borings during the January 2012 sampling event.

On January 25, 2012, five soil samples (SS-12 through SS-16) were collected in the area of the former heating oil UST for laboratory analysis of TRPH. Soil samples collected at soil borings SS-12 through SS-16 were from approximately 7.0 feet bls. The water table was encountered at approximately 7.5 feet bls in the area of these eight soil borings during the January 2012 sampling event. Additional volumes of material were collected and analyzed from SS-12 and SS-16 for TRPH speciation to differentiate specific ranges of carbon isotopes comprising the TRPH contamination.

On May 5, 2012, two soil samples (SS-17 and SS-18) were collected in the area between the former heating oil UST and the building structure for laboratory analysis of TRPH. Soil samples collected at soil borings SS-12 through SS-16 were from approximately 7.0 feet bls. The water table was encountered at approximately 7.5 feet bls in the area of these two soil borings during the May 2012 sampling event.

On July 25, 2012, one additional soil sample (SS-19) was collected adjacent to the east of the building for laboratory analysis of TRPH. The soil sample collected at soil boring SS-19 was from approximately 7.0 feet bls. The water table was encountered at approximately 7.0 feet bls in the area of this soil boring during the July 2012 sampling event. The soil screening locations are shown on Figure 2-2. The results of the soil sampling activities are discussed in Section 3.3.

2.5 GROUNDWATER ASSESSMENT METHODS

2.5.1 Initial Samples (Phase I)

On December 19, 2011, two temporary piezometer wells (PZ-1 and PZ-2) were installed in the stormwater ditch located south of the building that received the diesel fuel spill. The groundwater quality data was used to evaluate whether shallow groundwater at the site was impacted by the accidental spill. Temporary well PZ-1 was installed in the western end of the stormwater ditch, and temporary well PZ-2 was installed in eastern end of the stormwater ditch. The temporary wells were installed to depths of approximately 8.5 feet and 7.5 feet bls, respectively, using hand augering methods.

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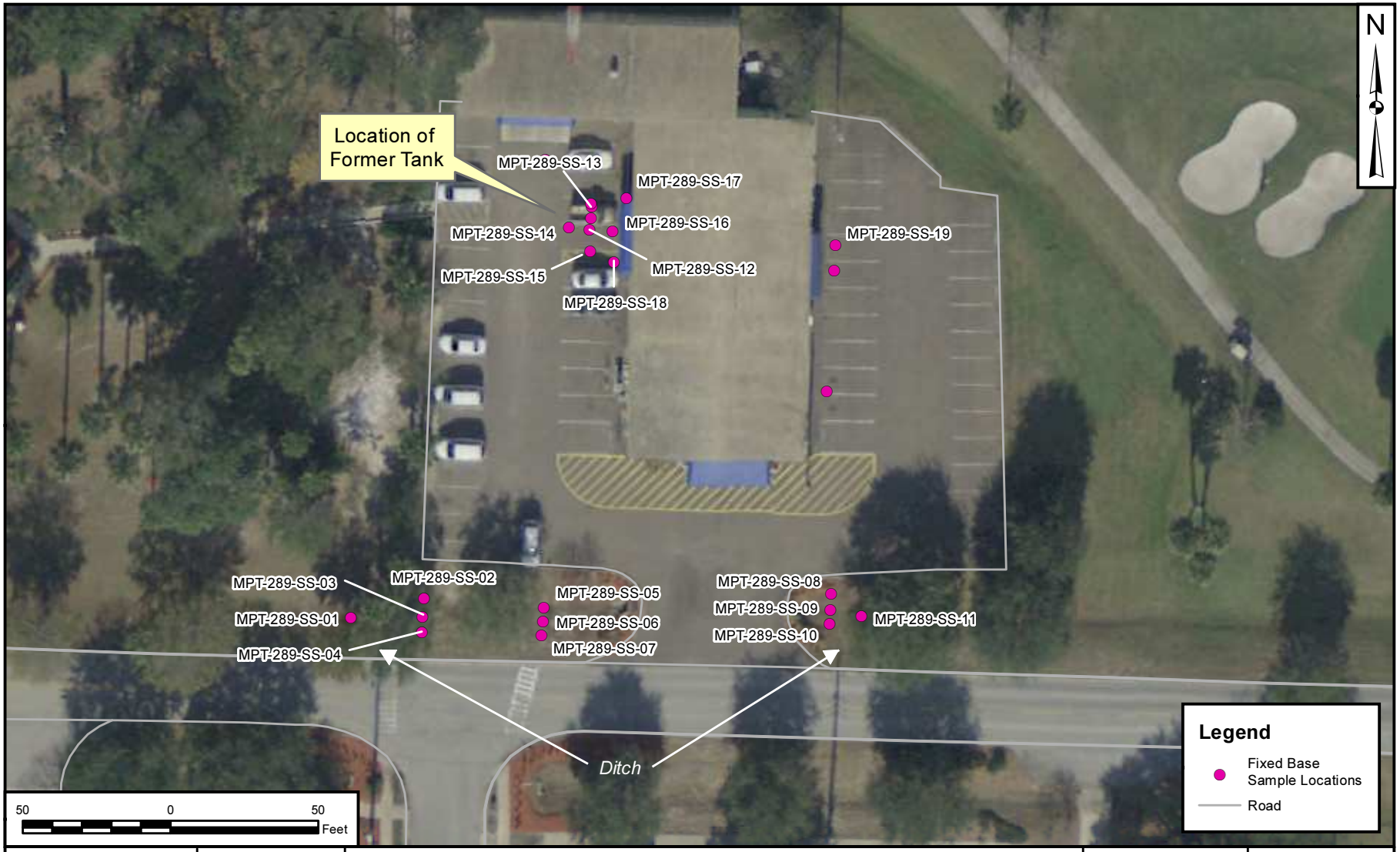

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SITE 289 SITE ASSESSMENT REPORT
SOIL SAMPLE LOCATIONS
BUILDING 289
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
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FIGURE NO. FIGURE 2-2	REV 0

The wells were constructed using a 5-foot length of 0.75-inch diameter, 0.010-inch mill slotted screen material connected to a 5-foot section of Schedule 40 polyvinyl chloride (PVC) solid riser material. The annular space at each piezometer location was filled with 20/30 filter sand from the boring terminus to land surface. The static water table was encountered at approximately 4.5 feet bls during the December 2011 sampling activities.

On December 19, 2011, groundwater samples were collected from PZ-1 and PZ-2 in general accordance with FDEP SOPs. A minimum one well volume was pumped from each well (partially submerged screen) using a peristaltic pump and the low flow quiescent purging method. The sample collection tubing was adjusted to remain approximately 1 foot below the top of the water column. After purging of these initial quantities, purging was continued and field parameters pH, specific conductance, dissolved oxygen, and temperature were measured periodically (minimum 3-minute intervals) using a YSI 556 instrument. Turbidity was measured using LaMotte 2020 turbidimeter.

Purging was considered complete when three consecutive measurements were within the following limits:

- Temperature $\pm$ 0.2 degree Celsius (^{o}C)
- pH $\pm$ 0.2 Standard Unit
- Specific conductivity $\pm$ 5 percent of previous reading(s)
- Dissolved oxygen not greater than 20 percent of saturation at field measured temperature
- Turbidity less than or equal to 20 Nephelometric turbidity units

After collection, samples were immediately placed on ice and delivered to Empirical Laboratories in Nashville, Tennessee under proper chain-of-custody and preservation (4 ^{o}C) protocol. Samples were analyzed for VOCs using USEPA Method 8260, PAHs using USEPA Method 8270, and TRPH using the Florida Residual Petroleum Organic (FL-PRO) method. The temporary wells were removed immediately after sampling, and the disturbed areas were returned to pre-sampling conditions.

Groundwater quality data reviewed for samples collected from PZ-2 appeared to provide false positive results believed to be impacted by elevated turbidity conditions during sampling. On August 16, 2012, temporary piezometer well PZ-2 was re-installed at the eastern end of the stormwater ditch located south of the building to verify elevated PAH results shown during the December 2011 sampling event. Temporary piezometer PZ-2 was installed to approximately 6.0 feet bls using hand augering methods. The well was constructed using a 5-foot length of 0.75-inch diameter, 0.010-inch mill slotted screen material connected to a 5-foot section of Schedule 40 PVC solid riser material. The annular space at each piezometer location was filled with 20/30 filter sand from the boring terminus to land surface. The

static water table was encountered at approximately 3.0 feet bls during the August 2012 sampling activities.

Verification samples collected from the re-installation of PZ-2 on August 16, 2012, were immediately placed on ice and delivered to Empirical Laboratories in Nashville, Tennessee for analyses of PAHs using USEPA Method 8270. The well was removed immediately after sampling, and the disturbed area was returned to pre-sampling conditions.

The temporary well locations are shown on Figure 2-3. Groundwater sampling logs and low flow purge sheets completed during purging and sampling are provided in Appendix D. The results of the temporary well groundwater sampling activities are discussed in Section 3.4.1.

2.5.2 Permanent Monitoring Wells (Phase II)

On June 26, 2012, one permanent deep monitoring well (MPT-289-MW-03D) was installed at the site by Probe Domain under Tetra Tech supervision. On June 28, 2012, four permanent shallow monitoring wells (MPT-289-MW-01, MPT-289-MW-02, MPT-289-MW-04, and MPT-289-MW-05) were also installed at the site by Probe Domain under Tetra Tech supervision. The monitoring well locations, as shown on Figure 2-3, were selected based upon analytical results of soil samples collected in the area of the former UST and the groundwater flow direction that was estimated to be to the southeast during the initial phase of this investigation.

2.5.2.1 Drilling Method

Each temporary and permanent well location was cleared of utilities per the excavation permit obtained from Public Works. Posthole diggers were used at each well location from ground surface to a depth of 5 feet bls prior to advancement of DPT tooling. All permanent monitoring wells were installed using DPT techniques by advancing a 3.5-inch diameter drop-tip casing to the desired installation depths. No drill cuttings were generated using the DPT drill rig.

2.5.2.2 Construction and Development

All permanent monitoring wells were installed through the DPT drill casing after attaining target depths. Shallow monitoring wells MPT-289-MW-01, MPT-289-MW-02, MPT-289-MW-04, and MPT-289-MW-05 were advanced to a total depth of approximately 14 feet bls and were constructed with 10 feet of 1-inch diameter, 0.010-inch mill slotted Schedule 40 PVC screen incased in a 20/30-grade silica sand Pre-Pack filter, threaded to 4 feet of solid riser. The annular space at each well location was filled with 20/30 filter sand from the boring terminus to approximately 2 feet above the top of the well screen. A 30/65 fine sand

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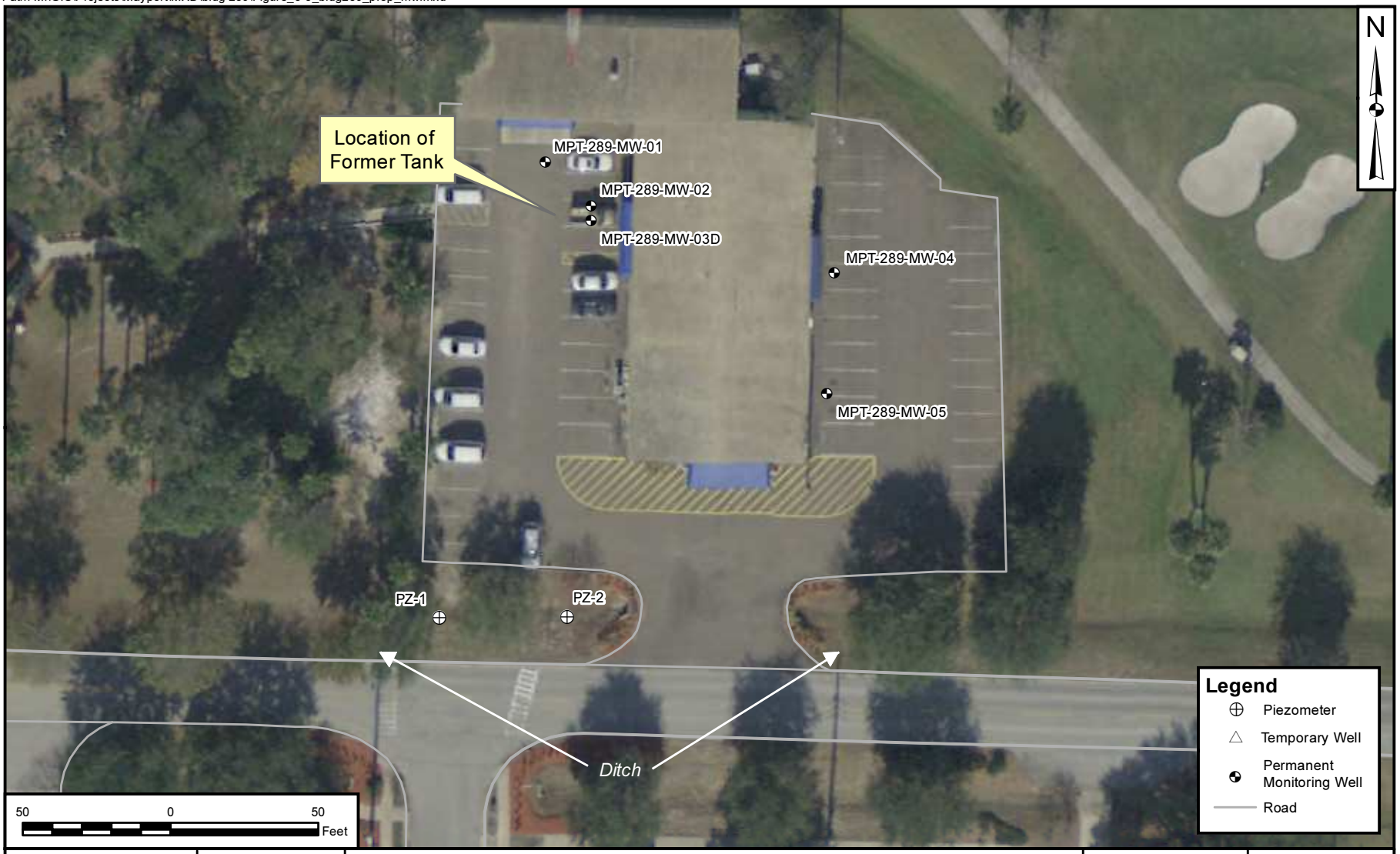

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SITE 289 SITE ASSESSMENT REPORT
MONITORING WELL LOCATIONS
BUILDING 289
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
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FIGURE NO. FIGURE 2-3	REV 0

seal approximately 1 foot thick was installed above the well screen, followed by Type I Portland neat cement to just below grade.

The deep monitoring well, MPT-289-MW-03D was advanced to a total depth of approximately 35 feet bls and was constructed with 5 feet of 1-inch diameter, 0.010-inch mill slotted Schedule 40 PVC well screen incased in a 20/30-grade silica sand Pre-Pack filter, threaded to 30 feet of solid PVC riser. The annular space was filled with 20/30 filter sand from the boring terminus to approximately 2 feet above the top of the well screen. A 30/65 fine sand seal approximately 2 feet thick was installed above the well screen, followed by Type I Portland neat cement to just below grade.

Surface completion at each well consisted of an 8-inch diameter steel manhole equipped with a bolt-down cover, secured in place within a 2-foot square, 6-inch thick concrete pad. A locking, expandable gasket cap was inserted at the top of the PVC casing after well installation. The monitoring wells were developed using a peristaltic pump until produced water was virtually clear. All development water was containerized for disposal in 55-gallon steel drums. Schematic diagrams showing the well construction details are provided in Appendix E.

2.5.2.3 Groundwater Sampling

Groundwater samples were collected from monitoring wells MPT-289-MW-01, MPT-289-MW-02, MPT-289-MW-03D, MPT-289-MW-04, and MPT-289-MW-05 on July 12, 2012. Groundwater sampling was conducted in general accordance with FDEP SOPs. A minimum one well volume was pumped from the well (partially submerged screen) using a peristaltic pump and the low flow quiescent purging method. The sample collection tubing was adjusted to remain approximately 1 foot below the top of the water column. After purging of these initial quantities, purging was continued and field parameters pH, specific conductance, dissolved oxygen, and temperature were measured periodically (minimum 3-minute intervals) using a YSI 556 instrument. Turbidity was measured using LaMotte 2020 turbidimeter.

Purging was considered complete when three consecutive measurements were within the following limits:

- Temperature $\pm$ 0.2 degree Celsius (^{o}C)
- pH $\pm$ 0.2 Standard Unit
- Specific conductivity $\pm$ 5 percent of previous reading(s)
- Dissolved oxygen not greater than 20 percent of saturation at field measured temperature
- Turbidity less than or equal to 20 Nephelometric Turbidity Units

After collection, samples were immediately placed on ice and delivered to Empirical Laboratories in Nashville, Tennessee under proper chain-of-custody and preservation (4 ^{o}C) protocol. Samples were

analyzed for VOCs using USEPA Method 8260, PAHs using USEPA Method 8270, ethylene dibromide using USEPA Method 8011, lead using USEPA Method 6010B, and TRPH using the FL-PRO method. Groundwater quality data reviewed for samples collected from MPT-289-MW-02 and MPT-289-MW-03D appeared to provide false positive results believed to be impacted by elevated turbidity conditions during sampling. On November 1, 2012, verification samples were collected from monitoring wells MPT-289-MW-02 and MPT-289-MW-03D, immediately placed on ice, and delivered to Empirical Laboratories in Nashville, Tennessee for analyses of PAHs using USEPA Method 8270.

Groundwater sampling logs and low flow purge sheets compiled during purging and sampling are provided in Appendix D. The results of the permanent well groundwater sampling activities are discussed in Section 3.4.2.

3.0 RESULTS OF INVESTIGATION

3.1 SITE GEOLOGY AND HYDROGEOLOGY

3.1.1 Lithology

Soil samples for lithologic description were collected during installation of monitoring well MPT-289-MW-03D on June 26, 2012. Samples were collected from approximately 5 feet bls to approximately 40 feet bls and consisted primarily of brown to dark brown, fine-grained marine quartz sands to approximately 10 feet bls. Gray, fine-grained quartz sands with coquina was encountered from approximately 10 feet to 23 feet bls. Sandy silts with coquina were encountered from approximately 23 feet to 40 feet bls where light gray, fine-grained quartz sands were encountered. The boring log for MPT-289-MW-03D is provided in Appendix C.

3.1.2 Groundwater Flow Direction

The direction of groundwater flow in the surficial aquifer underlying the site during the initial site investigation in November 2011 was to the southeast with flow components to the south and east. This preliminary indication of groundwater flow direction using data from temporary piezometers was one of the criteria used in selecting permanent monitoring well locations. The depth-to-water and TOC elevations for the November 2011 are presented in Table 3-1 and equipotential contour lines have been generated to depict the groundwater flow direction shown in Figure 3-1.

Table 3-1
Water Table Elevation Data – November 4, 2011

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida

Well Identification Number MPT-289-	Total Well Depth (feet)	TOC Elevation (feet)	November 4, 2011	
			Depth to Water Below TOC (feet)	Water Table Elevation (feet)
PZ-01	10	13.04	5.45	7.59
PZ-02	10	15.00	7.35	7.65
PZ-03	10	11.28	3.71	7.57
PZ-04	10	9.88	2.29	7.59

NM = not measured; NA = not available
TOC measurements were surveyed relative to each other and not the elevation above msl.
All depth-to-water measurements are subject to tidal influences.

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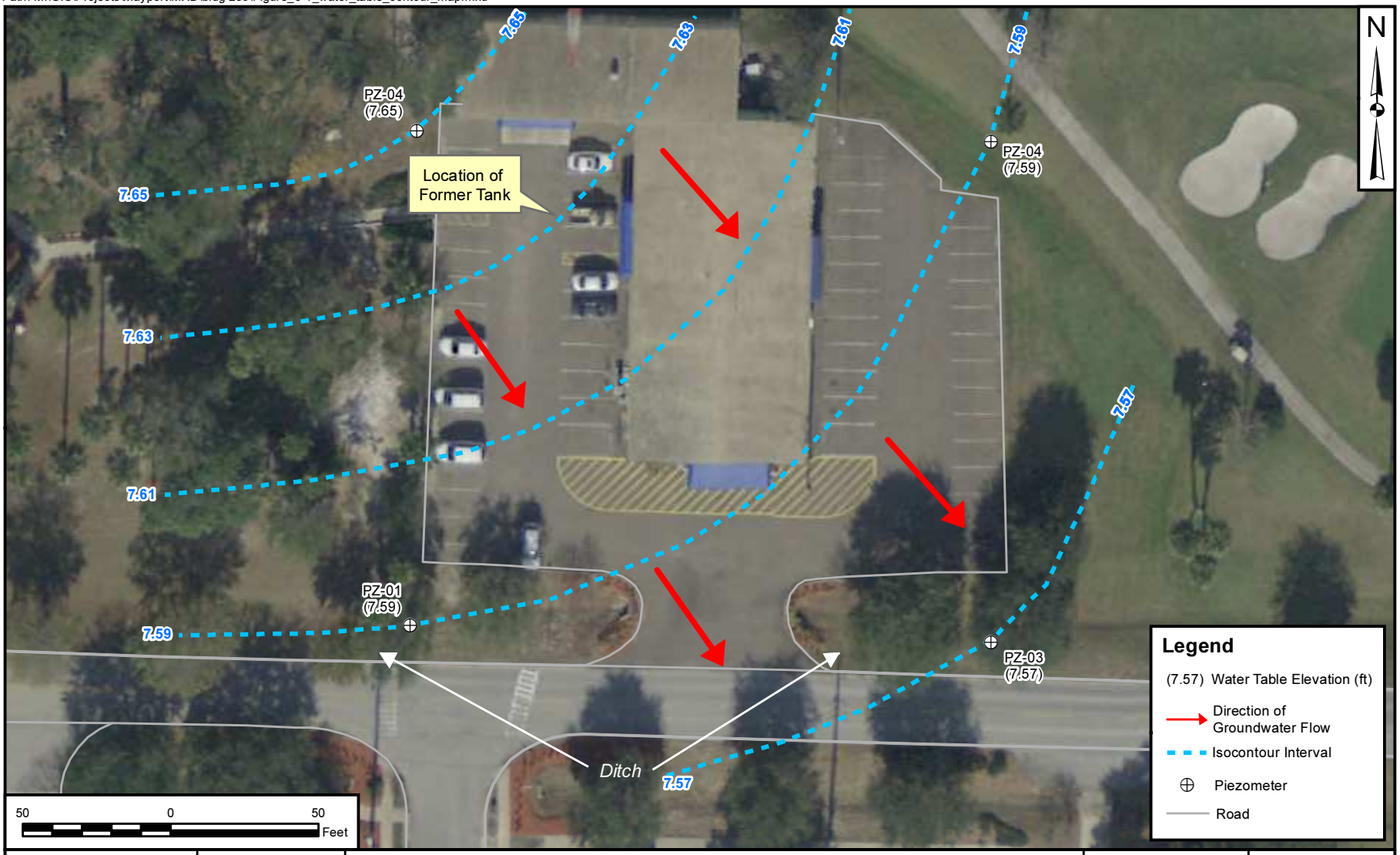

DRAWN BY J. ENGLISH	DATE 08/08/12	SITE 289 SITE ASSESSMENT REPORT WATER TABLE CONTOUR MAP - 11/4/11 BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER ___ / CTO NUMBER ___
CHECKED BY D. SIEFKEN	DATE 08/08/12		APPROVED BY ___ / DATE ___
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SCALE AS NOTED			FIGURE NO. FIGURE 3-1 / REV 0

Following well installation activities and prior to groundwater sampling activities, depth-to-water measurements were obtained from the permanent monitoring wells. The direction of groundwater flow in the surficial aquifer underlying the site during the July 2012 sampling event was to the southeast with flow components to the south and east. The depth-to-water and TOC elevations for the July 2012 are presented in Table 3-2, and equipotential contour lines have been generated to depict the groundwater flow direction shown in Figure 3-2.

Table 3-2
Water Table Elevation Data – July 12, 2012

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida

Well Identification Number MPT-289-	Total Well Depth (feet)	TOC Elevation (feet)	July 12, 2012	
			Depth to Water Below TOC (feet)	Water Table Elevation (feet)
MW-01	14	7.85	5.25	2.60
MW-02	14	7.92	5.27	2.65
MW-03D	35	7.95	5.40	2.55
MW-04	14	7.60	5.00	2.60
MW-05	14	7.74	5.17	2.57

NM = not measured; NA = not available
TOC measurements were surveyed by a state-registered surveyor to an accuracy of within 0.01 foot.
All depth-to-water measurements are subject to tidal influences.

3.1.3 Aquifer Classification and Characteristics

The State of Florida classifies the surficial aquifer underlying the site as G-II. According to the water resources report for Mayport, the average hydraulic conductivity of the surficial aquifer beneath the site is approximately 16.4 feet per day (USGS, 1998).

The horizontal hydraulic gradient across the site was evaluated from water level data listed in Table 3-1 and shown on Figure 3-1. The horizontal hydraulic gradient beneath the site, calculated from potentiometric contours depicted on Figure 3-2, was calculated to be 0.0008 foot per foot.

Based on information provided by Driscoll (Driscoll, 1986) and on lithologic descriptions of material encountered during the current investigation, the effective porosity of surficial aquifer sediments was estimated to be 0.30.

Using Darcy's Law, the groundwater velocity at the site was calculated.

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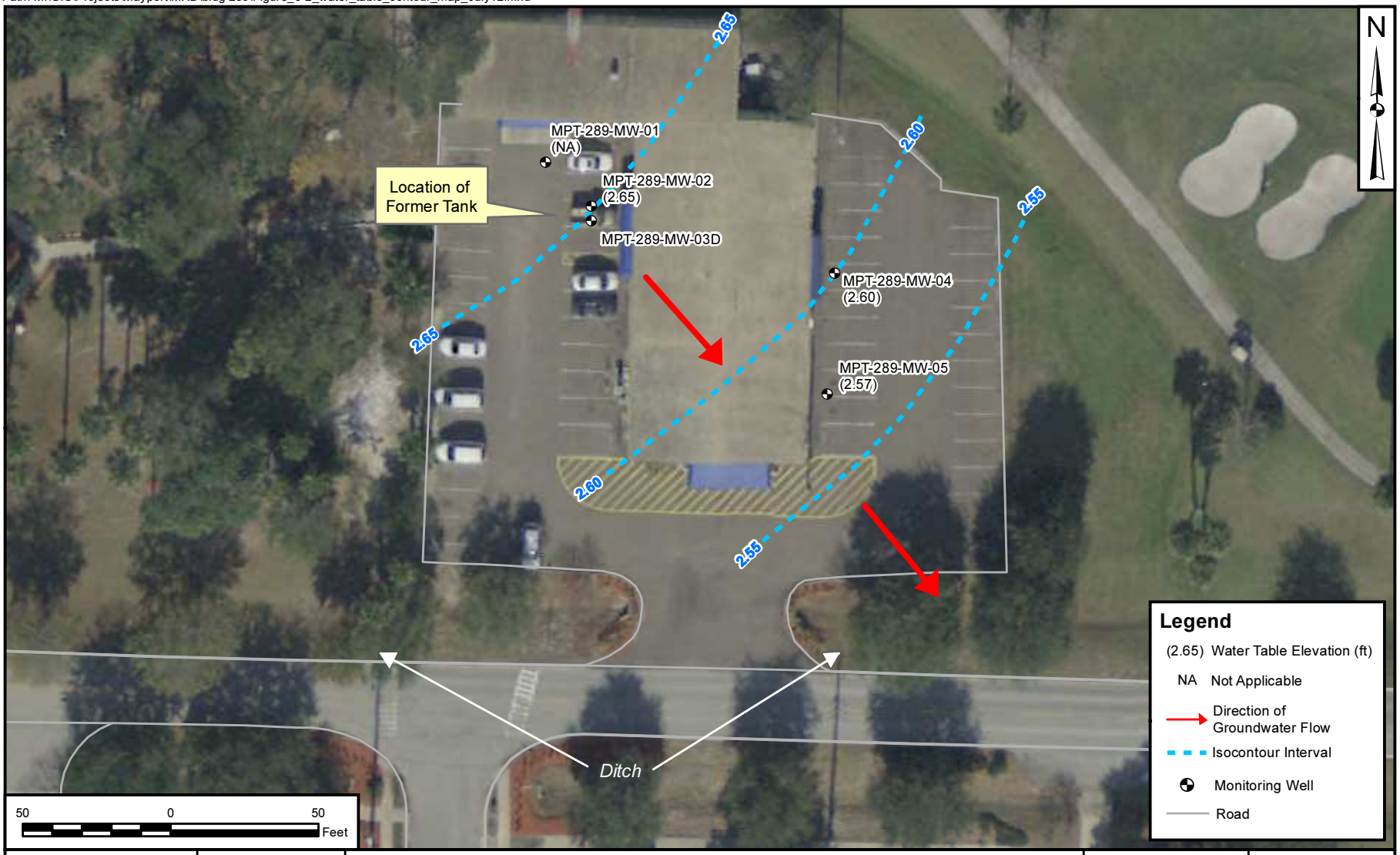

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SITE 289 SITE ASSESSMENT REPORT
WATER TABLE CONTOUR MAP - 7/12/12
BUILDING 289
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
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FIGURE NO. FIGURE 3-2	REV 0

Darcy's Law may be expressed as follows:

$$V = \frac{(K\ x\ i)}{n}$$

where: V = average seepage velocity

K = hydraulic conductivity

n = effective porosity

i = average hydraulic gradient

Using the average hydraulic conductivity of 16.4 feet per day, a hydraulic gradient of 0.0008 foot per foot, an inferred effective porosity value of 0.30, and Darcy's law, the groundwater seepage velocity across the site was calculated at 0.044 foot per day or approximately 16 feet per year.

3.2 SOIL SCREENING RESULTS

Soil vapor screening methods and sampling locations for headspace analyses are discussed in Section 2.4.1. Numerous soil samples were screened for organic vapors and the total number of samples per boring was influenced by the depth-to-water at each boring. At least three soil screening samples were collected at each soil boring location regardless of the depth-to-water.

One sample, SB-18 (6 feet to 7 feet bls), produced an instrument response at a concentration of 3.8 parts per million. Soil boring SB-18 was located at the northern boundary of the former UST pit. No other detections were documented exceeding background. The screening locations are shown on Figure 2-1.

3.3 SOIL SAMPLE ANALYTICAL RESULTS

All soil samples from borings SS-01 through SS-11 showed no concentrations of VOCs, PAHS, or TRPH exceeding FDEP SCTLs. Soil samples from borings SS-02 through SS-07 and SS-11 showed no concentrations of VOCs, PAHS, or TRPH exceeding the laboratory detection limits. Soil samples from borings SS-12 through SS-19 were analyzed for TRPH only.

Soil samples collected and analyzed from soil borings SS-13, SS-14, SS-15, SS-17, SS-18, and SS-19 showed no TRPH concentrations exceeding the FDEP SCTLs for either direct exposure or leachability. Soil samples collected and analyzed from soil borings SS-12 and SS-16 showed TRPH concentrations of 62,300 mg/kg and 41,400 mg/kg, respectively, exceeding FDEP SCTLs for both residential direct exposure and potential leachability. Additional volumes of material were collected and analyzed from SS-12 and SS-16 for TRPH speciation to differentiate specific ranges of carbon isotopes comprising the TRPH contamination. The TRPH speciation results for samples collected from SS-12 show exceedances of FDEP SCTLs for residential direct exposure scenarios and potential leachability to groundwater for

three component carbon ranges. The TRPH speciation results for samples collected from SS-16 show exceedances of FDEP SCTLs for residential direct exposure scenarios for three component carbon ranges and exceeding SCTLs for leachability to groundwater for two carbon ranges.

The TRPH exceedances detected in samples collected from SS-12 and SS-16 are shown on Figure 3-3. The laboratory analytical results for samples collected during the soil investigations are summarized in Table 3-3. The soil laboratory analytical reports submitted by Empirical are provided in Appendix F.

3.4 GROUNDWATER ANALYTICAL RESULTS

3.4.1 Temporary Monitoring Wells

Groundwater samples collected from the two temporary wells located in the stormwater ditch showed no constituents of concern exceeding FDEP GCTLs. The groundwater quality data obtained during the initial and verification sampling events are summarized in Table 3-4. The groundwater laboratory analytical reports submitted by Empirical Laboratories are included in Appendix G.

3.4.2 Permanent Monitoring Wells

Groundwater samples collected from the five permanently installed monitoring wells showed no constituents of concern exceeding FDEP GCTLs. The five wells include monitoring wells MPT-289-MW-02 and MPT-289-MW-03D that were installed in the same approximate area as soil sampling locations SS-12 and SS-16. Although soil samples collected at these locations showed TRPH concentrations exceeding FDEP SCTLs for residential direct exposure scenarios and potential leachability, groundwater quality in the shallow and deeper groundwater intervals has not been adversely impacted by the elevated soil concentrations. The groundwater quality data obtained during the initial and verification sampling events are summarized in Table 3-4. The groundwater laboratory analytical reports submitted by Empirical Laboratories are included in Appendix G.

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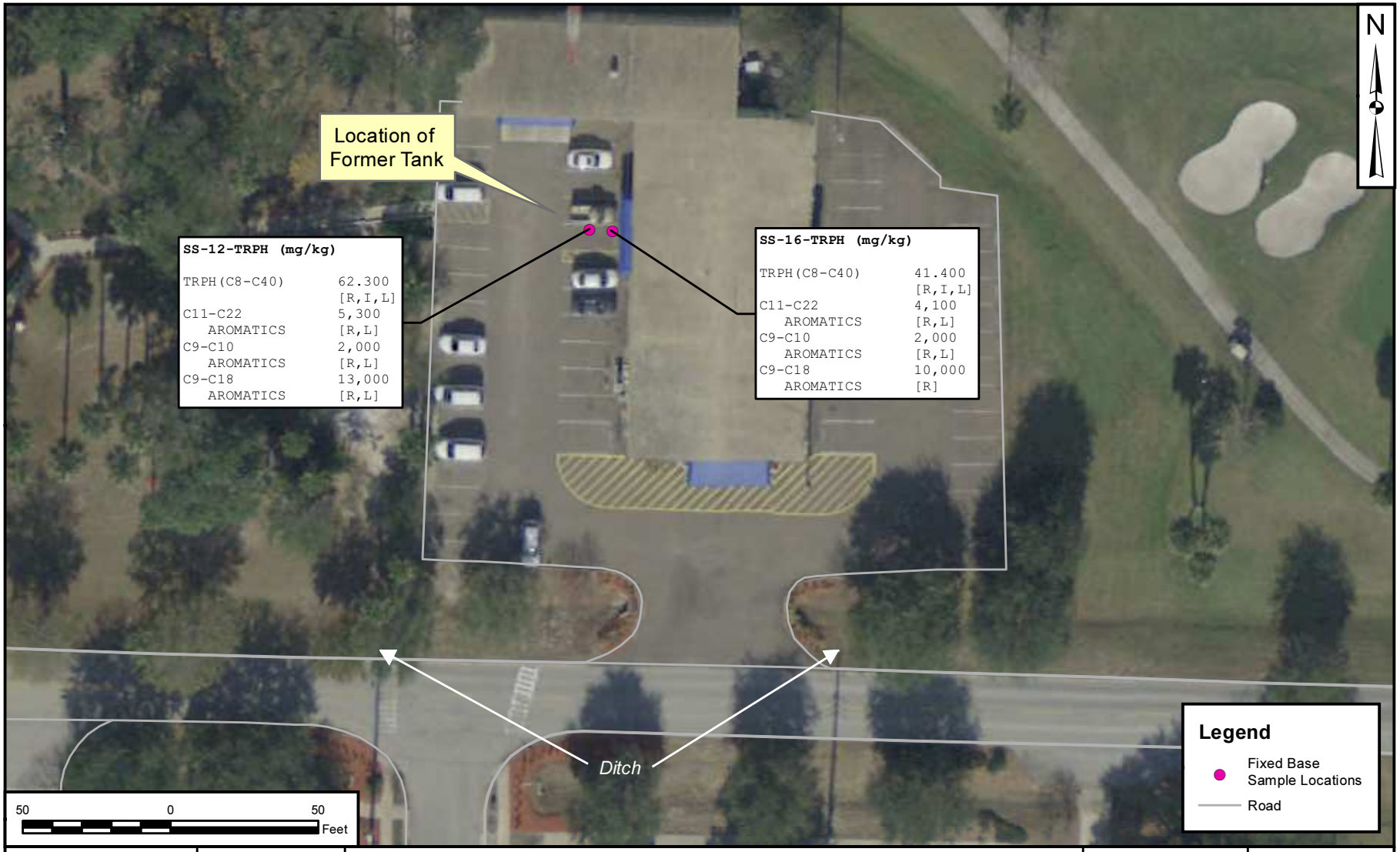

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SITE 289 SITE ASSESSMENT REPORT
SOIL SAMPLE ANALYTICAL RESULTS (EXCEEDANCES ONLY)
BUILDING 289
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	CTO NUMBER
APPROVED BY	DATE
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FIGURE NO. FIGURE 3-3	REV 0

TABLE 3-3
SOIL LABORATORY ANALYTICAL RESULTS

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida
Page 1 of 2

LOCATION	FL CTL 62-777 Industrial Soil-Direct	FL CTL 62-777 Residential Soil-Direct	FL CTL 62-777 Leachability Based GW	MPT-289-SS01	MPT-289-SS02	MPT-289-SS03	MPT-289-SS04	MPT-289-SS05	MPT-289-SS06	MPT-289-SS07	MPT-289-SS08	MPT-289-SS09	MPT-289-SS10
SAMPLE IDENTIFICATION				MPT-289-SS01-04-20120124	MPT-289-SS02-04-20120124	MPT-289-SS03-04-20120124	MPT-289-SS04-04-20120124	MPT-289-SS05-04-20120124	MPT-289-SS06-04-20120124	MPT-289-SS07-04-20120124	MPT-289-SS08-03-20120124	MPT-289-SS09-03-20120124	MPT-289-SS10-03-20120124
SAMPLE DATE				1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012	1/24/2012
VOLATILES (µg/kg)													
METHYLENE CHLORIDE (1)	26000	17000	20	1.63 U	1.37 U	1.43 U	1.37 U	1.4 U	1.29 U	1.67 J	1.19 U	1.52 J	1.25 U
POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)													
1-METHYLNAPHTHALENE (1)	1800000	200000	3100	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	2.62 J	2.01 U
2-METHYLNAPHTHALENE (1)	2100000	210000	8500	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	3.5 J	2.01 U
ACENAPHTHENE (1)	20000000	2400000	2100	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	3.75 J	2.01 U
ACENAPHTHYLENE (1)	20000000	1800000	27000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	20	19.1	8.1
ANTHRACENE (1)	300000000	21000000	2500000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	4.77 J	9.22	2.01 U
BAP EQUIVALENT-HALFND (1)	700	100	8000	5.71256	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	15.72589	17.8302	10.07897
BAP EQUIVALENT-POS (1)	700	100	8000	4.646	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	15.219	17.8302	9.07397
BENZO(A)ANTHRACENE (1)	--	--	800	2.67 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	3.39 J	10.5	3.93 J
BENZO(A)PYRENE (1)	700	100	8000	3.87 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	8.57	9.18	6.97 J
BENZO(B)FLUORANTHENE (1)	--	--	2400	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	9.92 U	12	7.91 J
BENZO(G,H,I)PERYLENE (1)	52000000	2500000	32000000	4.72 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	31.9	26.8	16.6
BENZO(K)FLUORANTHENE (1)	--	--	24000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	5.95 J	3.01 J
CHRYSENE (1)	--	--	77000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	10.7	3.87 J
DIBENZO(A,H)ANTHRACENE (1)	--	--	700	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	4.52 J	4.71 J	2.01 U
FLUORANTHENE (1)	59000000	3200000	1200000	3.36 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	3.05 J	25.5	4.65 J
FLUORENE (1)	33000000	2600000	160000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	6.23 J	2.01 U
INDENO(1,2,3-CD)PYRENE (1)	--	--	6600	5.09 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	17.9	16.2	8.86
NAPHTHALENE (1)	300000	55000	1200	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	4.34 J	2.01 U
PHENANTHRENE (1)	36000000	2200000	250000	1.92 U	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	1.98 U	16.4	2.37 J
PYRENE (1)	45000000	2400000	880000	3.06 J	1.78 U	1.74 U	1.73 U	1.7 U	1.79 U	1.81 U	3.38 J	22.5	7.12 J
PETROLEUM HYDROCARBONS (mgkg)													
C11-C22 AROMATICS	15000	1800	1000	--	--	--	--	--	--	--	--	--	--
C19-C36 ALIPHATICS	280000	42000	not a concern	--	--	--	--	--	--	--	--	--	--
C9-C10 AROMATICS	3400	560	380	--	--	--	--	--	--	--	--	--	--
C9-C12 ALIPHATICS	11000	1700	31000	--	--	--	--	--	--	--	--	--	--
C9-C18 ALIPHATICS	21000	2900	140000	--	--	--	--	--	--	--	--	--	--
TRPH (C08-C40)	2700	460	340	12.8 U	11.7 U	11.6 U	11.4 U	11.6 U	11.3 U	12.1 U	13.5 U	13.8 U	17.4 J

TABLE 3-3
SOIL LABORATORY ANALYTICAL RESULTS

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida
Page 2 of 2

LOCATION	FL CTL 62-777 Industrial Soil-Direct	FL CTL 62-777 Residential Soil-Direct	FL CTL 62-777 Leachability Based GW	MPT-289-SS11	MPT-289-SS12	MPT-289-SS13	MPT-289-SS14	MPT-289-SS15	MPT-289-SS16	MPT-289-SS17	MPT-289-SS18	MPT-289-SS19
SAMPLE IDENTIFICATION				MPT-289-SS11-03-20120124	MPT-289-SS12-07-20120125	MPT-289-SS13-07-20120125	MPT-289-SS14-07-20120125	MPT-289-SS15-07-20120125	MPT-289-SS16-07-20120125	MPT-289-SS16-07-20120126	MPT-289-SS16-07-20120127	MPT-289-SS16-07-20120128
SAMPLE DATE				1/24/2012	1/25/2012	1/25/2012	1/25/2012	1/25/2012	1/25/2012	5/23/2012	5/23/2012	7/25/2012
VOLATILES (µg/kg)												
METHYLENE CHLORIDE (1)	26000	17000	20	1.41 U	--	--	--	--	--	--	--	--
POLYCYCLIC AROMATIC HYDROCARBONS (µg/kg)												
1-METHYLNAPHTHALENE (1)	1800000	200000	3100	1.76 U	--	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE (1)	2100000	210000	8500	1.76 U	--	--	--	--	--	--	--	--
ACENAPHTHENE (1)	20000000	2400000	2100	1.76 U	--	--	--	--	--	--	--	--
ACENAPHTHYLENE (1)	20000000	1800000	27000	1.76 U	--	--	--	--	--	--	--	--
ANTHRACENE (1)	300000000	21000000	2500000	1.76 U	--	--	--	--	--	--	--	--
BAP EQUIVALENT-HALFND (1)	700	100	8000	1.76 U	--	--	--	--	--	--	--	--
BAP EQUIVALENT-POS (1)	700	100	8000	1.76 U	--	--	--	--	--	--	--	--
BENZO(A)ANTHRACENE (1)	--	--	800	1.76 U	--	--	--	--	--	--	--	--
BENZO(A)PYRENE (1)	700	100	8000	1.76 U	--	--	--	--	--	--	--	--
BENZO(B)FLUORANTHENE (1)	--	--	2400	1.76 U	--	--	--	--	--	--	--	--
BENZO(G,H,I)PERYLENE (1)	52000000	2500000	32000000	1.76 U	--	--	--	--	--	--	--	--
BENZO(K)FLUORANTHENE (1)	--	--	24000	1.76 U	--	--	--	--	--	--	--	--
CHRYSENE (1)	--	--	77000	1.76 U	--	--	--	--	--	--	--	--
DIBENZO(A,H)ANTHRACENE (1)	--	--	700	1.76 U	--	--	--	--	--	--	--	--
FLUORANTHENE (1)	59000000	3200000	1200000	1.76 U	--	--	--	--	--	--	--	--
FLUORENE (1)	33000000	2600000	160000	1.76 U	--	--	--	--	--	--	--	--
INDENO(1,2,3-CD)PYRENE (1)	--	--	6600	1.76 U	--	--	--	--	--	--	--	--
NAPHTHALENE (1)	300000	55000	1200	1.76 U	--	--	--	--	--	--	--	--
PHENANTHRENE (1)	36000000	2200000	250000	1.76 U	--	--	--	--	--	--	--	--
PYRENE (1)	45000000	2400000	880000	1.76 U	--	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS (mgkg)												
C11-C22 AROMATICS	15000	1800	1000	--	5300 R L	--	--	--	4100 R L	--	--	--
C19-C36 ALIPHATICS	280000	42000	not a concern	--	4200	--	--	--	2100	--	--	--
C9-C10 AROMATICS	3400	560	380	--	2000 R L	--	--	--	2000 R L	--	--	--
C9-C12 ALIPHATICS	11000	1700	31000	--	510	--	--	--	970	--	--	--
C9-C18 ALIPHATICS	21000	2900	140000	--	18000 R L	--	--	--	10000 R	--	--	--
TRPH (C08-C40)	2700	460	340	11.4 U	62300	14.1 J	12.7 U	13.3 U	41400	14 U	86.5	35.5

Notes:
(1) = The criteria value for this parameter has been converted to match the reported result.
(2) = The criteria units and the result units for this parameter do not match, and a unit conversion mapping has not been established. Exceedance shading was not performed.
-- = The chemical was not analyzed or no value was available.
Data Qualifiers:
Blank (i.e., no qualifier) = the chemical was detected.
> = The chemical was detected.
J = The chemical was detected but the concentration reported is an estimated value.
U = The chemical was not detected.
< = The chemical was not detected.
R = The chemical was rejected.

TABLE 3-4
GROUNDWATER LABORATORY ANALYTICAL RESULTS

Site Assessment Report, Site 289
Naval Station Mayport
Jacksonville, Florida

LOCATION	FL CTL 62-777 GW-Table I	MPT-289-MW01	MPT-289-MW02		MPT-289-MW03D		MPT-289-MW04	MPT-289-MW05	MPT-289-PZ01	MPT-289-PZ02	MPT-289-PZ02
SAMPLE IDENTIFICATION		MPT-289-MW01-20120712	MPT-289-MW02-20120712	MPT-289-MW02-20121101	MPT-289-MW03D-20120712	MPT-289-MW03D-20121101	MPT-289-MW04-20120712	MPT-289-MW05-20120712	PZ-1-20111219	PZ-2-20111219	MPT-289-PZ02-081612
SAMPLE DATE		7/12/2012	7/12/2012	11/1/2012	7/12/2012	11/1/2012	7/12/2012	7/12/2012	12/19/2011	12/19/2011	8/16/2012
SEMIVOLATILES (µg/L)											
1-METHYLNAPHTHALENE	28	0.0463 U	0.814	1.83	4.58	0.522	0.0463 U	0.0463 U	0.0467 U	0.0485 U	--
2-METHYLNAPHTHALENE	28	0.0463 U	0.596	0.206	3.32	0.357	0.0463 U	0.0463 U	0.0467 U	0.0485 U	--
ACENAPHTHENE	20	0.0463 U	0.0706 J	0.049 U	0.435	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.0485 U	--
BENZO(A)ANTHRACENE	0.05	0.0463 U	0.0463 U	0.049 U	0.1 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.103 J	0.0463 U
BENZO(A)PYRENE	0.2	0.0463 U	0.0463 U	0.049 U	0.0719 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.0778 J	--
BENZO(B)FLUORANTHENE	0.05	0.0463 U	0.0463 U	0.049 U	0.1 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.112 J	0.0463 U
BENZO(G,H,I)PERYLENE	210	0.0463 U	0.0463 U	0.049 U	0.0895 U	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.145 J	--
BENZO(K)FLUORANTHENE	0.5	0.0463 U	0.0463 U	0.049 U	0.0936 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.101 J	--
CHRYSENE	4.8	0.0463 U	0.0463 U	0.049 U	0.104 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.0987 J	--
DIBENZO(A,H)ANTHRACENE	0.005	0.0463 U	0.0463 U	0.049 U	0.089 U	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.134 J	0.0463 U
FLUORANTHENE	280	0.0463 U	0.0463 U	0.049 U	0.145 J	0.0463 U	0.0801 J	0.0463 U	0.0467 U	0.0975 J	--
FLUORENE	280	0.0463 U	0.0463 U	0.049 U	0.695	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.0485 U	--
INDENO(1,2,3-CD)PYRENE	0.05	0.0463 U	0.0463 U	0.049 U	0.0851 J	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.115 J	0.0463 U
NAPHTHALENE	14	0.0463 U	0.192	0.237	0.518	0.0463 U	0.0463 U	0.0463 U	0.0467 U	0.0485 U	--
PHENANTHRENE	210	0.0926 U	0.148 J	0.049 U	0.736	0.0463 U	0.115 J	0.0926 U	0.0935 U	0.0971 U	--
PYRENE	210	0.0463 U	0.0463 U	0.0711	0.157 J	0.0697	0.0723 J	0.0463 U	0.0467 U	0.0958 J	--
PETROLEUM HYDROCARBONS (mg/L)											
TRPH (C08-C40) (1)	5	0.157 U	2.08	NS	1.04	NS	0.157 U	0.157 U	0.17 U	0.17 U	--

Notes:
(1) = The criteria value for this parameter has been converted to match the reported result.
(2) = The criteria units and the result units for this parameter do not match, and a unit conversion mapping has not been established. Exceedance shading was not performed.
-- = The chemical was not analyzed or no value was available.
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J = The chemical was detected but the concentration reported is an estimated value.
U = The chemical was not detected.
< = The chemical was not detected.
R = The chemical was rejected.

4.0 SUMMARY

In March 2010, approximately 40 gallons of diesel fuel leaked out of the fill port of an abandoned UST at Building 289, reportedly caused by rain water filling the tank. The release flowed across the asphalt parking lot into a storm drain, and then into the stormwater ditch along the southern site boundary. Approximately 300 gallons of diesel fuel and 200 gallons of an oil/water mixture was pumped out of the tank. The parking lot was scrubbed with absorbent material, and 30 cubic yards of contaminated soil was removed and samples were collected to determine if the soil was impacted by the release. All waste was transported to at the Mayport NAVSTA hazardous storage facility for disposal. Subsequently, the area was backfilled with the empty tank in place.

In February 2011, the estimated 500-gallon capacity, non-regulated UST was removed, and closure assessment activities were performed. The UST had previously stored heating oil used to heat the building, but had reportedly been taken out of service approximately 15 years ago. Upon removal, the UST was noted as being rusted and in generally poor condition. Only soils required to facilitate the tank removal activities were excavated. Sampling results during the closure assessment indicated TRPH impacts to soil in excess of FDEP SCTLs. Groundwater samples showed concentrations less than the applicable FDEP GCTLs.

The SA activities performed by Tetra Tech in late 2011 and 2012 included soil gas surveys and multiple soil and groundwater sampling events in the areas of both the former UST and the stormwater ditch. No soil screening sample exceeded 10 ppm and most were at or below background detection levels. Soil samples collected for laboratory analysis from the ditch area did not record a detection in excess of FDEP SCTLs. Conversely, soil samples collected adjacent to the former UST location (SS-12 and SS-16) showed concentrations exceeding the FDEP SCTLs for TRPH for residential direct exposure scenarios and potential leachability to groundwater.

Multiple groundwater sampling events were conducted at the ditch and former tank area. Groundwater quality data for samples collected in December 2011 from temporary well MPT-289-PZ-02-20111219 located in the stormwater ditch showed PAH constituents exceeding FDEP GCTLs. According to the Groundwater Sampling Sheet associated with this sampling event (see Appendix D), the turbidity readings for stabilization samples were elevated with the lowest reading at stabilization being 207.1 Nephelometric turbidity units (NTUs), and samples were described as “cloudy.” The elevated turbidity readings appeared to be a trend that would affect future sampling results. Therefore, a new temporary well was installed at the same approximate location as temporary well MPT-289-PZ-02-081612 in August 2012, and samples were collected to verify the previous groundwater quality results. According to the Groundwater Sampling Sheet associated with this sampling event (see Appendix D), the turbidity readings were much lower with

the lowest reading at stabilization being 12.1 NTUs, and samples were described as “clear.” Groundwater quality data for samples collected in August 2012 from temporary well MPT 289 PZ 02 081612 showed no PAH constituents exceeding FDEP GCTLs. The initial and subsequent verification samples at both locations were collected in accordance with FDEP Standard Operating Procedures and delivered to Empirical Laboratories in Nashville, Tennessee for analyses of PAHs using United States Environmental Protection Agency Method 8270.

Similarly, groundwater quality data for samples collected in July 2012 at the tank pit from MPT-289-MW-03D showed benzo(a)anthracene, benzo(b)fluoranthene, and indeno(1,2,3-cd)pyrene concentrations exceeding the FDEP GCTLs. According to the Groundwater Sampling Sheet associated with this sampling event (see Appendix D), the turbidity readings for stabilization samples were elevated with the lowest reading at stabilization being 24.45 NTUs, and samples were described as “cloudy”. Additional samples were collected from MPT-289-MW-03D in November 2012 to verify the previous results apparently impacted by the elevated turbidity in the samples submitted for analyses. According to the Groundwater Sampling Sheet associated with this sampling event (see Appendix D), the turbidity readings for stabilization samples were less than 5.0 NTUs, with the lowest reading at stabilization being 3.84 NTUs, and samples were described as “yellow.” Groundwater quality data for samples collected in November 2012 from MPT-289-MW-03D showed no PAH constituents exceeding FDEP GCTLs.

Tetra Tech understands that the solubility of PAH compounds decreases with increasing molecular weight and that PAHs are hydrophobic and tend to adsorb to particles. Therefore, elevated turbidity readings recorded for stabilization samples collected at both locations apparently resulted in increased accumulation of PAH compounds and yielded analytical results that were not indicative of the site groundwater conditions only, but of the groundwater and suspended particles.

5.0 RECOMMENDATIONS

Based on the results obtained during this investigation, Tetra Tech recommends discussing options with NAVFAC SE to develop a Remedial Action Plan (RAP) to address the impacts to soil exceeding the FDEP SCTLs in the area of the former heating oil UST. The RAP recommendations may include implementing land use controls in this area of the site.

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APPENDIX A

SITE ASSESSMENT SUMMARY SHEET

SITE ASSESSMENT REPORT SUMMARY SHEET

Facility Name: Site 289 Reimbursement Site: ☐

Location: NAVSTA Mayport State Contract Site: ☐

EDI #: _____ FAC I.D.# _____ Other: Non-Prog. ☑

Date Reviewed: _____ Local Government: _____

(1) Source of Spill: Former UST Date of Spill: March 29, 2010

(2) Type of Product:

Gasoline Group	Gallons Lost	Unknown	Kerosene Group	Gallons Lost
☐ Leaded			☐ Kerosene	
☐ Unleaded Regular		x	X Diesel 40	
☐ Unleaded Premium			☐ JP-4 Jet Fuel	
☐ Gasohol			☐ Heating Fuel	
☐ Undetermined			X Unknown	Unknown

(3) Description of IRA: See Appendix B

IAP-HILL documentation

☐ Free product Removal: _____ (gals)
☐ Soil Removal: _____ (cubic yds)
☐ Soil Incineration: _____ (cubic yds)

(4) Free Product still present (yes/no) No Maximum apparent product thickness: N/A (feet)

(5) Maximum Groundwater contamination levels (ppb): Total VOA: BDL benzene: BDL EDB: BDL lead: BDL MTBE: BDL other: _____

(6) Brief lithologic description: Medium to fine sand. No significant lithologic variations across site.

(7) Areal and vertical extent of soils contamination defined (yes/no) Soil contaimantion present at tank pit

Highest current soil concentration (OVA: 3.8 ppm) or (EPA method 5030/8020: _____ ppb)

(8) Lower aquifer contaminated? (yes/no) No Depth of vertical contamination: N/A.

(9) Date of last complete round of groundwater sampling: 1/25/12 Date of last soil sampling: 7/25/12

(10) QAPP approved? (yes/no) Date: NA

(11) Direction (e.g. NNW) of surficial groundwater flow: S-SE (Figs. 3-1 & 3-2 on page _____)

(12) Average depth to groundwater: 6 5.0 ft.

(13) Observed range of seasonal groundwater fluctuations: 0.1 ft (ft) (Based on water level data collected during the CAR investigation)

(14) Estimated rate of groundwater flow: 0.044 (ft/day)

(15) Hydraulic gradient across site: 0.066 0.0008 ft/ft

(16) Aquifer characteristics:

	Values	Units	Method
Hydraulic conductivity	16.4	ft/day	Kasenow & Pare, 1995
Storage coefficient	-	ft/ft	-
Aquifer thickness		ft	Literature
Effective soil porosity	0.30	%	Literature
Transmissivity		gal/day/ft	Specific Capacity Tests

(17) Other remarks: None

APPENDIX B

TABLES AND FIGURES FROM PREVIOUS INVESTIGATIONS

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Full Service Environmental Consultants

Commercial/Industrial Services Telecommunications Services Environmental Testing & Sampling Ecological Services

UNDERGROUND STORAGE TANK CLOSURE ASSESSMENT REPORT

Mayport Naval Station Building 289
Mayport Naval Station, Mayport, Florida
Facility ID #8626008
Contract #: N69450-09-G-5087-0005

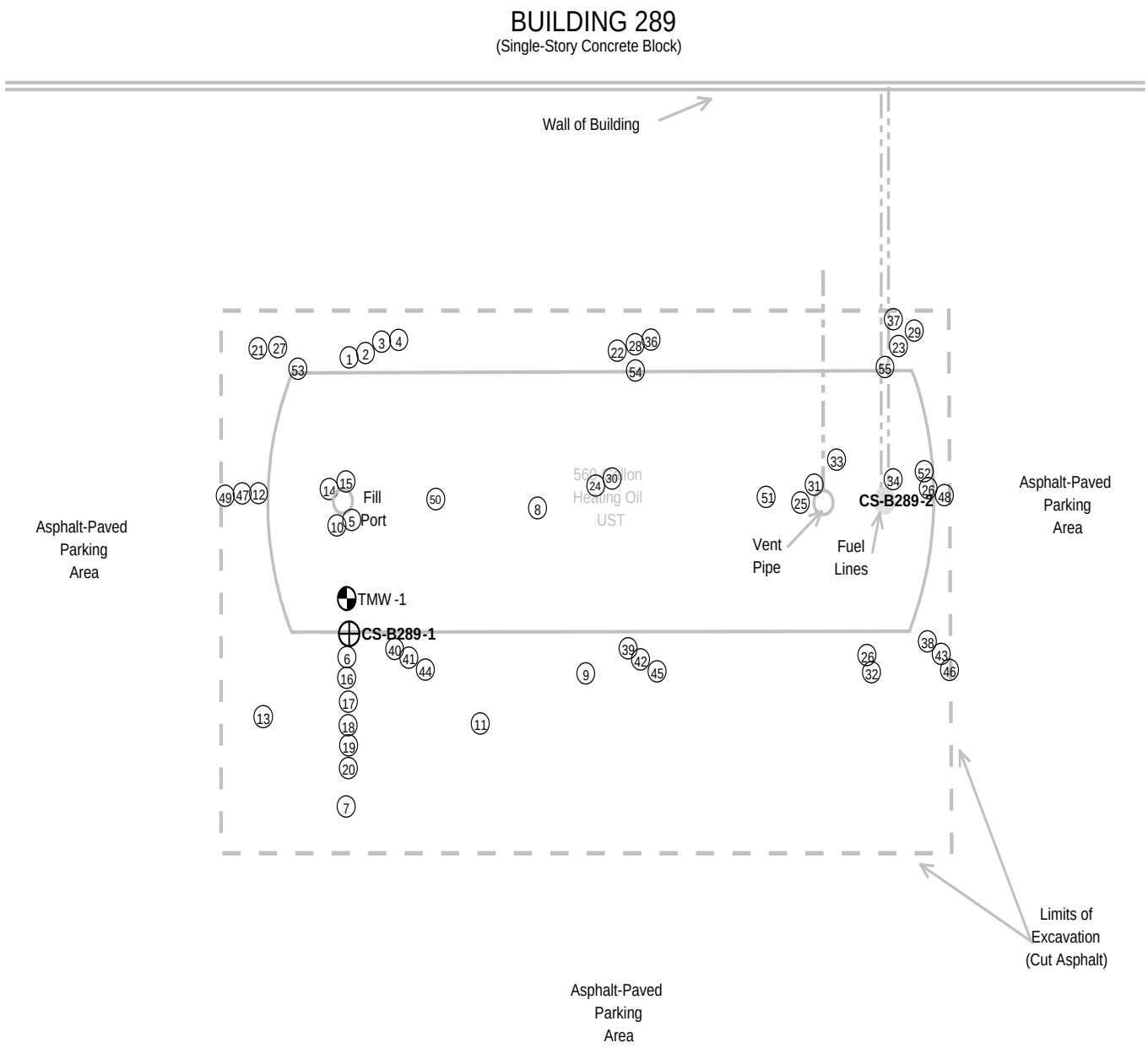
Prepared for:

Gulf Tech Construction, LLC
6800 Phillips Highway, Suite 48
Jacksonville, Florida 32216

Prepared by:

Martin Environmental Solutions Inc
8823 San Jose Boulevard, Suite 103
Jacksonville, Florida 32217

February 2011



Graphic Scale

0 2 ft

Legend

1 = OVA Soil Sampling Location

= Confirmatory Soil Sampling Location

= Temporary Monitor Well Location

MartinEnviro
Martin Environmental Solutions Inc

Figure 4. Site Diagram Indicating Soil and Groundwater Sampling Locations

Naval Station Mayport- Housing Center Building
Building 289
Jacksonville, Duval County, Florida

NORTH

Table 1 – Summary of OVA Soil Vapor Headspace Screening Results
Underground Storage Tank Closure Assessment
Building 289, Naval Station Mayport
Mayport, Duval County, Florida

Sample ID	Depth (ft bls)	PID Reading (ppm)	Remarks
1	Surficial	1.2	East side of tank, adjacent to fill port, just below asphalt pavement
2	1 ft	4.1	1 ft below Sample #1
3	2 ft	6.4	1 ft below Sample #2
4	3 ft	7.6	1 ft below Sample #3
5	Surficial	5.6	Center of tank, at Fill Port, just below asphalt pavement
6	Surficial	0.0	West side of tank, adjacent to fill port, just below asphalt pavement
7	Surficial	0.0	West wall of tank pit, just below asphalt pavement
8	1.5 ft	0.0	Top of tank, midpoint, center
9	1.5 ft	0.0	West wall of tank pit, center
10	1.5 ft	0.0	At fill Port, below Sample #5
11	1.5 ft	0.0	West wall of tank pit
12	1.5 ft	0.0	North end of tank, center
13	1.5 ft	0.0	NW Corner of tank pit
14	1.0 ft	8.3	At mid-depth of Fill Port
15	2.0 ft	11.1	Base of Fill Port, Top of Tank
16	3.0 ft	1.4	Soil Boring on West side of tank, adjacent to fill port
17	4.0 ft	38.6	Soil Boring on West side of tank, adjacent to fill port
18	5.0 ft	51.1	Soil Boring on West side of tank, adjacent to fill port
19	6.0 ft	**178**	Soil Boring on West side of tank, adjacent to fill port (just above water table)
20	7.0 ft	**146**	Soil Boring on West side of tank, adjacent to fill port (GW saturation)
21	Surficial	0.0	Northeast corner of tank pit, just below asphalt pavement
22	Surficial	0.5	East side of tank, mid-point, just below asphalt pavement
23	Surficial	0.0	Southeast corner of tank pit, just below asphalt pavement
24	Surficial	0.0	Center of tank, just below asphalt pavement
25	Surficial	0.0	South end of tank, just below asphalt pavement
26	Surficial	0.0	Southwest corner of tank pit, just below asphalt pavement
27	1.5 ft	3.0	Northeast corner of tank pit (below Sample #21)
28	1.5 ft	0.2	East side of tank, mid-point (below Sample #22)
29	1.5 ft	0.0	Southeast corner of tank pit(below Sample #23)
30	2.0 ft	0.0	Top of tank, center (below Sample #24)
31	1.5 ft	0.7	Just below vent pipe elbow
32	1.5 ft	2.0	Southwest corner of tank pit(below Sample #26)
33	2.0 ft	0.0	Top of tank, at Vent Pipe connection/elbow
34	2.0 ft	0.0	Top of tank, at fuel line connection
35	2.0 ft	0.0	East side of tank, NE corner (below sample #27)
36	2.0 ft	0.0	East side of tank, center
37	2.0 ft	0.0	East side of tank, SE corner (below Fuel Lines)

Field Equipment: Mini Rae 2000 Photo Ionization Detector
BLS = Below Land Surface; SB = Soil Boring; ppm = Parts per Million; PID = Photo Ionization Detector

Table 1 – Summary of OVA Soil Vapor Headspace Screening Results, continued
Underground Storage Tank Closure Assessment
Building 289, Naval Station Mayport
Mayport, Duval County, Florida

Sample ID	Depth (ft bls)	PID Reading (ppm)	Remarks
38	3.0 ft	0.2	West side of tank, SW corner
39	3.0 ft	4.1	West side of tank, center
40	3.0 ft	78.9	West side of tank, NW corner
41	4.0 ft	18.3	
42	4.0 ft	38.8	
43	4.0 ft	24.1	
44	6.0 ft	98.7	
45	6.0 ft	59.2	
46	6.0 ft	4.7	
47	2.5 ft	1.5	North end of tank
48	2.5 ft	0.0	South end of tank
49	5.0 ft	64.7	North end of tank
50	6.0 ft	93.1	Base of tank pit (below former UST location), north end
51	6.0 ft	33.5	Base of tank pit (below former UST location), south end
52	5.0 ft	16.3	South end of tank
53	5.0 ft	27.1	East wall, NE corner of tank pit
54	5.0 ft	9.0	East wall, center of tank pit
55	5.0 ft	0.9	East wall, SE corner of tank pit

Field Equipment: Mini Rae 2000 Photo Ionization Detector
BLS = Below Land Surface; SB = Soil Boring; ppm = Parts per Million; PID = Photo Ionization Detector

Table 2 – Summary of Confirmatory Soil Analysis
Underground Storage Tank Closure Assessment
Building 289, Naval Station Mayport
Mayport, Duval County, Florida

ANALYTE	SAMPLE ID (mg/kg)		FDEP Soil Cleanup Target Levels* (mg/kg)		
	CS-B289-1	CS-B289-2	Residential	Commercial	Leachability
VOLATILE ORGANIC COMPOUNDS: (EPA Method 8260)					
Benzene	0.0011	U (0.00022)	1.2	1.7	0.007
Ethylbenzene	0.00062	U (0.00044)	1,500	9,200	0.6
Toluene	U (0.0014)	U (0.0013)	7,500	60,000	0.5
Xylenes	0.0020	U (0.00088)	130	700	0.2
tert-Butyl methyl ether (MTBE)	U (0.00045)	U (0.00044)	4,400	24,000	0.09
POLYNUCLEAR AROMATIC HYDROCARBONS: (EPA Method 8270)					
Acenaphthene	U (0.033)	U (0.032)	2,400	20,000	2.1
Acenaphthylene	U (0.036)	U (0.035)	1,800	20,000	27
Anthracene	U (0.035)	U (0.032)	21,000	300,000	2,500
Benzo(a)anthracene	U (0.035)	U (0.034)	1.3	6.6	0.8
Benzo(a)pyrene	U (0.027)	U (0.026)	0.1	0.7	8.0
Benzo(b)Fluoranthene	U (0.027)	U (0.026)	1.3	6.5	2.4
Benzo(g,h,i)perylene	U (0.037)	U (0.036)	2,500	52,000	32,000
Benzo(k)fluoranthene	U (0.048)	U (0.046)	1.3	6.6	24
Chrysene	U (0.016)	U (0.015)	130	640	77
Dibenzo(a,h)anthracene	U (0.023)	U (0.022)	0.1	0.7	0.7
Fluoranthene	U (0.030)	U (0.029)	3,200	59,000	1,200
Fluorene	U (0.023)	U (0.022)	2,600	33,000	160
Indeno(1,2,3-cd)pyrene	U (0.014)	U (0.013)	1.3	6.6	6.6
1--Methylnaphthalene	0.037	U (0.026)	200	1,800	3.1
2-Methylnaphthalene	U (0.035)	U (0.034)	210	2,100	8.5
Naphthalene	U (0.040)	U (0.038)	55	300	1.2
Phenanthrene	U (0.031)	U (0.030)	2,200	36,000	250
Pyrene	0.074	U (0.025)	2,400	45,000	880
TOTAL PETROLEUM HYDROCARBONS: (FL-PRO Method)					
FL-PRO	3080	86.1	460	2,700	340

*Soil Cleanup Target Levels as per Chapter 62-777,F.A.C., Table II
Numbers in **BOLD** indicate exceedences
U = Undetected at the Specified Detection Limit; NA = Not Applicable
*** Leachability values are derived using the SPLP Test to calculate site-specific SCTLs or may be determined using TCLP in the event oily wastes are present.

Table 3. Summary of Groundwater Analysis
Underground Storage Tank Closure Assessment
Building 289, Naval Station Mayport
Mayport, Duval County, Florida

ANALYTE	SAMPLE ID TMW-B289-1 (µg/L)	FDEP GROUNDWATER CLEANUP TARGET LEVELS* (µg/L)
VOLATILE ORGANIC COMPOUNDS: EPA METHOD 8260		
Benzene	U (0.350)	1
Toluene	U (0.470)	40
Ethylbenzene	U (0.520)	30
Total Xylenes	U (0.980)	20
MTBE	U (0.440)	20
POLYNUCLEAR AROMATIC HYDROCARBONS:EPA METHOD 8270		
Acenaphthene	0.220	20
Acenaphthylene	U (0.035)	210
Anthracene	U (0.027)	2100
Benzo(a)anthracene	U (0.027)	0.05
Benzo(a) pyrene	U (0.037)	0.2
Benzo(b)fluoranthene	U (0.048)	0.05
Benzo(g,h,i)perylene	U (0.016)	210
Benzo(k)fluoranthene	U (0.023)	0.5
Chrysene	U (0.030)	4.8
Dibenzo(a,h)anthracene	U (0.023)	0.005
Fluoranthene	U (0.014)	280
Fluorene	0.299	280
Indeno(1,2,3-cd)pyrene	U (0.035)	0.05
1- Methylnaphthalene	2.75	28
2- Methylnaphthalene	2.22	28
Naphthalene	1.44	14
Phenanthrene	0.228	210
Pyrene	U (0.025)	210

*Groundwater Cleanup Target Levels as per Chapter 62-777,F.A.C., Table I
U = Undetected at the Specified Detection Limit; NA = Not Applicable; TMW = Temporary Monitor Well
Numbers in **BOLD** indicate exceedences

Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Facility/Site Name: Mayport Building 289
Location: Mayport Naval Station
Facility/Site ID No.: 8626008

Soil Sample No. CS-B289-1
Sample Date 1/18/2011
Location: Hot Spot- Floor of Excavation North End
Depth (ft): 6 feet

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter the contaminant concentrations (in mg/kg) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):

1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.014	1.0	0.0140
Benzo(a)anthracene	0.018	0.1	0.0018
Benzo(b)fluoranthene	0.014	0.1	0.0014
Benzo(k)fluoranthene	0.024	0.01	0.0002
Chrysene	0.008	0.001	0.0000
Dibenz(a,h)anthracene	0.012	1.0	0.0120
Indeno(1,2,3-cd)pyrene	0.007	0.1	0.0007

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 0.0

The concentration shown does not exceed the Residential Direct Exposure SCTL of 0.1 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 0.7 mg/kg.

Summary Criteria for Table Entries			
Detection	**Concentration Reported**	**Data Qualifier**	**Enter**
Various	Quantified with certainty	None	reported value
Various	Estimated	J	reported (estimated) value
ND at MDL	MDL	U	1/2 reported value
< MDL	Estimated	T	reported (estimated) value
≥ MDL but < PQL	Estimated	I	reported (estimated) value
≥ MDL but < PQL	PQL	M	1/2 reported value

Benzo(a)pyrene Conversion Table

For Direct Exposure Soil Cleanup Target Levels

Facility/Site Name: Mayport Building 289
Location: Mayport Naval Station
Facility/Site ID No.: 8626008

Soil Sample No. CS-B289-2
Sample Date 1/18/2011
Location: Floor of Excavation - south end
Depth (ft): 6 feet

INSTRUCTIONS: Calculate Total Benzo(a)pyrene Equivalents if at least one of the carcinogenic PAHs is detected in the sample at a concentration equal to or higher than the Method Detection Limit (MDL), whether quantified with certainty (the concentration reported has no qualifier) or estimated (the concentration reported has a "J", "T" or "I" qualifier). Enter the contaminant concentrations (in mg/kg) for all seven carcinogenic PAHs in the yellow boxes using the following criteria (and see table below):

1. If quantified with certainty, or estimated and has the "J" qualifier, enter the reported value;
2. If not detected at the MDL (the concentration reported is the MDL followed by the "U" qualifier) enter 1/2 of the reported value;
3. If detected at a concentration lower than the MDL and the concentration is estimated (has the "T" qualifier) enter the estimated value;
4. If detected at a concentration equal to or higher than the MDL but lower than the Practical Quantitation Limit (PQL) and the concentration is estimated (has the "I" qualifier) enter the estimated value;
5. If detected at a concentration equal to or higher than the MDL but lower than the PQL and it is not estimated (the concentration reported is the PQL followed by the "M" qualifier) enter 1/2 of the reported value.

Contaminant	Concentration (mg/kg)	Toxic Equivalency Factor	Benzo(a)pyrene Equivalents
Benzo(a)pyrene	0.013	1.0	0.0130
Benzo(a)anthracene	0.017	0.1	0.0017
Benzo(b)fluoranthene	0.013	0.1	0.0013
Benzo(k)fluoranthene	0.023	0.01	0.0002
Chrysene	0.080	0.001	0.0001
Dibenz(a,h)anthracene	0.011	1.0	0.0110
Indeno(1,2,3-cd)pyrene	0.014	0.1	0.0014

DE Residential = 0.1 mg/kg; DE Industrial = 0.7 mg/kg

Total Benzo(a)pyrene Equivalents = 0.0

The concentration shown does not exceed the Residential Direct Exposure SCTL of 0.1 mg/kg.

The concentration shown does not exceed the Industrial Direct Exposure SCTL of 0.7 mg/kg.

Summary Criteria for Table Entries			
Detection	**Concentration Reported**	**Data Qualifier**	**Enter**
Various	Quantified with certainty	None	reported value
Various	Estimated	J	reported (estimated) value
ND at MDL	MDL	U	1/2 reported value
< MDL	Estimated	T	reported (estimated) value
≥ MDL but < PQL	Estimated	I	reported (estimated) value
≥ MDL but < PQL	PQL	M	1/2 reported value

Date: April 7, 2010
File No. 2301-291

Rhonda O'Connor
NAVFAC Southeast (IPT South Atlantic)
Box 30, Bldg 135 NAS JAX
Jacksonville, FL 32212-0030

Subject: Contract No. N62467-00-D-2451

Reference: Annex 4

Para 4.2.4.2a

Title Post Spill Requirements

Contract deliverable is forwarded pursuant to cited contract reference. Enclosed is the Spill/Clean-Up Report Form and the Site Specific Safety and Health Plan for spill response. This spill is a contractor generated spill and does not count toward the contractual amount of OSOT response.

On Monday, March 29, 2010 approximately 40 gallons of diesel fuel leaked out of the fill port of an abandoned underground storage tank at Bldg 289. Approximately 300 gallons of diesel fuel and 200 gallons of Oily/water mixture was pumped out of the tank. The parking lot was scrubbed with absorbent material and 30 cu yards of contaminated soil was dug up. All waste was disposed of through the part B facility. Soil samples were taken from the "clean" soil and once results are received, the area will be backfilled and new sod will be laid. The tank is still in place, but empty. Base Environmental will explore options of abandoning in place or removing the tank. Advance notification was provided to the Public Works Office, COR representative and Station Environmental on March 30, 2010 via e-mail.

If you have any questions, please contact the undersigned.

Name: Wade Musgrave

Title: Environmental Manager, RBOS Jacksonville

Telephone: (904) 778-1452

(Signature)

Cc:

☐ Mr. Jimmy Pacetti
NAS Jacksonville
P.O. Box 30, Bldg. 103
Jacksonville, FL 32212-0139
IAP-H Contracts Manager

☒ Mr. David Burnett
NS Mayport
P.O. Box 2807, Bldg. 1966
Mayport, FL 32228-0157

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OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION SITE SPECIFIC HEALTH AND SAFETY PLAN

A. SITE DESCRIPTION:

1. Date: 3/29/10 2. Location: Bldg 289 - Housing office

3. Material Spilled: diesel Fuel 4. Size of Spill: ≈ 40gal

5. Hazard Class **(a thru e)**:

(a) Fire ☐ (b) Reactive ☐ (c) Pressure Release ☐ (d) Acute Health ☐

(e) Chronic Health ☐ — Pending analytical

6. Quantity Estimated: ≈40gal 7. Area Effected: East of Bldg 289 running into Storm water Catch South of Bldg 289 running East

8. Cause of Release (Be Specific):
Underground Storage tank overfilled with rain water causing diesel product to spill out of spill port.

9. Weather Conditions: Clear Temperature (F): 75°F

Wind Direction: From east

10. Topography/Terrain: Concrete / grass

B. ON-SCENE OPERATIONS TEAM (OSOT):

Title	Name	Time on Scene	Function / Assignment
Safety Officer	Patricia Kostic	11:15	Direct
OSOT Leader	Patricia Kostic	11:15	Direct/clean up
OSOT Team Member	Jerry McCammon	10:40	Clean up
OSOT Team Member	Andrew Wactor	10:40	Clean up
OSOT Team Member	Jason Woodle	4/1/10	Heavy Equip Operator
OSOT Team Member			
OSOT Team Member			

iAP-HILL

OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION SITE SPECIFIC HEALTH AND SAFETY PLAN

C. INITIAL ENTRANCE TO AFFECTED SITE (*Specific Health and Safety Plan*):
Initial Entrance Objective: The objective of the initial entrance to the contaminated area is To describe actions and tasks to be accomplished (i.e. identify contaminate, clean-up area, monitoring conditions, etc.):

Call recieved was for a 1 gallon oil spill; Upon further review; it was found that diesel fuel was Comming out of a fill port of an Underground Storage tank. We realized we were going to need further Clean up efforts than initially thought.

D. ON SITE CONTROL: Patricia Kostic OSOT Team Member has been designated to coordinate access control and security on site. A safe perimeter has been established at (distance or description of the controlled area):

Parking lot entry marked with Cones and Caution tape

(No Unauthorized personnel should be in this area)

1. **Exclusion Zone:**
   a. Time the Zone is Secured off: 10:40 a.m. ☒ p.m. ☐
   b. Entrance Control Point: West side of Building Parking lot.
   c. Location and Marker Type: Cones & work trucks.
2. **Contamination Reduction Zone (If necessary):**
   a. Time the Zone is Secured off: 10:40 a.m. ☒ p.m. ☐
   b. Entrance Control Point: Parking lot entry.
   c. Location and Marker Type: Cones; traffic flaggers & Caution tape
3. **Support Zone:**
   a. FD/IAP-H Command Post Location (If established): Service desk
   b. Time IAP-H Command Post Established: Service desk a.m. ☒ p.m. ☐ 10:34
4. **Substances Involved:** — Pending analytical
   a. Substance Known? **Yes** ☐ **No** ☐
   b. MSDS: **Yes** ☐ **No** ☐
   c. Substance Description: appears to be diesel

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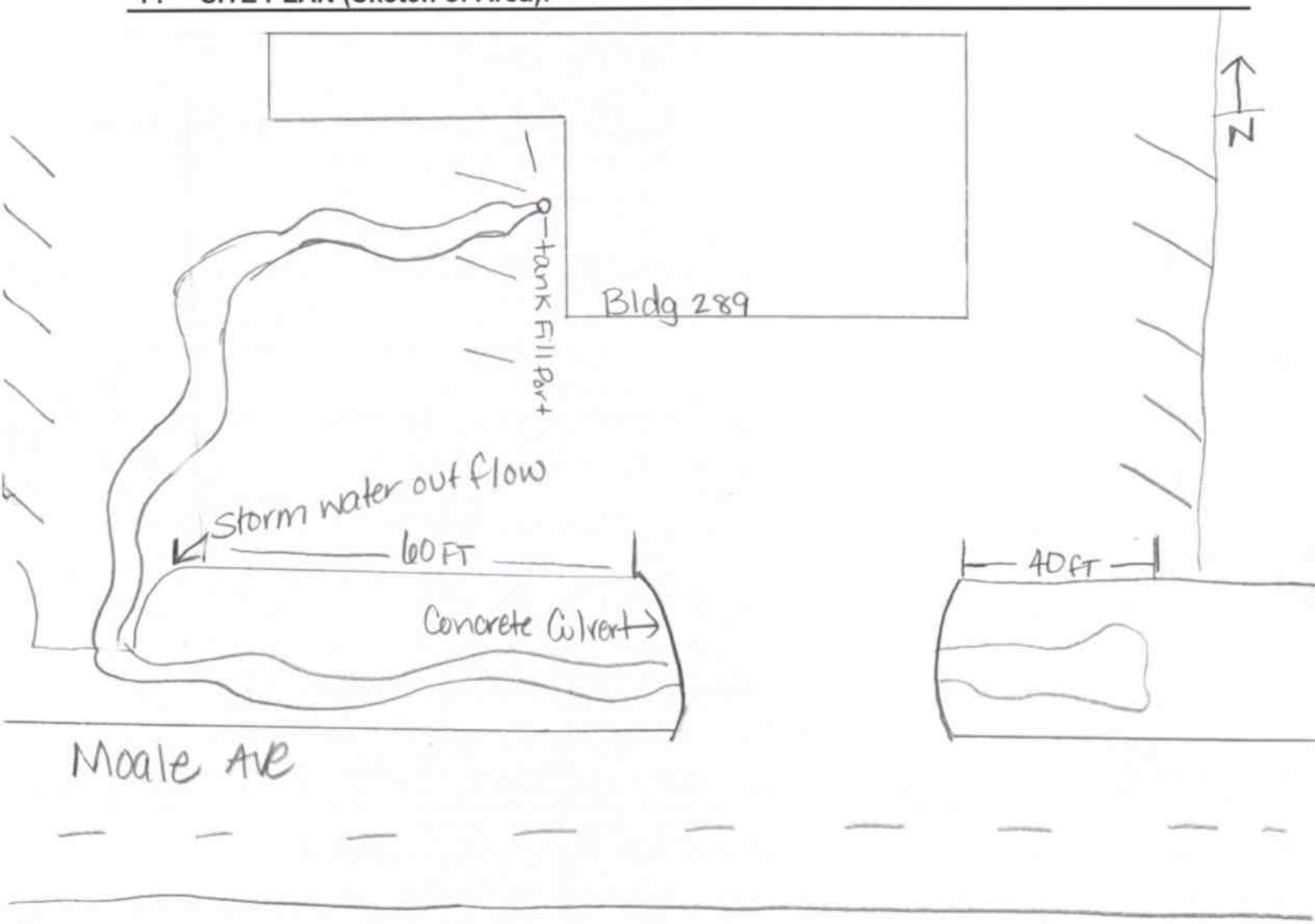
OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN

E. HAZARDS:

a.	Flammable	Yes ☐	No ☐	Flash Point: _____ F
b.	Explosive	Yes ☐	No ☐	
c.	Water Reactive	Yes ☐	No ☐	
d.	Corrosive	Yes ☐	No ☐	pH: _____
e.	Acid	Yes ☐	No ☐	pH: _____
f.	Base	Yes ☐	No ☐	pH: _____
g.	Toxic	Yes ☐	No ☐	
h.	Inhalation	Yes ☐	No ☐	
i.	Skin	Yes ☐	No ☐	

Pending analysis

F. SITE PLAN (Sketch of Area):



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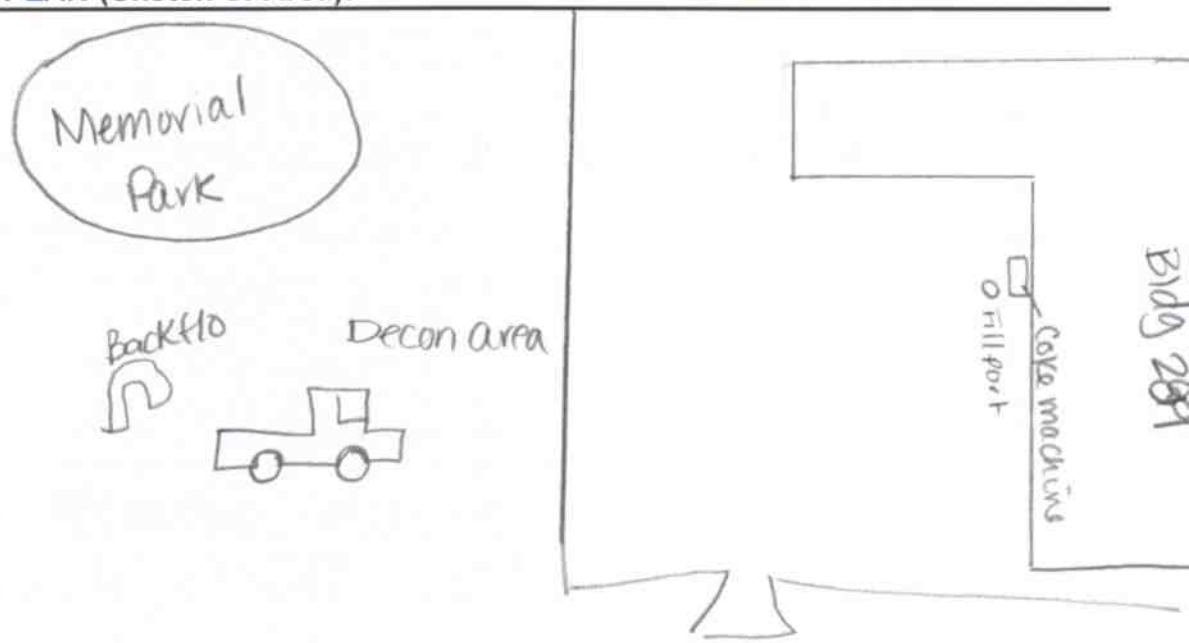
OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION SITE SPECIFIC HEALTH AND SAFETY PLAN

G. DECON SITE PLAN (Sketch of Area):



Decon Officer: Patricia Kostic

Decon Equipment: Soap & water

Description of Decon: wash hands

H. PERSONAL PROTECTION EQUIPMENT (PPE)- (LEVEL D FOR THIS FORM):

a. Exclusion Zone (Spill Area): AT A MINIMUM, PPE ~~FOR~~ LEVEL D IS: BOOTS, GLOVES, and ~~TYVEK SUIT~~. Additional Level D PPE if needed: Hard Hat/~~Face Protection~~ Hard hat &

b. Contamination Zone (DECON AREA): Hard hat & hazard vest & Steel toe traffic vest.

c. Reduction Zone: Hard hat & hazard vest & steel toe

work uniform

I. INSTALLATION RESTORATION (IR) SITE:

1. Is the Site an Installation Restoration Site? **Yes** ☐ **No** ☒
2. **If answer is YES,** what is the known **IR** site contaminant? _____
3. MSDS: **Yes** ☐ **No** ☐

OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION
SITE SPECIFIC HEALTH AND SAFETY PLAN

4. **IR SITE HAZARDS:**

NA

a.	Flammable	Yes ☐	No ☐	Flash Point: _____ F
b.	Explosive	Yes ☐	No ☐	
c.	Water Reactive	Yes ☐	No ☐	
d.	Corrosive	Yes ☐	No ☐	pH: _____
e.	Acid	Yes ☐	No ☐	pH: _____
f.	Base	Yes ☐	No ☐	pH: _____
g.	Toxic	Yes ☐	No ☐	
h.	Inhalation	Yes ☐	No ☐	
i.	Skin	Yes ☐	No ☐	

J. COMMUNICATION:

1. Contact Information

Name	Work Phone	Cell/Beeper Number	Home Phone
Deane Mills, S&H Manager	542-3962(JAX)	707-4415	777-5537
Wade Musgrave, JAX ES&H Manager	778-1452	707-4416	880-4646
Patty Kostic, MPT ES&H Manager	270-6761	312-8110	
Fire Department/Ambulance (Jacksonville)	911 or 542-3333		
Fire Department/Ambulance (Mayport)	911 or 270-5333		
PWC CDO	509-5125	967-6767	
Ed Keen, COTR (NAS Jacksonville)	542-5571 x 209		
Bettye Kersey, COTR (NAVSTA Mayport)	270-6343		
"Emergency Treatment Facility"			
NAS Jacksonville: Naval Hospital	911 if an emergency		
NAVSTA Mayport: Medical Clinic	911 if an emergency		

OIL/HAZARDOUS SUBSTANCE SPILL RELEASE - LEVEL D PROTECTION SITE SPECIFIC HEALTH AND SAFETY PLAN

K. SAFETY BRIEF HELD? Yes ☒ No ☐

a. Confined Space? **Yes ☐ No ☒ (If yes, follow IAP-H confined space entry procedures)**
b. Heat stress can be a factor when temperatures are > 70° F and humidity is > 50%.
c. Is a dig locate required? **Yes ☒ No ☐ (trenches > 4 feet must have slope sides or shoring installed)**
d. Does the clean up site have adequate oxygen? **Yes ☒ No ☐ (if not, level B or A PPE is required*) Use IAP-H form 3010-600 if levels C, B, or A are required***

Oxygen Level Detection Equipment Calibration Information:

Equip. _____ MFR: _____ Model No.: _____

Date of Calibration: _____ Name of Calibrator: _____

e. Where is the closest eye wash station? Back flow spickot by memorial park
f. What communication means is available? ☒ Cell Phone ☒ Radio ☐ Land Line
g. Discuss the possible use of respirators. not needed
h. Ensure newly arriving IAP-H OSOT members are briefed on the spill site clean up scenario.
i. If in doubt, call the IAP-H Environmental Manager for assistance.

L. DISPOSAL METHOD:

a. HW: **Yes ☐ No ☒** - liquid is pending analysis
b. Size of Disposal Containers: Gallons: — Other: (3) 250 gal totes (2) 25 yard roll off (2) tri axalls
c. Number of Containers: 7 Containers
d. Container Pick-Up Notification (NASJAX Only) Time/Date: N/A POC: N/A

Site and/or Area Clean-up Completed at (*Specify Time of Day*): 4/6/2010 11:00 a.m. ☒ p.m. ☐

OSOT Leader: _____ Date: 4/6/2010
(*Signature required*)

iAP-HILL

Annex 4-Environmental
SPILL RESPONSE FORM

Spill Call Worksheet
Service Call Reception Desk (SCRD)

Work Call Number: 884362 **Date:** 3-29-10
Location: 289 **Time:** 10:34
Name & Identification of Caller: Trish Loop **Phone # of Caller:**
****SPECIFIC DIRECTIONS TO SPILL SITE (Safe Route):** Housing parking lot
car leaked oil less than a gallon

****TYPE OF MATERIAL SPILLED** Less than a gallon of oil

****Amount of Material Spilled:**

****Immediate Hazards Involved:**

****CAUSE OF Release (BE SPECIFIC):**

****Nearest Receiving Stream:**

****Danger to Public Safety:**

On Scene Incident Commander:

Contacts Made:

Environmental Manager: Patty **Time:** 10:36

OSOT Members:	Supervisor	Team Leader (Y or N)	Time:
Patty Kostic		N	10:36
Jerry McCammon		N	10:37

For Mayport Spills:
-Contact Harbor Ops for spills in the water at **270-5266**. **Name/Time:**
-Contact Mayport Emergency Services at **911**. **Name/Time:** Danielle 10:43
-Page Station Environmental at 812-1168. **Name/Time:** Trish Loop 10:34
-During normal working hours, contact the COTR/Bill Burns (**270-6343**). **Name/Time:** Dave Burnette 10:40am - left mess
-After normal working hours, contact the PWC CDO at **904/509-5125** **Name/Time:**
For NAS Jax Spills:
-Contact NAS Jax Emergency Services at **911**. **Name/Time:**
-During normal working hours, contact the COTR/J. Pacetti (**542-5571x209**) **Name/Time:**
-After normal working hours, contact the PWC CDO at **904/509-5125** **Name/Time:**
For BIC Spills:
- Contact the BIC ESOH/Shari Kennedy at **696-5140 OR 294-0885.** **Name/Time:**

NAVFAC SE Code PRMP-12
Public Work Office Engineering Department
Excavation Permit No.
MYPT-02/10-104

EMERGENCY LOCATE
Fuel Spill @ Bldg 289

Contractor: IAP-Hill

Contractor Representative Signature: _____
Jim Bryant

Sunshine State One Call of Florida and Naval station Mayport Have completed
Locating and Marking Underground Utilities in Excavation Site
On Date 30 March 2010

NAVFAC SE (Code PRMP 12) Public Work Office
at Naval Station Mayport
Michael McVann at telephone number (904) 270-5207

Excavation Permit Issued by: _____
M. J. McVann

NAVFAC SE PRMP 12

Utility Locate Request Form

for

Excavation Permit

NAVFAC SE Form 12001 (Rev A) 2009

Locate Request Number **MYPT 03/10-104**

1a. Requestor (Company Name)	Date Requested	Date Required
IAP-Hill	03/29/2010	**ASAP (Emergency Locate)**

1b. Requesting Individual:	Office Phone	Cell Phone	Fax
Jim Bryant	904-270-6761	904-403-1583	904-249-9752

E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl POC Mike McVann (904) 270-5207
E-Mail Address:michael.mcvann@navy.mil

2a. Project Title: Sub-Contractor/Excavator:
EXCAVATE FUEL SPILL

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
IAP-Hill requests locate and mark underground utilities in the area of along Moale Ave. in the vicinity of Bldg 289 as shown on attached maps. Backhoe will be used to excavate an area 160' x 18' x 3' deep. Areas to be marked with white paint.

3. NAVFAC SE Locate Request Processor
Processor: M. J. McVann Processor Signature: M. J. McVann Date Received: 03/29/10

Processor Commennts:

4. Utility Organization Telphone	Ticket No.	Date	comments & Initials
4a. IAP-Hill (R-Bos Contractor) (904) 270-5347 Secondary Utility (Electric, Water , Sewer)	884421	3/30/10	
4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)	P.O.	3/30/10	
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	088007043	3/29/2010	
4d. NMCI : Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6162 ext 13 (Government Fiber Optics)		3/29/10	
4e. GEMD Bldg 2215 POC : Charles Rusbridge (904) 270-6148 Government Communications Cable		3/30/10	
4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables	10089001	3/30/10	
4g. Navy Fuel Depot POC :Wayne Wragg (904) 696-6556 ext 200 Under Ground Fuel Distribution System		3/30/10	
4h. SPAWARs/SASE POC :Mathew Richards (904) 866-6291 SPAWARs Fiber Optic Cables	NR	3/30/10	mgm
4i. NAVFAC SE Environmental POC :Cheryl Mitchel Bldg 2021 Telphone(904) 270-67301		3/30/2010	Area has known petroleum contamination. Contractor aware. DFears

Processors Name: Michael McVann Date: 3/30/10 Processors Signature: MJ McVann

Notes:

1. Locators please initial and date Excavation Permit Request when locates are completed, Fax signed copy to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil
2. Naval Station Locators (JEA, IAP-Hill, NCTC, NMCI, Environmental and GEMD) are provided five (5) working days to complete Locate and mark underground utilities in proposed excavation sites.
3. Requestor shall provide a copy of Sunshine State Reports to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil

NAVFAC SE PRMP 12

Utility Locate Request Form for Excavation Permit

NAVFAC SE Form 12001 (Rev A) 2009

Locate Request Number **MYPT 03/10-104**

1a. Requestor (Company Name)	Date Requested	Date Required
IAP-Hill	03/29/2010	**ASAP (Emergency Locate)**

1b. Requesting Individual:	Office Phone	Cell Phone	Fax
Jim Bryant	904-270-6761	904-403-1583	904-249-9752

E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl — POC Mike McVann (904) 270-5207
E-Mail Address.michael.mcvann@navy.mil

2a. Project Title: — Sub-Contractor/Excavator:
EXCAVATE FUEL SPILL

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
IAP-Hill requests locate and mark underground utilities in the area of along Moale Ave. in the vicinity of Bldg 289 as shown on attached maps. Backhoe will be used to excavate an area 160' x 18' x 3' deep. Areas to be marked with white paint.

3. NAVFAC SE Locate Request Processor
Processor: M. J. McVann Processor Signature: M. J. McVann Date Received: 03/29/10

Processor Commennts:

4. Utility Organization Telphone	Ticket No.	Date	comments & Initials
4a. IAP-Hill (R-Bos Contractor) (904) 270-5347 Secondary Utility (Electric, Water , Sewer)			
4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)			
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	088007043	3/29/2010	
4d. NMCI : Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6162 ext 13 (Government Fiber Optics)			
4e. GEMD Bldg 2215 POC : Charles Rusbridge (904) 270-6148 Government Communications Cable			
4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables			
4g. Navy Fuel Depot POC :Wayne Wragg (904) 898-6556 ext 200 Underground Fual Distribution System		3/30/2010	No known bulk U/G fuel piping in indicated area.
4h. SPAWARs/SASE POC :Mathew Richards (904) 866-6291 SPAWARs Fiber Optic Cables			
4i. NAVFAC SE Environmental POC :Cheryl Mitchel Bldg 2021 Telphone(904) 270-67301			

Processors Name: Michael McVann Date: _____ Processors Signature: _____

Notes:
1. Locators please initial and date Excavation Permit Request when locates are completed, Fax signed copy to NAVFAC SE PRMP 12. Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil
2. Naval Station Locators (JEA, IAP-Hill, NCTC, NMCI, Environmental and GEMD) are provided five (5) working days to complete Locate and mark underground utilities in proposed excavation sites.
3. Requestor shall provide a copy of Sunshine State Reports to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil

NAVFAC SE PRMP 12
Utility Locate Request Form
for
Excavation Permit

NAVFAC SE Form 12001 (Rev A) 2009

Locate Request Number MYPT 03/10-104

1a. Requestor (Company Name): IAP-Hill
Date Requested: 03/29/2010
Date Required: **ASAP (Emergency Locate)**

1b. Requesting Individual: Jim Bryant
Office Phone: 904-270-6761
Cell Phone: 904-403-1583
Fax: 904-249-9752
E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl
POC Mike McVann (904) 270-5207
E-Mail Address:michael.mcvann@navy.mil

2a. Project Title: EXCAVATE FUEL SPILL
Sub-Contractor/Excavator:

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
IAP-Hill requests locate and mark underground utilities in the area of along Moale Ave. in the vicinity of Bldg 289 as shown on attached maps. Backhoe will be used to excavate an area 160' x 18' x 3' deep. Areas to be marked with white paint.

3. NAVFAC SE Locate Request Processor
Processor: M. J. McVann Processor Signature: M. J. McVann Date Received: 03/29/10
Processor Commennts:

4. Utility Organization Telphone	Ticket No.	Date	comments & Initials
4a. IAP-Hill (R-Bos Contractor) (904) 270-5347 Secondary Utility (Electric, Water , Sewer)			
4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)			
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	088007043	3/29/2010	
4d. NMCI - Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6162 ext 13 (Government Fiber Optics)		3/29/10	NO NMCI CABLE IN AREA AS PER DUG Dean Jorgensen
4e. GEMD Bldg 2215 POC : Charles Rusbridge (904) 270-6148 Government Communications Cable			
4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables			
4g. Navy Fuel Depot POC :Wayne Wragg (904) 696-8556 ext 200 Under Ground Fuel Distribution System			
4h. SPAWARs/SASE POC :Mathew Richards (904) 866-6291 SPAWARs Fiber Optic Cables			
4i. NAVFAC SE Environmental POC :Cheryl Mitchel Bldg 2021 Telphone(904) 270-67301			

Processors Name: Michael McVann Date: _____ Processors Signature: _____

Notes:
1. Locators please initial and date Excavation Permit Request when locates are completed, Fax signed copy to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil
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3. Requestor shall provide a copy of Sunshine State Reports to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil

NAVFAC SE PRMP 12
Utility Locate Request Form
for
Excavation Permit

NAVFAC SE Form 12001 (Rev A) 2009

Locate Request Number **MYPT 03/10-104**

1a. Requestor (Company Name)	Date Requested	Date Required
IAP-Hill	03/29/2010	**ASAP (Emergency Locate)**

1b. Requesting Individual:	Office Phone	Cell Phone	Fax
Jim Bryant	904-270-6761	904-403-1583	904-249-9752

E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl POC Mike McVann (904) 270-5207
E-Mail Address:michael.mcvann@navy.mil

2a. Project Title: Sub-Contractor/Excavator:
EXCAVATE FUEL SPILL

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
IAP-Hill requests locate and mark underground utilities in the area of along Moale Ave. in the vicinity of Bldg 289 as shown on attached maps. Backhoe will be used to excavate an area 160' x 18' x 3' deep. Areas to be marked with white paint.

3. NAVFAC SE Locate Request Processor
Processor: M. J. McVann Processor Signature: M. J. McVann Date Received: 03/29/10

Processor Commennts:

4. Utility Organization Telphone	Ticket No.	Date	comments & Initials
4a. IAP-Hill (R-Bos Contractor) (904) 270-5347 Secondary Utility (Electric, Water , Sewer)			
4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)			
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	088007043	3/29/2010	
4d. NMCI : Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6162 ext 13 (Government Fiber Optics)			
4e. GEMD Bldg 2215 POC : Charles Rusbridge (904) 270-6148 Government Communications Cable		3/30/10	N/A CTR
4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables			
4g. Navy Fuel Depot POC :Wayne Wragg (904) 696-6556 ext 200 Under Ground Fuel Distribution System			
4h. SPAWARs/SASE POC :Mathew Richards (904) 866-6291 SPAWARs Fiber Optic Cables			
4i. NAVFAC SE Environmental POC :Cheryl Mitchel Bldg 2021 Telphone(904) 270-67301			

Processors Name: Michael McVann Date: Processors Signature:

Notes:
1. Locators please initial and date Excavation Permit Request when locates are completed, Fax signed copy to NAVFAC SE PRMP 12, Attn : Mike McVann FAX (904) 270-5115, or e-mail: michael.mcvann@navy.mil
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NAVFAC SE PRMP 12
Utility Locate Request Form
for
Excavation Permit

Form 12001 (Rev A) 2009

Locate Request Number MYPT 03/10-104

or (Company Name)

Date Requested: 03/29/2010

Date Required: ASAP (Emergency Locate)

requesting Individual: m Bryant

Office Phone: 904-270-6761

Cell Phone: 904-403-1[illegible]3

Fax: 904-249-9752

E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl
E-Mail Address:michael.mcvann@navy.mil

POC Mike McVann (904) 270-5207

2a. Project Title:
EXCAVATE FUEL SPILL

Sub-Contractor/Excavator:

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
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3. NAVFAC SE Locate Request Processor
Processor: M. J. McVann Processor Signature: M. J. McVann Date Received: 03/29/10

Processor Comments:

4. Utility Organization Telphone	Ticket No.	Date	comments & Initials
4a. IAP-Hill (R-Bos Contractor) (904) 270-5347 Secondary Utility (Electric, Water , Sewer)	884421	3-30-10	[illegible]
4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)			
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	089007043	3/29/2010	
4d. NMCI : Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6162 ext 13 (Government Fiber Optics)			
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4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables			
4g. Navy Fuel Depot POC :Wayne Wragg (904) 695-6556 ext 200 Under Ground Fuel Distribution System			
4h. SPAWARs/SASE POC :Mathew Richards (904) 865-6291 SPAWARs Fiber Optic Cables			
4i. NAVFAC SE Environmental POC :Cheryl Mitchel Bldg 2021 Telphone(904) 270-67301			

Processors Name: Michael McVann Date: Processors Signature:

Notes:

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NAVFAC SE PRMP 12
Utility Locate Request Form
for
Excavation Permit

NAVFAC SE Form 12001 (Rev A) 2009

Locate Request Number MYPT 03/10-104

1a. Requestor (Company Name): IAP-Hill
Date Requested: 03/29/2010
Date Required: ASAP (Emergency Locate)

1b. Requesting Individual: Jim Bryant
Office Phone: 904-270-6761
Cell Phone: 904-403-1583
Fax: 904-249-9752
E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl
POC Mike McVann (904) 270-5207
E-Mail Address:michael.mcvann@navy.mil

2a. Project Title:
EXCAVATE FUEL SPILL

Sub-Contractor/Excavator:

2b. Scope of Excavation (Specify Purpose, Method, Length, Width and Depth of Excavation) Provide Location and Site Maps
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4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables	10080001	3/30/2010	Complete [illegible]
4g. Navy Fuel Depot POC :Wayne Wragg (904) 696-6556 ext 200 Under Ground Fuel Distribution System			
4h. SPAWARs/SASE POC :Mathew Richards (904) 866-6291 SPAWARs Fiber Optic Cables			
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Utility Locate Request Form
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Excavation Permit

Form 12001 (Rev A) 2009 — Locate Request Number **MYPT 03/10-104**

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Requesting Individual:	Office Phone	Cell Phone	Fax
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E-Mail Address:

1c. Government Contracting Office:
NAVFAC SE PRMP 12 Naval Station Mayport, Fl — POC Mike McVann (904) 270-5207
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4b. JEA (904) 270-5397 Primary Utility (Electric, Water , Sewer)	P.O	3/30/2010	[illegible] Located [illegible]
4c. Sunshine State One Call Of Florida 1-800-432-4770 (Natural Gas / AT&T Telephone / CATV	068007043	3/29/2010	
4d. NMCI : Bldg 12 POC: Dean Jorgensen Telephone (904) 270-6182 ext 13 (Government Fiber Optics)			
4e. GEMD Bldg 2215 POC : Charles Rusbridge (904) 270-6146 Government Communications Cable			
4f. NCTC/ GMSI NAS Jax POC :John Buettgen (904) 542-4569 Navy Owned- Copper Telephone Cables			
4g. Navy Fuel Depot POC :Wayne Wragg (904) 695-6556 ext 200 Under Ground Fuel Distribution System			
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APPENDIX C

SOIL FIELD SHEETS

1126C 3576

NAVSTA MAYPORT
BLDG. 289; SOIL INVESTIGATION

1 NOVEMBER 2011

PERSONNEL: Z. SCRIBNER, K. WEICHERT; D. SIEFKEN
VEHICLE: ~~KE~~ 2006 F-250
PPE: LEVEL "D"
WEATHER: CLEAR 60°F WINDY
OBJECTIVE: INSTALL PIEZOMETERS AND COLLECT SOIL SCREENING RESULTS FROM LAND SURFACE TO THE WATER TABLE IN AREAS IMPACTED BY THE FUEL RUNOFF/SPILL

0600 ZS + KW ARRIVED AT TT OFFICE AND LOADED TRUCK W/ EQUIPMENT AND SUPPLIES

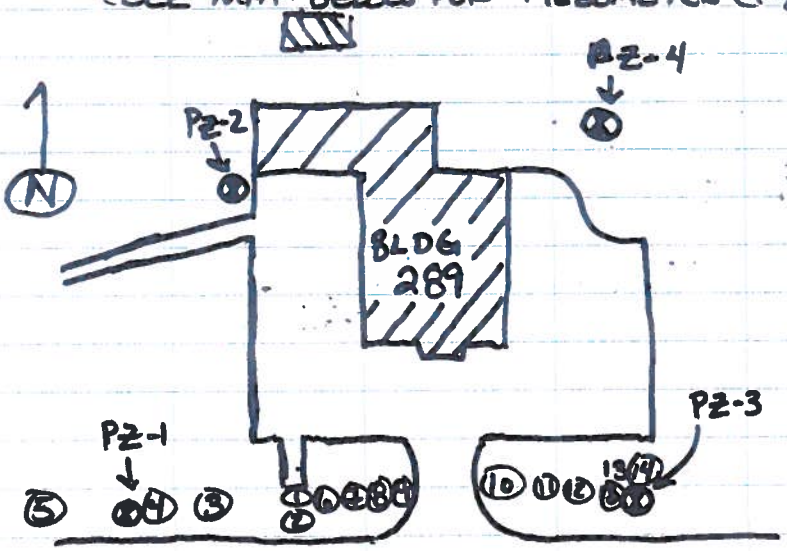
0630 ZS + KW DEPARTED TT OFFICE TO FILL THE TRUCK W/ GAS AND TO MEET DS AT NAVSTA MPT.

0705 ZS + KW MET DS NEAR BASE TO DELIVER DS HIS CREDENTIALS; DS, ZS, + KW THEN PROCEEDED TO BASE

0715 ZS + KW ARRIVED ON SITE AT BLDG 289, DS WENT TO ENVIRONMENTAL OFFICE TO ACQUIRE THE DIG PERMIT; ZS AND KW BEGAN INSTALLING PIEZOMETERS, CALIBRATING EQUIPMENT, AND SETTING UP A WORK STATION

0730 DS ARRIVED ONSITE W/ DIG PERMIT + ADDITIONAL PAPERWORK THAT DEPICTED THE PREVIOUS EXTENT + LIMITS OF THE FUEL SPILL; ZS, KW, + DS ALSO WALKED THE SITE AND WENT OVER WHAT NEEDED TO BE ACCOMPLISHED

0800 DS DEPARTED SITE, ZS + KW RESUMED PIEZOMETER INSTALLATION. (SEE MAP BELOW FOR PIEZOMETER (PZ) LOCATIONS)



PIEZOMETER	DEPTH TO H2O	DEPTH OF SCREEN
PZ-1	≈ 5.5'	≈ 9'
PZ-2		≈ 10'
PZ-3		≈ 7'
PZ-4		≈ 7'

(#) - INDICATES SOIL SCREENING LOCATION

1100 ZS + KW COMPLETED PZ INSTALLATIONS + DEPARTED SITE FOR LUNCH

1145 ZS + KW RETURNED TO SITE, SET UP A SOIL SCREENING STATION, VERIFIED/CALIBRATED FID READINGS AND BEGAN COLLECTING DATA. (SEE MAP ABOVE FOR SOIL SCREENING LOCATIONS AND THE TABLE ON THE FOLLOWING PAGE FOR SOIL SCREENING INFORMATION AND DETAILS.)

SOIL SCREENING LOCATION	INTERVAL	CH4 (ppm)	DEPTH TO SOIL SAT.
1	0006	0.0	N/A ON CONCRETE DRAIN
	0624	N/A	
	0204	N/A	
	0405	N/A	
2	0006	0.0	5'
	0624	0.0	
	0204	0.0	
	0405	0.0	
3	0006	0.0	5'
	0624	0.0	
	0204	0.0	
	0405	0.0	
4	0006	0.0	5'
	0624	0.0	
	0204	0.0	
	0405	0.0	
5	0006	0.0	5'
	0624	0.0	
	0204	0.0	
	0405	0.0	
6	0006	0.0	5'
	0624	0.0	
	0204	0.0	
	0405	0.0	
7	0006	0.0	4'
	0624	0.0	
	0204	0.0	
8	0006	0.0	4'
	0624	0.0	
	0204	0.0	
9	0006	0.0	3'
	0624	0.0	
	0203	0.0	
10	0006	0.0	3'
	0624	0.0	
	0203	0.0	
11	0006	0.0	3'
	0624	0.0	
	0203	0.0	

SCREENING LOCATION	INTERVAL	CH4 (ppm)	DEPTH TO SOIL SAT.
12	0006	0.0	3'
	0624	0.0	
	0203	0.0	
13	0006	0.0	3'
	0624	0.0	
	0203	0.0	
14	0006	0.0	3'
	0624	0.0	
	0203	0.0	

NOTE: ① NO CARBON FILTERS WERE USED DUE TO THE NON DETECTIONS OF CH4

② ZS + KW VERIFIED THE ACCURACY OF THE MICROFID THROUGHOUT THE SCREENING PROCESS. (AT 1245, 1330, 1400)

NAVSTA MPT

112G03576 BLDG 289 1 NOVEMBER 2011

1420 ZS AND KW COMPLETED INITIAL SCREENING OF THE DITCH; AND DEPARTED NAVSTA MPT FOR LOWE'S TO ACQUIRE TOOLS AND SUPPLIES FOR TOMORROW.

1450 ZS + KW ARRIVED AT LOWE'S AND PURCHASED SUPPLIES NECESSARY FOR TOMORROW

1525 ZS AND KW RETURNED TO TC OFFICE

11/1/11

NAVSTA MAYPORT

112G03576 BLDG 289 - SOIL INVESTIGATION 2 NOVEMBER, 2011

PERSONNEL: Z. SCRIBNER, K. WEICHERT
VEHICLE: 2006 F-250
PPE: LEVEL "D"
WEATHER: CLEAR, WINDY 60°F
OBJECTIVE: CONTINUE SOIL SCREENING AT AREAS THOUGHT TO BE IMPACTED BY THE FUEL SPILL, SURVEY PIEZOMETERS (PZ) AND DETERMINE PHYSICAL BOUNDARIES OF THE PREVIOUS DIG BY COMPARING SOIL HORIZONS.

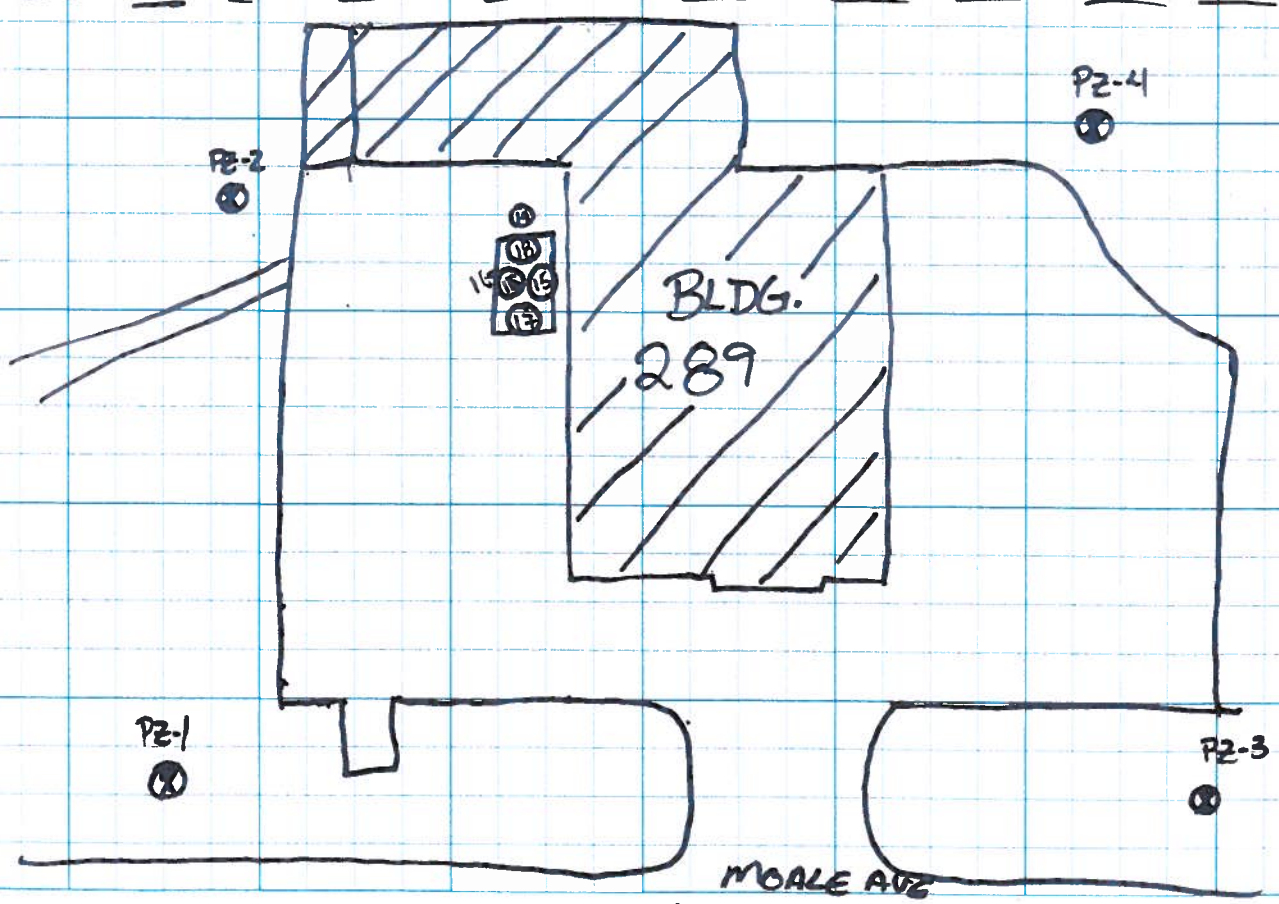
0600 ZS + KW ARRIVED AT TC OFFICE AND LOADED NECESSARY EQUIPMENT AND SUPPLIES

0630 ZS + KW DEPARTED FOR NAVSTA MPT, ENVIRONMENTAL OFFICE

0715 ZS + KW ARRIVED AT ENV. OFFICE TO ACQUIRE ADDITIONAL INFORMATION FROM TRISHA ABOUT THE PREVIOUS EXCAVATION AT BLDG ~~289~~ 289; TRISHA WILL NOT BE ON BASE/AVAILABLE UNTIL 1200, HAD PRIOR ENGAGEMENTS AND MEETINGS OFF BASE. ; ZS + KW DEPARTED FOR SITE

0735 ZS + KW ARRIVED ON SITE - BLDG 289; BEGAN READYING EQUIPMENT AND SUPPLIES FOR CONTINUED SOIL SCREENING (e.g. FID CALIBRATION, SCREENING SUPPLIES AND ~~CORE~~ TOOLS TO CORE THROUGH ASPHAULT.)

0805 ZS + KW BEGAN CORING THROUGH ASPHAULT AT THE LOCATION OF THE RECENTLY REMOVED UST. (SEE MAP BELOW FOR UST LOCATION AND SCREENING POINTS [TODAY'S POINTS WILL BEGIN AT 15])



NAVSTA MAYPORT

112G03576 BUILDING 289 2 NOVEMBER 2011

0825 KW + ZS BEGIN SCREENING SOILS

LOCATION	INTERVAL	CH_4 PPM	FILTERED PPM	H_2O DEPTH
15	0006"	0.0	0.0	- ~~REFUS~~
	0624"	0.4	0.0	- REFUSAL DUE TO FILL ROCK @ 2'
16	0006"	0.0	—	
	0624"	0.0	—	- REFUSAL DUE TO FILL ROCK @ 2'
17	0006"	0.0	—	
	0624"	0.0	—	
	0204'	0.0	—	
	0406'	0.0	—	

0945- FID CAL CHECK - 94.8 ppm on 95 ppm CAL GAS

17	0607'	0.0	—	- H_2O SATURATION @ 7'
18	0006"	0.0	—	
	0624"	0.0	—	
	0204'	0.0	—	
	0406'	0.0	—	
	0607'	3.8	0.0	- H_2O SATURATION @ 7'

1100 KW + ZS BREAK FOR LUNCH

1145 KW + ZS AT NAVFAC WAITING FOR TRISH - SHE WILL NOT HAVE TIME TO MEET KW + ZS TODAY

1210 KW + ZS AT 289 - BEGIN CORING ASPHALT + SCREENING

LOCATION	INTERVAL	CH_4 PPM	FILTERED PPM	H_2O DEPTH
19	0006	0.0	—	
	0624	0.0	—	- REFUSAL AT 2'
~~20~~	~~0006~~	~~0.0~~	—	

1330 KW + ZS BEGIN TOC SURVEY OF THE 4 PIEZOMETERS

	1ST SHOT	2ND SHOT	H_2O DEPTH	TOTAL DEPTH
PZ-01	5.49'	5.56'	7.37'	9.51'
PZ-02	3.53'	3.60'	5.44'	7.76'
PZ-03	7.25'	7.32'	3.72'	6.97'
PZ-04	8.65'	8.72'	2.28'	6.51'

— H_2O DEPTHS + TOTALS SWITCHED FOR PZ-01 + PZ-02

1405- KW + ZS BEGIN DIGGING TRENCHES TO FIND EDGE OF ORIGINAL EXCAVATION.

112G03576 BUILDING 289 2 NOVEMBER 2011

1450 ZS + KW DETERMINED THE EXTENTS (LATERALLY [N TO S]) OF THE PREVIOUS EXCAVATION ON THE WEST SIDE OF THE CULVERT; ZS + KW MARKED AREAS AND WILL RETURN TO SCREEN THE OUTER LIMITS OF THE EXCAVATION

1455 ZS + KW BEGAN SITE CLEANUP

1515 ZS + KW DEPARTED BASE FOR TC OFFICE

1555 ZS + KW ARRIVED AT TC OFFICE

ZS

11/2/11

NAVSTA MAYPORT

112603676 SITE 289 3 NOV. 2017

PERSONNEL: K. WEICHERT Z. SCRIBNER
TRUCK: 2006 F-250
PPE: LEVEL "D"
WEATHER: COOL, 60°, CLOUDY
OBJECTIVE: CONTINUE SOIL SCREENING AT 289

0600 KW + ZS AT TENUS OFFICE LOADING TRUCK
0640 KW + ZS DEPART FOR NAVSTA MAYPORT
0710 KW + ZS AT 4'3 GETTING WATER FOR CORE SAW
0730 KW + ZS AT 289, BEGIN CORING + CALIBRATING FID
0745 KW + ZS BEGIN SCREENING.

LOCATION	INTERVAL	CH4 PPM	FILTERED PPM	H_2O DEPTH
~~20~~	0006			

CORE DRILL SHORTS OUT BREAKER (TRIPS IT) 2x, MUST GO GET GENERATOR
0900 KW + ZS ON SITE w/ GENERATOR

LOCATION	INTERVAL	CH4 PPM	FILTERED PPM	H_2O DEPTH
20	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	
	0607'	0.0	–	-7'
21	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	
	0607'	0.0	–	7'

-CAL CHECK FID- 94.8 PPM w/ 95 PPM cal gas

22	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	
	0607'	0.0	–	7'

1115 - KW + ZS BREAK FOR LUNCH

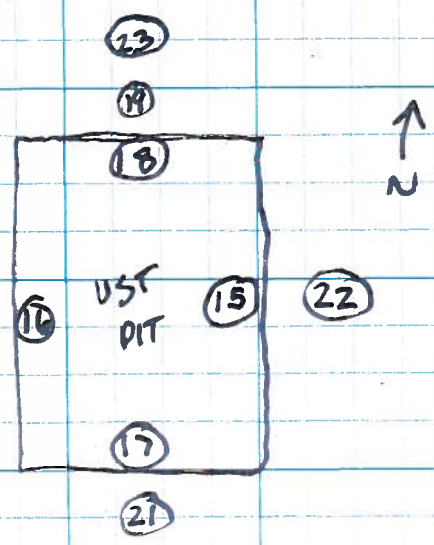
NAUSTA MAYNORI

112603576 SITE 289 3 NOV 2011

1145 KW + ZS ON SITE - CONTINUE SCREENIN

LOCATION	INTERVAL	CH_4 PPM	FILTERED PPM	H_2O DEPTH
23	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	
	0607'	0.0	–	-7'

- 1220 - CAL CHECK ON FID - 95.5 ON 95.0 PPM CAL GAS



1245- KW + ZS MOVE BACK TO DITCH AREA AND CONTINUE SCREENING

LOCATION	INTERVAL	CH_4 PPM	FILTERED PPM	H_2O DEPTH
24	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0405'	0.0	–	-5'
25	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0405'	0.0	–	-5'
26	0006"	0.2	0.0	
	0624"	0.1	0.0	
	0204'	0.0	0.0	4'
	~~04~~			

- RECALIBRATE FID - 95.1 ppm on 95 ppm CAL GAS.

NAUSTA MAYPERT

112G03756 SITE 289 3 NOVEM. 11

LOCATION	INTERVAL	CH_4 PPM	FILTER PPM	H_2O DEPTH
27	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0		-4'
28	0006"	0.3	0.0	
	0624"	0.0	–	
	0204'	0.0	–	-4'
29	0006"	0.0	–	
	0624"	0.0	–	
	020 '	0.0	–	4'
30	0006"	0.0	–	
	0624"	0.0	–	
	0203'	0.0	–	3'

RECAL FID- 94.8 ppm ON 95 ppm cal gas

31	0006"	0.0	–	
	0624"	0.0	–	
	0203'	0.0	–	3'

1500 KW+ZS SECURE AND LEAVE SITE, WILL RETURN GENERATOR TO TUCKER RENTAL + CORE DRILL TO RSC ON THEWAY TO OFFICE.

KPW

01. INL4

NAVSTA MAYPORT

112603576 SITE 289 4 NOV 11

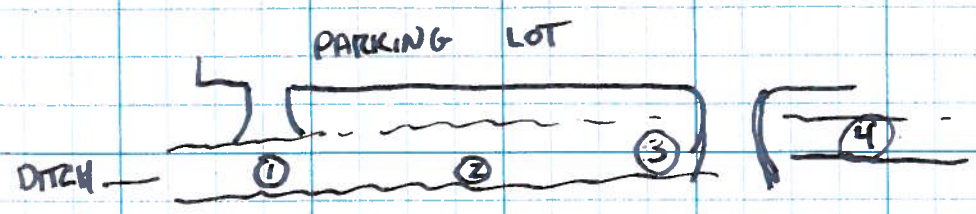
PERSONNEL: K. WEICHERT, Z. SCRIBNER.
TRUCK: 2006 F250
PPE: LEVEL "D"
WEATHER: COOL, 58°, LIGHT DRIZZLE
OBJECTIVE COMPLETE SCREENING ACTIVITIES AT 289

0600 KW + ZS AT TENUS OFFICE LOADING UP
0630 KW + ZS DEPART FOR NAVSTA MAYPORT - WILL STOP FOR FUEL AND ICE ON THE WAY.
0745 KW + ZS ON SITE - BEGIN TAKING WATER LEVELS FROM PEIZOMETERS

PZ #	H_2O DEPTH	TOTAL DEPTH
PZ-01	5.45'	7.76'
PZ-02	7.35'	9.51'
PZ-03	3.71'	6.97'
PZ-04	2.29'	6.51'

*KW + ZS PULL PEIZOMETERS AFTER GW LEVEL READINGS

KW + ZS BEGIN INSTALLING TEMPORARY WELL IN AREA OF PARKING LOT DRAIN, AND DITCH TO TAKE HEADSPACE READINGS OFF OF WATER TABLE



GW 1 - 0.0 ppm - NO ODORS OR SHEEN
GW 2 - 0.0 ppm - NO ODORS OR SHEEN
GW 3 - 0.0 ppm - NO ODORS / NO SHEEN
GW 4 - 0.0 ppm - NO ODORS / NO SHEEN

0900 - KW + ZS BEGIN SOIL SCREENING AT REMAINING LOCATIONS

KPW

NAUSTA MAYPORT

112603576 SITE 289 4 NOV 11

LOCATION	INTERVAL	CH4 PPM	FILTER PPM	GW DEPTH
32	0006"	0.0	–	
	0624"	0.0	–	
	0203'	0.0	–	3'
33	0006"	0.0	–	
	0624"	0.0	–	
	0203'	0.0	–	3'
34	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0405	0.0	–	5'
35	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0		6'

- CAL CHECK ON FID 94.9 PPM ON 95.0 PPM CAL GAS

36	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	6'
37	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	6'
38	0006"	0.0	–	
	0624"	0.0	–	
	0204'	0.0	–	
	0406'	0.0	–	6'

1035 KW+ZS BEGIN LOADING UP TRUCK AND CLEANING SITE

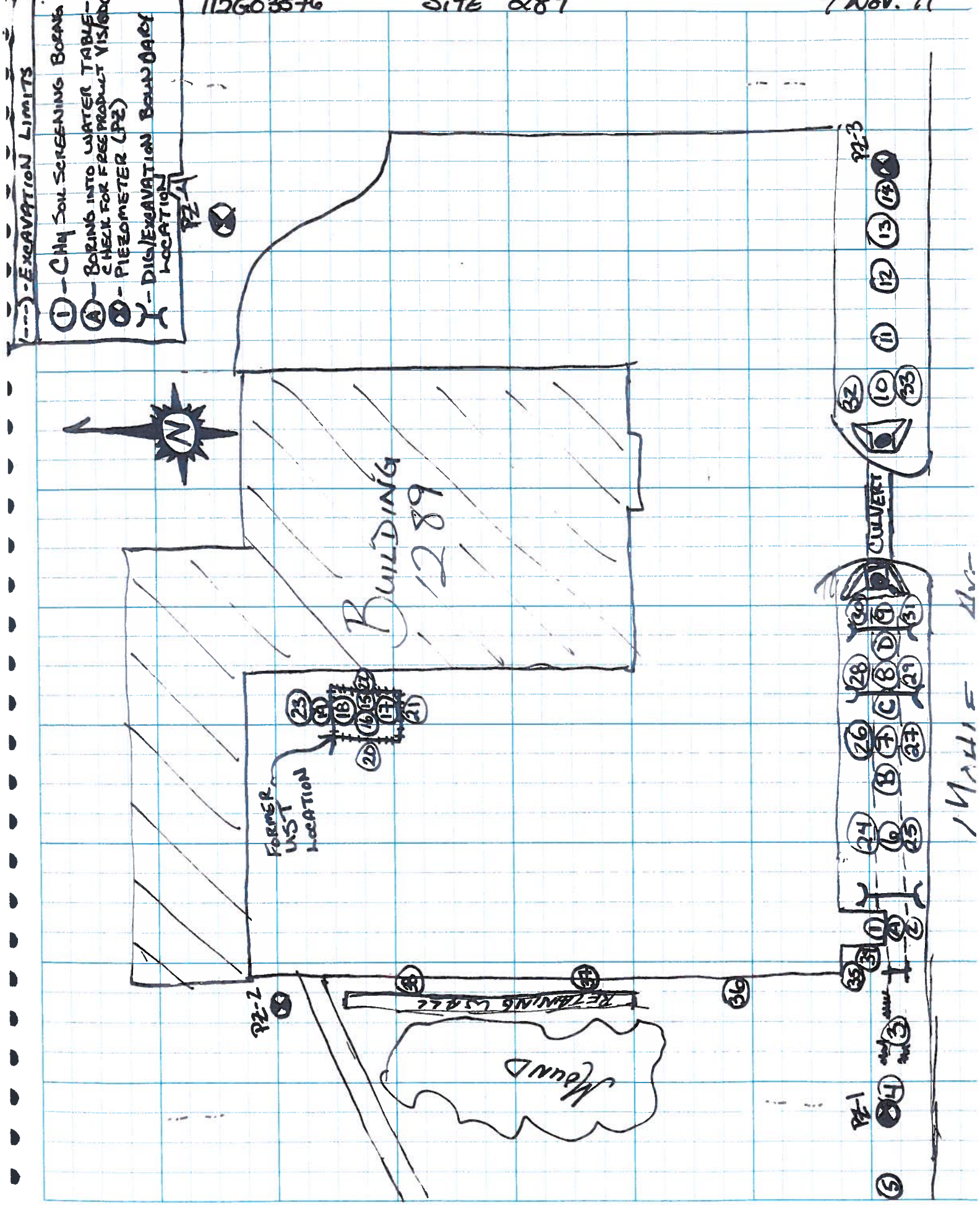
1103 KW+ZS DEPART SITE

1230 ZS + KW RETURN TO TE OFFICE AND UNLOAD VEHICLE

(MAP OF ALL SOIL BORINGS, PIEZOMETERS, ETC. ON NEXT PAGE +
GROUNDWATER FLOW MAP ON THE FOLLOWING)

NAVSTA MPT

112G03576 SITE 289 4 Nov. 11



112G03576

NAVSTA MPT
SITE 289

3 NOV 11

GROUND WATER FLOW DIRECTION
BASED ON PIEZOMER LOCATIONS (1-4)

112G03576 SITE 289 1-24-2012

PERSONNEL: D. SIEFKEN, K. WEICHERT, J. KROUE
TRUCK: 2006 F250
PPE: LEVEL "D"
WEATHER: WARM, 60°, CLEAR
OBJECTIVE: COLLECT CONFIRMATORY SOIL SAMPLES AT SITE 289 FOR LABORATORY ANALYSES

0645 KW AT TENUS OFFICE PREPARING FOR TODAY'S WORK.
0725 KW DEPARTS FOR NAUSTA MAYPORT
0810 KW MEETS DS AT 289 - BEGIN. SETTING UP FOR SAMPLING
0815 JK ON SITE - H+S MEETING CONDUCTED
0820 CREW DIGS PILOT HOLE TO DETERMINE WATER TABLE ELEVATION - H_2O @ 4'-4.2'

0900 - MPT-289-SS01-04-20120124 COLLECTED @ 4' BGS
~~FINE~~ MOIST LT BROWN ~~SAND~~ COCINA

* NOMENCLATURE:
MPT = MAYPORT
289 = SITE 289
SSXX = SOIL SAMPLE XX = LOCATION
04 = DEPTH
20120124 = YYYYMMDD

0915 MPT-289-SS02-04-20120124 collected at 4' bgs
Sample: Moist, Lt brown, fine sand, & cocina
Dug test boring prior to soil sampling to check depth of water table. H_2O table is just beyond 4' - 4.2
SS02 = SB34
0930 MPT-289-SS03-04-20120124 COLLECTED - MS/MSD
SS03 = SB __
SS03 - Lt Brown fine sand + some cocina, moist
0945 MPT-289-SS04-04-20120124
SS04 = SB02
Sample: Moist, Lt brown, fine sand.
1000 MPT-289-SS05-04-20120124
SS05 = SB26
Sample: moist, Lt. brown, fine sand.

n l AC

Mayport Site 289 Soil Lab Samples 1-24-12

1015 MPT-289-SS06-04-20110124 COLLECTED
SS06 = SB07
Sample: moist, fine Lt brown sand

1030 MPT-289-SS07-04-20120124 Collected
SS07 = SB27
Sample: moist, Fine Ltbrown sand.

1045 MPT-289-SS08-03-20120124
SS08 = SB32 - H_2O @ 3' BGS
Sample: moist, Fine, Lt ~~brown~~ Gray sand.

1100 MPT-289-SS09-03-20120124 COLLECTED DS
SS09 = SB10
Sample: moist, fine gray sand

1105- MPT-289-RB01-20110124 COLLECTED
-RINSATE BLANK COLLECTED FROM DECONTAMINATED AUGER

1115- MPT-289-SS10-03-20120124 COLLECTED
SS10 = SB33
Sample: - MOIST, FINE GRAY SAND

1130 MPT-289-SS11-03-20120124
SS11 =
Sample: moist, Fine gray sands

1145. CREW HEADS TO IDW STORAGE AREA TO DISPOSE OF DECON H_2O

1230 CREW DEPARTS SITE

KPW

112603576 SITE 289 1-25-12

PERSONNEL: D. SLEEKER, K. WEICHERT, J. KROUE
TRUCK: 2006 F250
PPE: LEVEL "D"
WEATHER: WARM, SUNNY, 60°
OBJECTIVE: CONDUCT SOIL SAMPLING AT FORMER UST LOCATION

0700 - CREW AT TENUS OFFICE LOADING UP
0805 - CREW DEPARTS FOR NAUSTA MAMPORT, WILL STOP FOR SUPPLIES ON THE WAY.
0845 - CREW ON SITE, BEGIN SETTING UP FOR TODAY'S ACTIVITIES.
0900 - CREW BEGINS CORING SAMPLING LOCATIONS IN ASPHALT
1000 - ALL LOCATIONS CORED CREW BEGINS SAMPLE COLLECTION
1005 - MPT-289-SS12-05-20120125 COLLECTED - LT GREY FINE SAND, PET. ODOR
1010 MPT-289-SS12-07-20120125 COLLECTED
- GW @ 7.8', SAMPLE COLLECTED 6' 7.0'-7.8' BGS
- GREY FINE SAND, PETRO ODOR, MOIST
1030 MPT-289-SS13-07-20120125 COLLECTED
- 6'-7.0' BGS
- FINE GRAY SAND, MOIST
1040 MPT-289-SS14-07-20120125 COLLECTED.
- 6'-7.0' BGS
- FINE GREY MOIST SAND
1045 MPT-289-SS15-07-20120125 COLLECTED
- 6'-7.0' BGS
- FINE GREY MOIST SAND
1055 MPT-289-SS16-07-20120125 COLLECTED
- 6'-7.0'- BGS
- FINE GREY MOIST SAND, PETROLEUM ODOR
1100 - CREW BEGINS PATCHING HOLES AND CLEANING SITE.

1130 CREW DEPARTS SITE

Rev. 1
01/23/12

PGH P:\GIS\MAYPORT_NS\MAPDOCS\MXD\BLDG289_SITE_PROP_LOCS_REVISED_112311_V10.MXD 11/23/11 CJT

DRAWN BY C. TULLEY	DATE 11/23/11	SITE LAYOUT AND PROPOSED SAMPLE LOCATIONS BUILDING 289 NAVAL STATION MAYPORT JACKSONVILLE, FLORIDA	CONTRACT NUMBER
CHECKED BY D. SIEFKEN	DATE 11/23/11		APPROVED BY — DATE —
COST/SCHEDULE-AREA			APPROVED BY — DATE —
SCALE AS NOTED	NAVFAC		DRAWING NO. FIGURE 5-2 REV 0

11JAX0189

SSG 4 = S3 02

CTO JM60

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS01-04-2012 0124
Sample Location: SS 01
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	3.5 - 4.0'	LT BROWN	MOIST COCINA
Time:	0900			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

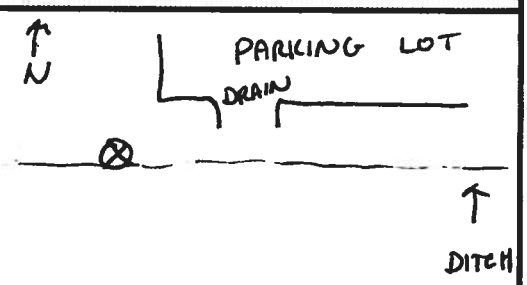
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	40AL VIALS	✓	Empirical
8270	4OZ JAR	✓	Empirical
TRPH	✓ 4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 4.0 - 4.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[✓] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS02-04-2012 0124
Sample Location: SS 02
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	3.5'-4.0'	LT BROWN	MOIST LT BROWN SAND AND COQUINA
Time:	0915			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

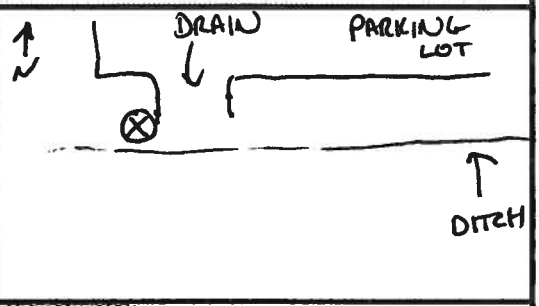
Analysis	Container Requirements	Collected	LAB
8260	40 mL VIALS	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- SAMPLE LOCATION IS NEXT TO SCREENING LOCATION SB 34

- H_2O @ 4.0-4.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS03-04-20120124
Sample Location: SS 03
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	3.5-4.0'	LT BROWN	MOIST FINE SAND/COCINA
Time:	0930			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

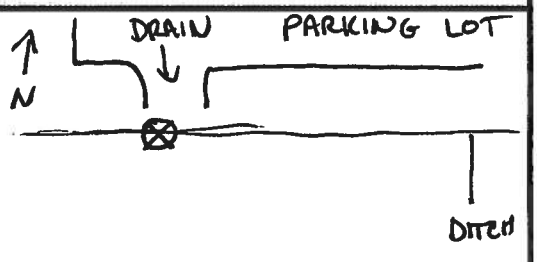
Analysis	Container Requirements	Collected	LAB
8260	3 40mL VIALS	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

H_2O @ 4.0-4.2' BGS

MS/MSD COLLECTED

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

KWLt

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SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS04-04-20120124
Sample Location: SS04
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	3.5-4.0'	LT BROWN	MOIST FINE SAND
Time:	0945			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

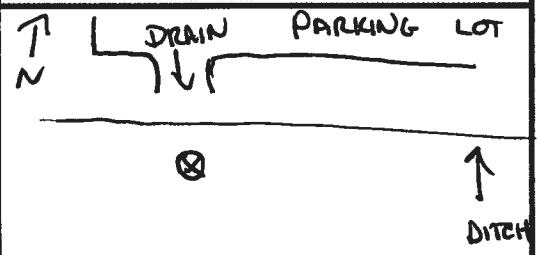
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40ML VIALS	✓	Empirical
8270	4 oz	✓	Empirical
TRPH	4 oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 4.0-4.2' BGS
- SAMPLE LOCATION IS LOCATED NEXT TO SCREENING LOCATION ~~SB 2~~ KW SB02

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS05-04-20120124
Sample Location: SS05
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/24/2012 Time: 1000 Method: grab Monitor Reading (ppm 0	3.5'-4.0'	LT BROWN	MOIST, FINE SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

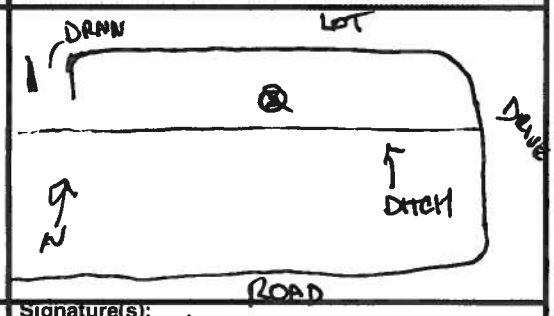
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40mL VIALS	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 4.0-4.2' BGS
- SAMPLE LOCATION IS NEXT TO SCREENING LOCATION SB26

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [signature]

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS06-04-2012 0124
Sample Location: SS 06
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/24/2012 Time: 1015 Method: grab Monitor Reading (ppm 0	3.5'-4.0'	LT BROWN	MOIST, FINE SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

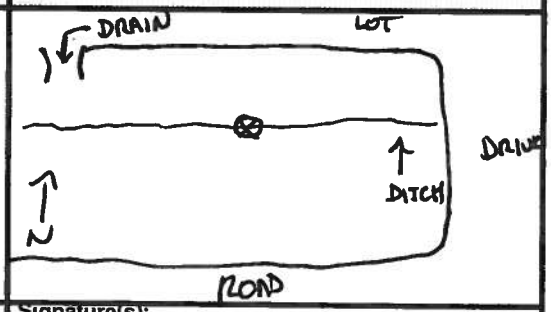
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40 ml	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 4.0~4.2' BGS
- SAMPLE LOCATION NEX TO SCREENING LOCATION SB07

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS07-04-20120124
Sample Location: SS07
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	3.5'-4.0'	LT BROWN	MOIST, FINE SAND
Time:	1030			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

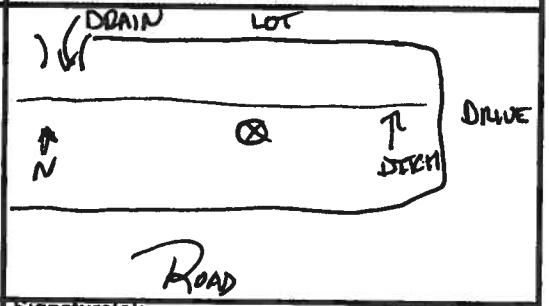
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40 mL	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 4.0-4.2' BGS
- SAMPLE LOCATION NEXT TO SCREENING LOCATION SB27

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS08-03-2012 0124
Sample Location: SS 08
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	2.5-3.0'	LT GREY	MOIST FINE SAND
Time:	1045			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

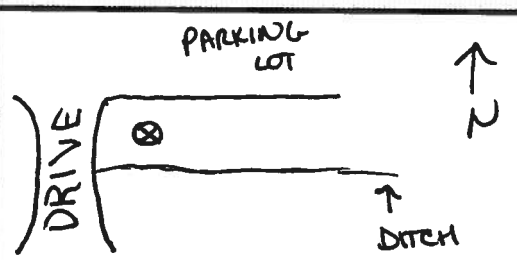
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3x ~40mL VIALS	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 3.0-3.2' BGS
- SAMPLE LOCATION NEXT TO SCREENING LOCATION SB32

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilhet

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[#] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS09-03-20120124
Sample Location: SS09
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	2.5 - 3.0'	GREY	MOIST FINE SAND
Time:	1100			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

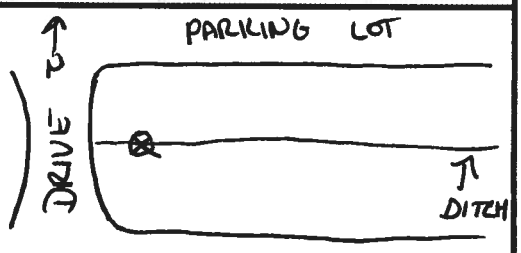
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40mL	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- H_2O @ 3.0 - 3.2' BGS
- SAMPLE LOCATION NEXT TO SCREENING LOCATION SB10

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS10-03-20120124
Sample Location: SS 10
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	2.5-3.0'	GREY	MOIST FINE SAND
Time:	1115			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

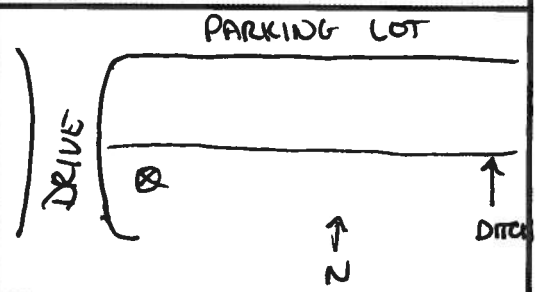
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3 40mL	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

- GW @ 3.0~3.2' BGS
- SAMPLE LOCATION NEXT TO SCREENING LOC. SB 33

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS11-03-2012024
Sample Location: SS 11
Sampled By: KW
C.O.C. No.: 0832

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

GRAB SAMPLE DATA:

		Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date:	1/24/2012	2.5-3.0'	GREY	MOIST FINE SAND
Time:	1130			
Method:	grab			
Monitor Reading (ppm	0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

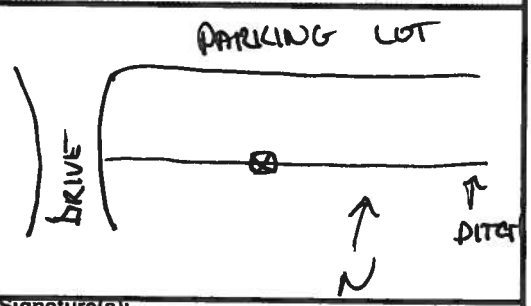
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260	3x40 mL	✓	Empirical
8270	4oz	✓	Empirical
TRPH	4oz	✓	Empirical

OBSERVATIONS / NOTES:

-GW @ 3.0~3.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): J.L. Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS12-05-20120125
Sample Location: SS
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25 ~~1/25~~/2012 Time: 1005 Method: grab Monitor Reading (ppm 0	4.5- 5.0'	GREY	FINE SAND PETROLEUM ODOR

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

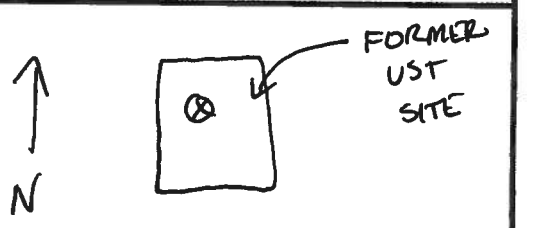
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST AMER.

OBSERVATIONS / NOTES:

GW @ 7.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): K. Neff

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS12-07-2012~~01~~25
Sample Location: SS 12
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25/2012 Time: 1010 ~~1005~~ Method: grab Monitor Reading (ppm 0	6.5-7.0'	GREY	MOIST FINE SAND PETROLEUM ODOR

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

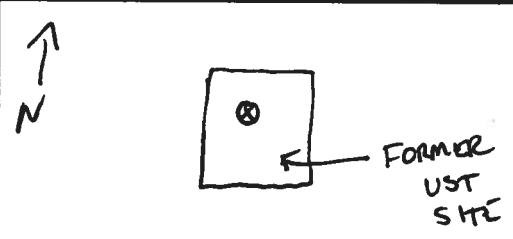
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST AMER.

OBSERVATIONS / NOTES:

GW @ 7.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): JL Wilt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS/13-07-20120125
Sample Location: SS 13
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25 ~~1/24~~/2012 Time: 1030 Method: grab Monitor Reading (ppm 0	6.5-7.0'	GREY	FINE MOIST SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

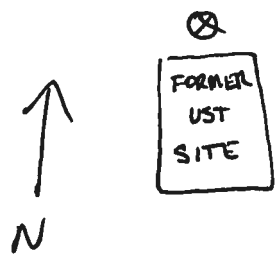
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4 oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST AMER.

OBSERVATIONS / NOTES:

- GW @ 7.2' BGS

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): KWLt

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS14-07-20120125
Sample Location: SS 14
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25 ~~1/24~~/2012 Time: 1040 Method: grab Monitor Reading (ppm 0	6.5-7.0'	GREY	FINE MOIST SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST AMER.

OBSERVATIONS / NOTES:

GW @ 7.2' BGS

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [illegible]

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS15-07-2012 0125
Sample Location: SS 15
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25 ~~1/24~~/2012 Time: 1045 Method: grab Monitor Reading (ppm 0	6.5-7.0'	GREY	FINE MOIST SAND

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

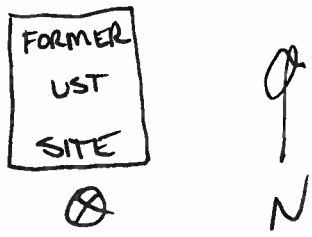
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST AMER.

OBSERVATIONS / NOTES:

-GW @ ~7.2' BGS

MAP:



Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: Site 289
Project No.: 112G03576

[] Surface Soil (SS)
[X] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS16-07-20120125
Sample Location: SS16
Sampled By: KW
C.O.C. No.: 0833

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 1/25 ~~1/24~~/2012 Time: 1055 Method: grab Monitor Reading (ppm 0	6.5-7.0'	GREY	MOIST FINE SAND, PETROLEUM ODOR

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

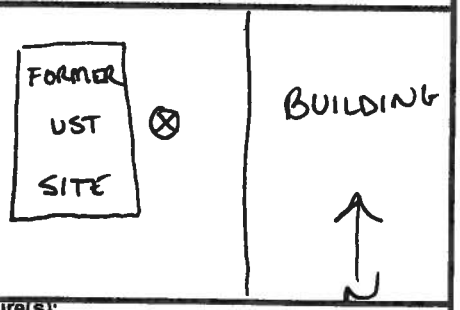
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH	4oz	✓	Empirical
MADEP	4 JAR KIT	✓	TEST. AMER.

OBSERVATIONS / NOTES:

- GW AT ~7.2' BGS

MAP:



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

Signature(s):

Personnel: Jeff Krone
Truck: 2006 F-250
PPE: Level D
Weather: Sunny 85°
Objective: Soil Sampling at Site 289

0900 Departed office for Mayport
1015 Arrived at NAUSTA, checked in with Housing ~~equip~~ Office and unpacked equipment and calibrated FID
1030 Began cutting asphalt for access to Soil
1225 Completed asphalt cutting for SB 17 and 18. Began Screening

Location	Interval	PPM	GW level
18	0006"	0.0	
	0624"	0.0	
	0204'	0.0	
	0406'	0.0	6.5'

1340 Collected MPT-289-SS18-07-20120503

Location	Interval	PPM	GW level
17	0006"	0.0	
	0624"	0.1	
	0204'	0.3	
	0406'	0.0	

1500 Collected MPT-289-SS17-07-20120503
1705 Patched pvc pipe in boring SS18 with Dave Siefken. Packed samples on ice for transport. Departed NAUSTA
1810 Relinquished samples to Empirical via FEDEX Airbill 8643 942 1550
1840 Arrived at office

EQUIPMENT CALIBRATION LOG

INSTRUMENT NAME/MODEL : mini Rae 3000

PROJECT NAME : Site 289

MANUFACTURER : Mini Rae

PROJECT NUMBER : 112603576

CALIBRATION DATE	INSTRUMENT/ SERIAL #	INITIAL SETTINGS	STANDARDS USED	PROCEDURE	ADJUSTMENTS MADE	FINAL SETTINGS	SIGNATURE	COMMENTS
3/2/12	17242	85.6				100.0		

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Site 289
Project No.: 112G03576

[X] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS17-07-20120503
Sample Location: SS 17
Sampled By: JK
C.O.C. No.: 2396

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 5/3/12 ~~1/24/2012~~			
Time: 1500			
Method: grab	07	grey	Sand
Monitor Reading (ppm 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

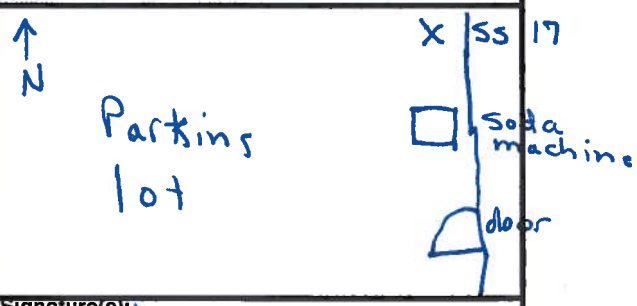
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH			Empirical

OBSERVATIONS / NOTES:

collected above water level

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: Site 289
Project No.: 112G03576

[x] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS18-07-20100503
Sample Location: SS 18
Sampled By: K
C.O.C. No.: 5396

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date 5/3/12 ~~1/24/2012~~	07	grey	Sand
Time: 1340			
Method: grab			
Monitor Reading (ppm 0			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

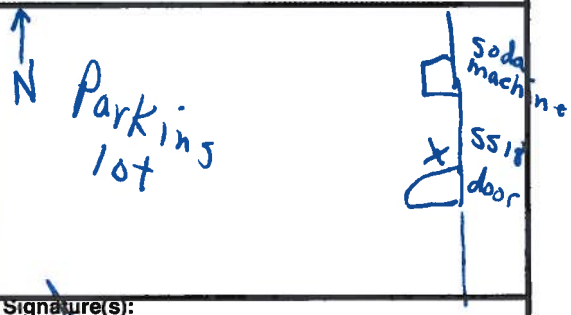
SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
8260			Empirical
8270			Empirical
TRPH			Empirical

OBSERVATIONS / NOTES:

Collected above water level

MAP:

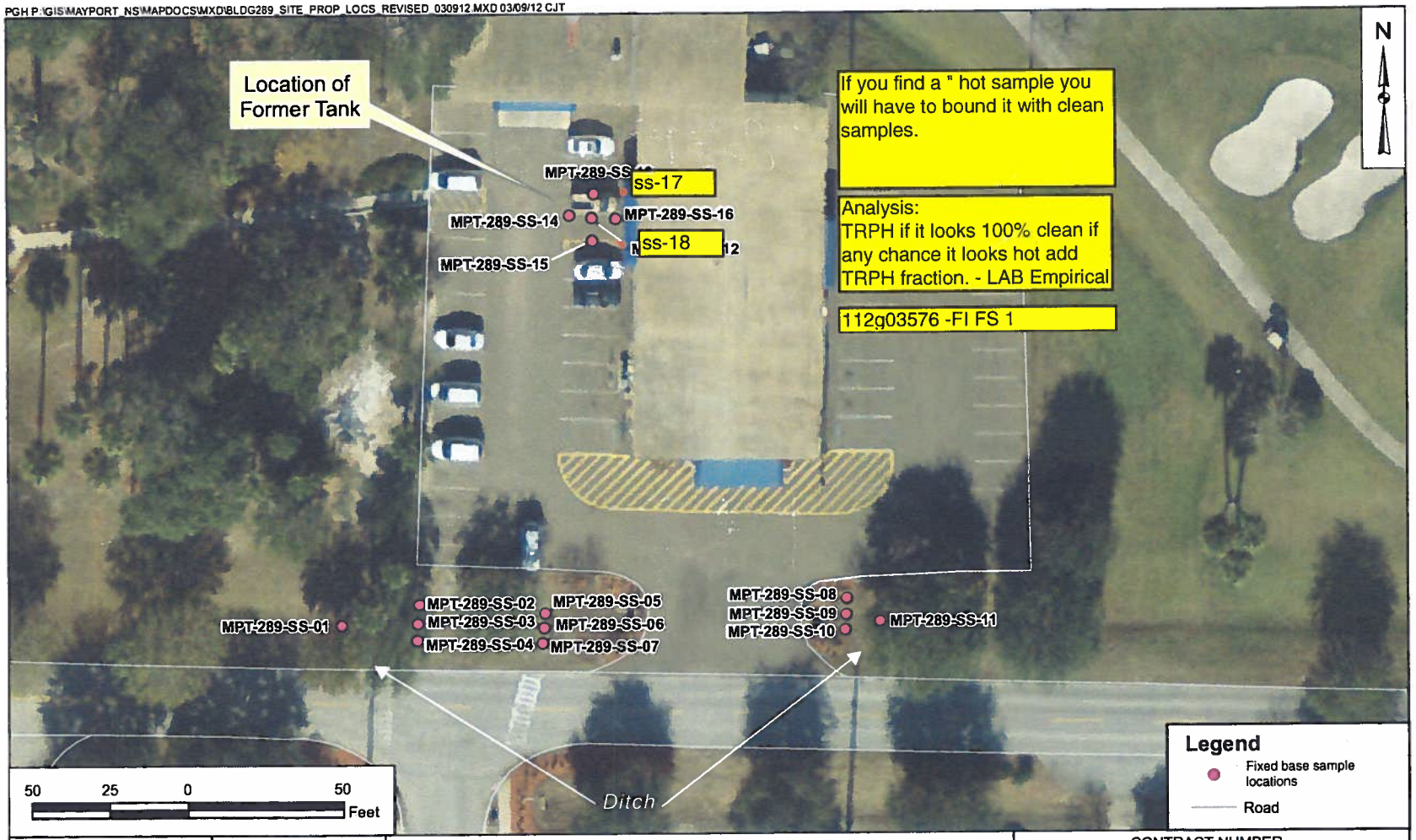


Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

PGH P:\GIS\MAYPORT_NS\MAPDOCS\MXD\BLDG289_SITE_PROP_LOCS_REVISED_030912.MXD 03/09/12 CJT



DRAWN BY	DATE
C. TULLEY	03/09/12
CHECKED BY	DATE
D. SIEFKEN	03/12/12
COST/SCHEDULE-AREA	
SCALE AS NOTED	

NAVFAC

SITE 289 SITE ASSESSMENT REPORT
FIXED BASE SOIL SAMPLE LOCATIONS
BUILDING 289
NAVAL STATION MAYPORT
JACKSONVILLE, FLORIDA

CONTRACT NUMBER	
APPROVED BY —	DATE —
APPROVED BY —	DATE —
DRAWING NO. FIGURE 5-2	REV 0

NAUSTA Mayport Site 289 Soil Sampling 3 May 12

Personnel: Jeff Krone
Truck: 2006 F-250
PPE: Level D
Weather: Sunny 85°
Objective: Soil Sampling at Site 289

0900 Departed office for Mayport
1015 Arrived at NAUSTA, checked in with Housing ~~equip~~ Office and unpacked equipment and calibrated FID
1030 Began cutting asphalt for access to Soil
1225 Completed asphalt cutting for SB 17 and 18. Began Screening

Location	Interval	PPM	GW level
18	0006"	0.0	
	0624"	0.0	
	0204'	0.0	
	0406'	0.0	6.5'

1340 Collected MPT-289-SS18-07-20120503

Location	Interval	PPM	GW level
17	0006"	0.0	
	0624"	0.1	
	0204'	0.3	
	0406'	0.0	

1500 Collected MPT-289-SS17-07-20120503
1705 Patched pvc pipe in boring SS18 with Dave Siefken. Packed samples on ice for transport. Departed NAUSTA
1810 Relinquished samples to Empirical via FEDEX Airbill 8643 9421550
1840 Arrived at office

JK

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2396 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G03576	Mayport / S-6289	Dave Siefker	904-334-7260	EMPIRICAL / Brian
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jeff Krone	PHONE NUMBER: 904-334-7260	ADDRESS: 621 Mainstream Dr, Ste 270
		CARRIER/WAYBILL NUMBER: Fedex Airbill 8643 5451550		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR May 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TRPH	MADEP TRPH							COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G							
PRESERVATIVE USED									—	—							
5/3	1340	MPT-289-5518-07-20120503						5	1	4							Cool to 4°C
5/3	1500	MPT-289-5517-07-20120503						5	1	4							

1. RELINQUISHED BY	DATE 5/3/12	TIME 1800	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

FedEx Express US Airbill

FedEx Tracking Number 8643 5142 1550

Form ID No. 0200 Sender's Copy

From Please print and press hard.

Date 5/3/12 Sender's FedEx Account Number 1772-0315-7

Sender's Name Jeff Krone Phone (904) 6997423

Company Tetra Tech

Address 8640 Philips Hwy Suite 16 Dept./Floor/Suite/Room

City Jacksonville State FL ZIP 32256

Your Internal Billing Reference First 24 characters will appear on invoice. 112603576

To Recipient's Name Sample Receiving Phone 877 345 1113

Company Empirical Labs

Recipient's Address 621 Mainstream Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Suite 270

To request a package be held at a specific FedEx location, print FedEx address here.

City Nashville State TN ZIP 37228

4a Express Package Service *Packages up to 150 lbs.*

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation:

** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
1	44	$ 0 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

520

Rev. Date 10/06•Part #158281•©1994–2006 FedEx•PRINTED IN U.S.A. SRY

Ship and track packages at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

FedEx Office

8060 PHILIPS HWY
JACKSONVILLE, FL 32256

Location:	NRBKO
Device ID:	NRBKO-POS1
Employee:	2265491
Transaction:	78052134987

PRIORITY OVERNIGHT 864351421550 43.25 lb (S)	41.39
Scheduled Delivery Date 05/04/2012	
Shipment subtotal:	41.39
Total Due:	41.39
FedEx Account: ****3157	41.39

H = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

NAVSTA Mayport Site 289 CTO JM60 / 12603576 25 July 12

Personnel: Jeff Krone
Truck: F-250
PPE: Level D
Objective: Soil Sample 19
Weather: Sunny 95°

0900 Departed office for Mayport
1000 Arrived at Site 289, began boring through asphalt.
1120 Hand augered down to 6 ft. Decontaminated auger
1130 Collected MPT-289-SS19-07-20120725 at 6.5'
1200 Backfilled boring and departed Site
1240 Transferred backfill remainders to FPS 18 and departed NAVSTA.
1350 Arrived at office.

JK

Tetra Tech, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: NAVSTA Mayport
Project No.: 112G03576

[] Surface Soil (SS)
[] Subsurface Soil (SU)
[] Sediment (SD)
[] Other:
[] QA Sample Type:

Sample ID No.: MPT-289-SS19-07-20120720
Sample Location: Site 289
Sampled By: JK
C.O.C. No.: 2195

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

GRAB SAMPLE DATA:

	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 7/25/12	6.5	grey	wet sand
Time: 1130			
Method: grab			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

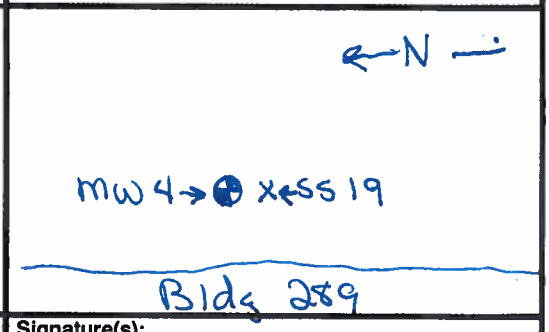
Date:	Time	Depth	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	LAB
TPH	(1) 4oz. Glass Jar		Empirical

OBSERVATIONS / NOTES:

MAP:



Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

APPENDIX D

GROUNDWATER FIELD SHEETS

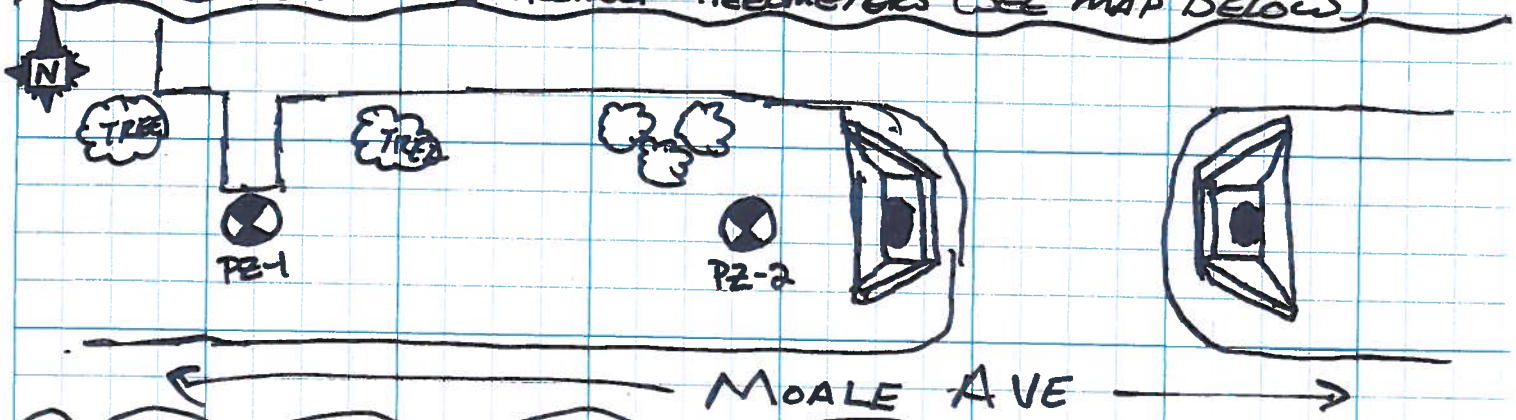
NAVSTA-MPT-SITE 289

11260357 6 PIEZOMETER INSTALLATION + SAMPLING 19 DEC. 201

PERSONNEL: Z. SCRIBNER
VEHICLE: P.O.V.
PPE: LEVEL "D"
WEATHER: CLEAR 62°F
OBJECTIVE: INSTALL (2) PIEZOMETERS AT SELECT LOCATIONS PER THE WORKPLAN AND COLLECT SAMPLES.

0640 ZS ARRIVED ON SITE AT NAVSTA MPT-SITE 289 AND BEGAN CALIBRATING EQUIPMENT.

0710 ZS BEGAN INSTALLING PIEZOMETERS (SEE MAP BELOW)



0750 ZS INSTALLED PZ-1 & PZ-2 AND SET UP PIEZOMETERS FOR SAMPLING

0805 ZS BEGAN PURGING AT PZ-1 (SEE TABLE BELOW FOR SAMPLE COLLECTION INFORMATION.)

WELL I.D.	SAMPLE I.D.	PURGE START	PURGE STOP	SAMPLE TIME	ANALYSES
PZ-1	PZ-1-20111219	0805	0827	0830	1 2 3 4
PZ-2	PZ-2-20111219	0905	0929	0930	1 2 3 4

1 - VOC; 2 TRPH - FL PRO; 3 PAH - LL; 4 METALS Pb ONLY

0955 ZS COMPLETED SAMPLING OF PIEZOMETERS AND BEGAN SITE CLEANUP: REMOVAL OF PIEZOMETERS, PACKING OF EQUIPMENT + SAMPLES

1010 ZS DEPARTED FOR IDW STORAGE TO EMPTY PURGE WATER INTO TOTE.

1040 ZS DEPARTED NAVSTA MPT FOR TE OFFICE

1110 ZS ARRIVED AT TE OFFICE AND UNLOADED VEHICLE + SAMPLES

1530 FED EX RECEIVED SAMPLES w/ COC # 8210 (AIRBILL 8660 1730 1094)

ZS 12-19-11

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: SITE 289		SITE LOCATION: NAVSTA MAYPORT	
WELL NO: PZ-1	SAMPLE ID: PZ-1-2011 1219		DATE: 12 / 19 / 2011

PURGING DATA

WELL DIAMETER (in): 1" 3/4"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH (ft): 0-8.5	STATIC DEPTH TO WATER (ft): 4.50	PURGE PUMP TYPE OR BAILER: Peristaltic Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable) 0.3 Liters (8.5-4.5)(0.0757)

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6'	PURGE INITIATED AT: 0805	PURGE ENDED AT: 0827	TOTAL VOLUME PURGED (Liters): 4.0	

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (ft)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR
0808	0.6	0.6	200	5.14	5.29	18.46	731	8.00	367	73.5	Brown
0813	1.0	1.6	200	5.17	5.02	18.89	755	7.31	51.15	111.9	clear
0818	1.0	2.6	200	5.18	6.41	19.14	764	7.29	28.83	27.4	Clear
0823	1.0	3.6	200	5.18	6.14	19.31	777	6.48	11.72	39.9	clear
0825	0.2	3.8	200	5.18	6.16	19.31	777	6.49	10.96	40.4	clear
0827	0.2	4.0	200	5.18	6.17	19.31	777	6.48	9.84	40.7	clear

WELL CAPACITY (Liters Per Foot): 0.75" = 0.0757; 1" = 0.151; 1.25" = 0.227; 2" = 0.605; 3" = 0.37; 4" = 1.40; 5" = 3.861; 6" = 5.564; 12"= 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): 1/8" = 0.00227; 3/16" = 0.00529; 1/4" = 0.00984; 5/16" = 0.0151; 3/8" = 0.0227; 1/2" = 0.0378; 5/8" = 0.0605

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Z. SCRIBNER /TTNUS	SAMPLER(S) SIGNATURES: [signature]	SAMPLING INITIATED AT: 0830	SAMPLING ENDED AT: 0855
PUMP OR TUBING DEPTH IN WELL (feet): 6'	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: ~~Teflon~~ PE	
FIELD DECONTAMINATION: (Y) N	FIELD-FILTERED: Y (N) Filtration Equipment Type: ____ FILTER SIZE: ____ µm		DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40mL	HCl	(3) 40mL	<2	VOC	RFPP
2	2	AG	1L	HCl	(2) 1L		TRPH-FLPRO	PP
3	2	AG	1L	—	(2) 1L		PAH-LL	PP
4	1	P	250mL	HNO_3	250mL		PB ONLY	PP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: SITE 289		SITE LOCATION: NAVSTA- MPT	
WELL NO: PZ-2	SAMPLE ID: PZ-2-20111219		DATE: 12/19 /2011

PURGING DATA

WELL DIAMETER (in): 3/4"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH (ft): 0-7.5	STATIC DEPTH TO WATER (ft): 4.10	PURGE PUMP TYPE OR BAILER: Peristaltic Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable) 0.3 Liters (7.5 - 4.10) (0.0757

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 5'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 5.5'	PURGE INITIATED AT: 0905	PURGE ENDED AT: 0929	TOTAL VOLUME PURGED (Liters): 4.4

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mlpm)	DEPTH TO WATER (ft)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR
0910	1.0	1.0	200	4.67	5.80	20.44	370	2.58	287.6	68.6	Clear/Cloud
0915	1.0	2.0	200	4.72	6.11	20.72	347	2.74	257.3	75.7	" / "
0920	1.0	3.0	200	4.77	6.39	20.73	327	1.57	229.0	63.7	clear/cloudy
0925	1.0	4.0	200	4.81	6.38	20.74	323	1.54	212.9	67.0	cloudy
0927	0.2	4.2	200	4.83	6.38	20.74	322	1.53	209.1	67.5	cloudy
0929	0.2	4.4	200	4.85	6.37	20.75	322	1.53	207.1	67.9	cloudy

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.0757; **1"** = 0.151; **1.25"** = 0.227; **2"** = 0.605; **3"** = 0.37; **4"** = 1.40; **5"** = 3.861; **6"** = 5.564; **12"**= 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): **1/8"** = 0.00227; **3/16"** = 0.00529; **1/4"** = 0.00984; **5/16"** = 0.0151; **3/8"** = 0.0227; **1/2"** = 0.0378; **5/8"** = 0.0605

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Z. SCRIBNER /TTNUS	SAMPLER(S) SIGNATURES: [signature]	SAMPLING INITIATED AT: 0930	SAMPLING ENDED AT: 0955
PUMP OR TUBING DEPTH IN WELL (feet): 5.5'	SAMPLE PUMP FLOW RATE (mL per minute): 200	TUBING MATERIAL CODE: ~~Teflon~~ PE	
FIELD DECONTAMINATION: (Y) N	FIELD-FILTERED: Y (N) Filtration Equipment Type: ____ FILTER SIZE: ____ µm		DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
1	3	CG	40mL	HCl	40mL (3)	<2	VOC	RFPP
2	2	AG	1L	HCl	1L (2)		TRPH-FLPRO	PP
3	2	AG	1L	—	1L (2)		PAH-LL	PP
4	1	P	250mL	HNO_3	250mL		Pb ONLY	PP

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2210 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112GC 3576	NAVSTA MPT - SITE 259	DAVE SIEFKEN	904-636-6125	EMPIRICAL LABORATORIES LLC / B. RICHARD
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		ZACH SCRIBNER	904-636-6125	621 MAINSTREAM DR. SUITE 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8660 1730 1094		NASHVILLE TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G, G, G, P

PRESERVATIVE USED: HCl, HCl, 1

TYPE OF ANALYSIS

DATE YEAR 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOC	TRPH-FLPRO	PAH-LL	[illegible]					COMMENTS
12/19	0830	PZ-1-20111219				GW	G	7	3	2	2	1					Cool to 4°C
12/19	0930	PZ-2-20111219				GW	G	7	3	2	2	1					
12/19	0000	TRIP BLANK 0581				QC		2	2								

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	12/19/2011	1530	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : JM 60

SITE NAME: SITE 289 - MPT

PROJECT No.: 112G03576

INSTRUMENT NAME/MODEL: YSI 556 / MICROTPW

MANUFACTURER: YSI / HF SCIENTIFIC INC.

SERIAL NUMBER: 07D100976 / 200704133

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
12/19/11	YSI	Z. SCHIBNER		pH 10.00	9.73	10.00	2101366	
				7.00	7.14	7.00	2105403	
				4.00	4.19	4.00	2106053	
				ORP 240	223	240	3354	
				COND 1413	1397	1413	9084	
				DO 100%	112	100%	—	
	TURB	ZS		1000 NTU	976	1000	—	
				10 NTU	10.21	10.00	—	
				0.2 NTU	0.28	0.20	—	
END OF DAY CHECK								
	YSI	ZS		pH 10	9.95		2101366	
				7	7.00		2105403	
				4	4.00		2106053	
				ORP 240	241		3354	
				COND 1413	1417		9084	
				DO 100	98%		—	
	TURB			1000 NTU	1013		—	
				10 NTU	10.01			
				0.2 NTU	0.22			

SITE 289

1126 03576 WELL DEVELOPMENT 7-6-12

PERSONNEL: J. KRONE, K. WEICHERT
TRUCK: 2006 F250
PPE: LEVEL "D"
WEATHER: WARM, SUNNY, LT BREEZE, 90°
OBJ: DEVELOP 5 WELLS AT SITE 289

0900 JK+ KW DEPART OFFICE
0930 JK+ KW ON SITE - BEGIN PURGING - SEE TABLE BELOW

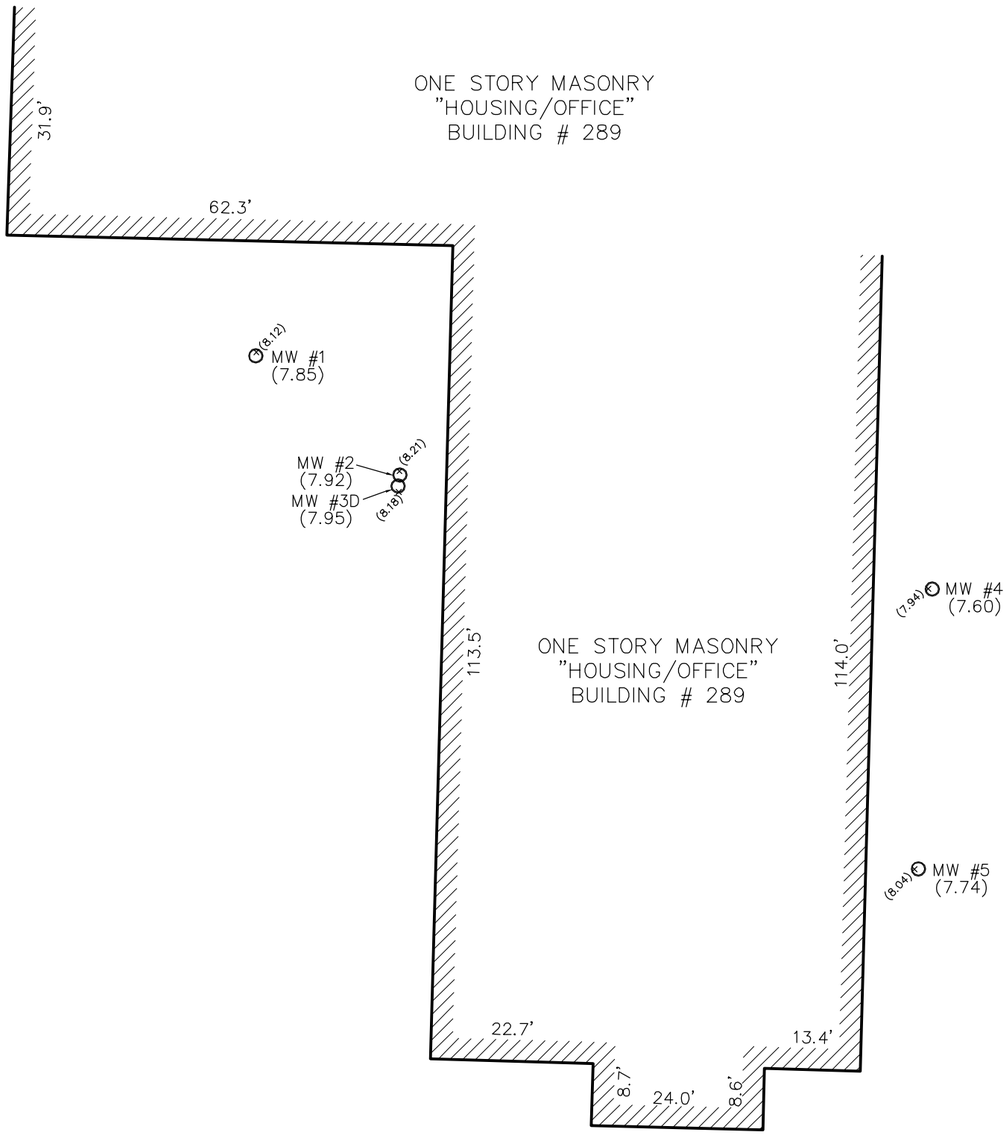
WELL ID	START	STOP	TOTAL VOL.	TURB
289-MW1	0945	1020	3.5 gal	12.59
289-MW2	0950	1025	3.0 gal	15.29
289-MW3D	0950	1105	10.5 gal	19.27
289-MW4	1035	1110	3.5 gal	15.33
289-MW5	1030	1115	4.0 gal	12.81

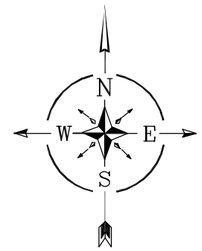
1130 JK+ KW DEPART SITE

KPW

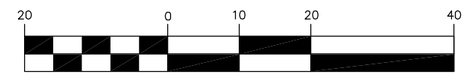
MAP SHOWING SKETCH OF

MAYPORT NAVAL STATION
MONITORING WELLS
FOR TETRA TECH





GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NAVSTA Mayport **Project No.:** 112G03576
Location: Site 289 **Personnel:**
Weather Conditions: **Measuring Device:**
Tidally Influenced: Yes X No ___ **Remarks:**

Well or Piezometer Number MPT-	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	PID (ppm) BK/BH
MW 01	7-12	0920			5.25			
MW 02	7-12	0922			5.27			
MW 03D	7-12	0923			5.40			
MW 04	7-12	0925			5.00			
MW 05	7-12	0927			5.17			

ppm=parts per million; BK=background; and BH=borehole of the well.

* All measurements to the nearest 0.01 foot

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2537 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112-GW3576	Site 289 / MPT	Dave Siefken	904-334-7260	Empirical Laboratory / Brian Richards

SAMPLERS (SIGNATURE)	FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
K. Will	Kevin Weichert	904-836-6125	621 Mainstream Dr., Suite 270
	CARRIER/WAYBILL NUMBER		CITY, STATE
	Fed Ex		Nashville, TN 37228

STANDARD TAT ☐
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TRPH-FL Pro	PAH-8310	VOC-BTEX + MTBE 8260							COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)																		
PRESERVATIVE USED									#2SO4	-	#HCL							
7/12	1000	MPT-289-MW01-120712				GW	G	7	2	2	3							Cool to 4°C
7/12	1045	MPT-289-MW02-120712				GW	G	7	2	2	3							
7/12	1120	MPT-289-MW03D-120712				GW	G	7	2	2	3							
7/12	1250	MPT-289-MW04-120712				GW	G	7	2	2	3							
7/12	1340	MPT-289-MW05-120712				GW	G	21	6	6	9							-MS/MSD

1. RELINQUISHED BY K. Will	DATE 7-12-12	TIME	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Mayport	SITE LOCATION: Site 289	
WELL NO: MW01	SAMPLE ID: MPT-289-MW01-120712	DATE: July 12, 2012

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.25	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ((14 - 5.25) feet (.04) (3.94 feet) X = 1.4 L gallons/foot = gallons X5 = 7.0L

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	PURGING INITIATED AT: 0930	PURGING ENDED AT: 0955	TOTAL VOLUME PURGED (~~gallons~~): 7.5 L

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (mL/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0930	—	—	300	5.25	—	—	—	—	—	—	—
0935	1.5	1.5	300	5.29	6.69	29.85	760	3.08	14.25	CLEAR	—
0940	1.5	3.0	300	5.30	6.65	29.71	758	2.89	12.22	CLEAR	—
0945	1.5	4.5	300	5.30	6.64	29.62	748	2.80	9.61	CLEAR	—
0950	1.5	6.0	300	5.30	6.61	29.58	747	2.71	8.89	CLEAR	—
0955	1.5	7.5	300	5.30	6.56	29.57	745	2.66	4.11	CLEAR	—
1000	- SAMPLE	TIME	5X	1.4L	VOL	PURGED					

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. WEICHERT	SAMPLER(S) SIGNATURE(S): K. Weichert	SAMPLING INITIATED AT: 1000	SAMPLING ENDED AT: 1010
PUMP OR TUBING DEPTH IN WELL (feet): 6.1 / RFPP	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
1	3	CG	40 mL	HCL	40 mL	<2	8260	SM	
2	2	AG	1 L	H2SO4	1 L	<2	TRPH	PP	
3	2	AG	1L	---	1L	<2	8310	PP	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Mayport	SITE LOCATION: Site 289	
WELL NO: MW02	SAMPLE ID: MPT-289-MW02-120712	DATE: July 12, 2012

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.27 ~~5.25~~	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ((14 - 5.27) feet – (.04) feet) X (0.94 gal) = 1.4L gallons/foot = X5 = 7.0L gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	PURGING INITIATED AT: 1015	PURGING ENDED AT: 1040	TOTAL VOLUME PURGED (~~gallons~~): 7.5L

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (~~gpm~~) mL/min	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1015	–	–	300	5.27	–	–	–	–	–	–	–
1020	1.5	1.5	300	5.32	7.32	27.84	624	2.28	14.76	CLEAR	–
1025	1.5	3.0	300	5.34	7.26	27.76	624	2.23	13.62	CLEAR	–
1030	1.5	4.5	300	5.34	7.22	27.82	624	2.14	12.79	CLEAR	–
1035	1.5	6.0	300	5.34	7.20	27.73	625	2.03	12.38	CLEAR	–
1040	1.5	7.5	300	5.34	7.18	27.90	625	1.99	10.44	CLEAR	–
1045 - SAMPLE TIME, 5x WELL VOL PURGED											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. WEICHERT	SAMPLER(S) SIGNATURE(S): K. Weichert	SAMPLING INITIATED AT: 1045	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 6.1 / RFPP	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	40 mL	<2	8260	SM	
	2	AG	1 L	H2SO4	1 L	<2	TRPH	PP	
	2	AG	1L	---	1L	<2	8310	PP	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Mayport	SITE LOCATION: Site 289	
WELL NO: MW03D	SAMPLE ID: MPT-289-MW03D-120712	DATE: July 12, 2012

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.40	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= (40)(.0014) gallons + (3.94 gallons/foot X) feet) + .75L gallons = .97L gallons X5 = 4.85 L

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	PURGING INITIATED AT: 1055	PURGING ENDED AT: 1115	TOTAL VOLUME PURGED (~~gallons~~): 6.0 L	

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (mL/min)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1055	—	—	300	5.40	—	—	—	—	—	—	—
1100	1.5	1.5	300	5.42	8.53	25.60	947	1.72	25.83	CLOUDY	—
1105	1.5	3.0	300	5.42	8.45	25.46	948	1.52	24.88	CLOUDY	—
1110	1.5	4.5	300	5.42	8.37	25.45	948	1.44	23.98	CLOUDY	—
1115	1.5	6.0	300	5.42	8.26	25.44	947	1.34	24.45	CLOUDY	—
1120 - SAMPLE TIME - OVER 5X EQUIPMENT VOL'S PURGED											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. WETCHERT	SAMPLER(S) SIGNATURE(S): K. WET	SAMPLING INITIATED AT: 1120	SAMPLING ENDED AT: 1130
PUMP OR TUBING DEPTH IN WELL (feet): 32.5/RFPP	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	40 mL	<2	8260	SM	
	2	AG	1 L	H2SO4	1 L	<2	TRPH	PP	
	2	AG	1L	---	1L	<2	8310	PP	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Mayport	SITE LOCATION: Site 289	
WELL NO: MW04	SAMPLE ID: MPT-289-MW04-120712	DATE: July 12, 2012

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.00	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ((14 - 5.00)(.04)(3.9 L/GAL) = 1.4 L feet – feet) X gallons/foot = gallons

x5 = 7.0 L

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.0	PURGING INITIATED AT: 1220	PURGING ENDED AT: 1245	TOTAL VOLUME PURGED (~~gallons~~): 7.5 L

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (~~gpm~~) mL	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1220	—	—	300	5.00	—	—	—	—	—	—	—
1230	3.0	3.0	300	5.08	5.27	28.77	466	2.18	14.17	CLEAR	—
1235	1.5	4.5	300	5.09	5.74	28.75	465	2.02	13.75	CLEAR	—
1240	1.5	6.0	300	5.09	5.76	28.75	465	1.96	9.82	CLEAR	—
1245	1.5	7.5	300	5.10	5.89	28.73	465	1.90	7.75	CLEAR	—
1250 - SAMPLE TIME - 5x WELL VOLS PURGED											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. WEICHERT	SAMPLER(S) SIGNATURE(S): K. WEICHERT	SAMPLING INITIATED AT: 1250	SAMPLING ENDED AT: 1300

PUMP OR TUBING DEPTH IN WELL (feet): 6.0 | RFPP
TUBING MATERIAL CODE: PE
FIELD-FILTERED: Y (N) Filtration Equipment Type:
FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced)
DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	40 mL	<2	8260	SM	
	2	AG	1 L	H2SO4	1 L	<2	TRPH	PP	
	2	AG	1L	---	1L	<2	8310	PP	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Mayport		SITE LOCATION: Site 289
WELL NO: MW05	SAMPLE ID: MPT-289-MW05-120712	DATE: July 12, 2012

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 5.17	PURGE PUMP TYPE OR BAILER: Peristaltic

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ((14 - 5.17) (0.04) (3.9 gal) = 1.4 L x5 = 7 L feet – feet X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 6.1	PURGING INITIATED AT: 1305	PURGING ENDED AT: 1340	TOTAL VOLUME PURGED (gallons): 7 L

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (mpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1305	—	—	300	5.17	—	—	—				—
1315	3.0	3.0	300	5.21	6.07	28.94	4846	1.38	17.66	CLEAR	—
1320	1.5	4.5	300	5.21	6.34	28.98	48	1.36	16.99	CLEAR	—
1325	1.5	6.0	300	5.21	6.36	28.87	4846	1.33	12.74	CLEAR	—
1330	1.5	7.5	300	5.21	6.35	28.87	4846	1.31	7.26	CLEAR	—
1340 - SAMPLE TIME - 5x WELL VOL. PURGED											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. Wagner	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 40	SAMPLING ENDED AT: 00
PUMP OR TUBING DEPTH IN WELL (feet): 6.1 / RFPP	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE. ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	40 mL	<2	8260	SM	
	2	AG	1 L	H2SO4	1 L	<2	TRPH	PP	
	2	AG	1L	---	1L	<2	8310	PP	

REMARKS: MS/MSD COLLECTED

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITER A FOR RANGE OF VARIATION OF LAST THREE CONSECUT VE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Revision Date: February 1, 2004

SITE LOG

112G03576 GW SAMPLING 7-12-12

PERSONNEL: K. WEICHERT
TRUCK: POV
PPE: LEVEL "D"
WEATHER: HOT, SUNNY, 90°
OBJ: COLLECT GW SAMPLES AT SITE 289

0850 KW ON SITE UNCAPPING WELLS
0855 KW BEGINS CALIBRATING EQUIPMENT

	YSI 556	PRE	POST	MICRO TPW	
pH	4.00	3.63	4.00	1000	1000
	7.00	6.72	7.00	10.0	10.0
	10.00	10.24	10.01	.02	.02
COND.	1.000	0.951	1.000		
DO.	100.0%	120.2%	100.1%		

0920 KW COLLECTS GW LEVELS AT SITE - SEE GW LEVEL MEASUREMENT SHEET FOR DETAILS

0930 KW BEGINS GW SAMPLING - SEE TABLE BELOW

WELL ID	SAMPLE ID		PURGE START	PURGE STOP	SAMPLE TIME	NOTES
MW1	MPT-289-MW01-120712		0930	0955	1000	1
MW2	MPT-289-	MW02-120712	1015	1040	1045	1
MW3D	MPT-289-	MW03D-120712	1065	1115	1120	1
MW4	MPT-289-	MW04-120712	1220	1245	1250	1
MW5	MPT-289-	MW05-120712	1305	1330	1340	1 2

1 ALL SAMPLES ANALYZED FOR VOCs (BTEX + MTBE) LOW LEVEL PAHs, AND TRPH
2 MS/MSD COLLECTED FROM MW-5

-1410 KW HEADS TO DRUM STORAGE AREA, PLACES PURGE H_2O IN PETROLEUM TOTE.

1730 KW RELINQUISHES SAMPLES TO FED EX.

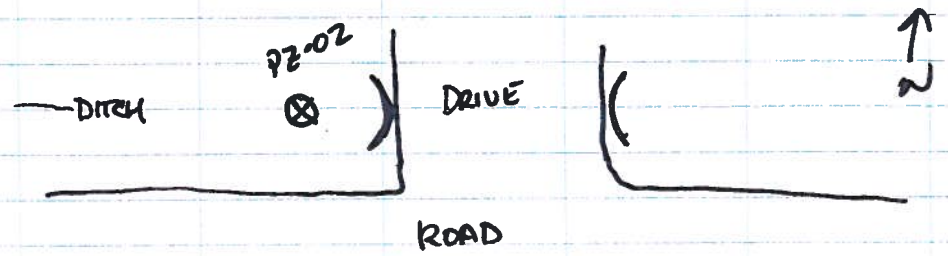
KPW

SITE 289

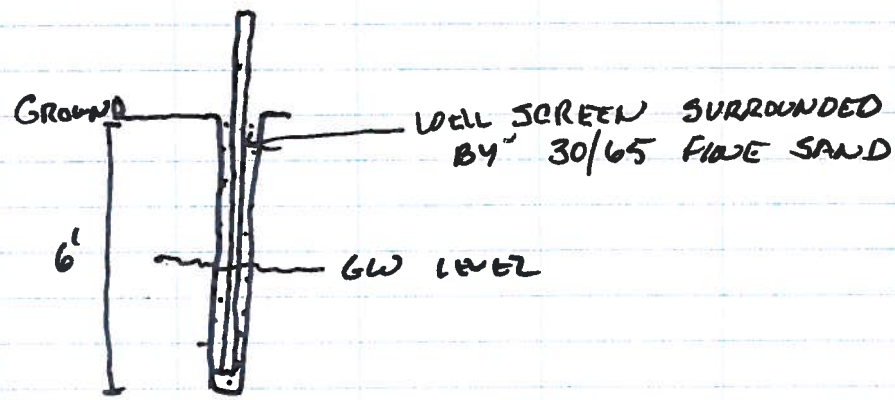
112603576 TEMP WELL INSTALL/SAMPLE AUG 16, 2012

PERSONNEL: K. WEICHERT
TRUCK: POV
PPE: LEVEL "D"
WEATHER: HOT, CLOUDY, 90°, HUMID
OBJ: INSTALL TEMPORARY MONITORING WELL + SAMPLE

0800 KW AT TE OFFICE LOADING UP
0920 KW DEPARTS FOR MAYNARD
1000 KW AT SITE 289, BEGINS INSTALLING PZ02



1030 PZ-02 INSTALLED TO ~6' BGS - SEE BELOW



1035 KW BEGINS SAMPLING
1200 MPT-289-PZ02-081612 COLLECTED - SEE GW SAMPLE LOG SHEET FOR DETAILS

1230 KW LOADS UP AND DEPARTS SITE

KPW

K. Weichert

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2547 | PAGE 1 OF 11

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G03576	NAVSTA MAYPORT	D. SIEFKEN	904-636-6125	EMPIRICAL LABORATORIES - B. RICHARD
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
K. WELT		K. WETCHERT	904-636-6125	621 MAINSTREAM DR. SUITE 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
				NASHVILLE, TN

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED: -

TYPE OF ANALYSIS: SELECT SVOC/PAHS 8270D *

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS									COMMENTS
8/16	1200	MPT-289-PZ02-081612				GW	G	2	2								COOL TO 4°C
																	*

1. RELINQUISHED BY K. WELT	DATE 8-16-12	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS * ONLY BENZO(A)ANTHRACENE, BENZO(B)FLUORANTHENE, DIBENZO(A,H)ANTHRACENE, INDENO(1,2,3-CD)PYRENE

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: 289		SITE LOCATION: MPT-289	
WELL NO: PZ-02	SAMPLE ID: MPT-289-PZ02-081612		DATE: 8-16-12

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 10 feet	STATIC DEPTH TO WATER (feet): 7.15	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= ((10 - 7.15) feet – (.04) feet) X (3.84 GAL) gallons/foot = .43 L gallons *5 = 2.15 L

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8.1'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.1'	PURGING INITIATED AT: 1035	PURGING ENDED AT: 1150	TOTAL VOLUME PURGED ~~(gallons)~~: 18.75 L

TIME	VOLUME PURGED (~~gallons~~) L	CUMUL. VOLUME PURGED (~~gallons~~) L	PURGE RATE (~~gpm~~) ml/min	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1035	–	–	250	7.15	–	–	–	–	–	–	–
1100	6.25	6.25	250	7.23	6.36	20.24	861	1.20	42.35	CLOUDY	–
1115	3.75	10.0 L	250	7.24	6.34	20.20	799	1.18	31.36	CLOUDY	–
1120	1.25	11.25	250	7.24	6.34	20.19	799	1.18	24.77	CLEAR	–
1130	2.50	13.75	250	7.24	6.33	20.19	797	1.14	19.85	CLEAR	–
1140	2.50	16.25	250	7.24	6.33	20.20	796	1.11	15.22	CLEAR	–
1150	2.50	18.75	250	7.25	6.32	20.18	797	1.10	12.10	CLEAR	
1200 - SAMPLE TIME - OVER 40 WELL VOLUMES PURGED											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: K. WEICHERT	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 1200	SAMPLING ENDED AT: 1220
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
1	2	AG	1L	–	1L	–	SELECT/SVOC/PAH		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Tetra Tech

EQUIPMENT CALIBRATION LOG

PROJECT NAME : SITE 289

SITE NAME: SITE 289

PROJECT No.: 112603576

INSTRUMENT NAME/MODEL: YSI 556 / MICRO TPW

MANUFACTURER: YSI / HF SCIENTIFIC

SERIAL NUMBER: 07D100976 / 200704133

Date of Calibration	Instrument I.D. Number	Person Performing Calibration	Instrument Settings		Instrument Readings		Calibration Standard (Lot No.)	Remarks and Comments
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
8/16/12	YSI	KW	pH	4.00	3.76	4.00	–	–
				7.00	6.95	7.00	–	–
				10.00	10.22	10.01	–	–
			COND	1413	1367	1413	–	–
			DO	100.0%	109.4%	100.1%	–	–
8/16/12	MICRO TPW	KW	TURB	1000	–	1000	–	
				10.0	–	10.0	–	
				0.2	–	0.2	–	

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: NAVSTA Mayport
Project No.: 112603576
Location: Site 289
Personnel: Jeff Krone & AJ Booth
Weather Conditions: Sunny 70°
Measuring Device: Heron Skinny Dipper
Tidally Influenced: Yes X No ___
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW-01S	11/1/12			13.6	6.22			
MW-02S				~~6.5~~ 13.6' AB	6.32'			
MW-03D				33.3'	6.35'			
MW-04S				13.6	6.19			
MW-05S	11/1/12			13.6	6.19			

* All measurements to the nearest 0.01 foot

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: Site 289		SITE LOCATION: NAVSTA MAYPORT	
WELL NO: MW03D	SAMPLE ID: MPT-289-GW-MW03D-20101101	DATE: 10 / 01 / 2012	

PURGING DATA

WELL DIAMETER (in):	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 28.3'-33.3'	STATIC DEPTH TO WATER (ft): 6.35'	PURGE PUMP TYPE OR BAILER: Peristaltic Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable) _____ Liters

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable) 1.2 Liters (35' x 0.00529) + 1 = 1.2L

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8	PURGE INITIATED AT: 1250	PURGE ENDED AT: 1406	TOTAL VOLUME PURGED (Liters): 38

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR
1250	0	0	500	6.35'	–	–	–	–	–	–	–
1400	35.0	35.0	500	13.23	7.19	23.47	0.840	0.23	4.37	9.9	yellow
1403	1.5	36.5	500	13.24	7.18	23.53	0.840	0.23	4.37	10.0	yellow
1406	1.5	38.0	500	13.25	7.18	23.	0.841	0.22	3.84	9.9	yellow
1410	Sample		time								

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.0757; **1"** = 0.151; **1.25"** = 0.227; **2"** = 0.605; **3"** = 0.37; **4"** = 1.40; **5"** = 3.861; **6"** = 5.564; **12"**= 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): **1/8"** = 0.00227; **3/16"** = 0.00529; **1/4"** = 0.00984; **5/16"** = 0.0151; **3/8"** = 0.0227; **1/2"** = 0.0378; **5/8"** = 0.0605

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TtNUS/ Jeff Krone	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1410	SAMPLING ENDED AT: 1420
PUMP OR TUBING DEPTH IN WELL (feet): 8	SAMPLE PUMP FLOW RATE (mL per minute): 500	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type: _____	FILTER SIZE: ____ µm	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

Tetra Tech NUS / FDEP Groundwater Sampling Sheet

SITE NAME: Site 289		SITE LOCATION:
WELL NO: MW02	SAMPLE ID: MPT-289-GW-MW02S-20121101	DATE: 11 / 01 / 2012

PURGING DATA

WELL DIAMETER (in): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 13.6'	STATIC DEPTH TO WATER (ft): 6.32'	PURGE PUMP TYPE OR BAILER: Peristaltic Pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
_____ Liters (13.6' - 6.32')(0.151) = 1.1L

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
_____ Liters

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8	PURGE INITIATED AT: 1250	PURGE ENDED AT: 1356	TOTAL VOLUME PURGED (Liters): 33

TIME	VOLUME PURGED (Liters)	CUMUL. VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft)	pH (standard units)	TEMP. (°C)	COND. (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	ORP (mV)	COLOR
1250	0	0	500	6.32	-	-	-	-	-	-	-
1350	30.0	30.0	500	6.39	6.66	26.07	0.575	0.51	2.41	9.6	yellow
1353	1.5	31.5	500	6.40	6.66	26.09	0.575	0.52	1.21	9.5	yellow
1356	1.5	33.0	500	6.40	6.67	26.10	0.57	0.53	1.60	9.5	yellow
1400	Sample time										

WELL CAPACITY (Liters Per Foot): **0.75"** = 0.0757; **1"** = 0.151; **1.25"** = 0.227; **2"** = 0.605; **3"** = 0.37; **4"** = 1.40; **5"** = 3.861; **6"** = 5.564; **12"**= 22.25
TUBING INSIDE DIA. CAPACITY (Ltr./Ft.): **1/8"** = 0.00227; **3/16"** = 0.00529; **1/4"** = 0.00984; **5/16"** = 0.0151; **3/8"** = 0.0227; **1/2"** = 0.0378; **5/8"** = 0.0605

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: TtNUS/ Jeff Krone	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1400	SAMPLING ENDED AT: 1405
PUMP OR TUBING DEPTH IN WELL (feet): 8	SAMPLE PUMP FLOW RATE (mL per minute): 500	TUBING MATERIAL CODE: Teflon	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type: _____	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 2558 | PAGE 2 OF 2

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G03576	NAVSTA Mayport Site 289	Dave Siefken	904 636 6125	Empirical / Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jeff Krone	PHONE NUMBER: 904 699 7473	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: FEDEX Airbill 8660 1730 0010		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —
TYPE OF ANALYSIS: PAHs (8270C)

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PAHs (8270C)								COMMENTS
11/01	1400	MPT-289-GW-MW02S-20121101				GW	G	2	X								Cool to 4°C
11/01	1410	MPT-289-GW-MW03D-20121101				GW	G	2	X								

1. RELINQUISHED BY	DATE	TIME	1. RECEIVED BY	DATE	TIME
	11/1/12	1600			
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

NAVSTA Mayport CTO JM60 Site 425 Groundwater Sampling 01 NOV 12

Personnel: Jeff Krone and AJ Booth
Truck: F-250
PPE: Level D
Objective: GW sampling at Site 425
Weather: Sunny 70°

0820 Departed office for Mayport
0825 Received text from Dave Siefken tasking us to also sample Site 289 wells 2S and 3D
0915 on site at Site 425, commenced calibration of instruments and purge of wells
0940 Completed calibration, began sampling event. See table below for details

Well ID	Sample ID	Start	Stop	Sample time	Analyses
MW01$	MPT-425-MW01$-20121101	0920	0946	0950	1,2,3,4,5,6
MW03$	MPT-425-MW03$-20121101	0930	1001	1005	1,2,3,4,5,6
MW02$	MPT-425-MW02$-20121101	0945	1016	1019	1,2,3,4,5,6
MW04$	MPT-425-MW04$-20121101	1035	1106	1110	1,2,3,4,5,6
MW06$	MPT-425-MW06$-20121101	1105	1131	1135	1,2,3,4,5,6

Analysis Key 1 = VOCs 2: TEPH 3: PAH 4: Ammonia 5: Nitrate, Sulfate TDS
6: Total metals (Na & Fe only)

No QC samples collected this round
1230 completed sampling, packed samples for transport and proceeded to Site 289.
1235 Arrived at Site 289, began uncapping wells
1250 collected water levels and began purge of wells MW02S and MW03D
1400 Finished purge of well MW02$, collected sample MPT-289-GW-MW02$-20121101 for PAH analysis
1410 Finished purge of well MW03D, collected sample MPT-289-GW-MW-03D-20121101 for PAH analysis
1430 packed samples and equipment for transport, departed site
1605 Relinquished samples to Empirical Labs via FedEx Airbill 8660 1730 0010
1625 Arrived at office

FedEx Express US Airbill

FedEx Tracking Number 8660 1730 0010

Form ID No. 0215 Sender's Copy

24 x 14 x 14
24 x 15 x 13

From Please print and press hard.

Date 11/1/12 Sender's FedEx Account Number 1772-0315-7

Sender's Name DISTRIBUTION Phone (904) 636-6125

Company TETRA TECH NUS INC/GOVT

Address 8640 PHILIPS HWY STE 16 Dept./Floor/Suite/Room

City JACKSONVILLE State FL ZIP 32256-1209

Your Internal Billing Reference First 24 characters will appear on invoice. 112G03576

To

Recipient's Name Sample Receiving Phone (877) 345 1113

Company Empirical Labs

Recipient's Address 621 Mainstream Drive

We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

Address Suite 270

To request a package be held at a specific FedEx location, print FedEx address here.

City Nashville State TN ZIP 37228

0383105710

Ship and track packages at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

4a Express Package Service *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation: ** To most locations.

5 Packaging

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
3	179	$ 75 .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. Fee applies.
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. Fee applies.

519

Rev. Date 10/06•Part #158279•©1994-2006 FedEx•PRINTED IN U.S.A.•SRS

FedEx®
3736 SALISBURY RD
JACKSONVILLE, FL 32216

Location: NRBCE
Device ID: NRBCE-POS1
Employee: 250814
Transaction: 78066801572

PRIORITY OVERNIGHT
866017300010 185.05 lb (S) 152.52
795546986623
795546986634

Scheduled Delivery Date 11/02/2012

Shipment subtotal: 152.52

Total Due: 152.52

FedEx Account: 152.52
*****3157

N = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

November 1, 2012 4:01:51 PM

APPENDIX E

MONITORING WELL CONSTRUCTION DIAGRAMS

Tetra Tech NUS, Inc.

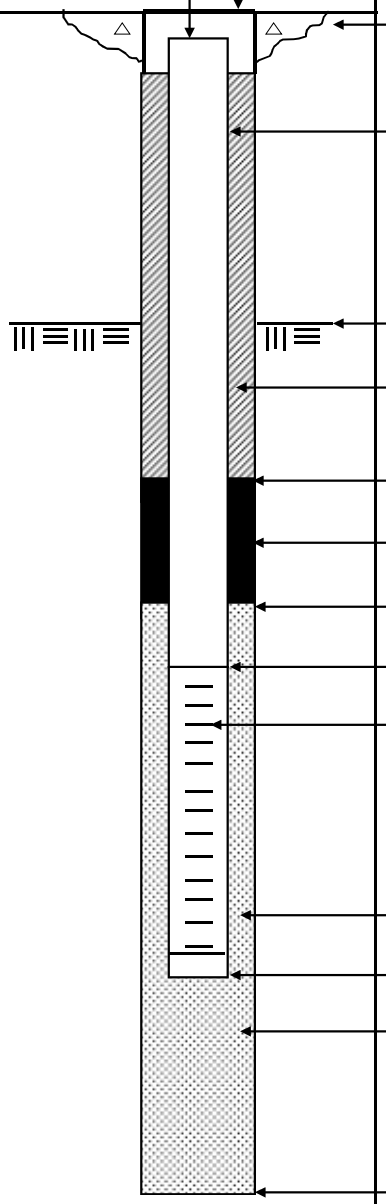
MONITORING WELL SHEET

WELL No.: MPT-289-MW01

PROJECT:	Site 289	DRILLING Co.:	Probe Domain	BORING No.:	1
PROJECT No.:	112g03576	DRILLER:	Jason	DATE COMPLETED:	07/28/12
SITE:	MPT - Site 289	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D.Siefken	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:	8"	
Type of Surface Casing:	Steel Manhole	
Type of Surface Seal:	Cement	
I.D. of Riser:	1"	
Type of Riser:	Schedule 40 PVC	
Borehole Diameter:	3.25"	
Elevation / Depth Top of Rock:		/
Type of Backfill:	Type I/II Protland Cement	
Elevation / Depth of Seal:		/ 2'
Type of Seal:	30/65 Sand	
Elevation / Depth of Top of Filter Pack:		/ 4'
Elevation / Depth of Top of Screen:		/ 4'
Type of Screen:	Schedule 40 PVC	
Slot Size x Length:	0.01' Slot Schedule 40 PVC	
I.D. of Screen:	1'	
Type of Filter Pack:	20/30 Sand	
Elevation / Depth of Bottom of Screen:		/ 14'
Elevation / Depth of Bottom of Filter Pack:		/ 14.3'
Type of Backfill Below Well:		
Elevation / Total Depth of Borehole:		/ 14.3'

Tetra Tech NUS, Inc.

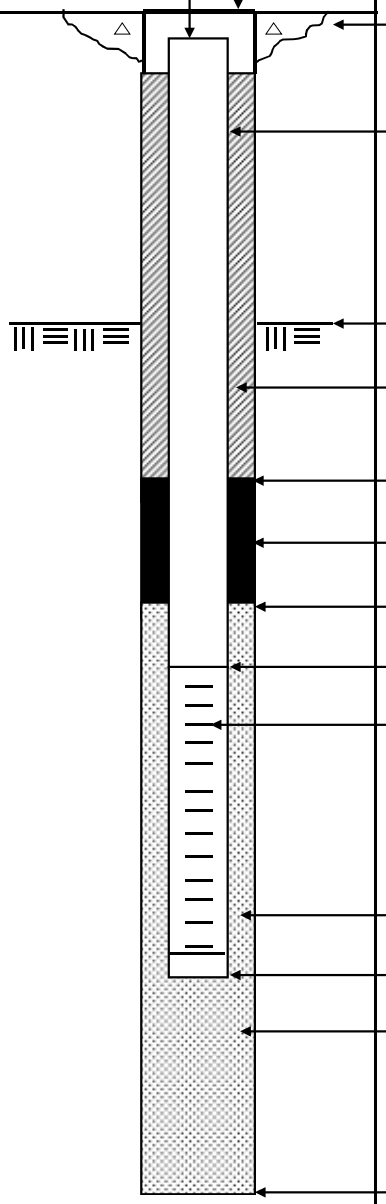
MONITORING WELL SHEET

WELL No.: MPT-289-MW02

PROJECT:	Site 289	DRILLING Co.:	Probe Domain	BORING No.:	2
PROJECT No.:	112g03576	DRILLER:	Jason	DATE COMPLETED:	07/28/12
SITE:	MPT - Site 289	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D.Siefken	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:	8"	
Type of Surface Casing:	Steel Manhole	
Type of Surface Seal:	Cement	
I.D. of Riser:	1"	
Type of Riser:	Schedule 40 PVC	
Borehole Diameter:	3.25"	
Elevation / Depth Top of Rock:		/
Type of Backfill:	Type I/II Protland Cement	
Elevation / Depth of Seal:		/ 2'
Type of Seal:	30/65 Sand	
Elevation / Depth of Top of Filter Pack:		/ 4'
Elevation / Depth of Top of Screen:		/ 4'
Type of Screen:	Schedule 40 PVC	
Slot Size x Length:	0.01' Slot Schedule 40 PVC	
I.D. of Screen:	1'	
Type of Filter Pack:	20/30 Sand	
Elevation / Depth of Bottom of Screen:		/ 14'
Elevation / Depth of Bottom of Filter Pack:		/ 14.3'
Type of Backfill Below Well:		
Elevation / Total Depth of Borehole:		/ 14.3'

Tetra Tech NUS, Inc.

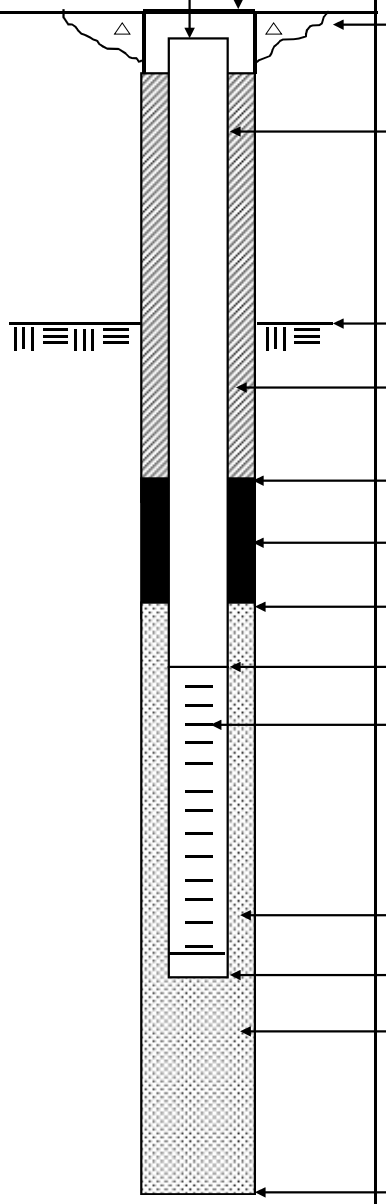
MONITORING WELL SHEET

WELL No.: MPT-289-MW03D

PROJECT:	Site 289	DRILLING Co.:	Probe Domain	BORING No.:	3
PROJECT No.:	112g03576	DRILLER:	Jason	DATE COMPLETED:	07/26/12
SITE:	MPT - Site 289	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D.Siefken	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser: /

Elevation / Height of Top of Surface Casing: /

I.D. of Surface Casing: 8"

Type of Surface Casing: Steel Manhole

Type of Surface Seal: Cement

I.D. of Riser: 1"

Type of Riser: Schedule 40 PVC

Borehole Diameter: 3.25"

Elevation / Depth Top of Rock: /

Type of Backfill: Type I/II Protland Cement

Elevation / Depth of Seal: / 28'

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: / 30'

Elevation / Depth of Top of Screen: / 30'

Type of Screen: Schedule 40 PVC

Slot Size x Length: 0.01' Slot Schedule 40 PVC

I.D. of Screen: 1'

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: / 35'

Elevation / Depth of Bottom of Filter Pack: / 35.3'

Type of Backfill Below Well:

Elevation / Total Depth of Borehole: / 35.3'

Tetra Tech NUS, Inc.

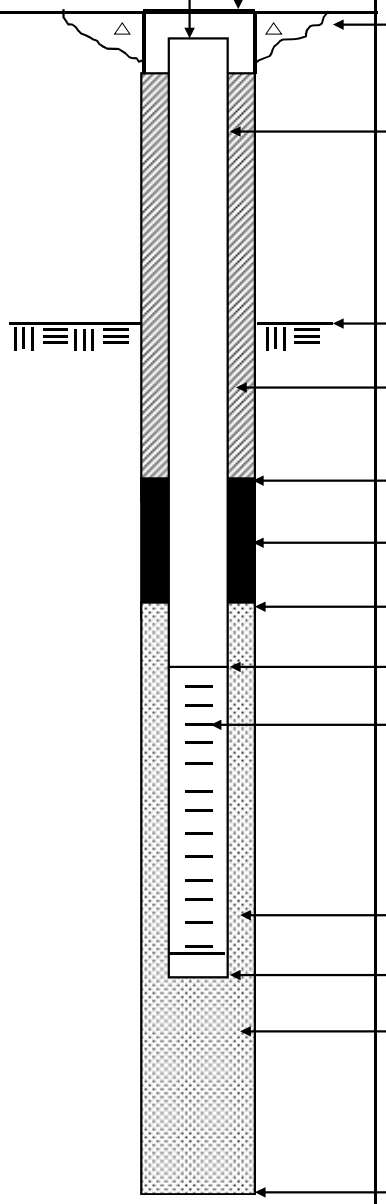
MONITORING WELL SHEET

WELL No.: MPT-289-MW04

PROJECT:	Site 289	DRILLING Co.:	Probe Domain	BORING No.:	4
PROJECT No.:	112g03576	DRILLER:	Jason	DATE COMPLETED:	07/28/12
SITE:	MPT - Site 289	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D.Siefken	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:	8"	
Type of Surface Casing:	Steel Manhole	
Type of Surface Seal:	Cement	
I.D. of Riser:	1"	
Type of Riser:	Schedule 40 PVC	
Borehole Diameter:	3.25"	
Elevation / Depth Top of Rock:		/
Type of Backfill:	Type I/II Protland Cement	
Elevation / Depth of Seal:		/ 2'
Type of Seal:	30/65 Sand	
Elevation / Depth of Top of Filter Pack:		/ 4'
Elevation / Depth of Top of Screen:		/ 4'
Type of Screen:	Schedule 40 PVC	
Slot Size x Length:	0.01' Slot Schedule 40 PVC	
I.D. of Screen:	1'	
Type of Filter Pack:	20/30 Sand	
Elevation / Depth of Bottom of Screen:		/ 14'
Elevation / Depth of Bottom of Filter Pack:		/ 14.3'
Type of Backfill Below Well:		
Elevation / Total Depth of Borehole:		/ 14.3'

Tetra Tech NUS, Inc.

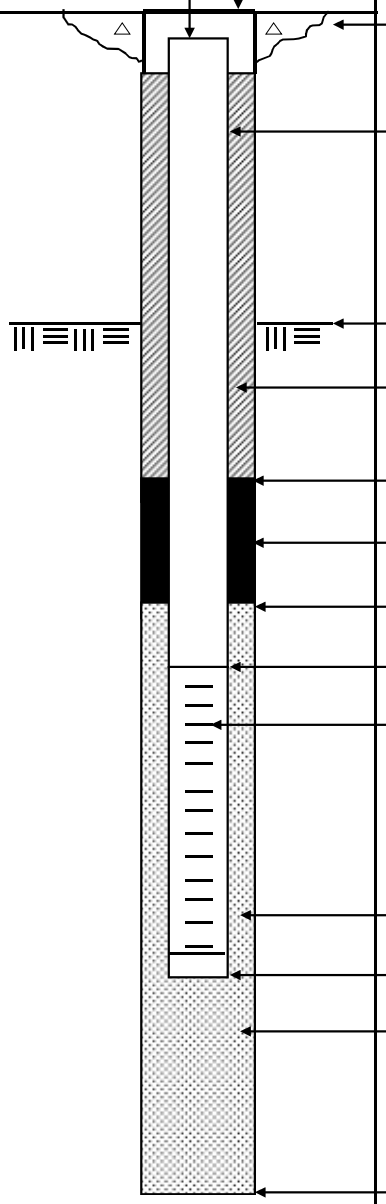
MONITORING WELL SHEET

WELL No.: MPT-289-MW05

PROJECT:	Site 289	DRILLING Co.:	Probe Domain	BORING No.:	5
PROJECT No.:	112g03576	DRILLER:	Jason	DATE COMPLETED:	07/28/12
SITE:	MPT - Site 289	DRILLING METHOD:	DPT	NORTHING:	
GEOLOGIST:	D.Siefken	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser:		/
Elevation / Height of Top of Surface Casing:		/
I.D. of Surface Casing:	8"	
Type of Surface Casing:	Steel Manhole	
Type of Surface Seal:	Cement	
I.D. of Riser:	1"	
Type of Riser:	Schedule 40 PVC	
Borehole Diameter:	3.25"	
Elevation / Depth Top of Rock:		/
Type of Backfill:	Type I/II Protland Cement	
Elevation / Depth of Seal:		/ 2'
Type of Seal:	30/65 Sand	
Elevation / Depth of Top of Filter Pack:		/ 4'
Elevation / Depth of Top of Screen:		/ 4'
Type of Screen:	Schedule 40 PVC	
Slot Size x Length:	0.01' Slot Schedule 40 PVC	
I.D. of Screen:	1'	
Type of Filter Pack:	20/30 Sand	
Elevation / Depth of Bottom of Screen:		/ 14'
Elevation / Depth of Bottom of Filter Pack:		/ 14.3'
Type of Backfill Below Well:		
Elevation / Total Depth of Borehole:		/ 14.3'

Tetra Tech NUS, Inc.

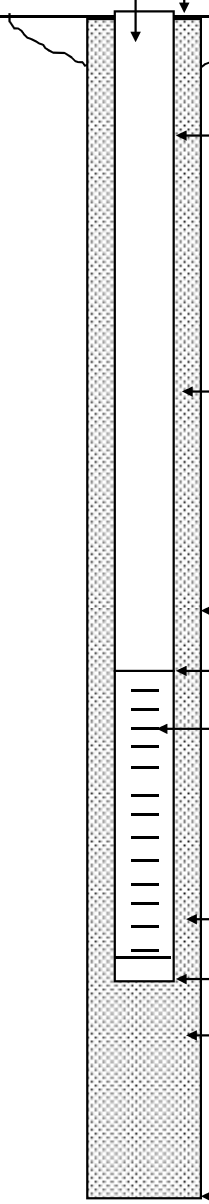
TEMPORARY MONITORING WELL

WELL No.: MPT-289-TW01

PROJECT:	Site 289	DRILLING Co.:	Tetra Tech	BORING No.:	1
PROJECT No.:	112g03576	DRILLER:	Zach Scribner	DATE COMPLETED:	12/19/11
SITE:	MPT - Site 289	DRILLING METHOD:	Hand Auger	NORTHING:	
GEOLOGIST:	Zach Scribner	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser: NA

Elevation / Height of Top of Surface Casing: NA

I.D. of Surface Casing: NA

Type of Surface Casing: Steel Manhole

Type of Surface Seal: None

I.D. of Riser: 1"

Type of Riser: Schedule 40 PVC

Borehole Diameter: 3.25"

Type of Backfill: 20/30 sand

Elevation / Depth of Top of Filter Pack: Land Surface

Elevation / Depth of Top of Screen: 0"

Type of Screen: Schedule 40 PVC

Slot Size x Length: 0.01" Slot Schedule 40 PVC

I.D. of Screen: 1"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 8.5'

Elevation / Depth of Bottom of Filter Pack: 8.5 '

Type of Backfill Below Well:

Elevation / Total Depth of Borehole: 8.5'

Tetra Tech NUS, Inc.

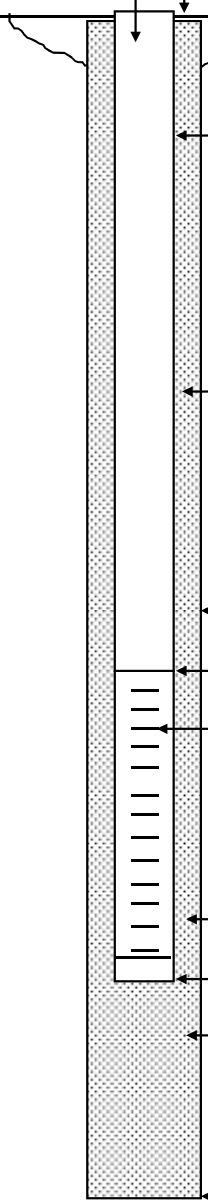
TEMPORARY MONITORING WELL

WELL No.: MPT-289-TW02

PROJECT:	Site 289	DRILLING Co.:	Tetra Tech	BORING No.:	2
PROJECT No.:	112g03576	DRILLER:	Zach Scribner	DATE COMPLETED:	12/19/11
SITE:	MPT - Site 289	DRILLING METHOD:	Hand Auger	NORTHING:	
GEOLOGIST:	Zach Scribner	DEV. METHOD:	Peristaltic	EASTING:	

Ground Elevation =

Datum:



Not to Scale

Elevation / Depth of Top of Riser: NA

Elevation / Height of Top of Surface Casing: NA

I.D. of Surface Casing: NA

Type of Surface Casing: Steel Manhole

Type of Surface Seal: None

I.D. of Riser: 1"

Type of Riser: Schedule 40 PVC

Borehole Diameter: 3.25"

Type of Backfill: 20/30 sand

Elevation / Depth of Top of Filter Pack: Land Surface

Elevation / Depth of Top of Screen: 0"

Type of Screen: Schedule 40 PVC

Slot Size x Length: 0.01" Slot Schedule 40 PVC

I.D. of Screen: 1"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 8.5'

Elevation / Depth of Bottom of Filter Pack: 8.5 '

Type of Backfill Below Well:

Elevation / Total Depth of Borehole: 8.5'

APPENDIX F

SOIL LABORATORY ANALYTICAL RESULTS

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1201142

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Tobrena Sedlmeyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Brian Richard
Tel (615)345-1115
Fax (866)417-0548
Email: brichard@empirlabs.com

Original Report Date: February 13, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 210

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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2	Table of Contents	2
3	Case Narrative	3
4	Sample Receipt Information Chain of Custody Forms Sample Receipt Confirmations WorkOrder Summary Sample Delivery Group (SDG) Sheets	9
5	Data for SW8260B Required Data / QAQC / Calibration Forms Supporting Raw Data / Logs	18
6	Data for SW8270D Required Data / QAQC / Calibration Forms Supporting Raw Data / Logs	114
7	Data for FLPRO Required Data / QAQC / Calibration Forms Supporting Raw Data / Logs	172

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The following batch spikes exceeded criteria:
2A27016-BS1 with 0% recovery for 2-Chloroethyl vinyl ether
2A30012-BS1 with 0% recovery for 2-Chloroethyl vinyl ether
2A31014-BSD1 with a positive bias for Vinyl Chloride
Note – Client was informed of batch spikes exceeding recovery with 0% for 2-Chloroethyl vinyl ether and indicated that the samples would not be re-analyzed.

The following matrix spikes exceeded criteria:

1201142-03 with a negative bias for 1,2-Dichlorbenzene

The following continuing calibration verifications exceeded criteria:
2A03008-CCV1 with a negative bias for 2-Chloroethyl vinyl ether
2A03105-CCV1 with a negative bias for 2-Chloroethyl vinyl ether
2B03307-CCV1 with a negative bias for 2-Chloroethyl vinyl ether

The following method blanks have positive results:
2A27016-BLK1 for Methylene Chloride

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D:
The following blanks have positive results:
2A25001-BLK1 for Benzo(b)fluoranthene and Chrysene
No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The following surrogates exceeded criteria with a negative bias:
2-Fluorobiphenyl with a negative bias in 1201142-06
o-Terphenyl with a negative bias in 1201142-06 and 2A27014-BS1

The following surrogate exceeded the retention time window:
o-Terphenyl in 2A27014-BLK1; note – the result bias due to the retention time shift was determined to be negligible for 2A27014-BLK1

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.2 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity or an approved technical designee is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

1201142

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 0832 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112903576	Site 289-MPT	Dave Siefken	904-334-7260	Empirical / Brian Richards
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
K. Wolf		Kevin Weichert	904-636-6125	621 Mainstream Dr, Suite 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8427-1834-4717 / ~~8427-1834-4726~~		Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G)
PRESERVATIVE USED

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	8310 PAH *	VOC	TRPH. - FL Prox					COMMENTS
1/24	0900	MPT-289-SS01-04-20120124			4	SO	G	4	x	x	x		01				Cool to 4°C
	0915	MPT-289-SS02-04-20120124			4	SO	G	4	x	x	x		02				
	0930	MPT-289-SS03-04-20120124			4	SO	G	12	x	x	x		03				MS/MSD COLLECTED
	0945	MPT-289-SS04-04-20120124			4	SO	G	4	x	x	x		04				
	1000	MPT-289-SS05-04-20120124			4	SO	G	4	x	x	x		05				
	1015	MPT-289-SS06-04-20120124			4	SO	G	4	x	x	x		06				
	1030	MPT-289-SS07-04-20120124			4	SO	G	4	x	x	x		07				
	1045	MPT-289-SS08-03-20120124			4	SO	G	4	x	x	x		08				
	1100	MPT-289-SS09-03-20120124			4	SO	G	4	x	x	x		09				
	1115	MPT-289-SS10-03-20120124			4	SO	G	4	x	x	x		10				
	1105	MPT-289-RB01-20120124				QC		7	x	x	x		11				RINSATE BLANK
	1130	MPT-289-SS11-03-20120124			4	SO	G	4	x	x	x		12				
	0000	TRIPBLANK				QC	2						13				TRIPBLANK

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY K. Wolf	1-24-12	1600	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY	1/25/12	0820

COMMENTS * PAH + TRPH IN SAME JAR

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 01/25/12 @ 0820

1. Tracking # 4717 (last 4 digits, FedEx) WO# 1201142

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened 0.6 Degrees Celsius + correction factor 0.0 = 0.6

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2-FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 1

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#_____

Additional Details:

Cooler Received/Opened On_ 01/25/12 @ 0820

1. Tracking #_____5625_____(last 4 digits, FedEx) WO# 1201142

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.5 *Degrees Celsius + correction factor 0.0* = 3.5

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES ...NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 - FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES ...NO... and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#_____

Additional Details:

WORK ORDER **Printed: 2/10/2012 4:47:02PM**

1201142

Empirical Laboratories, LLC

Client: **Tetra Tech NUS, Inc. (T010)**
Project: **NAS Mayport CTO JM60**

Project Manager: **Brian Richard**
Project Number: **TET_CTOJM60**

Report To:
Tetra Tech NUS, Inc. (T010)
Tobrena Sedlmyer
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 02/15/2012 16:00 (15 day TAT)

Received By: Benjamin C. Wright
Date Received: 01/25/2012 08:20

Logged In By: Benjamin C. Wright
Date Logged In: 01/25/2012 11:55

Samples Received at: **0.6°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confir	Yes		

Method	Test Code	Due	TAT	Expires	Comments
1201142-01 MPT-289-SS01-04-20120124 [Solid] Sampled 01/24/2012 09:00 Eastern					
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 08:00	see versions
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 08:00	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 08:00	
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 08:00	

WORK ORDER

Printed: 2/10/2012 4:47:02PM

1201142

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
1201142-02 MPT-289-SS02-04-20120124 [Solid] Sampled 01/24/2012 09:15 Eastern					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 08:15	
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 08:15	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 08:15	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 08:15	see versions
1201142-03 MPT-289-SS03-04-20120124 [Solid] Sampled 01/24/2012 09:30 Eastern					**MS/MSD.**
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 08:30	MS/MSD.
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 08:30	MS/MSD.
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 08:30	MS/MSD.
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 08:30	MS/MSD.
1201142-04 MPT-289-SS04-04-20120124 [Solid] Sampled 01/24/2012 09:45 Eastern					
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 08:45	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 08:45	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 08:45	see versions
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 08:45	
1201142-05 MPT-289-SS05-04-20120124 [Solid] Sampled 01/24/2012 10:00 Eastern					
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 09:00	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 09:00	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 09:00	see versions
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 09:00	

WORK ORDER

Printed: 2/10/2012 4:47:02PM

1201142

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
1201142-06 MPT-289-SS06-04-20120124 [Solid] Sampled 01/24/2012 10:15 Eastern					
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 09:15	see versions
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 09:15	
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 09:15	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 09:15	
1201142-07 MPT-289-SS07-04-20120124 [Solid] Sampled 01/24/2012 10:30 Eastern					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 09:30	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 09:30	
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 09:30	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 09:30	see versions
1201142-08 MPT-289-SS08-03-20120124 [Solid] Sampled 01/24/2012 10:45 Eastern					
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 09:45	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 09:45	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 09:45	see versions
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 09:45	
1201142-09 MPT-289-SS09-03-20120124 [Solid] Sampled 01/24/2012 11:00 Eastern					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 10:00	
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 10:00	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 10:00	see versions
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 10:00	

WORK ORDER

Printed: 2/10/2012 4:47:02PM

1201142

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
1201142-10 MPT-289-SS10-03-20120124 [Solid] Sampled 01/24/2012 11:15 Eastern					
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 10:15	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 10:15	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 10:15	see versions
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 10:15	
1201142-11 MPT-289-RB01-20120124 [Water] Sampled 01/24/2012 11:05 Eastern					
FLPRO	SGC_FLPRO_3510C	02/08/2012 14:00	10	01/31/2012 10:05	
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	01/31/2012 10:05	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 10:05	see versions
1201142-12 MPT-289-SS11-03-20120124 [Solid] Sampled 01/24/2012 11:30 Eastern					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/08/2012 14:00	10	01/31/2012 10:30	
FLPRO	SGC_FLPRO_3546	02/08/2012 14:00	10	02/07/2012 10:30	
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/07/2012 10:30	see versions
SW8270D	SMS_PAH_8270D_LOW	02/08/2012 14:00	10	02/07/2012 10:30	
1201142-13 Trip Blank [Water] Sampled 01/24/2012 00:00 Eastern					
SW8260B	VOC_8260B_REG	02/08/2012 14:00	10	02/06/2012 23:00	see versions

Reviewed By

Date

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: NAS Mayport CTO JM60
SDG #: 1201142
MATRIX: Water

QC LEVEL: Level IV
Report Due: 2/15/2012
Client Sample Count: 12

Sample Type	Sampled	Received	Lab ID	Client ID	FLPRO	SM2540B	SW8260B	SW8270D
Client Sample	1/24/2012	1/25/2012	1201142-01	MPT-289-SS01-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-02	MPT-289-SS02-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-03	MPT-289-SS03-04-20120124	MS/MSD.	MS/MSD.	MS/MSD.	MS/MSD.
Client Sample	1/24/2012	1/25/2012	1201142-04	MPT-289-SS04-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-05	MPT-289-SS05-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-06	MPT-289-SS06-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-07	MPT-289-SS07-04-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-08	MPT-289-SS08-03-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-09	MPT-289-SS09-03-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-10	MPT-289-SS10-03-20120124	X	X	X	X
Client Sample	1/24/2012	1/25/2012	1201142-11	MPT-289-RB01-20120124	X		X	X
Client Sample	1/24/2012	1/25/2012	1201142-12	MPT-289-SS11-03-20120124	X	X	X	X
Trip Blank	1/24/2012	1/25/2012	1201142-13	Trip Blank			X	

Data for SW8260B Forms

ANALYSIS DATA SHEET

MPT-289-SS01-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-01	File ID:	0114201.D
Sampled:	01/24/12 09:00	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 13:39
Solids:	84.15	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.63	3.26	6.51	U
75-25-2	Bromoform		1.63	3.26	6.51	U
74-83-9	Bromomethane		3.26	6.51	13.0	U
56-23-5	Carbon tetrachloride		1.63	3.26	6.51	U
108-90-7	Chlorobenzene		1.63	3.26	6.51	U
75-00-3	Chloroethane		3.26	6.51	13.0	U
67-66-3	Chloroform		1.63	3.26	6.51	U
110-75-8	2-Chloroethyl vinyl ether		32.6	65.1	130	Q, Y, U
74-87-3	Chloromethane		3.26	6.51	13.0	U
124-48-1	Dibromochloromethane		1.63	3.26	6.51	U
106-93-4	1,2-Dibromoethane (EDB)		1.63	3.26	6.51	U
95-50-1	1,2-Dichlorobenzene		1.63	3.26	6.51	U
541-73-1	1,3-Dichlorobenzene		1.63	3.26	6.51	U
106-46-7	1,4-Dichlorobenzene		1.63	3.26	6.51	U
75-71-8	Dichlorodifluoromethane		3.26	6.51	13.0	U
75-34-3	1,1-Dichloroethane		1.63	3.26	6.51	U
107-06-2	1,2-Dichloroethane		1.63	3.26	6.51	U
75-35-4	1,1-Dichloroethene		1.63	3.26	6.51	U
156-59-2	cis-1,2-Dichloroethene		1.63	3.26	6.51	U
156-60-5	trans-1,2-Dichloroethene		1.63	3.26	6.51	U
78-87-5	1,2-Dichloropropane		1.63	3.26	6.51	U
10061-01-5	cis-1,3-Dichloropropene		1.63	3.26	6.51	U
10061-02-6	trans-1,3-Dichloropropene		1.63	3.26	6.51	U
75-09-2	Methylene chloride	2.87	1.63	3.26	6.51	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.63	3.26	6.51	U
127-18-4	Tetrachloroethene		1.63	3.26	6.51	U
79-00-5	1,1,2-Trichloroethane		1.63	3.26	6.51	U
71-55-6	1,1,1-Trichloroethane		1.63	3.26	6.51	U
79-01-6	Trichloroethene		1.63	3.26	6.51	U
75-69-4	Trichlorofluoromethane		3.26	6.51	13.0	U
75-01-4	Vinyl chloride		3.26	6.51	13.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	39.09	38.52	98.5	85 - 120	
Dibromofluoromethane	39.09	39.92	102	80 - 125	
1,2-Dichloroethane-d4	39.09	40.44	103	75 - 140	
Toluene-d8	39.09	37.63	96.3	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS02-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-02	File ID:	0114202.D
Sampled:	01/24/12 09:15	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 14:06
Solids:	92.67	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.37	2.74	5.47	U
75-25-2	Bromoform		1.37	2.74	5.47	U
74-83-9	Bromomethane		2.74	5.47	10.9	U
56-23-5	Carbon tetrachloride		1.37	2.74	5.47	U
108-90-7	Chlorobenzene		1.37	2.74	5.47	U
75-00-3	Chloroethane		2.74	5.47	10.9	U
67-66-3	Chloroform		1.37	2.74	5.47	U
110-75-8	2-Chloroethyl vinyl ether		27.4	54.7	109	Q, Y, U
74-87-3	Chloromethane		2.74	5.47	10.9	U
124-48-1	Dibromochloromethane		1.37	2.74	5.47	U
106-93-4	1,2-Dibromoethane (EDB)		1.37	2.74	5.47	U
95-50-1	1,2-Dichlorobenzene		1.37	2.74	5.47	U
541-73-1	1,3-Dichlorobenzene		1.37	2.74	5.47	U
106-46-7	1,4-Dichlorobenzene		1.37	2.74	5.47	U
75-71-8	Dichlorodifluoromethane		2.74	5.47	10.9	U
75-34-3	1,1-Dichloroethane		1.37	2.74	5.47	U
107-06-2	1,2-Dichloroethane		1.37	2.74	5.47	U
75-35-4	1,1-Dichloroethene		1.37	2.74	5.47	U
156-59-2	cis-1,2-Dichloroethene		1.37	2.74	5.47	U
156-60-5	trans-1,2-Dichloroethene		1.37	2.74	5.47	U
78-87-5	1,2-Dichloropropane		1.37	2.74	5.47	U
10061-01-5	cis-1,3-Dichloropropene		1.37	2.74	5.47	U
10061-02-6	trans-1,3-Dichloropropene		1.37	2.74	5.47	U
75-09-2	Methylene chloride	1.86	1.37	2.74	5.47	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.37	2.74	5.47	U
127-18-4	Tetrachloroethene		1.37	2.74	5.47	U
79-00-5	1,1,2-Trichloroethane		1.37	2.74	5.47	U
71-55-6	1,1,1-Trichloroethane		1.37	2.74	5.47	U
79-01-6	Trichloroethene		1.37	2.74	5.47	U
75-69-4	Trichlorofluoromethane		2.74	5.47	10.9	U
75-01-4	Vinyl chloride		2.74	5.47	10.9	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.83	31.98	97.4	85 - 120	
Dibromofluoromethane	32.83	32.33	98.5	80 - 125	
1,2-Dichloroethane-d4	32.83	33.48	102	75 - 140	
Toluene-d8	32.83	32.02	97.5	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS03-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-03	File ID:	0114203.D
Sampled:	01/24/12 09:30	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 13:12
Solids:	94.73	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.43	2.86	5.71	U
75-25-2	Bromoform		1.43	2.86	5.71	U
74-83-9	Bromomethane		2.86	5.71	11.4	U
56-23-5	Carbon tetrachloride		1.43	2.86	5.71	U
108-90-7	Chlorobenzene		1.43	2.86	5.71	U
75-00-3	Chloroethane		2.86	5.71	11.4	U
67-66-3	Chloroform		1.43	2.86	5.71	U
110-75-8	2-Chloroethyl vinyl ether		28.6	57.1	114	Q, Y, U
74-87-3	Chloromethane		2.86	5.71	11.4	U
124-48-1	Dibromochloromethane		1.43	2.86	5.71	U
106-93-4	1,2-Dibromoethane (EDB)		1.43	2.86	5.71	U
95-50-1	1,2-Dichlorobenzene		1.43	2.86	5.71	N, U
541-73-1	1,3-Dichlorobenzene		1.43	2.86	5.71	U
106-46-7	1,4-Dichlorobenzene		1.43	2.86	5.71	U
75-71-8	Dichlorodifluoromethane		2.86	5.71	11.4	U
75-34-3	1,1-Dichloroethane		1.43	2.86	5.71	U
107-06-2	1,2-Dichloroethane		1.43	2.86	5.71	U
75-35-4	1,1-Dichloroethene		1.43	2.86	5.71	U
156-59-2	cis-1,2-Dichloroethene		1.43	2.86	5.71	U
156-60-5	trans-1,2-Dichloroethene		1.43	2.86	5.71	U
78-87-5	1,2-Dichloropropane		1.43	2.86	5.71	U
10061-01-5	cis-1,3-Dichloropropene		1.43	2.86	5.71	U
10061-02-6	trans-1,3-Dichloropropene		1.43	2.86	5.71	U
75-09-2	Methylene chloride	3.06	1.43	2.86	5.71	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.43	2.86	5.71	U
127-18-4	Tetrachloroethene		1.43	2.86	5.71	U
79-00-5	1,1,2-Trichloroethane		1.43	2.86	5.71	U
71-55-6	1,1,1-Trichloroethane		1.43	2.86	5.71	U
79-01-6	Trichloroethene		1.43	2.86	5.71	U
75-69-4	Trichlorofluoromethane		2.86	5.71	11.4	U
75-01-4	Vinyl chloride		2.86	5.71	11.4	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	34.27	33.57	97.9	85 - 120	
Dibromofluoromethane	34.27	33.54	97.9	80 - 125	
1,2-Dichloroethane-d4	34.27	33.97	99.1	75 - 140	
Toluene-d8	34.27	32.98	96.2	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS04-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-04	File ID:	0114204.D
Sampled:	01/24/12 09:45	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 14:33
Solids:	94.83	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.37	2.73	5.47	U
75-25-2	Bromoform		1.37	2.73	5.47	U
74-83-9	Bromomethane		2.73	5.47	10.9	U
56-23-5	Carbon tetrachloride		1.37	2.73	5.47	U
108-90-7	Chlorobenzene		1.37	2.73	5.47	U
75-00-3	Chloroethane		2.73	5.47	10.9	U
67-66-3	Chloroform		1.37	2.73	5.47	U
110-75-8	2-Chloroethyl vinyl ether		27.3	54.7	109	Q, Y, U
74-87-3	Chloromethane		2.73	5.47	10.9	U
124-48-1	Dibromochloromethane		1.37	2.73	5.47	U
106-93-4	1,2-Dibromoethane (EDB)		1.37	2.73	5.47	U
95-50-1	1,2-Dichlorobenzene		1.37	2.73	5.47	U
541-73-1	1,3-Dichlorobenzene		1.37	2.73	5.47	U
106-46-7	1,4-Dichlorobenzene		1.37	2.73	5.47	U
75-71-8	Dichlorodifluoromethane		2.73	5.47	10.9	U
75-34-3	1,1-Dichloroethane		1.37	2.73	5.47	U
107-06-2	1,2-Dichloroethane		1.37	2.73	5.47	U
75-35-4	1,1-Dichloroethene		1.37	2.73	5.47	U
156-59-2	cis-1,2-Dichloroethene		1.37	2.73	5.47	U
156-60-5	trans-1,2-Dichloroethene		1.37	2.73	5.47	U
78-87-5	1,2-Dichloropropane		1.37	2.73	5.47	U
10061-01-5	cis-1,3-Dichloropropene		1.37	2.73	5.47	U
10061-02-6	trans-1,3-Dichloropropene		1.37	2.73	5.47	U
75-09-2	Methylene chloride	1.86	1.37	2.73	5.47	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.37	2.73	5.47	U
127-18-4	Tetrachloroethene		1.37	2.73	5.47	U
79-00-5	1,1,2-Trichloroethane		1.37	2.73	5.47	U
71-55-6	1,1,1-Trichloroethane		1.37	2.73	5.47	U
79-01-6	Trichloroethene		1.37	2.73	5.47	U
75-69-4	Trichlorofluoromethane		2.73	5.47	10.9	U
75-01-4	Vinyl chloride		2.73	5.47	10.9	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.82	32.11	97.8	85 - 120	
Dibromofluoromethane	32.82	31.76	96.8	80 - 125	
1,2-Dichloroethane-d4	32.82	32.55	99.2	75 - 140	
Toluene-d8	32.82	31.72	96.7	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS05-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-05	File ID:	0114205.D
Sampled:	01/24/12 10:00	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 15:00
Solids:	93.41	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.40	2.81	5.61	U
75-25-2	Bromoform		1.40	2.81	5.61	U
74-83-9	Bromomethane		2.81	5.61	11.2	U
56-23-5	Carbon tetrachloride		1.40	2.81	5.61	U
108-90-7	Chlorobenzene		1.40	2.81	5.61	U
75-00-3	Chloroethane		2.81	5.61	11.2	U
67-66-3	Chloroform		1.40	2.81	5.61	U
110-75-8	2-Chloroethyl vinyl ether		28.1	56.1	112	Q, Y, U
74-87-3	Chloromethane		2.81	5.61	11.2	U
124-48-1	Dibromochloromethane		1.40	2.81	5.61	U
106-93-4	1,2-Dibromoethane (EDB)		1.40	2.81	5.61	U
95-50-1	1,2-Dichlorobenzene		1.40	2.81	5.61	U
541-73-1	1,3-Dichlorobenzene		1.40	2.81	5.61	U
106-46-7	1,4-Dichlorobenzene		1.40	2.81	5.61	U
75-71-8	Dichlorodifluoromethane		2.81	5.61	11.2	U
75-34-3	1,1-Dichloroethane		1.40	2.81	5.61	U
107-06-2	1,2-Dichloroethane		1.40	2.81	5.61	U
75-35-4	1,1-Dichloroethene		1.40	2.81	5.61	U
156-59-2	cis-1,2-Dichloroethene		1.40	2.81	5.61	U
156-60-5	trans-1,2-Dichloroethene		1.40	2.81	5.61	U
78-87-5	1,2-Dichloropropane		1.40	2.81	5.61	U
10061-01-5	cis-1,3-Dichloropropene		1.40	2.81	5.61	U
10061-02-6	trans-1,3-Dichloropropene		1.40	2.81	5.61	U
75-09-2	Methylene chloride	1.73	1.40	2.81	5.61	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.40	2.81	5.61	U
127-18-4	Tetrachloroethene		1.40	2.81	5.61	U
79-00-5	1,1,2-Trichloroethane		1.40	2.81	5.61	U
71-55-6	1,1,1-Trichloroethane		1.40	2.81	5.61	U
79-01-6	Trichloroethene		1.40	2.81	5.61	U
75-69-4	Trichlorofluoromethane		2.81	5.61	11.2	U
75-01-4	Vinyl chloride		2.81	5.61	11.2	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	33.67	34.00	101	85 - 120	
Dibromofluoromethane	33.67	33.83	100	80 - 125	
1,2-Dichloroethane-d4	33.67	34.49	102	75 - 140	
Toluene-d8	33.67	32.97	97.9	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS06-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-06	File ID:	0114206.D
Sampled:	01/24/12 10:15	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 15:27
Solids:	93.34	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.29	2.59	5.17	U
75-25-2	Bromoform		1.29	2.59	5.17	U
74-83-9	Bromomethane		2.59	5.17	10.3	U
56-23-5	Carbon tetrachloride		1.29	2.59	5.17	U
108-90-7	Chlorobenzene		1.29	2.59	5.17	U
75-00-3	Chloroethane		2.59	5.17	10.3	U
67-66-3	Chloroform		1.29	2.59	5.17	U
110-75-8	2-Chloroethyl vinyl ether		25.9	51.7	103	Q, Y, U
74-87-3	Chloromethane		2.59	5.17	10.3	U
124-48-1	Dibromochloromethane		1.29	2.59	5.17	U
106-93-4	1,2-Dibromoethane (EDB)		1.29	2.59	5.17	U
95-50-1	1,2-Dichlorobenzene		1.29	2.59	5.17	U
541-73-1	1,3-Dichlorobenzene		1.29	2.59	5.17	U
106-46-7	1,4-Dichlorobenzene		1.29	2.59	5.17	U
75-71-8	Dichlorodifluoromethane		2.59	5.17	10.3	U
75-34-3	1,1-Dichloroethane		1.29	2.59	5.17	U
107-06-2	1,2-Dichloroethane		1.29	2.59	5.17	U
75-35-4	1,1-Dichloroethene		1.29	2.59	5.17	U
156-59-2	cis-1,2-Dichloroethene		1.29	2.59	5.17	U
156-60-5	trans-1,2-Dichloroethene		1.29	2.59	5.17	U
78-87-5	1,2-Dichloropropane		1.29	2.59	5.17	U
10061-01-5	cis-1,3-Dichloropropene		1.29	2.59	5.17	U
10061-02-6	trans-1,3-Dichloropropene		1.29	2.59	5.17	U
75-09-2	Methylene chloride	2.23	1.29	2.59	5.17	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.29	2.59	5.17	U
127-18-4	Tetrachloroethene		1.29	2.59	5.17	U
79-00-5	1,1,2-Trichloroethane		1.29	2.59	5.17	U
71-55-6	1,1,1-Trichloroethane		1.29	2.59	5.17	U
79-01-6	Trichloroethene		1.29	2.59	5.17	U
75-69-4	Trichlorofluoromethane		2.59	5.17	10.3	U
75-01-4	Vinyl chloride		2.59	5.17	10.3	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.02	29.82	96.1	85 - 120	
Dibromofluoromethane	31.02	31.10	100	80 - 125	
1,2-Dichloroethane-d4	31.02	30.93	99.7	75 - 140	
Toluene-d8	31.02	29.44	94.9	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS07-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-07RE1	File ID:	0114207R.D
Sampled:	01/24/12 10:30	Prepared:	01/30/12 00:00	Analyzed:	01/30/12 10:58
Solids:	88.93	Preparation:	5035	Dilution:	1

Batch: 2A30012 Sequence: 2A03105 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.36	2.73	5.46	U
75-25-2	Bromoform		1.36	2.73	5.46	U
74-83-9	Bromomethane		2.73	5.46	10.9	U
56-23-5	Carbon tetrachloride		1.36	2.73	5.46	U
108-90-7	Chlorobenzene		1.36	2.73	5.46	U
75-00-3	Chloroethane		2.73	5.46	10.9	U
67-66-3	Chloroform		1.36	2.73	5.46	U
110-75-8	2-Chloroethyl vinyl ether		27.3	54.6	109	Q, Y, U
74-87-3	Chloromethane		2.73	5.46	10.9	U
124-48-1	Dibromochloromethane		1.36	2.73	5.46	U
106-93-4	1,2-Dibromoethane (EDB)		1.36	2.73	5.46	U
95-50-1	1,2-Dichlorobenzene		1.36	2.73	5.46	U
541-73-1	1,3-Dichlorobenzene		1.36	2.73	5.46	U
106-46-7	1,4-Dichlorobenzene		1.36	2.73	5.46	U
75-71-8	Dichlorodifluoromethane		2.73	5.46	10.9	U
75-34-3	1,1-Dichloroethane		1.36	2.73	5.46	U
107-06-2	1,2-Dichloroethane		1.36	2.73	5.46	U
75-35-4	1,1-Dichloroethene		1.36	2.73	5.46	U
156-59-2	cis-1,2-Dichloroethene		1.36	2.73	5.46	U
156-60-5	trans-1,2-Dichloroethene		1.36	2.73	5.46	U
78-87-5	1,2-Dichloropropane		1.36	2.73	5.46	U
10061-01-5	cis-1,3-Dichloropropene		1.36	2.73	5.46	U
10061-02-6	trans-1,3-Dichloropropene		1.36	2.73	5.46	U
75-09-2	Methylene chloride	1.67	1.36	2.73	5.46	I
79-34-5	1,1,2,2-Tetrachloroethane		1.36	2.73	5.46	U
127-18-4	Tetrachloroethene		1.36	2.73	5.46	U
79-00-5	1,1,2-Trichloroethane		1.36	2.73	5.46	U
71-55-6	1,1,1-Trichloroethane		1.36	2.73	5.46	U
79-01-6	Trichloroethene		1.36	2.73	5.46	U
75-69-4	Trichlorofluoromethane		2.73	5.46	10.9	U
75-01-4	Vinyl chloride		2.73	5.46	10.9	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.75	31.23	95.3	85 - 120	
Dibromofluoromethane	32.75	33.11	101	80 - 125	
1,2-Dichloroethane-d4	32.75	34.13	104	75 - 140	
Toluene-d8	32.75	31.62	96.5	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS08-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-08	File ID:	0114208.D
Sampled:	01/24/12 10:45	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 16:22
Solids:	80.97	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.19	2.37	4.74	U
75-25-2	Bromoform		1.19	2.37	4.74	U
74-83-9	Bromomethane		2.37	4.74	9.49	U
56-23-5	Carbon tetrachloride		1.19	2.37	4.74	U
108-90-7	Chlorobenzene		1.19	2.37	4.74	U
75-00-3	Chloroethane		2.37	4.74	9.49	U
67-66-3	Chloroform		1.19	2.37	4.74	U
110-75-8	2-Chloroethyl vinyl ether		23.7	47.4	94.9	Q, Y, U
74-87-3	Chloromethane		2.37	4.74	9.49	U
124-48-1	Dibromochloromethane		1.19	2.37	4.74	U
106-93-4	1,2-Dibromoethane (EDB)		1.19	2.37	4.74	U
95-50-1	1,2-Dichlorobenzene		1.19	2.37	4.74	U
541-73-1	1,3-Dichlorobenzene		1.19	2.37	4.74	U
106-46-7	1,4-Dichlorobenzene		1.19	2.37	4.74	U
75-71-8	Dichlorodifluoromethane		2.37	4.74	9.49	U
75-34-3	1,1-Dichloroethane		1.19	2.37	4.74	U
107-06-2	1,2-Dichloroethane		1.19	2.37	4.74	U
75-35-4	1,1-Dichloroethene		1.19	2.37	4.74	U
156-59-2	cis-1,2-Dichloroethene		1.19	2.37	4.74	U
156-60-5	trans-1,2-Dichloroethene		1.19	2.37	4.74	U
78-87-5	1,2-Dichloropropane		1.19	2.37	4.74	U
10061-01-5	cis-1,3-Dichloropropene		1.19	2.37	4.74	U
10061-02-6	trans-1,3-Dichloropropene		1.19	2.37	4.74	U
75-09-2	Methylene chloride	2.19	1.19	2.37	4.74	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.19	2.37	4.74	U
127-18-4	Tetrachloroethene		1.19	2.37	4.74	U
79-00-5	1,1,2-Trichloroethane		1.19	2.37	4.74	U
71-55-6	1,1,1-Trichloroethane		1.19	2.37	4.74	U
79-01-6	Trichloroethene		1.19	2.37	4.74	U
75-69-4	Trichlorofluoromethane		2.37	4.74	9.49	U
75-01-4	Vinyl chloride		2.37	4.74	9.49	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	28.46	27.40	96.3	85 - 120	
Dibromofluoromethane	28.46	29.66	104	80 - 125	
1,2-Dichloroethane-d4	28.46	29.20	103	75 - 140	
Toluene-d8	28.46	27.62	97.1	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS09-03-20120124

Laboratory:	Empirical Laboratories, LLC		SDG:	1201142	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:	Solid	Laboratory ID:	1201142-09RE1	File ID:	0114209R.D
Sampled:	01/24/12 11:00	Prepared:	02/01/12 00:00	Analyzed:	02/01/12 15:58
Solids:	78.67	Preparation:	5035	Dilution:	1
Batch:	2A31014	Sequence: 2B03307	Calibration:	2011002	Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.32	2.64	5.29	U
75-25-2	Bromoform		1.32	2.64	5.29	U
74-83-9	Bromomethane		2.64	5.29	10.6	U
56-23-5	Carbon tetrachloride		1.32	2.64	5.29	U
108-90-7	Chlorobenzene		1.32	2.64	5.29	U
75-00-3	Chloroethane		2.64	5.29	10.6	U
67-66-3	Chloroform		1.32	2.64	5.29	U
110-75-8	2-Chloroethyl vinyl ether		26.4	52.9	106	Y, U
74-87-3	Chloromethane		2.64	5.29	10.6	U
124-48-1	Dibromochloromethane		1.32	2.64	5.29	U
106-93-4	1,2-Dibromoethane (EDB)		1.32	2.64	5.29	U
95-50-1	1,2-Dichlorobenzene		1.32	2.64	5.29	U
541-73-1	1,3-Dichlorobenzene		1.32	2.64	5.29	U
106-46-7	1,4-Dichlorobenzene		1.32	2.64	5.29	U
75-71-8	Dichlorodifluoromethane		2.64	5.29	10.6	U
75-34-3	1,1-Dichloroethane		1.32	2.64	5.29	U
107-06-2	1,2-Dichloroethane		1.32	2.64	5.29	U
75-35-4	1,1-Dichloroethene		1.32	2.64	5.29	U
156-59-2	cis-1,2-Dichloroethene		1.32	2.64	5.29	U
156-60-5	trans-1,2-Dichloroethene		1.32	2.64	5.29	U
78-87-5	1,2-Dichloropropane		1.32	2.64	5.29	U
10061-01-5	cis-1,3-Dichloropropene		1.32	2.64	5.29	U
10061-02-6	trans-1,3-Dichloropropene		1.32	2.64	5.29	U
75-09-2	Methylene chloride	1.52	1.32	2.64	5.29	I
79-34-5	1,1,2,2-Tetrachloroethane		1.32	2.64	5.29	U
127-18-4	Tetrachloroethene		1.32	2.64	5.29	U
79-00-5	1,1,2-Trichloroethane		1.32	2.64	5.29	U
71-55-6	1,1,1-Trichloroethane		1.32	2.64	5.29	U
79-01-6	Trichloroethene		1.32	2.64	5.29	U
75-69-4	Trichlorofluoromethane		2.64	5.29	10.6	U
75-01-4	Vinyl chloride		2.64	5.29	10.6	Q, U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	31.73	29.47	92.9	85 - 120	
Dibromofluoromethane	31.73	31.87	100	80 - 125	
1,2-Dichloroethane-d4	31.73	29.44	92.8	75 - 140	
Toluene-d8	31.73	30.90	97.4	85 - 115	

ANALYSIS DATA SHEET

MPT-289-SS10-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-10	File ID:	0114210.D
Sampled:	01/24/12 11:15	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 17:16
Solids:	82.67	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.25	2.50	5.01	U
75-25-2	Bromoform		1.25	2.50	5.01	U
74-83-9	Bromomethane		2.50	5.01	10.0	U
56-23-5	Carbon tetrachloride		1.25	2.50	5.01	U
108-90-7	Chlorobenzene		1.25	2.50	5.01	U
75-00-3	Chloroethane		2.50	5.01	10.0	U
67-66-3	Chloroform		1.25	2.50	5.01	U
110-75-8	2-Chloroethyl vinyl ether		25.0	50.1	100	Q, Y, U
74-87-3	Chloromethane		2.50	5.01	10.0	U
124-48-1	Dibromochloromethane		1.25	2.50	5.01	U
106-93-4	1,2-Dibromoethane (EDB)		1.25	2.50	5.01	U
95-50-1	1,2-Dichlorobenzene		1.25	2.50	5.01	U
541-73-1	1,3-Dichlorobenzene		1.25	2.50	5.01	U
106-46-7	1,4-Dichlorobenzene		1.25	2.50	5.01	U
75-71-8	Dichlorodifluoromethane		2.50	5.01	10.0	U
75-34-3	1,1-Dichloroethane		1.25	2.50	5.01	U
107-06-2	1,2-Dichloroethane		1.25	2.50	5.01	U
75-35-4	1,1-Dichloroethene		1.25	2.50	5.01	U
156-59-2	cis-1,2-Dichloroethene		1.25	2.50	5.01	U
156-60-5	trans-1,2-Dichloroethene		1.25	2.50	5.01	U
78-87-5	1,2-Dichloropropane		1.25	2.50	5.01	U
10061-01-5	cis-1,3-Dichloropropene		1.25	2.50	5.01	U
10061-02-6	trans-1,3-Dichloropropene		1.25	2.50	5.01	U
75-09-2	Methylene chloride	2.39	1.25	2.50	5.01	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.25	2.50	5.01	U
127-18-4	Tetrachloroethene		1.25	2.50	5.01	U
79-00-5	1,1,2-Trichloroethane		1.25	2.50	5.01	U
71-55-6	1,1,1-Trichloroethane		1.25	2.50	5.01	U
79-01-6	Trichloroethene		1.25	2.50	5.01	U
75-69-4	Trichlorofluoromethane		2.50	5.01	10.0	U
75-01-4	Vinyl chloride		2.50	5.01	10.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.04	27.34	91.0	85 - 120	
Dibromofluoromethane	30.04	29.60	98.6	80 - 125	
1,2-Dichloroethane-d4	30.04	30.37	101	75 - 140	
Toluene-d8	30.04	27.88	92.8	85 - 115	

ANALYSIS DATA SHEET

MPT-289-RB01-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1201142-11	File ID:	0114211.D
Sampled:	01/24/12 11:05	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 12:20
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2A27019 Sequence: 2A03011 Calibration: 2011004 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride	1.94	0.500	1.00	2.00	I
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.72	102	75 - 120	
Dibromofluoromethane	30.00	32.36	108	85 - 115	
1,2-Dichloroethane-d4	30.00	32.48	108	70 - 120	
Toluene-d8	30.00	30.44	101	85 - 120	

ANALYSIS DATA SHEET

MPT-289-SS11-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-12	File ID:	0114212.D
Sampled:	01/24/12 11:30	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 17:43
Solids:	92.97	Preparation:	5035	Dilution:	1

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.41	2.82	5.65	U
75-25-2	Bromoform		1.41	2.82	5.65	U
74-83-9	Bromomethane		2.82	5.65	11.3	U
56-23-5	Carbon tetrachloride		1.41	2.82	5.65	U
108-90-7	Chlorobenzene		1.41	2.82	5.65	U
75-00-3	Chloroethane		2.82	5.65	11.3	U
67-66-3	Chloroform		1.41	2.82	5.65	U
110-75-8	2-Chloroethyl vinyl ether		28.2	56.5	113	Q, Y, U
74-87-3	Chloromethane		2.82	5.65	11.3	U
124-48-1	Dibromochloromethane		1.41	2.82	5.65	U
106-93-4	1,2-Dibromoethane (EDB)		1.41	2.82	5.65	U
95-50-1	1,2-Dichlorobenzene		1.41	2.82	5.65	U
541-73-1	1,3-Dichlorobenzene		1.41	2.82	5.65	U
106-46-7	1,4-Dichlorobenzene		1.41	2.82	5.65	U
75-71-8	Dichlorodifluoromethane		2.82	5.65	11.3	U
75-34-3	1,1-Dichloroethane		1.41	2.82	5.65	U
107-06-2	1,2-Dichloroethane		1.41	2.82	5.65	U
75-35-4	1,1-Dichloroethene		1.41	2.82	5.65	U
156-59-2	cis-1,2-Dichloroethene		1.41	2.82	5.65	U
156-60-5	trans-1,2-Dichloroethene		1.41	2.82	5.65	U
78-87-5	1,2-Dichloropropane		1.41	2.82	5.65	U
10061-01-5	cis-1,3-Dichloropropene		1.41	2.82	5.65	U
10061-02-6	trans-1,3-Dichloropropene		1.41	2.82	5.65	U
75-09-2	Methylene chloride	2.23	1.41	2.82	5.65	IV
79-34-5	1,1,2,2-Tetrachloroethane		1.41	2.82	5.65	U
127-18-4	Tetrachloroethene		1.41	2.82	5.65	U
79-00-5	1,1,2-Trichloroethane		1.41	2.82	5.65	U
71-55-6	1,1,1-Trichloroethane		1.41	2.82	5.65	U
79-01-6	Trichloroethene		1.41	2.82	5.65	U
75-69-4	Trichlorofluoromethane		2.82	5.65	11.3	U
75-01-4	Vinyl chloride		2.82	5.65	11.3	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	33.90	32.25	95.2	85 - 120	
Dibromofluoromethane	33.90	35.34	104	80 - 125	
1,2-Dichloroethane-d4	33.90	34.63	102	75 - 140	
Toluene-d8	33.90	32.84	96.9	85 - 115	

ANALYSIS DATA SHEET

Trip Blank

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1201142-13	File ID:	0114213.D
Sampled:	01/24/12 00:00	Prepared:	01/27/12 00:00	Analyzed:	01/27/12 12:48
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2A27019 Sequence: 2A03011 Calibration: 2011004 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.49	98.3	75 - 120	
Dibromofluoromethane	30.00	33.19	111	85 - 115	
1,2-Dichloroethane-d4	30.00	33.89	113	70 - 120	
Toluene-d8	30.00	30.32	101	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03008	Instrument:	MS-VOA5
		Calibration:	2011002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2A03008-CCV1) ug/L				Lab File ID: 0127CCV1.D		Analyzed: 01/27/12 10:46		
Bromofluorobenzene	30.00	107	80 - 120	12.199	12.199	0.0000	+/-1.000	
Dibromofluoromethane	30.00	99.5	80 - 120	6.839	6.839	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	80 - 120	7.342	7.342	0.0000	+/-1.000	
Toluene-d8	30.00	104	80 - 120	9.568	9.568	0.0000	+/-1.000	
LCS (2A27016-BS1) ug/Kg wet				Lab File ID: 0127LCS1.D		Analyzed: 01/27/12 11:23		
Bromofluorobenzene	30.00	103	85 - 120	12.205	12.199	0.0060	+/-1.000	
Dibromofluoromethane	30.00	101	80 - 125	6.845	6.839	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	75 - 140	7.348	7.342	0.0060	+/-1.000	
Toluene-d8	30.00	102	85 - 115	9.574	9.568	0.0060	+/-1.000	
Blank (2A27016-BLK1) ug/Kg wet				Lab File ID: 0127BL1.D		Analyzed: 01/27/12 12:45		
Bromofluorobenzene	30.00	102	85 - 120	12.195	12.199	-0.0040	+/-1.000	
Dibromofluoromethane	30.00	97.5	80 - 125	6.835	6.839	-0.0040	+/-1.000	
1,2-Dichloroethane-d4	30.00	100	75 - 140	7.338	7.342	-0.0040	+/-1.000	
Toluene-d8	30.00	102	85 - 115	9.574	9.568	0.0060	+/-1.000	
MPT-289-SS03-04-20120124 (1201142-03) ug/Kg dry				Lab File ID: 0114203.D		Analyzed: 01/27/12 13:12		
Bromofluorobenzene	34.27	97.9	85 - 120	12.193	12.199	-0.0060	+/-1.000	
Dibromofluoromethane	34.27	97.9	80 - 125	6.842	6.839	0.0030	+/-1.000	
1,2-Dichloroethane-d4	34.27	99.1	75 - 140	7.335	7.342	-0.0070	+/-1.000	
Toluene-d8	34.27	96.2	85 - 115	9.572	9.568	0.0040	+/-1.000	
MPT-289-SS01-04-20120124 (1201142-01) ug/Kg dry				Lab File ID: 0114201.D		Analyzed: 01/27/12 13:39		
Bromofluorobenzene	39.09	98.5	85 - 120	12.202	12.199	0.0030	+/-1.000	
Dibromofluoromethane	39.09	102	80 - 125	6.842	6.839	0.0030	+/-1.000	
1,2-Dichloroethane-d4	39.09	103	75 - 140	7.344	7.342	0.0020	+/-1.000	
Toluene-d8	39.09	96.3	85 - 115	9.571	9.568	0.0030	+/-1.000	
MPT-289-SS02-04-20120124 (1201142-02) ug/Kg dry				Lab File ID: 0114202.D		Analyzed: 01/27/12 14:06		
Bromofluorobenzene	32.83	97.4	85 - 120	12.19	12.199	-0.0090	+/-1.000	
Dibromofluoromethane	32.83	98.5	80 - 125	6.839	6.839	0.0000	+/-1.000	
1,2-Dichloroethane-d4	32.83	102	75 - 140	7.342	7.342	0.0000	+/-1.000	
Toluene-d8	32.83	97.5	85 - 115	9.569	9.568	0.0010	+/-1.000	
MPT-289-SS04-04-20120124 (1201142-04) ug/Kg dry				Lab File ID: 0114204.D		Analyzed: 01/27/12 14:33		
Bromofluorobenzene	32.82	97.8	85 - 120	12.2	12.199	0.0010	+/-1.000	
Dibromofluoromethane	32.82	96.8	80 - 125	6.84	6.839	0.0010	+/-1.000	
1,2-Dichloroethane-d4	32.82	99.2	75 - 140	7.343	7.342	0.0010	+/-1.000	
Toluene-d8	32.82	96.7	85 - 115	9.569	9.568	0.0010	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03008	Instrument:	MS-VOA5
		Calibration:	2011002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
MPT-289-SS05-04-20120124 (1201142-05) ug/Kg dry				Lab File ID: 0114205.D		Analyzed: 01/27/12 15:00		
Bromofluorobenzene	33.67	101	85 - 120	12.193	12.199	-0.0060	+/-1.000	
Dibromofluoromethane	33.67	100	80 - 125	6.842	6.839	0.0030	+/-1.000	
1,2-Dichloroethane-d4	33.67	102	75 - 140	7.335	7.342	-0.0070	+/-1.000	
Toluene-d8	33.67	97.9	85 - 115	9.572	9.568	0.0040	+/-1.000	
MPT-289-SS06-04-20120124 (1201142-06) ug/Kg dry				Lab File ID: 0114206.D		Analyzed: 01/27/12 15:27		
Bromofluorobenzene	31.02	96.1	85 - 120	12.193	12.199	-0.0060	+/-1.000	
Dibromofluoromethane	31.02	100	80 - 125	6.842	6.839	0.0030	+/-1.000	
1,2-Dichloroethane-d4	31.02	99.7	75 - 140	7.335	7.342	-0.0070	+/-1.000	
Toluene-d8	31.02	94.9	85 - 115	9.571	9.568	0.0030	+/-1.000	
MPT-289-SS08-03-20120124 (1201142-08) ug/Kg dry				Lab File ID: 0114208.D		Analyzed: 01/27/12 16:22		
Bromofluorobenzene	28.46	96.3	85 - 120	12.196	12.199	-0.0030	+/-1.000	
Dibromofluoromethane	28.46	104	80 - 125	6.836	6.839	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	28.46	103	75 - 140	7.338	7.342	-0.0040	+/-1.000	
Toluene-d8	28.46	97.1	85 - 115	9.565	9.568	-0.0030	+/-1.000	
MPT-289-SS10-03-20120124 (1201142-10) ug/Kg dry				Lab File ID: 0114210.D		Analyzed: 01/27/12 17:16		
Bromofluorobenzene	30.04	91.0	85 - 120	12.19	12.199	-0.0090	+/-1.000	
Dibromofluoromethane	30.04	98.6	80 - 125	6.84	6.839	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.04	101	75 - 140	7.332	7.342	-0.0100	+/-1.000	
Toluene-d8	30.04	92.8	85 - 115	9.569	9.568	0.0010	+/-1.000	
MPT-289-SS11-03-20120124 (1201142-12) ug/Kg dry				Lab File ID: 0114212.D		Analyzed: 01/27/12 17:43		
Bromofluorobenzene	33.90	95.2	85 - 120	12.19	12.199	-0.0090	+/-1.000	
Dibromofluoromethane	33.90	104	80 - 125	6.84	6.839	0.0010	+/-1.000	
1,2-Dichloroethane-d4	33.90	102	75 - 140	7.333	7.342	-0.0090	+/-1.000	
Toluene-d8	33.90	96.9	85 - 115	9.569	9.568	0.0010	+/-1.000	
Matrix Spike (2A27016-MS1) ug/Kg dry				Lab File ID: 0114203M.D		Analyzed: 01/27/12 18:10		
Bromofluorobenzene	32.78	105	85 - 120	12.191	12.199	-0.0080	+/-1.000	
Dibromofluoromethane	32.78	99.6	80 - 125	6.84	6.839	0.0010	+/-1.000	
1,2-Dichloroethane-d4	32.78	94.4	75 - 140	7.343	7.342	0.0010	+/-1.000	
Toluene-d8	32.78	96.4	85 - 115	9.57	9.568	0.0020	+/-1.000	
Matrix Spike Dup (2A27016-MSD1) ug/Kg dry				Lab File ID: 0114203S.D		Analyzed: 01/27/12 18:37		
Bromofluorobenzene	32.18	98.9	85 - 120	12.187	12.199	-0.0120	+/-1.000	
Dibromofluoromethane	32.18	101	80 - 125	6.836	6.839	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	32.18	97.3	75 - 140	7.339	7.342	-0.0030	+/-1.000	
Toluene-d8	32.18	97.6	85 - 115	9.566	9.568	-0.0020	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03011	Instrument:	MS-VOA4
		Calibration:	2011004

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2A03011-CCV1) ug/L				Lab File ID: 0127CCV1.D		Analyzed: 01/27/12 09:23		
Bromofluorobenzene	30.00	104	80 - 120	12.254	12.254	0.0000	+/-1.000	
Dibromofluoromethane	30.00	110	80 - 120	6.942	6.942	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	113	80 - 120	7.434	7.434	0.0000	+/-1.000	
Toluene-d8	30.00	104	80 - 120	9.637	9.637	0.0000	+/-1.000	
LCS (2A27019-BS1) ug/L				Lab File ID: 0127LCS1.D		Analyzed: 01/27/12 09:59		
Bromofluorobenzene	30.00	111	75 - 120	12.251	12.254	-0.0030	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	6.939	6.942	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	30.00	108	70 - 120	7.431	7.434	-0.0030	+/-1.000	
Toluene-d8	30.00	108	85 - 120	9.634	9.637	-0.0030	+/-1.000	
Blank (2A27019-BLK1) ug/L				Lab File ID: 0127BLK1.D		Analyzed: 01/27/12 11:24		
Bromofluorobenzene	30.00	102	75 - 120	12.253	12.254	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	6.94	6.942	-0.0020	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.432	7.434	-0.0020	+/-1.000	
Toluene-d8	30.00	105	85 - 120	9.636	9.637	-0.0010	+/-1.000	
MPT-289-RB01-20120124 (1201142-11) ug/L				Lab File ID: 0114211.D		Analyzed: 01/27/12 12:20		
Bromofluorobenzene	30.00	102	75 - 120	12.251	12.254	-0.0030	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	6.939	6.942	-0.0030	+/-1.000	
1,2-Dichloroethane-d4	30.00	108	70 - 120	7.431	7.434	-0.0030	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.635	9.637	-0.0020	+/-1.000	
Trip Blank (1201142-13) ug/L				Lab File ID: 0114213.D		Analyzed: 01/27/12 12:48		
Bromofluorobenzene	30.00	98.3	75 - 120	12.25	12.254	-0.0040	+/-1.000	
Dibromofluoromethane	30.00	111	85 - 115	6.938	6.942	-0.0040	+/-1.000	
1,2-Dichloroethane-d4	30.00	113	70 - 120	7.43	7.434	-0.0040	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.633	9.637	-0.0040	+/-1.000	
LCS Dup (2A27019-BSD1) ug/L				Lab File ID: 0127LCD1.D		Analyzed: 01/27/12 19:52		
Bromofluorobenzene	30.00	108	75 - 120	12.253	12.254	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	6.941	6.942	-0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	106	70 - 120	7.433	7.434	-0.0010	+/-1.000	
Toluene-d8	30.00	105	85 - 120	9.636	9.637	-0.0010	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03105	Instrument:	MS-VOA5
		Calibration:	2011002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2A03105-CCV1) ug/L				Lab File ID: 0130CCV1.D		Analyzed: 01/30/12 08:32		
Bromofluorobenzene	30.00	107	80 - 120	12.186	12.186	0.0000	+/-1.000	
Dibromofluoromethane	30.00	102	80 - 120	6.825	6.825	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	106	80 - 120	7.328	7.328	0.0000	+/-1.000	
Toluene-d8	30.00	97.3	80 - 120	9.555	9.555	0.0000	+/-1.000	
LCS (2A30012-BS1) ug/Kg wet				Lab File ID: 0130LCS1.D		Analyzed: 01/30/12 09:10		
Bromofluorobenzene	30.00	105	85 - 120	12.185	12.186	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	99.7	80 - 125	6.825	6.825	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	75 - 140	7.328	7.328	0.0000	+/-1.000	
Toluene-d8	30.00	97.6	85 - 115	9.554	9.555	-0.0010	+/-1.000	
Blank (2A30012-BLK1) ug/Kg wet				Lab File ID: 0130BL1.D		Analyzed: 01/30/12 10:31		
Bromofluorobenzene	30.00	98.6	85 - 120	12.186	12.186	0.0000	+/-1.000	
Dibromofluoromethane	30.00	99.5	80 - 125	6.825	6.825	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	105	75 - 140	7.328	7.328	0.0000	+/-1.000	
Toluene-d8	30.00	96.3	85 - 115	9.555	9.555	0.0000	+/-1.000	
MPT-289-SS07-04-20120124 (1201142-07RE1) ug/Kg dry				Lab File ID: 0114207R.D		Analyzed: 01/30/12 10:58		
Bromofluorobenzene	32.75	95.3	85 - 120	12.19	12.186	0.0040	+/-1.000	
Dibromofluoromethane	32.75	101	80 - 125	6.829	6.825	0.0040	+/-1.000	
1,2-Dichloroethane-d4	32.75	104	75 - 140	7.332	7.328	0.0040	+/-1.000	
Toluene-d8	32.75	96.5	85 - 115	9.559	9.555	0.0040	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03307	Instrument:	MS-VOA5
		Calibration:	2011002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03307-CCV1) ug/L				Lab File ID: 0201CCV1.D		Analyzed: 02/01/12 08:09		
Bromofluorobenzene	30.00	106	80 - 120	12.191	12.191	0.0000	+/-1.000	
Dibromofluoromethane	30.00	102	80 - 120	6.84	6.84	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	95.7	80 - 120	7.333	7.333	0.0000	+/-1.000	
Toluene-d8	30.00	101	80 - 120	9.56	9.56	0.0000	+/-1.000	
LCS (2A31014-BS1) ug/Kg wet				Lab File ID: 0201LCS1.D		Analyzed: 02/01/12 08:36		
Bromofluorobenzene	30.00	101	85 - 120	12.192	12.191	0.0010	+/-1.000	
Dibromofluoromethane	30.00	103	80 - 125	6.832	6.84	-0.0080	+/-1.000	
1,2-Dichloroethane-d4	30.00	104	75 - 140	7.334	7.333	0.0010	+/-1.000	
Toluene-d8	30.00	98.0	85 - 115	9.561	9.56	0.0010	+/-1.000	
Blank (2A31014-BLK1) ug/Kg wet				Lab File ID: 0201BL1.D		Analyzed: 02/01/12 09:57		
Bromofluorobenzene	30.00	98.0	85 - 120	12.193	12.191	0.0020	+/-1.000	
Dibromofluoromethane	30.00	100	80 - 125	6.833	6.84	-0.0070	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.6	75 - 140	7.335	7.333	0.0020	+/-1.000	
Toluene-d8	30.00	97.4	85 - 115	9.562	9.56	0.0020	+/-1.000	
MPT-289-SS09-03-20120124 (1201142-09RE1) ug/Kg dry				Lab File ID: 0114209R.D		Analyzed: 02/01/12 15:58		
Bromofluorobenzene	31.73	92.9	85 - 120	12.191	12.191	0.0000	+/-1.000	
Dibromofluoromethane	31.73	100	80 - 125	6.84	6.84	0.0000	+/-1.000	
1,2-Dichloroethane-d4	31.73	92.8	75 - 140	7.342	7.333	0.0090	+/-1.000	
Toluene-d8	31.73	97.4	85 - 115	9.569	9.56	0.0090	+/-1.000	
LCS Dup (2A31014-BSD1) ug/Kg wet				Lab File ID: 0201LCD1.D		Analyzed: 02/01/12 16:26		
Bromofluorobenzene	30.00	102	85 - 120	12.2	12.191	0.0090	+/-1.000	
Dibromofluoromethane	30.00	105	80 - 125	6.84	6.84	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	75 - 140	7.343	7.333	0.0100	+/-1.000	
Toluene-d8	30.00	94.6	85 - 115	9.57	9.56	0.0100	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A27016	Laboratory ID:	2A27016-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	43.96	87.9	70 - 130
Bromoform	50.00	51.50	103	55 - 135
Bromomethane	50.00	42.31	84.6	30 - 160
Carbon tetrachloride	50.00	46.08	92.2	65 - 135
Chlorobenzene	50.00	47.68	95.4	75 - 125
Chloroethane	50.00	45.71	91.4	40 - 155
Chloroform	50.00	44.14	88.3	70 - 125
2-Chloroethyl vinyl ether	**99.75**	**100 U**	**0**	**10 - 200**
Chloromethane	50.00	40.05	80.1	50 - 130
Dibromochloromethane	50.00	49.20	98.4	65 - 130
1,2-Dibromoethane (EDB)	50.00	50.47	101	70 - 125
1,2-Dichlorobenzene	50.00	44.85	89.7	75 - 120
1,3-Dichlorobenzene	50.00	45.14	90.3	70 - 125
1,4-Dichlorobenzene	50.00	45.24	90.5	70 - 125
Dichlorodifluoromethane	50.00	39.98	80.0	35 - 135
1,1-Dichloroethane	50.00	45.06	90.1	75 - 125
1,2-Dichloroethane	50.00	44.56	89.1	70 - 135
1,1-Dichloroethene	50.00	44.65	89.3	65 - 135
cis-1,2-Dichloroethene	50.00	47.12	94.2	65 - 125
trans-1,2-Dichloroethene	50.00	46.28	92.6	65 - 135
1,2-Dichloropropane	50.00	44.35	88.7	70 - 120
cis-1,3-Dichloropropene	50.00	48.80	97.6	70 - 125
trans-1,3-Dichloropropene	50.00	44.90	89.8	65 - 125
Methylene chloride	50.00	43.54	87.1	55 - 140
1,1,2,2-Tetrachloroethane	50.00	44.99	90.0	55 - 130
Tetrachloroethene	50.00	50.48	101	65 - 140
1,1,2-Trichloroethane	50.00	49.58	99.2	60 - 125
1,1,1-Trichloroethane	50.00	47.19	94.4	70 - 135
Trichloroethene	50.00	46.69	93.4	75 - 125
Trichlorofluoromethane	50.00	48.71	97.4	25 - 185

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A27016	Laboratory ID:	2A27016-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	55.85	112	60 - 125

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A27019	Laboratory ID:	2A27019-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	48.5	97.0	75 - 120
Bromoform	50.00	56.1	112	70 - 130
Bromomethane	50.00	43.6	87.1	30 - 145
Carbon tetrachloride	50.00	51.3	103	65 - 140
Chlorobenzene	50.00	52.7	105	80 - 120
Chloroethane	50.00	56.6	113	60 - 135
Chloroform	50.00	47.5	95.0	65 - 135
2-Chloroethyl vinyl ether	99.75	89.2	89.4	10 - 165
Chloromethane	50.00	38.0	76.0	40 - 125
Dibromochloromethane	50.00	52.2	104	60 - 135
1,2-Dibromoethane (EDB)	50.00	51.3	103	80 - 120
1,2-Dichlorobenzene	50.00	51.9	104	70 - 120
1,3-Dichlorobenzene	50.00	50.3	101	75 - 125
1,4-Dichlorobenzene	50.00	51.9	104	75 - 125
Dichlorodifluoromethane	50.00	45.7	91.3	30 - 155
1,1-Dichloroethane	50.00	51.2	102	70 - 135
1,2-Dichloroethane	50.00	47.7	95.5	70 - 130
1,1-Dichloroethene	50.00	47.5	95.0	70 - 130
cis-1,2-Dichloroethene	50.00	52.0	104	70 - 125
trans-1,2-Dichloroethene	50.00	51.6	103	60 - 140
1,2-Dichloropropane	50.00	50.5	101	75 - 125
cis-1,3-Dichloropropene	50.00	52.9	106	70 - 130
trans-1,3-Dichloropropene	50.00	45.0	90.0	55 - 140
Methylene chloride	50.00	49.7	99.3	55 - 140
1,1,2,2-Tetrachloroethane	50.00	50.1	100	65 - 130
Tetrachloroethene	50.00	54.0	108	45 - 150
1,1,2-Trichloroethane	50.00	53.6	107	75 - 125
1,1,1-Trichloroethane	50.00	49.3	98.5	65 - 130
Trichloroethene	50.00	52.1	104	70 - 125
Trichlorofluoromethane	50.00	52.0	104	60 - 145

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A27019	Laboratory ID:	2A27019-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	57.3	115	50 - 145

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50.00	50.2	100	3.50	30	75 - 120
Bromoform	50.00	58.1	116	3.42	30	70 - 130
Bromomethane	50.00	36.0	72.0	19.1	30	30 - 145
Carbon tetrachloride	50.00	52.5	105	2.20	30	65 - 140
Chlorobenzene	50.00	50.8	102	3.59	30	80 - 120
Chloroethane	50.00	53.3	107	5.88	30	60 - 135
Chloroform	50.00	48.2	96.3	1.38	30	65 - 135
2-Chloroethyl vinyl ether	99.75	90.3	90.6	1.30	30	10 - 165
Chloromethane	50.00	33.3	66.7	13.0	30	40 - 125
Dibromochloromethane	50.00	53.4	107	2.37	30	60 - 135
1,2-Dibromoethane (EDB)	50.00	51.9	104	1.22	30	80 - 120
1,2-Dichlorobenzene	50.00	52.3	105	0.841	30	70 - 120
1,3-Dichlorobenzene	50.00	49.5	98.9	1.63	30	75 - 125
1,4-Dichlorobenzene	50.00	51.6	103	0.554	30	75 - 125
Dichlorodifluoromethane	50.00	46.1	92.2	0.960	30	30 - 155
1,1-Dichloroethane	50.00	49.7	99.4	3.00	30	70 - 135
1,2-Dichloroethane	50.00	50.0	100	4.69	30	70 - 130
1,1-Dichloroethene	50.00	47.8	95.7	0.693	30	70 - 130
cis-1,2-Dichloroethene	50.00	52.8	106	1.45	30	70 - 125
trans-1,2-Dichloroethene	50.00	50.8	102	1.55	30	60 - 140
1,2-Dichloropropane	50.00	51.2	102	1.34	30	75 - 125
cis-1,3-Dichloropropene	50.00	53.2	106	0.492	30	70 - 130
trans-1,3-Dichloropropene	50.00	44.1	88.3	1.98	30	55 - 140
Methylene chloride	50.00	49.5	99.0	0.282	30	55 - 140
1,1,2,2-Tetrachloroethane	50.00	52.3	105	4.28	30	65 - 130
Tetrachloroethene	50.00	50.0	100	7.67	30	45 - 150

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A27019	Laboratory ID:	2A27019-BSD1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,2-Trichloroethane	50.00	55.1	110	2.60	30	75 - 125
1,1,1-Trichloroethane	50.00	49.7	99.4	0.831	30	65 - 130
Trichloroethene	50.00	51.2	102	1.87	30	70 - 125
Trichlorofluoromethane	50.00	51.1	102	1.65	30	60 - 145
Vinyl chloride	50.00	57.6	115	0.488	30	50 - 145

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A30012	Laboratory ID:	2A30012-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	44.17	88.3	70 - 130
Bromoform	50.00	47.05	94.1	55 - 135
Bromomethane	50.00	42.75	85.5	30 - 160
Carbon tetrachloride	50.00	47.63	95.3	65 - 135
Chlorobenzene	50.00	43.23	86.5	75 - 125
Chloroethane	50.00	44.96	89.9	40 - 155
Chloroform	50.00	43.94	87.9	70 - 125
2-Chloroethyl vinyl ether	**99.75**	**100 U**	**0**	**10 - 200**
Chloromethane	50.00	39.70	79.4	50 - 130
Dibromochloromethane	50.00	45.96	91.9	65 - 130
1,2-Dibromoethane (EDB)	50.00	46.44	92.9	70 - 125
1,2-Dichlorobenzene	50.00	42.15	84.3	75 - 120
1,3-Dichlorobenzene	50.00	42.01	84.0	70 - 125
1,4-Dichlorobenzene	50.00	43.69	87.4	70 - 125
Dichlorodifluoromethane	50.00	42.07	84.1	35 - 135
1,1-Dichloroethane	50.00	44.73	89.5	75 - 125
1,2-Dichloroethane	50.00	46.07	92.1	70 - 135
1,1-Dichloroethene	50.00	43.56	87.1	65 - 135
cis-1,2-Dichloroethene	50.00	45.73	91.5	65 - 125
trans-1,2-Dichloroethene	50.00	46.97	93.9	65 - 135
1,2-Dichloropropane	50.00	43.53	87.1	70 - 120
cis-1,3-Dichloropropene	50.00	48.07	96.1	70 - 125
trans-1,3-Dichloropropene	50.00	41.45	82.9	65 - 125
Methylene chloride	50.00	41.13	82.3	55 - 140
1,1,2,2-Tetrachloroethane	50.00	42.75	85.5	55 - 130
Tetrachloroethene	50.00	46.37	92.7	65 - 140
1,1,2-Trichloroethane	50.00	45.35	90.7	60 - 125
1,1,1-Trichloroethane	50.00	47.29	94.6	70 - 135
Trichloroethene	50.00	45.86	91.7	75 - 125
Trichlorofluoromethane	50.00	49.60	99.2	25 - 185

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A30012	Laboratory ID:	2A30012-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	53.98	108	60 - 125

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A31014	Laboratory ID:	2A31014-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	48.55	97.1	70 - 130
Bromoform	50.00	50.43	101	55 - 135
Bromomethane	50.00	47.90	95.8	30 - 160
Carbon tetrachloride	50.00	51.76	104	65 - 135
Chlorobenzene	50.00	46.68	93.4	75 - 125
Chloroethane	50.00	49.41	98.8	40 - 155
Chloroform	50.00	47.89	95.8	70 - 125
2-Chloroethyl vinyl ether	99.75	75.22	75.4	10 - 200
Chloromethane	50.00	43.22	86.4	50 - 130
Dibromochloromethane	50.00	49.60	99.2	65 - 130
1,2-Dibromoethane (EDB)	50.00	49.28	98.6	70 - 125
1,2-Dichlorobenzene	50.00	46.27	92.5	75 - 120
1,3-Dichlorobenzene	50.00	46.60	93.2	70 - 125
1,4-Dichlorobenzene	50.00	47.85	95.7	70 - 125
Dichlorodifluoromethane	50.00	43.69	87.4	35 - 135
1,1-Dichloroethane	50.00	48.33	96.7	75 - 125
1,2-Dichloroethane	50.00	51.61	103	70 - 135
1,1-Dichloroethene	50.00	46.82	93.6	65 - 135
cis-1,2-Dichloroethene	50.00	49.61	99.2	65 - 125
trans-1,2-Dichloroethene	50.00	48.94	97.9	65 - 135
1,2-Dichloropropane	50.00	47.82	95.6	70 - 120
cis-1,3-Dichloropropene	50.00	53.60	107	70 - 125
trans-1,3-Dichloropropene	50.00	45.77	91.5	65 - 125
Methylene chloride	50.00	46.91	93.8	55 - 140
1,1,2,2-Tetrachloroethane	50.00	46.57	93.1	55 - 130
Tetrachloroethene	50.00	48.91	97.8	65 - 140
1,1,2-Trichloroethane	50.00	48.07	96.1	60 - 125
1,1,1-Trichloroethane	50.00	52.95	106	70 - 135
Trichloroethene	50.00	50.68	101	75 - 125
Trichlorofluoromethane	50.00	53.86	108	25 - 185

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A31014	Laboratory ID:	2A31014-BS1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	59.98	120	60 - 125

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCSD CONCENTRATION (ug/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50.00	58.77	118	19.0	30	70 - 130
Bromoform	50.00	56.97	114	12.2	30	55 - 135
Bromomethane	50.00	57.18	114	17.7	30	30 - 160
Carbon tetrachloride	50.00	60.74	121	16.0	30	65 - 135
Chlorobenzene	50.00	48.16	96.3	3.13	30	75 - 125
Chloroethane	50.00	56.84	114	14.0	30	40 - 155
Chloroform	50.00	57.69	115	18.6	30	70 - 125
2-Chloroethyl vinyl ether	99.75	80.66	80.9	6.98	30	10 - 200
Chloromethane	50.00	52.51	105	19.4	30	50 - 130
Dibromochloromethane	50.00	54.54	109	9.50	30	65 - 130
1,2-Dibromoethane (EDB)	50.00	56.07	112	12.9	30	70 - 125
1,2-Dichlorobenzene	50.00	51.58	103	10.9	30	75 - 120
1,3-Dichlorobenzene	50.00	49.75	99.5	6.54	30	70 - 125
1,4-Dichlorobenzene	50.00	50.72	101	5.83	30	70 - 125
Dichlorodifluoromethane	50.00	49.12	98.2	11.7	30	35 - 135
1,1-Dichloroethane	50.00	59.47	119	20.7	30	75 - 125
1,2-Dichloroethane	50.00	65.31	131	23.4	30	70 - 135
1,1-Dichloroethene	50.00	50.61	101	7.79	30	65 - 135
cis-1,2-Dichloroethene	50.00	53.86	108	8.21	30	65 - 125
trans-1,2-Dichloroethene	50.00	54.46	109	10.7	30	65 - 135
1,2-Dichloropropane	50.00	59.47	119	21.7	30	70 - 120
cis-1,3-Dichloropropene	50.00	61.94	124	14.4	30	70 - 125
trans-1,3-Dichloropropene	50.00	52.28	105	13.3	30	65 - 125
Methylene chloride	50.00	53.78	108	13.6	30	55 - 140
1,1,2,2-Tetrachloroethane	50.00	57.27	115	20.6	30	55 - 130
Tetrachloroethene	50.00	48.37	96.7	1.11	30	65 - 140

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A31014	Laboratory ID:	2A31014-BSD1
Preparation:	5035	Initial/Final:	5 g / 5 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCSD CONCENTRATION (ug/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,2-Trichloroethane	50.00	54.53	109	12.6	30	60 - 125
1,1,1-Trichloroethane	50.00	62.45	125	16.5	30	70 - 135
Trichloroethene	50.00	55.18	110	8.51	30	75 - 125
Trichlorofluoromethane	50.00	61.56	123	13.3	30	25 - 185
Vinyl chloride	**50.00**	**67.59**	**135 ***	**11.9**	**30**	**60 - 125**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8260B

MPT-289-SS03-04-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A27016

% Solids: 94.73

Source Sample Name: **1201142-03**

ANALYTE	SPIKE ADDED (ug/Kg dry)	SAMPLE CONCENTRATION (ug/Kg dry)	MS CONCENTRATION (ug/Kg dry)	MS % REC.	Q	QC LIMITS REC.
Bromodichloromethane	54.64	ND	50.40	92.2		70 - 130
Bromoform	54.64	ND	46.65	85.4		55 - 135
Bromomethane	54.64	ND	47.37	86.7		30 - 160
Carbon tetrachloride	54.64	ND	51.29	93.9		65 - 135
Chlorobenzene	54.64	ND	44.20	80.9		75 - 125
Chloroethane	54.64	ND	50.92	93.2		40 - 155
Chloroform	54.64	ND	49.99	91.5		70 - 125
2-Chloroethyl vinyl ether	109.0	ND	74.45	68.3		10 - 200
Chloromethane	54.64	ND	48.42	88.6		50 - 130
Dibromochloromethane	54.64	ND	47.57	87.1		65 - 130
1,2-Dibromoethane (EDB)	54.64	ND	47.19	86.4		70 - 125
1,2-Dichlorobenzene	54.64	ND	44.28	81.0		75 - 120
1,3-Dichlorobenzene	54.64	ND	43.65	79.9		70 - 125
1,4-Dichlorobenzene	54.64	ND	44.40	81.3		70 - 125
Dichlorodifluoromethane	54.64	ND	45.88	84.0		35 - 135
1,1-Dichloroethane	54.64	ND	52.27	95.7		75 - 125
1,2-Dichloroethane	54.64	ND	53.68	98.2		70 - 135
1,1-Dichloroethene	54.64	ND	44.94	82.2		65 - 135
cis-1,2-Dichloroethene	54.64	ND	48.70	89.1		65 - 125
trans-1,2-Dichloroethene	54.64	ND	47.05	86.1		65 - 135
1,2-Dichloropropane	54.64	ND	49.60	90.8		70 - 120
cis-1,3-Dichloropropene	54.64	ND	51.62	94.5		70 - 125
trans-1,3-Dichloropropene	54.64	ND	44.46	81.4		65 - 125
Methylene chloride	54.64	3.064	47.06	80.5		55 - 140
1,1,2,2-Tetrachloroethane	54.64	ND	45.65	83.5		55 - 130
Tetrachloroethene	54.64	ND	42.75	78.3		65 - 140
1,1,2-Trichloroethane	54.64	ND	48.33	88.5		60 - 125
1,1,1-Trichloroethane	54.64	ND	53.00	97.0		70 - 135
Trichloroethene	54.64	ND	48.66	89.1		75 - 125
Trichlorofluoromethane	54.64	ND	52.98	97.0		25 - 185
Vinyl chloride	54.64	ND	63.74	117		60 - 125

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8260B

MPT-289-SS03-04-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A27016

% Solids: 94.73

Source Sample Name: **1201142-03**

ANALYTE	SPIKE ADDED (ug/Kg dry)	MSD CONCENTRATION (ug/Kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	53.64	49.44	92.2	1.92		30	70 - 130
Bromoform	53.64	47.26	88.1	1.30		30	55 - 135
Bromomethane	53.64	47.10	87.8	0.565		30	30 - 160
Carbon tetrachloride	53.64	51.65	96.3	0.699		30	65 - 135
Chlorobenzene	53.64	42.04	78.4	5.00		30	75 - 125
Chloroethane	53.64	50.25	93.7	1.33		30	40 - 155
Chloroform	53.64	49.61	92.5	0.765		30	70 - 125
2-Chloroethyl vinyl ether	107.0	84.95	79.4	13.2		30	10 - 200
Chloromethane	53.64	48.85	91.1	0.877		30	50 - 130
Dibromochloromethane	53.64	47.84	89.2	0.581		30	65 - 130
1,2-Dibromoethane (EDB)	53.64	47.19	88.0	0.0110		30	70 - 125
1,2-Dichlorobenzene	53.64	39.98	74.5	10.2	*	30	75 - 120
1,3-Dichlorobenzene	53.64	38.42	71.6	12.7		30	70 - 125
1,4-Dichlorobenzene	53.64	39.51	73.7	11.7		30	70 - 125
Dichlorodifluoromethane	53.64	49.13	91.6	6.83		30	35 - 135
1,1-Dichloroethane	53.64	50.83	94.8	2.81		30	75 - 125
1,2-Dichloroethane	53.64	53.86	100	0.341		30	70 - 135
1,1-Dichloroethene	53.64	46.14	86.0	2.63		30	65 - 135
cis-1,2-Dichloroethene	53.64	47.59	88.7	2.29		30	65 - 125
trans-1,2-Dichloroethene	53.64	47.41	88.4	0.767		30	65 - 135
1,2-Dichloropropane	53.64	50.07	93.4	0.957		30	70 - 120
cis-1,3-Dichloropropene	53.64	52.02	97.0	0.770		30	70 - 125
trans-1,3-Dichloropropene	53.64	44.12	82.3	0.761		30	65 - 125
Methylene chloride	53.64	46.65	81.3	0.884		30	55 - 140
1,1,2,2-Tetrachloroethane	53.64	45.50	84.8	0.327		30	55 - 130
Tetrachloroethene	53.64	42.62	79.5	0.304		30	65 - 140
1,1,2-Trichloroethane	53.64	47.46	88.5	1.83		30	60 - 125
1,1,1-Trichloroethane	53.64	53.39	99.5	0.739		30	70 - 135
Trichloroethene	53.64	48.49	90.4	0.339		30	75 - 125
Trichlorofluoromethane	53.64	53.59	99.9	1.15		30	25 - 185
Vinyl chloride	53.64	59.89	112	6.23		30	60 - 125

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A27016 Batch Matrix: Solid Preparation: 5035

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS01-04-20120124	1201142-01	01/27/12 00:00	4.56	5.00
MPT-289-SS02-04-20120124	1201142-02	01/27/12 00:00	4.93	5.00
MPT-289-SS03-04-20120124	1201142-03	01/27/12 00:00	4.62	5.00
MPT-289-SS04-04-20120124	1201142-04	01/27/12 00:00	4.82	5.00
MPT-289-SS05-04-20120124	1201142-05	01/27/12 00:00	4.77	5.00
MPT-289-SS06-04-20120124	1201142-06	01/27/12 00:00	5.18	5.00
MPT-289-SS08-03-20120124	1201142-08	01/27/12 00:00	6.51	5.00
MPT-289-SS10-03-20120124	1201142-10	01/27/12 00:00	6.04	5.00
MPT-289-SS11-03-20120124	1201142-12	01/27/12 00:00	4.76	5.00
Blank	2A27016-BLK1	01/27/12 00:00	5.00	5.00
LCS	2A27016-BS1	01/27/12 00:00	5.00	5.00
MPT-289-SS03-04-20120124	2A27016-MS1	01/27/12 00:00	4.83	5.00
MPT-289-SS03-04-20120124	2A27016-MSD1	01/27/12 00:00	4.92	5.00

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A27019 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-RB01-20120124	1201142-11	01/27/12 00:00	5.00	5.00
Trip Blank	1201142-13	01/27/12 00:00	5.00	5.00
Blank	2A27019-BLK1	01/27/12 00:00	5.00	5.00
LCS	2A27019-BS1	01/27/12 00:00	5.00	5.00
LCS Dup	2A27019-BSD1	01/27/12 00:00	5.00	5.00

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A30012 Batch Matrix: Solid Preparation: 5035

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS07-04-20120124	1201142-07RE1	01/30/12 00:00	5.15	5.00
Blank	2A30012-BLK1	01/30/12 00:00	5.00	5.00
LCS	2A30012-BS1	01/30/12 00:00	5.00	5.00

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A31014 Batch Matrix: Solid Preparation: 5035

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS09-03-20120124	1201142-09RE1	02/01/12 00:00	6.01	5.00
Blank	2A31014-BLK1	02/01/12 00:00	5.00	5.00
LCS	2A31014-BS1	02/01/12 00:00	5.00	5.00
LCS Dup	2A31014-BSD1	02/01/12 00:00	5.00	5.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0104TU1.D	Injection Date:	01/04/12
Instrument ID:	MS-VOA5	Injection Time:	07:36
Sequence:	2A00602	Lab Sample ID:	2A00602-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.3	PASS
75	30 - 60% of 95	53	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.5	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	63	PASS
175	5 - 9% of 174	6.9	PASS
176	95 - 101% of 174	95.4	PASS
177	5 - 9% of 176	6.74	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0104TU2.D	Injection Date:	01/05/12
Instrument ID:	MS-VOA5	Injection Time:	06:45
Sequence:	2A00602	Lab Sample ID:	2A00602-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	24.5	PASS
75	30 - 60% of 95	51.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.6	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	69.1	PASS
175	5 - 9% of 174	7.03	PASS
176	95 - 101% of 174	97.3	PASS
177	5 - 9% of 176	6.47	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0106TU1.D	Injection Date:	01/06/12
Instrument ID:	MS-VOA4	Injection Time:	07:52
Sequence:	2A00902	Lab Sample ID:	2A00902-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	17.4	PASS
75	30 - 60% of 95	42.8	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.54	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	81.6	PASS
175	5 - 9% of 174	8.11	PASS
176	95 - 101% of 174	96	PASS
177	5 - 9% of 176	6.79	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0127TU1.D	Injection Date:	01/27/12
Instrument ID:	MS-VOA5	Injection Time:	09:39
Sequence:	2A03008	Lab Sample ID:	2A03008-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	23.2	PASS
75	30 - 60% of 95	50	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.08	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	70.8	PASS
175	5 - 9% of 174	7.38	PASS
176	95 - 101% of 174	97.6	PASS
177	5 - 9% of 176	6.46	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0127TU1.D	Injection Date:	01/27/12
Instrument ID:	MS-VOA4	Injection Time:	08:55
Sequence:	2A03011	Lab Sample ID:	2A03011-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	16.4	PASS
75	30 - 60% of 95	41.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.77	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	88	PASS
175	5 - 9% of 174	7.69	PASS
176	95 - 101% of 174	95	PASS
177	5 - 9% of 176	6.87	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0130TU1.D	Injection Date:	01/30/12
Instrument ID:	MS-VOA5	Injection Time:	08:05
Sequence:	2A03105	Lab Sample ID:	2A03105-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	24.1	PASS
75	30 - 60% of 95	52	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.29	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.6	PASS
175	5 - 9% of 174	7	PASS
176	95 - 101% of 174	98	PASS
177	5 - 9% of 176	6.21	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	0201TU1.D	Injection Date:	02/01/12
Instrument ID:	MS-VOA5	Injection Time:	07:41
Sequence:	2B03307	Lab Sample ID:	2B03307-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	26.5	PASS
75	30 - 60% of 95	53.7	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.56	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	63.4	PASS
175	5 - 9% of 174	7.07	PASS
176	95 - 101% of 174	96.5	PASS
177	5 - 9% of 176	6.63	PASS

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00602	Instrument:	MS-VOA5
Calibration:	2011002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2A00602-TUN1	0104TU1.D	01/04/12 07:36
Cal Standard	2A00602-CAL1	SEQCAL1.D	01/04/12 08:30
Cal Standard	2A00602-CAL2	SEQCAL2.D	01/04/12 08:57
Cal Standard	2A00602-CAL3	SEQCAL3.D	01/04/12 09:25
Cal Standard	2A00602-CAL4	SEQCAL4.D	01/04/12 09:52
Cal Standard	2A00602-CAL5	SEQCAL5.D	01/04/12 10:19
Cal Standard	2A00602-CAL6	SEQCAL6.D	01/04/12 11:13
Cal Standard	2A00602-CAL7	SEQCAL7.D	01/04/12 12:07
Cal Standard	2A00602-CAL8	SEQCAL8.D	01/04/12 13:02
Initial Cal Check	2A00602-ICV2	SEQICV2.D	01/04/12 14:50
MS Tune	2A00602-TUN2	0104TU2.D	01/05/12 06:45

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00902	Instrument:	MS-VOA4
Calibration:	2011004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2A00902-TUN1	0106TU1.D	01/06/12 07:52
Cal Standard	2A00902-CAL1	SEQCAL1.D	01/06/12 08:49
Cal Standard	2A00902-CAL2	SEQCAL2.D	01/06/12 09:17
Cal Standard	2A00902-CAL3	SEQCAL3.D	01/06/12 09:45
Cal Standard	2A00902-CAL4	SEQCAL4.D	01/06/12 10:13
Cal Standard	2A00902-CAL5	SEQCAL5.D	01/06/12 10:42
Cal Standard	2A00902-CAL6	SEQCAL6.D	01/06/12 11:10
Cal Standard	2A00902-CAL7	SEQCAL7.D	01/06/12 11:38
Cal Standard	2A00902-CAL8	SEQCAL8.D	01/06/12 12:06
Cal Standard	2A00902-CAL9	SEQCAL9.D	01/06/12 12:34
Initial Cal Check	2A00902-ICV2	SEQICV2.D	01/06/12 13:59

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03008	Instrument:	MS-VOA5
Calibration:	2011002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2A03008-TUN1	0127TU1.D	01/27/12 09:39
Calibration Check	2A03008-CCV1	0127CCV1.D	01/27/12 10:46
LCS	2A27016-BS1	0127LCS1.D	01/27/12 11:23
Blank	2A27016-BLK1	0127BL1.D	01/27/12 12:45
MPT-289-SS03-04-20120124	1201142-03	0114203.D	01/27/12 13:12
MPT-289-SS01-04-20120124	1201142-01	0114201.D	01/27/12 13:39
MPT-289-SS02-04-20120124	1201142-02	0114202.D	01/27/12 14:06
MPT-289-SS04-04-20120124	1201142-04	0114204.D	01/27/12 14:33
MPT-289-SS05-04-20120124	1201142-05	0114205.D	01/27/12 15:00
MPT-289-SS06-04-20120124	1201142-06	0114206.D	01/27/12 15:27
MPT-289-SS08-03-20120124	1201142-08	0114208.D	01/27/12 16:22
MPT-289-SS10-03-20120124	1201142-10	0114210.D	01/27/12 17:16
MPT-289-SS11-03-20120124	1201142-12	0114212.D	01/27/12 17:43
MPT-289-SS03-04-20120124	2A27016-MS1	0114203M.D	01/27/12 18:10
MPT-289-SS03-04-20120124	2A27016-MSD1	0114203S.D	01/27/12 18:37

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03011	Instrument:	MS-VOA4
Calibration:	2011004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2A03011-TUN1	0127TU1.D	01/27/12 08:55
Calibration Check	2A03011-CCV1	0127CCV1.D	01/27/12 09:23
LCS	2A27019-BS1	0127LCS1.D	01/27/12 09:59
Blank	2A27019-BLK1	0127BLK1.D	01/27/12 11:24
MPT-289-RB01-20120124	1201142-11	0114211.D	01/27/12 12:20
Trip Blank	1201142-13	0114213.D	01/27/12 12:48
LCS Dup	2A27019-BSD1	0127LCD1.D	01/27/12 19:52

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03105	Instrument:	MS-VOA5
Calibration:	2011002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2A03105-TUN1	0130TU1.D	01/30/12 08:05
Calibration Check	2A03105-CCV1	0130CCV1.D	01/30/12 08:32
LCS	2A30012-BS1	0130LCS1.D	01/30/12 09:10
Blank	2A30012-BLK1	0130BL1.D	01/30/12 10:31
MPT-289-SS07-04-20120124	1201142-07RE1	0114207R.D	01/30/12 10:58

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03307	Instrument:	MS-VOA5
Calibration:	2011002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2B03307-TUN1	0201TU1.D	02/01/12 07:41
Calibration Check	2B03307-CCV1	0201CCV1.D	02/01/12 08:09
LCS	2A31014-BS1	0201LCS1.D	02/01/12 08:36
Blank	2A31014-BLK1	0201BL1.D	02/01/12 09:57
MPT-289-SS09-03-20120124	1201142-09RE1	0114209R.D	02/01/12 15:58
LCS Dup	2A31014-BSD1	0201LCD1.D	02/01/12 16:26

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Sequence: 2A03008
Instrument: MS-VOA5
Calibration: 2011002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2A03008-CCV1)			Lab File ID: 0127CCV1.D			Analyzed: 01/27/12 10:46			
Fluorobenzene	829214	7.874	642862	7.864	129	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	333301	10.997	276632	10.998	120	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	228322	13.402	170699	13.392	134	50 - 200	0.0100	+/-0.50	
LCS (2A27016-BS1)			Lab File ID: 0127LCS1.D			Analyzed: 01/27/12 11:23			
Fluorobenzene	856953	7.88	829214	7.874	103	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5	347084	11.003	333301	10.997	104	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	227749	13.408	228322	13.402	100	50 - 200	0.0060	+/-0.50	
Blank (2A27016-BLK1)			Lab File ID: 0127BL1.D			Analyzed: 01/27/12 12:45			
Fluorobenzene	749693	7.87	829214	7.874	90	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5	305654	11.003	333301	10.997	92	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	192474	13.398	228322	13.402	84	50 - 200	-0.0040	+/-0.50	
MPT-289-SS03-04-20120124 (1201142-03)			Lab File ID: 0114203.D			Analyzed: 01/27/12 13:12			
Fluorobenzene	704477	7.867	829214	7.874	85	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	294521	11	333301	10.997	88	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	172313	13.395	228322	13.402	75	50 - 200	-0.0070	+/-0.50	
MPT-289-SS01-04-20120124 (1201142-01)			Lab File ID: 0114201.D			Analyzed: 01/27/12 13:39			
Fluorobenzene	673255	7.876	829214	7.874	81	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	294207	11	333301	10.997	88	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	171253	13.404	228322	13.402	75	50 - 200	0.0020	+/-0.50	
MPT-289-SS02-04-20120124 (1201142-02)			Lab File ID: 0114202.D			Analyzed: 01/27/12 14:06			
Fluorobenzene	669570	7.874	829214	7.874	81	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	285029	10.998	333301	10.997	86	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	166660	13.392	228322	13.402	73	50 - 200	-0.0100	+/-0.50	
MPT-289-SS04-04-20120124 (1201142-04)			Lab File ID: 0114204.D			Analyzed: 01/27/12 14:33			
Fluorobenzene	663806	7.875	829214	7.874	80	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	280833	10.998	333301	10.997	84	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	164018	13.403	228322	13.402	72	50 - 200	0.0010	+/-0.50	
MPT-289-SS05-04-20120124 (1201142-05)			Lab File ID: 0114205.D			Analyzed: 01/27/12 15:00			
Fluorobenzene	617849	7.867	829214	7.874	75	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	261286	11	333301	10.997	78	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	155846	13.395	228322	13.402	68	50 - 200	-0.0070	+/-0.50	
MPT-289-SS06-04-20120124 (1201142-06)			Lab File ID: 0114206.D			Analyzed: 01/27/12 15:27			
Fluorobenzene	613366	7.867	829214	7.874	74	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	268351	11	333301	10.997	81	50 - 200	0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	150122	13.395	228322	13.402	66	50 - 200	-0.0070	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Sequence: 2A03008
Instrument: MS-VOA5
Calibration: 2011002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MPT-289-SS08-03-20120124 (1201142-08)			Lab File ID: 0114208.D			Analyzed: 01/27/12 16:22			
Fluorobenzene	588812	7.87	829214	7.874	71	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5	253986	11.004	333301	10.997	76	50 - 200	0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	137341	13.398	228322	13.402	60	50 - 200	-0.0040	+/-0.50	
MPT-289-SS10-03-20120124 (1201142-10)			Lab File ID: 0114210.D			Analyzed: 01/27/12 17:16			
Fluorobenzene	538099	7.864	829214	7.874	65	50 - 200	-0.0100	+/-0.50	
Chlorobenzene-d5	234613	10.998	333301	10.997	70	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	118260	13.392	228322	13.402	52	50 - 200	-0.0100	+/-0.50	
MPT-289-SS11-03-20120124 (1201142-12)			Lab File ID: 0114212.D			Analyzed: 01/27/12 17:43			
Fluorobenzene	555216	7.865	829214	7.874	67	50 - 200	-0.0090	+/-0.50	
Chlorobenzene-d5	239716	10.998	333301	10.997	72	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	128900	13.393	228322	13.402	56	50 - 200	-0.0090	+/-0.50	
Matrix Spike (2A27016-MS1)			Lab File ID: 0114203M.D			Analyzed: 01/27/12 18:10			
Fluorobenzene	535337	7.865	829214	7.874	65	50 - 200	-0.0090	+/-0.50	
Chlorobenzene-d5	228586	10.999	333301	10.997	69	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	143192	13.393	228322	13.402	63	50 - 200	-0.0090	+/-0.50	
Matrix Spike Dup (2A27016-MSD1)			Lab File ID: 0114203S.D			Analyzed: 01/27/12 18:37			
Fluorobenzene	556538	7.861	829214	7.874	67	50 - 200	-0.0130	+/-0.50	
Chlorobenzene-d5	243232	10.995	333301	10.997	73	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	152513	13.389	228322	13.402	67	50 - 200	-0.0130	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03011	Instrument:	MS-VOA4
		Calibration:	2011004

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2A03011-CCV1)			Lab File ID: 0127CCV1.D			Analyzed: 01/27/12 09:23			
Fluorobenzene	925531	7.955	983262	7.953	94	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	366828	11.064	383879	11.06	96	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	399802	13.464	399760	13.457	100	50 - 200	0.0070	+/-0.50	
LCS (2A27019-BS1)			Lab File ID: 0127LCS1.D			Analyzed: 01/27/12 09:59			
Fluorobenzene	995125	7.952	925531	7.955	108	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	367289	11.061	366828	11.064	100	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	403173	13.461	399802	13.464	101	50 - 200	-0.0030	+/-0.50	
Blank (2A27019-BLK1)			Lab File ID: 0127BLK1.D			Analyzed: 01/27/12 11:24			
Fluorobenzene	950567	7.954	925531	7.955	103	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	353222	11.062	366828	11.064	96	50 - 200	-0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	384729	13.453	399802	13.464	96	50 - 200	-0.0110	+/-0.50	
MPT-289-RB01-20120124 (1201142-11)			Lab File ID: 0114211.D			Analyzed: 01/27/12 12:20			
Fluorobenzene	935313	7.952	925531	7.955	101	50 - 200	-0.0030	+/-0.50	
Chlorobenzene-d5	366302	11.061	366828	11.064	100	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4	397678	13.461	399802	13.464	99	50 - 200	-0.0030	+/-0.50	
Trip Blank (1201142-13)			Lab File ID: 0114213.D			Analyzed: 01/27/12 12:48			
Fluorobenzene	908931	7.951	925531	7.955	98	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5	364332	11.06	366828	11.064	99	50 - 200	-0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	396976	13.46	399802	13.464	99	50 - 200	-0.0040	+/-0.50	
LCS Dup (2A27019-BSD1)			Lab File ID: 0127LCD1.D			Analyzed: 01/27/12 19:52			
Fluorobenzene	951521	7.954	925531	7.955	103	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	363342	11.063	366828	11.064	99	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	395674	13.453	399802	13.464	99	50 - 200	-0.0110	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A03105	Instrument:	MS-VOA5
		Calibration:	2011002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2A03105-CCV1)			Lab File ID: 0130CCV1.D			Analyzed: 01/30/12 08:32			
Fluorobenzene	689797	7.86	642862	7.864	107	50 - 200	-0.0040	+/-0.50	
Chlorobenzene-d5	304369	10.994	276632	10.998	110	50 - 200	-0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	206741	13.388	170699	13.392	121	50 - 200	-0.0040	+/-0.50	
LCS (2A30012-BS1)			Lab File ID: 0130LCS1.D			Analyzed: 01/30/12 09:10			
Fluorobenzene	757388	7.86	689797	7.86	110	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	322843	10.993	304369	10.994	106	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	208016	13.388	206741	13.388	101	50 - 200	0.0000	+/-0.50	
Blank (2A30012-BLK1)			Lab File ID: 0130BL1.D			Analyzed: 01/30/12 10:31			
Fluorobenzene	668889	7.86	689797	7.86	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	293212	10.993	304369	10.994	96	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	177954	13.388	206741	13.388	86	50 - 200	0.0000	+/-0.50	
MPT-289-SS07-04-20120124 (1201142-07RE1)			Lab File ID: 0114207R.D			Analyzed: 01/30/12 10:58			
Fluorobenzene	621610	7.864	689797	7.86	90	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	271878	10.998	304369	10.994	89	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	154885	13.392	206741	13.388	75	50 - 200	0.0040	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03307	Instrument:	MS-VOA5
		Calibration:	2011002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2B03307-CCV1)			Lab File ID: 0201CCV1.D			Analyzed: 02/01/12 08:09			
Fluorobenzene	569537	7.865	642862	7.864	89	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	245591	10.998	276632	10.998	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	162008	13.393	170699	13.392	95	50 - 200	0.0010	+/-0.50	
LCS (2A31014-BS1)			Lab File ID: 0201LCS1.D			Analyzed: 02/01/12 08:36			
Fluorobenzene	632985	7.867	569537	7.865	111	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	273205	11	245591	10.998	111	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4	172157	13.395	162008	13.393	106	50 - 200	0.0020	+/-0.50	
Blank (2A31014-BLK1)			Lab File ID: 0201BL1.D			Analyzed: 02/01/12 09:57			
Fluorobenzene	560176	7.867	569537	7.865	98	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5	239294	10.991	245591	10.998	97	50 - 200	-0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	133822	13.395	162008	13.393	83	50 - 200	0.0020	+/-0.50	
MPT-289-SS09-03-20120124 (1201142-09RE1)			Lab File ID: 0114209R.D			Analyzed: 02/01/12 15:58			
Fluorobenzene	408858	7.865	569537	7.865	72	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	173511	10.998	245591	10.998	71	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	86489	13.393	162008	13.393	53	50 - 200	0.0000	+/-0.50	
LCS Dup (2A31014-BSD1)			Lab File ID: 0201LCD1.D			Analyzed: 02/01/12 16:26			
Fluorobenzene	411209	7.875	569537	7.865	72	50 - 200	0.0100	+/-0.50	
Chlorobenzene-d5	189698	11.008	245591	10.998	77	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	118499	13.403	162008	13.393	73	50 - 200	0.0100	+/-0.50	

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2011002

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	4	0.1352829	10	0.1351762	20	0.1088004	40	0.1166641	80	0.1122428	200	0.1042014
Acrolein	10.01	2.523079E-02	25.02	3.009801E-02	50.05	3.190861E-02	100.1	4.171768E-02	200.2	4.423514E-02	500.5	4.234663E-02
Acrylonitrile	9.992	9.648086E-02	24.98	0.1015489	49.97	0.0884786	99.94	0.1005033	199.9	9.738804E-02	499.7	8.582549E-02
Benzene	2	1.244844	5	1.339603	10	1.157945	20	1.252436	40	1.284681	100	1.102567
Bromobenzene	2	0.9755735	5	1.010557	10	0.8476311	20	0.9586532	40	0.9661349	100	0.8210294
Bromochloromethane	2	0.1173133	5	0.1347198	10	0.1194045	20	0.1323927	40	0.1318268	100	0.1164259
Tert-Amyl Methyl Ether	2	0.6946247	5	0.792468	10	0.6914126	20	0.7941289	40	0.8127949	100	0.6910674
Bromodichloromethane	2	0.38836	5	0.4365125	10	0.3884758	20	0.4336553	40	0.4406266	100	0.3824118
Bromoform	2	0.2880215	5	0.3237775	10	0.2812826	20	0.3358082	40	0.3537543	100	0.3014597
Bromomethane	2	0.3098466	5	0.3386704	10	0.2664644	20	0.2663553	40	0.2511704	100	0.2297453
Bromofluorobenzene	35	0.7932441	40	0.7600984	50	0.7782313	60	0.7936181	70	0.8086866	30	0.7950346
n-Butylbenzene	2	2.405097	5	2.742286	10	2.466776	20	2.888338	40	2.797954	100	2.37903
2-Butanone	4	0.183831	10	0.1915661	20	0.1689912	40	0.1967078	80	0.1881723	200	0.1731106
sec-Butylbenzene	2	3.779438	5	4.133982	10	3.797775	20	4.397346	40	4.300262	100	3.679682
tert-Butylbenzene	2	2.619308	5	2.825802	10	2.534732	20	2.855379	40	2.805202	100	2.410687
Carbon disulfide	2	1.248522	5	1.301953	10	1.143653	20	1.236131	40	1.244474	100	1.116728
Carbon tetrachloride	2	0.3540314	5	0.3680742	10	0.3134369	20	0.3656854	40	0.3769811	100	0.3330617
Chlorobenzene	2	1.504145	5	1.588133	10	1.394778	20	1.582776	40	1.614627	100	1.354686
Chloroethane	2	0.2684744	5	0.2502684	10	0.2358104	20	0.245061	40	0.250282	100	0.2294387
Chloroform	2	0.6702245	5	0.6726156	10	0.5400192	20	0.5854054	40	0.5978354	100	0.5076366
2-Chloroethyl vinyl ether	3.99	3.130573E-02	9.975	3.378195E-02	19.95	3.233816E-02	39.9	3.664689E-02	79.8	3.911807E-02	199.5	3.012936E-02
Chloromethane	2	0.6472186	5	0.6625937	10	0.5629105	20	0.5913156	40	0.5951473	100	0.5574861
1-Chlorohexane	2	0.9926642	5	0.9993171	10	0.8636051	20	0.9810009	40	1.018813	100	0.8724988
2-Chlorotoluene	2	3.186664	5	3.329672	10	2.964628	20	3.341384	40	3.228033	100	2.829985
4-Chlorotoluene	2	3.509718	5	3.627673	10	3.087086	20	3.474329	40	3.457584	100	2.962292
Cyclohexane	2	0.6652964	5	0.7124226	10	0.624291	20	0.6803264	40	0.7015406	100	0.6062169
Dibromochloromethane	2	0.5404927	5	0.557688	10	0.5248289	20	0.6144763	40	0.6367224	100	0.5521639
1,2-Dibromo-3-chloropropane	2	0.1434955	5	0.1553474	10	0.1441943	20	0.155651	40	0.1604108	100	0.1416353
1,2-Dibromoethane (EDB)	2	0.4527553	5	0.4987389	10	0.456539	20	0.5384873	40	0.5366973	100	0.4657747
Dibromomethane	2	0.1688783	5	0.193738	10	0.1669429	20	0.1927333	40	0.196245	100	0.1695275
1,2-Dichlorobenzene	2	1.513491	5	1.508669	10	1.352392	20	1.544245	40	1.508846	100	1.297593

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2011002

Instrument: MS-VOA5

Matrix: Water

Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	2	1.632329	5	1.672549	10	1.529736	20	1.692397	40	1.687538	100	1.421483
1,4-Dichlorobenzene	2	1.539453	5	1.651197	10	1.432428	20	1.587143	40	1.560628	100	1.352159
Dichlorodifluoromethane	2	0.4248762	5	0.4587735	10	0.3561145	20	0.3884572	40	0.3841592	100	0.4067189
1,1-Dichloroethane	2	0.6349103	5	0.7555301	10	0.6468148	20	0.7148216	40	0.7335076	100	0.643577
1,2-Dichloroethane	2	0.4097553	5	0.4543995	10	0.403619	20	0.4424661	40	0.4477738	100	0.3930704
1,1-Dichloroethene	2	0.2738112	5	0.3007293	10	0.2662032	20	0.2879527	40	0.2952943	100	0.2602072
cis-1,2-Dichloroethene	2	0.2998702	5	0.3266119	10	0.2779947	20	0.310206	40	0.3164358	100	0.2814525
trans-1,2-Dichloroethene	2	0.2995336	5	0.3122862	10	0.2634802	20	0.307483	40	0.3122698	100	0.268377
1,2-Dichloroethene (total)	4	0.2997019	10	0.319449	20	0.2707375	40	0.3088445	80	0.3143528	200	0.2749148
1,2-Dichloropropane	2	0.3732631	5	0.4160372	10	0.359147	20	0.3983265	40	0.4102143	100	0.3472342
1,3-Dichloropropane	2	0.9868851	5	0.9733348	10	0.8974442	20	1.016444	40	1.036583	100	0.8651342
2,2-Dichloropropane	2	0.4585076	5	0.5127457	10	0.4447732	20	0.4719912	40	0.4940648	100	0.4285153
1,1-Dichloropropene	2	0.4736526	5	0.5067465	10	0.4512396	20	0.495168	40	0.5052246	100	0.4395911
cis-1,3-Dichloropropene	2	0.4382182	5	0.4994834	10	0.4387226	20	0.5048502	40	0.509354	100	0.4319761
trans-1,3-Dichloropropene	2	0.9912632	5	1.015963	10	0.9354523	20	1.06932	40	1.09282	100	0.9216786
Diisopropyl Ether	2	1.527261	5	1.650064	10	1.469307	20	1.62769	40	1.615858	100	1.35854
Ethylbenzene	2	2.85669	5	3.003446	10	2.681208	20	3.027251	40	3.072975	100	2.608636
Ethyl tert-Butyl Ether	2	0.9279052	5	1.069672	10	0.9650882	20	1.030452	40	1.063944	100	0.8889336
Ethyl Methacrylate	2	0.7684465	5	0.8256129	10	0.7406764	20	0.8626677	40	0.8785758	100	0.7355342
Hexachlorobutadiene	2	0.5287932	5	0.5930186	10	0.5297896	20	0.6164242	40	0.6283155	100	0.5531614
2-Hexanone	4	0.5577133	10	0.5796542	20	0.5353364	40	0.6152241	80	0.6248646	200	0.5170964
Iodomethane	2	4.476177E-02	5	7.140779E-02	10	0.0970065	20	0.194244	40	0.2487708	100	0.2650777
Isopropylbenzene	2	2.130507	5	2.306324	10	2.076624	20	2.481252	40	2.465927	100	2.112128
p-Isopropyltoluene	2	2.5298	5	2.572479	10	2.419688	20	2.816953	40	2.786529	100	2.420157
Methylene chloride	2	~~0.5046396~~	5	0.456115	10	0.3591422	20	0.3649868	40	0.3565528	100	0.3043997
Methyl Acetate	2	0.2630896	5	0.2509806	10	0.2248218	20	0.2623465	40	0.24712	100	0.2085336
Methylcyclohexane	2	0.5026684	5	0.5444969	10	0.4696523	20	0.5334991	40	0.5170175	100	0.458294
Naphthalene	2	0.7831962	5	0.816961	10	0.7782611	20	0.9006721	40	0.9475646	100	0.833265
Methyl Methacrylate	2	0.447209	5	0.4904846	10	0.4451794	20	0.4767104	40	0.4667664	100	0.4092752
4-Methyl-2-pentanone	4	0.3278042	10	0.3339252	20	0.3066174	40	0.3444313	80	0.3492036	200	0.294169
Methyl t-Butyl Ether	2	0.6488773	5	0.767709	10	0.6516223	20	0.7278757	40	0.7313702	100	0.6279233

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011002
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	2	5.266207	5	5.49117	10	4.910321	20	5.4256	40	5.285074	100	4.563763
Styrene	2	1.417166	5	1.510046	10	1.369424	20	1.623733	40	1.685077	100	1.428969
1,1,2,2-Tetrachloroethane	2	1.25583	5	1.29225	10	1.116324	20	1.230133	40	1.201205	100	1.013509
1,1,1,2-Tetrachloroethane	2	0.5035998	5	0.5270261	10	0.4723313	20	0.548043	40	0.5497349	100	0.4703979
tert-Butyl alcohol	10	2.901582E-02	25	2.870356E-02	50	2.540345E-02	100	0.0273485	200	2.767092E-02	500	2.327044E-02
Tetrachloroethene	2	0.5242061	5	0.5494928	10	0.4951588	20	0.5628161	40	0.5803094	100	0.5058916
Toluene	2	1.54273	5	1.548205	10	1.39087	20	1.566131	40	1.612149	100	1.364956
1,2,3-Trichlorobenzene	2	0.4544928	5	0.4337203	10	0.4275729	20	0.5239753	40	0.5242526	100	0.447971
1,2,4-Trichlorobenzene	2	0.487298	5	0.489916	10	0.4847214	20	0.5781878	40	0.5882039	100	0.4979291
1,1,2-Trichloroethane	2	0.5010897	5	0.5006247	10	0.4344025	20	0.5008924	40	0.4964086	100	0.4185947
1,1,1-Trichloroethane	2	0.4066782	5	0.4455413	10	0.3980667	20	0.4403327	40	0.4417634	100	0.4045904
Tetrahydrofuran	2	0.1125775	5	0.1112248	10	8.576638E-02	20	0.1077242	40	9.934577E-02	100	8.696361E-02
Trichloroethene	2	0.2836434	5	0.3165297	10	0.285651	20	0.3174636	40	0.3223454	100	0.2831595
Trichlorofluoromethane	2	0.4783884	5	0.4897824	10	0.4313227	20	0.494621	40	0.4798152	100	0.4296852
1,2,3-Trichloropropane	2	0.1281328	5	0.1435079	10	0.1231326	20	0.1544325	40	0.158283	100	0.1302648
1,3,5-Trimethylbenzene	2	2.356324	5	2.520445	10	2.259979	20	2.59885	40	2.59357	100	2.23638
1,2,4-Trimethylbenzene	2	2.151563	5	2.325294	10	1.998135	20	2.36983	40	2.327408	100	2.034091
1,1,2-Trichloro-1,2,2-trifluoroethan	2	0.3044858	5	0.3581023	10	0.299232	20	0.3305769	40	0.3245	100	0.2827946
Vinyl chloride	2	0.390788	5	0.3249566	10	0.2445065	20	0.3228576	40	0.2707217	100	0.3792604
m,p-Xylene	4	2.126391	10	2.160849	20	1.906868	40	2.225954	80	2.192128	200	1.88549
o-Xylene	2	2.098109	5	2.177321	10	1.954398	20	2.259165	40	2.292993	100	1.944901
Vinyl acetate	3.985	0.7385019	9.962	0.8068098	19.92	0.7220917	39.84	0.8109264	79.68	0.8285574	199.2	0.6830367
Xylenes (total)	6	2.116964	15	2.166339	30	1.922711	60	2.237024	120	2.225749	300	1.905293
Dibromofluoromethane	35	0.2852843	40	0.2955628	50	0.2961811	60	0.2950548	70	0.3029924	30	0.2865561
1,2-Dichloroethane-d4	35	4.825781E-02	40	5.052116E-02	50	5.123058E-02	60	5.143896E-02	70	5.185738E-02	30	5.087406E-02
Toluene-d8	35	2.179263	40	2.083641	50	2.128977	60	2.149858	70	2.1653	30	2.157198
tert-Amyl alcohol	10	0.0155344	25	2.320402E-02	50	2.002618E-02	100	2.199947E-02	200	2.245715E-02	500	1.976234E-02
tert-Amyl ethyl ether	2	0.7429203	5	0.8428688	10	0.710633	20	0.8285129	40	0.8347069	100	0.7010531

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011002
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	300	0.115503	400	0.1122766								
Acrolein	750.8	~~5.124233E-02~~	1001	~~5.097769E-02~~								
Acrylonitrile	749.6	9.408722E-02	999.4	9.129981E-02								
Benzene	150	1.2101	200	1.134245								
Bromobenzene	150	0.8972714	200	0.8858845								
Bromochloromethane	150	0.1318317	200	0.1279054								
Tert-Amyl Methyl Ether	150	0.7939878	200	0.7504913								
Bromodichloromethane	150	0.4363556	200	0.4222222								
Bromoform	150	0.3705929	200	0.3711983								
Bromomethane	150	0.2520208	200	0.2529713								
Bromofluorobenzene	30	0.821065	30	0.8420125								
n-Butylbenzene	150	2.718313	200	2.530785								
2-Butanone	300	0.1895403	400	0.1810445								
sec-Butylbenzene	150	3.973625	200	3.789804								
tert-Butylbenzene	150	2.69398	200	2.683749								
Carbon disulfide	150	1.211119	200	1.157697								
Carbon tetrachloride	150	0.3883206	200	0.3713108								
Chlorobenzene	150	1.619485	200	1.573087								
Chloroethane	150	0.2510653	200	0.244116								
Chloroform	150	0.5720141	200	0.5460607								
2-Chloroethyl vinyl ether	299.2	3.439395E-02	399	3.593686E-02								
Chloromethane	150	0.589611	200	0.5842779								
1-Chlorohexane	150	1.006518	200	0.9608026								
2-Chlorotoluene	150	2.948325	200	2.851266								
4-Chlorotoluene	150	3.208855	200	3.043893								
Cyclohexane	150	0.6611583	200	0.6125702								
Dibromochloromethane	150	0.6569563	200	0.658789								
1,2-Dibromo-3-chloropropane	150	0.1518764	200	0.1540795								
1,2-Dibromoethane (EDB)	150	0.5572918	200	0.5423824								
Dibromomethane	150	0.1939734	200	0.1839866								
1,2-Dichlorobenzene	150	1.461351	200	1.424697								

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011002
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	150	1.587022	200	1.52724								
1,4-Dichlorobenzene	150	1.489277	200	1.436877								
Dichlorodifluoromethane	150	0.4546049	200	0.4404648								
1,1-Dichloroethane	150	0.7053144	200	0.6744356								
1,2-Dichloroethane	150	0.4327703	200	0.409523								
1,1-Dichloroethene	150	0.2940299	200	0.2811911								
cis-1,2-Dichloroethene	150	0.3183554	200	0.3064637								
trans-1,2-Dichloroethene	150	0.308968	200	0.2924458								
1,2-Dichloroethene (total)	300	0.3136617	400	0.2994547								
1,2-Dichloropropane	150	0.3802352	200	0.3612526								
1,3-Dichloropropane	150	1.029332	200	0.9768702								
2,2-Dichloropropane	150	0.4837034	200	0.4562648								
1,1-Dichloropropene	150	0.4770029	200	0.4551489								
cis-1,3-Dichloropropene	150	0.4824172	200	0.4702197								
trans-1,3-Dichloropropene	150	1.069357	200	1.028262								
Diisopropyl Ether	150	1.47713	200	1.380548								
Ethylbenzene	150	3.013174	200	2.898681								
Ethyl tert-Butyl Ether	150	0.9884001	200	0.9373577								
Ethyl Methacrylate	150	0.8699249	200	0.8429464								
Hexachlorobutadiene	150	0.6235193	200	0.6371286								
2-Hexanone	300	0.5922763	400	0.5764733								
Iodomethane	150	~~0.3250975~~	200	~~0.3372392~~								
Isopropylbenzene	150	2.423176	200	2.367113								
p-Isopropyltoluene	150	2.816749	200	2.668388								
Methylene chloride	150	0.3356222	200	0.3197925								
Methyl Acetate	150	0.2392806	200	0.2296331								
Methylcyclohexane	150	0.5205736	200	0.4857919								
Naphthalene	150	1.059683	200	0.9844738								
Methyl Methacrylate	150	0.4395706	200	0.4026909								
4-Methyl-2-pentanone	300	0.3264359	400	0.3106606								
Methyl t-Butyl Ether	150	0.72126	200	0.698465								

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011002
Instrument: MS-VOA5
Matrix: Water
Calibration Dates: 1/4/12 8:30 1/4/12 13:02

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	150	4.911374	200	4.588004								
Styrene	150	1.722961	200	1.634784								
1,1,2,2-Tetrachloroethane	150	1.07936	200	1.03947								
1,1,1,2-Tetrachloroethane	150	0.5868076	200	0.5704995								
tert-Butyl alcohol	750	2.749357E-02	1000	2.695177E-02								
Tetrachloroethene	150	0.6011354	200	0.5914255								
Toluene	150	1.594655	200	1.524231								
1,2,3-Trichlorobenzene	150	0.5666972	200	0.5307425								
1,2,4-Trichlorobenzene	150	0.620538	200	0.5904288								
1,1,2-Trichloroethane	150	0.4914492	200	0.481204								
1,1,1-Trichloroethane	150	0.4536201	200	0.4330745								
Tetrahydrofuran	150	9.031417E-02	200	0.0914575								
Trichloroethene	150	0.3139723	200	0.3029939								
Trichlorofluoromethane	150	0.4903671	200	0.4700913								
1,2,3-Trichloropropane	150	0.1518118	200	0.1512737								
1,3,5-Trimethylbenzene	150	2.582733	200	2.460895								
1,2,4-Trimethylbenzene	150	2.436392	200	2.315371								
1,1,2-Trichloro-1,2,2-trifluoroethan	150	0.3213751	200	0.3146793								
Vinyl chloride	150	0.3843865	200	0.3578592								
m,p-Xylene	300	2.131491	400	2.008702								
o-Xylene	150	2.290308	200	2.171526								
Vinyl acetate	298.9	0.7619629	398.5	0.7108566								
Xylenes (total)	450	2.18443	600	2.062976								
Dibromofluoromethane	30	0.2887855	30	0.2889294								
1,2-Dichloroethane-d4	30	4.983137E-02	30	4.904084E-02								
Toluene-d8	30	2.214573	30	2.231578								
tert-Amyl alcohol	750	2.279692E-02	1000	2.220608E-02								
tert-Amyl ethyl ether	150	0.7917882	200	0.7439936								

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011002	Instrument:	MS-VOA5
Matrix:	Water	Calibration Dates:	1/4/12 8:30 1/4/12 13:02

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.1175184	9.865041	3.687	9.636248E-02			15	
Acrolein	3.592281E-02	21.85914	3.571333	9.766205E-02	0.9988841		0.995	
Acrylonitrile	9.445153E-02	5.933961	4.518375	0.1651377			15	
Benzene	1.215803	6.60275	7.594	7.898868E-02			15	
Bromobenzene	0.9203419	7.303095	12.3485	3.067306E-02			15	
Bromochloromethane	0.1264775	5.956511	6.686375	0.1066511			15	
Tert-Amyl Methyl Ether	0.752622	7.021106	7.786	7.860426E-02			15	
Bromodichloromethane	0.4160775	6.054102	8.585375	5.562883E-02			15	
Bromoform	0.3282369	10.86753	11.752	5.049262E-02			SPCC (0.1)	
Bromomethane	0.2709056	13.17018	2.767	0.1980018			15	
Bromofluorobenzene	0.7989988	3.156762	12.186	3.681749E-02			15	
n-Butylbenzene	2.616072	7.421384	13.777	0.0267404			15	
2-Butanone	0.1841205	5.108687	6.135625	9.414069E-02			15	
sec-Butylbenzene	3.981489	6.714449	13.23875	3.207049E-02			15	
tert-Butylbenzene	2.678605	5.73521	13.00375	4.094049E-02			15	
Carbon disulfide	1.207535	5.200074	4.697	0.1273011			15	
Carbon tetrachloride	0.3588628	6.854018	7.564625	7.543298E-02			15	
Chlorobenzene	1.528965	6.67312	11.02925	4.720386E-02			SPCC (0.3)	
Chloroethane	0.2468145	4.706426	2.896375	0.1855288			15	
Chloroform	0.5864764	10.14508	6.658	9.055415E-02			CCC (20)	
2-Chloroethyl vinyl ether	3.420637E-02	8.687547	8.944	6.722224E-02			15	
Chloromethane	0.5988201	6.239949	2.1965	0.2538259			SPCC (0.1)	
1-Chlorohexane	0.9619025	6.286559	10.996	5.154276E-02			15	
2-Chlorotoluene	3.084995	6.812929	12.56875	3.146927E-02			15	
4-Chlorotoluene	3.296429	7.603436	12.634	2.921722E-02			15	
Cyclohexane	0.6579778	6.106551	7.495625	7.619735E-02			15	
Dibromochloromethane	0.5927647	9.264268	10.26075	4.691675E-02			15	
1,2-Dibromo-3-chloropropane	0.1508363	4.54831	14.37812	2.429744E-02			15	
1,2-Dibromoethane (EDB)	0.5060833	8.483947	10.47225	5.772622E-02			15	
Dibromomethane	0.1832531	6.979477	8.52	7.152288E-02			15	
1,2-Dichlorobenzene	1.451411	6.013567	13.73675	0.0332692			15	
1,3-Dichlorobenzene	1.593787	6.021311	13.32775	3.174411E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011002	Instrument:	MS-VOA5
Matrix:	Water	Calibration Dates:	1/4/12 8:30 1/4/12 13:02

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.506145	6.442444	13.41762	4.134164E-02			15	
Dichlorodifluoromethane	0.4142712	8.854199	1.977375	0.2001275			15	
1,1-Dichloroethane	0.6886139	6.568106	5.692	0.1060102			SPCC (0.1)	
1,2-Dichloroethane	0.4241722	5.41392	7.425375	5.101265E-02			15	
1,1-Dichloroethene	0.2824274	5.180328	4.1625	0.1340652			CCC (20)	
cis-1,2-Dichloroethene	0.3046738	5.704781	6.4055	0.1064277			15	
trans-1,2-Dichloroethene	0.2956055	6.6123	5.317875	0.1074606			15	
1,2-Dichloroethene (total)	0.3001396	6.085053	0	0			15	
1,2-Dichloropropane	0.3807138	6.621708	8.40825	5.953822E-02			CCC (20)	
1,3-Dichloropropane	0.9727534	6.343578	10.00063	0.0533223			15	
2,2-Dichloropropane	0.4688207	5.849857	6.51125	9.224985E-02			15	
1,1-Dichloropropene	0.4754718	5.358873	7.446	7.950658E-02			15	
cis-1,3-Dichloropropene	0.4719052	6.792321	9.160875	6.117193E-02			15	
trans-1,3-Dichloropropene	1.015515	6.198525	9.633875	5.826676E-02			15	
Diisopropyl Ether	1.5133	7.380431	6.061875	0.1011756			15	
Ethylbenzene	2.895258	5.897486	11.17975	3.671338E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.9839691	6.722181	6.529875	8.712045E-02			15	
Ethyl Methacrylate	0.8155481	7.213757	9.82475	4.760244E-02			15	
Hexachlorobutadiene	0.5887688	7.659652	15.7355	3.473829E-02			15	
2-Hexanone	0.5748298	6.459625	9.93775	3.890598E-02			15	
Iodomethane	0.1535448	61.7448	4.354333	0.1074762	0.9978479		0.995	
Isopropylbenzene	2.295381	7.249864	12.07638	2.932581E-02			15	
p-Isopropyltoluene	2.628843	6.388002	13.37675	2.975837E-02			15	
Methylene chloride	0.3566587	13.78325	4.645714	0.1288701			15	
Methyl Acetate	0.2407257	7.894457	4.505	8.122284E-02			15	
Methylcyclohexane	0.5039992	6.072322	8.737	6.868406E-02			15	
Naphthalene	0.8880096	11.54392	15.60375	2.575195E-02			15	
Methyl Methacrylate	0.4472358	6.870342	7.495625	7.619735E-02			15	
4-Methyl-2-pentanone	0.3241559	5.878011	9.082	6.590642E-02			15	
Methyl t-Butyl Ether	0.6968879	7.044732	5.308	0.1128254			15	
n-Propylbenzene	5.055189	7.195147	12.48637	1.909532E-02			15	
Styrene	1.54902	8.704959	11.65275	3.587031E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011002	Instrument:	MS-VOA5
Matrix:	Water	Calibration Dates:	1/4/12 8:30 1/4/12 13:02

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	1.15351	9.112998	11.99863	4.923332E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.528555	8.200037	11.07113	3.493807E-02			15	
tert-Butyl alcohol	2.698225E-02	6.896545	4.29675	0.1103482			15	
Tetrachloroethene	0.5513045	7.19663	10.37175	3.730793E-02			15	
Toluene	1.517991	6.006997	9.636375	5.411529E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.4886781	10.92382	15.89225	3.714975E-02			15	
1,2,4-Trichlorobenzene	0.5421529	10.54661	15.45575	2.811252E-02			15	
1,1,2-Trichloroethane	0.4780832	6.859787	9.790125	4.037827E-02			15	
1,1,1-Trichloroethane	0.4279584	5.019371	7.223375	9.500182E-02			15	
Tetrahydrofuran	9.817174E-02	11.26997	6.865	8.630139E-02			15	
Trichloroethene	0.3032198	5.512589	8.361375	4.754015E-02			15	
Trichlorofluoromethane	0.4705092	5.506171	3.386625	0.1682235			15	
1,2,3-Trichloropropane	0.1426049	9.509527	12.12575	0.0320027			15	
1,3,5-Trimethylbenzene	2.451147	6.089876	12.66637	2.857786E-02			15	
1,2,4-Trimethylbenzene	2.24476	7.233492	13.0355	4.145077E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3169682	7.151447	4.2415	0.1313748			15	
Vinyl chloride	0.3344171	16.22138	2.33075	0.1740113	0.9954596		CCC (20)	
m,p-Xylene	2.079734	6.245686	11.29275	4.074253E-02			15	
o-Xylene	2.14859	6.493598	11.68175	3.467126E-02			15	
Vinyl acetate	0.7578429	6.998167	5.761	0.1021091			15	
Xylenes (total)	2.102686	6.150079	4.380875	138.0131			15	
Dibromofluoromethane	0.2924183	2.05774	6.831375	7.083683E-02			15	
1,2-Dichloroethane-d4	5.038152E-02	2.475633	7.3305	0.0768399			15	
Toluene-d8	2.163799	2.159875	9.56125	0.0524394			15	
tert-Amyl alcohol	2.099832E-02	12.0768	7.029875	4.813513E-02			15	
tert-Amyl ethyl ether	0.7745596	7.387079	8.67675	0.0483778			15	

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2011004

Instrument: MS-VOA4

Matrix: Water

Calibration Dates: 1/6/12 8:49 1/6/12 12:34

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	1	9.381877E-02	2	0.102278	4	8.767798E-02	10	7.415318E-02	20	7.114093E-02	100	6.120788E-02
Acrolein	2.502	5.229756E-02	5.005	4.028654E-02	10.01	4.190665E-02	25.02	4.123089E-02	50.05	0.0230089	250.2	2.281535E-02
Acrylonitrile	2.498	7.961083E-02	4.997	7.836325E-02	9.994	8.376711E-02	24.98	8.360881E-02	49.97	7.773431E-02	249.8	7.718366E-02
Benzene	0.5	0.8659493	1	0.877736	2	0.877177	5	0.8557211	10	0.8068226	50	0.7915002
Bromobenzene	0.5	0.6704029	1	0.6307899	2	0.6861217	5	0.6504002	10	0.6463347	50	0.6342971
Bromochloromethane	0.5	0.1379813	1	0.120716	2	0.1396707	5	0.1406665	10	0.1357205	50	0.1289797
Tert-Amyl Methyl Ether	0.5	0.6474739	1	0.6270465	2	0.6588948	5	0.6481996	10	0.6277878	50	0.5928271
Bromodichloromethane	0.5	0.2942953	1	0.2980532	2	0.3222217	5	0.302965	10	0.2895951	50	0.2852179
Bromoform	0.5	0.4132312	1	0.4194731	2	0.4288657	5	0.4204919	10	0.4170685	50	0.4648139
Bromomethane	0.5	~~0.27833~~	1	0.2107993	2	0.2166476	5	0.1955186	10	0.1750855	50	0.16324
Bromofluorobenzene	30	0.9298439	35	0.9002505	40	0.910851	50	0.8220762	60	0.8685338	70	0.8358502
n-Butylbenzene	0.5	1.348218	1	1.275935	2	1.346341	5	1.279428	10	1.228666	50	1.229195
2-Butanone	1	0.139165	2	0.1359554	4	0.1343393	10	0.1260152	20	0.112409	100	0.1063829
sec-Butylbenzene	0.5	1.743622	1	1.644123	2	1.842209	5	1.70771	10	1.638106	50	1.664286
tert-Butylbenzene	0.5	1.402824	1	1.336683	2	1.462715	5	1.396918	10	1.368962	50	1.348517
Carbon disulfide	0.5	0.7314889	1	0.6938786	2	0.7631246	5	0.7269538	10	0.7239692	50	0.7084408
Carbon tetrachloride	0.5	0.2362618	1	0.2334663	2	0.255266	5	0.2408453	10	0.2322999	50	0.2349772
Chlorobenzene	0.5	1.509865	1	1.446717	2	1.614753	5	1.449472	10	1.42403	50	1.442146
Chloroethane	0.5	0.1705189	1	0.1638047	2	0.1746838	5	0.1529196	10	0.1593694	50	0.1548301
Chloroform	0.5	0.4965019	1	0.4377146	2	0.4488159	5	0.397298	10	0.3876951	50	0.3625836
2-Chloroethyl vinyl ether	0.9975	0.1458429	1.995	0.1472264	3.99	0.1592328	9.975	0.148259	19.95	0.1481127	99.75	0.1402443
Chloromethane	0.5	0.3545141	1	0.3025127	2	0.3083051	5	0.2658091	10	0.2645749	50	0.2471158
1-Chlorohexane	0.5	0.8964132	1	0.7316316	2	0.7155059	5	0.6523462	10	0.5952247	50	0.6070666
2-Chlorotoluene	0.5	1.537903	1	1.488294	2	1.552511	5	1.447063	10	1.425774	50	1.382797
4-Chlorotoluene	0.5	1.731067	1	1.690295	2	1.808498	5	1.683845	10	1.632089	50	1.618613
Cyclohexane	0.5	0.3281077	1	0.3000215	2	0.3185096	5	0.3126979	10	0.2819641	50	0.2830945
Dibromochloromethane	0.5	0.6417163	1	0.6059409	2	0.6598401	5	0.6371383	10	0.6240749	50	0.6499053
1,2-Dibromo-3-chloropropane	0.5	0.1188937	1	0.1114334	2	0.1241829	5	0.1237643	10	0.127064	50	0.1328724
1,2-Dibromoethane (EDB)	0.5	0.588661	1	0.5585284	2	0.6300814	5	0.5861066	10	0.5859926	50	0.5805325
Dibromomethane	0.5	0.1751324	1	0.1563311	2	0.1750657	5	0.173679	10	0.1626532	50	0.1568931
1,2-Dichlorobenzene	0.5	1.027538	1	1.010226	2	1.113704	5	1.045242	10	1.025395	50	1.026858

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011004
Instrument: MS-VOA4
Matrix: Water
Calibration Dates: 1/6/12 8:49 1/6/12 12:34

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	0.5	1.153238	1	1.071788	2	1.146514	5	1.112392	10	1.065198	50	1.022892
1,4-Dichlorobenzene	0.5	1.095153	1	1.063723	2	1.172117	5	1.072213	10	1.065337	50	1.063538
Dichlorodifluoromethane	0.5	0.2258814	1	0.2296526	2	0.2117745	5	0.2070516	10	0.219852	50	0.2224737
1,1-Dichloroethane	0.5	0.4014994	1	0.4243052	2	0.4371296	5	0.4125289	10	0.4098296	50	0.4017474
1,2-Dichloroethane	0.5	0.3010335	1	0.2829521	2	0.3110854	5	0.2960147	10	0.2805772	50	0.2730936
1,1-Dichloroethene	0.5	0.2457317	1	0.2166122	2	0.2366901	5	0.216693	10	0.2083183	50	0.2086674
cis-1,2-Dichloroethene	0.5	0.2356548	1	0.248475	2	0.263729	5	0.2497117	10	0.2385969	50	0.227138
trans-1,2-Dichloroethene	0.5	0.2468851	1	0.239925	2	0.2459627	5	0.2305449	10	0.2291592	50	0.2229139
1,2-Dichloroethene (total)	1	0.2412699	2	0.2442	4	0.2548459	10	0.2401283	20	0.233878	100	0.2250259
1,2-Dichloropropane	0.5	0.2513772	1	0.2475831	2	0.2534634	5	0.2442136	10	0.2388799	50	0.2252443
1,3-Dichloropropane	0.5	0.7944081	1	0.8323434	2	0.9197218	5	0.8716809	10	0.8548685	50	0.8580708
2,2-Dichloropropane	0.5	0.2899246	1	0.3105092	2	0.3055248	5	0.2849393	10	0.2780739	50	0.2637238
1,1-Dichloropropene	0.5	0.2992731	1	0.2900874	2	0.3271407	5	0.301049	10	0.2880838	50	0.2825747
cis-1,3-Dichloropropene	0.5	0.3358172	1	0.3565504	2	0.3857251	5	0.3614479	10	0.3470396	50	0.336022
trans-1,3-Dichloropropene	0.5	0.9401523	1	0.8511174	2	0.9438045	5	0.8871702	10	0.8772335	50	0.8576712
Diisopropyl Ether	0.5	0.9352739	1	0.8562685	2	0.9298647	5	0.8701526	10	0.8680981	50	0.8337026
Ethylbenzene	0.5	2.267008	1	2.478176	2	2.528961	5	2.272122	10	2.24054	50	2.273311
Ethyl tert-Butyl Ether	0.5	0.6726056	1	0.7062424	2	0.7194498	5	0.6965895	10	0.6807109	50	0.6392152
Ethyl Methacrylate	0.5	0.7053511	1	0.6972656	2	0.7845103	5	0.7215242	10	0.6991505	50	0.7224117
Hexachlorobutadiene	0.5	0.2801413	1	0.2598633	2	0.2761079	5	0.2504403	10	0.2497174	50	0.2493844
2-Hexanone	1	0.4044676	2	0.4146602	4	0.432251	10	0.405198	20	0.3931269	100	0.3925799
Iodomethane	0.5	0.1795638	1	0.210092	2	0.237683	5	0.2668282	10	0.2956776	50	0.3488043
Isopropylbenzene	0.5	1.825986	1	1.841927	2	2.001292	5	1.830686	10	1.801343	50	1.792526
p-Isopropyltoluene	0.5	1.487683	1	1.413191	2	1.532052	5	1.456519	10	1.387423	50	1.37815
Methylene chloride	0.5	0.3181522	1	0.29304	2	0.2688618	5	0.2527078	10	0.2421513	50	0.2367567
Methyl Acetate	0.5	0.2270954	1	0.1895164	2	0.2359874	5	0.1841076	10	0.1812675	50	0.1659459
Methylcyclohexane	0.5	0.2502846	1	0.222548	2	0.235468	5	0.2274633	10	0.2074632	50	0.2146291
Naphthalene	0.5	1.28393	1	1.213484	2	1.30407	5	1.301191	10	1.23965	50	1.276068
Methyl Methacrylate	0.5	0.2020245	1	0.1965595	2	0.2208333	5	0.2072225	10	0.1968935	50	0.1905085
4-Methyl-2-pentanone	1	0.2377491	2	0.2298679	4	0.2386454	10	0.2254618	20	0.2208875	100	0.20822
Methyl t-Butyl Ether	0.5	0.5774817	1	0.5665194	2	0.5785876	5	0.5801729	10	0.5536569	50	0.5311237

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011004
Instrument: MS-VOA4
Matrix: Water
Calibration Dates: 1/6/12 8:49 1/6/12 12:34

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	0.5	2.311014	1	2.119158	2	2.309471	5	2.221438	10	2.12356	50	2.17659
Styrene	0.5	1.567815	1	1.517915	2	1.668433	5	1.565587	10	1.509273	50	1.603069
1,1,2,2-Tetrachloroethane	0.5	0.6542176	1	0.5887619	2	0.6496326	5	0.6389634	10	0.6186124	50	0.6115664
1,1,1,2-Tetrachloroethane	0.5	0.480024	1	0.4893985	2	0.5552793	5	0.5271817	10	0.5046919	50	0.5314135
tert-Butyl alcohol	2.5	1.505471E-02	5	1.619593E-02	10	1.866451E-02	25	1.825271E-02	50	0.0169003	250	1.516307E-02
Tetrachloroethene	0.5	0.6196099	1	0.5681541	2	0.6580967	5	0.5845123	10	0.5757528	50	0.5936625
Toluene	0.5	1.358752	1	1.373291	2	1.386617	5	1.312367	10	1.278747	50	1.267786
1,2,3-Trichlorobenzene	0.5	0.5778292	1	0.5115133	2	0.5502262	5	0.5281669	10	0.5108822	50	0.5300002
1,2,4-Trichlorobenzene	0.5	0.6652599	1	0.5647882	2	0.6373945	5	0.589974	10	0.5565634	50	0.5797486
1,1,2-Trichloroethane	0.5	0.4077046	1	0.4490661	2	0.4533132	5	0.4591447	10	0.4536798	50	0.4502663
1,1,1-Trichloroethane	0.5	0.2970877	1	0.2883651	2	0.307358	5	0.302428	10	0.2780521	50	0.2738227
Tetrahydrofuran	0.5		1	8.694627E-02	2	9.011454E-02	5	6.741642E-02	10	0.0634119	50	6.212034E-02
Trichloroethene	0.5	0.2530163	1	0.2316824	2	0.2466043	5	0.2328515	10	0.2243174	50	0.2144664
Trichlorofluoromethane	0.5	0.3106855	1	0.2965461	2	0.3382465	5	0.3158527	10	0.297503	50	0.2981497
1,2,3-Trichloropropane	0.5	0.1375332	1	0.1484424	2	0.1715382	5	0.1603318	10	0.1611793	50	0.1617741
1,3,5-Trimethylbenzene	0.5	1.557567	1	1.530026	2	1.597672	5	1.540824	10	1.514749	50	1.488827
1,2,4-Trimethylbenzene	0.5	1.614291	1	1.514562	2	1.627028	5	1.672709	10	1.556236	50	1.496979
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.2113123	1	0.1982203	2	0.2267605	5	0.2190789	10	0.204055	50	0.2082972
Vinyl chloride	0.5	0.2207822	1	0.2008037	2	0.2226512	5	0.1782495	10	0.191464	50	0.1720476
m,p-Xylene	1	1.90778	2	1.800361	4	1.96529	10	1.802451	20	1.747328	100	1.67976
o-Xylene	0.5	1.991468	1	1.915273	2	2.004049	5	1.884844	10	1.755247	50	1.808514
Vinyl acetate	0.996	0.4697588	1.992	0.5129341	3.984	0.5572453	9.96	0.5395889	19.92	0.5142655	99.62	0.4952973
Xylenes (total)	1.5	1.935676	3	1.838665	6	1.978209	15	1.829915	30	1.749967	150	1.722678
Dibromofluoromethane	30	0.300478	35	0.2962983	40	0.2901867	50	0.2786321	60	0.2805554	70	0.2654734
1,2-Dichloroethane-d4	30	6.007517E-02	35	6.069411E-02	40	5.627614E-02	50	0.0568408	60	5.688372E-02	70	5.376075E-02
Toluene-d8	30	2.35476	35	2.234245	40	2.280675	50	2.112041	60	2.169492	70	2.088149
tert-Amyl alcohol	2.5	0.0130029	5	1.288047E-02	10	0.0134492	25	1.308298E-02	50	1.229865E-02	250	1.206255E-02
tert-Amyl ethyl ether	0.5	0.5468259	1	0.5815281	2	0.60167	5	0.5791722	10	0.5562442	50	0.5435141

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011004
Instrument: MS-VOA4
Matrix: Water
Calibration Dates: 1/6/12 8:49 1/6/12 12:34

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	200	6.840238E-02	300	6.327703E-02	400	6.539198E-02						
Acrolein	500.5	2.525839E-02	750.8	2.379317E-02	1001	2.420215E-02						
Acrylonitrile	499.7	8.421197E-02	749.6	8.061115E-02	999.4	8.265219E-02						
Benzene	100	0.8238047	150	0.7807284	200	0.759281						
Bromobenzene	100	0.6623068	150	0.6610546	200	0.6507036						
Bromochloromethane	100	0.1412531	150	0.1336871	200	0.1312866						
Tert-Amyl Methyl Ether	100	0.6363808	150	0.5800117	200	0.5843138						
Bromodichloromethane	100	0.2963187	150	0.2845465	200	0.2799448						
Bromoform	100	0.5213094	150	0.5115891	200	0.5171277						
Bromomethane	100	0.1812619	150	0.1805642	200	0.1830554						
Bromofluorobenzene	30	1.020289	30	0.9718459	30	0.9911713						
n-Butylbenzene	100	1.261692	150	1.218387	200	1.170125						
2-Butanone	200	0.1212751	300	0.117579	400	0.1171103						
sec-Butylbenzene	100	1.645047	150	1.662902	200	1.547214						
tert-Butylbenzene	100	1.367332	150	1.345331	200	1.309463						
Carbon disulfide	100	0.7514947	150	0.724944	200	0.7284933						
Carbon tetrachloride	100	0.2530443	150	0.243776	200	0.2424461						
Chlorobenzene	100	1.48609	150	1.39112	200	1.394199						
Chloroethane	100	0.1651746	150	0.1557637	200	0.1595611						
Chloroform	100	0.3836072	150	0.3587965	200	0.3509863						
2-Chloroethyl vinyl ether	199.5	0.1552751	299.2	0.1454333	399	0.1452536						
Chloromethane	100	0.2739588	150	0.2684152	200	0.2622653						
1-Chlorohexane	100	0.6350822	150	0.6270059	200	0.6322465						
2-Chlorotoluene	100	1.349691	150	1.384648	200	1.304885						
4-Chlorotoluene	100	1.611909	150	1.600739	200	1.51511						
Cyclohexane	100	0.3006848	150	0.2858816	200	0.2862235						
Dibromochloromethane	100	0.6945121	150	0.6735623	200	0.6940503						
1,2-Dibromo-3-chloropropane	100	0.1468029	150	0.1517534	200	0.1560608						
1,2-Dibromoethane (EDB)	100	0.6299025	150	0.5943547	200	0.6186179						
Dibromomethane	100	0.1674192	150	0.1592365	200	0.1575043						
1,2-Dichlorobenzene	100	1.06236	150	1.024679	200	1.001634						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011004	Instrument:	MS-VOA4
Matrix:	Water	Calibration Dates:	1/6/12 8:49 1/6/12 12:34

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	100	1.054281	150	1.055899	200	1.007597						
1,4-Dichlorobenzene	100	1.070809	150	1.068599	200	1.030568						
Dichlorodifluoromethane	100	0.238552	150	0.2289638	200	0.2275247						
1,1-Dichloroethane	100	0.4246041	150	0.4046457	200	0.390202						
1,2-Dichloroethane	100	0.284239	150	0.2616644	200	0.2569983						
1,1-Dichloroethene	100	0.2141902	150	0.2057988	200	0.2145801						
cis-1,2-Dichloroethene	100	0.2457092	150	0.2343075	200	0.2368486						
trans-1,2-Dichloroethene	100	0.2300958	150	0.2204311	200	0.2225448						
1,2-Dichloroethene (total)	200	0.2379025	300	0.2273693	400	0.2296967						
1,2-Dichloropropane	100	0.2443097	150	0.2296434	200	0.2286445						
1,3-Dichloropropane	100	0.8924075	150	0.8422525	200	0.8547604						
2,2-Dichloropropane	100	0.2664378	150	0.2522102	200	0.2519803						
1,1-Dichloropropene	100	0.298074	150	0.2820662	200	0.2807297						
cis-1,3-Dichloropropene	100	0.3624957	150	0.3372328	200	0.3396853						
trans-1,3-Dichloropropene	100	0.8870757	150	0.8029358	200	0.7913708						
Diisopropyl Ether	100	0.8524936	150	0.81107	200	0.7806082						
Ethylbenzene	100	2.354578	150	2.120514	200	2.064044						
Ethyl tert-Butyl Ether	100	0.6685004	150	0.6223114	200	0.6199278						
Ethyl Methacrylate	100	0.7710764	150	0.7462247	200	0.7449815						
Hexachlorobutadiene	100	0.2627541	150	0.276623	200	0.2717933						
2-Hexanone	200	0.4342725	300	0.3983831	400	0.4138226						
Iodomethane	100	0.3924044	150	0.3808489	200	0.3798566						
Isopropylbenzene	100	1.874681	150	1.733129	200	1.698429						
p-Isopropyltoluene	100	1.391224	150	1.362157	200	1.324643						
Methylene chloride	100	0.2578361	150	0.2451741	200	0.2468627						
Methyl Acetate	100	0.1832243	150	0.1748652	200	0.1796074						
Methylcyclohexane	100	0.2301063	150	0.2346923	200	0.229254						
Naphthalene	100	1.331745	150	1.384501	200	1.336922						
Methyl Methacrylate	100	0.1965885	150	0.1908664	200	0.186286						
4-Methyl-2-pentanone	200	0.2240031	300	0.2113823	400	0.2131554						
Methyl t-Butyl Ether	100	0.5680552	150	0.5368452	200	0.5373366						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 2011004
Instrument: MS-VOA4
Matrix: Water
Calibration Dates: 1/6/12 8:49 1/6/12 12:34

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	100	2.068663	150	2.057718	200	1.954379						
Styrene	100	1.635283	150	1.538518	200	1.494041						
1,1,2,2-Tetrachloroethane	100	0.6357117	150	0.6719298	200	0.65479						
1,1,1,2-Tetrachloroethane	100	0.556232	150	0.5359604	200	0.5455617						
tert-Butyl alcohol	500	1.824846E-02	750	1.799841E-02	1000	1.760797E-02						
Tetrachloroethene	100	0.6148619	150	0.5889952	200	0.6057697						
Toluene	100	1.306264	150	1.192749	200	1.180517						
1,2,3-Trichlorobenzene	100	0.5417719	150	0.5641881	200	0.5593847						
1,2,4-Trichlorobenzene	100	0.5964962	150	0.6070519	200	0.5946947						
1,1,2-Trichloroethane	100	0.4791617	150	0.4547186	200	0.4617507						
1,1,1-Trichloroethane	100	0.2930975	150	0.2721367	200	0.2793273						
Tetrahydrofuran	100	6.976513E-02	150	~~5.886121E-02~~	200	~~6.404349E-02~~						
Trichloroethene	100	0.2288882	150	0.2216504	200	0.2174214						
Trichlorofluoromethane	100	0.3186577	150	0.3129281	200	0.3143692						
1,2,3-Trichloropropane	100	0.1742049	150	0.1702515	200	0.1749536						
1,3,5-Trimethylbenzene	100	1.433318	150	1.443886	200	1.365028						
1,2,4-Trimethylbenzene	100	1.557772	150	1.471524	200	1.401438						
1,1,2-Trichloro-1,2,2-trifluoroethan	100	0.2184536	150	0.2184004	200	0.2178584						
Vinyl chloride	100	0.1938319	150	0.1690258	200	0.1585416						
m,p-Xylene	200	1.626	300	1.471002	400	1.373884						
o-Xylene	100	1.855637	150	1.701865	200	1.628721						
Vinyl acetate	199.2	0.5296794	298.9	0.4921099	398.5	0.4817225						
Xylenes (total)	300	1.702546	450	1.547956	600	1.45883						
Dibromofluoromethane	30	0.3005112	30	0.2962413	30	0.2987464						
1,2-Dichloroethane-d4	30	6.205962E-02	30	6.004951E-02	30	5.929523E-02						
Toluene-d8	30	2.470441	30	2.468475	30	2.497404						
tert-Amyl alcohol	500	0.0138149	750	1.407104E-02	1000	1.465782E-02						
tert-Amyl ethyl ether	100	0.557275	150	0.5317157	200	0.5053606						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011004	Instrument:	MS-VOA4
Matrix:	Water	Calibration Dates:	1/6/12 8:49 1/6/12 12:34

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	7.637201E-02	19.20558	3.837111	0.1034709	0.9987951		0.995	
Acrolein	3.275551E-02	34.09303	3.721778	6.767667E-02	0.9990098		0.995	
Acrylonitrile	8.086036E-02	3.431582	4.664444	0.1251943			15	
Benzene	0.8265245	5.383026	7.689778	6.859723E-02			15	
Bromobenzene	0.6547124	2.659029	12.41278	3.534174E-02			15	
Bromochloromethane	0.1344402	4.957755	6.791889	7.837531E-02			15	
Tert-Amyl Methyl Ether	0.6225484	4.749438	7.874889	5.295584E-02			15	
Bromodichloromethane	0.2947954	4.284919	8.666444	0.0581257			15	
Bromoform	0.4571078	10.3293	11.82089	3.193005E-02			SPCC (0.1)	
Bromomethane	0.1882716	9.630826	2.88925	0.1718568			15	
Bromofluorobenzene	0.9167457	7.478808	12.25267	2.225876E-02			15	
n-Butylbenzene	1.261999	4.652187	13.84222	0.024947			15	
2-Butanone	0.123359	9.157966	6.250667	8.203309E-02			15	
sec-Butylbenzene	1.677247	4.875423	13.30178	4.197691E-02			15	
tert-Butylbenzene	1.370972	3.286644	13.06922	3.339714E-02			15	
Carbon disulfide	0.7280875	2.819596	4.836667	9.196641E-02			15	
Carbon tetrachloride	0.2413759	3.429831	7.657889	5.488948E-02			15	
Chlorobenzene	1.462044	4.717212	11.09844	2.186609E-02			SPCC (0.3)	
Chloroethane	0.1618473	4.541407	3.022667	0.1237572			15	
Chloroform	0.4026666	12.09692	6.764667	7.409076E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.14832	3.827301	9.021555	5.742235E-02			15	
Chloromethane	0.2830523	11.70564	2.299222	0.1137219			SPCC (0.1)	
1-Chlorohexane	0.676947	13.92183	11.06256	3.535821E-02			15	
2-Chlorotoluene	1.430396	5.887971	12.63411	4.045303E-02			15	
4-Chlorotoluene	1.654685	5.129992	12.69667	6.255846E-03			15	
Cyclohexane	0.2996872	5.650079	7.591	0.0689517			15	
Dibromochloromethane	0.6534156	4.628133	10.33144	4.404036E-02			15	
1,2-Dibromo-3-chloropropane	0.1325364	11.73279	14.44489	3.043544E-02			15	
1,2-Dibromoethane (EDB)	0.5969753	4.065334	10.54511	3.752935E-02			15	
Dibromomethane	0.1648794	4.893615	8.603778	3.239242E-02			15	
1,2-Dichlorobenzene	1.037515	3.239724	13.80256	2.667667E-02			15	
1,3-Dichlorobenzene	1.076644	4.732395	13.39278	3.781641E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011004	Instrument:	MS-VOA4
Matrix:	Water	Calibration Dates:	1/6/12 8:49 1/6/12 12:34

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.078006	3.614925	13.48367	2.878757E-02			15	
Dichlorodifluoromethane	0.2235251	4.298462	2.085556	0.1852325			15	
1,1-Dichloroethane	0.4118324	3.530376	5.814444	6.205191E-02			SPCC (0.1)	
1,2-Dichloroethane	0.2830731	6.27005	7.518667	3.590633E-02			15	
1,1-Dichloroethene	0.2185869	6.211544	4.311667	9.971813E-02			CCC (20)	
cis-1,2-Dichloroethene	0.2422412	4.487146	6.515889	8.044807E-02			15	
trans-1,2-Dichloroethene	0.2320514	4.30646	5.446222	4.689926E-02			15	
1,2-Dichloroethene (total)	0.2371463	3.939299	0	0			15	
1,2-Dichloropropane	0.2403732	4.309562	8.490889	6.093833E-02			CCC (20)	
1,3-Dichloropropane	0.8578349	4.152439	10.07367	2.435231E-02			15	
2,2-Dichloropropane	0.2781471	7.71535	6.620111	3.572975E-02			15	
1,1-Dichloropropene	0.2943421	4.938977	7.539556	5.858253E-02			15	
cis-1,3-Dichloropropene	0.3513351	4.789296	9.236444	4.893457E-02			15	
trans-1,3-Dichloropropene	0.8709479	6.046711	9.707556	2.782621E-02			15	
Diisopropyl Ether	0.8597258	5.84109	6.176222	4.435771E-02			15	
Ethylbenzene	2.288806	6.55409	11.24211	4.629047E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6695059	5.363739	6.633	0.0876457			15	
Ethyl Methacrylate	0.7324996	4.27656	9.894111	4.157879E-02			15	
Hexachlorobutadiene	0.2640917	4.728033	15.80644	2.896382E-02			15	
2-Hexanone	0.4098624	3.757277	10.00678	3.691595E-02			15	
Iodomethane	0.2990843	26.80501	4.501333	9.463535E-02	0.9994085		0.995	
Isopropylbenzene	1.822222	4.747523	12.14089	4.125689E-02			15	
p-Isopropyltoluene	1.414782	4.631644	13.43978	2.791071E-02			15	
Methylene chloride	0.2623936	10.2699	4.786333	6.510921E-02			15	
Methyl Acetate	0.1912908	12.46535	4.648111	0.0868378			15	
Methylcyclohexane	0.2279899	5.446885	8.819667	3.024068E-02			15	
Naphthalene	1.29684	3.987961	15.67789	2.710664E-02			15	
Methyl Methacrylate	0.1986425	5.245019	8.621333	4.629479E-02			15	
4-Methyl-2-pentanone	0.2232636	4.933831	9.159667	0.0581008			15	
Methyl t-Butyl Ether	0.5588643	3.509635	5.434	8.690575E-02			15	
n-Propylbenzene	2.14911	5.51075	12.54978	2.655913E-02			15	
Styrene	1.566659	3.784981	11.71578	0.0482124			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2011004	Instrument:	MS-VOA4
Matrix:	Water	Calibration Dates:	1/6/12 8:49 1/6/12 12:34

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.6360206	4.047422	12.06644	1.410712E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.5250825	5.294848	11.13933	2.459598E-02			15	
tert-Butyl alcohol	1.712067E-02	7.984318	4.447444	0.1092876			15	
Tetrachloroethene	0.6010461	4.559189	10.44078	3.440352E-02			15	
Toluene	1.295232	5.698501	9.710889	6.108741E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.5415514	4.319346	15.964	2.815398E-02			15	
1,2,4-Trichlorobenzene	0.5991079	5.714696	15.52678	2.213845E-02			15	
1,1,2-Trichloroethane	0.4520895	4.189176	9.861	5.427956E-02			15	
1,1,1-Trichloroethane	0.2879639	4.458	7.321445	4.167841E-02			15	
Tetrahydrofuran	7.329577E-02	16.58463	6.966667	3.991461E-02	0.9968956		0.995	
Trichloroethene	0.2300998	5.580514	8.445111	2.155812E-02			15	
Trichlorofluoromethane	0.3114376	4.238866	3.525667	0.1064837			15	
1,2,3-Trichloropropane	0.1622454	7.738864	12.19133	3.745857E-02			15	
1,3,5-Trimethylbenzene	1.496877	4.811007	12.72844	0.0331799			15	
1,2,4-Trimethylbenzene	1.545838	5.477834	13.10122	2.253856E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2136041	4.151001	4.389333	9.363296E-02			15	
Vinyl chloride	0.1897108	11.84015	2.449444	0.1128293			CCC (20)	
m,p-Xylene	1.708206	11.34454	11.35733	4.035927E-02			15	
o-Xylene	1.838402	6.924633	11.74522	4.483148E-02			15	
Vinyl acetate	0.5102891	5.575662	5.883444	0.1006304			15	
Xylenes (total)	1.751605	9.667105	6.526222	94.86835			15	
Dibromofluoromethane	0.2896803	4.218212	6.935556	3.502668E-02			15	
1,2-Dichloroethane-d4	5.843723E-02	4.516811	7.428889	3.256323E-02			15	
Toluene-d8	2.297298	6.904486	9.635333	5.103081E-02			15	
tert-Amyl alcohol	1.325783E-02	6.285237	7.130778	6.734641E-02			15	
tert-Amyl ethyl ether	0.5559229	5.194072	8.755111	6.121651E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	SEQICV2.D	Calibration Date:	01/04/12 08:30
Sequence:	2A00602	Injection Date:	01/04/12
Lab Sample ID:	2A00602-ICV2	Injection Time:	14:50

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Bromodichloromethane	A	100.0	91.61	0.4160775	0.3811514		-8.4	20
Bromoform	A	100.0	104.7	0.3282369	0.3436481	0.1	4.7	20
Bromomethane	A	100.0	97.09	0.2709056	0.2630133		-2.9	20
Carbon tetrachloride	A	100.0	96.44	0.3588628	0.3460707		-3.6	20
Chlorobenzene	A	100.0	97.61	1.528965	1.492439	0.3	-2.4	20
Chloroethane	A	100.0	102.3	0.2468145	0.252505		2.3	20
Chloroform	A	100.0	90.47	0.5864764	0.5305595		-9.5	20
2-Chloroethyl vinyl ether	A	199.5	189.0	3.420637E-02	3.232748E-02		-5.5	20
Chloromethane	A	100.0	95.51	0.5988201	0.57195	0.1	-4.5	20
Dibromochloromethane	A	100.0	101.9	0.5927647	0.6039082		1.9	20
1,2-Dibromoethane (EDB)	A	100.0	103.0	0.5060833	0.5211783		3.0	20
1,2-Dichlorobenzene	A	100.0	94.17	1.451411	1.366862		-5.8	20
1,3-Dichlorobenzene	A	100.0	90.74	1.593787	1.446253		-9.3	20
1,4-Dichlorobenzene	A	100.0	92.47	1.506145	1.392789		-7.5	20
Dichlorodifluoromethane	A	100.0	104.0	0.4142712	0.4309229		4.0	20
1,1-Dichloroethane	A	100.0	92.77	0.6886139	0.6388437	0.1	-7.2	20
1,2-Dichloroethane	A	100.0	93.51	0.4241722	0.3966418		-6.5	20
1,1-Dichloroethene	A	100.0	91.21	0.2824274	0.2576148		-8.8	20
cis-1,2-Dichloroethene	A	100.0	94.46	0.3046738	0.2877807		-5.5	20
trans-1,2-Dichloroethene	A	100.0	94.48	0.2956055	0.2792992		-5.5	20
1,2-Dichloropropane	A	100.0	92.92	0.3807138	0.3537444		-7.1	20
cis-1,3-Dichloropropene	A	100.0	99.03	0.4719052	0.4673398		-1.0	20
trans-1,3-Dichloropropene	A	100.0	88.85	1.015515	0.9023058		-11.1	20
Methylene chloride	A	100.0	87.46	0.3566587	0.3119421		-12.5	20
1,1,2,2-Tetrachloroethane	A	100.0	90.82	1.15351	1.047571	0.3	-9.2	20
Tetrachloroethene	A	100.0	103.0	0.5513045	0.5679776		3.0	20
1,1,2-Trichloroethane	A	100.0	97.73	0.4780832	0.4672156		-2.3	20
1,1,1-Trichloroethane	A	100.0	96.84	0.4279584	0.4144368		-3.2	20
Trichloroethene	A	100.0	96.12	0.3032198	0.2914649		-3.9	20

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	SEQICV2.D	Calibration Date:	01/04/12 08:30
Sequence:	2A00602	Injection Date:	01/04/12
Lab Sample ID:	2A00602-ICV2	Injection Time:	14:50

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Trichlorofluoromethane	A	100.0	99.91	0.4705092	0.4701063		-0.09	20
Vinyl chloride	L	100.0	110.4	0.3344171	0.4033579		10.4	20
Bromofluorobenzene	A	30.00	30.63	0.7989988	0.8156663		2.1	20
Dibromofluoromethane	A	30.00	29.17	0.2924183	0.2843679		-2.8	20
1,2-Dichloroethane-d4	A	30.00	29.35	5.038152E-02	0.0492886		-2.2	20
Toluene-d8	A	30.00	31.09	2.163799	2.242485		3.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA4	Calibration:	2011004
Lab File ID:	SEQICV2.D	Calibration Date:	01/06/12 08:49
Sequence:	2A00902	Injection Date:	01/06/12
Lab Sample ID:	2A00902-ICV2	Injection Time:	13:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Bromodichloromethane	A	100.0	88.79	0.2947954	0.2617489		-11.2	20
Bromoform	A	100.0	103.1	0.4571078	0.4713188	0.1	3.1	20
Bromomethane	A	100.0	96.31	0.1882716	0.1813164		-3.7	20
Carbon tetrachloride	A	100.0	98.72	0.2413759	0.238284		-1.3	20
Chlorobenzene	A	100.0	90.86	1.462044	1.328377	0.3	-9.1	20
Chloroethane	A	100.0	102.2	0.1618473	0.1653759		2.2	20
Chloroform	A	100.0	85.45	0.4026666	0.3440878		-14.5	20
2-Chloroethyl vinyl ether	A	199.5	181.4	0.14832	0.1345425		-9.3	20
Chloromethane	A	100.0	89.82	0.2830523	0.2542389	0.1	-10.2	20
Dibromochloromethane	A	100.0	94.38	0.6534156	0.6166799		-5.6	20
1,2-Dibromoethane (EDB)	A	100.0	95.04	0.5969753	0.5673534		-5.0	20
1,2-Dichlorobenzene	A	100.0	92.37	1.037515	0.958391		-7.6	20
1,3-Dichlorobenzene	A	100.0	90.94	1.076644	0.9791329		-9.1	20
1,4-Dichlorobenzene	A	100.0	95.27	1.078006	1.026981		-4.7	20
Dichlorodifluoromethane	A	100.0	103.9	0.2235251	0.2321607		3.9	20
1,1-Dichloroethane	A	100.0	94.13	0.4118324	0.3876571	0.1	-5.9	20
1,2-Dichloroethane	A	100.0	90.93	0.2830731	0.2573927		-9.1	20
1,1-Dichloroethene	A	100.0	87.80	0.2185869	0.1919198		-12.2	20
cis-1,2-Dichloroethene	A	100.0	93.96	0.2422412	0.2276055		-6.0	20
trans-1,2-Dichloroethene	A	100.0	92.78	0.2320514	0.2152866		-7.2	20
1,2-Dichloropropane	A	100.0	91.30	0.2403732	0.2194586		-8.7	20
cis-1,3-Dichloropropene	A	100.0	98.43	0.3513351	0.3458146		-1.6	20
trans-1,3-Dichloropropene	A	100.0	83.60	0.8709479	0.7280993		-16.4	20
Methylene chloride	A	100.0	88.97	0.2623936	0.2334517		-11.0	20
1,1,2,2-Tetrachloroethane	A	100.0	95.99	0.6360206	0.6105293	0.3	-4.0	20
Tetrachloroethene	A	100.0	94.38	0.6010461	0.5672643		-5.6	20
1,1,2-Trichloroethane	A	100.0	95.67	0.4520895	0.432498		-4.3	20
1,1,1-Trichloroethane	A	100.0	95.11	0.2879639	0.2738928		-4.9	20
Trichloroethene	A	100.0	92.99	0.2300998	0.2139701		-7.0	20

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA4	Calibration:	2011004
Lab File ID:	SEQICV2.D	Calibration Date:	01/06/12 08:49
Sequence:	2A00902	Injection Date:	01/06/12
Lab Sample ID:	2A00902-ICV2	Injection Time:	13:59

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Trichlorofluoromethane	A	100.0	99.14	0.3114376	0.3087647		-0.9	20
Vinyl chloride	A	100.0	96.32	0.1897108	0.1827298		-3.7	20
Bromofluorobenzene	A	30.00	30.94	0.9167457	0.9455377		3.1	20
Dibromofluoromethane	A	30.00	30.68	0.2896803	0.2962878		2.3	20
1,2-Dichloroethane-d4	A	30.00	30.71	5.843723E-02	5.982259E-02		2.4	20
Toluene-d8	A	30.00	30.85	2.297298	2.362082		2.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0127CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2A03008	Injection Date:	01/27/12
Lab Sample ID:	2A03008-CCV1	Injection Time:	10:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Bromodichloromethane	A	100.0	102.4	0.4160775	0.4259519		2.4	20
Bromoform	A	100.0	113.4	0.3282369	0.3722977	0.1	13.4	20
Bromomethane	A	100.0	87.38	0.2709056	0.2367145		-12.6	20
Carbon tetrachloride	A	100.0	102.7	0.3588628	0.368459		2.7	20
Chlorobenzene	A	100.0	103.7	1.528965	1.585144	0.3	3.7	20
Chloroethane	A	100.0	91.32	0.2468145	0.2253942		-8.7	20
Chloroform	A	100.0	94.16	0.5864764	0.5521998		-5.8	20
2-Chloroethyl vinyl ether	A	199.5	92.69	3.420637E-02	0.0158525		-53.7	20 *
Chloromethane	A	100.0	86.75	0.5988201	0.5194688	0.1	-13.3	20
Dibromochloromethane	A	100.0	112.6	0.5927647	0.6675903		12.6	20
1,2-Dibromoethane (EDB)	A	100.0	112.9	0.5060833	0.5716094		12.9	20
1,2-Dichlorobenzene	A	100.0	97.14	1.451411	1.409889		-2.9	20
1,3-Dichlorobenzene	A	100.0	98.30	1.593787	1.566786		-1.7	20
1,4-Dichlorobenzene	A	100.0	100.4	1.506145	1.513007		0.5	20
Dichlorodifluoromethane	A	100.0	94.55	0.4142712	0.3916797		-5.5	20
1,1-Dichloroethane	A	100.0	97.78	0.6886139	0.6732947	0.1	-2.2	20
1,2-Dichloroethane	A	100.0	99.47	0.4241722	0.4219339		-0.5	20
1,1-Dichloroethene	A	100.0	101.5	0.2824274	0.2867321		1.5	20
cis-1,2-Dichloroethene	A	100.0	99.61	0.3046738	0.3034999		-0.4	20
trans-1,2-Dichloroethene	A	100.0	103.7	0.2956055	0.3065748		3.7	20
1,2-Dichloropropane	A	100.0	95.13	0.3807138	0.3621918		-4.9	20
cis-1,3-Dichloropropene	A	100.0	103.5	0.4719052	0.4884758		3.5	20
trans-1,3-Dichloropropene	A	100.0	107.3	1.015515	1.089801		7.3	20
Methylene chloride	A	100.0	92.62	0.3566587	0.3303486		-7.4	20
1,1,2,2-Tetrachloroethane	A	100.0	94.74	1.15351	1.092903	0.3	-5.3	20
Tetrachloroethene	A	100.0	110.3	0.5513045	0.6082844		10.3	20
1,1,2-Trichloroethane	A	100.0	103.7	0.4780832	0.4958743		3.7	20
1,1,1-Trichloroethane	A	100.0	102.3	0.4279584	0.4377383		2.3	20
Trichloroethene	A	100.0	101.4	0.3032198	0.3074315		1.4	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0127CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2A03008	Injection Date:	01/27/12
Lab Sample ID:	2A03008-CCV1	Injection Time:	10:46

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	107.1	0.4705092	0.5037679		7.1	20
Vinyl chloride	L	100.0	100.1	0.3344171	0.3646964		0.1	20
Bromofluorobenzene	A	30.00	32.12	0.7989988	0.855491		7.1	20
Dibromofluoromethane	A	30.00	29.84	0.2924183	0.2908574		-0.5	20
1,2-Dichloroethane-d4	A	30.00	30.57	5.038152E-02	5.134621E-02		1.9	20
Toluene-d8	A	30.00	31.16	2.163799	2.247641		3.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA4	Calibration:	2011004
Lab File ID:	0127CCV1.D	Calibration Date:	01/06/12 08:49
Sequence:	2A03011	Injection Date:	01/27/12
Lab Sample ID:	2A03011-CCV1	Injection Time:	09:23

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Bromodichloromethane	A	100.0	109.6	0.2947954	0.3231535		9.6	20
Bromoform	A	100.0	108.8	0.4571078	0.4973952	0.1	8.8	20
Bromomethane	A	100.0	88.99	0.1882716	0.1675445		-11.0	20
Carbon tetrachloride	A	100.0	109.8	0.2413759	0.2651321		9.8	20
Chlorobenzene	A	100.0	103.6	1.462044	1.51427	0.3	3.6	20
Chloroethane	A	100.0	111.1	0.1618473	0.1798332		11.1	20
Chloroform	A	100.0	100.2	0.4026666	0.4035771		0.2	20
2-Chloroethyl vinyl ether	A	199.5	187.0	0.14832	0.1386776		-6.5	20
Chloromethane	A	100.0	81.94	0.2830523	0.2319251	0.1	-18.1	20
Dibromochloromethane	A	100.0	106.3	0.6534156	0.694541		6.3	20
1,2-Dibromoethane (EDB)	A	100.0	102.0	0.5969753	0.6090762		2.0	20
1,2-Dichlorobenzene	A	100.0	101.9	1.037515	1.057424		1.9	20
1,3-Dichlorobenzene	A	100.0	101.1	1.076644	1.088514		1.1	20
1,4-Dichlorobenzene	A	100.0	104.0	1.078006	1.121351		4.0	20
Dichlorodifluoromethane	A	100.0	103.5	0.2235251	0.2313582		3.5	20
1,1-Dichloroethane	A	100.0	107.3	0.4118324	0.4419719	0.1	7.3	20
1,2-Dichloroethane	A	100.0	104.9	0.2830731	0.2970785		4.9	20
1,1-Dichloroethene	A	100.0	109.7	0.2185869	0.2397693		9.7	20
cis-1,2-Dichloroethene	A	100.0	107.4	0.2422412	0.260118		7.4	20
trans-1,2-Dichloroethene	A	100.0	105.3	0.2320514	0.2442716		5.3	20
1,2-Dichloropropane	A	100.0	107.0	0.2403732	0.2573035		7.0	20
cis-1,3-Dichloropropene	A	100.0	105.1	0.3513351	0.3691795		5.1	20
trans-1,3-Dichloropropene	A	100.0	95.32	0.8709479	0.8301572		-4.7	20
Methylene chloride	A	100.0	104.4	0.2623936	0.2739292		4.4	20
1,1,2,2-Tetrachloroethane	A	100.0	100.4	0.6360206	0.6383237	0.3	0.4	20
Tetrachloroethene	A	100.0	102.4	0.6010461	0.6152982		2.4	20
1,1,2-Trichloroethane	A	100.0	102.4	0.4520895	0.4629698		2.4	20
1,1,1-Trichloroethane	A	100.0	104.2	0.2879639	0.3000279		4.2	20
Trichloroethene	A	100.0	108.1	0.2300998	0.2488059		8.1	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA4	Calibration:	2011004
Lab File ID:	0127CCV1.D	Calibration Date:	01/06/12 08:49
Sequence:	2A03011	Injection Date:	01/27/12
Lab Sample ID:	2A03011-CCV1	Injection Time:	09:23

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	107.9	0.3114376	0.3359174		7.9	20
Vinyl chloride	A	100.0	106.1	0.1897108	0.201285		6.1	20
Bromofluorobenzene	A	30.00	31.34	0.9167457	0.957555		4.5	20
Dibromofluoromethane	A	30.00	33.10	0.2896803	0.3196327		10.3	20
1,2-Dichloroethane-d4	A	30.00	34.04	5.843723E-02	6.629816E-02		13.5	20
Toluene-d8	A	30.00	31.13	2.297298	2.383787		3.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0130CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2A03105	Injection Date:	01/30/12
Lab Sample ID:	2A03105-CCV1	Injection Time:	08:32

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Bromodichloromethane	A	100.0	98.30	0.4160775	0.4090016		-1.7	20
Bromoform	A	100.0	101.0	0.3282369	0.3314825	0.1	1.0	20
Bromomethane	A	100.0	80.68	0.2709056	0.2185704		-19.3	20
Carbon tetrachloride	A	100.0	99.99	0.3588628	0.3588443		-0.005	20
Chlorobenzene	A	100.0	89.84	1.528965	1.373597	0.3	-10.2	20
Chloroethane	A	100.0	88.27	0.2468145	0.2178558		-11.7	20
Chloroform	A	100.0	89.47	0.5864764	0.5247078		-10.5	20
2-Chloroethyl vinyl ether	A	199.5	2.996	3.420637E-02	5.123007E-04		-98.5	20 *
Chloromethane	A	100.0	83.36	0.5988201	0.4991851	0.1	-16.6	20
Dibromochloromethane	A	100.0	98.12	0.5927647	0.5816473		-1.9	20
1,2-Dibromoethane (EDB)	A	100.0	83.42	0.5060833	0.4221678		-16.6	20
1,2-Dichlorobenzene	A	100.0	85.95	1.451411	1.247433		-14.1	20
1,3-Dichlorobenzene	A	100.0	83.66	1.593787	1.33345		-16.3	20
1,4-Dichlorobenzene	A	100.0	84.64	1.506145	1.274849		-15.4	20
Dichlorodifluoromethane	A	100.0	86.65	0.4142712	0.3589813		-13.3	20
1,1-Dichloroethane	A	100.0	95.05	0.6886139	0.6545478	0.1	-4.9	20
1,2-Dichloroethane	A	100.0	99.24	0.4241722	0.4209291		-0.8	20
1,1-Dichloroethene	A	100.0	94.02	0.2824274	0.2655316		-6.0	20
cis-1,2-Dichloroethene	A	100.0	92.94	0.3046738	0.2831572		-7.1	20
trans-1,2-Dichloroethene	A	100.0	92.67	0.2956055	0.2739402		-7.3	20
1,2-Dichloropropane	A	100.0	92.27	0.3807138	0.3512886		-7.7	20
cis-1,3-Dichloropropene	A	100.0	97.85	0.4719052	0.4617424		-2.2	20
trans-1,3-Dichloropropene	A	100.0	94.71	1.015515	0.9617852		-5.3	20
Methylene chloride	A	100.0	85.09	0.3566587	0.303478		-14.9	20
1,1,2,2-Tetrachloroethane	A	100.0	83.72	1.15351	0.9657286	0.3	-16.3	20
Tetrachloroethene	A	100.0	91.09	0.5513045	0.5021678		-8.9	20
1,1,2-Trichloroethane	A	100.0	91.43	0.4780832	0.4371309		-8.6	20
1,1,1-Trichloroethane	A	100.0	98.98	0.4279584	0.4235977		-1.0	20
Trichloroethene	A	100.0	96.02	0.3032198	0.2911374		-4.0	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0130CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2A03105	Injection Date:	01/30/12
Lab Sample ID:	2A03105-CCV1	Injection Time:	08:32

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	97.48	0.4705092	0.4586475		-2.5	20
Vinyl chloride	L	100.0	92.72	0.3344171	0.337164		-7.3	20
Bromofluorobenzene	A	30.00	32.19	0.7989988	0.8572555		7.3	20
Dibromofluoromethane	A	30.00	30.52	0.2924183	0.2975006		1.7	20
1,2-Dichloroethane-d4	A	30.00	31.65	5.038152E-02	5.314607E-02		5.5	20
Toluene-d8	A	30.00	29.18	2.163799	2.104498		-2.7	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0201CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2B03307	Injection Date:	02/01/12
Lab Sample ID:	2B03307-CCV1	Injection Time:	08:09

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Bromodichloromethane	A	100.0	101.5	0.4160775	0.4223383		1.5	20
Bromoform	A	100.0	106.3	0.3282369	0.3490291	0.1	6.3	20
Bromomethane	A	100.0	89.97	0.2709056	0.243728		-10.0	20
Carbon tetrachloride	A	100.0	107.2	0.3588628	0.3845244		7.2	20
Chlorobenzene	A	100.0	95.25	1.528965	1.456336	0.3	-4.8	20
Chloroethane	A	100.0	95.82	0.2468145	0.2364937		-4.2	20
Chloroform	A	100.0	96.44	0.5864764	0.5655794		-3.6	20
2-Chloroethyl vinyl ether	A	199.5	157.5	3.420637E-02	2.693918E-02		-21.2	20 *
Chloromethane	A	100.0	89.22	0.5988201	0.5342461	0.1	-10.8	20
Dibromochloromethane	A	100.0	103.3	0.5927647	0.6126075		3.3	20
1,2-Dibromoethane (EDB)	A	100.0	103.4	0.5060833	0.5231344		3.4	20
1,2-Dichlorobenzene	A	100.0	92.95	1.451411	1.349156		-7.0	20
1,3-Dichlorobenzene	A	100.0	92.54	1.593787	1.474851		-7.5	20
1,4-Dichlorobenzene	A	100.0	96.06	1.506145	1.446804		-3.9	20
Dichlorodifluoromethane	A	100.0	92.94	0.4142712	0.3850117		-7.1	20
1,1-Dichloroethane	A	100.0	97.17	0.6886139	0.6691425	0.1	-2.8	20
1,2-Dichloroethane	A	100.0	106.6	0.4241722	0.4523775		6.6	20
1,1-Dichloroethene	A	100.0	92.11	0.2824274	0.2601566		-7.9	20
cis-1,2-Dichloroethene	A	100.0	97.25	0.3046738	0.2962965		-2.7	20
trans-1,2-Dichloroethene	A	100.0	95.96	0.2956055	0.2836752		-4.0	20
1,2-Dichloropropane	A	100.0	96.73	0.3807138	0.368276		-3.3	20
cis-1,3-Dichloropropene	A	100.0	103.3	0.4719052	0.4873137		3.3	20
trans-1,3-Dichloropropene	A	100.0	97.94	1.015515	0.9946158		-2.1	20
Methylene chloride	A	100.0	90.60	0.3566587	0.3231225		-9.4	20
1,1,2,2-Tetrachloroethane	A	100.0	91.70	1.15351	1.057764	0.3	-8.3	20
Tetrachloroethene	A	100.0	98.00	0.5513045	0.5402788		-2.0	20
1,1,2-Trichloroethane	A	100.0	96.02	0.4780832	0.4590742		-4.0	20
1,1,1-Trichloroethane	A	100.0	105.9	0.4279584	0.4531734		5.9	20
Trichloroethene	A	100.0	101.3	0.3032198	0.3072496		1.3	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA5	Calibration:	2011002
Lab File ID:	0201CCV1.D	Calibration Date:	01/04/12 08:30
Sequence:	2B03307	Injection Date:	02/01/12
Lab Sample ID:	2B03307-CCV1	Injection Time:	08:09

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	105.3	0.4705092	0.4956131		5.3	20
Vinyl chloride	L	100.0	108.8	0.3344171	0.3972859		8.8	20
Bromofluorobenzene	A	30.00	31.81	0.7989988	0.8472094		6.0	20
Dibromofluoromethane	A	30.00	30.61	0.2924183	0.2983476		2.0	20
1,2-Dichloroethane-d4	A	30.00	28.71	5.038152E-02	4.820933E-02		-4.3	20
Toluene-d8	A	30.00	30.16	2.163799	2.175027		0.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27016-BLK1 File ID: 0127BL1.D

Sampled: Prepared: Analyzed: 01/27/12 12:45

Solids: Preparation: 5035 Dilution:

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.25	2.50	5.00	U
75-25-2	Bromoform		1.25	2.50	5.00	U
74-83-9	Bromomethane		2.50	5.00	10.0	U
56-23-5	Carbon tetrachloride		1.25	2.50	5.00	U
108-90-7	Chlorobenzene		1.25	2.50	5.00	U
75-00-3	Chloroethane		2.50	5.00	10.0	U
67-66-3	Chloroform		1.25	2.50	5.00	U
110-75-8	2-Chloroethyl vinyl ether		25.0	50.0	100	Q, Y, U
74-87-3	Chloromethane		2.50	5.00	10.0	U
124-48-1	Dibromochloromethane		1.25	2.50	5.00	U
106-93-4	1,2-Dibromoethane (EDB)		1.25	2.50	5.00	U
95-50-1	1,2-Dichlorobenzene		1.25	2.50	5.00	U
541-73-1	1,3-Dichlorobenzene		1.25	2.50	5.00	U
106-46-7	1,4-Dichlorobenzene		1.25	2.50	5.00	U
75-71-8	Dichlorodifluoromethane		2.50	5.00	10.0	U
75-34-3	1,1-Dichloroethane		1.25	2.50	5.00	U
107-06-2	1,2-Dichloroethane		1.25	2.50	5.00	U
75-35-4	1,1-Dichloroethene		1.25	2.50	5.00	U
156-59-2	cis-1,2-Dichloroethene		1.25	2.50	5.00	U
156-60-5	trans-1,2-Dichloroethene		1.25	2.50	5.00	U
78-87-5	1,2-Dichloropropane		1.25	2.50	5.00	U
10061-01-5	cis-1,3-Dichloropropene		1.25	2.50	5.00	U
10061-02-6	trans-1,3-Dichloropropene		1.25	2.50	5.00	U
75-09-2	Methylene chloride	1.60	1.25	2.50	5.00	I
79-34-5	1,1,2,2-Tetrachloroethane		1.25	2.50	5.00	U
127-18-4	Tetrachloroethene		1.25	2.50	5.00	U
79-00-5	1,1,2-Trichloroethane		1.25	2.50	5.00	U
71-55-6	1,1,1-Trichloroethane		1.25	2.50	5.00	U
79-01-6	Trichloroethene		1.25	2.50	5.00	U
75-69-4	Trichlorofluoromethane		2.50	5.00	10.0	U
75-01-4	Vinyl chloride		2.50	5.00	10.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.66	102	85 - 120	
Dibromofluoromethane	30.00	29.26	97.5	80 - 125	
1,2-Dichloroethane-d4	30.00	30.00	100	75 - 140	
Toluene-d8	30.00	30.59	102	85 - 115	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC | SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) | Project: NAS Mayport CTO JM60

Matrix: | Laboratory ID: 2A27016-BS1 | File ID: 0127LCS1.D

Sampled: | Prepared: | Analyzed: 01/27/12 11:23

Solids: | Preparation: 5035 | Dilution:

Batch: 2A27016 | Sequence: 2A03008 | Calibration: 2011002 | Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	43.96	1.25	2.50	5.00	
75-25-2	Bromoform	51.50	1.25	2.50	5.00	
74-83-9	Bromomethane	42.31	2.50	5.00	10.0	
56-23-5	Carbon tetrachloride	46.08	1.25	2.50	5.00	
108-90-7	Chlorobenzene	47.68	1.25	2.50	5.00	
75-00-3	Chloroethane	45.71	2.50	5.00	10.0	
67-66-3	Chloroform	44.14	1.25	2.50	5.00	
110-75-8	2-Chloroethyl vinyl ether		25.0	50.0	100	Y, U
74-87-3	Chloromethane	40.05	2.50	5.00	10.0	
124-48-1	Dibromochloromethane	49.20	1.25	2.50	5.00	
106-93-4	1,2-Dibromoethane (EDB)	50.47	1.25	2.50	5.00	
95-50-1	1,2-Dichlorobenzene	44.85	1.25	2.50	5.00	
541-73-1	1,3-Dichlorobenzene	45.14	1.25	2.50	5.00	
106-46-7	1,4-Dichlorobenzene	45.24	1.25	2.50	5.00	
75-71-8	Dichlorodifluoromethane	39.98	2.50	5.00	10.0	
75-34-3	1,1-Dichloroethane	45.06	1.25	2.50	5.00	
107-06-2	1,2-Dichloroethane	44.56	1.25	2.50	5.00	
75-35-4	1,1-Dichloroethene	44.65	1.25	2.50	5.00	
156-59-2	cis-1,2-Dichloroethene	47.12	1.25	2.50	5.00	
156-60-5	trans-1,2-Dichloroethene	46.28	1.25	2.50	5.00	
78-87-5	1,2-Dichloropropane	44.35	1.25	2.50	5.00	
10061-01-5	cis-1,3-Dichloropropene	48.80	1.25	2.50	5.00	
10061-02-6	trans-1,3-Dichloropropene	44.90	1.25	2.50	5.00	
75-09-2	Methylene chloride	43.54	1.25	2.50	5.00	
79-34-5	1,1,2,2-Tetrachloroethane	44.99	1.25	2.50	5.00	
127-18-4	Tetrachloroethene	50.48	1.25	2.50	5.00	
79-00-5	1,1,2-Trichloroethane	49.58	1.25	2.50	5.00	
71-55-6	1,1,1-Trichloroethane	47.19	1.25	2.50	5.00	
79-01-6	Trichloroethene	46.69	1.25	2.50	5.00	
75-69-4	Trichlorofluoromethane	48.71	2.50	5.00	10.0	
75-01-4	Vinyl chloride	55.85	2.50	5.00	10.0	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.95	103	85 - 120	
Dibromofluoromethane	30.00	30.18	101	80 - 125	
1,2-Dichloroethane-d4	30.00	30.62	102	75 - 140	
Toluene-d8	30.00	30.50	102	85 - 115	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27016-MS1 File ID: 0114203M.D

Sampled: Prepared: Analyzed: 01/27/12 18:10

Solids: Preparation: 5035 Dilution:

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	50.40	1.37	2.73	5.46	
75-25-2	Bromoform	46.65	1.37	2.73	5.46	
74-83-9	Bromomethane	47.37	2.73	5.46	10.9	
56-23-5	Carbon tetrachloride	51.29	1.37	2.73	5.46	
108-90-7	Chlorobenzene	44.20	1.37	2.73	5.46	
75-00-3	Chloroethane	50.92	2.73	5.46	10.9	
67-66-3	Chloroform	49.99	1.37	2.73	5.46	
110-75-8	2-Chloroethyl vinyl ether	74.45	27.3	54.6	109	Q, Y, I
74-87-3	Chloromethane	48.42	2.73	5.46	10.9	
124-48-1	Dibromochloromethane	47.57	1.37	2.73	5.46	
106-93-4	1,2-Dibromoethane (EDB)	47.19	1.37	2.73	5.46	
95-50-1	1,2-Dichlorobenzene	44.28	1.37	2.73	5.46	
541-73-1	1,3-Dichlorobenzene	43.65	1.37	2.73	5.46	
106-46-7	1,4-Dichlorobenzene	44.40	1.37	2.73	5.46	
75-71-8	Dichlorodifluoromethane	45.88	2.73	5.46	10.9	
75-34-3	1,1-Dichloroethane	52.27	1.37	2.73	5.46	
107-06-2	1,2-Dichloroethane	53.68	1.37	2.73	5.46	
75-35-4	1,1-Dichloroethene	44.94	1.37	2.73	5.46	
156-59-2	cis-1,2-Dichloroethene	48.70	1.37	2.73	5.46	
156-60-5	trans-1,2-Dichloroethene	47.05	1.37	2.73	5.46	
78-87-5	1,2-Dichloropropane	49.60	1.37	2.73	5.46	
10061-01-5	cis-1,3-Dichloropropene	51.62	1.37	2.73	5.46	
10061-02-6	trans-1,3-Dichloropropene	44.46	1.37	2.73	5.46	
75-09-2	Methylene chloride	47.06	1.37	2.73	5.46	
79-34-5	1,1,2,2-Tetrachloroethane	45.65	1.37	2.73	5.46	
127-18-4	Tetrachloroethene	42.75	1.37	2.73	5.46	
79-00-5	1,1,2-Trichloroethane	48.33	1.37	2.73	5.46	
71-55-6	1,1,1-Trichloroethane	53.00	1.37	2.73	5.46	
79-01-6	Trichloroethene	48.66	1.37	2.73	5.46	
75-69-4	Trichlorofluoromethane	52.98	2.73	5.46	10.9	
75-01-4	Vinyl chloride	63.74	2.73	5.46	10.9	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.78	34.52	105	85 - 120	
Dibromofluoromethane	32.78	32.64	99.6	80 - 125	
1,2-Dichloroethane-d4	32.78	30.96	94.4	75 - 140	
Toluene-d8	32.78	31.62	96.4	85 - 115	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27016-MSD1 File ID: 0114203S.D

Sampled: Prepared: Analyzed: 01/27/12 18:37

Solids: Preparation: 5035 Dilution:

Batch: 2A27016 Sequence: 2A03008 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	49.44	1.34	2.68	5.36	
75-25-2	Bromoform	47.26	1.34	2.68	5.36	
74-83-9	Bromomethane	47.10	2.68	5.36	10.7	
56-23-5	Carbon tetrachloride	51.65	1.34	2.68	5.36	
108-90-7	Chlorobenzene	42.04	1.34	2.68	5.36	
75-00-3	Chloroethane	50.25	2.68	5.36	10.7	
67-66-3	Chloroform	49.61	1.34	2.68	5.36	
110-75-8	2-Chloroethyl vinyl ether	84.95	26.8	53.6	107	Q, Y, I
74-87-3	Chloromethane	48.85	2.68	5.36	10.7	
124-48-1	Dibromochloromethane	47.84	1.34	2.68	5.36	
106-93-4	1,2-Dibromoethane (EDB)	47.19	1.34	2.68	5.36	
95-50-1	1,2-Dichlorobenzene	39.98	1.34	2.68	5.36	
541-73-1	1,3-Dichlorobenzene	38.42	1.34	2.68	5.36	
106-46-7	1,4-Dichlorobenzene	39.51	1.34	2.68	5.36	
75-71-8	Dichlorodifluoromethane	49.13	2.68	5.36	10.7	
75-34-3	1,1-Dichloroethane	50.83	1.34	2.68	5.36	
107-06-2	1,2-Dichloroethane	53.86	1.34	2.68	5.36	
75-35-4	1,1-Dichloroethene	46.14	1.34	2.68	5.36	
156-59-2	cis-1,2-Dichloroethene	47.59	1.34	2.68	5.36	
156-60-5	trans-1,2-Dichloroethene	47.41	1.34	2.68	5.36	
78-87-5	1,2-Dichloropropane	50.07	1.34	2.68	5.36	
10061-01-5	cis-1,3-Dichloropropene	52.02	1.34	2.68	5.36	
10061-02-6	trans-1,3-Dichloropropene	44.12	1.34	2.68	5.36	
75-09-2	Methylene chloride	46.65	1.34	2.68	5.36	
79-34-5	1,1,2,2-Tetrachloroethane	45.50	1.34	2.68	5.36	
127-18-4	Tetrachloroethene	42.62	1.34	2.68	5.36	
79-00-5	1,1,2-Trichloroethane	47.46	1.34	2.68	5.36	
71-55-6	1,1,1-Trichloroethane	53.39	1.34	2.68	5.36	
79-01-6	Trichloroethene	48.49	1.34	2.68	5.36	
75-69-4	Trichlorofluoromethane	53.59	2.68	5.36	10.7	
75-01-4	Vinyl chloride	59.89	2.68	5.36	10.7	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
Bromofluorobenzene	32.18	31.84	98.9	85 - 120	
Dibromofluoromethane	32.18	32.49	101	80 - 125	
1,2-Dichloroethane-d4	32.18	31.32	97.3	75 - 140	
Toluene-d8	32.18	31.41	97.6	85 - 115	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27019-BLK1 File ID: 0127BLK1.D

Sampled: Prepared: Analyzed: 01/27/12 11:24

Solids: Preparation: 5030B Dilution:

Batch: 2A27019 Sequence: 2A03011 Calibration: 2011004 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.65	102	75 - 120	
Dibromofluoromethane	30.00	31.31	104	85 - 115	
1,2-Dichloroethane-d4	30.00	30.47	102	70 - 120	
Toluene-d8	30.00	31.38	105	85 - 120	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27019-BS1 File ID: 0127LCS1.D

Sampled: Prepared: Analyzed: 01/27/12 09:59

Solids: Preparation: 5030B Dilution:

Batch: 2A27019 Sequence: 2A03011 Calibration: 2011004 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	48.5	0.250	0.500	1.00	
75-25-2	Bromoform	56.1	0.250	0.500	1.00	
74-83-9	Bromomethane	43.6	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	51.3	0.250	0.500	1.00	
108-90-7	Chlorobenzene	52.7	0.250	0.500	1.00	
75-00-3	Chloroethane	56.6	0.500	1.00	2.00	
67-66-3	Chloroform	47.5	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	89.2	1.25	2.50	5.00	
74-87-3	Chloromethane	38.0	0.500	1.00	2.00	
124-48-1	Dibromochloromethane	52.2	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	51.3	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	51.9	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	50.3	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	51.9	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	45.7	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	51.2	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	47.7	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	47.5	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	52.0	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	51.6	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	50.5	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	52.9	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	45.0	0.250	0.500	1.00	
75-09-2	Methylene chloride	49.7	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	50.1	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	54.0	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	53.6	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	49.3	0.250	0.500	1.00	
79-01-6	Trichloroethene	52.1	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	52.0	0.500	1.00	2.00	
75-01-4	Vinyl chloride	57.3	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	33.30	111	75 - 120	
Dibromofluoromethane	30.00	30.83	103	85 - 115	
1,2-Dichloroethane-d4	30.00	32.34	108	70 - 120	
Toluene-d8	30.00	32.26	108	85 - 120	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A27019-BSD1 File ID: 0127LCD1.D

Sampled: Prepared: Analyzed: 01/27/12 19:52

Solids: Preparation: 5030B Dilution:

Batch: 2A27019 Sequence: 2A03011 Calibration: 2011004 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	50.2	0.250	0.500	1.00	
75-25-2	Bromoform	58.1	0.250	0.500	1.00	
74-83-9	Bromomethane	36.0	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	52.5	0.250	0.500	1.00	
108-90-7	Chlorobenzene	50.8	0.250	0.500	1.00	
75-00-3	Chloroethane	53.3	0.500	1.00	2.00	
67-66-3	Chloroform	48.2	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	90.3	1.25	2.50	5.00	
74-87-3	Chloromethane	33.3	0.500	1.00	2.00	
124-48-1	Dibromochloromethane	53.4	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	51.9	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	52.3	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	49.5	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	51.6	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	46.1	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	49.7	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	50.0	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	47.8	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	52.8	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	50.8	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	51.2	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	53.2	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	44.1	0.250	0.500	1.00	
75-09-2	Methylene chloride	49.5	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	52.3	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	50.0	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	55.1	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	49.7	0.250	0.500	1.00	
79-01-6	Trichloroethene	51.2	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	51.1	0.500	1.00	2.00	
75-01-4	Vinyl chloride	57.6	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.30	108	75 - 120	
Dibromofluoromethane	30.00	31.19	104	85 - 115	
1,2-Dichloroethane-d4	30.00	31.76	106	70 - 120	
Toluene-d8	30.00	31.55	105	85 - 120	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A30012-BLK1 File ID: 0130BL1.D

Sampled: Prepared: Analyzed: 01/30/12 10:31

Solids: Preparation: 5035 Dilution:

Batch: 2A30012 Sequence: 2A03105 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.25	2.50	5.00	U
75-25-2	Bromoform		1.25	2.50	5.00	U
74-83-9	Bromomethane		2.50	5.00	10.0	U
56-23-5	Carbon tetrachloride		1.25	2.50	5.00	U
108-90-7	Chlorobenzene		1.25	2.50	5.00	U
75-00-3	Chloroethane		2.50	5.00	10.0	U
67-66-3	Chloroform		1.25	2.50	5.00	U
110-75-8	2-Chloroethyl vinyl ether		25.0	50.0	100	Q, Y, U
74-87-3	Chloromethane		2.50	5.00	10.0	U
124-48-1	Dibromochloromethane		1.25	2.50	5.00	U
106-93-4	1,2-Dibromoethane (EDB)		1.25	2.50	5.00	U
95-50-1	1,2-Dichlorobenzene		1.25	2.50	5.00	U
541-73-1	1,3-Dichlorobenzene		1.25	2.50	5.00	U
106-46-7	1,4-Dichlorobenzene		1.25	2.50	5.00	U
75-71-8	Dichlorodifluoromethane		2.50	5.00	10.0	U
75-34-3	1,1-Dichloroethane		1.25	2.50	5.00	U
107-06-2	1,2-Dichloroethane		1.25	2.50	5.00	U
75-35-4	1,1-Dichloroethene		1.25	2.50	5.00	U
156-59-2	cis-1,2-Dichloroethene		1.25	2.50	5.00	U
156-60-5	trans-1,2-Dichloroethene		1.25	2.50	5.00	U
78-87-5	1,2-Dichloropropane		1.25	2.50	5.00	U
10061-01-5	cis-1,3-Dichloropropene		1.25	2.50	5.00	U
10061-02-6	trans-1,3-Dichloropropene		1.25	2.50	5.00	U
75-09-2	Methylene chloride		1.25	2.50	5.00	U
79-34-5	1,1,2,2-Tetrachloroethane		1.25	2.50	5.00	U
127-18-4	Tetrachloroethene		1.25	2.50	5.00	U
79-00-5	1,1,2-Trichloroethane		1.25	2.50	5.00	U
71-55-6	1,1,1-Trichloroethane		1.25	2.50	5.00	U
79-01-6	Trichloroethene		1.25	2.50	5.00	U
75-69-4	Trichlorofluoromethane		2.50	5.00	10.0	U
75-01-4	Vinyl chloride		2.50	5.00	10.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.59	98.6	85 - 120	
Dibromofluoromethane	30.00	29.85	99.5	80 - 125	
1,2-Dichloroethane-d4	30.00	31.42	105	75 - 140	
Toluene-d8	30.00	28.88	96.3	85 - 115	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC | SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) | Project: NAS Mayport CTO JM60

Matrix: | Laboratory ID: 2A30012-BS1 | File ID: 0130LCS1.D

Sampled: | Prepared: | Analyzed: 01/30/12 09:10

Solids: | Preparation: 5035 | Dilution:

Batch: 2A30012 | Sequence: 2A03105 | Calibration: 2011002 | Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	44.17	1.25	2.50	5.00	
75-25-2	Bromoform	47.05	1.25	2.50	5.00	
74-83-9	Bromomethane	42.75	2.50	5.00	10.0	
56-23-5	Carbon tetrachloride	47.63	1.25	2.50	5.00	
108-90-7	Chlorobenzene	43.23	1.25	2.50	5.00	
75-00-3	Chloroethane	44.96	2.50	5.00	10.0	
67-66-3	Chloroform	43.94	1.25	2.50	5.00	
110-75-8	2-Chloroethyl vinyl ether		25.0	50.0	100	Y, U
74-87-3	Chloromethane	39.70	2.50	5.00	10.0	
124-48-1	Dibromochloromethane	45.96	1.25	2.50	5.00	
106-93-4	1,2-Dibromoethane (EDB)	46.44	1.25	2.50	5.00	
95-50-1	1,2-Dichlorobenzene	42.15	1.25	2.50	5.00	
541-73-1	1,3-Dichlorobenzene	42.01	1.25	2.50	5.00	
106-46-7	1,4-Dichlorobenzene	43.69	1.25	2.50	5.00	
75-71-8	Dichlorodifluoromethane	42.07	2.50	5.00	10.0	
75-34-3	1,1-Dichloroethane	44.73	1.25	2.50	5.00	
107-06-2	1,2-Dichloroethane	46.07	1.25	2.50	5.00	
75-35-4	1,1-Dichloroethene	43.56	1.25	2.50	5.00	
156-59-2	cis-1,2-Dichloroethene	45.73	1.25	2.50	5.00	
156-60-5	trans-1,2-Dichloroethene	46.97	1.25	2.50	5.00	
78-87-5	1,2-Dichloropropane	43.53	1.25	2.50	5.00	
10061-01-5	cis-1,3-Dichloropropene	48.07	1.25	2.50	5.00	
10061-02-6	trans-1,3-Dichloropropene	41.45	1.25	2.50	5.00	
75-09-2	Methylene chloride	41.13	1.25	2.50	5.00	
79-34-5	1,1,2,2-Tetrachloroethane	42.75	1.25	2.50	5.00	
127-18-4	Tetrachloroethene	46.37	1.25	2.50	5.00	
79-00-5	1,1,2-Trichloroethane	45.35	1.25	2.50	5.00	
71-55-6	1,1,1-Trichloroethane	47.29	1.25	2.50	5.00	
79-01-6	Trichloroethene	45.86	1.25	2.50	5.00	
75-69-4	Trichlorofluoromethane	49.60	2.50	5.00	10.0	
75-01-4	Vinyl chloride	53.98	2.50	5.00	10.0	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.63	105	85 - 120	
Dibromofluoromethane	30.00	29.92	99.7	80 - 125	
1,2-Dichloroethane-d4	30.00	30.56	102	75 - 140	
Toluene-d8	30.00	29.29	97.6	85 - 115	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31014-BLK1 File ID: 0201BL1.D

Sampled: Prepared: Analyzed: 02/01/12 09:57

Solids: Preparation: 5035 Dilution:

Batch: 2A31014 Sequence: 2B03307 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		1.25	2.50	5.00	U
75-25-2	Bromoform		1.25	2.50	5.00	U
74-83-9	Bromomethane		2.50	5.00	10.0	U
56-23-5	Carbon tetrachloride		1.25	2.50	5.00	U
108-90-7	Chlorobenzene		1.25	2.50	5.00	U
75-00-3	Chloroethane		2.50	5.00	10.0	U
67-66-3	Chloroform		1.25	2.50	5.00	U
110-75-8	2-Chloroethyl vinyl ether		25.0	50.0	100	Y, U
74-87-3	Chloromethane		2.50	5.00	10.0	U
124-48-1	Dibromochloromethane		1.25	2.50	5.00	U
106-93-4	1,2-Dibromoethane (EDB)		1.25	2.50	5.00	U
95-50-1	1,2-Dichlorobenzene		1.25	2.50	5.00	U
541-73-1	1,3-Dichlorobenzene		1.25	2.50	5.00	U
106-46-7	1,4-Dichlorobenzene		1.25	2.50	5.00	U
75-71-8	Dichlorodifluoromethane		2.50	5.00	10.0	U
75-34-3	1,1-Dichloroethane		1.25	2.50	5.00	U
107-06-2	1,2-Dichloroethane		1.25	2.50	5.00	U
75-35-4	1,1-Dichloroethene		1.25	2.50	5.00	U
156-59-2	cis-1,2-Dichloroethene		1.25	2.50	5.00	U
156-60-5	trans-1,2-Dichloroethene		1.25	2.50	5.00	U
78-87-5	1,2-Dichloropropane		1.25	2.50	5.00	U
10061-01-5	cis-1,3-Dichloropropene		1.25	2.50	5.00	U
10061-02-6	trans-1,3-Dichloropropene		1.25	2.50	5.00	U
75-09-2	Methylene chloride		1.25	2.50	5.00	U
79-34-5	1,1,2,2-Tetrachloroethane		1.25	2.50	5.00	U
127-18-4	Tetrachloroethene		1.25	2.50	5.00	U
79-00-5	1,1,2-Trichloroethane		1.25	2.50	5.00	U
71-55-6	1,1,1-Trichloroethane		1.25	2.50	5.00	U
79-01-6	Trichloroethene		1.25	2.50	5.00	U
75-69-4	Trichlorofluoromethane		2.50	5.00	10.0	U
75-01-4	Vinyl chloride		2.50	5.00	10.0	Q, U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.41	98.0	85 - 120	
Dibromofluoromethane	30.00	30.04	100	80 - 125	
1,2-Dichloroethane-d4	30.00	29.87	99.6	75 - 140	
Toluene-d8	30.00	29.23	97.4	85 - 115	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC | SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) | Project: NAS Mayport CTO JM60

Matrix: | Laboratory ID: 2A31014-BS1 | File ID: 0201LCS1.D

Sampled: | Prepared: | Analyzed: 02/01/12 08:36

Solids: | Preparation: 5035 | Dilution:

Batch: 2A31014 | Sequence: 2B03307 | Calibration: 2011002 | Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	48.55	1.25	2.50	5.00	
75-25-2	Bromoform	50.43	1.25	2.50	5.00	
74-83-9	Bromomethane	47.90	2.50	5.00	10.0	
56-23-5	Carbon tetrachloride	51.76	1.25	2.50	5.00	
108-90-7	Chlorobenzene	46.68	1.25	2.50	5.00	
75-00-3	Chloroethane	49.41	2.50	5.00	10.0	
67-66-3	Chloroform	47.89	1.25	2.50	5.00	
110-75-8	2-Chloroethyl vinyl ether	75.22	25.0	50.0	100	Y, I
74-87-3	Chloromethane	43.22	2.50	5.00	10.0	
124-48-1	Dibromochloromethane	49.60	1.25	2.50	5.00	
106-93-4	1,2-Dibromoethane (EDB)	49.28	1.25	2.50	5.00	
95-50-1	1,2-Dichlorobenzene	46.27	1.25	2.50	5.00	
541-73-1	1,3-Dichlorobenzene	46.60	1.25	2.50	5.00	
106-46-7	1,4-Dichlorobenzene	47.85	1.25	2.50	5.00	
75-71-8	Dichlorodifluoromethane	43.69	2.50	5.00	10.0	
75-34-3	1,1-Dichloroethane	48.33	1.25	2.50	5.00	
107-06-2	1,2-Dichloroethane	51.61	1.25	2.50	5.00	
75-35-4	1,1-Dichloroethene	46.82	1.25	2.50	5.00	
156-59-2	cis-1,2-Dichloroethene	49.61	1.25	2.50	5.00	
156-60-5	trans-1,2-Dichloroethene	48.94	1.25	2.50	5.00	
78-87-5	1,2-Dichloropropane	47.82	1.25	2.50	5.00	
10061-01-5	cis-1,3-Dichloropropene	53.60	1.25	2.50	5.00	
10061-02-6	trans-1,3-Dichloropropene	45.77	1.25	2.50	5.00	
75-09-2	Methylene chloride	46.91	1.25	2.50	5.00	
79-34-5	1,1,2,2-Tetrachloroethane	46.57	1.25	2.50	5.00	
127-18-4	Tetrachloroethene	48.91	1.25	2.50	5.00	
79-00-5	1,1,2-Trichloroethane	48.07	1.25	2.50	5.00	
71-55-6	1,1,1-Trichloroethane	52.95	1.25	2.50	5.00	
79-01-6	Trichloroethene	50.68	1.25	2.50	5.00	
75-69-4	Trichlorofluoromethane	53.86	2.50	5.00	10.0	
75-01-4	Vinyl chloride	59.98	2.50	5.00	10.0	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.21	101	85 - 120	
Dibromofluoromethane	30.00	30.80	103	80 - 125	
1,2-Dichloroethane-d4	30.00	31.08	104	75 - 140	
Toluene-d8	30.00	29.40	98.0	85 - 115	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31014-BSD1 File ID: 0201LCD1.D

Sampled: Prepared: Analyzed: 02/01/12 16:26

Solids: Preparation: 5035 Dilution:

Batch: 2A31014 Sequence: 2B03307 Calibration: 2011002 Instrument: MS-VOA5

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	58.77	1.25	2.50	5.00	
75-25-2	Bromoform	56.97	1.25	2.50	5.00	
74-83-9	Bromomethane	57.18	2.50	5.00	10.0	
56-23-5	Carbon tetrachloride	60.74	1.25	2.50	5.00	
108-90-7	Chlorobenzene	48.16	1.25	2.50	5.00	
75-00-3	Chloroethane	56.84	2.50	5.00	10.0	
67-66-3	Chloroform	57.69	1.25	2.50	5.00	
110-75-8	2-Chloroethyl vinyl ether	80.66	25.0	50.0	100	Y, I
74-87-3	Chloromethane	52.51	2.50	5.00	10.0	
124-48-1	Dibromochloromethane	54.54	1.25	2.50	5.00	
106-93-4	1,2-Dibromoethane (EDB)	56.07	1.25	2.50	5.00	
95-50-1	1,2-Dichlorobenzene	51.58	1.25	2.50	5.00	
541-73-1	1,3-Dichlorobenzene	49.75	1.25	2.50	5.00	
106-46-7	1,4-Dichlorobenzene	50.72	1.25	2.50	5.00	
75-71-8	Dichlorodifluoromethane	49.12	2.50	5.00	10.0	
75-34-3	1,1-Dichloroethane	59.47	1.25	2.50	5.00	
107-06-2	1,2-Dichloroethane	65.31	1.25	2.50	5.00	
75-35-4	1,1-Dichloroethene	50.61	1.25	2.50	5.00	
156-59-2	cis-1,2-Dichloroethene	53.86	1.25	2.50	5.00	
156-60-5	trans-1,2-Dichloroethene	54.46	1.25	2.50	5.00	
78-87-5	1,2-Dichloropropane	59.47	1.25	2.50	5.00	
10061-01-5	cis-1,3-Dichloropropene	61.94	1.25	2.50	5.00	
10061-02-6	trans-1,3-Dichloropropene	52.28	1.25	2.50	5.00	
75-09-2	Methylene chloride	53.78	1.25	2.50	5.00	
79-34-5	1,1,2,2-Tetrachloroethane	57.27	1.25	2.50	5.00	
127-18-4	Tetrachloroethene	48.37	1.25	2.50	5.00	
79-00-5	1,1,2-Trichloroethane	54.53	1.25	2.50	5.00	
71-55-6	1,1,1-Trichloroethane	62.45	1.25	2.50	5.00	
79-01-6	Trichloroethene	55.18	1.25	2.50	5.00	
75-69-4	Trichlorofluoromethane	61.56	2.50	5.00	10.0	
75-01-4	Vinyl chloride	67.59	2.50	5.00	10.0	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.50	102	85 - 120	
Dibromofluoromethane	30.00	31.51	105	80 - 125	
1,2-Dichloroethane-d4	30.00	31.04	103	75 - 140	
Toluene-d8	30.00	28.38	94.6	85 - 115	

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS01-04-20120124	01/24/12 09:00	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 13:39	3.24	14.00	
MPT-289-SS02-04-20120124	01/24/12 09:15	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 14:06	3.24	14.00	
MPT-289-SS03-04-20120124	01/24/12 09:30	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 13:12	3.20	14.00	
MPT-289-SS04-04-20120124	01/24/12 09:45	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 14:33	3.24	14.00	
MPT-289-SS05-04-20120124	01/24/12 10:00	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 15:00	3.25	14.00	
MPT-289-SS06-04-20120124	01/24/12 10:15	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 15:27	3.26	14.00	
MPT-289-SS07-04-20120124	01/24/12 10:30	01/25/12 08:20	01/30/12 00:00	N/A	14.00	01/30/12 10:58	6.06	14.00	
MPT-289-SS08-03-20120124	01/24/12 10:45	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 16:22	3.28	14.00	
MPT-289-SS09-03-20120124	01/24/12 11:00	01/25/12 08:20	02/01/12 00:00	N/A	14.00	02/01/12 15:58	8.25	14.00	
MPT-289-SS10-03-20120124	01/24/12 11:15	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 17:16	3.29	14.00	
MPT-289-RB01-20120124	01/24/12 11:05	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 12:20	3.09	14.00	
MPT-289-SS11-03-20120124	01/24/12 11:30	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 17:43	3.30	14.00	
Trip Blank	01/24/12 00:00	01/25/12 08:20	01/27/12 00:00	N/A	14.00	01/27/12 12:48	3.58	14.00	

Data for SW8270D (PAH) Forms

ANALYSIS DATA SHEET

MPT-289-SS01-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-01	File ID:	0114201.D
Sampled:	01/24/12 09:00	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 12:27
Solids:	84.15	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.92	3.83	7.67	U
208-96-8	Acenaphthylene		1.92	3.83	7.67	U
120-12-7	Anthracene		1.92	3.83	7.67	U
56-55-3	Benzo(a)anthracene	2.67	1.92	3.83	7.67	I
50-32-8	Benzo(a)pyrene	3.87	1.92	3.83	7.67	I
205-99-2	Benzo(b)fluoranthene	6.68	1.92	3.83	7.67	IV
191-24-2	Benzo(g,h,i)perylene	4.72	1.92	3.83	7.67	I
207-08-9	Benzo(k)fluoranthene		1.92	3.83	7.67	U
218-01-9	Chrysene	4.84	1.92	3.83	7.67	IV
53-70-3	Dibenz(a,h)anthracene		1.92	3.83	7.67	U
206-44-0	Fluoranthene	3.36	1.92	3.83	7.67	I
86-73-7	Fluorene		1.92	3.83	7.67	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.09	1.92	3.83	7.67	I
90-12-0	1-Methylnaphthalene		1.92	3.83	7.67	U
91-57-6	2-Methylnaphthalene		1.92	3.83	7.67	U
91-20-3	Naphthalene		1.92	3.83	7.67	U
85-01-8	Phenanthrene		1.92	3.83	7.67	U
129-00-0	Pyrene	3.06	1.92	3.83	7.67	I

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3833	3108	81.1	14 - 129	
Terphenyl-d14	3833	3976	104	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS02-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-02	File ID:	0114202.D
Sampled:	01/24/12 09:15	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 12:56
Solids:	92.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.78	3.55	7.10	U
208-96-8	Acenaphthylene		1.78	3.55	7.10	U
120-12-7	Anthracene		1.78	3.55	7.10	U
56-55-3	Benzo(a)anthracene		1.78	3.55	7.10	U
50-32-8	Benzo(a)pyrene		1.78	3.55	7.10	U
205-99-2	Benzo(b)fluoranthene		1.78	3.55	7.10	U
191-24-2	Benzo(g,h,i)perylene		1.78	3.55	7.10	U
207-08-9	Benzo(k)fluoranthene		1.78	3.55	7.10	U
218-01-9	Chrysene		1.78	3.55	7.10	U
53-70-3	Dibenz(a,h)anthracene		1.78	3.55	7.10	U
206-44-0	Fluoranthene		1.78	3.55	7.10	U
86-73-7	Fluorene		1.78	3.55	7.10	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.78	3.55	7.10	U
90-12-0	1-Methylnaphthalene		1.78	3.55	7.10	U
91-57-6	2-Methylnaphthalene		1.78	3.55	7.10	U
91-20-3	Naphthalene		1.78	3.55	7.10	U
85-01-8	Phenanthrene		1.78	3.55	7.10	U
129-00-0	Pyrene		1.78	3.55	7.10	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3550	2312	65.1	14 - 129	
Terphenyl-d14	3550	2967	83.6	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS03-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-03	File ID:	0114203.D
Sampled:	01/24/12 09:30	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 13:24
Solids:	94.73	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.74	3.47	6.95	U
208-96-8	Acenaphthylene		1.74	3.47	6.95	U
120-12-7	Anthracene		1.74	3.47	6.95	U
56-55-3	Benzo(a)anthracene		1.74	3.47	6.95	U
50-32-8	Benzo(a)pyrene		1.74	3.47	6.95	U
205-99-2	Benzo(b)fluoranthene		1.74	3.47	6.95	U
191-24-2	Benzo(g,h,i)perylene		1.74	3.47	6.95	U
207-08-9	Benzo(k)fluoranthene		1.74	3.47	6.95	U
218-01-9	Chrysene		1.74	3.47	6.95	U
53-70-3	Dibenz(a,h)anthracene		1.74	3.47	6.95	U
206-44-0	Fluoranthene		1.74	3.47	6.95	U
86-73-7	Fluorene		1.74	3.47	6.95	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.74	3.47	6.95	U
90-12-0	1-Methylnaphthalene		1.74	3.47	6.95	U
91-57-6	2-Methylnaphthalene		1.74	3.47	6.95	U
91-20-3	Naphthalene		1.74	3.47	6.95	U
85-01-8	Phenanthrene		1.74	3.47	6.95	U
129-00-0	Pyrene		1.74	3.47	6.95	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3472	2167	62.4	14 - 129	
Terphenyl-d14	3472	2724	78.4	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS04-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-04	File ID:	0114204.D
Sampled:	01/24/12 09:45	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 13:52
Solids:	94.83	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.73	3.44	6.90	U
208-96-8	Acenaphthylene		1.73	3.44	6.90	U
120-12-7	Anthracene		1.73	3.44	6.90	U
56-55-3	Benzo(a)anthracene		1.73	3.44	6.90	U
50-32-8	Benzo(a)pyrene		1.73	3.44	6.90	U
205-99-2	Benzo(b)fluoranthene		1.73	3.44	6.90	U
191-24-2	Benzo(g,h,i)perylene		1.73	3.44	6.90	U
207-08-9	Benzo(k)fluoranthene		1.73	3.44	6.90	U
218-01-9	Chrysene		1.73	3.44	6.90	U
53-70-3	Dibenz(a,h)anthracene		1.73	3.44	6.90	U
206-44-0	Fluoranthene		1.73	3.44	6.90	U
86-73-7	Fluorene		1.73	3.44	6.90	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.73	3.44	6.90	U
90-12-0	1-Methylnaphthalene		1.73	3.44	6.90	U
91-57-6	2-Methylnaphthalene		1.73	3.44	6.90	U
91-20-3	Naphthalene		1.73	3.44	6.90	U
85-01-8	Phenanthrene		1.73	3.44	6.90	U
129-00-0	Pyrene		1.73	3.44	6.90	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3446	2324	67.5	14 - 129	
Terphenyl-d14	3446	2805	81.4	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS05-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-05	File ID:	0114205.D
Sampled:	01/24/12 10:00	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 14:20
Solids:	93.41	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.70	3.38	6.78	U
208-96-8	Acenaphthylene		1.70	3.38	6.78	U
120-12-7	Anthracene		1.70	3.38	6.78	U
56-55-3	Benzo(a)anthracene		1.70	3.38	6.78	U
50-32-8	Benzo(a)pyrene		1.70	3.38	6.78	U
205-99-2	Benzo(b)fluoranthene		1.70	3.38	6.78	U
191-24-2	Benzo(g,h,i)perylene		1.70	3.38	6.78	U
207-08-9	Benzo(k)fluoranthene		1.70	3.38	6.78	U
218-01-9	Chrysene		1.70	3.38	6.78	U
53-70-3	Dibenz(a,h)anthracene		1.70	3.38	6.78	U
206-44-0	Fluoranthene		1.70	3.38	6.78	U
86-73-7	Fluorene		1.70	3.38	6.78	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.70	3.38	6.78	U
90-12-0	1-Methylnaphthalene		1.70	3.38	6.78	U
91-57-6	2-Methylnaphthalene		1.70	3.38	6.78	U
91-20-3	Naphthalene		1.70	3.38	6.78	U
85-01-8	Phenanthrene		1.70	3.38	6.78	U
129-00-0	Pyrene		1.70	3.38	6.78	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3388	1989	58.7	14 - 129	
Terphenyl-d14	3388	2466	72.8	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS06-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-06	File ID:	0114206.D
Sampled:	01/24/12 10:15	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 14:48
Solids:	93.34	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.79	3.57	7.15	U
208-96-8	Acenaphthylene		1.79	3.57	7.15	U
120-12-7	Anthracene		1.79	3.57	7.15	U
56-55-3	Benzo(a)anthracene		1.79	3.57	7.15	U
50-32-8	Benzo(a)pyrene		1.79	3.57	7.15	U
205-99-2	Benzo(b)fluoranthene		1.79	3.57	7.15	U
191-24-2	Benzo(g,h,i)perylene		1.79	3.57	7.15	U
207-08-9	Benzo(k)fluoranthene		1.79	3.57	7.15	U
218-01-9	Chrysene		1.79	3.57	7.15	U
53-70-3	Dibenz(a,h)anthracene		1.79	3.57	7.15	U
206-44-0	Fluoranthene		1.79	3.57	7.15	U
86-73-7	Fluorene		1.79	3.57	7.15	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.79	3.57	7.15	U
90-12-0	1-Methylnaphthalene		1.79	3.57	7.15	U
91-57-6	2-Methylnaphthalene		1.79	3.57	7.15	U
91-20-3	Naphthalene		1.79	3.57	7.15	U
85-01-8	Phenanthrene		1.79	3.57	7.15	U
129-00-0	Pyrene		1.79	3.57	7.15	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3571	2580	72.2	14 - 129	
Terphenyl-d14	3571	2982	83.5	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS07-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-07	File ID:	0114207.D
Sampled:	01/24/12 10:30	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 15:16
Solids:	88.93	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.81	3.60	7.21	U
208-96-8	Acenaphthylene		1.81	3.60	7.21	U
120-12-7	Anthracene		1.81	3.60	7.21	U
56-55-3	Benzo(a)anthracene		1.81	3.60	7.21	U
50-32-8	Benzo(a)pyrene		1.81	3.60	7.21	U
205-99-2	Benzo(b)fluoranthene		1.81	3.60	7.21	U
191-24-2	Benzo(g,h,i)perylene		1.81	3.60	7.21	U
207-08-9	Benzo(k)fluoranthene		1.81	3.60	7.21	U
218-01-9	Chrysene		1.81	3.60	7.21	U
53-70-3	Dibenz(a,h)anthracene		1.81	3.60	7.21	U
206-44-0	Fluoranthene		1.81	3.60	7.21	U
86-73-7	Fluorene		1.81	3.60	7.21	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.81	3.60	7.21	U
90-12-0	1-Methylnaphthalene		1.81	3.60	7.21	U
91-57-6	2-Methylnaphthalene		1.81	3.60	7.21	U
91-20-3	Naphthalene		1.81	3.60	7.21	U
85-01-8	Phenanthrene		1.81	3.60	7.21	U
129-00-0	Pyrene		1.81	3.60	7.21	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3604	2792	77.5	14 - 129	
Terphenyl-d14	3604	3457	95.9	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS08-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-08	File ID:	0114208.D
Sampled:	01/24/12 10:45	Prepared:	01/25/12 14:48	Analyzed:	02/02/12 15:43
Solids:	80.97	Preparation:	EXT_3546	Dilution:	1

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.98	3.95	7.92	U
208-96-8	Acenaphthylene	20.0	1.98	3.95	7.92	
120-12-7	Anthracene	4.77	1.98	3.95	7.92	I
56-55-3	Benzo(a)anthracene	3.39	1.98	3.95	7.92	I
50-32-8	Benzo(a)pyrene	8.57	1.98	3.95	7.92	
205-99-2	Benzo(b)fluoranthene	9.92	1.98	3.95	7.92	V
191-24-2	Benzo(g,h,i)perylene	31.9	1.98	3.95	7.92	
207-08-9	Benzo(k)fluoranthene		1.98	3.95	7.92	U
218-01-9	Chrysene	3.52	1.98	3.95	7.92	IV
53-70-3	Dibenz(a,h)anthracene	4.52	1.98	3.95	7.92	I
206-44-0	Fluoranthene	3.05	1.98	3.95	7.92	I
86-73-7	Fluorene		1.98	3.95	7.92	U
193-39-5	Indeno(1,2,3-cd)pyrene	17.9	1.98	3.95	7.92	
90-12-0	1-Methylnaphthalene		1.98	3.95	7.92	U
91-57-6	2-Methylnaphthalene		1.98	3.95	7.92	U
91-20-3	Naphthalene		1.98	3.95	7.92	U
85-01-8	Phenanthrene		1.98	3.95	7.92	U
129-00-0	Pyrene	3.38	1.98	3.95	7.92	I

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3959	2812	71.0	14 - 129	
Terphenyl-d14	3959	3258	82.3	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS09-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-09	File ID:	0114209.D
Sampled:	01/24/12 11:00	Prepared:	02/01/12 10:55	Analyzed:	02/03/12 18:16
Solids:	78.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	3.75	2.07	4.12	8.26	I
208-96-8	Acenaphthylene	19.1	2.07	4.12	8.26	
120-12-7	Anthracene	9.22	2.07	4.12	8.26	
56-55-3	Benzo(a)anthracene	10.5	2.07	4.12	8.26	
50-32-8	Benzo(a)pyrene	9.18	2.07	4.12	8.26	
205-99-2	Benzo(b)fluoranthene	12.0	2.07	4.12	8.26	
191-24-2	Benzo(g,h,i)perylene	26.8	2.07	4.12	8.26	
207-08-9	Benzo(k)fluoranthene	5.95	2.07	4.12	8.26	I
218-01-9	Chrysene	10.7	2.07	4.12	8.26	
53-70-3	Dibenz(a,h)anthracene	4.71	2.07	4.12	8.26	I
206-44-0	Fluoranthene	25.5	2.07	4.12	8.26	
86-73-7	Fluorene	6.23	2.07	4.12	8.26	I
193-39-5	Indeno(1,2,3-cd)pyrene	16.2	2.07	4.12	8.26	
90-12-0	1-Methylnaphthalene	2.62	2.07	4.12	8.26	I
91-57-6	2-Methylnaphthalene	3.50	2.07	4.12	8.26	I
91-20-3	Naphthalene	4.34	2.07	4.12	8.26	I
85-01-8	Phenanthrene	16.4	2.07	4.12	8.26	
129-00-0	Pyrene	22.5	2.07	4.12	8.26	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4127	2892	70.1	14 - 129	
Terphenyl-d14	4127	3486	84.5	14 - 129	

ANALYSIS DATA SHEET

MPT-289-SS10-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-10	File ID:	0114210.D
Sampled:	01/24/12 11:15	Prepared:	02/01/12 10:55	Analyzed:	02/03/12 19:38
Solids:	82.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		2.01	4.00	8.01	U
208-96-8	Acenaphthylene	8.10	2.01	4.00	8.01	
120-12-7	Anthracene		2.01	4.00	8.01	U
56-55-3	Benzo(a)anthracene	3.93	2.01	4.00	8.01	I
50-32-8	Benzo(a)pyrene	6.97	2.01	4.00	8.01	I
205-99-2	Benzo(b)fluoranthene	7.91	2.01	4.00	8.01	I
191-24-2	Benzo(g,h,i)perylene	16.6	2.01	4.00	8.01	
207-08-9	Benzo(k)fluoranthene	3.01	2.01	4.00	8.01	I
218-01-9	Chrysene	3.87	2.01	4.00	8.01	I
53-70-3	Dibenz(a,h)anthracene		2.01	4.00	8.01	U
206-44-0	Fluoranthene	4.65	2.01	4.00	8.01	I
86-73-7	Fluorene		2.01	4.00	8.01	U
193-39-5	Indeno(1,2,3-cd)pyrene	8.86	2.01	4.00	8.01	
90-12-0	1-Methylnaphthalene		2.01	4.00	8.01	U
91-57-6	2-Methylnaphthalene		2.01	4.00	8.01	U
91-20-3	Naphthalene		2.01	4.00	8.01	U
85-01-8	Phenanthrene	2.37	2.01	4.00	8.01	I
129-00-0	Pyrene	7.12	2.01	4.00	8.01	I

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4005	3030	75.7	14 - 129	
Terphenyl-d14	4005	3497	87.3	14 - 129	

ANALYSIS DATA SHEET

MPT-289-RB01-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1201142-11	File ID:	0114211.D
Sampled:	01/24/12 11:05	Prepared:	01/26/12 12:00	Analyzed:	02/04/12 01:04
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2A26004 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene	0.0952	0.0463	0.0926	0.185	I
85-01-8	Phenanthrene		0.0926	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	35.04	75.7	34 - 167	
Terphenyl-d14	46.30	39.37	85.0	34 - 167	

ANALYSIS DATA SHEET

MPT-289-SS11-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-12	File ID:	0114212.D
Sampled:	01/24/12 11:30	Prepared:	02/01/12 10:55	Analyzed:	02/03/12 20:05
Solids:	92.97	Preparation:	EXT_3546	Dilution:	1

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/Kg dry)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.76	3.51	7.03	U
208-96-8	Acenaphthylene		1.76	3.51	7.03	U
120-12-7	Anthracene		1.76	3.51	7.03	U
56-55-3	Benzo(a)anthracene		1.76	3.51	7.03	U
50-32-8	Benzo(a)pyrene		1.76	3.51	7.03	U
205-99-2	Benzo(b)fluoranthene		1.76	3.51	7.03	U
191-24-2	Benzo(g,h,i)perylene		1.76	3.51	7.03	U
207-08-9	Benzo(k)fluoranthene		1.76	3.51	7.03	U
218-01-9	Chrysene		1.76	3.51	7.03	U
53-70-3	Dibenz(a,h)anthracene		1.76	3.51	7.03	U
206-44-0	Fluoranthene		1.76	3.51	7.03	U
86-73-7	Fluorene		1.76	3.51	7.03	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.76	3.51	7.03	U
90-12-0	1-Methylnaphthalene		1.76	3.51	7.03	U
91-57-6	2-Methylnaphthalene		1.76	3.51	7.03	U
91-20-3	Naphthalene		1.76	3.51	7.03	U
85-01-8	Phenanthrene		1.76	3.51	7.03	U
129-00-0	Pyrene		1.76	3.51	7.03	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3515	2531	72.0	14 - 129	
Terphenyl-d14	3515	2966	84.4	14 - 129	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03314	Instrument:	MS-BNA4
		Calibration:	1238006

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03314-CCV1) ug/mL				Lab File ID: SEQ-CCV2.D		Analyzed: 02/02/12 05:29		
2-Fluorobiphenyl	5.000	110	80 - 120	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	5.000	118	80 - 120	11.496	11.496	0.0000	+/-0.500	
LCS (2A25003-BS1) ug/Kg wet				Lab File ID: A25003L1.D		Analyzed: 02/02/12 05:56		
2-Fluorobiphenyl	3333	84.7	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3333	108	14 - 129	11.505	11.496	0.0090	+/-0.500	
Blank (2A25003-BLK1) ug/Kg wet				Lab File ID: A25003B1.D		Analyzed: 02/02/12 06:23		
2-Fluorobiphenyl	3333	85.7	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3333	108	14 - 129	11.505	11.496	0.0090	+/-0.500	
MPT-289-SS01-04-20120124 (1201142-01) ug/Kg dry				Lab File ID: 0114201.D		Analyzed: 02/02/12 12:27		
2-Fluorobiphenyl	3833	81.1	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3833	104	14 - 129	11.505	11.496	0.0090	+/-0.500	
MPT-289-SS02-04-20120124 (1201142-02) ug/Kg dry				Lab File ID: 0114202.D		Analyzed: 02/02/12 12:56		
2-Fluorobiphenyl	3550	65.1	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3550	83.6	14 - 129	11.496	11.496	0.0000	+/-0.500	
MPT-289-SS03-04-20120124 (1201142-03) ug/Kg dry				Lab File ID: 0114203.D		Analyzed: 02/02/12 13:24		
2-Fluorobiphenyl	3472	62.4	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3472	78.4	14 - 129	11.496	11.496	0.0000	+/-0.500	
MPT-289-SS04-04-20120124 (1201142-04) ug/Kg dry				Lab File ID: 0114204.D		Analyzed: 02/02/12 13:52		
2-Fluorobiphenyl	3446	67.5	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3446	81.4	14 - 129	11.496	11.496	0.0000	+/-0.500	
MPT-289-SS05-04-20120124 (1201142-05) ug/Kg dry				Lab File ID: 0114205.D		Analyzed: 02/02/12 14:20		
2-Fluorobiphenyl	3388	58.7	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3388	72.8	14 - 129	11.496	11.496	0.0000	+/-0.500	
MPT-289-SS06-04-20120124 (1201142-06) ug/Kg dry				Lab File ID: 0114206.D		Analyzed: 02/02/12 14:48		
2-Fluorobiphenyl	3571	72.2	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3571	83.5	14 - 129	11.496	11.496	0.0000	+/-0.500	
MPT-289-SS07-04-20120124 (1201142-07) ug/Kg dry				Lab File ID: 0114207.D		Analyzed: 02/02/12 15:16		
2-Fluorobiphenyl	3604	77.5	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3604	95.9	14 - 129	11.505	11.496	0.0090	+/-0.500	
MPT-289-SS08-03-20120124 (1201142-08) ug/Kg dry				Lab File ID: 0114208.D		Analyzed: 02/02/12 15:43		
2-Fluorobiphenyl	3959	71.0	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3959	82.3	14 - 129	11.496	11.496	0.0000	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03314	Instrument:	MS-BNA4
		Calibration:	1238006

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Matrix Spike (2A25003-MS1) ug/Kg dry				Lab File ID: 0114203M.D		Analyzed: 02/02/12 16:11		
2-Fluorobiphenyl	3495	66.5	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3495	78.3	14 - 129	11.496	11.496	0.0000	+/-0.500	
Matrix Spike Dup (2A25003-MSD1) ug/Kg dry				Lab File ID: 0114203S.D		Analyzed: 02/02/12 16:39		
2-Fluorobiphenyl	3472	70.5	14 - 129	6.913	6.913	0.0000	+/-0.500	
Terphenyl-d14	3472	81.2	14 - 129	11.496	11.496	0.0000	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03712	Instrument:	MS-BNA4
		Calibration:	1238006

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03712-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 02/03/12 16:28		
2-Fluorobiphenyl	5.000	113	80 - 120	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	5.000	108	80 - 120	11.44	11.44	0.0000	+/-0.500	
LCS (2A31007-BS2) ug/Kg wet				Lab File ID: A31007L1.D		Analyzed: 02/03/12 16:55		
2-Fluorobiphenyl	3333	83.7	14 - 129	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	3333	88.7	14 - 129	11.44	11.44	0.0000	+/-0.500	
LCS Dup (2A31007-BSD2) ug/Kg wet				Lab File ID: A31007L2.D		Analyzed: 02/03/12 17:22		
2-Fluorobiphenyl	3333	81.4	14 - 129	6.867	6.866	0.0010	+/-0.500	
Terphenyl-d14	3333	87.6	14 - 129	11.44	11.44	0.0000	+/-0.500	
Blank (2A31007-BLK2) ug/Kg wet				Lab File ID: A31007B1.D		Analyzed: 02/03/12 17:49		
2-Fluorobiphenyl	3333	83.5	14 - 129	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	3333	85.3	14 - 129	11.44	11.44	0.0000	+/-0.500	
MPT-289-SS09-03-20120124 (1201142-09) ug/Kg dry				Lab File ID: 0114209.D		Analyzed: 02/03/12 18:16		
2-Fluorobiphenyl	4127	70.1	14 - 129	6.867	6.866	0.0010	+/-0.500	
Terphenyl-d14	4127	84.5	14 - 129	11.44	11.44	0.0000	+/-0.500	
Matrix Spike (2A31007-MS2) ug/Kg dry				Lab File ID: 0114209M.D		Analyzed: 02/03/12 18:44		
2-Fluorobiphenyl	4101	67.4	14 - 129	6.876	6.866	0.0100	+/-0.500	
Terphenyl-d14	4101	82.2	14 - 129	11.45	11.44	0.0100	+/-0.500	
Matrix Spike Dup (2A31007-MSD2) ug/Kg dry				Lab File ID: 0114209S.D		Analyzed: 02/03/12 19:11		
2-Fluorobiphenyl	4101	64.1	14 - 129	6.876	6.866	0.0100	+/-0.500	
Terphenyl-d14	4101	80.5	14 - 129	11.44	11.44	0.0000	+/-0.500	
MPT-289-SS10-03-20120124 (1201142-10) ug/Kg dry				Lab File ID: 0114210.D		Analyzed: 02/03/12 19:38		
2-Fluorobiphenyl	4005	75.7	14 - 129	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	4005	87.3	14 - 129	11.44	11.44	0.0000	+/-0.500	
MPT-289-SS11-03-20120124 (1201142-12) ug/Kg dry				Lab File ID: 0114212.D		Analyzed: 02/03/12 20:05		
2-Fluorobiphenyl	3515	72.0	14 - 129	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	3515	84.4	14 - 129	11.44	11.44	0.0000	+/-0.500	
LCS (2A26004-BS2) ug/L				Lab File ID: A26004L1.D		Analyzed: 02/03/12 22:21		
2-Fluorobiphenyl	50.00	73.8	34 - 167	6.867	6.866	0.0010	+/-0.500	
Terphenyl-d14	50.00	96.3	34 - 167	11.45	11.44	0.0100	+/-0.500	
LCS Dup (2A26004-BSD2) ug/L				Lab File ID: A26004L2.D		Analyzed: 02/03/12 22:48		
2-Fluorobiphenyl	50.00	76.7	34 - 167	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	50.00	97.0	34 - 167	11.45	11.44	0.0100	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03712	Instrument:	MS-BNA4
		Calibration:	1238006

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Blank (2A26004-BLK2) ug/L				Lab File ID: A26004B1.D		Analyzed: 02/03/12 23:15		
2-Fluorobiphenyl	50.00	58.7	34 - 167	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	50.00	79.7	34 - 167	11.449	11.44	0.0090	+/-0.500	
MPT-289-RB01-20120124 (1201142-11) ug/L				Lab File ID: 0114211.D		Analyzed: 02/04/12 01:04		
2-Fluorobiphenyl	46.30	75.7	34 - 167	6.866	6.866	0.0000	+/-0.500	
Terphenyl-d14	46.30	85.0	34 - 167	11.44	11.44	0.0000	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A25003	Laboratory ID:	2A25003-BS1
Preparation:	EXT_3546	Initial/Final:	15 g / 1 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Acenaphthene	66.67	52.45	78.7	28 - 110
Acenaphthylene	66.67	54.32	81.5	23 - 126
Anthracene	66.67	53.61	80.4	28 - 136
Benzo(a)anthracene	66.67	63.21	94.8	31 - 146
Benzo(a)pyrene	66.67	54.89	82.3	28 - 128
Benzo(b)fluoranthene	66.67	58.33	87.5	30 - 139
Benzo(g,h,i)perylene	66.67	66.00	99.0	21 - 149
Benzo(k)fluoranthene	66.67	52.93	79.4	42 - 129
Chrysene	66.67	62.73	94.1	39 - 134
Dibenz(a,h)anthracene	66.67	68.55	103	30 - 138
Fluoranthene	66.67	59.00	88.5	30 - 142
Fluorene	66.67	56.74	85.1	27 - 116
Indeno(1,2,3-cd)pyrene	66.67	62.27	93.4	17 - 164
1-Methylnaphthalene	66.67	50.55	75.8	30 - 111
2-Methylnaphthalene	66.67	52.83	79.2	30 - 111
Naphthalene	66.67	49.58	74.4	29 - 106
Phenanthrene	66.67	55.60	83.4	32 - 127
Pyrene	66.67	59.12	88.7	28 - 130

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A26004	Laboratory ID:	2A26004-BS2
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.7501	75.0	41 - 132
Acenaphthylene	1.000	0.7655	76.6	43 - 140
Anthracene	1.000	0.8006	80.1	50 - 139
Benzo(a)anthracene	1.000	0.9424	94.2	58 - 141
Benzo(a)pyrene	1.000	0.7438	74.4	31 - 142
Benzo(b)fluoranthene	1.000	0.8182	81.8	42 - 156
Benzo(g,h,i)perylene	1.000	0.8969	89.7	12 - 171
Benzo(k)fluoranthene	1.000	0.8247	82.5	49 - 165
Chrysene	1.000	0.8758	87.6	51 - 155
Dibenz(a,h)anthracene	1.000	0.7976	79.8	28 - 153
Fluoranthene	1.000	0.9586	95.9	47 - 158
Fluorene	1.000	0.8105	81.0	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.8727	87.3	20 - 167
1-Methylnaphthalene	1.000	0.7036	70.4	35 - 131
2-Methylnaphthalene	1.000	0.7131	71.3	36 - 121
Naphthalene	1.000	0.6729	67.3	39 - 125
Phenanthrene	1.000	0.8782	87.8	46 - 144
Pyrene	1.000	0.9702	97.0	39 - 158

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.000	0.7686	76.9	2.44	30	41 - 132
Acenaphthylene	1.000	0.8221	82.2	7.13	30	43 - 140
Anthracene	1.000	0.8146	81.5	1.74	30	50 - 139
Benzo(a)anthracene	1.000	0.8928	89.3	5.41	30	58 - 141
Benzo(a)pyrene	1.000	0.7637	76.4	2.63	30	31 - 142
Benzo(b)fluoranthene	1.000	0.8008	80.1	2.15	30	42 - 156
Benzo(g,h,i)perylene	1.000	0.8344	83.4	7.22	30	12 - 171
Benzo(k)fluoranthene	1.000	0.8087	80.9	1.97	30	49 - 165
Chrysene	1.000	0.8683	86.8	0.860	30	51 - 155

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A26004	Laboratory ID:	2A26004-BSD2
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenz(a,h)anthracene	1.000	0.7392	73.9	7.60	30	28 - 153
Fluoranthene	1.000	0.9456	94.6	1.38	30	47 - 158
Fluorene	1.000	0.8520	85.2	4.99	30	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.7910	79.1	9.82	30	20 - 167
1-Methylnaphthalene	1.000	0.7120	71.2	1.19	30	35 - 131
2-Methylnaphthalene	1.000	0.7672	76.7	7.32	30	36 - 121
Naphthalene	1.000	0.6953	69.5	3.29	30	39 - 125
Phenanthrene	1.000	0.9033	90.3	2.81	30	46 - 144
Pyrene	1.000	0.9210	92.1	5.20	30	39 - 158

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A31007	Laboratory ID:	2A31007-BS2
Preparation:	EXT_3546	Initial/Final:	15 g / 1 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCS CONCENTRATION (ug/Kg wet)	LCS % REC.	QC LIMITS REC.
Acenaphthene	66.67	52.60	78.9	28 - 110
Acenaphthylene	66.67	52.77	79.2	23 - 126
Anthracene	66.67	54.29	81.4	28 - 136
Benzo(a)anthracene	66.67	51.65	77.5	31 - 146
Benzo(a)pyrene	66.67	53.79	80.7	28 - 128
Benzo(b)fluoranthene	66.67	53.91	80.9	30 - 139
Benzo(g,h,i)perylene	66.67	65.54	98.3	21 - 149
Benzo(k)fluoranthene	66.67	52.88	79.3	42 - 129
Chrysene	66.67	47.20	70.8	39 - 134
Dibenz(a,h)anthracene	66.67	61.36	92.0	30 - 138
Fluoranthene	66.67	55.21	82.8	30 - 142
Fluorene	66.67	56.28	84.4	27 - 116
Indeno(1,2,3-cd)pyrene	66.67	63.58	95.4	17 - 164
1-Methylnaphthalene	66.67	51.86	77.8	30 - 111
2-Methylnaphthalene	66.67	51.76	77.6	30 - 111
Naphthalene	66.67	49.96	74.9	29 - 106
Phenanthrene	66.67	58.79	88.2	32 - 127
Pyrene	66.67	56.11	84.2	28 - 130

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCSD CONCENTRATION (ug/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	66.67	52.17	78.2	0.829	30	28 - 110
Acenaphthylene	66.67	54.77	82.2	3.71	30	23 - 126
Anthracene	66.67	52.77	79.2	2.83	30	28 - 136
Benzo(a)anthracene	66.67	52.18	78.3	1.02	30	31 - 146
Benzo(a)pyrene	66.67	51.60	77.4	4.15	30	28 - 128
Benzo(b)fluoranthene	66.67	54.09	81.1	0.322	30	30 - 139
Benzo(g,h,i)perylene	66.67	64.06	96.1	2.28	30	21 - 149
Benzo(k)fluoranthene	66.67	53.30	79.9	0.776	30	42 - 129
Chrysene	66.67	52.89	79.3	11.4	30	39 - 134

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A31007	Laboratory ID:	2A31007-BSD2
Preparation:	EXT_3546	Initial/Final:	15 g / 1 mL

ANALYTE	SPIKE ADDED (ug/Kg wet)	LCSD CONCENTRATION (ug/Kg wet)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenz(a,h)anthracene	66.67	57.95	86.9	5.72	30	30 - 138
Fluoranthene	66.67	55.93	83.9	1.29	30	30 - 142
Fluorene	66.67	56.65	85.0	0.655	30	27 - 116
Indeno(1,2,3-cd)pyrene	66.67	62.94	94.4	1.03	30	17 - 164
1-Methylnaphthalene	66.67	49.46	74.2	4.73	30	30 - 111
2-Methylnaphthalene	66.67	49.71	74.6	4.04	30	30 - 111
Naphthalene	66.67	48.50	72.7	2.97	30	29 - 106
Phenanthrene	66.67	56.27	84.4	4.38	30	32 - 127
Pyrene	66.67	54.22	81.3	3.42	30	28 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-SS03-04-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A25003

% Solids: 94.73

Source Sample Name: **1201142-03**

ANALYTE	SPIKE ADDED (ug/Kg dry)	SAMPLE CONCENTRATION (ug/Kg dry)	MS CONCENTRATION (ug/Kg dry)	MS % REC.	Q	QC LIMITS REC.
Acenaphthene	69.91	ND	42.12	60.3		28 - 110
Acenaphthylene	69.91	ND	45.15	64.6		23 - 126
Anthracene	69.91	ND	43.63	62.4		28 - 136
Benzo(a)anthracene	69.91	ND	46.57	66.6		31 - 146
Benzo(a)pyrene	69.91	ND	42.74	61.1		28 - 128
Benzo(b)fluoranthene	69.91	ND	46.92	67.1		30 - 139
Benzo(g,h,i)perylene	69.91	ND	42.25	60.4		21 - 149
Benzo(k)fluoranthene	69.91	ND	46.23	66.1		42 - 129
Chrysene	69.91	ND	45.65	65.3		39 - 134
Dibenz(a,h)anthracene	69.91	ND	42.49	60.8		30 - 138
Fluoranthene	69.91	ND	46.18	66.1		30 - 142
Fluorene	69.91	ND	46.15	66.0		27 - 116
Indeno(1,2,3-cd)pyrene	69.91	ND	40.95	58.6		17 - 164
1-Methylnaphthalene	69.91	ND	42.20	60.4		30 - 111
2-Methylnaphthalene	69.91	ND	44.28	63.3		30 - 111
Naphthalene	69.91	ND	41.91	60.0		29 - 106
Phenanthrene	69.91	ND	45.08	64.5		32 - 127
Pyrene	69.91	ND	45.03	64.4		28 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-SS03-04-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A25003

% Solids: 94.73

Source Sample Name: **1201142-03**

ANALYTE	SPIKE ADDED (ug/Kg dry)	MSD CONCENTRATION (ug/Kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	69.45	43.08	62.0	2.26		30	28 - 110
Acenaphthylene	69.45	45.21	65.1	0.133		30	23 - 126
Anthracene	69.45	45.53	65.6	4.27		30	28 - 136
Benzo(a)anthracene	69.45	44.97	64.8	3.49		30	31 - 146
Benzo(a)pyrene	69.45	45.20	65.1	5.61		30	28 - 128
Benzo(b)fluoranthene	69.45	49.84	71.8	6.03		30	30 - 139
Benzo(g,h,i)perylene	69.45	48.74	70.2	14.3		30	21 - 149
Benzo(k)fluoranthene	69.45	47.64	68.6	3.00		30	42 - 129
Chrysene	69.45	45.78	65.9	0.277		30	39 - 134
Dibenz(a,h)anthracene	69.45	49.35	71.1	14.9		30	30 - 138
Fluoranthene	69.45	47.63	68.6	3.09		30	30 - 142
Fluorene	69.45	46.62	67.1	1.03		30	27 - 116
Indeno(1,2,3-cd)pyrene	69.45	47.85	68.9	15.5		30	17 - 164
1-Methylnaphthalene	69.45	43.94	63.3	4.03		30	30 - 111
2-Methylnaphthalene	69.45	44.23	63.7	0.120		30	30 - 111
Naphthalene	69.45	43.50	62.6	3.73		30	29 - 106
Phenanthrene	69.45	45.69	65.8	1.35		30	32 - 127
Pyrene	69.45	45.99	66.2	2.11		30	28 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-SS09-03-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A31007

% Solids: 78.67

Source Sample Name: **1201142-09**

ANALYTE	SPIKE ADDED (ug/Kg dry)	SAMPLE CONCENTRATION (ug/Kg dry)	MS CONCENTRATION (ug/Kg dry)	MS % REC.	Q	QC LIMITS REC.
Acenaphthene	4101	3.748	2638	64.2		28 - 110
Acenaphthylene	4101	19.05	2825	68.4		23 - 126
Anthracene	4101	9.224	3030	73.7		28 - 136
Benzo(a)anthracene	4101	10.48	3633	88.3		31 - 146
Benzo(a)pyrene	4101	9.179	2746	66.7		28 - 128
Benzo(b)fluoranthene	4101	11.97	2895	70.3		30 - 139
Benzo(g,h,i)perylene	4101	26.83	3023	73.1		21 - 149
Benzo(k)fluoranthene	4101	5.953	2757	67.1		42 - 129
Chrysene	4101	10.74	3303	80.3		39 - 134
Dibenz(a,h)anthracene	4101	4.715	2917	71.0		30 - 138
Fluoranthene	4101	25.49	3294	79.7		30 - 142
Fluorene	4101	6.230	2971	72.3		27 - 116
Indeno(1,2,3-cd)pyrene	4101	16.20	2988	72.5		17 - 164
1-Methylnaphthalene	4101	2.624	2479	60.4		30 - 111
2-Methylnaphthalene	4101	3.497	2515	61.3		30 - 111
Naphthalene	4101	4.340	2371	57.7		29 - 106
Phenanthrene	4101	16.43	2980	72.3		32 - 127
Pyrene	4101	22.45	3299	79.9		28 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-SS09-03-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A31007

% Solids: 78.67

Source Sample Name: **1201142-09**

ANALYTE	SPIKE ADDED (ug/Kg dry)	MSD CONCENTRATION (ug/Kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	4101	2549	62.1	3.43		30	28 - 110
Acenaphthylene	4101	2705	65.5	4.33		30	23 - 126
Anthracene	4101	2956	71.9	2.47		30	28 - 136
Benzo(a)anthracene	4101	3575	86.9	1.60		30	31 - 146
Benzo(a)pyrene	4101	2796	68.0	1.83		30	28 - 128
Benzo(b)fluoranthene	4101	3192	77.6	9.77		30	30 - 139
Benzo(g,h,i)perylene	4101	2998	72.5	0.821		30	21 - 149
Benzo(k)fluoranthene	4101	2814	68.5	2.05		30	42 - 129
Chrysene	4101	3265	79.4	1.15		30	39 - 134
Dibenz(a,h)anthracene	4101	2911	70.9	0.195		30	30 - 138
Fluoranthene	4101	3266	79.0	0.857		30	30 - 142
Fluorene	4101	2905	70.7	2.23		30	27 - 116
Indeno(1,2,3-cd)pyrene	4101	3014	73.1	0.844		30	17 - 164
1-Methylnaphthalene	4101	2373	57.8	4.37		30	30 - 111
2-Methylnaphthalene	4101	2441	59.4	3.01		30	30 - 111
Naphthalene	4101	2280	55.5	3.90		30	29 - 106
Phenanthrene	4101	2966	71.9	0.492		30	32 - 127
Pyrene	4101	3246	78.6	1.63		30	28 - 130

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A25003 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS01-04-20120124	1201142-01	01/25/12 14:48	15.50	1.00
MPT-289-SS02-04-20120124	1201142-02	01/25/12 14:48	15.20	1.00
MPT-289-SS03-04-20120124	1201142-03	01/25/12 14:48	15.20	1.00
MPT-289-SS04-04-20120124	1201142-04	01/25/12 14:48	15.30	1.00
MPT-289-SS05-04-20120124	1201142-05	01/25/12 14:48	15.80	1.00
MPT-289-SS06-04-20120124	1201142-06	01/25/12 14:48	15.00	1.00
MPT-289-SS07-04-20120124	1201142-07	01/25/12 14:48	15.60	1.00
MPT-289-SS08-03-20120124	1201142-08	01/25/12 14:48	15.60	1.00
Blank	2A25003-BLK1	01/25/12 14:48	15.00	1.00
LCS	2A25003-BS1	01/25/12 14:48	15.00	1.00
MPT-289-SS03-04-20120124	2A25003-MS1	01/25/12 14:48	15.10	1.00
MPT-289-SS03-04-20120124	2A25003-MSD1	01/25/12 14:48	15.20	1.00

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A26004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-RB01-20120124	1201142-11	01/26/12 12:00	1,080.00	1.00
Blank	2A26004-BLK2	01/26/12 12:00	1,000.00	1.00
LCS	2A26004-BS2	01/26/12 12:00	1,000.00	1.00
LCS Dup	2A26004-BSD2	01/26/12 12:00	1,000.00	1.00

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A31007 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS09-03-20120124	1201142-09	02/01/12 10:55	15.40	1.00
MPT-289-SS10-03-20120124	1201142-10	02/01/12 10:55	15.10	1.00
MPT-289-SS11-03-20120124	1201142-12	02/01/12 10:55	15.30	1.00
Blank	2A31007-BLK2	02/01/12 10:55	15.00	1.00
LCS	2A31007-BS2	02/01/12 10:55	15.00	1.00
LCS Dup	2A31007-BSD2	02/01/12 10:55	15.00	1.00
MPT-289-SS09-03-20120124	2A31007-MS2	02/01/12 10:55	15.50	1.00
MPT-289-SS09-03-20120124	2A31007-MSD2	02/01/12 10:55	15.50	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	08/24/11
Instrument ID:	MS-BNA4	Injection Time:	14:16
Sequence:	1H23712	Lab Sample ID:	1H23712-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	46.6	PASS
68	Less than 2% of 69	1.46	PASS
69	Less than 200% of 198	49.8	PASS
70	Less than 2% of 69	0.379	PASS
127	40 - 60% of 198	57.3	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.71	PASS
275	10 - 30% of 198	25	PASS
365	1 - 200% of 198	3.37	PASS
441	0.001 - 100% of 443	79.7	PASS
442	40 - 200% of 198	97.7	PASS
443	17 - 23% of 442	19.5	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN2.D	Injection Date:	02/02/12
Instrument ID:	MS-BNA4	Injection Time:	05:11
Sequence:	2B03314	Lab Sample ID:	2B03314-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	31.4	PASS
68	Less than 2% of 69	1.63	PASS
69	Less than 200% of 198	40.4	PASS
70	Less than 2% of 69	0.447	PASS
127	40 - 60% of 198	49.2	PASS
197	Less than 1% of 198	0.706	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.81	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.2	PASS
441	0.001 - 100% of 443	79.1	PASS
442	40 - 200% of 198	81	PASS
443	17 - 23% of 442	19.8	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/03/12
Instrument ID:	MS-BNA4	Injection Time:	16:10
Sequence:	2B03712	Lab Sample ID:	2B03712-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	57.2	PASS
68	Less than 2% of 69	1.63	PASS
69	Less than 200% of 198	49.2	PASS
70	Less than 2% of 69	0.434	PASS
127	40 - 60% of 198	50.7	PASS
197	Less than 1% of 198	0.76	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.67	PASS
275	10 - 30% of 198	20.2	PASS
365	1 - 200% of 198	2.1	PASS
441	0.001 - 100% of 443	77.8	PASS
442	40 - 200% of 198	53.1	PASS
443	17 - 23% of 442	19.7	PASS

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1H23712	Instrument:	MS-BNA4
Calibration:	1238006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1H23712-TUN1	SEQ-TUN1.D	08/24/11 14:16
Cal Standard	1H23712-CAL1	SEQ-CAL1.D	08/24/11 14:35
Cal Standard	1H23712-CAL2	SEQ-CAL2.D	08/24/11 15:05
Cal Standard	1H23712-CAL3	SEQ-CAL3.D	08/24/11 15:35
Cal Standard	1H23712-CAL4	SEQ-CAL4.D	08/24/11 16:05
Cal Standard	1H23712-CAL5	SEQ-CAL5.D	08/24/11 16:35
Cal Standard	1H23712-CAL6	SEQ-CAL6.D	08/24/11 17:05
Cal Standard	1H23712-CAL7	SEQ-CAL7.D	08/24/11 17:34
Cal Standard	1H23712-CAL9	SEQ-CAL9.D	08/24/11 18:33
Initial Cal Check	1H23712-ICV1	SEQ-ICV1.D	08/24/11 19:02

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03314	Instrument:	MS-BNA4
Calibration:	1238006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2B03314-TUN1	SEQ-TUN2.D	02/02/12 05:11
Calibration Check	2B03314-CCV1	SEQ-CCV2.D	02/02/12 05:29
LCS	2A25003-BS1	A25003L1.D	02/02/12 05:56
Blank	2A25003-BLK1	A25003B1.D	02/02/12 06:23
MPT-289-SS01-04-20120124	1201142-01	0114201.D	02/02/12 12:27
MPT-289-SS02-04-20120124	1201142-02	0114202.D	02/02/12 12:56
MPT-289-SS03-04-20120124	1201142-03	0114203.D	02/02/12 13:24
MPT-289-SS04-04-20120124	1201142-04	0114204.D	02/02/12 13:52
MPT-289-SS05-04-20120124	1201142-05	0114205.D	02/02/12 14:20
MPT-289-SS06-04-20120124	1201142-06	0114206.D	02/02/12 14:48
MPT-289-SS07-04-20120124	1201142-07	0114207.D	02/02/12 15:16
MPT-289-SS08-03-20120124	1201142-08	0114208.D	02/02/12 15:43
MPT-289-SS03-04-20120124	2A25003-MS1	0114203M.D	02/02/12 16:11
MPT-289-SS03-04-20120124	2A25003-MSD1	0114203S.D	02/02/12 16:39

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03712	Instrument:	MS-BNA4
Calibration:	1238006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2B03712-TUN1	SEQ-TUN1.D	02/03/12 16:10
Calibration Check	2B03712-CCV1	SEQ-CCV1.D	02/03/12 16:28
LCS	2A31007-BS2	A31007L1.D	02/03/12 16:55
LCS Dup	2A31007-BSD2	A31007L2.D	02/03/12 17:22
Blank	2A31007-BLK2	A31007B1.D	02/03/12 17:49
MPT-289-SS09-03-20120124	1201142-09	0114209.D	02/03/12 18:16
MPT-289-SS09-03-20120124	2A31007-MS2	0114209M.D	02/03/12 18:44
MPT-289-SS09-03-20120124	2A31007-MSD2	0114209S.D	02/03/12 19:11
MPT-289-SS10-03-20120124	1201142-10	0114210.D	02/03/12 19:38
MPT-289-SS11-03-20120124	1201142-12	0114212.D	02/03/12 20:05
LCS	2A26004-BS2	A26004L1.D	02/03/12 22:21
LCS Dup	2A26004-BSD2	A26004L2.D	02/03/12 22:48
Blank	2A26004-BLK2	A26004B1.D	02/03/12 23:15
MPT-289-RB01-20120124	1201142-11	0114211.D	02/04/12 01:04

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Sequence: 2B03314
Instrument: MS-BNA4
Calibration: 1238006

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2B03314-CCV1)			Lab File ID: SEQ-CCV2.D			Analyzed: 02/02/12 05:29			
Phenanthrene-d10	105793	9.488	105583	10.012	100	50 - 200	-0.5240	+/-0.50	
Perylene-d12	42853	15.568	58058	16.483	74	50 - 200	-0.9150	+/-0.50	
LCS (2A25003-BS1)			Lab File ID: A25003L1.D			Analyzed: 02/02/12 05:56			
Phenanthrene-d10	115001	9.488	105793	9.488	109	50 - 200	0.0000	+/-0.50	
Perylene-d12	52982	15.568	42853	15.568	124	50 - 200	0.0000	+/-0.50	
Blank (2A25003-BLK1)			Lab File ID: A25003B1.D			Analyzed: 02/02/12 06:23			
Phenanthrene-d10	107798	9.488	105793	9.488	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	45038	15.568	42853	15.568	105	50 - 200	0.0000	+/-0.50	
MPT-289-SS01-04-20120124 (1201142-01)			Lab File ID: 0114201.D			Analyzed: 02/02/12 12:27			
Phenanthrene-d10	109380	9.488	105793	9.488	103	50 - 200	0.0000	+/-0.50	
Perylene-d12	43424	15.568	42853	15.568	101	50 - 200	0.0000	+/-0.50	
MPT-289-SS02-04-20120124 (1201142-02)			Lab File ID: 0114202.D			Analyzed: 02/02/12 12:56			
Phenanthrene-d10	107363	9.488	105793	9.488	101	50 - 200	0.0000	+/-0.50	
Perylene-d12	43139	15.568	42853	15.568	101	50 - 200	0.0000	+/-0.50	
MPT-289-SS03-04-20120124 (1201142-03)			Lab File ID: 0114203.D			Analyzed: 02/02/12 13:24			
Phenanthrene-d10	109346	9.488	105793	9.488	103	50 - 200	0.0000	+/-0.50	
Perylene-d12	44791	15.568	42853	15.568	105	50 - 200	0.0000	+/-0.50	
MPT-289-SS04-04-20120124 (1201142-04)			Lab File ID: 0114204.D			Analyzed: 02/02/12 13:52			
Phenanthrene-d10	103193	9.488	105793	9.488	98	50 - 200	0.0000	+/-0.50	
Perylene-d12	37776	15.568	42853	15.568	88	50 - 200	0.0000	+/-0.50	
MPT-289-SS05-04-20120124 (1201142-05)			Lab File ID: 0114205.D			Analyzed: 02/02/12 14:20			
Phenanthrene-d10	103535	9.488	105793	9.488	98	50 - 200	0.0000	+/-0.50	
Perylene-d12	42714	15.568	42853	15.568	100	50 - 200	0.0000	+/-0.50	
MPT-289-SS06-04-20120124 (1201142-06)			Lab File ID: 0114206.D			Analyzed: 02/02/12 14:48			
Phenanthrene-d10	99239	9.488	105793	9.488	94	50 - 200	0.0000	+/-0.50	
Perylene-d12	39075	15.568	42853	15.568	91	50 - 200	0.0000	+/-0.50	
MPT-289-SS07-04-20120124 (1201142-07)			Lab File ID: 0114207.D			Analyzed: 02/02/12 15:16			
Phenanthrene-d10	115322	9.488	105793	9.488	109	50 - 200	0.0000	+/-0.50	
Perylene-d12	47188	15.568	42853	15.568	110	50 - 200	0.0000	+/-0.50	
MPT-289-SS08-03-20120124 (1201142-08)			Lab File ID: 0114208.D			Analyzed: 02/02/12 15:43			
Phenanthrene-d10	104125	9.488	105793	9.488	98	50 - 200	0.0000	+/-0.50	
Perylene-d12	40613	15.568	42853	15.568	95	50 - 200	0.0000	+/-0.50	
Matrix Spike (2A25003-MS1)			Lab File ID: 0114203M.D			Analyzed: 02/02/12 16:11			
Phenanthrene-d10	91891	9.488	105793	9.488	87	50 - 200	0.0000	+/-0.50	
Perylene-d12	33204	15.568	42853	15.568	77	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03314	Instrument:	MS-BNA4
		Calibration:	1238006

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (2A25003-MSD1)			Lab File ID: 0114203S.D			Analyzed: 02/02/12 16:39			
Phenanthrene-d10	107341	9.488	105793	9.488	101	50 - 200	0.0000	+/-0.50	
Perylene-d12	39191	15.568	42853	15.568	91	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1201142
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Sequence: 2B03712
Instrument: MS-BNA4
Calibration: 1238006

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2B03712-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 02/03/12 16:28			
Phenanthrene-d10	98596	9.432	105583	10.012	93	50 - 200	-0.5800	+/-0.50	
Perylene-d12	40818	15.465	58058	16.483	70	50 - 200	-1.0180	+/-0.50	
LCS (2A31007-BS2)			Lab File ID: A31007L1.D			Analyzed: 02/03/12 16:55			
Phenanthrene-d10	100649	9.432	98596	9.432	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	41883	15.475	40818	15.465	103	50 - 200	0.0100	+/-0.50	
LCS Dup (2A31007-BSD2)			Lab File ID: A31007L2.D			Analyzed: 02/03/12 17:22			
Phenanthrene-d10	107756	9.432	98596	9.432	109	50 - 200	0.0000	+/-0.50	
Perylene-d12	45078	15.475	40818	15.465	110	50 - 200	0.0100	+/-0.50	
Blank (2A31007-BLK2)			Lab File ID: A31007B1.D			Analyzed: 02/03/12 17:49			
Phenanthrene-d10	108849	9.432	98596	9.432	110	50 - 200	0.0000	+/-0.50	
Perylene-d12	33997	15.475	40818	15.465	83	50 - 200	0.0100	+/-0.50	
MPT-289-SS09-03-20120124 (1201142-09)			Lab File ID: 0114209.D			Analyzed: 02/03/12 18:16			
Phenanthrene-d10	113702	9.432	98596	9.432	115	50 - 200	0.0000	+/-0.50	
Perylene-d12	49966	15.475	40818	15.465	122	50 - 200	0.0100	+/-0.50	
Matrix Spike (2A31007-MS2)			Lab File ID: 0114209M.D			Analyzed: 02/03/12 18:44			
Phenanthrene-d10	133020	9.442	98596	9.432	135	50 - 200	0.0100	+/-0.50	
Perylene-d12	65516	15.475	40818	15.465	161	50 - 200	0.0100	+/-0.50	
Matrix Spike Dup (2A31007-MSD2)			Lab File ID: 0114209S.D			Analyzed: 02/03/12 19:11			
Phenanthrene-d10	126049	9.441	98596	9.432	128	50 - 200	0.0090	+/-0.50	
Perylene-d12	56994	15.484	40818	15.465	140	50 - 200	0.0190	+/-0.50	
MPT-289-SS10-03-20120124 (1201142-10)			Lab File ID: 0114210.D			Analyzed: 02/03/12 19:38			
Phenanthrene-d10	108752	9.432	98596	9.432	110	50 - 200	0.0000	+/-0.50	
Perylene-d12	41071	15.475	40818	15.465	101	50 - 200	0.0100	+/-0.50	
MPT-289-SS11-03-20120124 (1201142-12)			Lab File ID: 0114212.D			Analyzed: 02/03/12 20:05			
Phenanthrene-d10	107080	9.432	98596	9.432	109	50 - 200	0.0000	+/-0.50	
Perylene-d12	37838	15.475	40818	15.465	93	50 - 200	0.0100	+/-0.50	
LCS (2A26004-BS2)			Lab File ID: A26004L1.D			Analyzed: 02/03/12 22:21			
Phenanthrene-d10	133295	9.442	98596	9.432	135	50 - 200	0.0100	+/-0.50	
Perylene-d12	58845	15.475	40818	15.465	144	50 - 200	0.0100	+/-0.50	
LCS Dup (2A26004-BSD2)			Lab File ID: A26004L2.D			Analyzed: 02/03/12 22:48			
Phenanthrene-d10	135149	9.432	98596	9.432	137	50 - 200	0.0000	+/-0.50	
Perylene-d12	58998	15.475	40818	15.465	145	50 - 200	0.0100	+/-0.50	
Blank (2A26004-BLK2)			Lab File ID: A26004B1.D			Analyzed: 02/03/12 23:15			
Phenanthrene-d10	166818	9.441	98596	9.432	169	50 - 200	0.0090	+/-0.50	
Perylene-d12	69357	15.475	40818	15.465	170	50 - 200	0.0100	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03712	Instrument:	MS-BNA4
		Calibration:	1238006

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
MPT-289-RB01-20120124 (1201142-11)			Lab File ID: 0114211.D			Analyzed: 02/04/12 01:04			
Phenanthrene-d10	136257	9.441	98596	9.432	138	50 - 200	0.0090	+/-0.50	
Perylene-d12	46019	15.475	40818	15.465	113	50 - 200	0.0100	+/-0.50	

INITIAL CALIBRATION DATA

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.9250935	0.2	0.9137168	0.5	0.9364989	1	0.8390082	5	0.9269314	10	0.8393586
Acenaphthylene	0.1	1.310504	0.2	1.352461	0.5	1.271225	1	1.290937	5	1.386269	10	1.244926
Anthracene	0.1	1.06615	0.2	1.134831	0.5	1.101345	1	1.102299	5	1.188356	10	1.148519
Benzo(a)anthracene	0.1	0.5409415	0.2	0.6742062	0.5	0.5788873	1	0.7281002	5	0.6593813	10	0.7987934
Benzo(a)pyrene	0.1	1.378905	0.2	1.002256	0.5	1.016483	1	1.019308	5	1.075559	10	1.127809
Benzo(b)fluoranthene	0.1	1.122247	0.2	1.081127	0.5	1.238364	1	1.347532	5	1.400773	10	1.437569
Benzo(g,h,i)perylene	0.1	0.6978619	0.2	0.7632258	0.5	0.8646701	1	0.7961693	5	0.8182613	10	0.795468
Benzo(k)fluoranthene	0.1	1.344346	0.2	1.226983	0.5	1.325082	1	1.236505	5	1.347683	10	1.446366
Chrysene	0.1	0.5955121	0.2	0.6734888	0.5	0.5942531	1	0.7589479	5	0.660282	10	0.8081928
Dibenz(a,h)anthracene	0.1	0.6888766	0.2	0.7301866	0.5	0.6212773	1	0.7604637	5	0.8511152	10	0.8183589
Fluoranthene	0.1	0.9437932	0.2	1.144311	0.5	0.9607296	1	1.154921	5	1.122071	10	1.164182
Fluorene	0.1	0.7208357	0.2	0.7935516	0.5	0.8908906	1	0.8564163	5	0.9304082	10	0.8408686
2-Fluorobiphenyl	0.1	0.9588967	0.2	1.008414	0.5	0.9847565	1	0.9339003	5	0.9920094	10	0.8838859
Indeno(1,2,3-cd)pyrene	0.1	0.7780389	0.2	0.7517426	0.5	0.7584511	1	0.7398291	5	0.7760122	10	0.8214657
1-Methylnaphthalene	0.1	0.9628524	0.2	0.8826634	0.5	0.9399633	1	0.8267998	5	0.8932794	10	0.7948718
2-Methylnaphthalene	0.1	0.9978244	0.2	0.8913748	0.5	0.9675566	1	0.8669293	5	0.9100694	10	0.7917116
Naphthalene	0.1	1.747878	0.2	1.602784	0.5	1.531261	1	1.442401	5	1.532498	10	1.3281
Phenanthrene	0.1	1.100493	0.2	1.227222	0.5	1.113348	1	1.180057	5	1.188825	10	1.148797
Pyrene	0.1	1.188956	0.2	1.014922	0.5	0.9682087	1	1.142021	5	1.1344	10	1.157542
Terphenyl-d14	0.1	0.5796893	0.2	0.6757435	0.5	0.5439169	1	0.6142371	5	0.613267	10	0.6844251
2,4,6-Tribromophenol	0.2	~~0.144293~~	0.4	~~0.1036649~~	1	0.1499083	2	0.1575348	10	0.1820851	20	0.1756278

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	20	0.8784872	50	0.8458228								
Acenaphthylene	20	1.297533	50	1.20877								
Anthracene	20	1.205372	50	1.177482								
Benzo(a)anthracene	20	0.7839756	50	0.8122166								
Benzo(a)pyrene	20	1.205292	50	1.177397								
Benzo(b)fluoranthene	20	1.575784	50	1.477207								
Benzo(g,h,i)perylene	20	0.9098913	50	0.885178								
Benzo(k)fluoranthene	20	1.46597	50	1.416125								
Chrysene	20	0.7485348	50	0.7758677								
Dibenz(a,h)anthracene	20	0.9273779	50	0.9395602								
Fluoranthene	20	1.131794	50	1.144791								
Fluorene	20	0.885353	50	0.8574573								
2-Fluorobiphenyl	20	0.9326552	50	0.8648192								
Indeno(1,2,3-cd)pyrene	20	0.9101472	50	0.9226895								
1-Methylnaphthalene	20	0.8391113	50	0.7766753								
2-Methylnaphthalene	20	0.8795573	50	0.8287812								
Naphthalene	20	1.40468	50	1.318393								
Phenanthrene	20	1.192468	50	1.157994								
Pyrene	20	1.154247	50	1.138918								
Terphenyl-d14	20	0.6894383	50	0.6732402								
2,4,6-Tribromophenol	40	0.1903821	100	0.183212								

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8881147	4.765862	8.240375	8.005672E-02			15	
Acenaphthylene	1.295328	4.367363	8.027625	8.607367E-02			15	
Anthracene	1.140544	4.254591	10.10862	0.0700752			15	
Benzo(a)anthracene	0.6970627	14.59061	13.80988	0.0529908			15	
Benzo(a)pyrene	1.125376	11.34597	16.38237	4.577814E-02			15	
Benzo(b)fluoranthene	1.335075	13.04297	15.80187	8.137397E-02			15	
Benzo(g,h,i)perylene	0.8163407	8.478144	18.8055	4.843521E-02			15	
Benzo(k)fluoranthene	1.351132	6.606248	15.85263	0.0761119			15	
Chrysene	0.7018849	11.75411	13.87237	4.522786E-02			15	
Dibenz(a,h)anthracene	0.792152	14.22527	18.3905	4.438511E-02			15	
Fluoranthene	1.095824	8.181104	11.52912	1.610412E-02			15	
Fluorene	0.8469727	7.646974	8.87125	4.967807E-02			15	
2-Fluorobiphenyl	0.9449172	5.432361	7.39325	5.511184E-02			15	
Indeno(1,2,3-cd)pyrene	0.807297	8.877407	18.33625	0.0475878			15	
1-Methylnaphthalene	0.8645271	7.716576	7.057125	4.664672E-02			15	
2-Methylnaphthalene	0.8917256	7.590679	6.94225	9.738335E-02			15	
Naphthalene	1.488499	9.765898	6.111375	7.795345E-02			15	
Phenanthrene	1.163651	3.638206	10.04475	7.061639E-02			15	
Pyrene	1.112402	6.963902	11.839	6.221472E-02			15	
Terphenyl-d14	0.6342447	8.591082	12.10513	2.846396E-02			15	
2,4,6-Tribromophenol	0.173125	9.199082	9.170834	8.799438E-02			15	

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	1238006
Lab File ID:	SEQ-ICV1.D	Calibration Date:	08/24/11 14:16
Sequence:	1H23712	Injection Date:	08/24/11
Lab Sample ID:	1H23712-ICV1	Injection Time:	19:02

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.510	0.8881147	0.9786847		10.2	20
Acenaphthylene	A	5.000	5.578	1.295328	1.445077		11.6	20
Anthracene	A	5.000	5.626	1.140544	1.283382		12.5	20
Benzo(a)anthracene	A	5.000	5.418	0.6970627	0.7552943		8.4	20
Benzo(a)pyrene	A	5.000	5.079	1.125376	1.143152		1.6	20
Benzo(b)fluoranthene	A	5.000	5.229	1.335075	1.39628		4.6	20
Benzo(g,h,i)perylene	A	5.000	5.076	0.8163407	0.8286846		1.5	20
Benzo(k)fluoranthene	A	5.000	5.414	1.351132	1.462908		8.3	20
Chrysene	A	5.000	5.424	0.7018849	0.7614294		8.5	20
Dibenz(a,h)anthracene	A	5.000	5.548	0.792152	0.8789424		11.0	20
Fluoranthene	A	5.000	5.359	1.095824	1.174563		7.2	20
Fluorene	A	5.000	5.736	0.8469727	0.9715661		14.7	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.009	0.807297	0.808753		0.2	20
1-Methylnaphthalene	A	5.000	4.971	0.8645271	0.8594861		-0.6	20
2-Methylnaphthalene	A	5.000	5.068	0.8917256	0.9037654		1.4	20
Naphthalene	A	5.000	5.687	1.488499	1.69304		13.7	20
Phenanthrene	A	5.000	5.574	1.163651	1.297238		11.5	20
Pyrene	A	5.000	5.539	1.112402	1.232241		10.8	20
2-Fluorobiphenyl	A	5.000	5.058	0.9449172	0.9558622		1.2	20
Terphenyl-d14	A	5.000	5.406	0.6342447	0.6857866		8.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	1238006
Lab File ID:	SEQ-CCV2.D	Calibration Date:	08/24/11 14:16
Sequence:	2B03314	Injection Date:	02/02/12
Lab Sample ID:	2B03314-CCV1	Injection Time:	05:29

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.972	0.8881147	0.8832286		-0.6	20
Acenaphthylene	A	5.000	5.142	1.295328	1.332262		2.9	20
Anthracene	A	5.000	4.967	1.140544	1.133052		-0.7	20
Benzo(a)anthracene	A	5.000	5.486	0.6970627	0.7648635		9.7	20
Benzo(a)pyrene	A	5.000	4.846	1.125376	1.090747		-3.1	20
Benzo(b)fluoranthene	A	5.000	5.230	1.335075	1.396584		4.6	20
Benzo(g,h,i)perylene	A	5.000	4.347	0.8163407	0.7098126		-13.0	20
Benzo(k)fluoranthene	A	5.000	5.116	1.351132	1.382652		2.3	20
Chrysene	A	5.000	5.150	0.7018849	0.722959		3.0	20
Dibenz(a,h)anthracene	A	5.000	4.777	0.792152	0.7568105		-4.5	20
Fluoranthene	A	5.000	5.014	1.095824	1.098982		0.3	20
Fluorene	A	5.000	5.250	0.8469727	0.8892706		5.0	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.561	0.807297	0.7363872		-8.8	20
1-Methylnaphthalene	A	5.000	4.868	0.8645271	0.8418081		-2.6	20
2-Methylnaphthalene	A	5.000	4.923	0.8917256	0.87806		-1.5	20
Naphthalene	A	5.000	4.713	1.488499	1.403136		-5.7	20
Phenanthrene	A	5.000	4.822	1.163651	1.122239		-3.6	20
Pyrene	A	5.000	5.122	1.112402	1.13955		2.4	20
2-Fluorobiphenyl	A	5.000	5.520	0.9449172	1.043131		10.4	20
Terphenyl-d14	A	5.000	5.876	0.6342447	0.7454387		17.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	1238006
Lab File ID:	SEQ-CCV1.D	Calibration Date:	08/24/11 14:16
Sequence:	2B03712	Injection Date:	02/03/12
Lab Sample ID:	2B03712-CCV1	Injection Time:	16:28

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.998	0.8881147	0.8877399		-0.04	20
Acenaphthylene	A	5.000	5.226	1.295328	1.353968		4.5	20
Anthracene	A	5.000	4.879	1.140544	1.112923		-2.4	20
Benzo(a)anthracene	A	5.000	4.771	0.6970627	0.6651426		-4.6	20
Benzo(a)pyrene	A	5.000	4.773	1.125376	1.074281		-4.5	20
Benzo(b)fluoranthene	A	5.000	4.892	1.335075	1.306335		-2.2	20
Benzo(g,h,i)perylene	A	5.000	5.878	0.8163407	0.95966		17.6	20
Benzo(k)fluoranthene	A	5.000	4.589	1.351132	1.240022		-8.2	20
Chrysene	A	5.000	4.542	0.7018849	0.6375269		-9.2	20
Dibenz(a,h)anthracene	A	5.000	5.265	0.792152	0.8341614		5.3	20
Fluoranthene	A	5.000	5.050	1.095824	1.106854		1.0	20
Fluorene	A	5.000	5.294	0.8469727	0.8968579		5.9	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.425	0.807297	0.8759273		8.5	20
1-Methylnaphthalene	A	5.000	5.031	0.8645271	0.8699136		0.6	20
2-Methylnaphthalene	A	5.000	4.781	0.8917256	0.852637		-4.4	20
Naphthalene	A	5.000	4.737	1.488499	1.410201		-5.3	20
Phenanthrene	A	5.000	5.040	1.163651	1.172861		0.8	20
Pyrene	A	5.000	5.092	1.112402	1.132827		1.8	20
2-Fluorobiphenyl	A	5.000	5.669	0.9449172	1.071305		13.4	20
Terphenyl-d14	A	5.000	5.392	0.6342447	0.6839405		7.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A25003-BLK1 File ID: A25003B1.D

Sampled: Prepared: Analyzed: 02/02/12 06:23

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.67	3.33	6.67	U
208-96-8	Acenaphthylene		1.67	3.33	6.67	U
120-12-7	Anthracene		1.67	3.33	6.67	U
56-55-3	Benzo(a)anthracene		1.67	3.33	6.67	U
50-32-8	Benzo(a)pyrene		1.67	3.33	6.67	U
205-99-2	Benzo(b)fluoranthene	2.08	1.67	3.33	6.67	I
191-24-2	Benzo(g,h,i)perylene		1.67	3.33	6.67	U
207-08-9	Benzo(k)fluoranthene		1.67	3.33	6.67	U
218-01-9	Chrysene	1.73	1.67	3.33	6.67	I
53-70-3	Dibenz(a,h)anthracene		1.67	3.33	6.67	U
206-44-0	Fluoranthene		1.67	3.33	6.67	U
86-73-7	Fluorene		1.67	3.33	6.67	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.67	3.33	6.67	U
90-12-0	1-Methylnaphthalene		1.67	3.33	6.67	U
91-57-6	2-Methylnaphthalene		1.67	3.33	6.67	U
91-20-3	Naphthalene		1.67	3.33	6.67	U
85-01-8	Phenanthrene		1.67	3.33	6.67	U
129-00-0	Pyrene		1.67	3.33	6.67	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2858	85.7	14 - 129	
Terphenyl-d14	3333	3593	108	14 - 129	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A25003-BS1 File ID: A25003L1.D

Sampled: Prepared: Analyzed: 02/02/12 05:56

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	52.45	1.67	3.33	6.67	
208-96-8	Acenaphthylene	54.32	1.67	3.33	6.67	
120-12-7	Anthracene	53.61	1.67	3.33	6.67	
56-55-3	Benzo(a)anthracene	63.21	1.67	3.33	6.67	
50-32-8	Benzo(a)pyrene	54.89	1.67	3.33	6.67	
205-99-2	Benzo(b)fluoranthene	58.33	1.67	3.33	6.67	
191-24-2	Benzo(g,h,i)perylene	66.00	1.67	3.33	6.67	
207-08-9	Benzo(k)fluoranthene	52.93	1.67	3.33	6.67	
218-01-9	Chrysene	62.73	1.67	3.33	6.67	
53-70-3	Dibenz(a,h)anthracene	68.55	1.67	3.33	6.67	
206-44-0	Fluoranthene	59.00	1.67	3.33	6.67	
86-73-7	Fluorene	56.74	1.67	3.33	6.67	
193-39-5	Indeno(1,2,3-cd)pyrene	62.27	1.67	3.33	6.67	
90-12-0	1-Methylnaphthalene	50.55	1.67	3.33	6.67	
91-57-6	2-Methylnaphthalene	52.83	1.67	3.33	6.67	
91-20-3	Naphthalene	49.58	1.67	3.33	6.67	
85-01-8	Phenanthrene	55.60	1.67	3.33	6.67	
129-00-0	Pyrene	59.12	1.67	3.33	6.67	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2822	84.7	14 - 129	
Terphenyl-d14	3333	3616	108	14 - 129	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A25003-MS1 File ID: 0114203M.D

Sampled: Prepared: Analyzed: 02/02/12 16:11

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg dry	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	42.12	1.75	3.49	6.99	
208-96-8	Acenaphthylene	45.15	1.75	3.49	6.99	
120-12-7	Anthracene	43.63	1.75	3.49	6.99	
56-55-3	Benzo(a)anthracene	46.57	1.75	3.49	6.99	
50-32-8	Benzo(a)pyrene	42.74	1.75	3.49	6.99	
205-99-2	Benzo(b)fluoranthene	46.92	1.75	3.49	6.99	
191-24-2	Benzo(g,h,i)perylene	42.25	1.75	3.49	6.99	
207-08-9	Benzo(k)fluoranthene	46.23	1.75	3.49	6.99	
218-01-9	Chrysene	45.65	1.75	3.49	6.99	
53-70-3	Dibenz(a,h)anthracene	42.49	1.75	3.49	6.99	
206-44-0	Fluoranthene	46.18	1.75	3.49	6.99	
86-73-7	Fluorene	46.15	1.75	3.49	6.99	
193-39-5	Indeno(1,2,3-cd)pyrene	40.95	1.75	3.49	6.99	
90-12-0	1-Methylnaphthalene	42.20	1.75	3.49	6.99	
91-57-6	2-Methylnaphthalene	44.28	1.75	3.49	6.99	
91-20-3	Naphthalene	41.91	1.75	3.49	6.99	
85-01-8	Phenanthrene	45.08	1.75	3.49	6.99	
129-00-0	Pyrene	45.03	1.75	3.49	6.99	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3495	2325	66.5	14 - 129	
Terphenyl-d14	3495	2736	78.3	14 - 129	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A25003-MSD1 File ID: 0114203S.D

Sampled: Prepared: Analyzed: 02/02/12 16:39

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A25003 Sequence: 2B03314 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg dry	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	43.08	1.74	3.47	6.95	
208-96-8	Acenaphthylene	45.21	1.74	3.47	6.95	
120-12-7	Anthracene	45.53	1.74	3.47	6.95	
56-55-3	Benzo(a)anthracene	44.97	1.74	3.47	6.95	
50-32-8	Benzo(a)pyrene	45.20	1.74	3.47	6.95	
205-99-2	Benzo(b)fluoranthene	49.84	1.74	3.47	6.95	
191-24-2	Benzo(g,h,i)perylene	48.74	1.74	3.47	6.95	
207-08-9	Benzo(k)fluoranthene	47.64	1.74	3.47	6.95	
218-01-9	Chrysene	45.78	1.74	3.47	6.95	
53-70-3	Dibenz(a,h)anthracene	49.35	1.74	3.47	6.95	
206-44-0	Fluoranthene	47.63	1.74	3.47	6.95	
86-73-7	Fluorene	46.62	1.74	3.47	6.95	
193-39-5	Indeno(1,2,3-cd)pyrene	47.85	1.74	3.47	6.95	
90-12-0	1-Methylnaphthalene	43.94	1.74	3.47	6.95	
91-57-6	2-Methylnaphthalene	44.23	1.74	3.47	6.95	
91-20-3	Naphthalene	43.50	1.74	3.47	6.95	
85-01-8	Phenanthrene	45.69	1.74	3.47	6.95	
129-00-0	Pyrene	45.99	1.74	3.47	6.95	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3472	2447	70.5	14 - 129	
Terphenyl-d14	3472	2818	81.2	14 - 129	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A26004-BLK2 File ID: A26004B1.D

Sampled: Prepared: Analyzed: 02/03/12 23:15

Solids: Preparation: EXT_3510 Dilution:

Batch: 2A26004 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.100	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	29.33	58.7	34 - 167	
Terphenyl-d14	50.00	39.86	79.7	34 - 167	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A26004-BS2 File ID: A26004L1.D

Sampled: Prepared: Analyzed: 02/03/12 22:21

Solids: Preparation: EXT_3510 Dilution:

Batch: 2A26004 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.7501	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.7655	0.0500	0.100	0.200	
120-12-7	Anthracene	0.8006	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.9424	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.7438	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.8182	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.8969	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.8247	0.0500	0.100	0.200	
218-01-9	Chrysene	0.8758	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7976	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.9586	0.0500	0.100	0.200	
86-73-7	Fluorene	0.8105	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.8727	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.7036	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.7131	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.6729	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.8782	0.100	0.200	0.400	
129-00-0	Pyrene	0.9702	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	36.91	73.8	34 - 167	
Terphenyl-d14	50.00	48.16	96.3	34 - 167	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A26004-BSD2 File ID: A26004L2.D

Sampled: Prepared: Analyzed: 02/03/12 22:48

Solids: Preparation: EXT_3510 Dilution:

Batch: 2A26004 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.7686	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.8221	0.0500	0.100	0.200	
120-12-7	Anthracene	0.8146	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.8928	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.7637	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.8008	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.8344	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.8087	0.0500	0.100	0.200	
218-01-9	Chrysene	0.8683	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7392	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.9456	0.0500	0.100	0.200	
86-73-7	Fluorene	0.8520	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7910	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.7120	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.7672	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.6953	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.9033	0.100	0.200	0.400	
129-00-0	Pyrene	0.9210	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	38.34	76.7	34 - 167	
Terphenyl-d14	50.00	48.51	97.0	34 - 167	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31007-BLK2 File ID: A31007B1.D

Sampled: Prepared: Analyzed: 02/03/12 17:49

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		1.67	3.33	6.67	U
208-96-8	Acenaphthylene		1.67	3.33	6.67	U
120-12-7	Anthracene		1.67	3.33	6.67	U
56-55-3	Benzo(a)anthracene		1.67	3.33	6.67	U
50-32-8	Benzo(a)pyrene		1.67	3.33	6.67	U
205-99-2	Benzo(b)fluoranthene		1.67	3.33	6.67	U
191-24-2	Benzo(g,h,i)perylene		1.67	3.33	6.67	U
207-08-9	Benzo(k)fluoranthene		1.67	3.33	6.67	U
218-01-9	Chrysene		1.67	3.33	6.67	U
53-70-3	Dibenz(a,h)anthracene		1.67	3.33	6.67	U
206-44-0	Fluoranthene		1.67	3.33	6.67	U
86-73-7	Fluorene		1.67	3.33	6.67	U
193-39-5	Indeno(1,2,3-cd)pyrene		1.67	3.33	6.67	U
90-12-0	1-Methylnaphthalene		1.67	3.33	6.67	U
91-57-6	2-Methylnaphthalene		1.67	3.33	6.67	U
91-20-3	Naphthalene		1.67	3.33	6.67	U
85-01-8	Phenanthrene		1.67	3.33	6.67	U
129-00-0	Pyrene		1.67	3.33	6.67	U

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2784	83.5	14 - 129	
Terphenyl-d14	3333	2844	85.3	14 - 129	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31007-BS2 File ID: A31007L1.D

Sampled: Prepared: Analyzed: 02/03/12 16:55

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	52.60	1.67	3.33	6.67	
208-96-8	Acenaphthylene	52.77	1.67	3.33	6.67	
120-12-7	Anthracene	54.29	1.67	3.33	6.67	
56-55-3	Benzo(a)anthracene	51.65	1.67	3.33	6.67	
50-32-8	Benzo(a)pyrene	53.79	1.67	3.33	6.67	
205-99-2	Benzo(b)fluoranthene	53.91	1.67	3.33	6.67	
191-24-2	Benzo(g,h,i)perylene	65.54	1.67	3.33	6.67	
207-08-9	Benzo(k)fluoranthene	52.88	1.67	3.33	6.67	
218-01-9	Chrysene	47.20	1.67	3.33	6.67	
53-70-3	Dibenz(a,h)anthracene	61.36	1.67	3.33	6.67	
206-44-0	Fluoranthene	55.21	1.67	3.33	6.67	
86-73-7	Fluorene	56.28	1.67	3.33	6.67	
193-39-5	Indeno(1,2,3-cd)pyrene	63.58	1.67	3.33	6.67	
90-12-0	1-Methylnaphthalene	51.86	1.67	3.33	6.67	
91-57-6	2-Methylnaphthalene	51.76	1.67	3.33	6.67	
91-20-3	Naphthalene	49.96	1.67	3.33	6.67	
85-01-8	Phenanthrene	58.79	1.67	3.33	6.67	
129-00-0	Pyrene	56.11	1.67	3.33	6.67	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2790	83.7	14 - 129	
Terphenyl-d14	3333	2958	88.7	14 - 129	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31007-BSD2 File ID: A31007L2.D

Sampled: Prepared: Analyzed: 02/03/12 17:22

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg we	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	52.17	1.67	3.33	6.67	
208-96-8	Acenaphthylene	54.77	1.67	3.33	6.67	
120-12-7	Anthracene	52.77	1.67	3.33	6.67	
56-55-3	Benzo(a)anthracene	52.18	1.67	3.33	6.67	
50-32-8	Benzo(a)pyrene	51.60	1.67	3.33	6.67	
205-99-2	Benzo(b)fluoranthene	54.09	1.67	3.33	6.67	
191-24-2	Benzo(g,h,i)perylene	64.06	1.67	3.33	6.67	
207-08-9	Benzo(k)fluoranthene	53.30	1.67	3.33	6.67	
218-01-9	Chrysene	52.89	1.67	3.33	6.67	
53-70-3	Dibenz(a,h)anthracene	57.95	1.67	3.33	6.67	
206-44-0	Fluoranthene	55.93	1.67	3.33	6.67	
86-73-7	Fluorene	56.65	1.67	3.33	6.67	
193-39-5	Indeno(1,2,3-cd)pyrene	62.94	1.67	3.33	6.67	
90-12-0	1-Methylnaphthalene	49.46	1.67	3.33	6.67	
91-57-6	2-Methylnaphthalene	49.71	1.67	3.33	6.67	
91-20-3	Naphthalene	48.50	1.67	3.33	6.67	
85-01-8	Phenanthrene	56.27	1.67	3.33	6.67	
129-00-0	Pyrene	54.22	1.67	3.33	6.67	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg wet)	CONC (ug/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3333	2714	81.4	14 - 129	
Terphenyl-d14	3333	2920	87.6	14 - 129	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31007-MS2 File ID: 0114209M.D

Sampled: Prepared: Analyzed: 02/03/12 18:44

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg dry	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	2638	2.05	4.10	8.21	
208-96-8	Acenaphthylene	2825	2.05	4.10	8.21	
120-12-7	Anthracene	3030	2.05	4.10	8.21	
56-55-3	Benzo(a)anthracene	3633	2.05	4.10	8.21	
50-32-8	Benzo(a)pyrene	2746	2.05	4.10	8.21	
205-99-2	Benzo(b)fluoranthene	2895	2.05	4.10	8.21	
191-24-2	Benzo(g,h,i)perylene	3023	2.05	4.10	8.21	
207-08-9	Benzo(k)fluoranthene	2757	2.05	4.10	8.21	
218-01-9	Chrysene	3303	2.05	4.10	8.21	
53-70-3	Dibenz(a,h)anthracene	2917	2.05	4.10	8.21	
206-44-0	Fluoranthene	3294	2.05	4.10	8.21	
86-73-7	Fluorene	2971	2.05	4.10	8.21	
193-39-5	Indeno(1,2,3-cd)pyrene	2988	2.05	4.10	8.21	
90-12-0	1-Methylnaphthalene	2479	2.05	4.10	8.21	
91-57-6	2-Methylnaphthalene	2515	2.05	4.10	8.21	
91-20-3	Naphthalene	2371	2.05	4.10	8.21	
85-01-8	Phenanthrene	2980	2.05	4.10	8.21	
129-00-0	Pyrene	3299	2.05	4.10	8.21	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4101	2763	67.4	14 - 129	
Terphenyl-d14	4101	3371	82.2	14 - 129	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2A31007-MSD2 File ID: 0114209S.D

Sampled: Prepared: Analyzed: 02/03/12 19:11

Solids: Preparation: EXT_3546 Dilution:

Batch: 2A31007 Sequence: 2B03712 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	ONC. (ug/Kg dry	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	2549	2.05	4.10	8.21	
208-96-8	Acenaphthylene	2705	2.05	4.10	8.21	
120-12-7	Anthracene	2956	2.05	4.10	8.21	
56-55-3	Benzo(a)anthracene	3575	2.05	4.10	8.21	
50-32-8	Benzo(a)pyrene	2796	2.05	4.10	8.21	
205-99-2	Benzo(b)fluoranthene	3192	2.05	4.10	8.21	
191-24-2	Benzo(g,h,i)perylene	2998	2.05	4.10	8.21	
207-08-9	Benzo(k)fluoranthene	2814	2.05	4.10	8.21	
218-01-9	Chrysene	3265	2.05	4.10	8.21	
53-70-3	Dibenz(a,h)anthracene	2911	2.05	4.10	8.21	
206-44-0	Fluoranthene	3266	2.05	4.10	8.21	
86-73-7	Fluorene	2905	2.05	4.10	8.21	
193-39-5	Indeno(1,2,3-cd)pyrene	3014	2.05	4.10	8.21	
90-12-0	1-Methylnaphthalene	2373	2.05	4.10	8.21	
91-57-6	2-Methylnaphthalene	2441	2.05	4.10	8.21	
91-20-3	Naphthalene	2280	2.05	4.10	8.21	
85-01-8	Phenanthrene	2966	2.05	4.10	8.21	
129-00-0	Pyrene	3246	2.05	4.10	8.21	

SYSTEM MONITORING COMPOUND	ADDED (ug/Kg dry)	CONC (ug/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4101	2629	64.1	14 - 129	
Terphenyl-d14	4101	3299	80.5	14 - 129	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS01-04-20120124	01/24/12 09:00	01/25/12 08:20	01/25/12 14:48	1.28	14.00	02/02/12 12:27	7.90	40.00	
MPT-289-SS02-04-20120124	01/24/12 09:15	01/25/12 08:20	01/25/12 14:48	1.27	14.00	02/02/12 12:56	7.92	40.00	
MPT-289-SS03-04-20120124	01/24/12 09:30	01/25/12 08:20	01/25/12 14:48	1.26	14.00	02/02/12 13:24	7.94	40.00	
MPT-289-SS04-04-20120124	01/24/12 09:45	01/25/12 08:20	01/25/12 14:48	1.25	14.00	02/02/12 13:52	7.96	40.00	
MPT-289-SS05-04-20120124	01/24/12 10:00	01/25/12 08:20	01/25/12 14:48	1.24	14.00	02/02/12 14:20	7.98	40.00	
MPT-289-SS06-04-20120124	01/24/12 10:15	01/25/12 08:20	01/25/12 14:48	1.23	14.00	02/02/12 14:48	8.00	40.00	
MPT-289-SS07-04-20120124	01/24/12 10:30	01/25/12 08:20	01/25/12 14:48	1.22	14.00	02/02/12 15:16	8.02	40.00	
MPT-289-SS08-03-20120124	01/24/12 10:45	01/25/12 08:20	01/25/12 14:48	1.21	14.00	02/02/12 15:43	8.04	40.00	
MPT-289-SS09-03-20120124	01/24/12 11:00	01/25/12 08:20	02/01/12 10:55	8.04	14.00	02/03/12 18:16	2.31	40.00	
MPT-289-SS10-03-20120124	01/24/12 11:15	01/25/12 08:20	02/01/12 10:55	8.03	14.00	02/03/12 19:38	2.36	40.00	
MPT-289-RB01-20120124	01/24/12 11:05	01/25/12 08:20	01/26/12 12:00	2.08	7.00	02/04/12 01:04	8.54	40.00	
MPT-289-SS11-03-20120124	01/24/12 11:30	01/25/12 08:20	02/01/12 10:55	8.02	14.00	02/03/12 20:05	2.38	40.00	

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A02402	Instrument:	GL-GCFID2
Calibration:	2024001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2A02402-CAL1	004F0401.D	01/23/12 12:06
Cal Standard	2A02402-CAL2	005F0501.D	01/23/12 12:40
Cal Standard	2A02402-CAL3	006F0601.D	01/23/12 13:13
Cal Standard	2A02402-CAL4	007F0701.D	01/23/12 13:47
Cal Standard	2A02402-CAL5	008F0801.D	01/23/12 14:20
Cal Standard	2A02402-CAL6	009F0901.D	01/23/12 14:53
Initial Cal Check	2A02402-ICV1	010F1001.D	01/23/12 15:27

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
Calibration:	2024001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2B03308-CCV1	002F0201.D	01/30/12 15:10
Blank	2A27014-BLK1	003F0301.D	01/30/12 16:22
LCS	2A27014-BS1	004F0401.D	01/30/12 16:55
LCS Dup	2A27014-BSD1	005F0501.D	01/30/12 17:28
MPT-289-RB01-20120124	1201142-11	006F0601.D	01/30/12 18:01
Calibration Check	2B03308-CCV2	013F1301.D	01/30/12 21:52
Blank	2A27007-BLK1	014F1401.D	01/30/12 22:25
LCS	2A27007-BS1	015F1501.D	01/30/12 22:58
MPT-289-SS01-04-20120124	1201142-01	016F1601.D	01/30/12 23:31
MPT-289-SS02-04-20120124	1201142-02	017F1701.D	01/31/12 00:04
MPT-289-SS03-04-20120124	1201142-03	018F1801.D	01/31/12 00:37
MPT-289-SS03-04-20120124	2A27007-MS1	019F1901.D	01/31/12 01:10
MPT-289-SS03-04-20120124	2A27007-MSD1	020F2001.D	01/31/12 01:43
MPT-289-SS04-04-20120124	1201142-04	021F2101.D	01/31/12 02:16
MPT-289-SS05-04-20120124	1201142-05	022F2201.D	01/31/12 02:49
MPT-289-SS06-04-20120124	1201142-06	023F2301.D	01/31/12 03:22
MPT-289-SS07-04-20120124	1201142-07	024F2401.D	01/31/12 03:55
MPT-289-SS08-03-20120124	1201142-08	025F2501.D	01/31/12 04:28
MPT-289-SS09-03-20120124	1201142-09	026F2601.D	01/31/12 05:01
MPT-289-SS10-03-20120124	1201142-10	027F2701.D	01/31/12 05:34
Calibration Check	2B03308-CCV3	028F2801.D	01/31/12 06:07
MPT-289-SS11-03-20120124	1201142-12	029F2901.D	01/31/12 06:40
Calibration Check	2B03308-CCV4	036F3601.D	01/31/12 10:31

ANALYSIS DATA SHEET

MPT-289-SS01-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-01	File ID:	016F1601.D
Sampled:	01/24/12 09:00	Prepared:	01/27/12 12:24	Analyzed:	01/30/12 23:31
Solids:	84.15	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		12.8	25.6	51.3	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.883	4.100	106	50 - 150	
o-Terphenyl	3.883	3.373	86.9	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS02-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-02	File ID:	017F1701.D
Sampled:	01/24/12 09:15	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 00:04
Solids:	92.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.7	23.4	46.9	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.550	3.381	95.2	50 - 150	
o-Terphenyl	3.550	2.840	80.0	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS03-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-03	File ID:	018F1801.D
Sampled:	01/24/12 09:30	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 00:37
Solids:	94.73	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.6	23.2	46.4	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.519	3.474	98.7	50 - 150	
o-Terphenyl	3.519	2.866	81.5	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS04-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-04	File ID:	021F2101.D
Sampled:	01/24/12 09:45	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 02:16
Solids:	94.83	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.4	22.7	45.5	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.446	3.353	97.3	50 - 150	
o-Terphenyl	3.446	2.824	82.0	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS05-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-05	File ID:	022F2201.D
Sampled:	01/24/12 10:00	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 02:49
Solids:	93.41	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.6	23.2	46.5	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.522	3.804	108	50 - 150	
o-Terphenyl	3.522	3.222	91.5	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS06-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-06	File ID:	023F2301.D
Sampled:	01/24/12 10:15	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 03:22
Solids:	93.34	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.3	22.7	45.3	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.434	1.711	49.8	50 - 150	*
o-Terphenyl	3.434	1.096	31.9	35 - 140	*

ANALYSIS DATA SHEET

MPT-289-SS07-04-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-07	File ID:	024F2401.D
Sampled:	01/24/12 10:30	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 03:55
Solids:	88.93	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		12.1	24.3	48.5	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.675	3.211	87.4	50 - 150	
o-Terphenyl	3.675	2.605	70.9	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS08-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-08	File ID:	025F2501.D
Sampled:	01/24/12 10:45	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 04:28
Solids:	80.97	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		13.5	27.0	54.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.090	4.654	114	50 - 150	
o-Terphenyl	4.090	3.860	94.4	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS09-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-09	File ID:	026F2601.D
Sampled:	01/24/12 11:00	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 05:01
Solids:	78.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		13.8	27.6	55.2	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.182	4.645	111	50 - 150	
o-Terphenyl	4.182	3.929	94.0	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS10-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-10	File ID:	027F2701.D
Sampled:	01/24/12 11:15	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 05:34
Solids:	82.67	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	17.4	12.7	25.4	50.8	I

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.852	4.661	121	50 - 150	
o-Terphenyl	3.852	4.043	105	35 - 140	

ANALYSIS DATA SHEET

MPT-289-RB01-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1201142-11	File ID:	006F0601.D
Sampled:	01/24/12 11:05	Prepared:	01/27/12 13:00	Analyzed:	01/30/12 18:01
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2A27014 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.159	0.318	0.636	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04673	0.04544	97.2	50 - 150	
o-Terphenyl	0.04673	0.03869	82.8	82 - 142	

ANALYSIS DATA SHEET

MPT-289-SS11-03-20120124

Laboratory:	Empirical Laboratories, LLC			SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201142-12	File ID:	029F2901.D
Sampled:	01/24/12 11:30	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 06:40
Solids:	92.97	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.4	22.8	45.5	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.448	3.793	110	50 - 150	
o-Terphenyl	3.448	3.227	93.6	35 - 140	

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A27007	Laboratory ID:	2A27007-BS1
Preparation:	EXT_3546	Initial/Final:	15 g / 2 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	213.3	171.1	80.2	50 - 140

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2A27014	Laboratory ID:	2A27014-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	1.833	57.3	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	2.433	76.0	28.1	30	55 - 118

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

FLPRO

MPT-289-SS03-04-20120124

Laboratory: Empirical Laboratories, LLC

SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2A27007

% Solids: 94.73

Source Sample Name: **1201142-03**

ANALYTE	SPIKE ADDED (mg/Kg dry)	SAMPLE CONCENTRATION (mg/Kg dry)	MS CONCENTRATION (mg/Kg dry)	MS % REC.	Q	QC LIMITS REC.
Petroleum Range Organics	222.2	ND	160.9	72.4		50 - 140

ANALYTE	SPIKE ADDED (mg/Kg dry)	MSD CONCENTRATION (mg/Kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	222.2	167.0	75.1	3.71		40	50 - 140

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A27007 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS01-04-20120124	1201142-01	01/27/12 12:24	15.30	2.00
MPT-289-SS02-04-20120124	1201142-02	01/27/12 12:24	15.20	2.00
MPT-289-SS03-04-20120124	1201142-03	01/27/12 12:24	15.00	2.00
MPT-289-SS04-04-20120124	1201142-04	01/27/12 12:24	15.30	2.00
MPT-289-SS05-04-20120124	1201142-05	01/27/12 12:24	15.20	2.00
MPT-289-SS06-04-20120124	1201142-06	01/27/12 12:24	15.60	2.00
MPT-289-SS07-04-20120124	1201142-07	01/27/12 12:24	15.30	2.00
MPT-289-SS08-03-20120124	1201142-08	01/27/12 12:24	15.10	2.00
MPT-289-SS09-03-20120124	1201142-09	01/27/12 12:24	15.20	2.00
MPT-289-SS10-03-20120124	1201142-10	01/27/12 12:24	15.70	2.00
MPT-289-SS11-03-20120124	1201142-12	01/27/12 12:24	15.60	2.00
Blank	2A27007-BLK1	01/27/12 12:24	15.00	2.00
LCS	2A27007-BS1	01/27/12 12:24	15.00	2.00
MPT-289-SS03-04-20120124	2A27007-MS1	01/27/12 12:24	15.20	2.00
MPT-289-SS03-04-20120124	2A27007-MSD1	01/27/12 12:24	15.20	2.00

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A27014 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-RB01-20120124	1201142-11	01/27/12 13:00	1,070.00	2.00
Blank	2A27014-BLK1	01/27/12 13:00	1,000.00	2.00
LCS	2A27014-BS1	01/27/12 13:00	1,000.00	2.00
LCS Dup	2A27014-BSD1	01/27/12 13:00	1,000.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A02402	Instrument:	GL-GCFID2
Calibration:	2024001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
11L0176	FLPRO CAL6 85ppm	2A02402-CAL1	004F0401.D	01/23/12 12:06
11L0175	FLPRO CAL5 850ppm	2A02402-CAL2	005F0501.D	01/23/12 12:40
11L0174	FLPRO CAL4 2550ppm	2A02402-CAL3	006F0601.D	01/23/12 13:13
11L0173	FLPRO CAL3 4250ppm	2A02402-CAL4	007F0701.D	01/23/12 13:47
11L0172	FLPRO CAL2 5950ppm	2A02402-CAL5	008F0801.D	01/23/12 14:20
11L0171	FLPRO CAL1 8500ppm	2A02402-CAL6	009F0901.D	01/23/12 14:53

INITIAL CALIBRATION DATA
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2024001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	1/23/12 12:06 1/23/12 14:53

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	85	820.9529	850	988.647	2550	780.9647	4250	876.3654	5950	842.9541	8500	900.5278
2-Fluorobiphenyl	5	242.4	10	410.8	15	667	25	832.2	35	895.8857	50	950.22
o-Terphenyl	5	1137.4	10	1168.9	15	1196.333	25	1245.6	35	1193.4	50	1245.36
Petroleum Range Organics	85	820.9529	850	988.647	2550	780.9647	4250	876.3654	5950	842.9541	8500	900.5278
2-Fluorobiphenyl	5	242.4	10	410.8	15	667	25	832.2	35	895.8857	50	950.22
o-Terphenyl	5	1137.4	10	1168.9	15	1196.333	25	1245.6	35	1193.4	50	1245.36

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2024001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	1/23/12 12:06 1/23/12 14:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	868.402	8.319614	3.93	3.055508E-03			20	
2-Fluorobiphenyl	666.4176	42.74964	8.820833	0.478137	0.9980477		0.995	
o-Terphenyl	1197.832	3.552085	10.97467	0.3634249			20	
Petroleum Range Organics	868.402	8.319614	3.93	3.055508E-03			20	
2-Fluorobiphenyl	666.4176	42.74964	8.820833	0.478137	0.9980477		0.995	
o-Terphenyl	1197.832	3.552085	10.97467	0.3634249			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	010F1001.D	Calibration Date:	01/23/12 12:06
Sequence:	2A02402	Injection Date:	01/23/12
Lab Sample ID:	2A02402-ICV1	Injection Time:	15:27

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4137	868.402	898.2155		3.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	002F0201.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/30/12
Lab Sample ID:	2B03308-CCV1	Injection Time:	15:10

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3588	868.402	733.1391		-15.6	25
2-Fluorobiphenyl	L	25.00	24.61	666.4176	820.64		-1.6	25
o-Terphenyl	A	25.00	25.64	1197.832	1228.72		2.6	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	013F1301.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/30/12
Lab Sample ID:	2B03308-CCV2	Injection Time:	21:52

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3720	868.402	760.0464		-12.5	25
2-Fluorobiphenyl	L	25.00	26.30	666.4176	891.88		5.2	25
o-Terphenyl	A	25.00	26.09	1197.832	1250.24		4.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	028F2801.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/31/12
Lab Sample ID:	2B03308-CCV3	Injection Time:	06:07

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4378	868.402	894.6341		3.0	25
2-Fluorobiphenyl	L	25.00	28.91	666.4176	1001.68		15.6	25
o-Terphenyl	A	25.00	27.84	1197.832	1333.96		11.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	036F3601.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/31/12
Lab Sample ID:	2B03308-CCV4	Injection Time:	10:31

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4549	868.402	929.4664		7.0	25
2-Fluorobiphenyl	L	25.00	27.97	666.4176	961.88		11.9	25
o-Terphenyl	A	25.00	27.62	1197.832	1323.44		10.5	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
		Calibration:	2024001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03308-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 01/30/12 15:10		
2-Fluorobiphenyl	25.00	98.4	75 - 125	8.773	8.773	0.0000	+/-0.050	
o-Terphenyl	25.00	103	75 - 125	10.916	10.916	0.0000	+/-0.050	
Blank (2A27014-BLK1) mg/L				Lab File ID: 003F0301.D		Analyzed: 01/30/12 16:22		
2-Fluorobiphenyl	0.05000	96.3	50 - 150	8.79	8.773	0.0170	+/-0.050	
o-Terphenyl	0.05000	97.9	82 - 142	10.97	10.916	0.0540	+/-0.050	*
LCS (2A27014-BS1) mg/L				Lab File ID: 004F0401.D		Analyzed: 01/30/12 16:55		
2-Fluorobiphenyl	0.05000	69.8	50 - 150	8.783	8.773	0.0100	+/-0.050	
o-Terphenyl	0.05000	69.4	82 - 142	10.91	10.916	-0.0060	+/-0.050	*
LCS Dup (2A27014-BSD1) mg/L				Lab File ID: 005F0501.D		Analyzed: 01/30/12 17:28		
2-Fluorobiphenyl	0.05000	83.0	50 - 150	8.776	8.773	0.0030	+/-0.050	
o-Terphenyl	0.05000	84.3	82 - 142	10.906	10.916	-0.0100	+/-0.050	
MPT-289-RB01-20120124 (1201142-11) mg/L				Lab File ID: 006F0601.D		Analyzed: 01/30/12 18:01		
2-Fluorobiphenyl	0.04673	97.2	50 - 150	8.776	8.773	0.0030	+/-0.050	
o-Terphenyl	0.04673	82.8	82 - 142	10.903	10.916	-0.0130	+/-0.050	
Calibration Check (2B03308-CCV2) mg/L				Lab File ID: 013F1301.D		Analyzed: 01/30/12 21:52		
2-Fluorobiphenyl	25.00	105	75 - 125	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	25.00	104	75 - 125	10.893	10.916	-0.0230	+/-0.050	
Blank (2A27007-BLK1) mg/Kg wet				Lab File ID: 014F1401.D		Analyzed: 01/30/12 22:25		
2-Fluorobiphenyl	3.333	111	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.333	102	35 - 140	10.893	10.916	-0.0230	+/-0.050	
LCS (2A27007-BS1) mg/Kg wet				Lab File ID: 015F1501.D		Analyzed: 01/30/12 22:58		
2-Fluorobiphenyl	3.333	89.7	50 - 150	8.773	8.773	0.0000	+/-0.050	
o-Terphenyl	3.333	85.2	35 - 140	10.896	10.916	-0.0200	+/-0.050	
MPT-289-SS01-04-20120124 (1201142-01) mg/Kg dry				Lab File ID: 016F1601.D		Analyzed: 01/30/12 23:31		
2-Fluorobiphenyl	3.883	106	50 - 150	8.766	8.773	-0.0070	+/-0.050	
o-Terphenyl	3.883	86.9	35 - 140	10.896	10.916	-0.0200	+/-0.050	
MPT-289-SS02-04-20120124 (1201142-02) mg/Kg dry				Lab File ID: 017F1701.D		Analyzed: 01/31/12 00:04		
2-Fluorobiphenyl	3.550	95.2	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.550	80.0	35 - 140	10.89	10.916	-0.0260	+/-0.050	
MPT-289-SS03-04-20120124 (1201142-03) mg/Kg dry				Lab File ID: 018F1801.D		Analyzed: 01/31/12 00:37		
2-Fluorobiphenyl	3.519	98.7	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.519	81.5	35 - 140	10.883	10.916	-0.0330	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
		Calibration:	2024001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Matrix Spike (2A27007-MS1) mg/Kg dry				Lab File ID: 019F1901.D		Analyzed: 01/31/12 01:10		
2-Fluorobiphenyl	3.472	86.1	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.472	82.0	35 - 140	10.9	10.916	-0.0160	+/-0.050	
Matrix Spike Dup (2A27007-MSD1) mg/Kg dry				Lab File ID: 020F2001.D		Analyzed: 01/31/12 01:43		
2-Fluorobiphenyl	3.472	91.6	50 - 150	8.766	8.773	-0.0070	+/-0.050	
o-Terphenyl	3.472	94.4	35 - 140	10.896	10.916	-0.0200	+/-0.050	
MPT-289-SS04-04-20120124 (1201142-04) mg/Kg dry				Lab File ID: 021F2101.D		Analyzed: 01/31/12 02:16		
2-Fluorobiphenyl	3.446	97.3	50 - 150	8.773	8.773	0.0000	+/-0.050	
o-Terphenyl	3.446	82.0	35 - 140	10.9	10.916	-0.0160	+/-0.050	
MPT-289-SS05-04-20120124 (1201142-05) mg/Kg dry				Lab File ID: 022F2201.D		Analyzed: 01/31/12 02:49		
2-Fluorobiphenyl	3.522	108	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.522	91.5	35 - 140	10.896	10.916	-0.0200	+/-0.050	
MPT-289-SS06-04-20120124 (1201142-06) mg/Kg dry				Lab File ID: 023F2301.D		Analyzed: 01/31/12 03:22		
2-Fluorobiphenyl	3.434	49.8	50 - 150	8.803	8.773	0.0300	+/-0.050	*
o-Terphenyl	3.434	31.9	35 - 140	10.906	10.916	-0.0100	+/-0.050	*
MPT-289-SS07-04-20120124 (1201142-07) mg/Kg dry				Lab File ID: 024F2401.D		Analyzed: 01/31/12 03:55		
2-Fluorobiphenyl	3.675	87.4	50 - 150	8.776	8.773	0.0030	+/-0.050	
o-Terphenyl	3.675	70.9	35 - 140	10.903	10.916	-0.0130	+/-0.050	
MPT-289-SS08-03-20120124 (1201142-08) mg/Kg dry				Lab File ID: 025F2501.D		Analyzed: 01/31/12 04:28		
2-Fluorobiphenyl	4.090	114	50 - 150	8.763	8.773	-0.0100	+/-0.050	
o-Terphenyl	4.090	94.4	35 - 140	10.893	10.916	-0.0230	+/-0.050	
MPT-289-SS09-03-20120124 (1201142-09) mg/Kg dry				Lab File ID: 026F2601.D		Analyzed: 01/31/12 05:01		
2-Fluorobiphenyl	4.182	111	50 - 150	8.76	8.773	-0.0130	+/-0.050	
o-Terphenyl	4.182	94.0	35 - 140	10.886	10.916	-0.0300	+/-0.050	
MPT-289-SS10-03-20120124 (1201142-10) mg/Kg dry				Lab File ID: 027F2701.D		Analyzed: 01/31/12 05:34		
2-Fluorobiphenyl	3.852	121	50 - 150	8.756	8.773	-0.0170	+/-0.050	
o-Terphenyl	3.852	105	35 - 140	10.89	10.916	-0.0260	+/-0.050	
Calibration Check (2B03308-CCV3) mg/L				Lab File ID: 028F2801.D		Analyzed: 01/31/12 06:07		
2-Fluorobiphenyl	25.00	116	75 - 125	8.76	8.773	-0.0130	+/-0.050	
o-Terphenyl	25.00	111	75 - 125	10.906	10.916	-0.0100	+/-0.050	
MPT-289-SS11-03-20120124 (1201142-12) mg/Kg dry				Lab File ID: 029F2901.D		Analyzed: 01/31/12 06:40		
2-Fluorobiphenyl	3.448	110	50 - 150	8.763	8.773	-0.0100	+/-0.050	
o-Terphenyl	3.448	93.6	35 - 140	10.893	10.916	-0.0230	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
		Calibration:	2024001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03308-CCV4) mg/L				Lab File ID: 036F3601.D		Analyzed: 01/31/12 10:31		
2-Fluorobiphenyl	25.00	112	75 - 125	8.763	8.773	-0.0100	+/-0.050	
o-Terphenyl	25.00	110	75 - 125	10.91	10.916	-0.0060	+/-0.050	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1201142

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS01-04-20120124	01/24/12 09:00	01/25/12 08:20	01/27/12 12:24	3.18	14.00	01/30/12 23:31	3.46	40.00	
MPT-289-SS02-04-20120124	01/24/12 09:15	01/25/12 08:20	01/27/12 12:24	3.17	14.00	01/31/12 00:04	3.49	40.00	
MPT-289-SS03-04-20120124	01/24/12 09:30	01/25/12 08:20	01/27/12 12:24	3.16	14.00	01/31/12 00:37	3.51	40.00	
MPT-289-SS04-04-20120124	01/24/12 09:45	01/25/12 08:20	01/27/12 12:24	3.15	14.00	01/31/12 02:16	3.58	40.00	
MPT-289-SS05-04-20120124	01/24/12 10:00	01/25/12 08:20	01/27/12 12:24	3.14	14.00	01/31/12 02:49	3.60	40.00	
MPT-289-SS06-04-20120124	01/24/12 10:15	01/25/12 08:20	01/27/12 12:24	3.13	14.00	01/31/12 03:22	3.62	40.00	
MPT-289-SS07-04-20120124	01/24/12 10:30	01/25/12 08:20	01/27/12 12:24	3.12	14.00	01/31/12 03:55	3.65	40.00	
MPT-289-SS08-03-20120124	01/24/12 10:45	01/25/12 08:20	01/27/12 12:24	3.11	14.00	01/31/12 04:28	3.67	40.00	
MPT-289-SS09-03-20120124	01/24/12 11:00	01/25/12 08:20	01/27/12 12:24	3.10	14.00	01/31/12 05:01	3.69	40.00	
MPT-289-SS10-03-20120124	01/24/12 11:15	01/25/12 08:20	01/27/12 12:24	3.09	14.00	01/31/12 05:34	3.72	40.00	
MPT-289-RB01-20120124	01/24/12 11:05	01/25/12 08:20	01/27/12 13:00	3.12	7.00	01/30/12 18:01	3.21	40.00	
MPT-289-SS11-03-20120124	01/24/12 11:30	01/25/12 08:20	01/27/12 12:24	3.08	14.00	01/31/12 06:40	3.76	40.00	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	1201142	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	2A27007-BLK1	File ID:	014F1401.D
Sampled:		Prepared:		Analyzed:	01/30/12 22:25
Solids:		Preparation:	EXT_3546	Dilution:	

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.0	22.0	44.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	3.713	111	50 - 150	
o-Terphenyl	3.333	3.391	102	35 - 140	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27007-BS1	File ID:	015F1501.D
Sampled:		Prepared:		Analyzed:	01/30/12 22:58
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2A27007	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics	171.1	11.0	22.0	44.0	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	2.989	89.7	50 - 150	
o-Terphenyl	3.333	2.841	85.2	35 - 140	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27007-MS1	File ID:	019F1901.D
Sampled:		Prepared:		Analyzed:	01/31/12 01:10
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2A27007	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg dr	DL	LOD	LOQ	Q
	Petroleum Range Organics	160.9	11.5	22.9	45.8	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.472	2.989	86.1	50 - 150	
o-Terphenyl	3.472	2.847	82.0	35 - 140	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27007-MSD1	File ID:	020F2001.D
Sampled:		Prepared:		Analyzed:	01/31/12 01:43
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2A27007	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg dr	DL	LOD	LOQ	Q
	Petroleum Range Organics	167.0	11.5	22.9	45.8	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.472	3.181	91.6	50 - 150	
o-Terphenyl	3.472	3.278	94.4	35 - 140	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27014-BLK1	File ID:	003F0301.D
Sampled:		Prepared:		Analyzed:	01/30/12 16:22
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	2A27014	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.170	0.340	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.04814	96.3	50 - 150	
o-Terphenyl	0.05000	0.04896	97.9	82 - 142	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27014-BS1	File ID:	004F0401.D
Sampled:		Prepared:		Analyzed:	01/30/12 16:55
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	2A27014	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	1.833	0.170	0.340	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03489	69.8	50 - 150	
o-Terphenyl	0.05000	0.03469	69.4	82 - 142	

ANALYSIS DATA SHEET

LCS Dup

Laboratory:	Empirical Laboratories, LLC	SDG:	1201142
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27014-BSD1	File ID:	005F0501.D
Sampled:		Prepared:		Analyzed:	01/30/12 17:28
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	2A27014	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.433	0.170	0.340	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.04150	83.0	50 - 150	
o-Terphenyl	0.05000	0.04215	84.3	82 - 142	

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1201170

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Tobrena Sedlmeyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Brian Richard
Tel (615)345-1115
Fax (866)417-0548
Email: brichard@empirlabs.com

Original Report Date: February 17, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 398

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. Samples were subcontracted to Test America for MA VPH and MA EPH.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

FLPRO:
The following surrogates were diluted out:
2-Fluorobiphenyl in 1201170-01, -02, and -06
o-Terphenyl in 1201170-01, -02, and -06

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.2 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity or an approved technical designee is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

1201170

TETRA TECH NUS, INC. CHAIN OF CUSTODY NUMBER 0833 PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G03576	SITE 289	D. SIEFKEN	904-636-6125	EMPIRICAL LABORITORIES
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		K. WEICHERT	904-636-6125	621 MAINSTREAM DR. ST. 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
		8427 1834 4691		NASHVILLE, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G

PRESERVATIVE USED:

TYPE OF ANALYSIS: TRPH - FLPRO-8270 -

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS								COMMENTS
1/25	1010	MPT-289-SS12-07-20120125			7	SO	G	1	1			01				COOL TO 4°C
1/25	1005	MPT-289-SS12-05-20120125			5	SO	G	1	1			02				
1/25	1030	MPT-289-SS13-07-20120125			7	SO	G	1	1			03				
1/25	1040	MPT-289-SS14-07-20120125			7	SO	G	1	1			04				
1/25	1045	MPT-289-SS15-07-20120125			7	SO	G	1	1			05				
1/25	1055	MPT-289-SS16-07-20120125			7	SO	G	1	1			06				

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY [signature]	1-25-12	1600	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY [signature]	1/26/12	0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 01/26/12 @ 0830

1. Tracking # 4691 (last 4 digits, FedEx) WO# 1201170

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 1.0 *Degrees Celsius + correction factor 0.0* = 1.0

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # ___

I certify that I unloaded the cooler and answered questions 7-14 (intial) JD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) JD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) JD

I certify that I attached a label with the unique LIMS number to each container (intial) JD

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...# ___

Additional Details:

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1201170

SENDING LABORATORY:

Empirical Laboratories, LLC
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Phone: 615.345.1115
Fax: 866.417.0548
Project Manager: Brian Richard

RECEIVING LABORATORY:

Test America (SUB017)
3355 McLemore Drive
Pensacola, FLA 32514
Phone :(850) 474-1001
Fax: none

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: MPT-289-SS12-07-20120125				
Reference No: 1201170-01	**Solid**	**Sampled:01/25/2012 10:10**		
SUB_SPECIALTY	02/09/2012 14:00	07/23/2012 10:10		MA-EPH/VPH sub direct to TA-Pensacola
Containers Supplied:				
Sample ID: MPT-289-SS12-05-20120125				
Reference No: 1201170-02	**Solid**	**Sampled:01/25/2012 10:05**		
SUB_SPECIALTY	02/09/2012 14:00	07/23/2012 10:05		MA-EPH/VPH sub direct to TA-Pensacola
Containers Supplied:				
Sample ID: MPT-289-SS16-07-20120125				
Reference No: 1201170-06	**Solid**	**Sampled:01/25/2012 10:55**		
SUB_SPECIALTY	02/09/2012 14:00	07/23/2012 10:55		MA-EPH/VPH sub direct to TA-Pensacola
Containers Supplied:				

Released By	Date	Received By	Date

Released By	Date	Received By	Date

WORK ORDER

Printed: 2/13/2012 1:08:04PM

1201170

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60

Project Manager: Brian Richard
Project Number: TET_CTOJM60

Report To:
Tetra Tech NUS, Inc. (T010)
Tobrena Sedlmyer
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 02/16/2012 16:00 (15 day TAT)

Received By: Benjamin C. Wright
Date Received: 01/26/2012 08:30

Logged In By: Benjamin C. Wright
Date Logged In: 01/26/2012 13:25

Samples Received at: **1°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confir	No		

Method	Test Code	Due	TAT	Expires	Comments
1201170-01 MPT-289-SS12-07-20120125 [Solid] Sampled 01/25/2012 10:10 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:10	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:10	
1201170-02 MPT-289-SS12-05-20120125 [Solid] Sampled 01/25/2012 10:05 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:05	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:05	

WORK ORDER

Printed: 2/13/2012 1:08:04PM

1201170

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
1201170-03 MPT-289-SS13-07-20120125 [Solid] Sampled 01/25/2012 10:30 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:30	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:30	
1201170-04 MPT-289-SS14-07-20120125 [Solid] Sampled 01/25/2012 10:40 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:40	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:40	
1201170-05 MPT-289-SS15-07-20120125 [Solid] Sampled 01/25/2012 10:45 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:45	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:45	
1201170-06 MPT-289-SS16-07-20120125 [Solid] Sampled 01/25/2012 10:55 Central					
SM2540B	WC_PERCENT_SOLIDS_2540B	02/09/2012 14:00	10	02/01/2012 10:55	
FLPRO	SGC_FLPRO_3546	02/09/2012 14:00	10	02/08/2012 10:55	

Test America (SUB017)

1201170-01 MPT-289-SS12-07-20120125 [Solid] Sampled 01/25/2012 10:10 Central					
SUB_SPECIA	SUB_SPECIALTY	02/09/2012 14:00	10	07/23/2012 10:10	MA-EPH/VPH sub direct to TA-Pensacola
1201170-02 MPT-289-SS12-05-20120125 [Solid] Sampled 01/25/2012 10:05 Central					
SUB_SPECIA	SUB_SPECIALTY	02/09/2012 14:00	10	07/23/2012 10:05	MA-EPH/VPH sub direct to TA-Pensacola

WORK ORDER

Printed: 2/13/2012 1:08:04PM

1201170

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60

Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
Test America (SUB017)					
1201170-06 MPT-289-SS16-07-20120125 [Solid] Sampled 01/25/2012 10:55 Central					
SUB_SPECIAL	SUB_SPECIALTY	02/09/2012 14:00	10	07/23/2012 10:55	MA-EPH/VPH sub direct to TA-Pensacola

Reviewed By

Date

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: NAS Mayport CTO JM60
SDG #: 1201170
MATRIX: Solid

QC LEVEL: Level IV
Report Due: 2/16/2012
Client Sample Count: 6

Sample Type	Sampled	Received	Lab ID	Client ID	FLPRO	SM2540B	SUB_SPECIALTY
Client Sample	1/25/2012	1/26/2012	1201170-01	MPT-289-SS12-07-20120125	X	X	X
Client Sample	1/25/2012	1/26/2012	1201170-02	MPT-289-SS12-05-20120125	X	X	X
Client Sample	1/25/2012	1/26/2012	1201170-03	MPT-289-SS13-07-20120125	X	X	
Client Sample	1/25/2012	1/26/2012	1201170-04	MPT-289-SS14-07-20120125	X	X	
Client Sample	1/25/2012	1/26/2012	1201170-05	MPT-289-SS15-07-20120125	X	X	
Client Sample	1/25/2012	1/26/2012	1201170-06	MPT-289-SS16-07-20120125	X	X	X

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A02402	Instrument:	GL-GCFID2
Calibration:	2024001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2A02402-CAL1	004F0401.D	01/23/12 12:06
Cal Standard	2A02402-CAL2	005F0501.D	01/23/12 12:40
Cal Standard	2A02402-CAL3	006F0601.D	01/23/12 13:13
Cal Standard	2A02402-CAL4	007F0701.D	01/23/12 13:47
Cal Standard	2A02402-CAL5	008F0801.D	01/23/12 14:20
Cal Standard	2A02402-CAL6	009F0901.D	01/23/12 14:53
Initial Cal Check	2A02402-ICV1	010F1001.D	01/23/12 15:27

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
Calibration:	2024001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2B03308-CCV1	002F0201.D	01/30/12 15:10
Calibration Check	2B03308-CCV2	013F1301.D	01/30/12 21:52
Blank	2A27007-BLK1	014F1401.D	01/30/12 22:25
LCS	2A27007-BS1	015F1501.D	01/30/12 22:58
Calibration Check	2B03308-CCV3	028F2801.D	01/31/12 06:07
MPT-289-SS13-07-20120125	1201170-03	032F3201.D	01/31/12 08:19
MPT-289-SS14-07-20120125	1201170-04	033F3301.D	01/31/12 08:52
MPT-289-SS15-07-20120125	1201170-05	034F3401.D	01/31/12 09:25
Calibration Check	2B03308-CCV4	036F3601.D	01/31/12 10:31

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03310	Instrument:	GL-GCFID2
Calibration:	2024001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2B03310-CCV1	002F0201.D	01/31/12 13:18
MPT-289-SS12-07-20120125	1201170-01	003F0301.D	01/31/12 13:51
MPT-289-SS12-05-20120125	1201170-02	004F0401.D	01/31/12 14:24
MPT-289-SS16-07-20120125	1201170-06	005F0501.D	01/31/12 14:58
Calibration Check	2B03310-CCV2	006F0601.D	01/31/12 15:31

ANALYSIS DATA SHEET

MPT-289-SS12-07-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-01	File ID:	003F0301.D
Sampled:	01/25/12 10:10	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 13:51
Solids:	87.90	Preparation:	EXT_3546	Dilution:	200

Batch: 2A27007 Sequence: 2B03310 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	62300	2380	4750	9500	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.600	0.000		50 - 150	DU
o-Terphenyl	3.600	0.000		35 - 140	DU

ANALYSIS DATA SHEET

MPT-289-SS12-05-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-02	File ID:	004F0401.D
Sampled:	01/25/12 10:05	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 14:24
Solids:	77.20	Preparation:	EXT_3546	Dilution:	50

Batch: 2A27007 Sequence: 2B03310 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	15600	689	1380	2760	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.178	0.000		50 - 150	DU
o-Terphenyl	4.178	0.000		35 - 140	DU

ANALYSIS DATA SHEET

MPT-289-SS13-07-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-03	File ID:	032F3201.D
Sampled:	01/25/12 10:30	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 08:19
Solids:	78.03	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	14.1	13.6	27.1	54.2	I

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.107	4.424	108	50 - 150	
o-Terphenyl	4.107	3.687	89.8	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS14-07-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-04	File ID:	033F3301.D
Sampled:	01/25/12 10:40	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 08:52
Solids:	82.44	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		12.7	25.3	50.7	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.839	4.020	105	50 - 150	
o-Terphenyl	3.839	4.535	118	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS15-07-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-05	File ID:	034F3401.D
Sampled:	01/25/12 10:45	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 09:25
Solids:	80.76	Preparation:	EXT_3546	Dilution:	1

Batch: 2A27007 Sequence: 2B03308 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		13.3	26.5	53.1	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.020	3.718	92.5	50 - 150	
o-Terphenyl	4.020	4.294	107	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS16-07-20120125

Laboratory:	Empirical Laboratories, LLC			SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1201170-06	File ID:	005F0501.D
Sampled:	01/25/12 10:55	Prepared:	01/27/12 12:24	Analyzed:	01/31/12 14:58
Solids:	83.63	Preparation:	EXT_3546	Dilution:	100

Batch: 2A27007 Sequence: 2B03310 Calibration: 2024001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	41400	1270	2550	5090	D

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.857	0.000		50 - 150	DU
o-Terphenyl	3.857	0.000		35 - 140	DU

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2A27007	Laboratory ID:	2A27007-BS1
Preparation:	EXT_3546	Initial/Final:	15 g / 2 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	213.3	171.1	80.2	50 - 140

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1201170

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2A27007 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS12-07-20120125	1201170-01	01/27/12 12:24	15.80	2.00
MPT-289-SS12-05-20120125	1201170-02	01/27/12 12:24	15.50	2.00
MPT-289-SS13-07-20120125	1201170-03	01/27/12 12:24	15.60	2.00
MPT-289-SS14-07-20120125	1201170-04	01/27/12 12:24	15.80	2.00
MPT-289-SS15-07-20120125	1201170-05	01/27/12 12:24	15.40	2.00
MPT-289-SS16-07-20120125	1201170-06	01/27/12 12:24	15.50	2.00
Blank	2A27007-BLK1	01/27/12 12:24	15.00	2.00
LCS	2A27007-BS1	01/27/12 12:24	15.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A02402	Instrument:	GL-GCFID2
Calibration:	2024001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
11L0176	FLPRO CAL6 85ppm	2A02402-CAL1	004F0401.D	01/23/12 12:06
11L0175	FLPRO CAL5 850ppm	2A02402-CAL2	005F0501.D	01/23/12 12:40
11L0174	FLPRO CAL4 2550ppm	2A02402-CAL3	006F0601.D	01/23/12 13:13
11L0173	FLPRO CAL3 4250ppm	2A02402-CAL4	007F0701.D	01/23/12 13:47
11L0172	FLPRO CAL2 5950ppm	2A02402-CAL5	008F0801.D	01/23/12 14:20
11L0171	FLPRO CAL1 8500ppm	2A02402-CAL6	009F0901.D	01/23/12 14:53

INITIAL CALIBRATION DATA

FLPRO

Laboratory:	Empirical Laboratories, LLC		SDG:	1201170	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Calibration:	2024001		Instrument:	GL-GCFID2	
Matrix:	Water		Calibration Dates:	1/23/12 12:06	1/23/12 14:53

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	85	820.9529	850	988.647	2550	780.9647	4250	876.3654	5950	842.9541	8500	900.5278
2-Fluorobiphenyl	5	242.4	10	410.8	15	667	25	832.2	35	895.8857	50	950.22
o-Terphenyl	5	1137.4	10	1168.9	15	1196.333	25	1245.6	35	1193.4	50	1245.36

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2024001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	1/23/12 12:06 1/23/12 14:53

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	868.402	8.319614	3.93	3.055508E-03			20	
2-Fluorobiphenyl	666.4176	42.74964	8.820833	0.478137	0.9980477		0.995	
o-Terphenyl	1197.832	3.552085	10.97467	0.3634249			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	010F1001.D	Calibration Date:	01/23/12 12:06
Sequence:	2A02402	Injection Date:	01/23/12
Lab Sample ID:	2A02402-ICV1	Injection Time:	15:27

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4137	868.402	898.2155		3.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	002F0201.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/30/12
Lab Sample ID:	2B03308-CCV1	Injection Time:	15:10

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3588	868.402	733.1391		-15.6	25
2-Fluorobiphenyl	L	25.00	24.61	666.4176	820.64		-1.6	25
o-Terphenyl	A	25.00	25.64	1197.832	1228.72		2.6	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	013F1301.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/30/12
Lab Sample ID:	2B03308-CCV2	Injection Time:	21:52

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3720	868.402	760.0464		-12.5	25
2-Fluorobiphenyl	L	25.00	26.30	666.4176	891.88		5.2	25
o-Terphenyl	A	25.00	26.09	1197.832	1250.24		4.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	028F2801.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/31/12
Lab Sample ID:	2B03308-CCV3	Injection Time:	06:07

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4378	868.402	894.6341		3.0	25
2-Fluorobiphenyl	L	25.00	28.91	666.4176	1001.68		15.6	25
o-Terphenyl	A	25.00	27.84	1197.832	1333.96		11.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	036F3601.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03308	Injection Date:	01/31/12
Lab Sample ID:	2B03308-CCV4	Injection Time:	10:31

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4549	868.402	929.4664		7.0	25
2-Fluorobiphenyl	L	25.00	27.97	666.4176	961.88		11.9	25
o-Terphenyl	A	25.00	27.62	1197.832	1323.44		10.5	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	002F0201.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03310	Injection Date:	01/31/12
Lab Sample ID:	2B03310-CCV1	Injection Time:	13:18

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4278	868.402	874.0899		0.7	25
2-Fluorobiphenyl	L	25.00	24.83	666.4176	829.68		-0.7	25
o-Terphenyl	A	25.00	27.88	1197.832	1335.84		11.5	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2024001
Lab File ID:	006F0601.D	Calibration Date:	01/23/12 12:06
Sequence:	2B03310	Injection Date:	01/31/12
Lab Sample ID:	2B03310-CCV2	Injection Time:	15:31

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3962	868.402	809.6769		-6.8	25
2-Fluorobiphenyl	L	25.00	22.03	666.4176	711.56		-11.9	25
o-Terphenyl	A	25.00	26.45	1197.832	1267.16		5.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03308	Instrument:	GL-GCFID2
		Calibration:	2024001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03308-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 01/30/12 15:10		
2-Fluorobiphenyl	25.00	98.4	75 - 125	8.773	8.773	0.0000	+/-0.050	
o-Terphenyl	25.00	103	75 - 125	10.916	10.916	0.0000	+/-0.050	
Calibration Check (2B03308-CCV2) mg/L				Lab File ID: 013F1301.D		Analyzed: 01/30/12 21:52		
2-Fluorobiphenyl	25.00	105	75 - 125	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	25.00	104	75 - 125	10.893	10.916	-0.0230	+/-0.050	
Blank (2A27007-BLK1) mg/Kg wet				Lab File ID: 014F1401.D		Analyzed: 01/30/12 22:25		
2-Fluorobiphenyl	3.333	111	50 - 150	8.77	8.773	-0.0030	+/-0.050	
o-Terphenyl	3.333	102	35 - 140	10.893	10.916	-0.0230	+/-0.050	
LCS (2A27007-BS1) mg/Kg wet				Lab File ID: 015F1501.D		Analyzed: 01/30/12 22:58		
2-Fluorobiphenyl	3.333	89.7	50 - 150	8.773	8.773	0.0000	+/-0.050	
o-Terphenyl	3.333	85.2	35 - 140	10.896	10.916	-0.0200	+/-0.050	
Calibration Check (2B03308-CCV3) mg/L				Lab File ID: 028F2801.D		Analyzed: 01/31/12 06:07		
2-Fluorobiphenyl	25.00	116	75 - 125	8.76	8.773	-0.0130	+/-0.050	
o-Terphenyl	25.00	111	75 - 125	10.906	10.916	-0.0100	+/-0.050	
MPT-289-SS13-07-20120125 (1201170-03) mg/Kg dry				Lab File ID: 032F3201.D		Analyzed: 01/31/12 08:19		
2-Fluorobiphenyl	4.107	108	50 - 150	8.766	8.773	-0.0070	+/-0.050	
o-Terphenyl	4.107	89.8	35 - 140	10.92	10.916	0.0040	+/-0.050	
MPT-289-SS14-07-20120125 (1201170-04) mg/Kg dry				Lab File ID: 033F3301.D		Analyzed: 01/31/12 08:52		
2-Fluorobiphenyl	3.839	105	50 - 150	8.776	8.773	0.0030	+/-0.050	
o-Terphenyl	3.839	118	35 - 140	10.93	10.916	0.0140	+/-0.050	
MPT-289-SS15-07-20120125 (1201170-05) mg/Kg dry				Lab File ID: 034F3401.D		Analyzed: 01/31/12 09:25		
2-Fluorobiphenyl	4.020	92.5	50 - 150	8.783	8.773	0.0100	+/-0.050	
o-Terphenyl	4.020	107	35 - 140	10.933	10.916	0.0170	+/-0.050	
Calibration Check (2B03308-CCV4) mg/L				Lab File ID: 036F3601.D		Analyzed: 01/31/12 10:31		
2-Fluorobiphenyl	25.00	112	75 - 125	8.763	8.773	-0.0100	+/-0.050	
o-Terphenyl	25.00	110	75 - 125	10.91	10.916	-0.0060	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2B03310	Instrument:	GL-GCFID2
		Calibration:	2024001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2B03310-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 01/31/12 13:18		
2-Fluorobiphenyl	25.00	99.3	75 - 125	8.776	8.776	0.0000	+/-0.050	
o-Terphenyl	25.00	112	75 - 125	10.973	10.973	0.0000	+/-0.050	
MPT-289-SS12-07-20120125 (1201170-01) mg/Kg dry				Lab File ID: 003F0301.D		Analyzed: 01/31/12 13:51		
2-Fluorobiphenyl	3.600		50 - 150		8.776	-8.7760	+/-0.050	*
o-Terphenyl	3.600		35 - 140		10.973	-10.9730	+/-0.050	*
MPT-289-SS12-05-20120125 (1201170-02) mg/Kg dry				Lab File ID: 004F0401.D		Analyzed: 01/31/12 14:24		
2-Fluorobiphenyl	4.178		50 - 150		8.776	-8.7760	+/-0.050	*
o-Terphenyl	4.178		35 - 140		10.973	-10.9730	+/-0.050	*
MPT-289-SS16-07-20120125 (1201170-06) mg/Kg dry				Lab File ID: 005F0501.D		Analyzed: 01/31/12 14:58		
2-Fluorobiphenyl	3.857		50 - 150		8.776	-8.7760	+/-0.050	*
o-Terphenyl	3.857		35 - 140		10.973	-10.9730	+/-0.050	*
Calibration Check (2B03310-CCV2) mg/L				Lab File ID: 006F0601.D		Analyzed: 01/31/12 15:31		
2-Fluorobiphenyl	25.00	88.1	75 - 125	8.766	8.776	-0.0100	+/-0.050	
o-Terphenyl	25.00	106	75 - 125	10.903	10.973	-0.0700	+/-0.050	*

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1201170

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS12-07-20120125	01/25/12 10:10	01/26/12 08:30	01/27/12 12:24	2.09	14.00	01/31/12 13:51	4.06	40.00	
MPT-289-SS12-05-20120125	01/25/12 10:05	01/26/12 08:30	01/27/12 12:24	2.10	14.00	01/31/12 14:24	4.08	40.00	
MPT-289-SS13-07-20120125	01/25/12 10:30	01/26/12 08:30	01/27/12 12:24	2.08	14.00	01/31/12 08:19	3.83	40.00	
MPT-289-SS14-07-20120125	01/25/12 10:40	01/26/12 08:30	01/27/12 12:24	2.07	14.00	01/31/12 08:52	3.85	40.00	
MPT-289-SS15-07-20120125	01/25/12 10:45	01/26/12 08:30	01/27/12 12:24	2.07	14.00	01/31/12 09:25	3.88	40.00	
MPT-289-SS16-07-20120125	01/25/12 10:55	01/26/12 08:30	01/27/12 12:24	2.06	14.00	01/31/12 14:58	4.11	40.00	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27007-BLK1	File ID:	014F1401.D
Sampled:		Prepared:		Analyzed:	01/30/12 22:25
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2A27007	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.0	22.0	44.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	3.713	111	50 - 150	
o-Terphenyl	3.333	3.391	102	35 - 140	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC	SDG:	1201170
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2A27007-BS1	File ID:	015F1501.D
Sampled:		Prepared:		Analyzed:	01/30/12 22:58
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2A27007	Sequence:	2B03308	Calibration:	2024001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics	171.1	11.0	22.0	44.0	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	2.989	89.7	50 - 150	
o-Terphenyl	3.333	2.841	85.2	35 - 140	

Subcontractor Data Package

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-62678-1
Client Project/Site: 112G03576 SITE 289

For:
Empirical Laboratories, LLC
621 Mainstream Drive
Suite 270
Nashville, Tennessee 37228

Attn: Mr. Brian Richard

Authorized for release by:
2/14/2012 11:57:26 AM

Cheyenne Whitmire
Project Manager II
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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 400-62678-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-62678-1

GC VOA
Method(s) MAVPH: The following samples were diluted due to the abundance of target analytes: MPT-289-SS12-07-20120125 (400-62678-2), MPT-289-SS16-07-20120125 (400-62678-3).

Method(s) MAVPH: The following sample was diluted because the base dilution for VPH soil analysis is 1:50: MPT-289-SS12-05-20120125 (400-62678-1).

Method(s) MAVPH: Elevated reporting limits are provided for the following samples due to insufficient sample provided for analysis: MPT-289-SS12-05-20120125 (400-62678-1), MPT-289-SS12-07-20120125 (400-62678-2), MPT-289-SS16-07-20120125 (400-62678-3) The samples contained between 4.87 and 5.47 grams of soil and 15 mls of MeOH and they should contain 15 grams of soil and 15 mls of MeOH.

GC Semi VOA
Method(s) MA-EPH: The following samples were diluted due to the abundance of target analytes: MPT-289-SS12-05-20120125 (400-62678-1), MPT-289-SS12-07-20120125 (400-62678-2), MPT-289-SS16-07-20120125 (400-62678-3). Elevated reporting limits (RLs) are provided.

Method(s) MA-EPH: Surrogate recovery for the following sample(s) was outside control limits: MPT-289-SS12-05-20120125 (400-62678-1), MPT-289-SS12-07-20120125 (400-62678-2), MPT-289-SS16-07-20120125 (400-62678-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Detection Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Client Sample ID: MPT-289-SS12-05-20120125 — Lab Sample ID: 400-62678-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C9-C10 Aromatics	24		2.6	2.6	mg/Kg	50	☼	MAVPH	Total/NA
C9-C18 Aliphatics	1600		37	37	mg/Kg	20	☼	MA-EPH	Total/NA
C19-C36 Aliphatics	690		37	37	mg/Kg	20	☼	MA-EPH	Total/NA
C11-C22 Aromatics	830		9.2	9.2	mg/Kg	5	☼	MA-EPH	Total/NA

Client Sample ID: MPT-289-SS12-07-20120125 — Lab Sample ID: 400-62678-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C9-C12 Aliphatics - DL	510		240	240	mg/Kg	2500	☼	MAVPH	Total/NA
C9-C10 Aromatics - DL	2000		130	130	mg/Kg	2500	☼	MAVPH	Total/NA
C9-C18 Aliphatics	18000		360	360	mg/Kg	200	☼	MA-EPH	Total/NA
C19-C36 Aliphatics	4200		360	360	mg/Kg	200	☼	MA-EPH	Total/NA
C11-C22 Aromatics	5300		89	89	mg/Kg	50	☼	MA-EPH	Total/NA

Client Sample ID: MPT-289-SS16-07-20120125 — Lab Sample ID: 400-62678-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
C9-C12 Aliphatics - DL	970		230	230	mg/Kg	2500	☼	MAVPH	Total/NA
C9-C10 Aromatics - DL	2000		130	130	mg/Kg	2500	☼	MAVPH	Total/NA
C9-C18 Aliphatics	10000		190	190	mg/Kg	100	☼	MA-EPH	Total/NA
C19-C36 Aliphatics	2100		190	190	mg/Kg	100	☼	MA-EPH	Total/NA
C11-C22 Aromatics	4100		39	39	mg/Kg	20	☼	MA-EPH	Total/NA

Method Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Method	Method Description	Protocol	Laboratory
MAVPH	Massachusetts - Volatile Petroleum Hydrocarbons (GC)	MA DEP	TAL PEN
MA-EPH	Massachusetts - Extractable Petroleum Hydrocarbons (GC)	MA DEP	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-62678-1	MPT-289-SS12-05-20120125	Solid	01/25/12 10:05	01/26/12 10:26
400-62678-2	MPT-289-SS12-07-20120125	Solid	01/25/12 10:10	01/26/12 10:26
400-62678-3	MPT-289-SS16-07-20120125	Solid	01/25/12 10:55	01/26/12 10:26

Client Sample Results

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Client Sample ID: MPT-289-SS12-05-20120125

Lab Sample ID: 400-62678-1
Date Collected: 01/25/12 10:05
Matrix: Solid
Date Received: 01/26/12 10:26
Percent Solids: 86.0

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	9.3	U	9.3	9.3	mg/Kg	☼	01/30/12 15:30	02/01/12 15:43	50
C9-C12 Aliphatics	4.8	U	4.8	4.8	mg/Kg	☼	01/30/12 15:30	02/01/12 15:43	50
C9-C10 Aromatics	**24**		2.6	2.6	mg/Kg	☼	01/30/12 15:30	02/01/12 15:43	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*96*		*70 - 130*	*01/30/12 15:30*	*02/01/12 15:43*	*50*
a,a,a-Trifluorotoluene (pid)	*97*		*70 - 130*	*01/30/12 15:30*	*02/01/12 15:43*	*50*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	**1600**		37	37	mg/Kg	☼	01/29/12 17:07	02/01/12 15:54	20
C19-C36 Aliphatics	**690**		37	37	mg/Kg	☼	01/29/12 17:07	02/01/12 15:54	20
C11-C22 Aromatics	**830**		9.2	9.2	mg/Kg	☼	01/29/12 17:07	02/01/12 16:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*61*		*40 - 140*	*01/29/12 17:07*	*02/01/12 15:54*	*20*
o-Terphenyl	*42*		*40 - 140*	*01/29/12 17:07*	*02/01/12 16:37*	*5*
2-Fluorobiphenyl	*35*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:37*	*5*
2-Bromonaphthalene	*45*		*40 - 140*	*01/29/12 17:07*	*02/01/12 16:37*	*5*

Client Sample ID: MPT-289-SS12-07-20120125

Lab Sample ID: 400-62678-2
Date Collected: 01/25/12 10:10
Matrix: Solid
Date Received: 01/26/12 10:26
Percent Solids: 89.0

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	470	U	470	470	mg/Kg	☼	01/30/12 15:30	02/02/12 17:01	2500
C9-C12 Aliphatics	**510**		240	240	mg/Kg	☼	01/30/12 15:30	02/02/12 17:01	2500
C9-C10 Aromatics	**2000**		130	130	mg/Kg	☼	01/30/12 15:30	02/02/12 17:01	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*100*		*70 - 130*	*01/30/12 15:30*	*02/02/12 17:01*	*2500*
a,a,a-Trifluorotoluene (pid)	*109*		*70 - 130*	*01/30/12 15:30*	*02/02/12 17:01*	*2500*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	**18000**		360	360	mg/Kg	☼	01/29/12 17:07	02/01/12 16:01	200
C19-C36 Aliphatics	**4200**		360	360	mg/Kg	☼	01/29/12 17:07	02/01/12 16:01	200
C11-C22 Aromatics	**5300**		89	89	mg/Kg	☼	01/29/12 17:07	02/01/12 16:44	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*1219*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:01*	*200*
o-Terphenyl	*211*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:44*	*50*
2-Fluorobiphenyl	*247*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:44*	*50*
2-Bromonaphthalene	*608*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:44*	*50*

Client Sample Results

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Client Sample ID: MPT-289-SS16-07-20120125

Date Collected: 01/25/12 10:55
Date Received: 01/26/12 10:26

Lab Sample ID: 400-62678-3

Matrix: Solid
Percent Solids: 82.0

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	450	U	450	450	mg/Kg	☼	01/30/12 15:30	02/02/12 18:01	2500
C9-C12 Aliphatics	**970**		230	230	mg/Kg	☼	01/30/12 15:30	02/02/12 18:01	2500
C9-C10 Aromatics	**2000**		130	130	mg/Kg	☼	01/30/12 15:30	02/02/12 18:01	2500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*130*		*70 - 130*	*01/30/12 15:30*	*02/02/12 18:01*	*2500*
a,a,a-Trifluorotoluene (pid)	*126*		*70 - 130*	*01/30/12 15:30*	*02/02/12 18:01*	*2500*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	**10000**		190	190	mg/Kg	☼	01/29/12 17:07	02/01/12 16:08	100
C19-C36 Aliphatics	**2100**		190	190	mg/Kg	☼	01/29/12 17:07	02/01/12 16:08	100
C11-C22 Aromatics	**4100**		39	39	mg/Kg	☼	01/29/12 17:07	02/01/12 16:51	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*846*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:08*	*100*
o-Terphenyl	*191*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:51*	*20*
2-Fluorobiphenyl	*431*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:51*	*20*
2-Bromonaphthalene	*955*	*J1*	*40 - 140*	*01/29/12 17:07*	*02/01/12 16:51*	*20*

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
J1	Estimated value; value may not be accurate. Surrogate recovery outside of criteria.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Client Sample ID: MPT-289-SS12-05-20120125 — Lab Sample ID: 400-62678-1

Date Collected: 01/25/12 10:05 — **Matrix: Solid**
Date Received: 01/26/12 10:26 — **Percent Solids: 86.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			148143	01/30/12 15:30	MA	TAL PEN
Total/NA	Analysis	MAVPH		50	148117	02/01/12 15:43	MA	TAL PEN
Total/NA	Prep	3541			148056	01/29/12 17:07	RT	TAL PEN
Total/NA	Analysis	MA-EPH		20	148296	02/01/12 15:54	KA	TAL PEN
Total/NA	Analysis	MA-EPH		5	148326	02/01/12 16:37	KA	TAL PEN
Total/NA	Analysis	Moisture		1	147963	01/26/12 17:00	TS	TAL PEN

Client Sample ID: MPT-289-SS12-07-20120125 — Lab Sample ID: 400-62678-2

Date Collected: 01/25/12 10:10 — **Matrix: Solid**
Date Received: 01/26/12 10:26 — **Percent Solids: 89.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035	DL		148143	01/30/12 15:30	MA	TAL PEN
Total/NA	Analysis	MAVPH	DL	2500	148117	02/02/12 17:01	MA	TAL PEN
Total/NA	Prep	3541			148056	01/29/12 17:07	RT	TAL PEN
Total/NA	Analysis	MA-EPH		200	148296	02/01/12 16:01	KA	TAL PEN
Total/NA	Analysis	MA-EPH		50	148326	02/01/12 16:44	KA	TAL PEN
Total/NA	Analysis	Moisture		1	147963	01/26/12 17:00	TS	TAL PEN

Client Sample ID: MPT-289-SS16-07-20120125 — Lab Sample ID: 400-62678-3

Date Collected: 01/25/12 10:55 — **Matrix: Solid**
Date Received: 01/26/12 10:26 — **Percent Solids: 82.0**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035	DL		148143	01/30/12 15:30	MA	TAL PEN
Total/NA	Analysis	MAVPH	DL	2500	148117	02/02/12 18:01	MA	TAL PEN
Total/NA	Prep	3541			148056	01/29/12 17:07	RT	TAL PEN
Total/NA	Analysis	MA-EPH		100	148296	02/01/12 16:08	KA	TAL PEN
Total/NA	Analysis	MA-EPH		20	148326	02/01/12 16:51	KA	TAL PEN
Total/NA	Analysis	Moisture		1	147963	01/26/12 17:00	TS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

GC VOA

Analysis Batch: 148117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	MAVPH	148143
400-62678-1 MS	MPT-289-SS12-05-20120125	Total/NA	Solid	MAVPH	148143
400-62678-1 MSD	MPT-289-SS12-05-20120125	Total/NA	Solid	MAVPH	148143
400-62678-2 - DL	MPT-289-SS12-07-20120125	Total/NA	Solid	MAVPH	148143
400-62678-3 - DL	MPT-289-SS16-07-20120125	Total/NA	Solid	MAVPH	148143
LCS 400-148143/2-A	Lab Control Sample	Total/NA	Solid	MAVPH	148143
LCSD 400-148143/3-A	Lab Control Sample Dup	Total/NA	Solid	MAVPH	148143
MB 400-148143/1-A	Method Blank	Total/NA	Solid	MAVPH	148143

Prep Batch: 148143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	5035	
400-62678-1 MS	MPT-289-SS12-05-20120125	Total/NA	Solid	5035	
400-62678-1 MSD	MPT-289-SS12-05-20120125	Total/NA	Solid	5035	
400-62678-2 - DL	MPT-289-SS12-07-20120125	Total/NA	Solid	5035	
400-62678-3 - DL	MPT-289-SS16-07-20120125	Total/NA	Solid	5035	
LCS 400-148143/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 400-148143/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 400-148143/1-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 148056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62673-A-1-B MS	Matrix Spike	Total/NA	Solid	3541	
400-62673-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3541	
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	3541	
400-62678-2	MPT-289-SS12-07-20120125	Total/NA	Solid	3541	
400-62678-3	MPT-289-SS16-07-20120125	Total/NA	Solid	3541	
LCS 400-148056/17-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 400-148056/18-A	Lab Control Sample Dup	Total/NA	Solid	3541	
MB 400-148056/19-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 148296

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62673-A-1-B MS	Matrix Spike	Total/NA	Solid	MA-EPH	148056
400-62673-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	MA-EPH	148056
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	MA-EPH	148056
400-62678-2	MPT-289-SS12-07-20120125	Total/NA	Solid	MA-EPH	148056
400-62678-3	MPT-289-SS16-07-20120125	Total/NA	Solid	MA-EPH	148056
LCS 400-148056/17-A	Lab Control Sample	Total/NA	Solid	MA-EPH	148056
LCSD 400-148056/18-A	Lab Control Sample Dup	Total/NA	Solid	MA-EPH	148056
MB 400-148056/19-A	Method Blank	Total/NA	Solid	MA-EPH	148056

Analysis Batch: 148326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62673-A-1-B MS	Matrix Spike	Total/NA	Solid	MA-EPH	148056
400-62673-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	MA-EPH	148056
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	MA-EPH	148056
400-62678-2	MPT-289-SS12-07-20120125	Total/NA	Solid	MA-EPH	148056
400-62678-3	MPT-289-SS16-07-20120125	Total/NA	Solid	MA-EPH	148056
LCS 400-148056/17-A	Lab Control Sample	Total/NA	Solid	MA-EPH	148056

GC Semi VOA (Continued)

Analysis Batch: 148326 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 400-148056/18-A	Lab Control Sample Dup	Total/NA	Solid	MA-EPH	148056
MB 400-148056/19-A	Method Blank	Total/NA	Solid	MA-EPH	148056

General Chemistry

Analysis Batch: 147963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-62678-1	MPT-289-SS12-05-20120125	Total/NA	Solid	Moisture	
400-62678-2	MPT-289-SS12-07-20120125	Total/NA	Solid	Moisture	
400-62678-3	MPT-289-SS16-07-20120125	Total/NA	Solid	Moisture	

Surrogate Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TFT2	TFT1
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
400-62678-1	MPT-289-SS12-05-20120125	96	97
400-62678-1 MS	MPT-289-SS12-05-20120125	84	84
400-62678-1 MSD	MPT-289-SS12-05-20120125	99	98
400-62678-2 - DL	MPT-289-SS12-07-20120125	100	109
400-62678-3 - DL	MPT-289-SS16-07-20120125	130	126
LCS 400-148143/2-A	Lab Control Sample	97	97
LCSD 400-148143/3-A	Lab Control Sample Dup	99	97
MB 400-148143/1-A	Method Blank	103	105

Surrogate Legend

TFT = a,a,a-Trifluorotoluene (fid)

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		1COD1
Lab Sample ID	Client Sample ID	(40-140)
400-62673-A-1-B MS	Matrix Spike	25 J1
400-62673-A-1-C MSD	Matrix Spike Duplicate	42
400-62678-1	MPT-289-SS12-05-20120125	61
400-62678-2	MPT-289-SS12-07-20120125	1219 J1
400-62678-3	MPT-289-SS16-07-20120125	846 J1
LCS 400-148056/17-A	Lab Control Sample	57
LCSD 400-148056/18-A	Lab Control Sample Dup	56
MB 400-148056/19-A	Method Blank	94

Surrogate Legend

1COD = 1-Chlorooctadecane

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		OTPH1	FBP1	2BN1
Lab Sample ID	Client Sample ID	(40-140)	(40-140)	(40-140)
400-62673-A-1-B MS	Matrix Spike	21 J1	87	101
400-62673-A-1-C MSD	Matrix Spike Duplicate	41	89	90
400-62678-1	MPT-289-SS12-05-20120125	42	35 J1	45
400-62678-2	MPT-289-SS12-07-20120125	211 J1	247 J1	608 J1
400-62678-3	MPT-289-SS16-07-20120125	191 J1	431 J1	955 J1
LCS 400-148056/17-A	Lab Control Sample	82	100	110
LCSD 400-148056/18-A	Lab Control Sample Dup	76	95	99
MB 400-148056/19-A	Method Blank	80	92	96

Surrogate Legend

OTPH = o-Terphenyl
FBP = 2-Fluorobiphenyl
2BN = 2-Bromonaphthalene

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 400-148143/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148117 — **Prep Batch: 148143**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	2.7	U	2.7	2.7	mg/Kg		01/27/12 14:30	01/27/12 16:26	50
C9-C12 Aliphatics	1.4	U	1.4	1.4	mg/Kg		01/27/12 14:30	01/27/12 16:26	50
C9-C10 Aromatics	0.75	U	0.75	0.75	mg/Kg		01/27/12 14:30	01/27/12 16:26	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*70 - 130*	*01/27/12 14:30*	*01/27/12 16:26*	*50*
a,a,a-Trifluorotoluene (pid)	*105*		*70 - 130*	*01/27/12 14:30*	*01/27/12 16:26*	*50*

Lab Sample ID: LCS 400-148143/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148117 — **Prep Batch: 148143**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C5-C8 Aliphatics	15.0	12.5		mg/Kg		83	70 - 130
C9-C12 Aliphatics	17.5	16.3		mg/Kg		93	70 - 130
C9-C10 Aromatics	2.50	2.34		mg/Kg		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*97*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*97*		*70 - 130*

Lab Sample ID: LCSD 400-148143/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148117 — **Prep Batch: 148143**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C5-C8 Aliphatics	15.0	12.8		mg/Kg		85	70 - 130	2	50
C9-C12 Aliphatics	17.5	16.0		mg/Kg		91	70 - 130	2	50
C9-C10 Aromatics	2.50	2.19		mg/Kg		87	70 - 130	7	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*99*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*97*		*70 - 130*

Lab Sample ID: 400-62678-1 MS — **Client Sample ID: MPT-289-SS12-05-20120125**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148117 — **Prep Batch: 148143**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C5-C8 Aliphatics	9.3	U	51.8	38.6		mg/Kg	☼	75	70 - 130
C9-C12 Aliphatics	4.8	U	60.5	49.9		mg/Kg	☼	83	70 - 130
C9-C10 Aromatics	24		8.64	31.7		mg/Kg	☼	85	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*84*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*84*		*70 - 130*

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: 400-62678-1 MSD — **Client Sample ID: MPT-289-SS12-05-20120125**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148117 — **Prep Batch: 148143**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C5-C8 Aliphatics	9.3	U	51.8	43.5		mg/Kg	☼	84	70 - 130	12	50
C9-C12 Aliphatics	4.8	U	60.5	53.0		mg/Kg	☼	88	70 - 130	6	50
C9-C10 Aromatics	24		8.64	32.9		mg/Kg	☼	98	70 - 130	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*99*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*98*		*70 - 130*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 400-148056/19-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148296 — **Prep Batch: 148056**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	1.6	U	1.6	1.6	mg/Kg		01/29/12 17:07	02/01/12 10:08	1
C19-C36 Aliphatics	1.6	U	1.6	1.6	mg/Kg		01/29/12 17:07	02/01/12 10:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*94*		*40 - 140*	*01/29/12 17:07*	*02/01/12 10:08*	*1*

Lab Sample ID: MB 400-148056/19-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148326 — **Prep Batch: 148056**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C11-C22 Aromatics	1.6	U	1.6	1.6	mg/Kg		01/29/12 17:07	02/01/12 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*80*		*40 - 140*	*01/29/12 17:07*	*02/01/12 13:04*	*1*
2-Fluorobiphenyl	*92*		*40 - 140*	*01/29/12 17:07*	*02/01/12 13:04*	*1*
2-Bromonaphthalene	*96*		*40 - 140*	*01/29/12 17:07*	*02/01/12 13:04*	*1*

Lab Sample ID: LCS 400-148056/17-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148296 — **Prep Batch: 148056**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C18 Aliphatics	10.0	5.13		mg/Kg		51	40 - 140
C19-C36 Aliphatics	13.3	7.56		mg/Kg		57	40 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctadecane	*57*		*40 - 140*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: LCS 400-148056/17-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148326 — **Prep Batch: 148056**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C11-C22 Aromatics			28.3	24.0		mg/Kg		85	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*82*		*40 - 140*
2-Fluorobiphenyl	*100*		*40 - 140*
2-Bromonaphthalene	*110*		*40 - 140*

Lab Sample ID: LCSD 400-148056/18-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148296 — **Prep Batch: 148056**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C18 Aliphatics			10.0	5.09		mg/Kg		51	40 - 140	1	50
C19-C36 Aliphatics			13.3	7.91		mg/Kg		59	40 - 140	5	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctadecane	*56*		*40 - 140*

Lab Sample ID: LCSD 400-148056/18-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148326 — **Prep Batch: 148056**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C11-C22 Aromatics			28.3	24.1		mg/Kg		85	40 - 140	0	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*76*		*40 - 140*
2-Fluorobiphenyl	*95*		*40 - 140*
2-Bromonaphthalene	*99*		*40 - 140*

Lab Sample ID: 400-62673-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148296 — **Prep Batch: 148056**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C9-C18 Aliphatics	2.0	U	12.3	3.98	J3	mg/Kg	☼	32	40 - 140		
C19-C36 Aliphatics	2.0	U	16.4	5.07	J3	mg/Kg	☼	31	40 - 140		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctadecane	*25*	*J1*	*40 - 140*

Lab Sample ID: 400-62673-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 148326 — **Prep Batch: 148056**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C11-C22 Aromatics	2.4		34.7	10.3	J3	mg/Kg	☼	23	40 - 140		

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: 400-62673-A-1-B MS
Matrix: Solid
Analysis Batch: 148326

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 148056

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*21*	*J1*	*40 - 140*
2-Fluorobiphenyl	*87*		*40 - 140*
2-Bromonaphthalene	*101*		*40 - 140*

Lab Sample ID: 400-62673-A-1-C MSD
Matrix: Solid
Analysis Batch: 148296

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 148056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C18 Aliphatics	2.0	U	12.3	4.80	J3	mg/Kg	☼	39	40 - 140	19	50
C19-C36 Aliphatics	2.0	U	16.4	8.78	J3	mg/Kg	☼	53	40 - 140	54	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctadecane	*42*		*40 - 140*

Lab Sample ID: 400-62673-A-1-C MSD
Matrix: Solid
Analysis Batch: 148326

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 148056

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C11-C22 Aromatics	2.4		34.9	19.9	J3	mg/Kg	☼	50	40 - 140	64	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*41*		*40 - 140*
2-Fluorobiphenyl	*89*		*40 - 140*
2-Bromonaphthalene	*90*		*40 - 140*

400-62678

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER 2257 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G03576	SITE 289	D. SIEFKEN	904-636-6125	TEST AMERICA / B. THOMAS
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
[signature]		K. WEICHERT	904-636-6125	3355 MCLEMORE DR.
		CARRIER/WAYBILL NUMBER		CITY, STATE
				PENSACOLA, FL 32514

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED: - METHANOL

TYPE OF ANALYSIS: MADEP EPH, MADEP VPH

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAP (G) COMP (C)	No. OF CONTAINERS	MADEP EPH	MADEP VPH							COMMENTS
1/25	1005	MPT-289-SS12-05-20120125			5	SO	G	4	X	X							-COOL TO 4°C
	1010	MPT-289-SS12-07-20120125			7	SO	G	4	X	X							
	~~1030~~	~~MPT-289-SS13-07-20120125~~					~~G~~	~~4~~	~~X~~	~~X~~	KW						
	1055	MPT-289-SS16-07-20120125			7		G	4	X	X							

1. RELINQUISHED BY [signature]	DATE 1-25-12	TIME 1600	1. RECEIVED BY [signature]	DATE 1/26/12	TIME 1026
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS 0.2°

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

2/14/2012

Login Sample Receipt Checklist

Client: Empirical Laboratories, LLC

Job Number: 400-62678-1

Login Number: 62678
List Number: 1
Creator: Whitmire, Cheyenne

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.2°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC indicates 4 bottles, however, only 3 bottles per sample was received.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	False	Soils vials appear to only have 5g of soil per 15ml of Methanol. Method
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	requires a 1:1 ratio. Insufficient volume for MS/MSD received.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Certification Summary

Client: Empirical Laboratories, LLC
Project/Site: 112G03576 SITE 289

TestAmerica Job ID: 400-62678-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pensacola	Alabama	State Program	4	40150
TestAmerica Pensacola	Arizona	State Program	9	AZ0710
TestAmerica Pensacola	Arkansas	State Program	6	88-0689
TestAmerica Pensacola	Florida	NELAC	4	E81010
TestAmerica Pensacola	Georgia	Georgia EPD	4	N/A
TestAmerica Pensacola	Illinois	NELAC	5	200041
TestAmerica Pensacola	Iowa	State Program	7	367
TestAmerica Pensacola	Kansas	NELAC	7	E-10253
TestAmerica Pensacola	Kentucky	Kentucky UST	4	53
TestAmerica Pensacola	Louisiana	NELAC	6	30976
TestAmerica Pensacola	Maryland	State Program	3	233
TestAmerica Pensacola	Massachusetts	State Program	1	M-FL094
TestAmerica Pensacola	Michigan	State Program	5	9912
TestAmerica Pensacola	New Hampshire	NELAC	1	2505
TestAmerica Pensacola	New Jersey	NELAC	2	FL006
TestAmerica Pensacola	North Carolina	North Carolina DENR	4	314
TestAmerica Pensacola	Oklahoma	State Program	6	9810
TestAmerica Pensacola	Pennsylvania	NELAC	3	68-00467
TestAmerica Pensacola	Rhode Island	State Program	1	LAO00307
TestAmerica Pensacola	South Carolina	State Program	4	96026
TestAmerica Pensacola	Tennessee	State Program	4	TN02907
TestAmerica Pensacola	Texas	NELAC	6	T104704286-11-3
TestAmerica Pensacola	USDA	USDA		P330-10-00407
TestAmerica Pensacola	Virginia	NELAC	3	460166
TestAmerica Pensacola	Washington	State Program	10	C915
TestAmerica Pensacola	West Virginia	West Virginia DEP	3	136

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

MAEPH
DATA
PACKAGE
FOR
JOB# 400-62678 S

DATA ANALYSIS PARAMETERS

Method Name: W:\METHODS\PROCESS\ALIEPHAI.M

Percent Report Settings

Sort By: Signal

Output Destination
    Screen: No
    Printer: Yes
    File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: No

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
    Screen: No
    Printer: No
    File: No

Generate Report During Run Method: Yes

MA/NC EPH'S ON FLASH
Calibration Last Updated: Fri Dec 16 09:11:29 2011

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

---

1) 1-Chlorooctadecane ( )
Ret. Time 1.08 min., Extract & Integrate from 1.06 to 1.10 min.

Lvl	ID	Conc (ug/ml)	Response

1	1.000	8146
2	5.000	16939
3	20.000	110548
4	50.000	251994
5	100.000	536445
6	200.000	1002040

Curve Fit: Linear

---

2) C10-C12 Aliphatics ( )

Ret. Time 0.60 min., Extract & Integrate from 0.51 to 0.72 min.

Lvl	ID	Conc (ppb)	Response
1		2.000	18824
2		10.000	51551
3		40.000	313801
4		100.000	724300
5		200.000	1586090
6		400.000	3151621

Curve Fit: Linear

---

3) C12-C16 Aliphatics ( )

Ret. Time 0.82 min., Extract & Integrate from 0.72 to 0.91 min.

Lvl	ID	Conc (ppb)	Response
1		2.000	19465
2		10.000	49622
3		40.000	296752
4		100.000	649434
5		200.000	1401190
6		400.000	2743305

Curve Fit: Linear

---

4) C16-C35 Aliphatics ( )

Ret. Time 1.41 min., Extract & Integrate from 0.91 to 1.60 min.

Lvl	ID	Conc (ppb)	Response
1		8.000	76188
2		40.000	143465
3		160.000	947388
4		400.000	2152806
5		800.000	4688010
6		1600.000	8468409

Curve Fit: Linear

---

5) C9-C18 Aliphatics ( )

Ret. Time 0.48 min., Extract & Integrate from 0.31 to 0.99 min.

Lvl	ID	Conc (ppb)	Response
1		6.000	69936
2		30.000	150848
3		120.000	924349

4	300.000	2021245
5	600.000	4403385
6	1200.000	8644867

Curve Fit: Linear

---

6) C19-C36 Aliphatics ( )

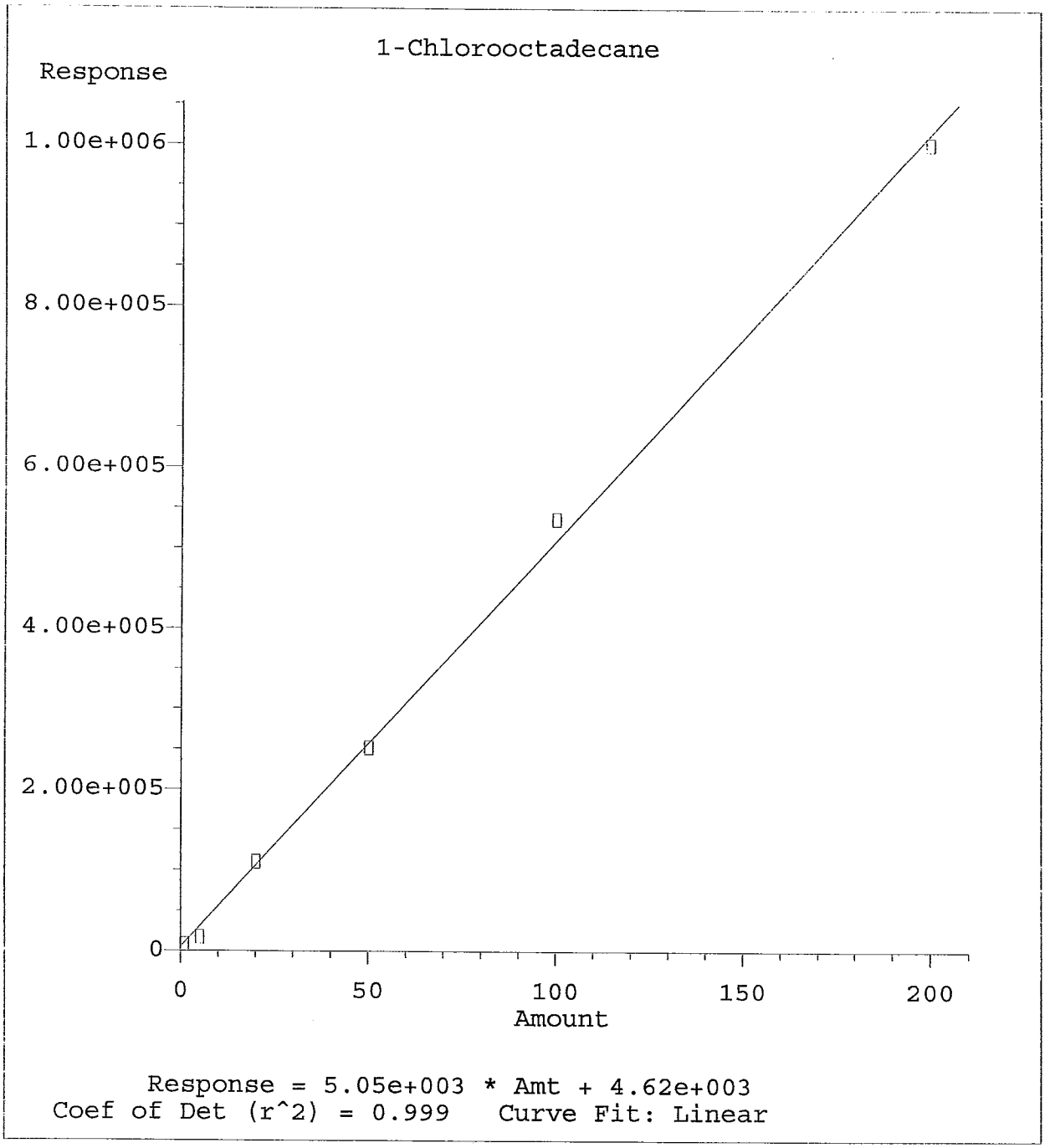
Ret. Time 1.28 min., Extract & Integrate from 0.99 to 1.80 min.

Lvl	ID	Conc (ppb)	Response
1		8.000	70356
2		40.000	129341
3		160.000	898665
4		400.000	2105420
5		800.000	4648059
6		1600.000	8099411

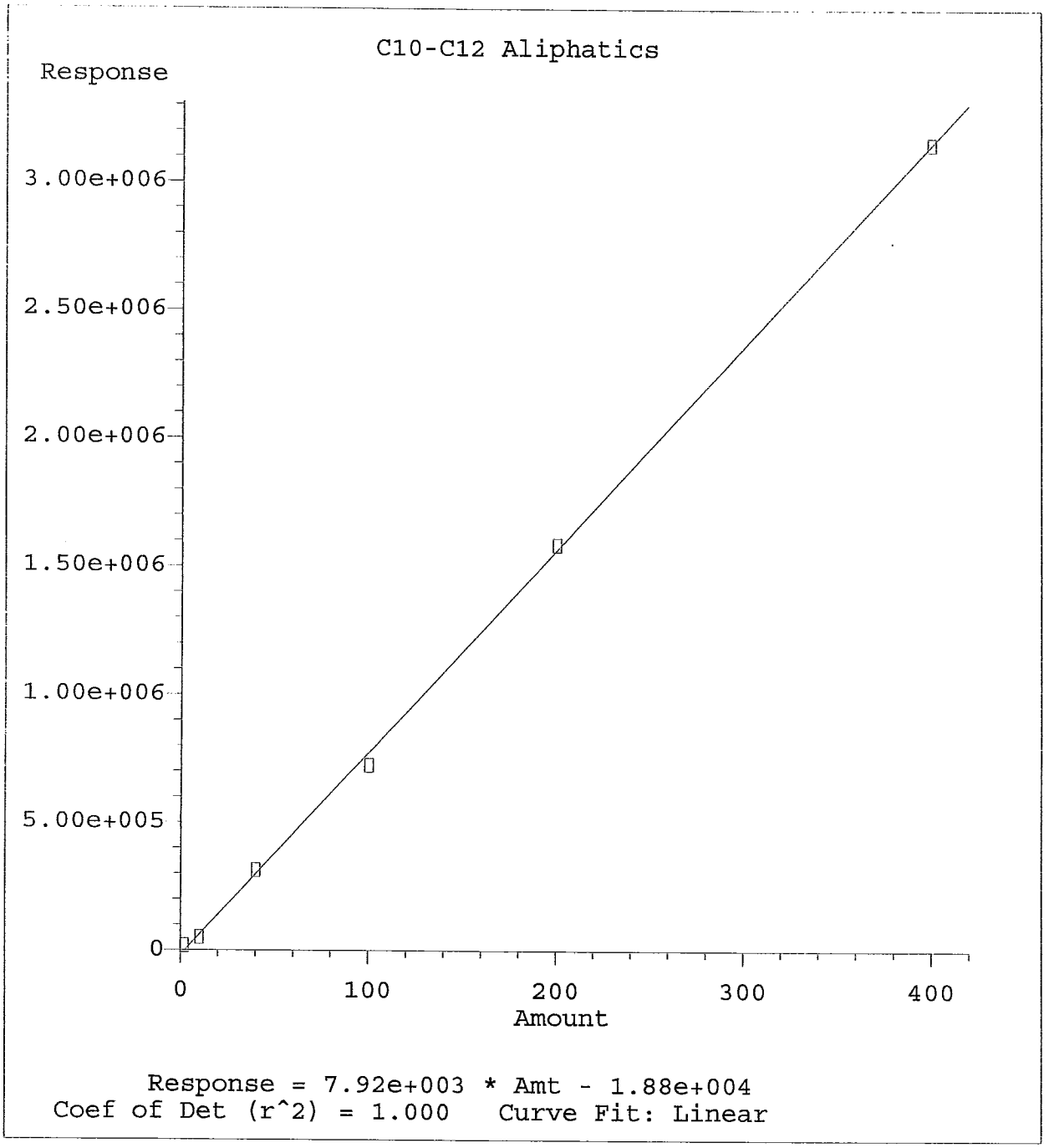
Curve Fit: Linear

END OF DATA ANALYSIS PARAMETERS

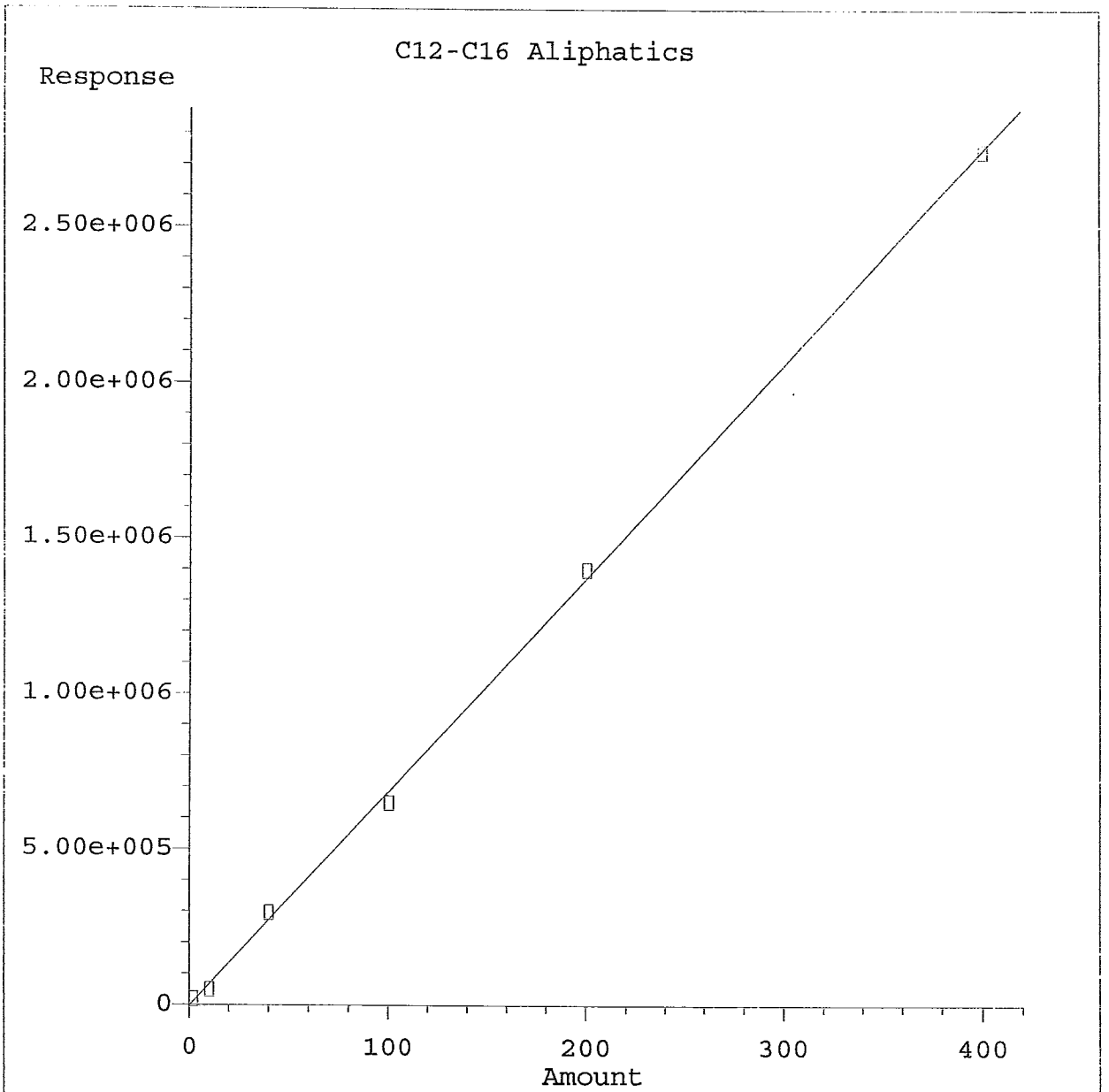
Fri Dec 16 11:14:50 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011

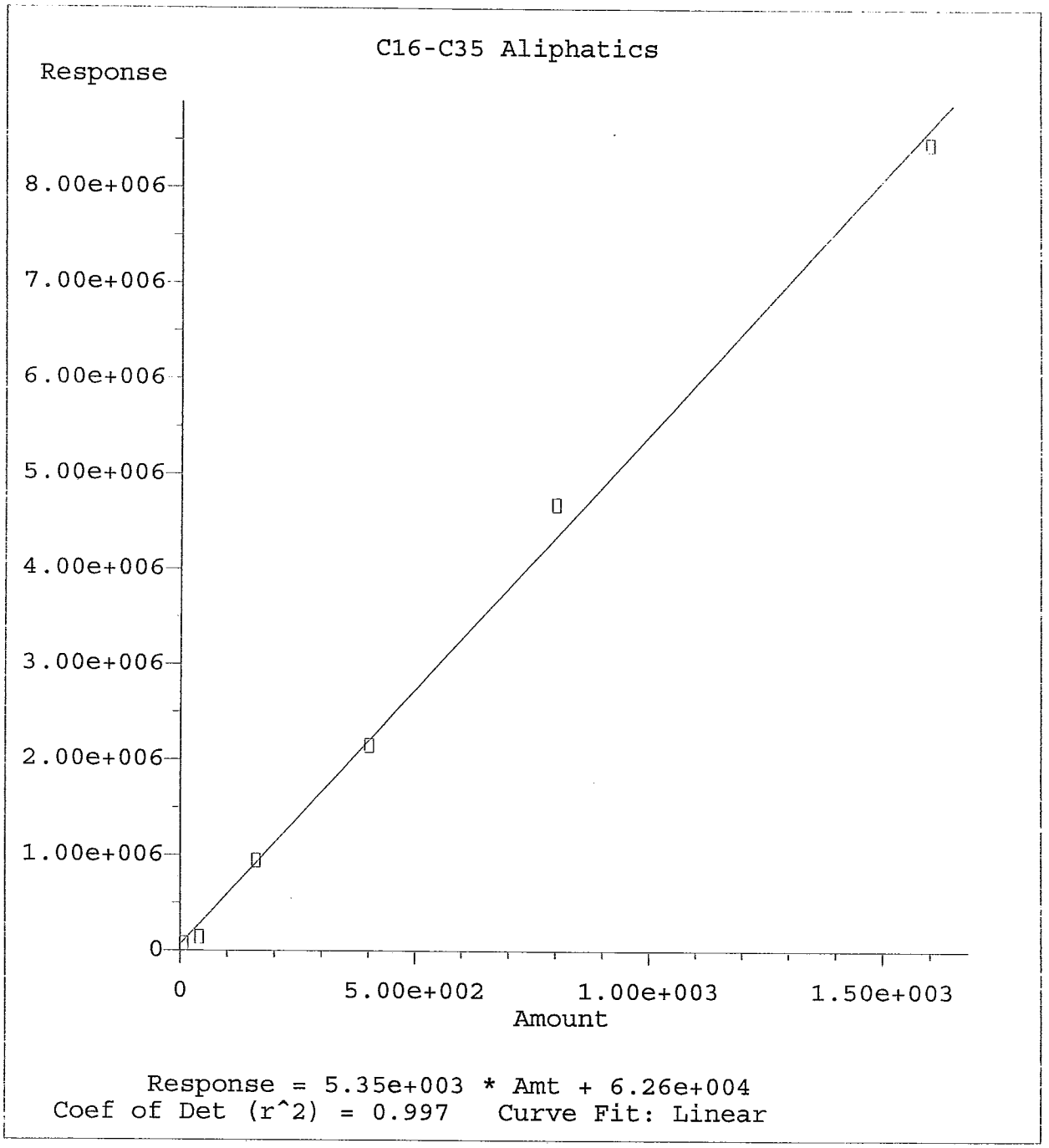


Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011

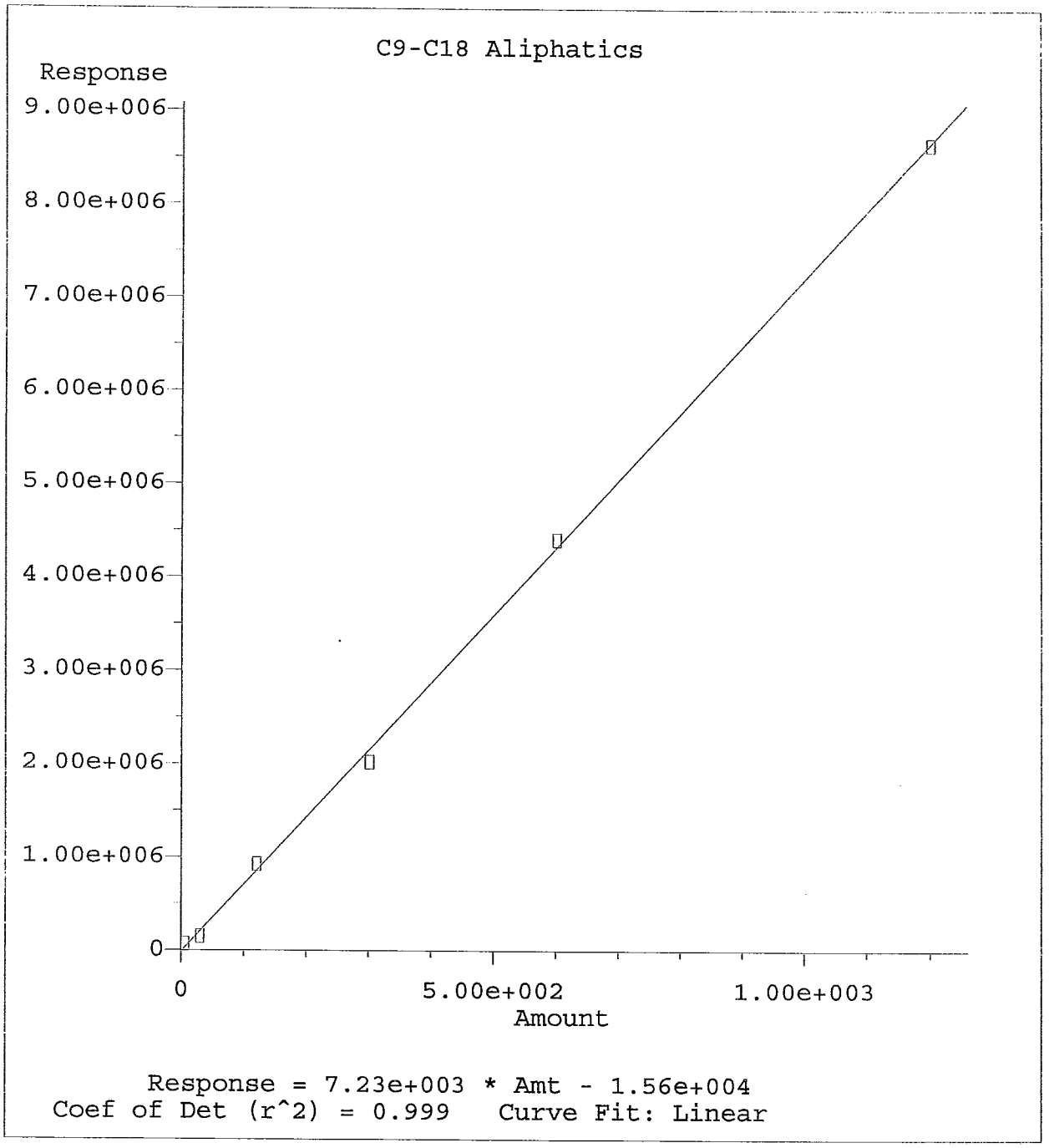


Response = 6.88e+003 * Amt - 2.48e+003
Coef of Det (r^2) = 0.999 Curve Fit: Linear

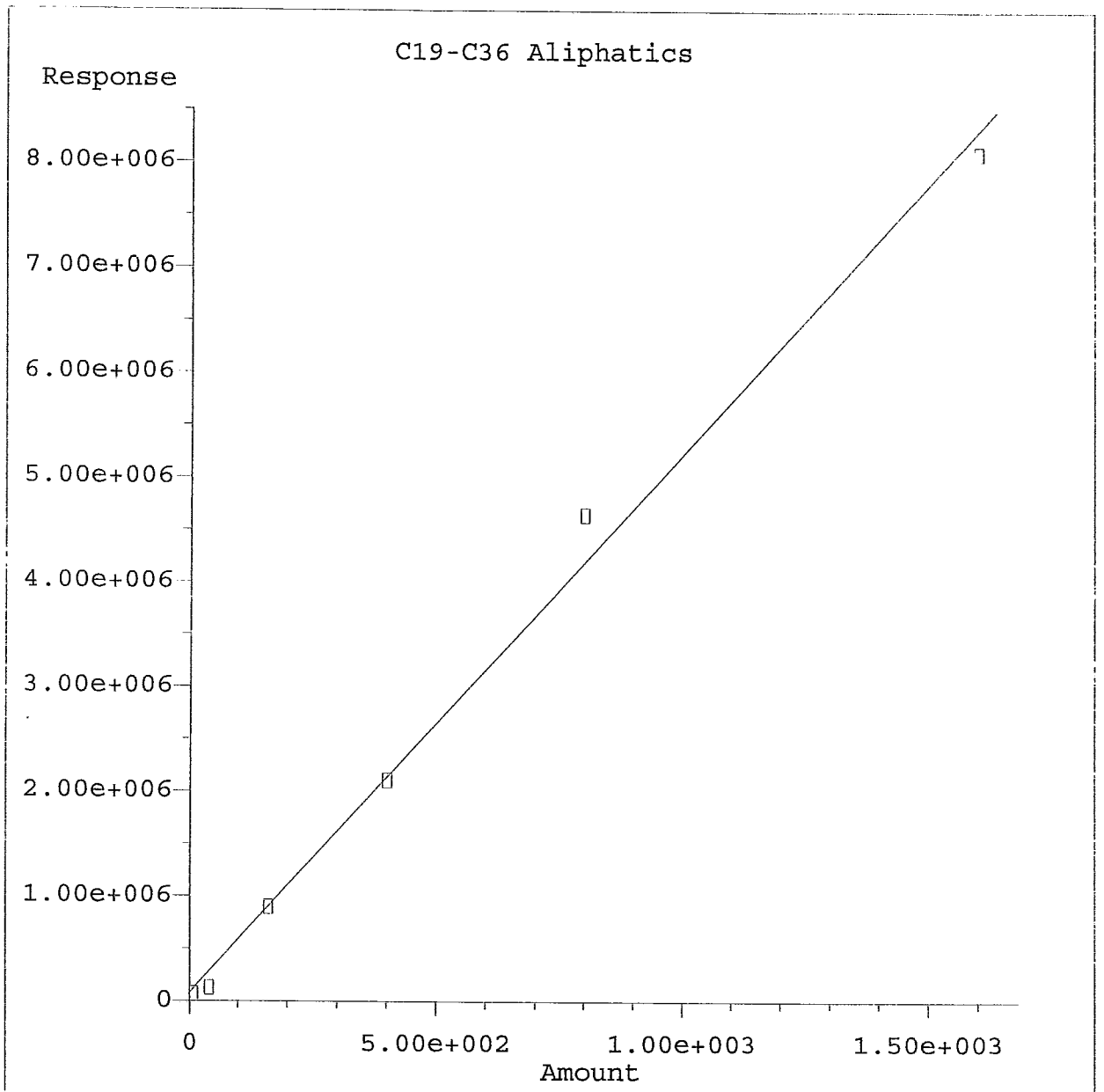
Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Response = 5.15e+003 * Amt + 7.82e+004
Coef of Det (r^2) = 0.994 Curve Fit: Linear

Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011

Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\0601006.D
Acq On : 15 Dec 2011 15:22
Sample : 1 PPM ALIPHATIC STD
Misc : EPHALICRV_00057
IntFile : EVENTS.E
Quant Time: Dec 16 9:01 2011 Quant Results File: ALIEPHAI.RES

Vial: 6
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	1.08	8146	N.D.	ug/ml
Target Compounds				
2) HM C10-C12 Aliphatics	0.60	18824	2.045	ppb
3) HM C12-C16 Aliphatics	0.82	19465	N.D.	ppb
4) HM C16-C35 Aliphatics	1.41	76188	N.D.	ppb
5) HM C9-C18 Aliphatics	0.48	69936	2.979	ppb
6) HM C19-C36 Aliphatics	1.28	70356	N.D.	ppb

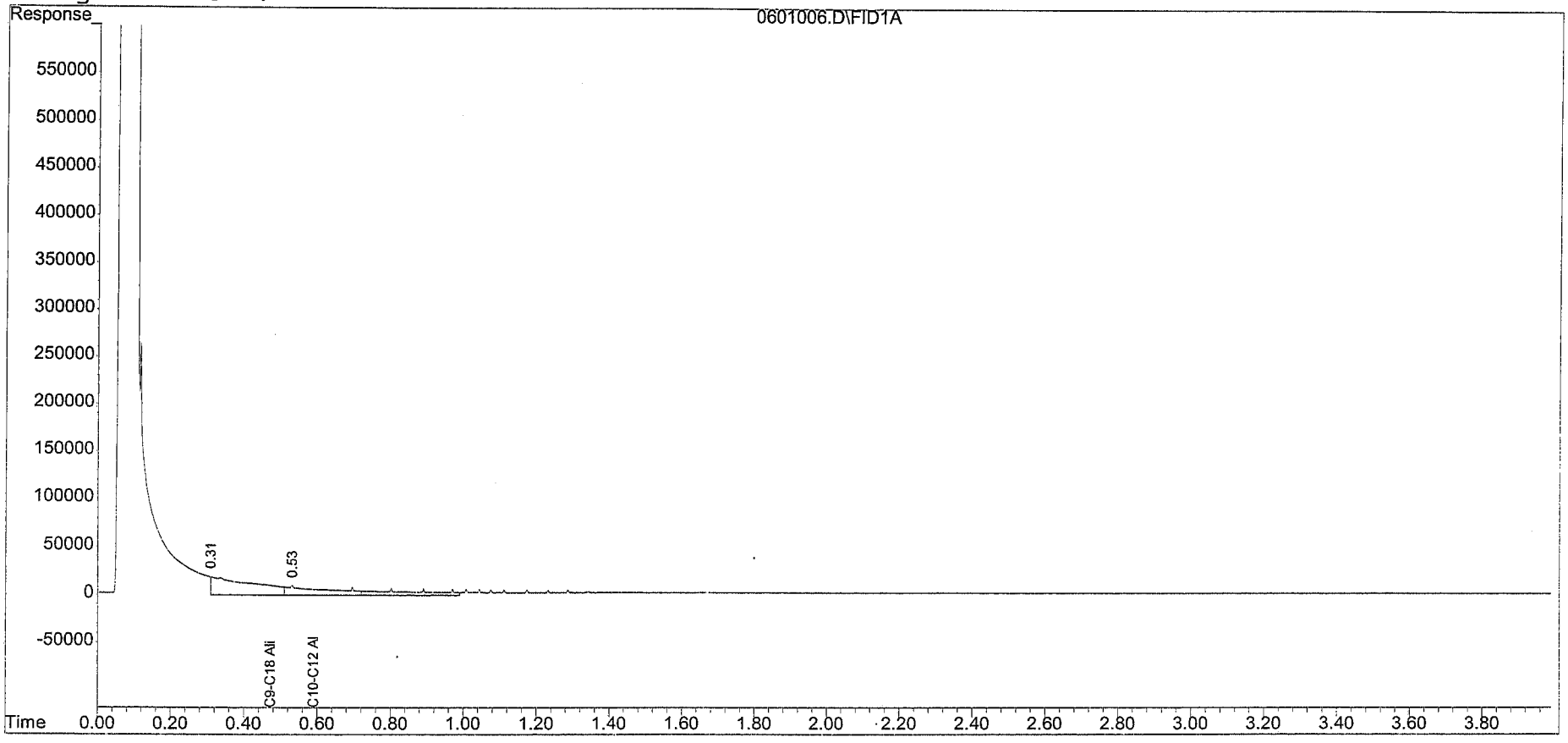
Quantitation Report

Data File : W:\DATA\121511C\0601006.D
Acq On : 15 Dec 2011 15:22
Sample : 1 PPM ALIPHATIC STD
Misc : EPHALICRV_00057
IntFile : EVENTS.E
Quant Time: Dec 16 9:01 2011 Quant Results File: ALIEPHAI.RES

Vial: 6
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\0701007.D
Acq On : 15 Dec 2011 15:29
Sample : 5 PPM ALIPHATIC STD
Misc : EPHALICRV_00057
IntFile : EVENTS.E
Quant Time: Dec 16 9:02 2011 Quant Results File: ALIEPHAI.RES

Vial: 7
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	1.08	16939	N.D.	ug/ml
Target Compounds				
2) HM C10-C12 Aliphatics	0.60	51551	6.046	ppb
3) HM C12-C16 Aliphatics	0.82	49622	3.520	ppb
4) HM C16-C35 Aliphatics	1.41	143465	N.D.	ppb
5) HM C9-C18 Aliphatics	0.48	150848	13.891	ppb
6) HM C19-C36 Aliphatics	1.28	129341	N.D.	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

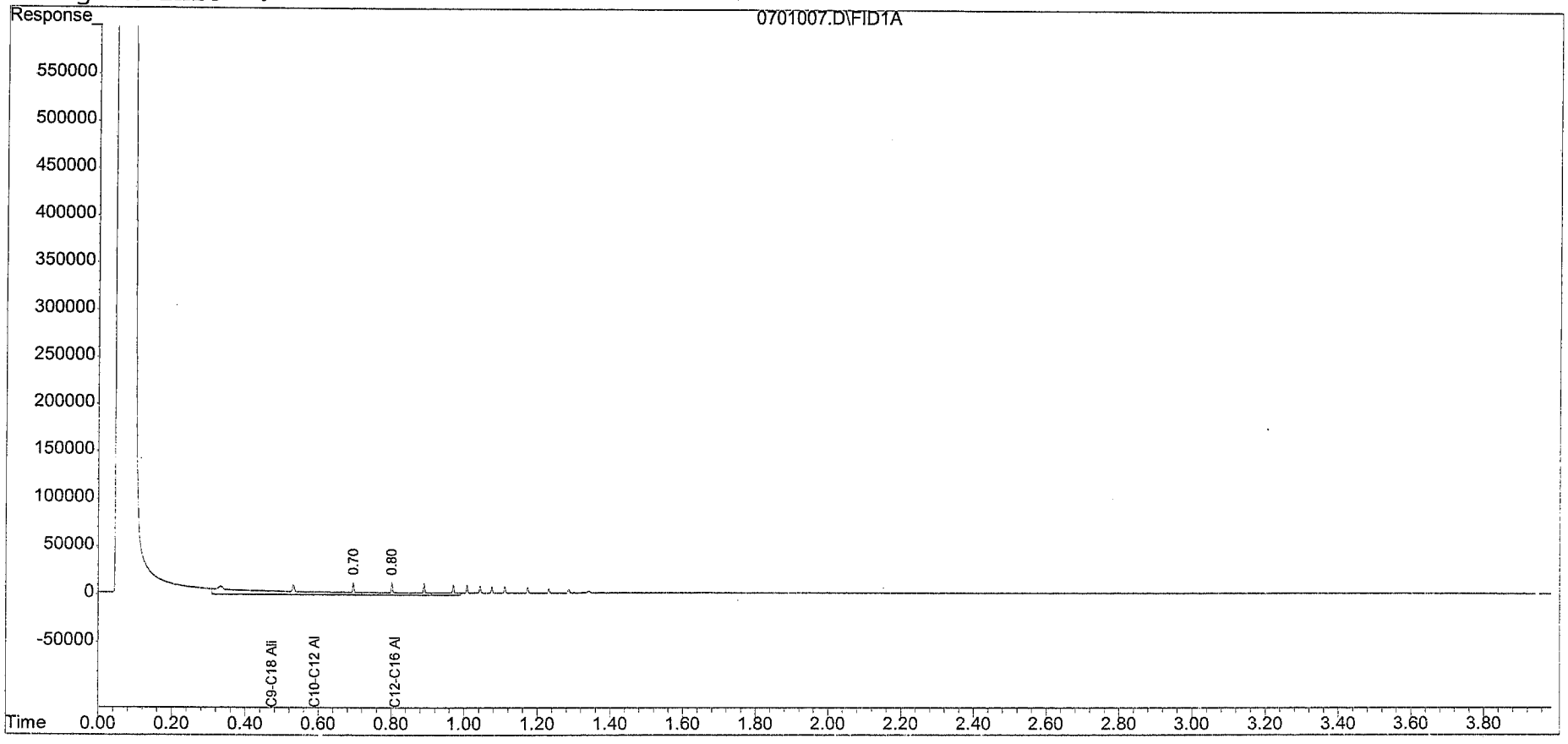
Quantitation Report

Data File : W:\DATA\121511C\0701007.D
Acq On : 15 Dec 2011 15:29
Sample : 5 PPM ALIPHATIC STD
Misc : EPHALICRV_00057
IntFile : EVENTS.E
Quant Time: Dec 16 9:02 2011 Quant Results File: ALIEPHAI.RES

Vial: 7
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\0801008.D
Acq On : 15 Dec 2011 15:36
Sample : 20 PPM ALIPHATIC STD
Misc : EPHALICRV_00058
IntFile : EVENTS.E
Quant Time: Dec 16 9:03 2011 Quant Results File: ALIEPHAI.RES

Vial: 8
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	110548	17.556 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	313801	38.109 ppb
3) HM C12-C16 Aliphatics	0.82	296752	38.879 ppb
4) HM C16-C35 Aliphatics	1.41	947388	134.848 ppb
5) HM C9-C18 Aliphatics	0.48	924349	118.202 ppb
6) HM C19-C36 Aliphatics	1.28	898665	126.413 ppb

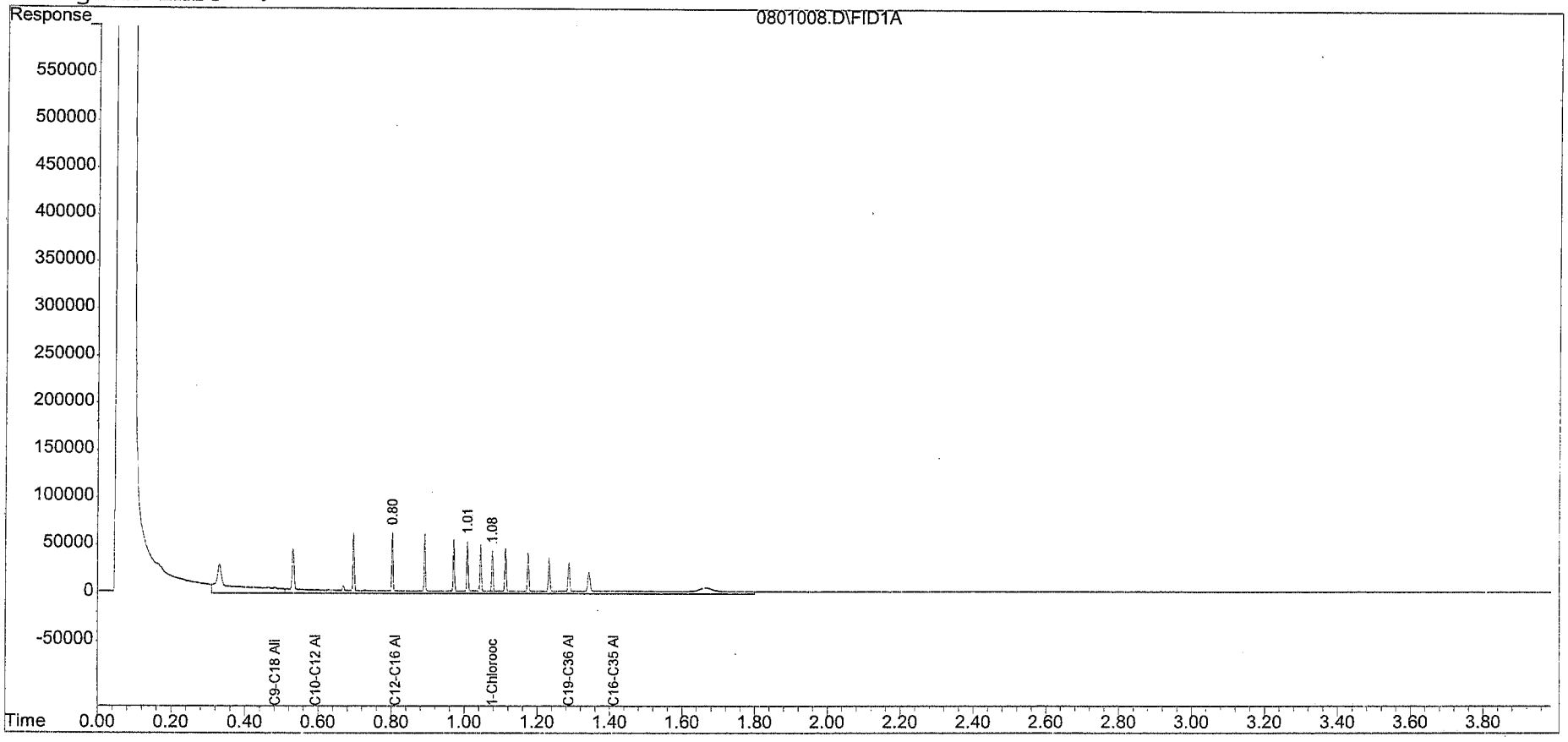
Quantitation Report

Data File : W:\DATA\121511C\0801008.D
Acq On : 15 Dec 2011 15:36
Sample : 20 PPM ALIPHATIC STD
Misc : EPHALICRV_00058
IntFile : EVENTS.E
Quant Time: Dec 16 9:03 2011 Quant Results File: ALIEPHAI.RES

Vial: 8
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\0901009.D
Acq On : 15 Dec 2011 15:43
Sample : 50 PPM ALIPHATIC STD
Misc : EPHALICRV_00059
IntFile : EVENTS.E
Quant Time: Dec 16 9:04 2011 Quant Results File: ALIEPHAI.RES

Vial: 9
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	251994	46.159 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	724300	88.296 ppb
3) HM C12-C16 Aliphatics	0.82	649434	89.342 ppb
4) HM C16-C35 Aliphatics	1.41	2152806	355.958 ppb
5) HM C9-C18 Aliphatics	0.48	2021245	266.126 ppb
6) HM C19-C36 Aliphatics	1.28	2105420	356.668 ppb

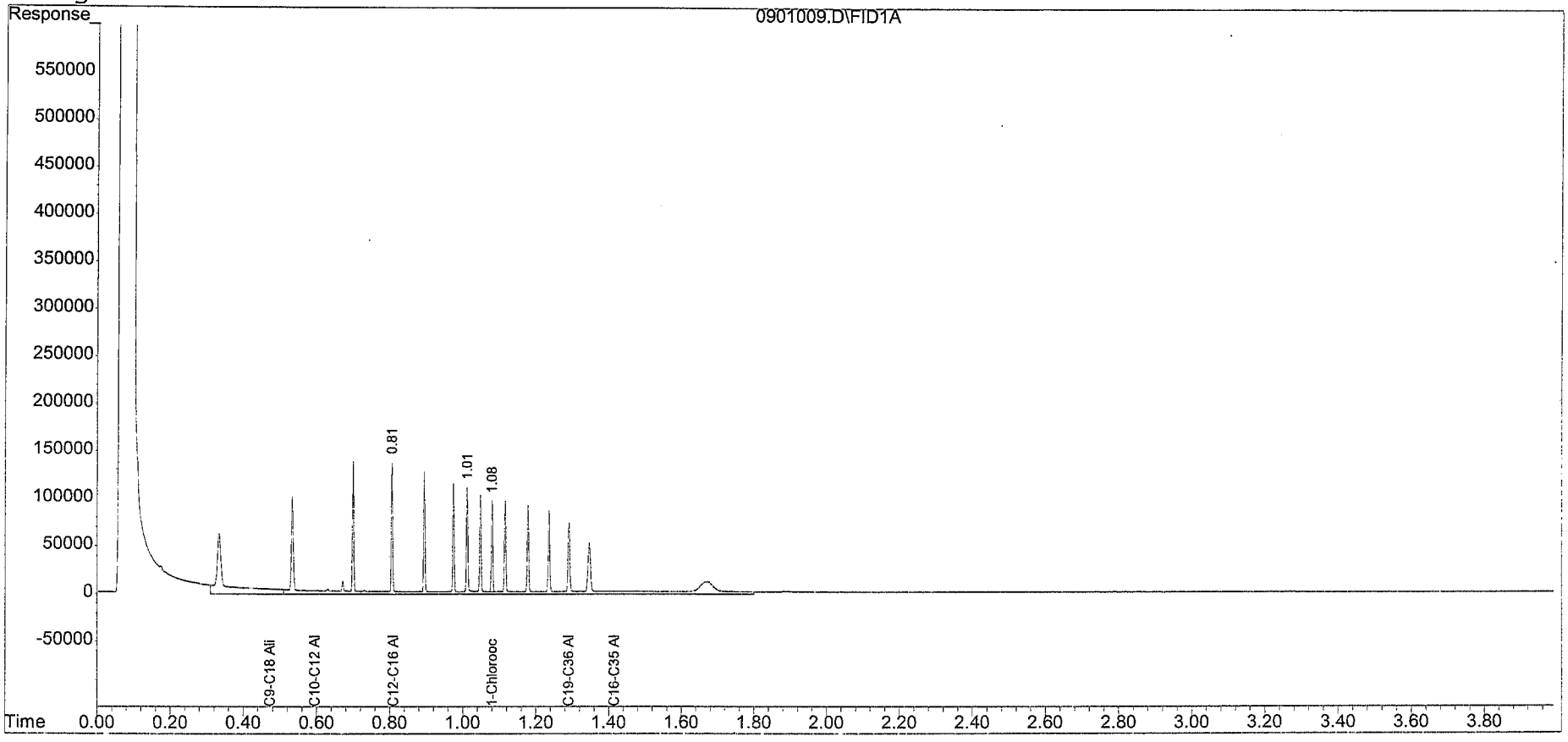
Quantitation Report

Data File : W:\DATA\121511C\0901009.D
Acq On : 15 Dec 2011 15:43
Sample : 50 PPM ALIPHATIC STD
Misc : EPHALICRV_00059
IntFile : EVENTS.E
Quant Time: Dec 16 9:04 2011 Quant Results File: ALIEPHAI.RES

Vial: 9
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1001010.D
Acq On : 15 Dec 2011 15:50
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICRV_00060
IntFile : EVENTS.E
Quant Time: Dec 16 9:05 2011 Quant Results File: ALIEPHAI.RES

Vial: 10
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	536445	103.680 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	1586090	193.659 ppb
3) HM C12-C16 Aliphatics	0.82	1401190	196.904 ppb
4) HM C16-C35 Aliphatics	1.41	4688010	820.993 ppb
5) HM C9-C18 Aliphatics	0.48	4403385	587.373 ppb
6) HM C19-C36 Aliphatics	1.28	4648059	841.816 ppb

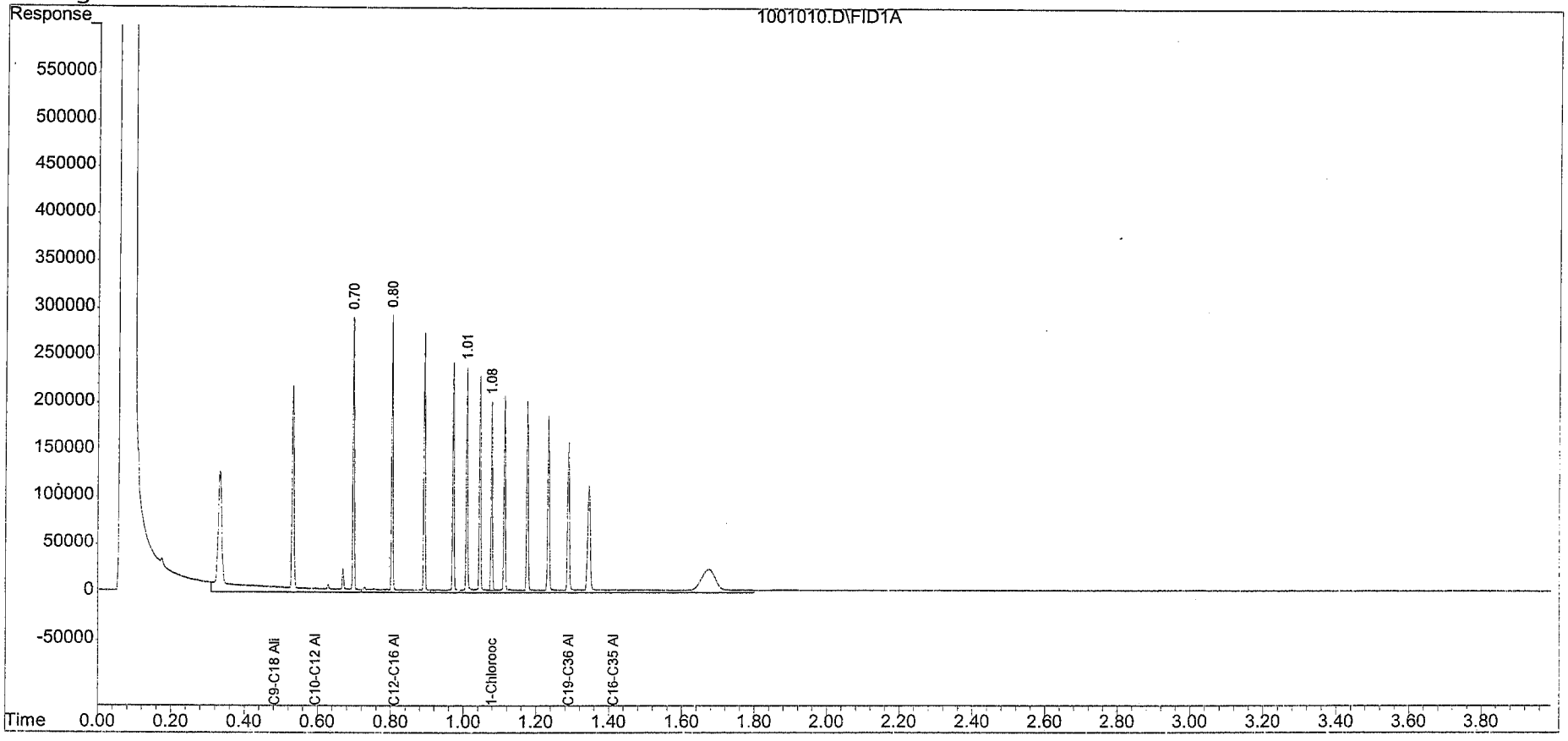
Quantitation Report

Data File : W:\DATA\121511C\1001010.D
Acq On : 15 Dec 2011 15:50
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICRV_00060
IntFile : EVENTS.E
Quant Time: Dec 16 9:05 2011 Quant Results File: ALIEPHAI.RES

Vial: 10
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1101011.D
Acq On : 15 Dec 2011 15:58
Sample : 200 PPM ALIPHATIC STD
Misc : EPHALICRV_00061
IntFile : EVENTS.E
Quant Time: Dec 16 9:05 2011 Quant Results File: ALIEPHAI.RES

Vial: 11
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	1002040	197.831 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	3151621	385.061 ppb
3) HM C12-C16 Aliphatics	0.82	2743305	388.936 ppb
4) HM C16-C35 Aliphatics	1.41	8468409	1514.434 ppb
5) HM C9-C18 Aliphatics	0.48	8644867	1159.365 ppb
6) HM C19-C36 Aliphatics	1.28	8099411	1500.352 ppb

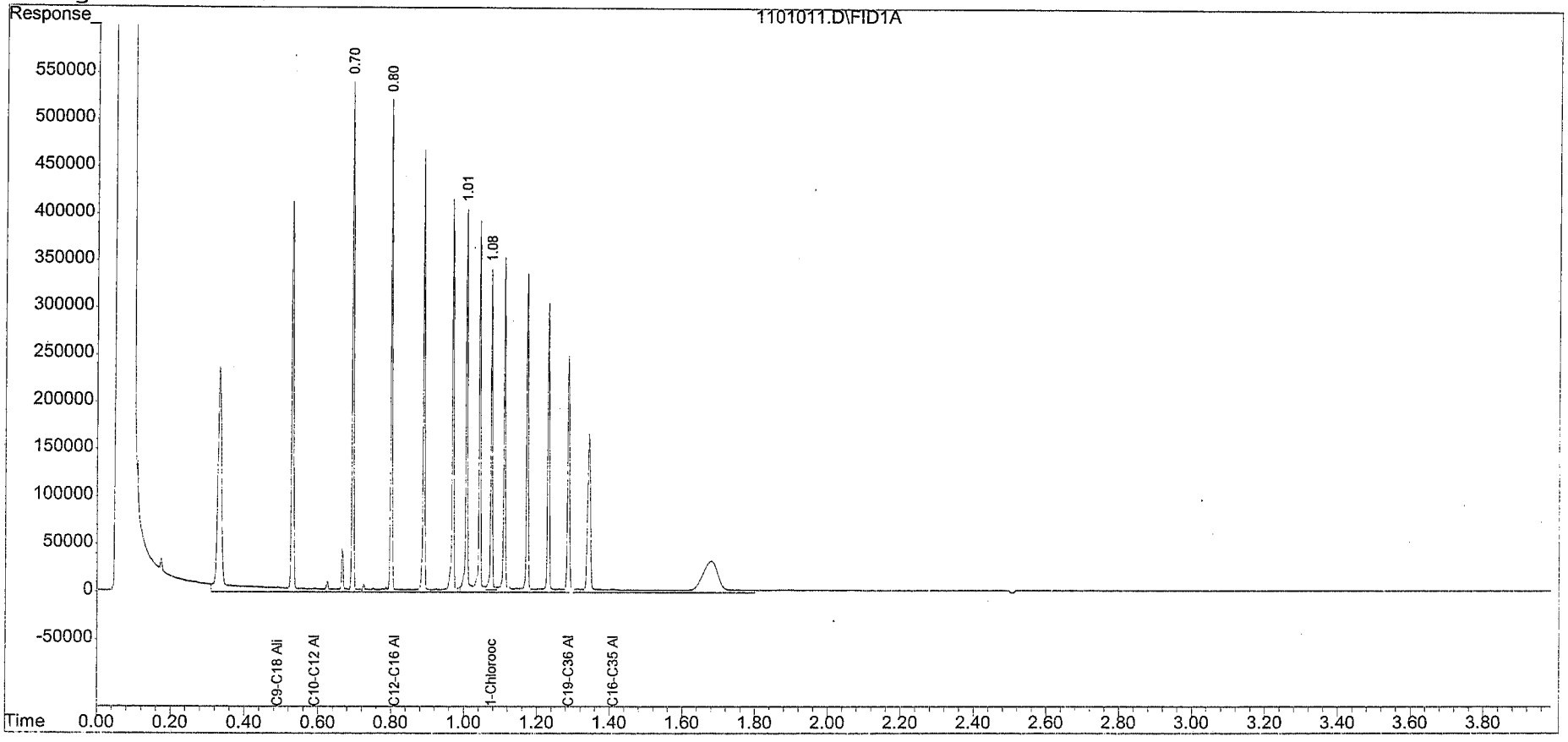
Quantitation Report

Data File : W:\DATA\121511C\1101011.D
Acq On : 15 Dec 2011 15:58
Sample : 200 PPM ALIPHATIC STD
Misc : EPHALICRV_00061
IntFile : EVENTS.E
Quant Time: Dec 16 9:05 2011 Quant Results File: ALIEPHAI.RES

Vial: 11
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 08:50:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : W:\DATA\121511C\1201012.D
Acq On : 15 Dec 2011 16:05
Sample : 100 PPM ALIPHATIC ICV
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 12
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 09:11:29 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	199.942	0.0	99	0.00
3 HM	C12-C16 Aliphatics	200.000	216.883	-8.4	106	0.00
4 HM	C16-C35 Aliphatics	800.000	870.250	-8.8	101	0.00
5 HM	C9-C18 Aliphatics	600.000	649.300	-8.2	106	0.00
6 HM	C19-C36 Aliphatics	800.000	849.590	-6.2	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Fri Dec 16 09:13:19 2011 FLO

Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1201012.D
Acq On : 15 Dec 2011 16:05
Sample : 100 PPM ALIPHATIC ICV
Misc : EPHALICCV_00044
IntFile : EVENTS.E
Quant Time: Dec 16 9:13 2011 Quant Results File: ALIEPHAI.RES

Vial: 12
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 09:11:29 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	0.00	0	N.D.	ug/mld
Target Compounds				
2) HM C10-C12 Aliphatics	0.60	1565547	199.942	ppb
3) HM C12-C16 Aliphatics	0.82	1489930	216.883	ppb
4) HM C16-C35 Aliphatics	1.41	4720693	870.250	ppb
5) HM C9-C18 Aliphatics	0.48	4678066	649.300	ppb
6) HM C19-C36 Aliphatics	1.28	4450978	849.590	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

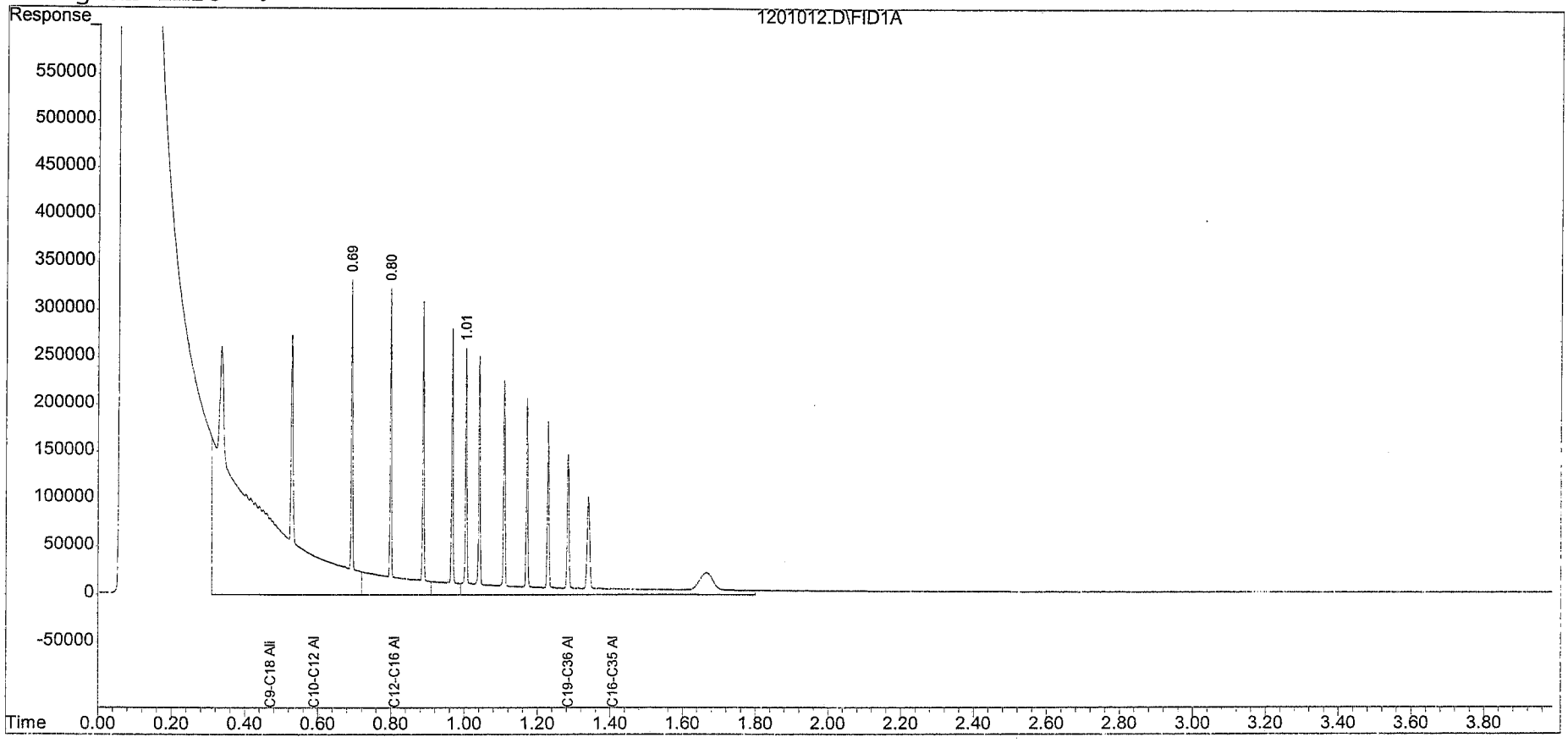
Quantitation Report

Data File : W:\DATA\121511C\1201012.D
Acq On : 15 Dec 2011 16:05
Sample : 100 PPM ALIPHATIC ICV
Misc : EPHALICCV_00044
IntFile : EVENTS.E
Quant Time: Dec 16 9:13 2011 Quant Results File: ALIEPHAI.RES

Vial: 12
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 09:11:29 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



DATA ANALYSIS PARAMETERS

Method Name: W:\METHODS\PROCESS\AROEPHAI.M

Percent Report Settings

Sort By: Signal

Output Destination
    Screen: No
    Printer: Yes
    File: No

Integration Events: AutoIntegrate

Generate Report During Run Method: Yes

Signal Correlation Window: 0.020

Quantitative Report Settings

Report Type: Summary

Output Destination
    Screen: No
    Printer: No
    File: No

Generate Report During Run Method: No

MA/NC EPH'S ON FLASH
Calibration Last Updated: Fri Dec 16 10:37:17 2011

Reference Window: 10.00 Percent
Non-Reference Window: 5.00 Percent
Correlation Window: 0.02 minutes
Default Multiplier: 1.00
Default Sample Concentration: 0.00

Compound Information

---

1) o-Terphenyl ( )
Ret. Time 1.02 min., Extract & Integrate from 1.00 to 1.04 min.

Lvl	ID	Conc (ug/ml)	Response

1	1.000	8265
2	5.000	36882
3	20.000	133704
4	50.000	333396
5	100.000	697221
6	200.000	1387193

Curve Fit: Avg. RF

---

2) 2-Fluorobiphenyl ( )

Ret. Time 0.80 min., Extract & Integrate from 0.77 to 0.83 min.

Lvl	ID	Conc (ug/ml)	Response
1		5.000	41961
2		20.000	169823
3		50.000	406785
4		100.000	667742
5		200.000	1245054
6		not used for this compound	

Curve Fit: Linear

---

3) 2-Bromonaphthalene ( )

Ret. Time 0.85 min., Extract & Integrate from 0.82 to 0.88 min.

Lvl	ID	Conc (ug/ml)	Response
1		5.000	28322
2		20.000	114102
3		50.000	274138
4		100.000	451422
5		200.000	846680
6		not used for this compound	

Curve Fit: Linear

---

4) C10-C12 Aromatics ( )

Ret. Time 0.68 min., Extract & Integrate from 0.51 to 0.71 min.

Lvl	ID	Conc (ppb)	Response
1		1.000	7698
2		5.000	38692
3		20.000	144260
4		50.000	373243
5		100.000	770609
6		200.000	1565885

Curve Fit: Avg. RF

---

5) C12-C16 Aromatics ( )

Ret. Time 0.80 min., Extract & Integrate from 0.74 to 0.87 min.

Lvl	ID	Conc (ppb)	Response
1		3.000	24762
2		15.000	113817
3		60.000	422386

4	150.000	1034711
5	300.000	2238395
6	600.000	4507319

Curve Fit: Avg. RF

---

6) C16-C21 Aromatics ( )

Ret. Time 1.00 min., Extract & Integrate from 0.88 to 1.12 min.

Lvl	ID	Conc (ppb)	Response
1		5.000	40509
2		25.000	172379
3		100.000	630442
4		250.000	1569087
5		500.000	3325164
6		1000.000	6702196

Curve Fit: Avg. RF

---

7) C21-C35 Aromatics ( )

Ret. Time 1.40 min., Extract & Integrate from 1.12 to 1.52 min.

Lvl	ID	Conc (ppb)	Response
1		8.000	43812
2		40.000	194514
3		160.000	720248
4		400.000	1940872
5		800.000	4145573
6		1600.000	8799899

Curve Fit: Avg. RF

---

8) C11-C22 Aromatics ( )

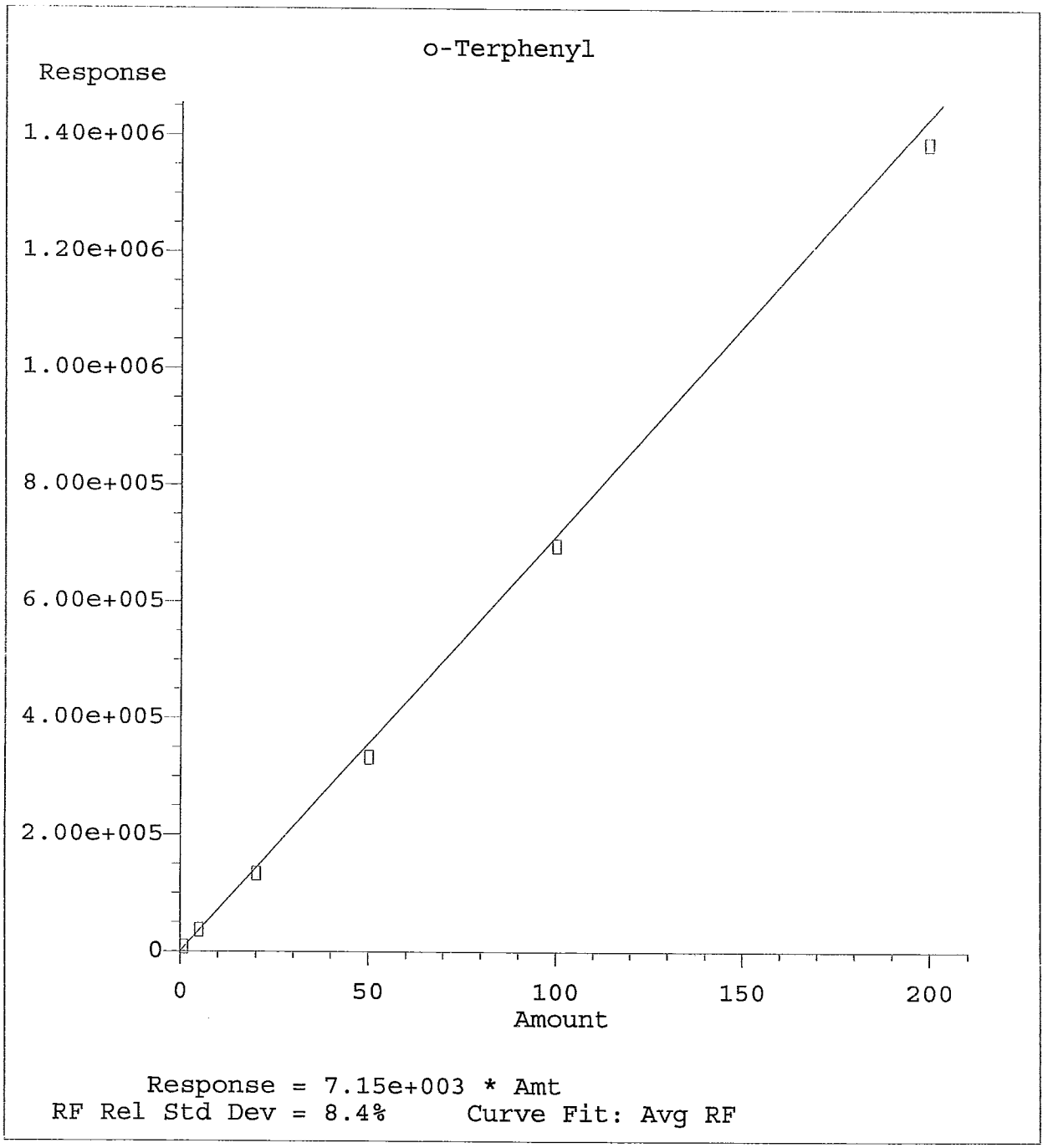
Ret. Time 0.87 min., Extract & Integrate from 0.67 to 1.52 min.

Lvl	ID	Conc (ppb)	Response
1		17.000	116780
2		85.000	519402
3		340.000	1917336
4		850.000	4915905
5		1700.000	10479742
6		3400.000	21574617

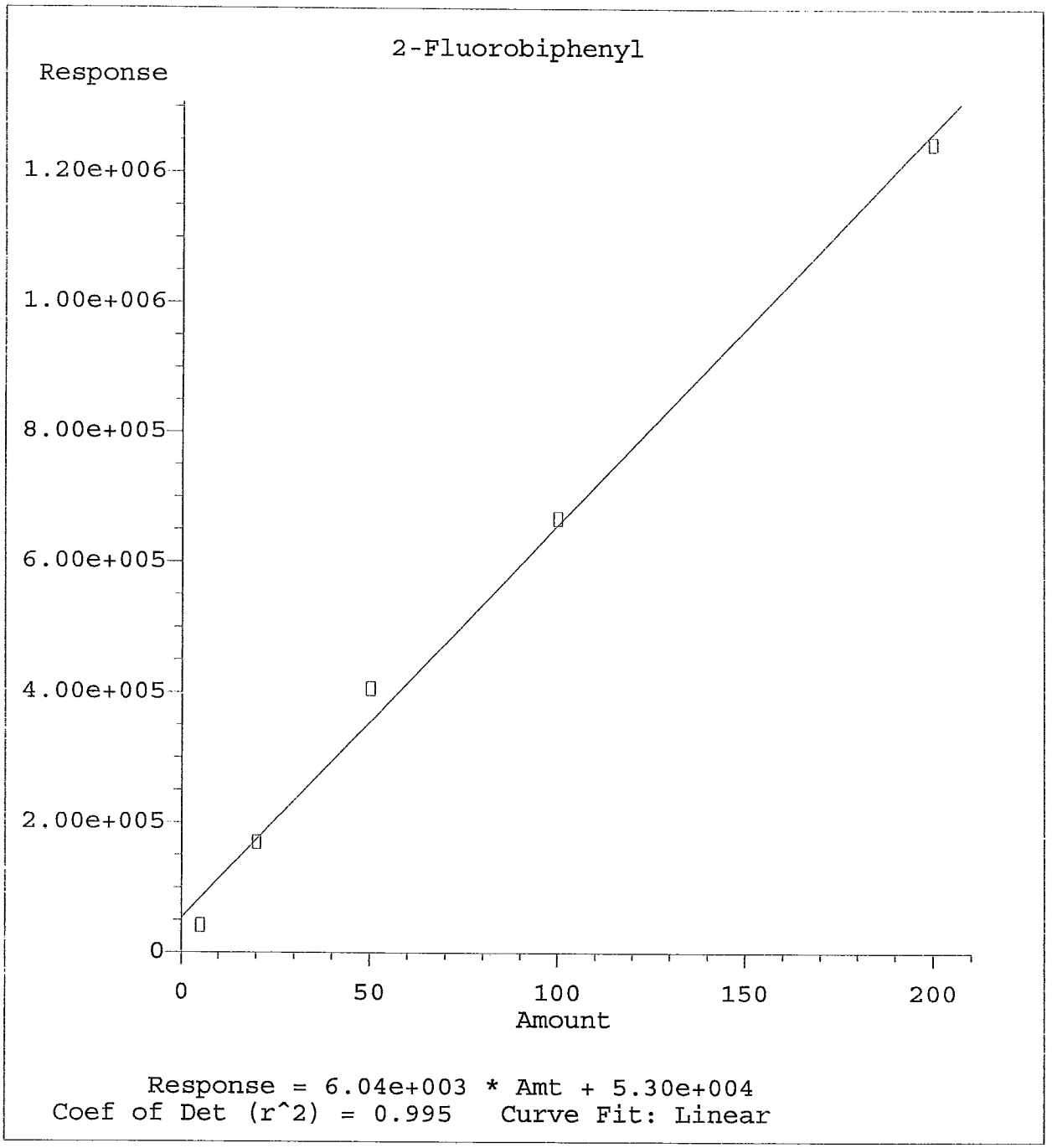
Curve Fit: Avg. RF

END OF DATA ANALYSIS PARAMETERS

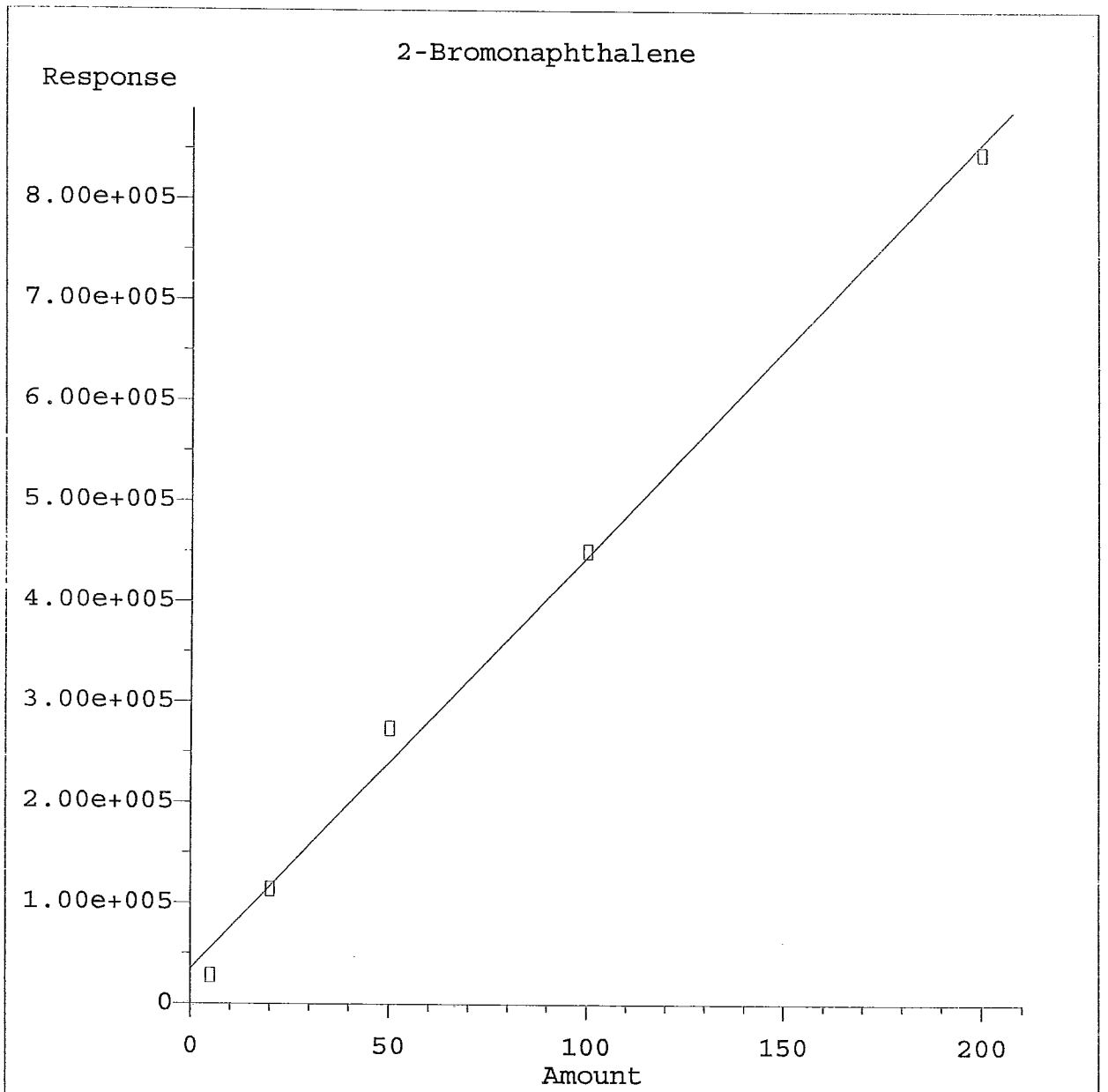
Fri Dec 16 11:14:01 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011

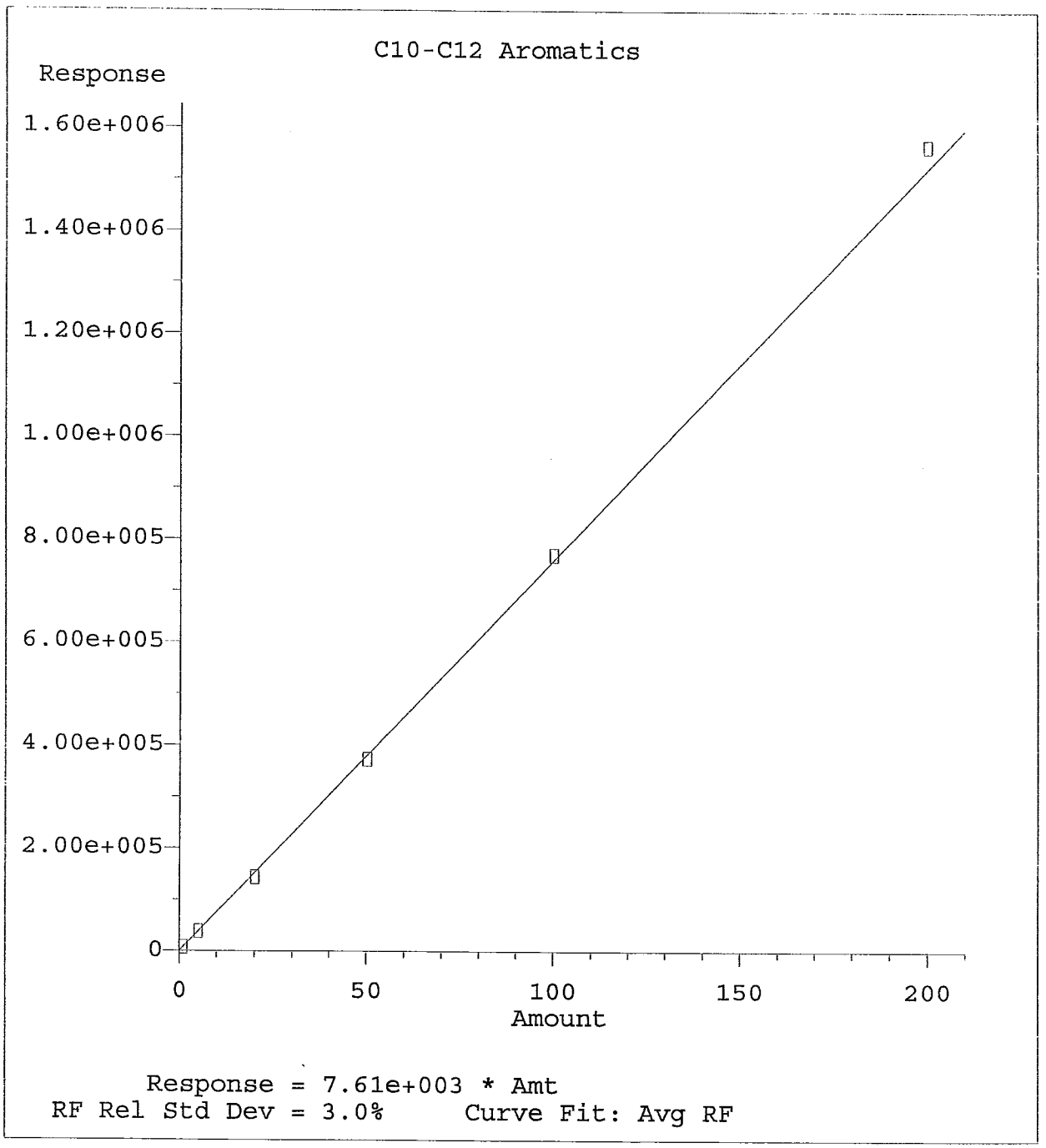


Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011

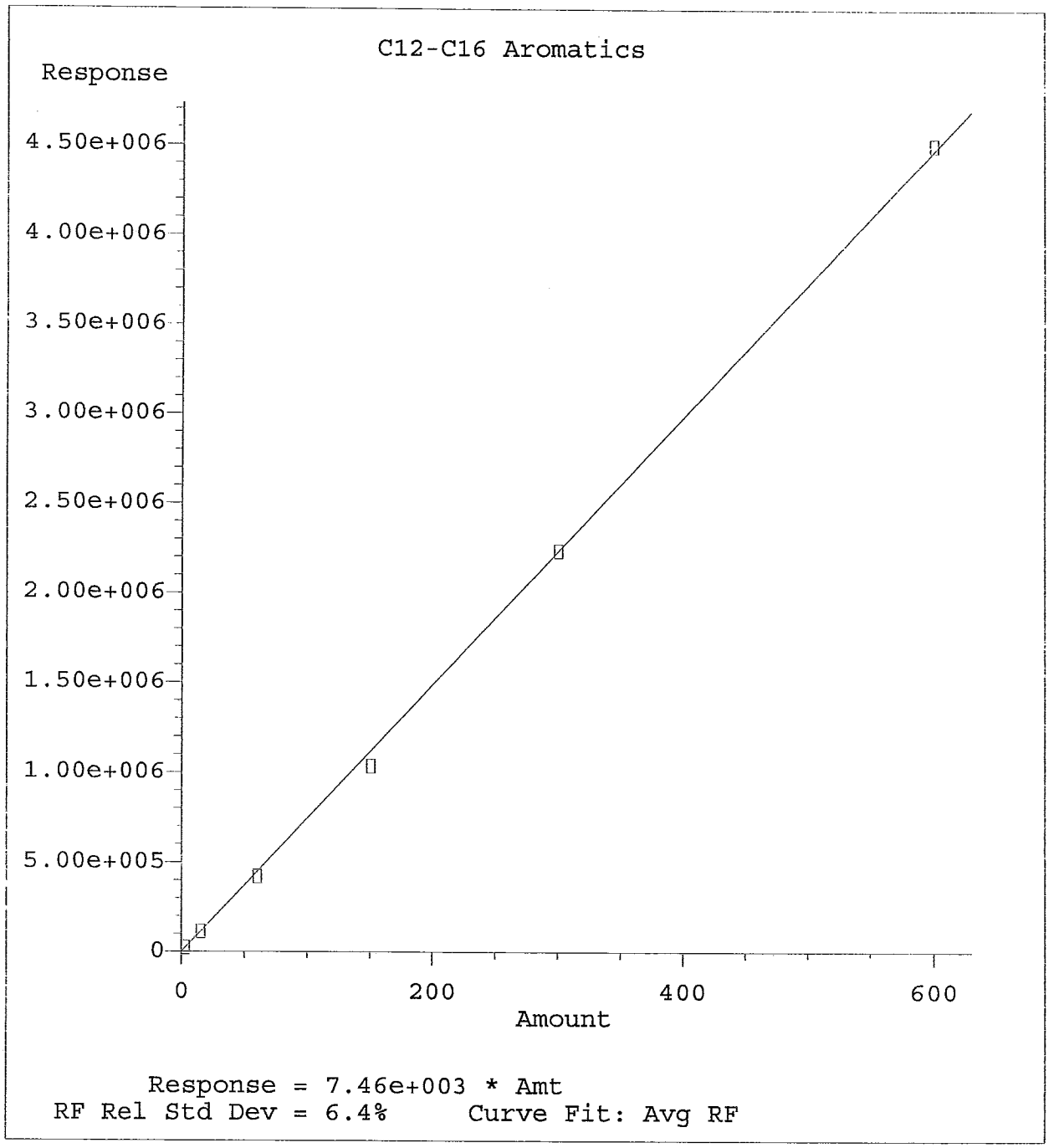


Response = 4.11e+003 * Amt + 3.44e+004
Coef of Det (r^2) = 0.995 Curve Fit: Linear

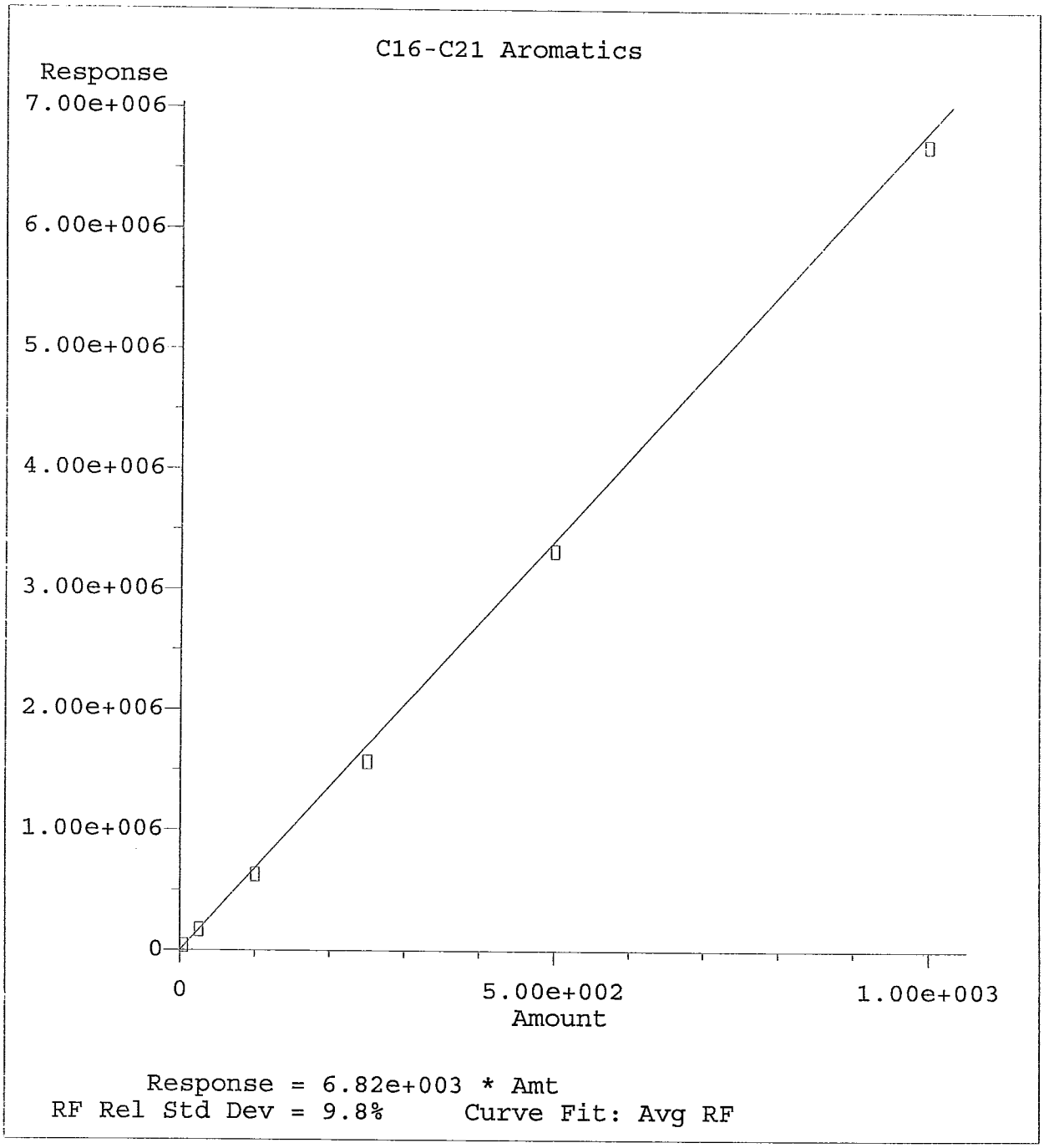
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



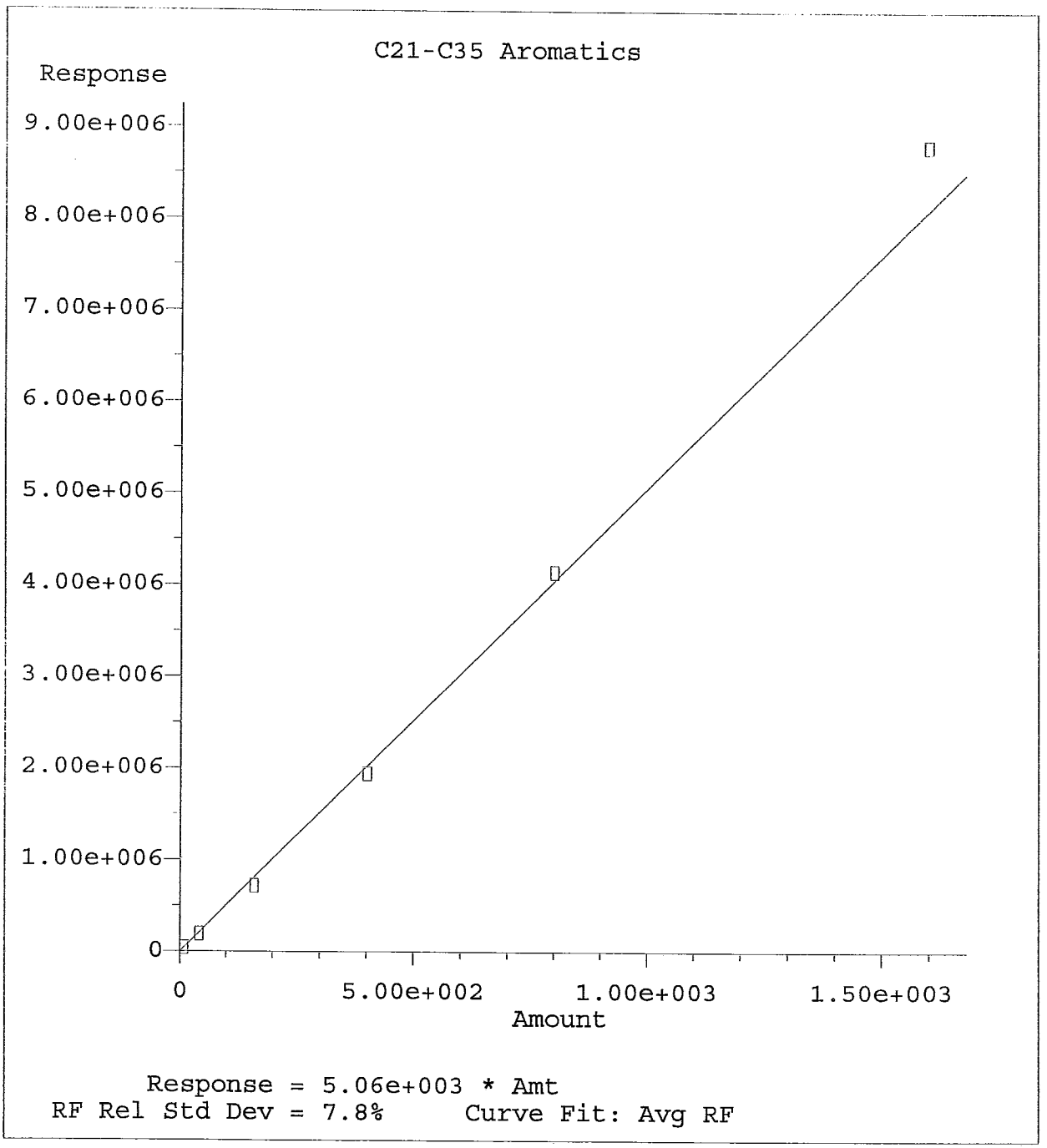
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



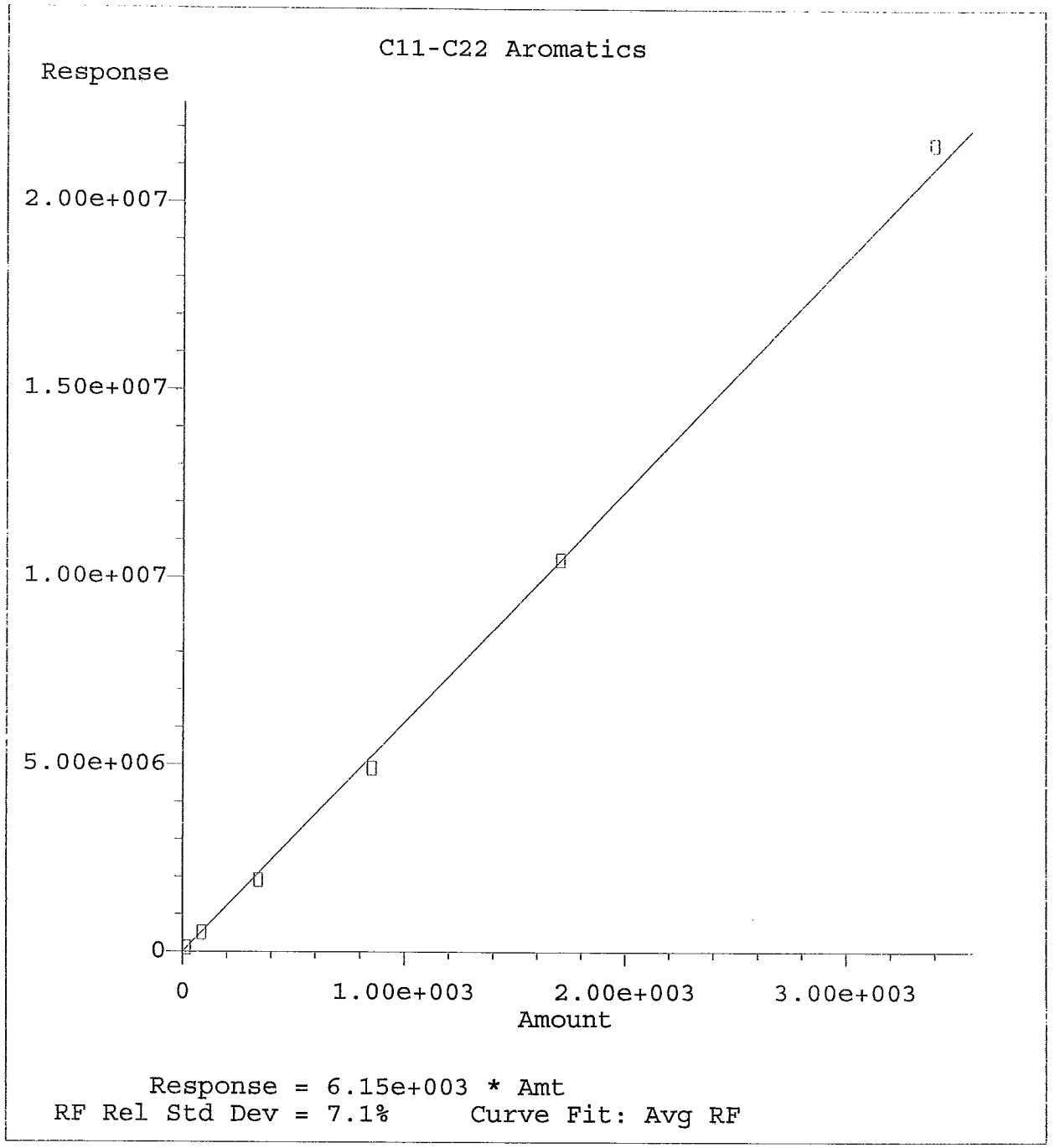
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011

Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1301013.D
Acq On : 15 Dec 2011 16:12
Sample : 1 PPM AROMATIC STD
Misc : EPHAROCRV_00075
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 13
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.02	8265	1.241	ug/ml
2)	S	2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3)	S	2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	7698	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.80	24762	N.D.	ppb
6)	HM	C16-C21 Aromatics	1.00	40509	N.D.	ppb
7)	HM	C21-C35 Aromatics	1.40	43812	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	116780	N.D.	ppb

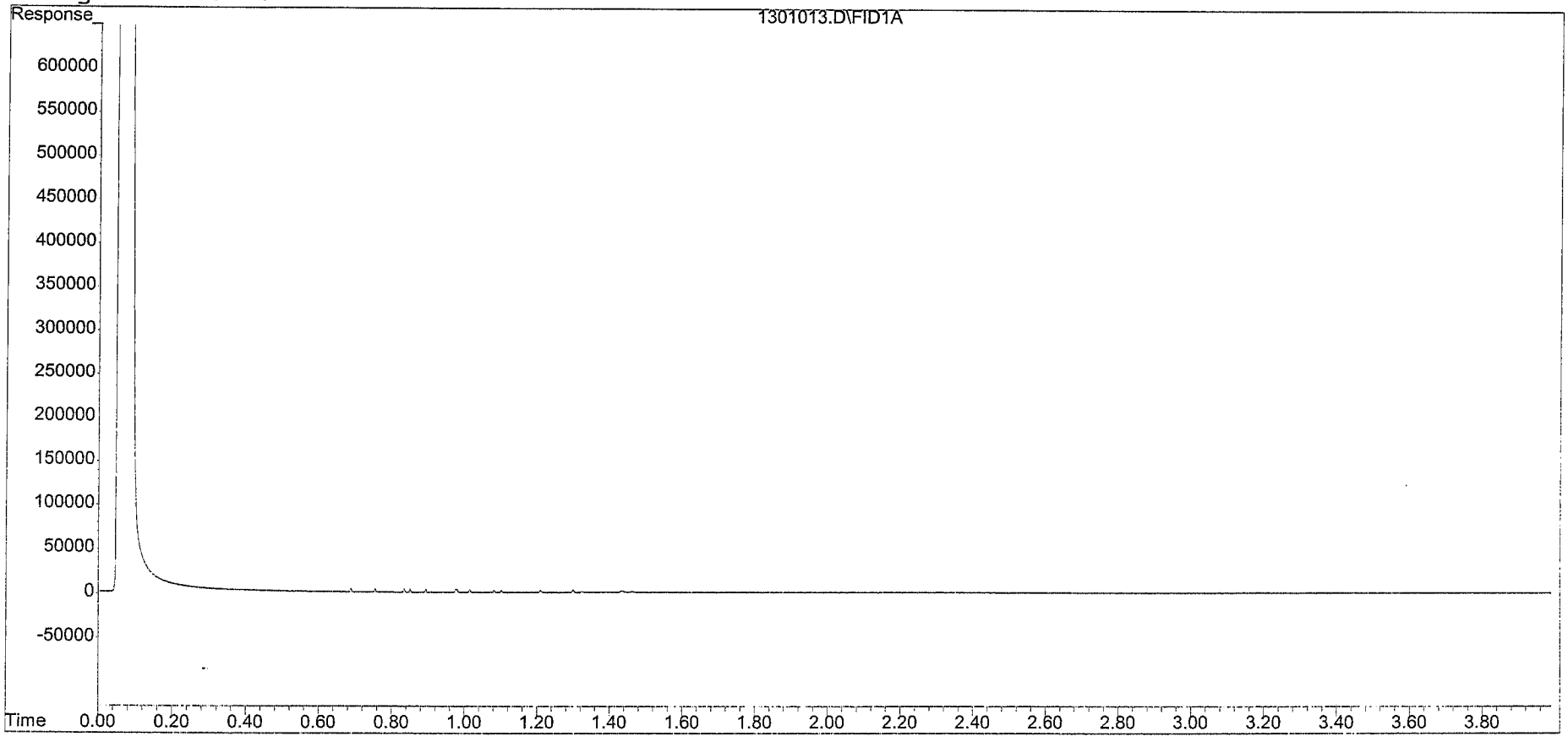
Quantitation Report

Data File : W:\DATA\121511C\1301013.D
Acq On : 15 Dec 2011 16:12
Sample : 1 PPM AROMATIC STD
Misc : EPHAROCRV_00075
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 13
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1401014.D
Acq On : 15 Dec 2011 16:19
Sample : 5 PPM AROMATIC STD
Misc : EPHAROCRV_00075
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 14
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S o-Terphenyl	1.02	36882	5.537 ug/ml
2) S 2-Fluorobiphenyl	0.00	0	N.D. ug/mld
3) S 2-Bromonaphthalene	0.00	0	N.D. ug/mld
Target Compounds			
4) HM C10-C12 Aromatics	0.68	38692	4.496 ppb
5) HM C12-C16 Aromatics	0.80	113817	13.762 ppb
6) HM C16-C21 Aromatics	1.00	172379	20.039 ppb
7) HM C21-C35 Aromatics	1.40	194514	19.943 ppb
8) HM C11-C22 Aromatics	0.87	519402	59.886 ppb

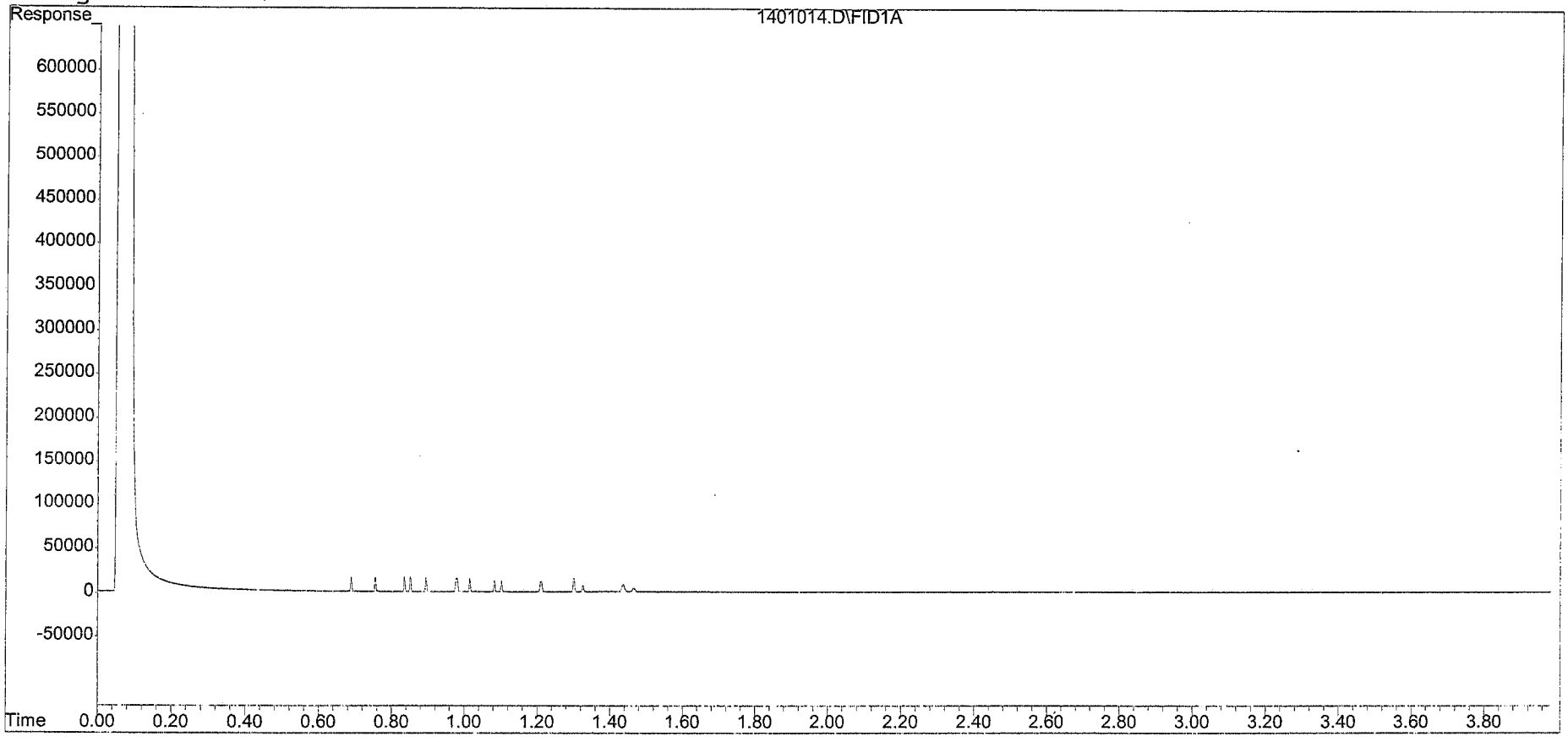
Quantitation Report

Data File : W:\DATA\121511C\1401014.D
Acq On : 15 Dec 2011 16:19
Sample : 5 PPM AROMATIC STD
Misc : EPHAROCRV_00075
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 14
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1501015.D
Acq On : 15 Dec 2011 16:26
Sample : 20 PPM AROMATIC STD
Misc : EPHAROCRV_00076
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 15
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	1.02	133704	20.071	ug/ml
2) S 2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3) S 2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds				
4) HM C10-C12 Aromatics	0.68	144260	20.642	ppb
5) HM C12-C16 Aromatics	0.80	422386	62.553	ppb
6) HM C16-C21 Aromatics	1.00	630442	99.272	ppb
7) HM C21-C35 Aromatics	1.40	720248	126.659	ppb
8) HM C11-C22 Aromatics	0.87	1917336	313.163	ppb

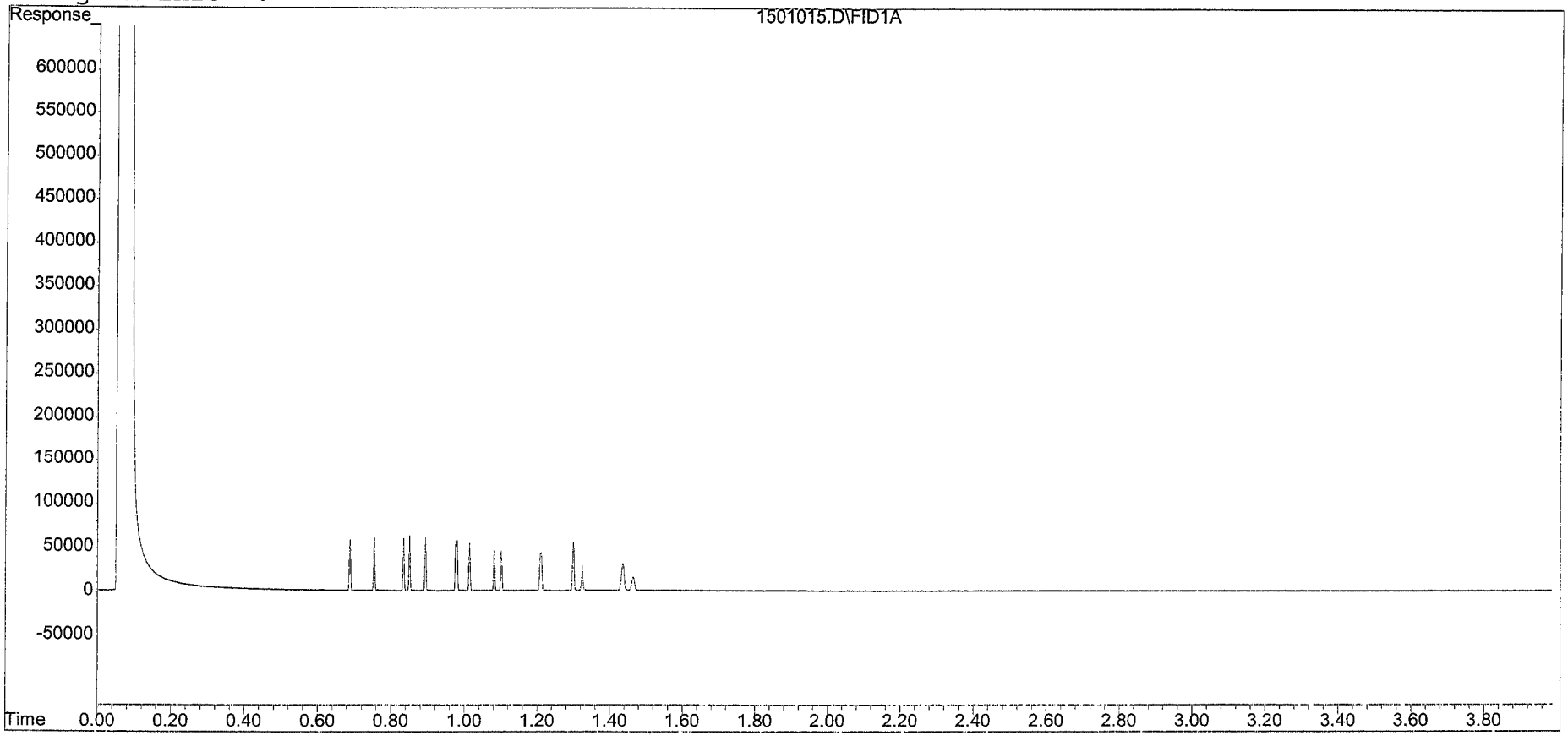
Quantitation Report

Data File : W:\DATA\121511C\1501015.D
Acq On : 15 Dec 2011 16:26
Sample : 20 PPM AROMATIC STD
Misc : EPHAROCRV_00076
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 15
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1601016.D
Vial: 16
Acq On : 15 Dec 2011 16:33
Operator: KJA
Sample : 50 PPM AROMATIC STD
Inst : Flash
Misc : EPHAROCRV_00077
Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.02	333396	50.048	ug/ml
2)	S	2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3)	S	2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	373243	55.661	ppb
5)	HM	C12-C16 Aromatics	0.80	1034711	159.374	ppb
6)	HM	C16-C21 Aromatics	1.00	1569087	261.634	ppb
7)	HM	C21-C35 Aromatics	1.40	1940872	374.427	ppb
8)	HM	C11-C22 Aromatics	0.87	4915905	856.443	ppb

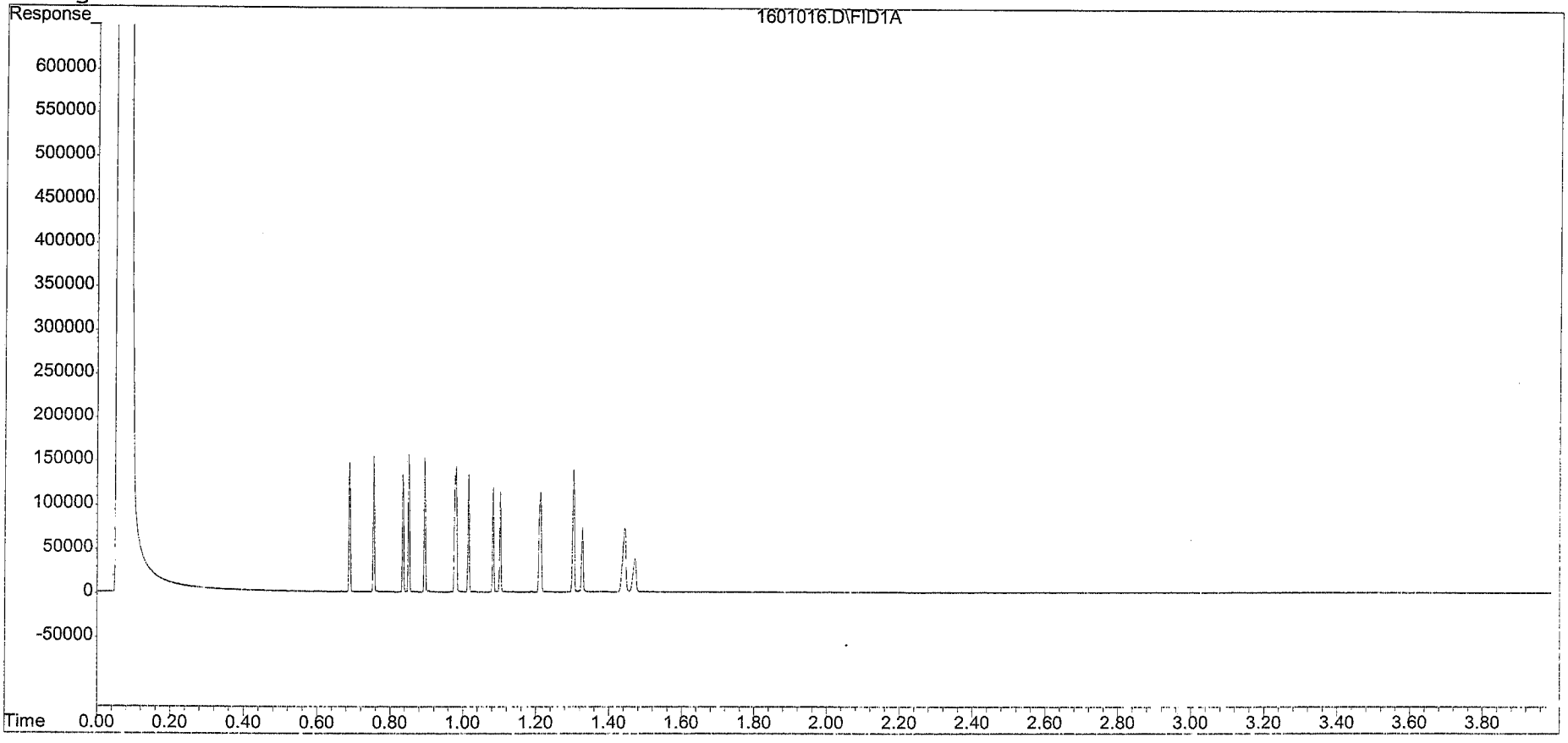
Quantitation Report

Data File : W:\DATA\121511C\1601016.D
Acq On : 15 Dec 2011 16:33
Sample : 50 PPM AROMATIC STD
Misc : EPHAROCRV_00077
IntFile : events.e
Quant Time: Dec 16 10:30 2011 Quant Results File: AROEPHAI.RES

Vial: 16
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1701017.D
Acq On : 15 Dec 2011 16:41
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCRV_00078
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Vial: 17
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

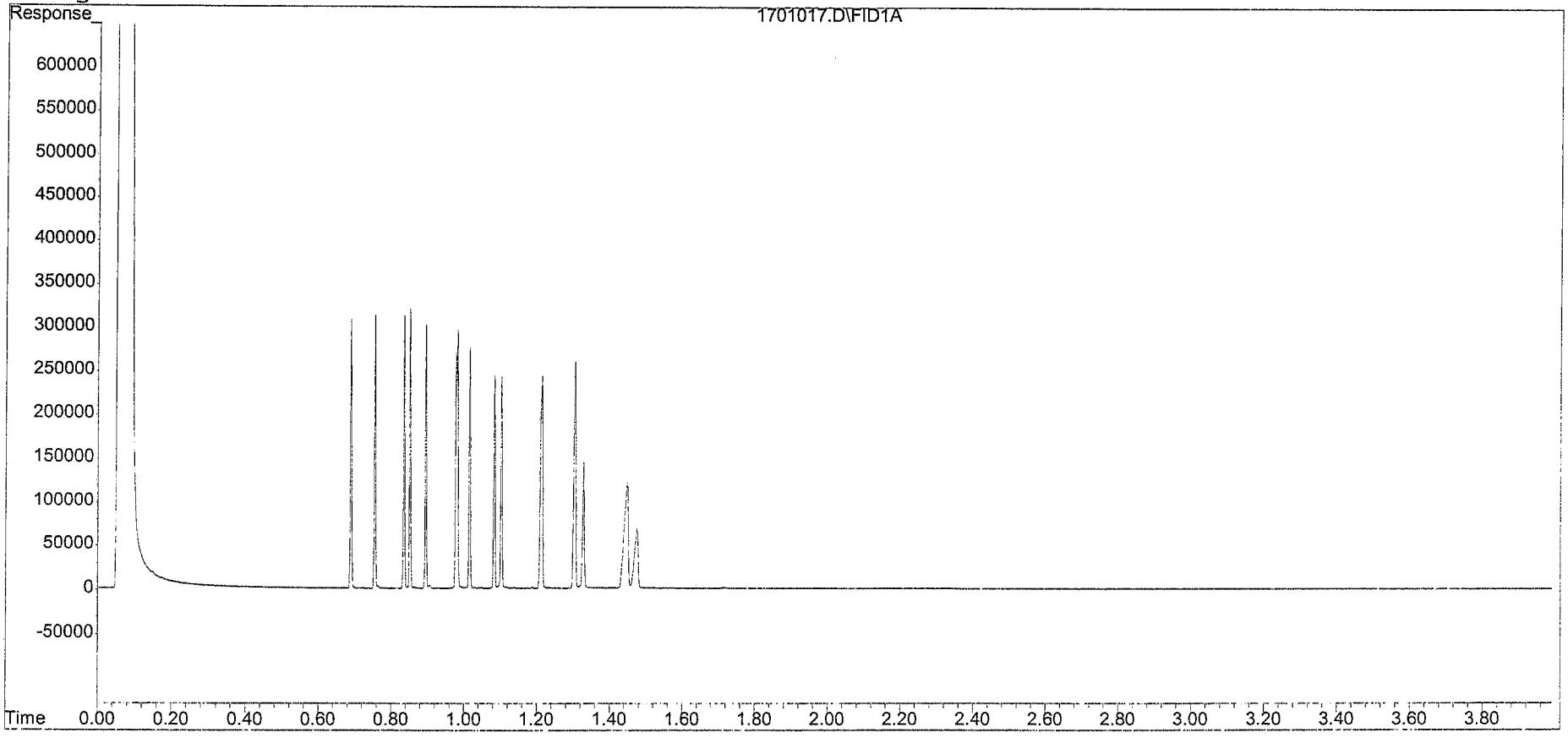
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	1.02	697221	104.664	ug/ml
2) S 2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3) S 2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds				
4) HM C10-C12 Aromatics	0.68	770609	116.433	ppb
5) HM C12-C16 Aromatics	0.80	2238395	349.701	ppb
6) HM C16-C21 Aromatics	1.00	3325164	565.390	ppb
7) HM C21-C35 Aromatics	1.40	4145573	821.946	ppb
8) HM C11-C22 Aromatics	0.87	10479742	1864.498	ppb

Quantitation Report

Data File : W:\DATA\121511C\1701017.D Vial: 17
Acq On : 15 Dec 2011 16:41 Operator: KJA
Sample : 100 PPM AROMATIC STD Inst : Flash
Misc : EPHAROCRV_00078 Multiplr: 1.00
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1801018.D
Acq On : 15 Dec 2011 16:48
Sample : 200 PPM AROMATIC STD
Misc : EPHAROCRV_00079
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Vial: 18
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	1.02	1387193	208.239	ug/ml
2) S 2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3) S 2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds				
4) HM C10-C12 Aromatics	0.68	1565885	238.060	ppb
5) HM C12-C16 Aromatics	0.80	4507319	708.463	ppb
6) HM C16-C21 Aromatics	1.00	6702196	1149.531	ppb
7) HM C21-C35 Aromatics	1.40	8799899	1766.702	ppb
8) HM C11-C22 Aromatics	0.87	21574617	3874.665	ppb

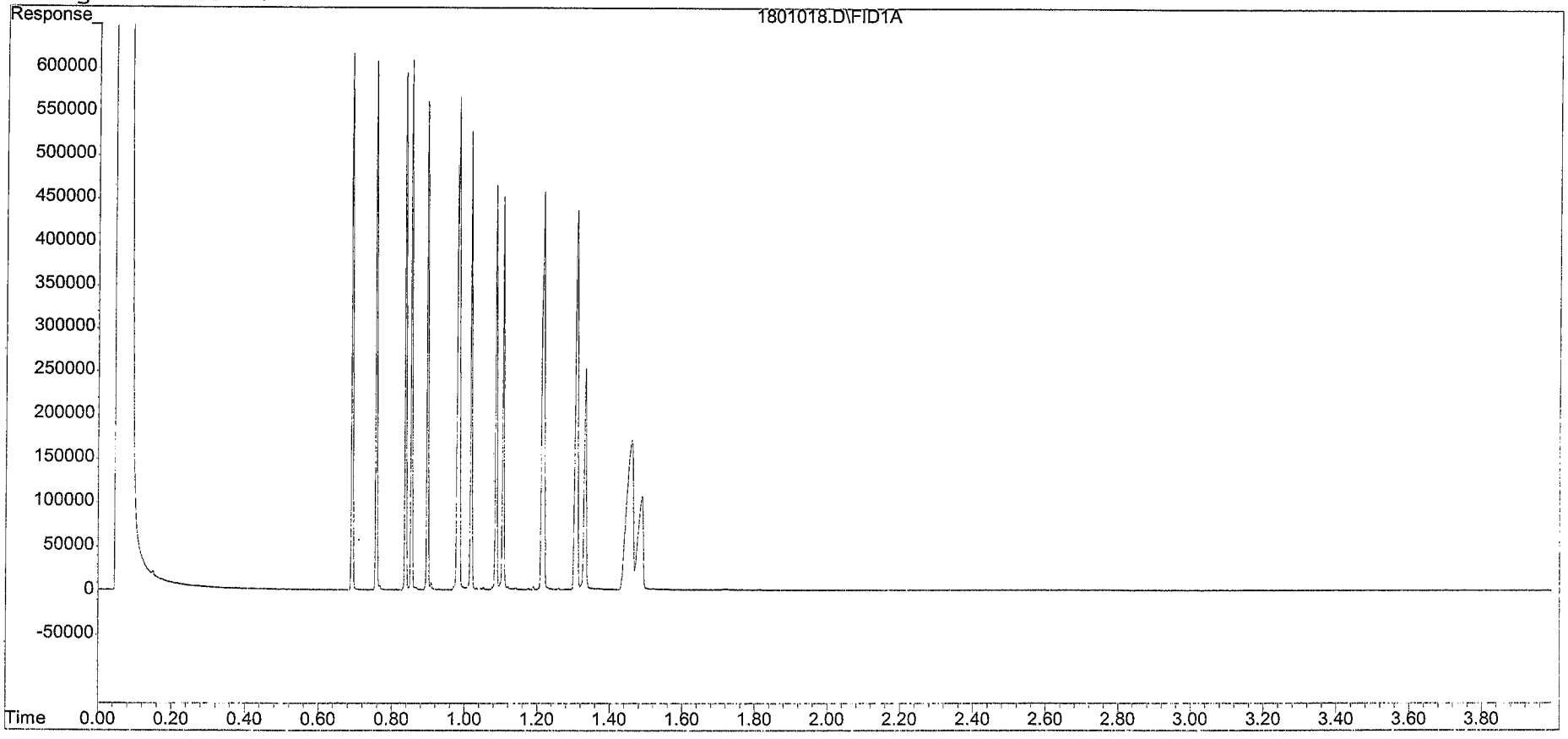
Quantitation Report

Data File : W:\DATA\121511C\1801018.D
Acq On : 15 Dec 2011 16:48
Sample : 200 PPM AROMATIC STD
Misc : EPHAROCRV_00079
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Vial: 18
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\2001020.D
Acq On : 15 Dec 2011 17:02
Sample : 5 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00067
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Vial: 20
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	0.00	0	N.D.	ug/mld
2) S 2-Fluorobiphenyl	0.79	41961	5.358	ug/ml
3) S 2-Bromonaphthalene	0.84	28322	5.361	ug/ml
Target Compounds				
4) HM C10-C12 Aromatics	0.00	0	N.D.	ppb
5) HM C12-C16 Aromatics	0.00	0	N.D.	ppb
6) HM C16-C21 Aromatics	0.00	0	N.D.	ppb
7) HM C21-C35 Aromatics	0.00	0	N.D.	ppb
8) HM C11-C22 Aromatics	0.00	0	N.D.	ppb

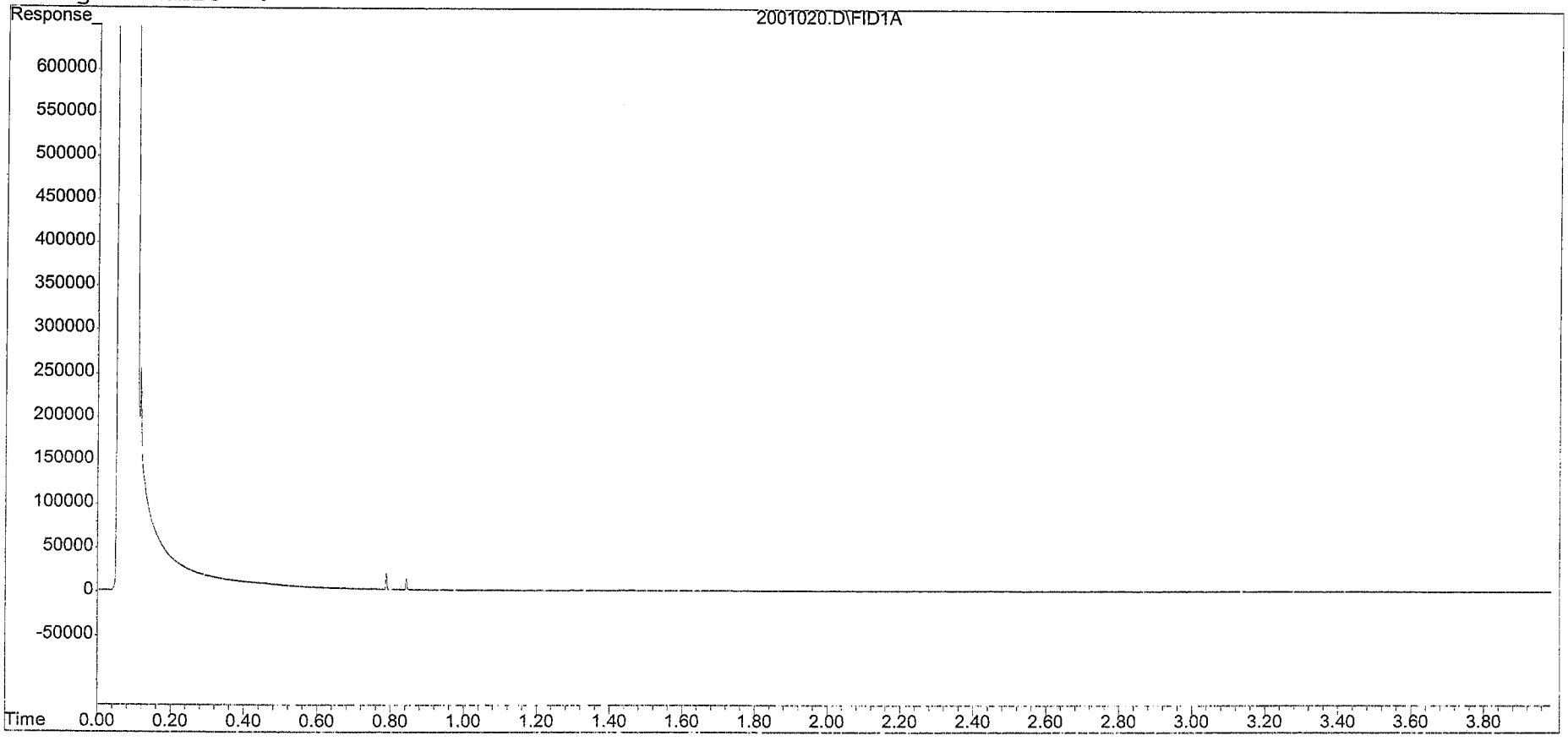
Quantitation Report

Data File : W:\DATA\121511C\2001020.D
Acq On : 15 Dec 2011 17:02
Sample : 5 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00067
IntFile : events.e
Quant Time: Dec 16 10:31 2011 Quant Results File: AROEPHAI.RES

Vial: 20
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\2101021.D
Acq On : 15 Dec 2011 17:09
Sample : 20 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00068
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 21
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	0.00	0	N.D.	ug/mld
2)	S	2-Fluorobiphenyl	0.80	169823	21.685	ug/ml
3)	S	2-Bromonaphthalene	0.85	114102	21.598	ug/ml
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.00	0	N.D.	ppb

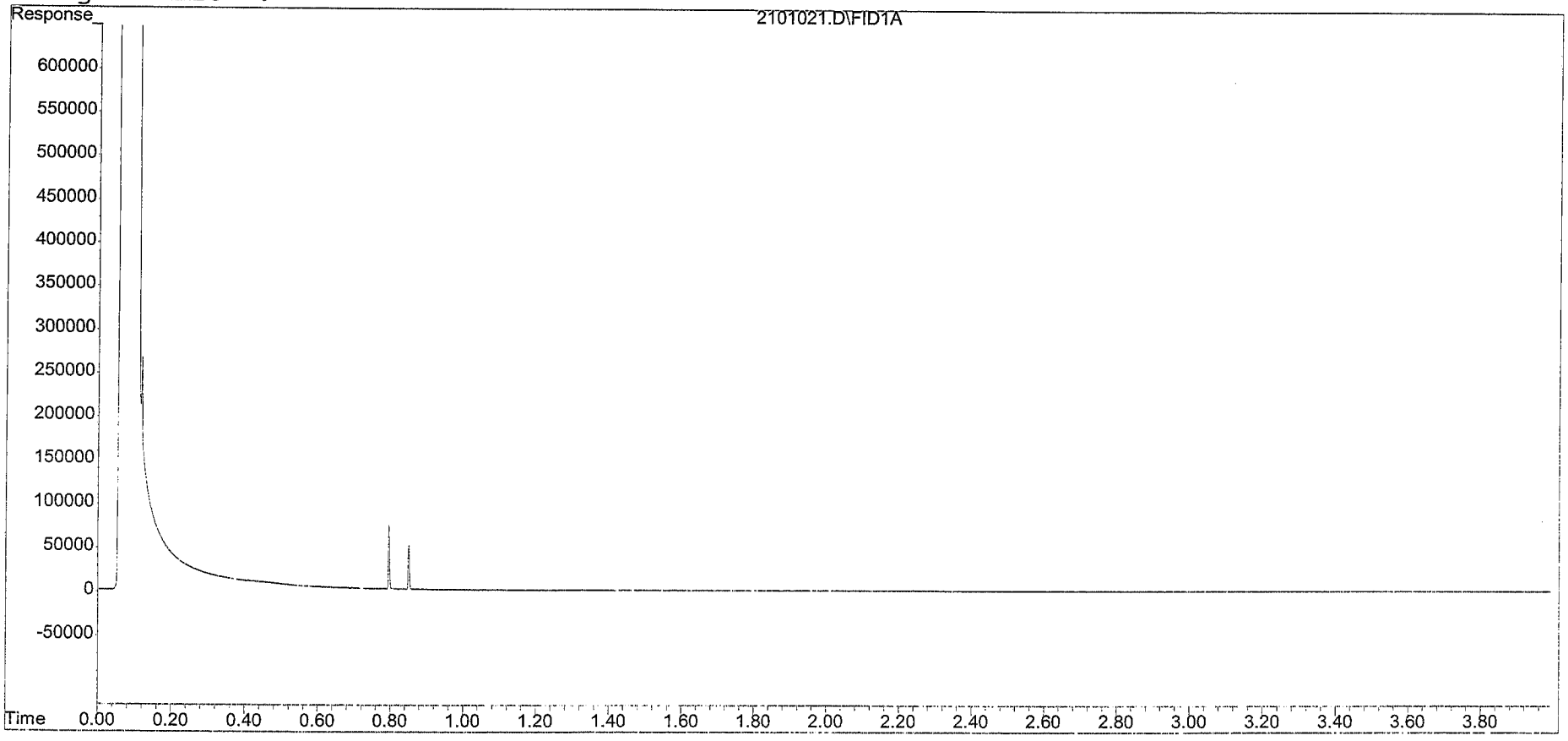
Quantitation Report

Data File : W:\DATA\121511C\2101021.D
Acq On : 15 Dec 2011 17:09
Sample : 20 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00068
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 21
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\2201022.D
Acq On : 15 Dec 2011 17:16
Sample : 50 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00069
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 22
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	0.00	0	N.D.	ug/mld
2)	S	2-Fluorobiphenyl	0.80	406785	51.943	ug/ml
3)	S	2-Bromonaphthalene	0.85	274138	51.890	ug/ml
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.00	0	N.D.	ppb

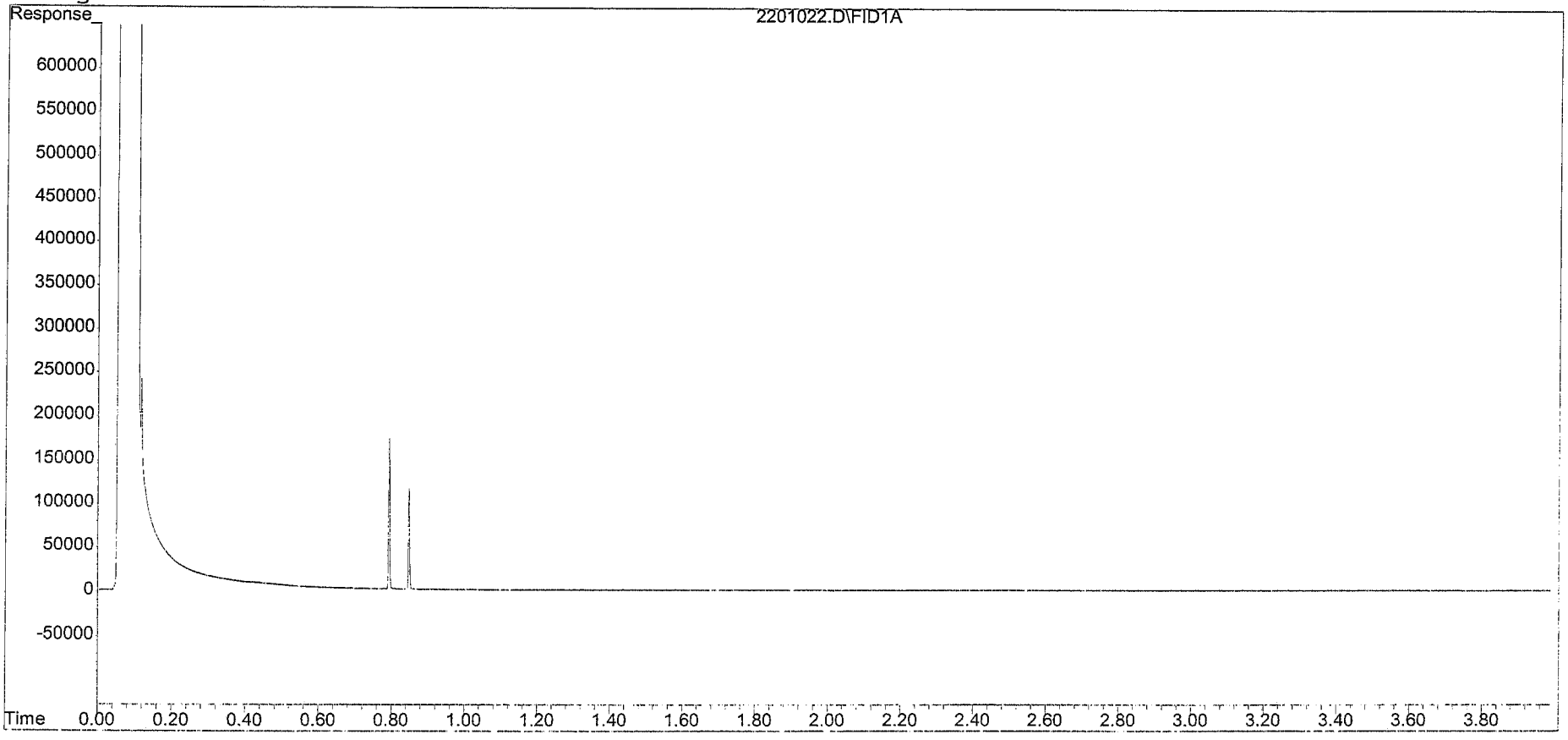
Quantitation Report

Data File : W:\DATA\121511C\2201022.D
Acq On : 15 Dec 2011 17:16
Sample : 50 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00069
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 22
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\2301023.D
Acq On : 15 Dec 2011 17:23
Sample : 100 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00070
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 23
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	0.00	0	N.D.	ug/mld
2)	S	2-Fluorobiphenyl	0.80	667742	85.265	ug/ml
3)	S	2-Bromonaphthalene	0.85	451422	85.448	ug/ml
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.00	0	N.D.	ppb

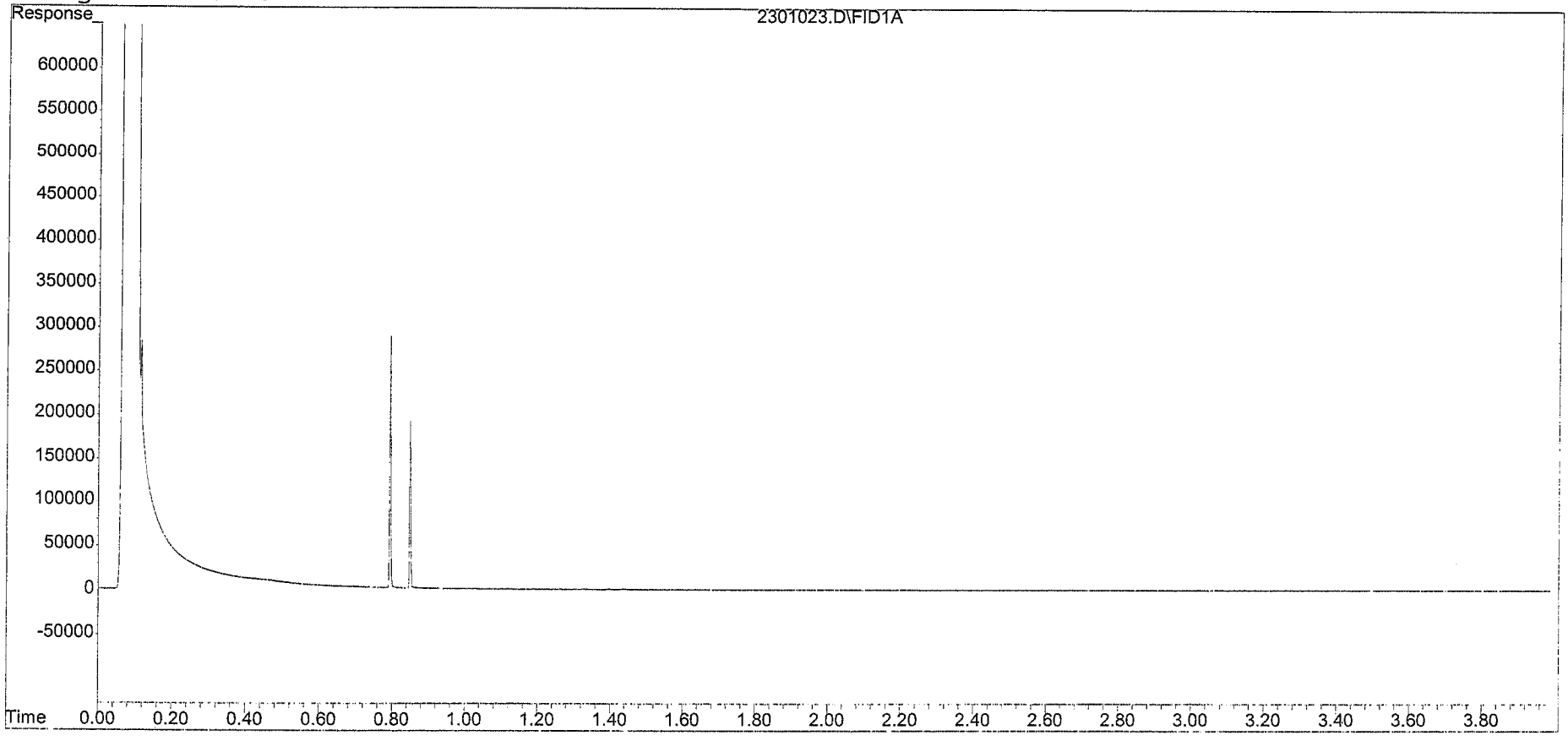
Quantitation Report

Data File : W:\DATA\121511C\2301023.D
Acq On : 15 Dec 2011 17:23
Sample : 100 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00070
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 23
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\2401024.D
Acq On : 15 Dec 2011 17:30
Sample : 200 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00071
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 24
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	0.00	0	N.D.	ug/mld
2) S 2-Fluorobiphenyl	0.79	1245054	158.983	ug/ml
3) S 2-Bromonaphthalene	0.85	846680	160.264	ug/ml
Target Compounds				
4) HM C10-C12 Aromatics	0.00	0	N.D.	ppb
5) HM C12-C16 Aromatics	0.00	0	N.D.	ppb
6) HM C16-C21 Aromatics	0.00	0	N.D.	ppb
7) HM C21-C35 Aromatics	0.00	0	N.D.	ppb
8) HM C11-C22 Aromatics	0.00	0	N.D.	ppb

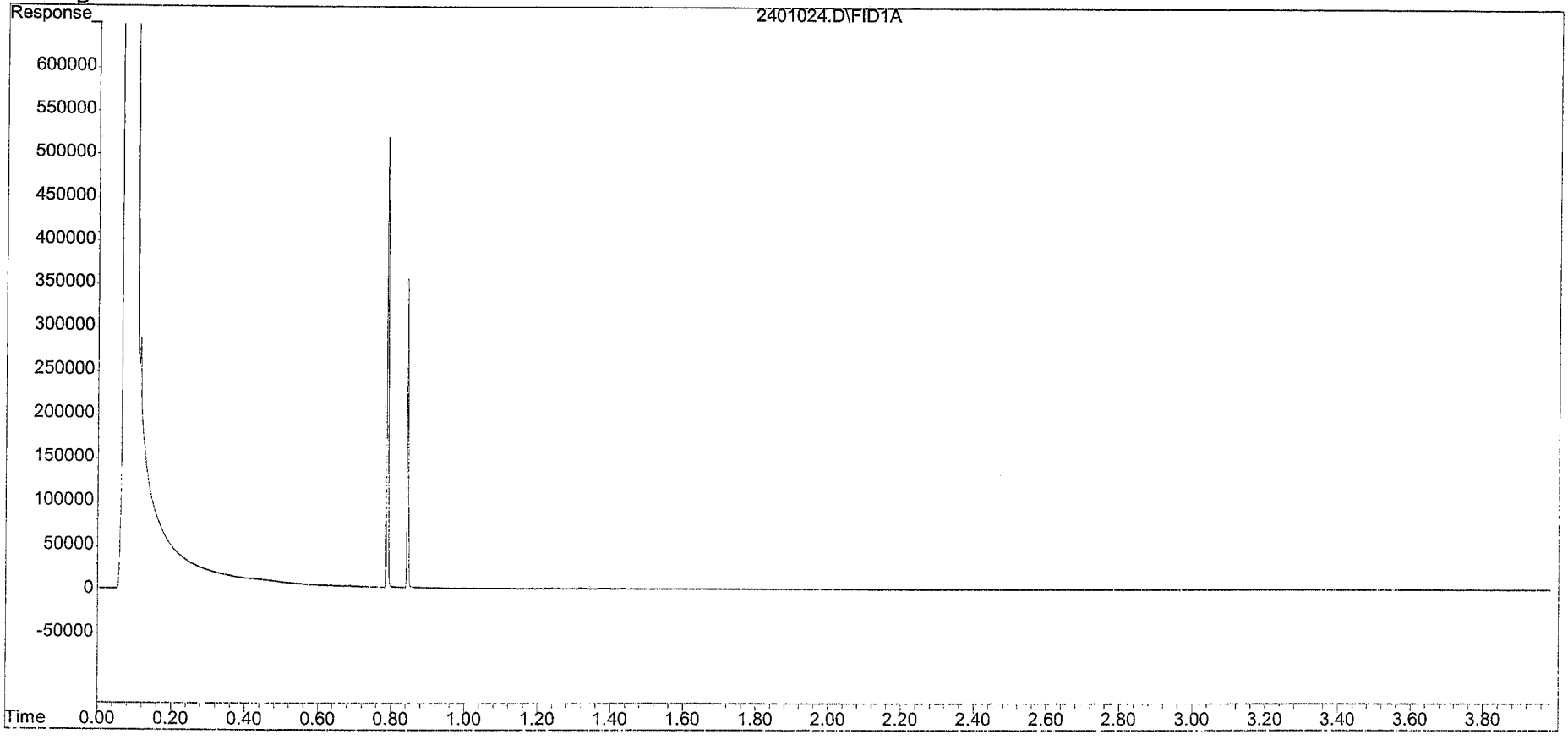
Quantitation Report

Data File : W:\DATA\121511C\2401024.D
Acq On : 15 Dec 2011 17:30
Sample : 200 PPM FRAC SURROGATE STD
Misc : SGFRACCRV_00071
IntFile : events.e
Quant Time: Dec 16 10:32 2011 Quant Results File: AROEPHAI.RES

Vial: 24
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:25:25 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : W:\DATA\121511C\1901019.D
Acq On : 15 Dec 2011 16:55
Sample : 100 PPM AROMATIC ICV
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 19
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:37:17 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM	C10-C12 Aromatics	100.000	100.514	-0.5	99	0.00
5 HM	C12-C16 Aromatics	300.000	300.927	-0.3	100	0.00
6 HM	C16-C21 Aromatics	500.000	464.922	7.0	95	0.00
7 HM	C21-C35 Aromatics	800.000	774.947	3.1	95	0.00
8 HM	C11-C22 Aromatics	1700.000	1642.366	3.4	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Fri Dec 16 10:42:30 2011 FLO

Quantitation Report (QT Reviewed)

Data File : W:\DATA\121511C\1901019.D
Acq On : 15 Dec 2011 16:55
Sample : 100 PPM AROMATIC ICV
Misc : EPHAROCCV_00044
IntFile : events.e
Quant Time: Dec 16 10:42 2011 Quant Results File: AROEPHAI.RES

Vial: 19
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:37:17 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	0.00	0	N.D.	ug/mld
2)	S	2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3)	S	2-Bromonaphthalene	0.00	0	N.D.	ug/mld
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	764739	100.514	ppb
5)	HM	C12-C16 Aromatics	0.80	2244565	300.927	ppb
6)	HM	C16-C21 Aromatics	1.00	3171556	464.922	ppb
7)	HM	C21-C35 Aromatics	1.40	3923168	774.947	ppb
8)	HM	C11-C22 Aromatics	0.87	10104028	1642.366	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

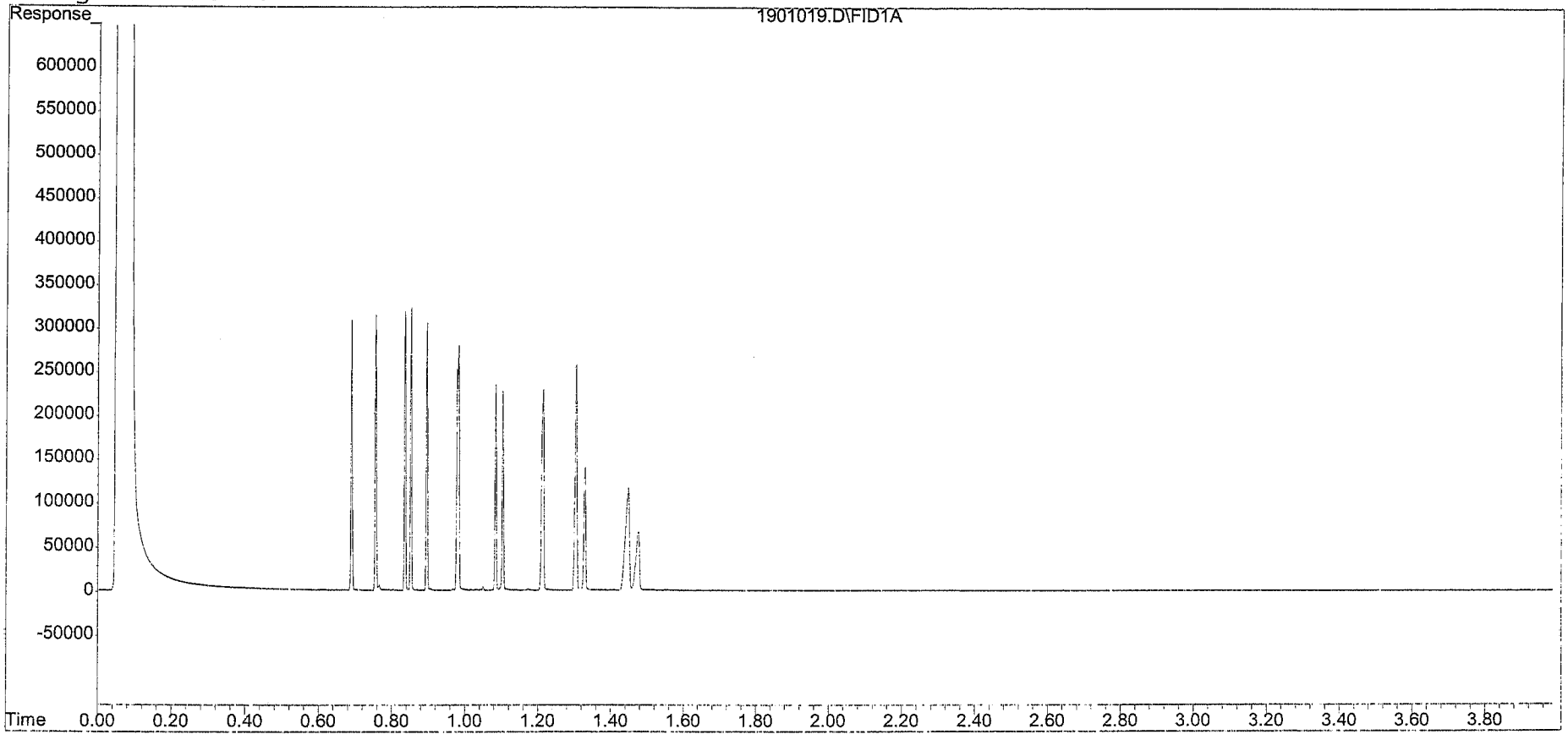
Quantitation Report

Data File : W:\DATA\121511C\1901019.D
Acq On : 15 Dec 2011 16:55
Sample : 100 PPM AROMATIC ICV
Misc : EPHAROCCV_00044
IntFile : events.e
Quant Time: Dec 16 10:42 2011 Quant Results File: AROEPHAI.RES

Vial: 19
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:37:17 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCALI001.D
Acq On : 1 Feb 2012 9:54
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 6
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	189.712	5.1	94	0.00
3 HM	C12-C16 Aliphatics	200.000	210.499	-5.2	103	0.00
4 HM	C16-C35 Aliphatics	800.000	800.662	-0.1	93	0.00
5 HM	C9-C18 Aliphatics	600.000	603.285	-0.5	99	0.00
6 HM	C19-C36 Aliphatics	800.000	746.668	6.7	84	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Wed Feb 01 13:24:45 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCALI002.D
Acq On : 1 Feb 2012 11:12
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 17
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	179.339	10.3	88	0.00
3 HM	C12-C16 Aliphatics	200.000	198.226	0.9	97	0.00
4 HM	C16-C35 Aliphatics	800.000	807.246	-0.9	94	0.00
5 HM	C9-C18 Aliphatics	600.000	572.119	4.6	94	0.00
6 HM	C19-C36 Aliphatics	800.000	778.498	2.7	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Wed Feb 01 13:24:55 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCALI003.D
Acq On : 1 Feb 2012 12:29
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 28
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	182.305	8.8	90	0.00
3 HM	C12-C16 Aliphatics	200.000	212.496	-6.2	104	0.00
4 HM	C16-C35 Aliphatics	800.000	823.110	-2.9	95	0.00
5 HM	C9-C18 Aliphatics	600.000	592.112	1.3	97	0.00
6 HM	C19-C36 Aliphatics	800.000	796.121	0.5	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Wed Feb 01 13:25:05 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCALI005.D
Acq On : 1 Feb 2012 15:47
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 56
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	198.943	0.5	98	0.00
3 HM	C12-C16 Aliphatics	200.000	218.996	-9.5	107	0.00
4 HM	C16-C35 Aliphatics	800.000	866.444	-8.3	100	0.00
5 HM	C9-C18 Aliphatics	600.000	630.672	-5.1	103	0.00
6 HM	C19-C36 Aliphatics	800.000	837.355	-4.7	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Wed Feb 01 16:20:47 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCALI006.D
Acq On : 1 Feb 2012 16:23
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 61
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	197.539	1.2	98	0.00
3 HM	C12-C16 Aliphatics	200.000	218.683	-9.3	107	0.00
4 HM	C16-C35 Aliphatics	800.000	869.745	-8.7	101	0.00
5 HM	C9-C18 Aliphatics	600.000	629.251	-4.9	103	0.00
6 HM	C19-C36 Aliphatics	800.000	840.298	-5.0	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Wed Feb 01 16:22:38 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCARO001.D
Acq On : 1 Feb 2012 12:50
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 31
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM C10-C12 Aromatics	100.000	96.986	3.0	96	0.00
5 HM C12-C16 Aromatics	300.000	292.788	2.4	98	0.00
6 HM C16-C21 Aromatics	500.000	462.123	7.6	95	0.00
7 HM C21-C35 Aromatics	800.000	749.445	6.3	92	0.00
8 HM C11-C22 Aromatics	1700.000	1604.046	5.6	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Wed Feb 01 13:29:54 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCARO002.D
Acq On : 1 Feb 2012 14:08
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 42
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM C10-C12 Aromatics	100.000	94.292	5.7	93	0.00
5 HM C12-C16 Aromatics	300.000	283.744	5.4	95	0.00
6 HM C16-C21 Aromatics	500.000	449.142	10.2	92	0.00
7 HM C21-C35 Aromatics	800.000	798.003	0.2	97	0.00
8 HM C11-C22 Aromatics	1700.000	1615.314	5.0	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Wed Feb 01 14:46:54 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCARO003.D
Acq On : 1 Feb 2012 15:26
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 53
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM C10-C12 Aromatics	100.000	96.433	3.6	95	0.00
5 HM C12-C16 Aromatics	300.000	292.190	2.6	97	0.00
6 HM C16-C21 Aromatics	500.000	468.664	6.3	96	0.00
7 HM C21-C35 Aromatics	800.000	761.454	4.8	93	0.00
8 HM C11-C22 Aromatics	1700.000	1619.772	4.7	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Wed Feb 01 15:43:01 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCARO005.D
Acq On : 1 Feb 2012 16:30
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 62
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM	C10-C12 Aromatics	100.000	101.302	-1.3	100	0.00
5 HM	C12-C16 Aromatics	300.000	304.547	-1.5	101	0.00
6 HM	C16-C21 Aromatics	500.000	474.139	5.2	97	0.00
7 HM	C21-C35 Aromatics	800.000	767.599	4.1	94	0.00
8 HM	C11-C22 Aromatics	1700.000	1651.902	2.8	97	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Thu Feb 02 07:26:12 2012

Evaluate Continuing Calibration Report

Data File : W:\DATA\020112\CCARO006.D
Acq On : 1 Feb 2012 16:58
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 66
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM C10-C12 Aromatics	100.000	94.730	5.3	94	0.00
5 HM C12-C16 Aromatics	300.000	287.667	4.1	96	0.00
6 HM C16-C21 Aromatics	500.000	483.774	3.2	99	0.00
7 HM C21-C35 Aromatics	800.000	946.781	-18.3	116	0.00
8 HM C11-C22 Aromatics	1700.000	1781.441	-4.8	105	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Thu Feb 02 07:26:47 2012

Sequence Name: D:\HPCHEM\3\SEQUENCE\020112.S
Comment: Linked Data Acquisition. FLASH MAEPH
Operator: KJA
Data Path: D:\HPCHEM\3\DATA\020112\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	--------	8015	MECL2
2	Sample	2	--------	8015	MECL2
3	Sample	3	--------	8015	MECL2
4	Sample	4	--------	8015	MECL2
5	Sample	5	--------	8015	MECL2
6	Sample	6	CCALI001	8015	100 PPM ALIPHATIC STD
7	Sample	7	--------	8015	LI=FRAC BLK LB=S148056 LM=MAE
8	Sample	8	--------	8015	LI=1794724 MB LB=S148056 LM=M
9	Sample	9	--------	8015	LI=1794722 LCS LB=S148056 LM=
10	Sample	10	--------	8015	LI=1794723 LCSD LB=S148056 LM
11	Sample	11	--------	8015	LI=1794720 MS LB=S148056 LM=M
12	Sample	12	--------	8015	LI=1794721 MSD LB=S148056 LM=
13	Sample	13	--------	8015	LI=1794706 20X LB=S148056 LM=
14	Sample	14	--------	8015	LI=1794707 20X LB=S148056 LM=
15	Sample	15	--------	8015	LI=1794708 10X LB=S148056 LM=
16	Sample	16	--------	8015	LI=1794709 LB=S148056 LM=MAEP
17	Sample	17	CCALI002	8015	100 PPM ALIPHATIC STD
18	Sample	18	--------	8015	LI=1794710 LB=S148056 LM=MAEP
19	Sample	19	--------	8015	LI=1794711 LB=S148056 LM=MAEP
20	Sample	20	--------	8015	LI=1794712 LB=S148056 LM=MAEP
21	Sample	21	--------	8015	LI=1794713 LB=S148056 LM=MAEP
22	Sample	22	--------	8015	LI=1794714 LB=S148056 LM=MAEP
23	Sample	23	--------	8015	LI=1794715 LB=S148056 LM=MAEP
24	Sample	24	--------	8015	LI=1794716 LB=S148056 LM=MAEP
25	Sample	25	--------	8015	LI=1794717 LB=S148056 LM=MAEP
26	Sample	26	--------	8015	LI=1794718 LB=S148056 LM=MAEP
27	Sample	27	--------	8015	LI=1794719 LB=S148056 LM=MAEP
28	Sample	28	CCALI003	8015	100 PPM ALIPHATIC STD
29	Sample	29	--------	8015	LI=1794725 PT LB=S148056 LM=M
30	Sample	30	CCALI004	8015	100 PPM ALIPHATIC STD
31	Sample	31	CCARO001	8015	100 PPM AROMATIC STD
32	Sample	32	--------	8015	LI=FRAC BLK LB=S148056Z LM=MA
33	Sample	33	--------	8015	LI=1794724 MB LB=S148056Z LM=
34	Sample	34	--------	8015	LI=1794722 LCS LB=S148056Z LM
35	Sample	35	--------	8015	LI=1794723 LCSD LB=S148056Z L
36	Sample	36	--------	8015	LI=1794720 MS LB=S148056Z LM=
37	Sample	37	--------	8015	LI=1794721 MSD LB=S148056Z LM
38	Sample	38	--------	8015	LI=1794706 10X LB=S148056Z LM
39	Sample	39	--------	8015	LI=1794707 10X LB=S148056Z LM
40	Sample	40	--------	8015	LI=1794708 5X LB=S148056Z LM=
41	Sample	41	--------	8015	LI=1794709 LB=S148056Z LM=MAE
42	Sample	42	CCARO002	8015	100 PPM AROMATIC STD
43	Sample	43	--------	8015	LI=1794710 LB=S148056Z LM=MAE

Sequence Name: D:\HPCHEM\3\SEQUENCE\020112.S

Line	Type	Vial	DataFile	Method	Sample Name
44	Sample	44	--------	8015	LI=1794711 LB=S148056Z LM=MAE
45	Sample	45	--------	8015	LI=1794712 LB=S148056Z LM=MAE
46	Sample	46	--------	8015	LI=1794713 LB=S148056Z LM=MAE
47	Sample	47	--------	8015	LI=1794714 LB=S148056Z LM=MAE
48	Sample	48	--------	8015	LI=1794715 LB=S148056Z LM=MAE
49	Sample	49	--------	8015	LI=1794716 LB=S148056Z LM=MAE
50	Sample	50	--------	8015	LI=1794717 LB=S148056Z LM=MAE
51	Sample	51	--------	8015	LI=1794718 LB=S148056Z LM=MAE
52	Sample	52	--------	8015	LI=1794719 LB=S148056Z LM=MAE
53	Sample	53	CCARO003	8015	100 PPM AROMATIC STD
54	Sample	54	--------	8015	LI=1794725 PT LB=S148056Z LM=
55	Sample	55	CCARO004	8015	100 PPM AROMATIC STD
56	Sample	56	CCALI005	8015	100 PPM ALIPHATIC STD
57	Sample	57	--------	8015	LI=1794717 20X LB=S148056 LM=
58	Sample	58	--------	8015	LI=1794718 200X LB=S148056 LM
59	Sample	59	--------	8015	LI=1794719 100X LB=S148056 LM
60	Sample	60	--------	8015	LI=1794725 PT 5X LB=S148056 L
61	Sample	61	CCALI006	8015	100 PPM ALIPHATIC STD
62	Sample	62	CCARO005	8015	100 PPM AROMATIC STD
63	Sample	63	--------	8015	LI=1794717 5X LB=S148056Z LM=
64	Sample	64	--------	8015	LI=1794718 50X LB=S148056Z LM
65	Sample	65	--------	8015	LI=1794719 20X LB=S148056Z LM
66	Sample	66	CCARO006	8015	100 PPM AROMATIC STD

Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\0701007.D Vial: 7
Acq On : 1 Feb 2012 10:01 Operator: KJA
Sample : LI=FRAC BLK LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:06 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

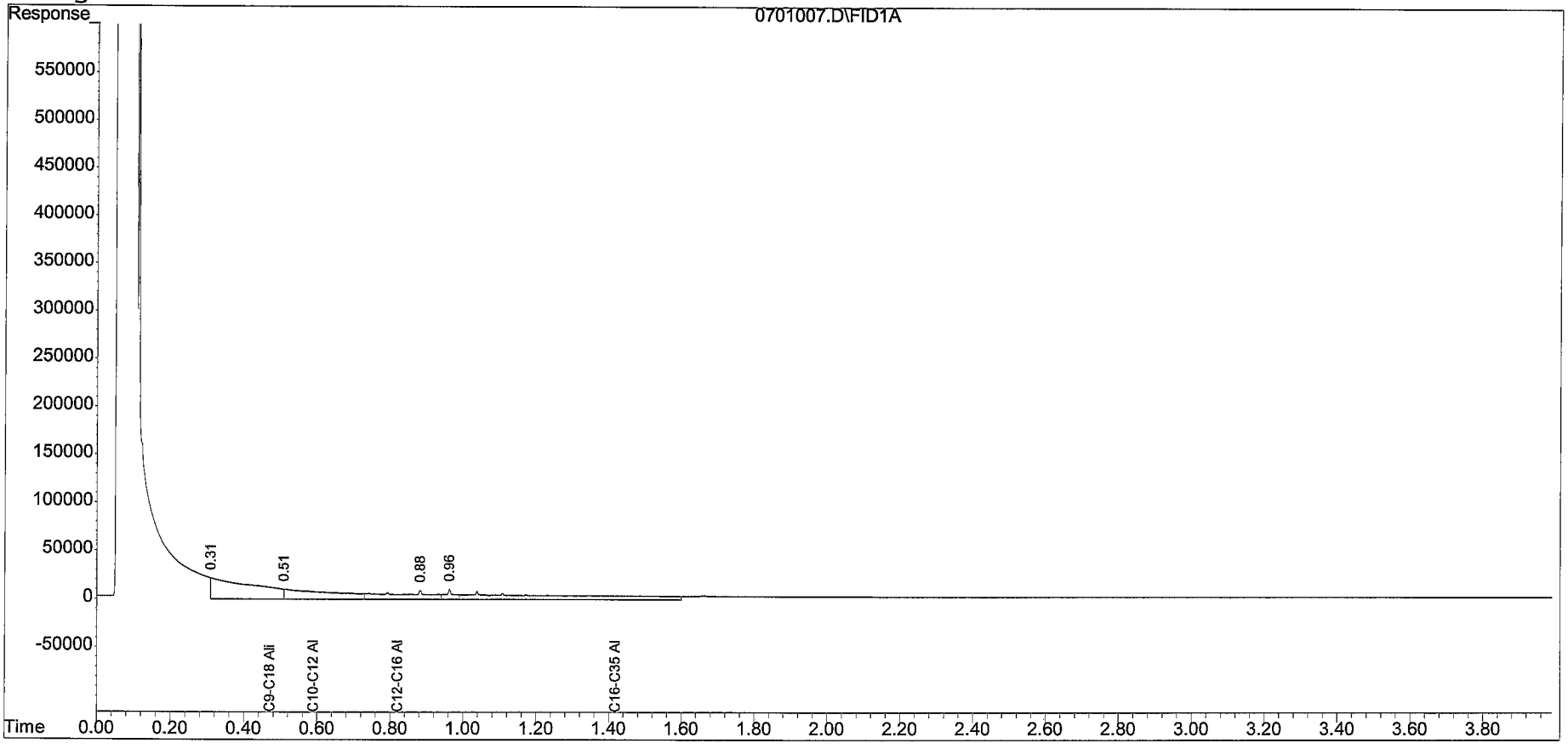
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	0.00	0	N.D.	ug/mld
Target Compounds				
2) HM C10-C12 Aliphatics	0.60	1533	2.560	ppb
3) HM C12-C16 Aliphatics	0.82	39880	6.156	ppb
4) HM C16-C35 Aliphatics	1.41	75897	2.479	ppb
5) HM C9-C18 Aliphatics	0.48	78942	13.077	ppb
6) HM C19-C36 Aliphatics	1.28	54805	N.D.	ppb

Quantitation Report

Data File : W:\DATA\020112\0701007.D Vial: 7
Acq On : 1 Feb 2012 10:01 Operator: KJA
Sample : LI=FRAC BLK LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:06 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\0801008.D
Acq On : 1 Feb 2012 10:08
Sample : LI=1794724 MB LB=S148056 LM=MAEPH
Misc : RDU=UG/ML SOIL BLK
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Vial: 8
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	607724	119.452 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	2454	2.677 ppb
3) HM C12-C16 Aliphatics	0.82	49666	7.578 ppb
4) HM C16-C35 Aliphatics	1.41	109820	8.817 ppb
5) HM C9-C18 Aliphatics	0.48	119056	18.626 ppb
6) HM C19-C36 Aliphatics	1.28	66958	N.D. ppb

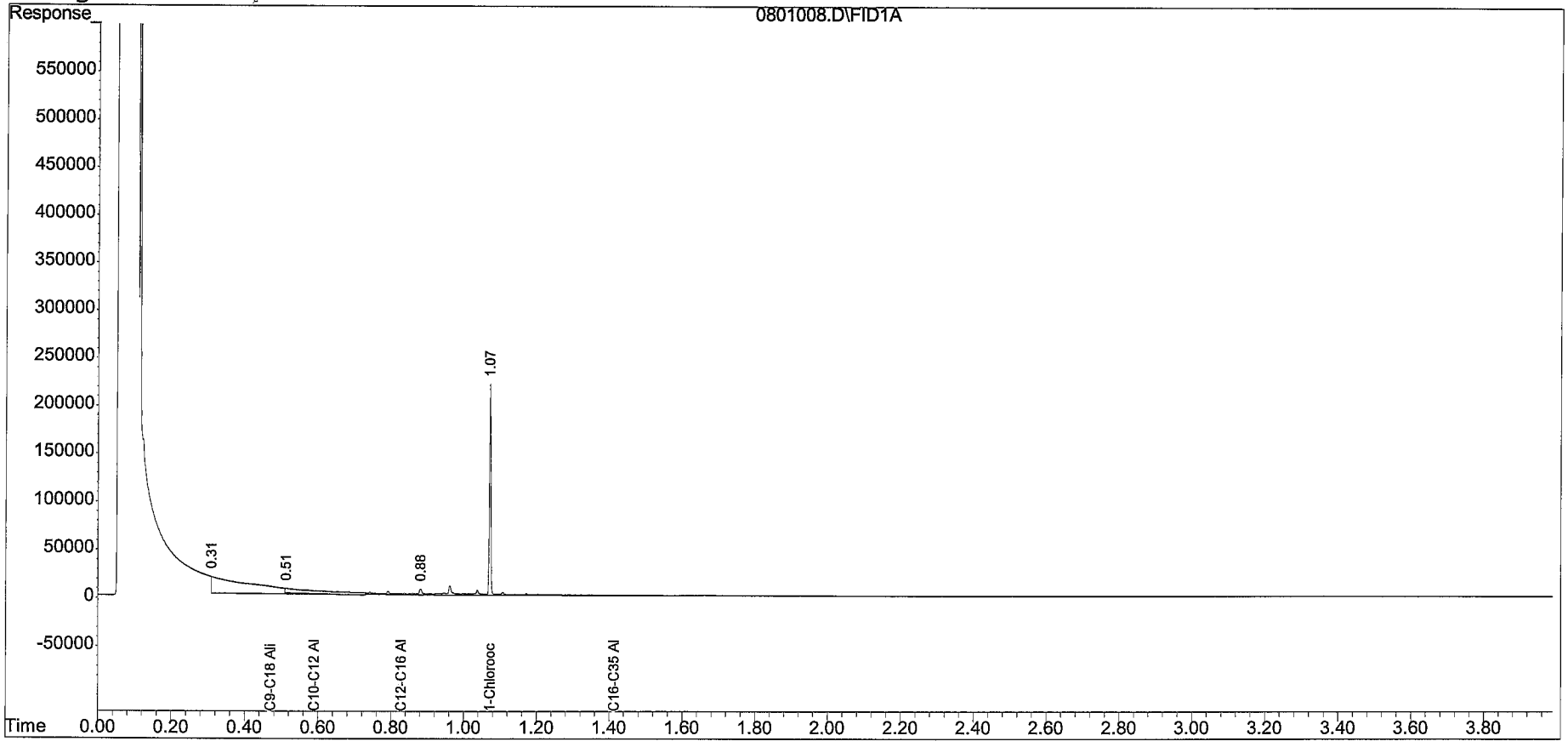
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\0801008.D Vial: 8
Acq On : 1 Feb 2012 10:08 Operator: KJA
Sample : LI=1794724 MB LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL BLK Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\0901009.D
Acq On : 1 Feb 2012 10:15
Sample : LI=1794722 LCS LB=S148056 LM=MAEPH
Misc : RDU=UG/ML SOIL LCS
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Vial: 9
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

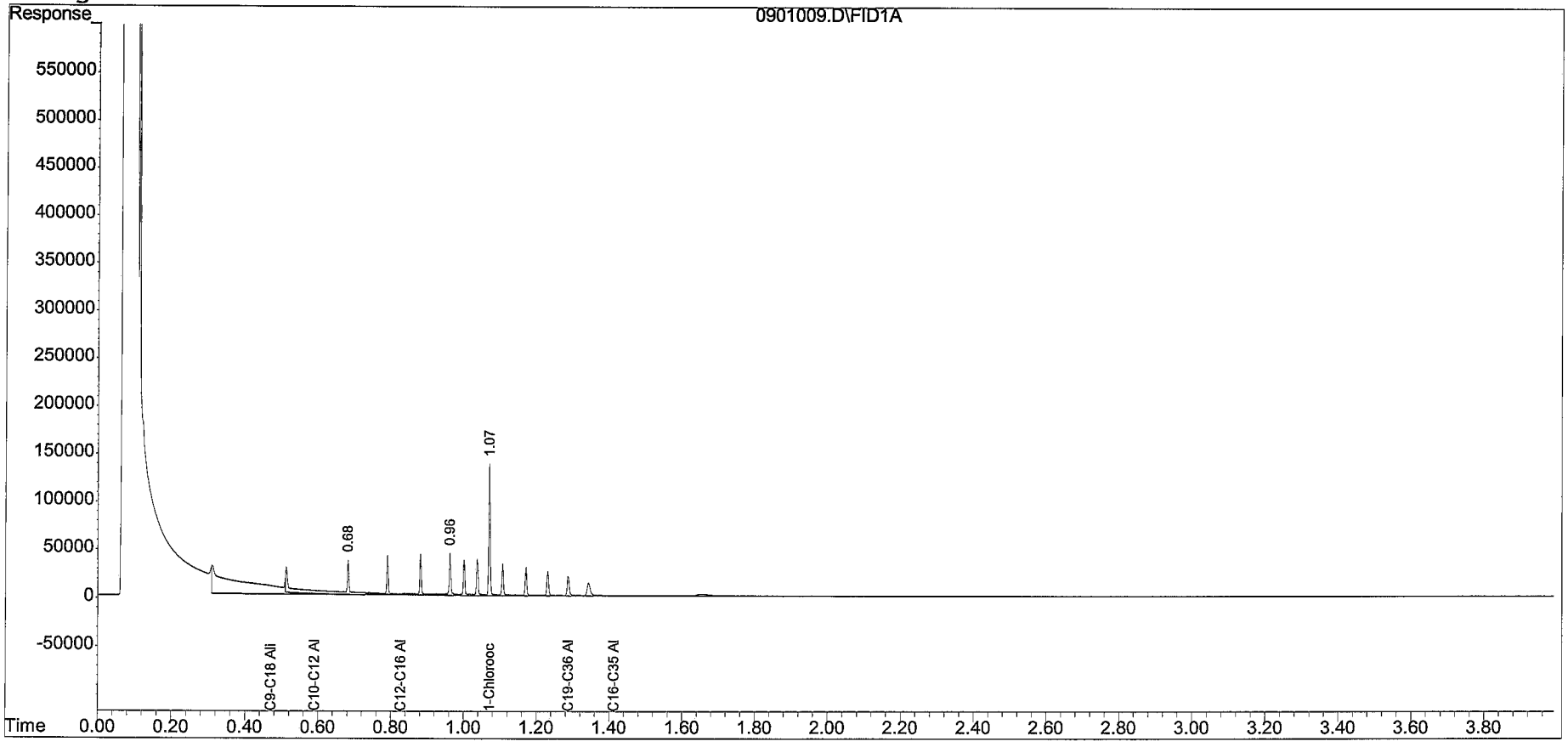
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	373429	73.047 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	156103	22.067 ppb
3) HM C12-C16 Aliphatics	0.82	214737	31.567 ppb
4) HM C16-C35 Aliphatics	1.41	746282	127.725 ppb
5) HM C9-C18 Aliphatics	0.48	540696	76.954 ppb
6) HM C19-C36 Aliphatics	1.28	661552	113.334 ppb

Quantitation Report

Data File : W:\DATA\020112\0901009.D Vial: 9
Acq On : 1 Feb 2012 10:15 Operator: KJA
Sample : LI=1794722 LCS LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL LCS Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\1001010.D Vial: 10
Acq On : 1 Feb 2012 10:22 Operator: KJA
Sample : LI=1794723 LCSD LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL LCSD Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

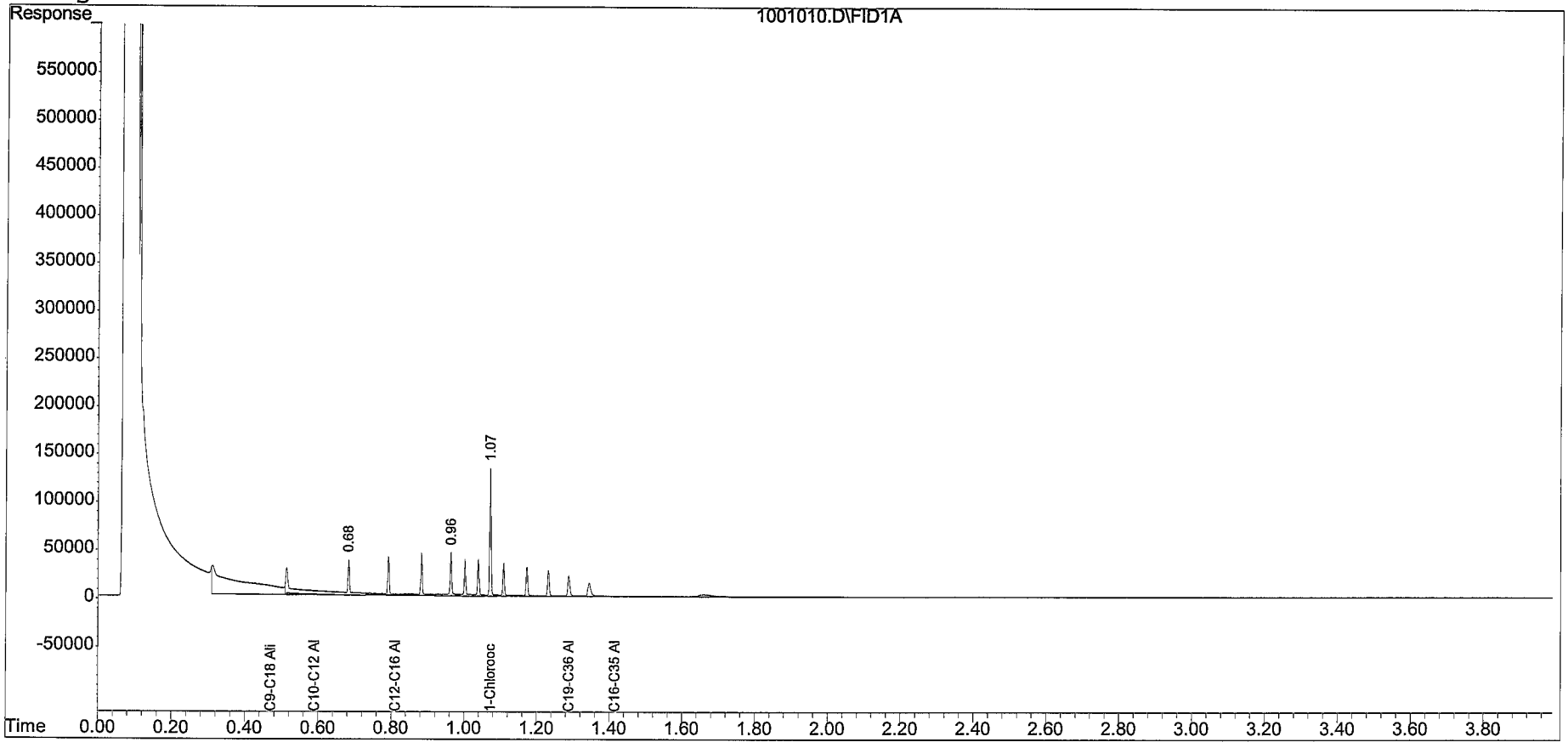
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	363080	70.997 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	157009	22.182 ppb
3) HM C12-C16 Aliphatics	0.82	217780	32.009 ppb
4) HM C16-C35 Aliphatics	1.41	764919	131.207 ppb
5) HM C9-C18 Aliphatics	0.48	536260	76.340 ppb
6) HM C19-C36 Aliphatics	1.28	689051	118.676 ppb

Quantitation Report

Data File : W:\DATA\020112\1001010.D Vial: 10
Acq On : 1 Feb 2012 10:22 Operator: KJA
Sample : LI=1794723 LCSD LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL LCSD Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 12:51 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\1101011.D Vial: 11
Acq On : 1 Feb 2012 10:30 Operator: KJA
Sample : LI=1794720 MS LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MS Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:07 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	166196	32.002 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	77455	12.142 ppb
3) HM C12-C16 Aliphatics	0.82	141488	20.922 ppb
4) HM C16-C35 Aliphatics	1.41	464151	75.015 ppb
5) HM C9-C18 Aliphatics	0.48	336673	48.730 ppb
6) HM C19-C36 Aliphatics	1.28	397276	61.987 ppb

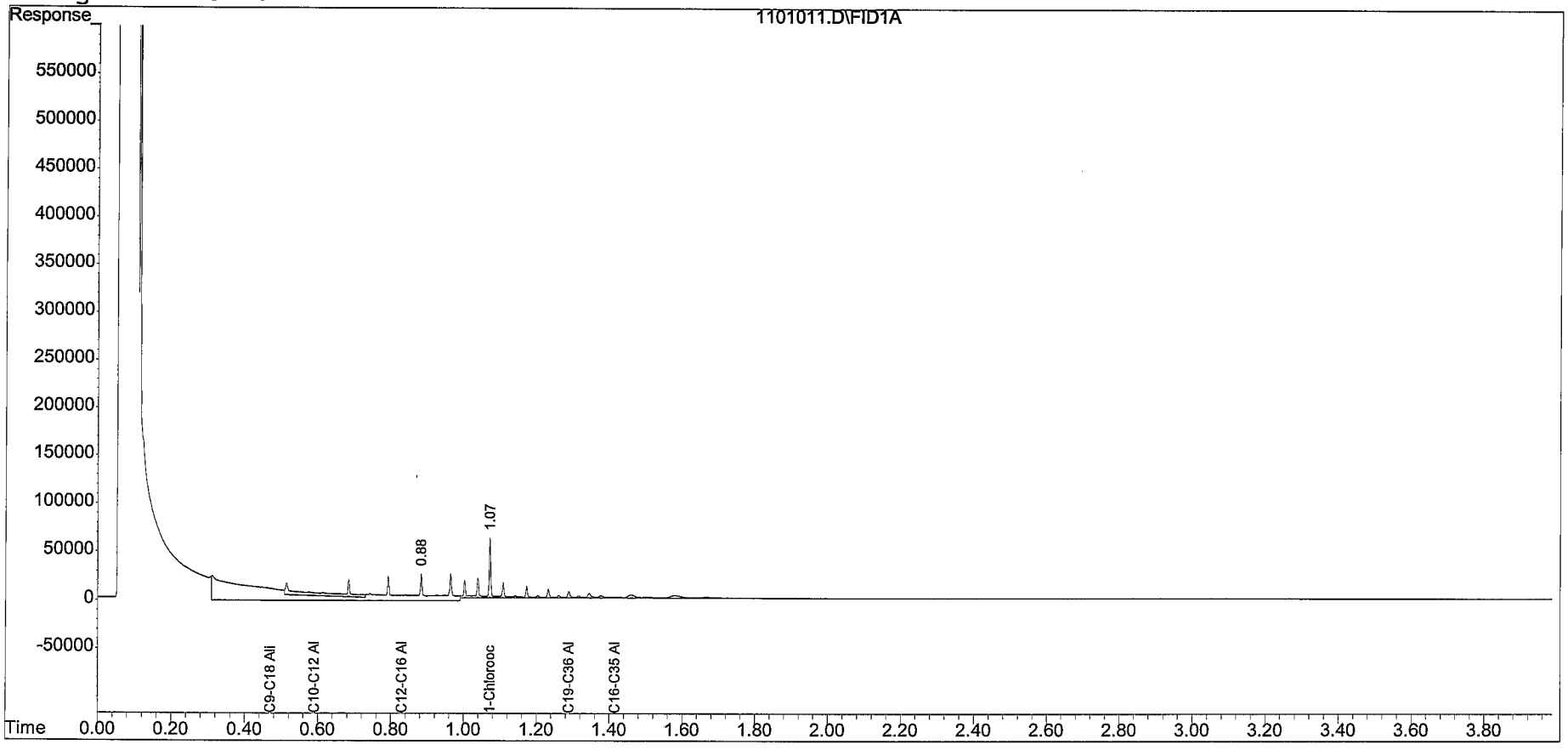
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\1101011.D Vial: 11
Acq On : 1 Feb 2012 10:30 Operator: KJA
Sample : LI=1794720 MS LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MS Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:07 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\1201012.D Vial: 12
Acq On : 1 Feb 2012 10:37 Operator: KJA
Sample : LI=1794721 MSD LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MSD Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:07 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	278512	54.248 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	88011	13.474 ppb
3) HM C12-C16 Aliphatics	0.82	170104	25.081 ppb
4) HM C16-C35 Aliphatics	1.41	704434	119.906 ppb
5) HM C9-C18 Aliphatics	0.48	407149	58.480 ppb
6) HM C19-C36 Aliphatics	1.28	628458	106.904 ppb

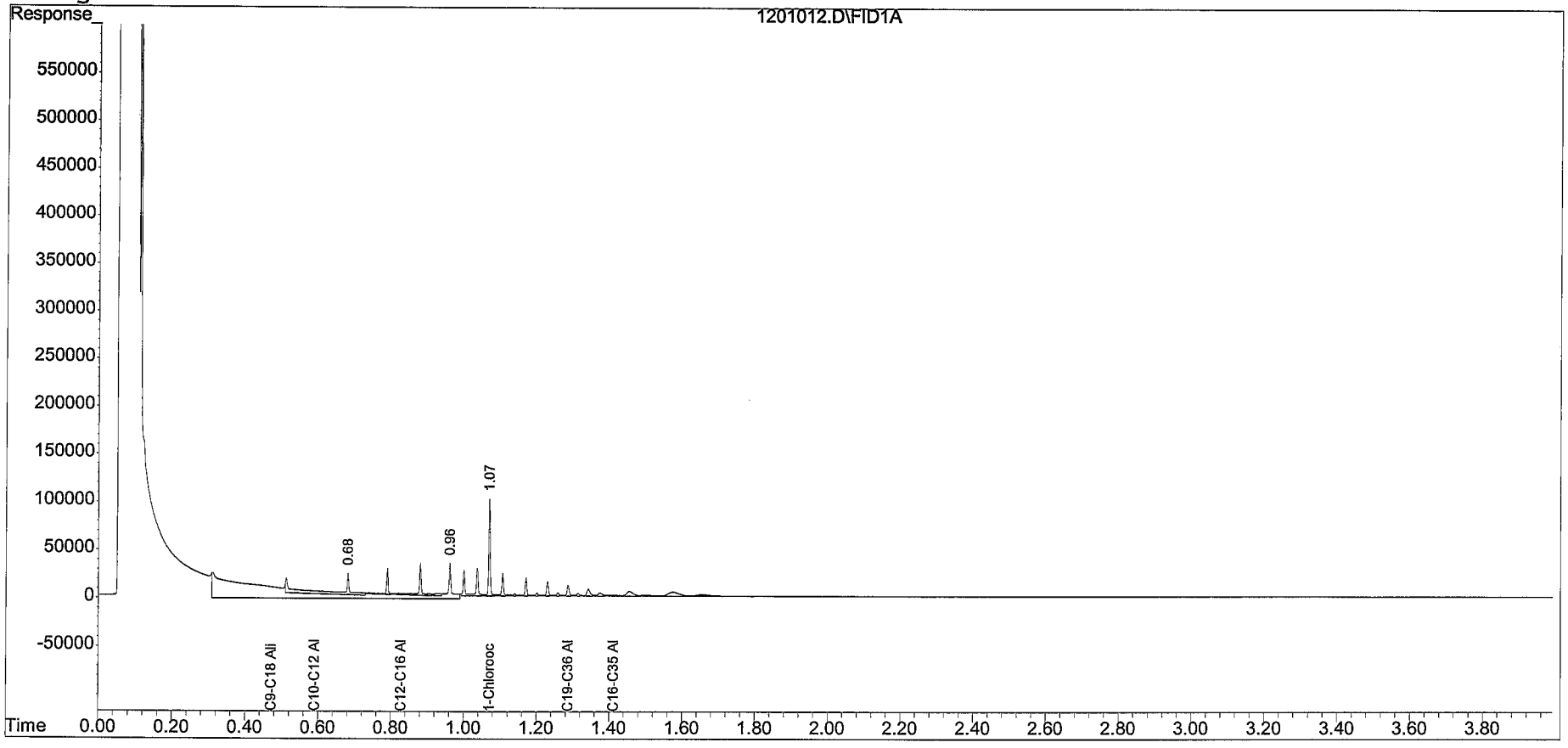
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\1201012.D Vial: 12
Acq On : 1 Feb 2012 10:37 Operator: KJA
Sample : LI=1794721 MSD LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MSD Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:07 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\1601016.D
Acq On : 1 Feb 2012 11:05
Sample : LI=1794709 LB=S148056 LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62673-1
IntFile : EVENTS.E
Quant Time: Feb 1 12:52 2012 Quant Results File: ALIEPHAI.RES

Vial: 16
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

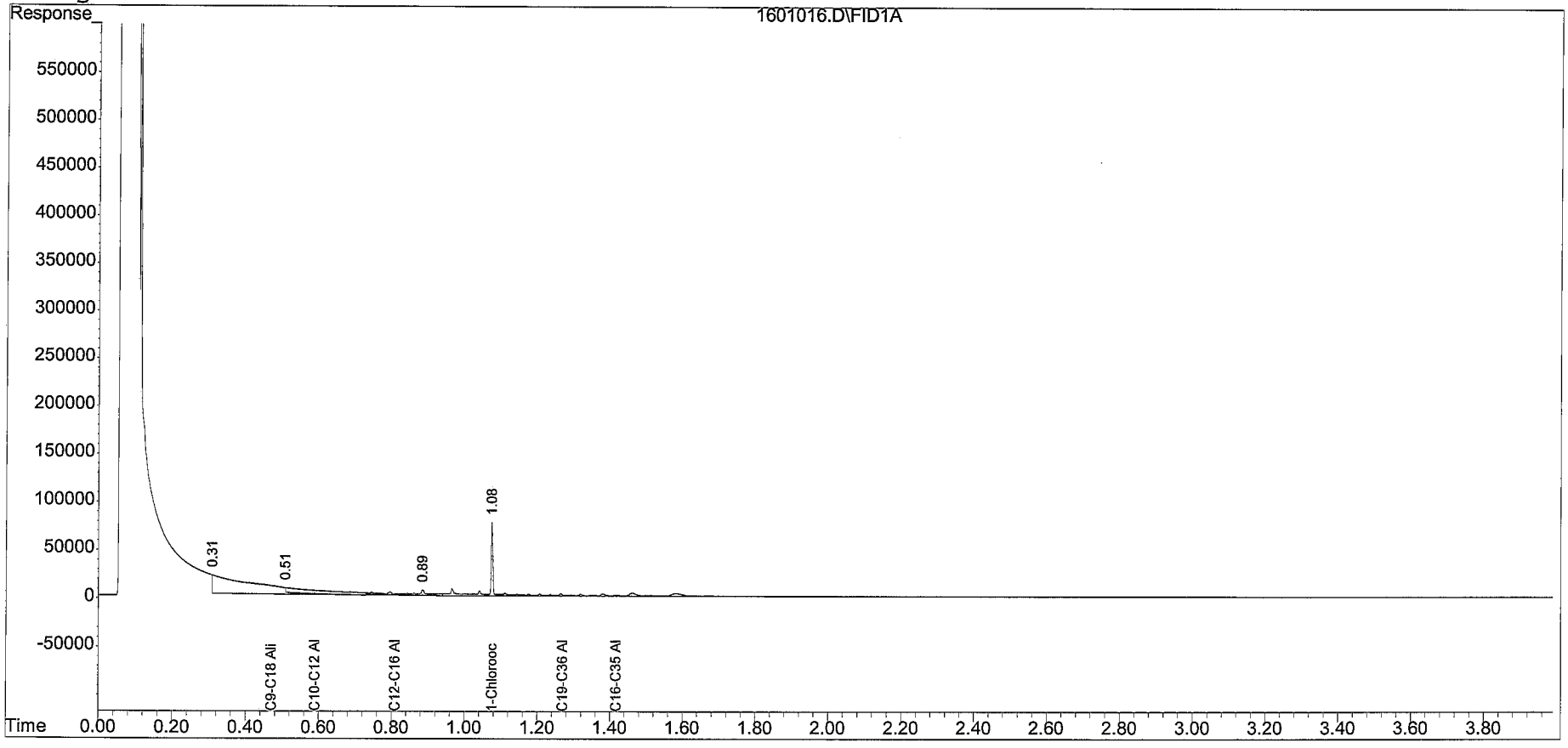
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	208050	40.292 ug/ml
Target Compounds			
2) HM C10-C12 Aliphatics	0.60	1345	2.537 ppb
3) HM C12-C16 Aliphatics	0.82	37206	5.767 ppb
4) HM C16-C35 Aliphatics	1.41	197678	25.231 ppb
5) HM C9-C18 Aliphatics	0.48	77853	12.926 ppb
6) HM C19-C36 Aliphatics	1.28	172481	18.311 ppb

Quantitation Report

Data File : W:\DATA\020112\1601016.D Vial: 16
Acq On : 1 Feb 2012 11:05 Operator: KJA
Sample : LI=1794709 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 12:52 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\2501025.D Vial: 25
Acq On : 1 Feb 2012 12:08 Operator: KJA
Sample : LI=1794717 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:10 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	369704	72.309 ug/mlm
Target Compounds			
2) HM C10-C12 Aliphatics	0.00	0	N.D. ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D. ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D. ppb
5) HM C9-C18 Aliphatics	0.48	127808093	17682.579 ppb
6) HM C19-C36 Aliphatics	1.28	41211704	7991.914 ppb

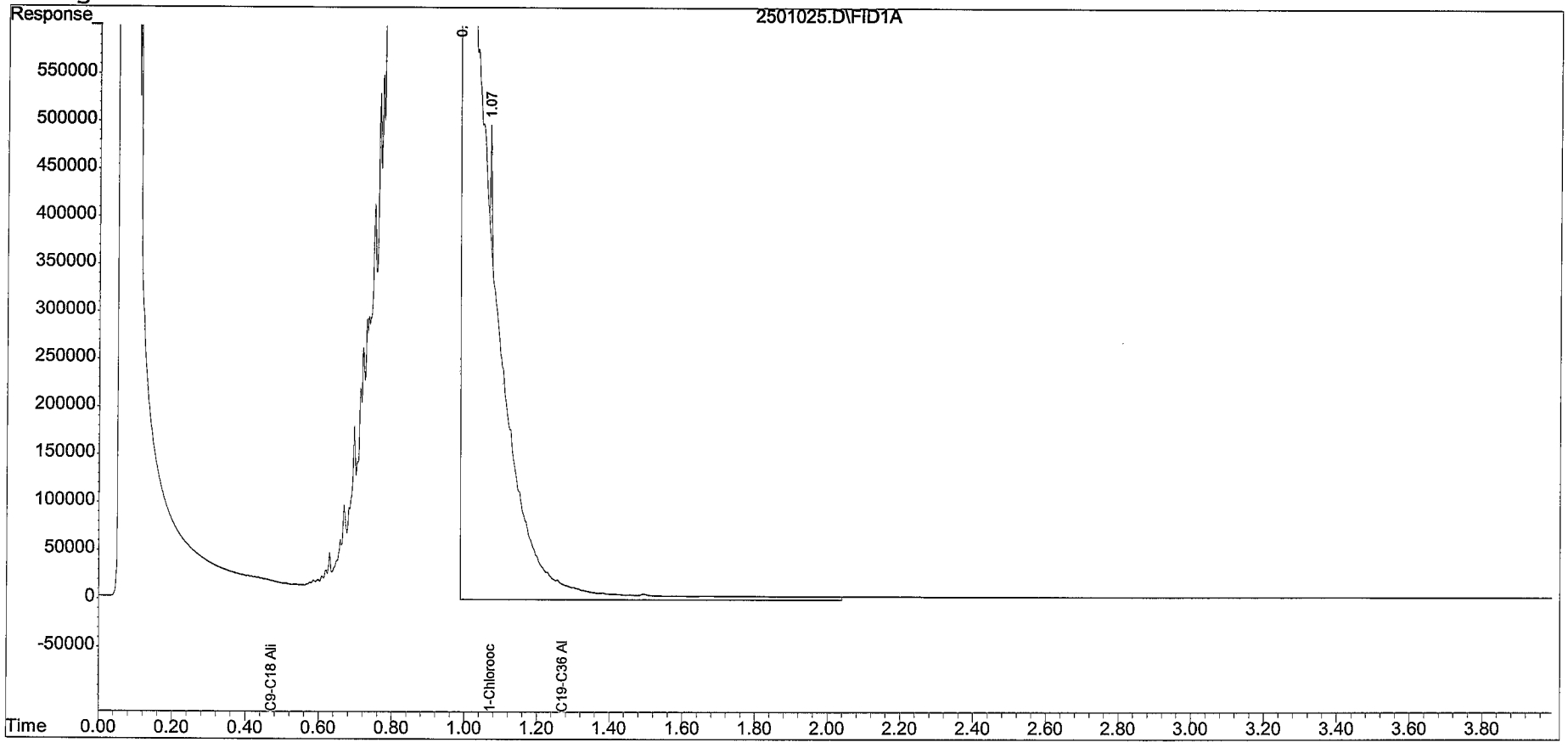
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\2501025.D Vial: 25
Acq On : 1 Feb 2012 12:08 Operator: KJA
Sample : LI=1794717 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:10 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5701057.D Vial: 57
Acq On : 1 Feb 2012 15:54 Operator: KJA
Sample : LI=1794717 20X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1 DF=20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:30 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.08	24313	3.900 ug/mlm
Target Compounds			
2) HM C10-C12 Aliphatics	0.00	0	N.D. ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D. ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D. ppb
5) HM C9-C18 Aliphatics	0.48	7403736	1026.357 ppb
6) HM C19-C36 Aliphatics	1.28	2379570	447.131 ppb

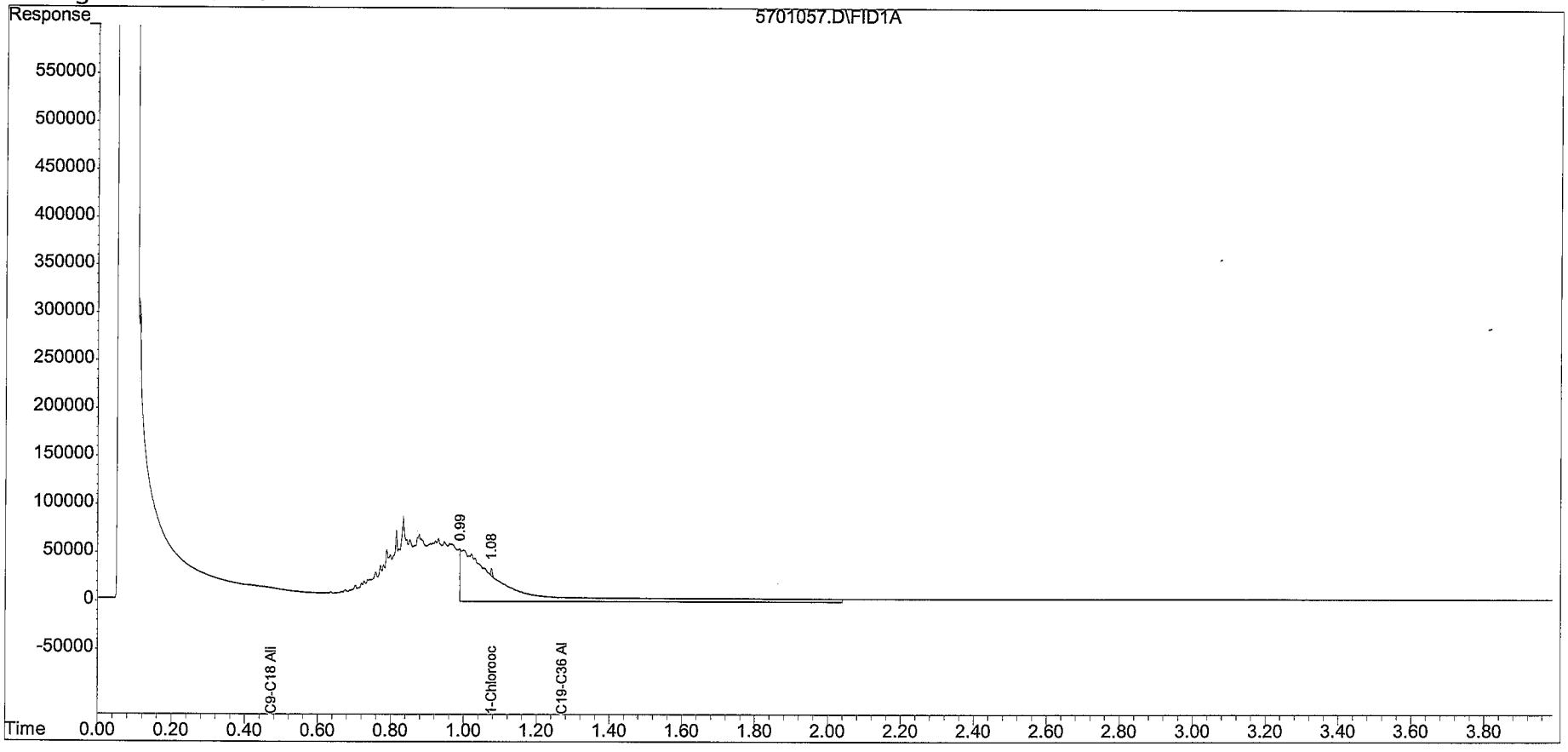
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\5701057.D Vial: 57
Acq On : 1 Feb 2012 15:54 Operator: KJA
Sample : LI=1794717 20X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1 DF=20 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:30 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\2601026.D
Acq On : 1 Feb 2012 12:15
Sample : LI=1794718 LB=S148056 LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-2
IntFile : EVENTS.E
Quant Time: Feb 1 13:12 2012 Quant Results File: ALIEPHAI.RES

Vial: 26
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.07	443558	86.937 ug/mlm
Target Compounds			
2) HM C10-C12 Aliphatics	0.00	0	N.D. ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D. ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D. ppb
5) HM C9-C18 Aliphatics	0.48	1244266151	172128.589 ppb
6) HM C19-C36 Aliphatics	1.28	365710955	71039.608 ppb

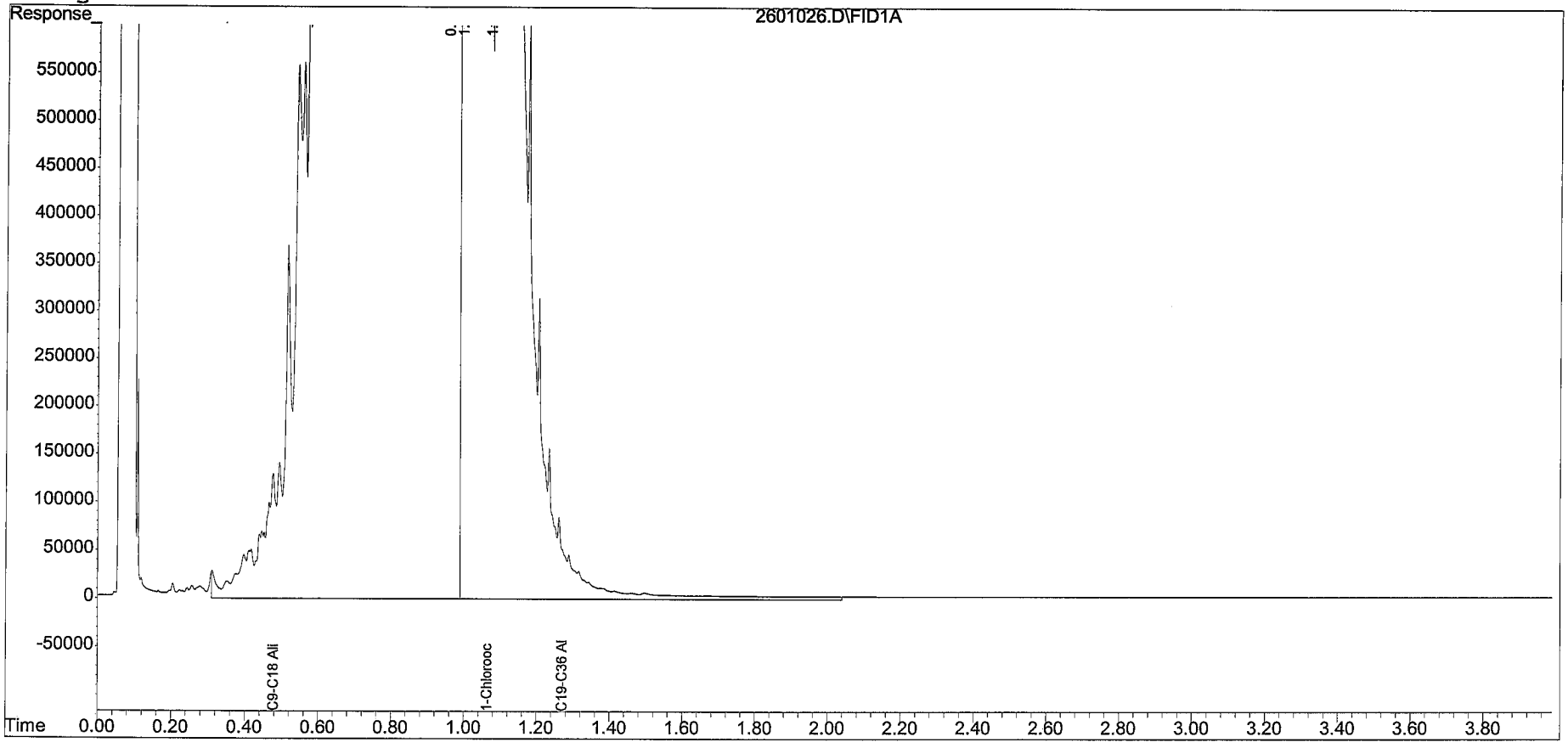
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\2601026.D Vial: 26
Acq On : 1 Feb 2012 12:15 Operator: KJA
Sample : LI=1794718 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:12 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5801058.D Vial: 58
Acq On : 1 Feb 2012 16:01 Operator: KJA
Sample : LI=1794718 200X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 DF=200 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:31 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

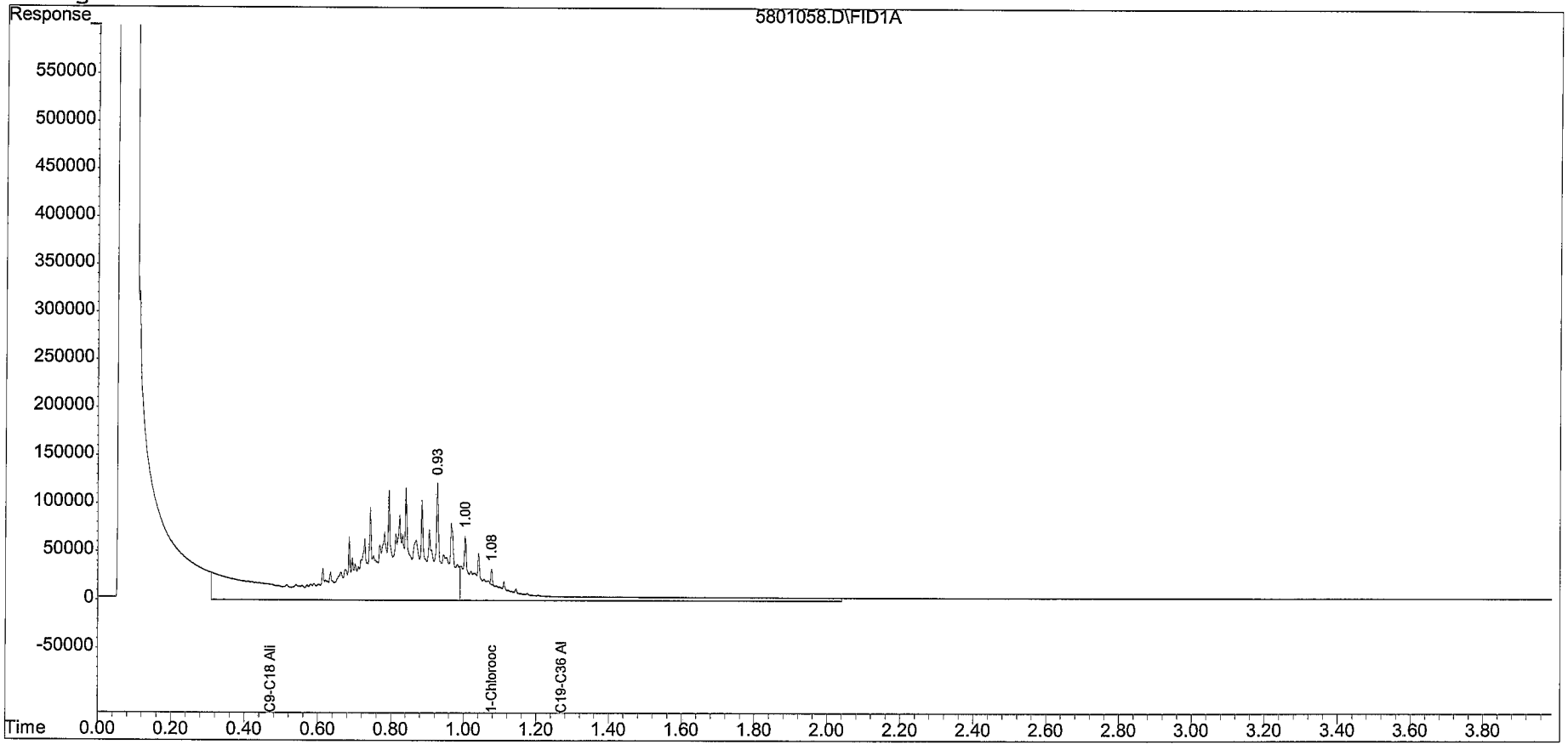
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	1.08	43921	7.784	ug/mlm
Target Compounds				
2) HM C10-C12 Aliphatics	0.00	0	N.D.	ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D.	ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D.	ppb
5) HM C9-C18 Aliphatics	0.48	8577670	1188.754	ppb
6) HM C19-C36 Aliphatics	1.28	1545703	285.117	ppb

Quantitation Report

Data File : W:\DATA\020112\5801058.D Vial: 58
Acq On : 1 Feb 2012 16:01 Operator: KJA
Sample : LI=1794718 200X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 DF=200 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:31 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\2701027.D Vial: 27
Acq On : 1 Feb 2012 12:22 Operator: KJA
Sample : LI=1794719 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-3 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:13 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S 1-Chlorooctadecane	1.06f	223849	43.421 ug/mlm
Target Compounds			
2) HM C10-C12 Aliphatics	0.00	0	N.D. ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D. ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D. ppb
5) HM C9-C18 Aliphatics	0.48	671877745	92946.837 ppb
6) HM C19-C36 Aliphatics	1.28	121632641	23617.080 ppb

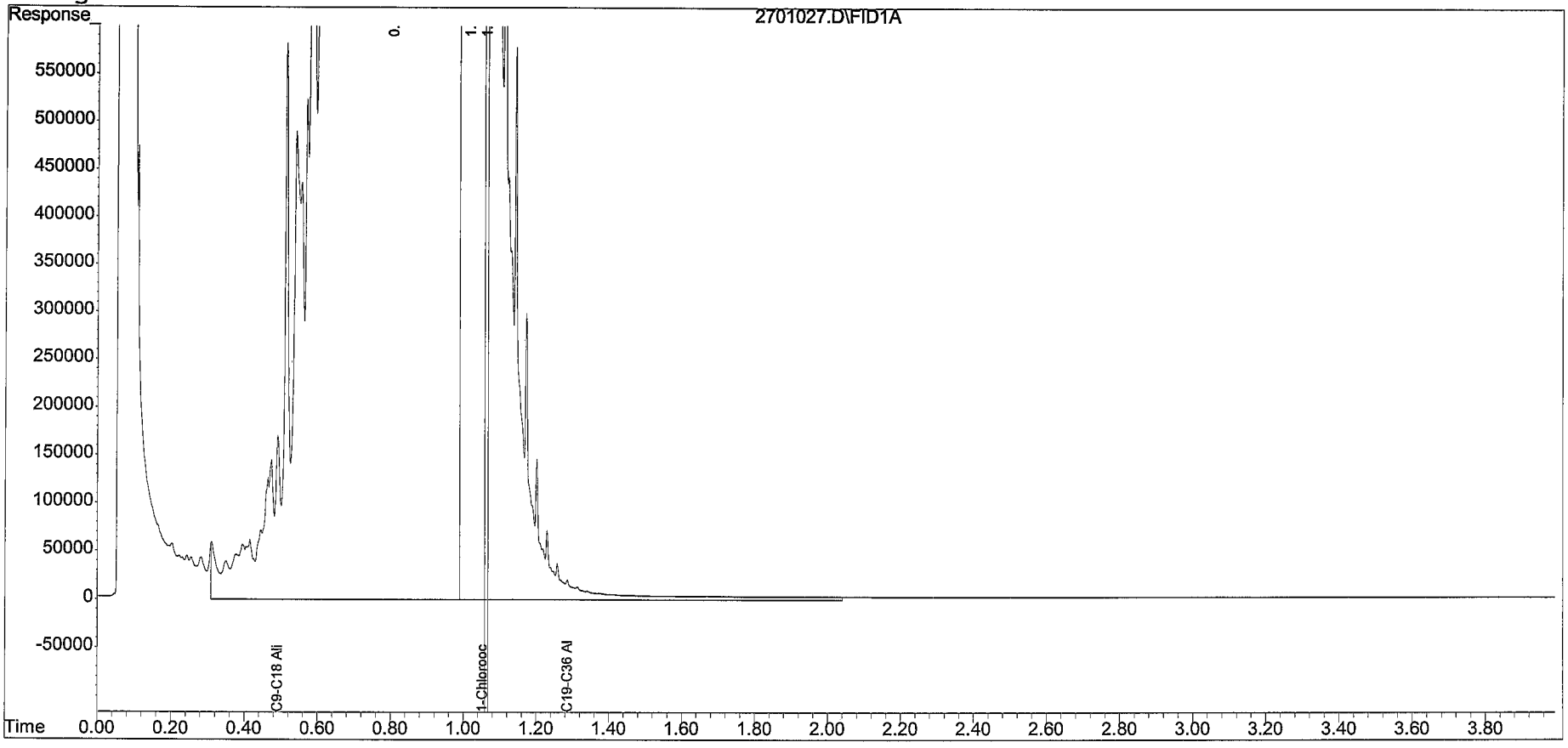
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\2701027.D Vial: 27
Acq On : 1 Feb 2012 12:22 Operator: KJA
Sample : LI=1794719 LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-3 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 13:13 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5901059.D Vial: 59
Acq On : 1 Feb 2012 16:08 Operator: KJA
Sample : LI=1794719 100X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-3 DF=100 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:31 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

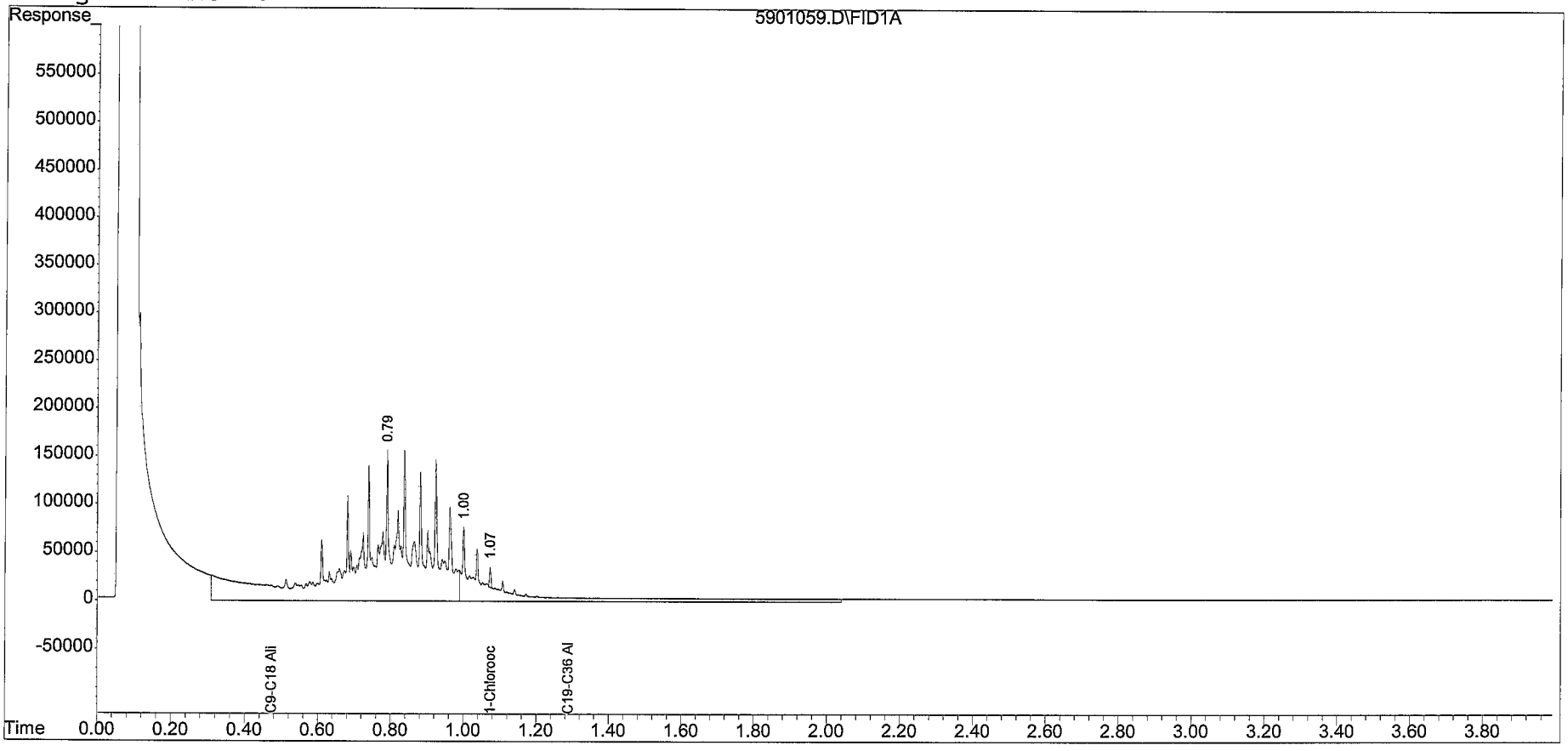
Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S 1-Chlorooctadecane	1.07	59140	10.798	ug/mlm
Target Compounds				
2) HM C10-C12 Aliphatics	0.00	0	N.D.	ppb
3) HM C12-C16 Aliphatics	0.00	0	N.D.	ppb
4) HM C16-C35 Aliphatics	0.00	0	N.D.	ppb
5) HM C9-C18 Aliphatics	0.48	9005347	1247.917	ppb
6) HM C19-C36 Aliphatics	1.28	1401005	257.004	ppb

Quantitation Report

Data File : W:\DATA\020112\5901059.D Vial: 59
Acq On : 1 Feb 2012 16:08 Operator: KJA
Sample : LI=1794719 100X LB=S148056 LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-3 DF=100 Multiplr: 1.00
IntFile : EVENTS.E
Quant Time: Feb 1 16:31 2012 Quant Results File: ALIEPHAI.RES

Quant Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Tue Dec 27 14:04:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3201032.D
Vial: 32
Acq On : 1 Feb 2012 12:57
Operator: KJA
Sample : LI=FRAC BLK LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:32 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	o-Terphenyl	0.00	0	N.D.	ug/mld
2)	S	2-Fluorobiphenyl	0.00	0	N.D.	ug/mld
3)	S	2-Bromonaphthalene	0.00	0	N.D.	ug/mld
		Target Compounds				
4)	HM	C10-C12 Aromatics	0.68	2964	0.390	ppb
5)	HM	C12-C16 Aromatics	0.80	30217	4.051	ppb
6)	HM	C16-C21 Aromatics	1.00	64813	9.501	ppb
7)	HM	C21-C35 Aromatics	1.40	29417	5.811	ppb
8)	HM	C11-C22 Aromatics	0.87	125022	20.322	ppb

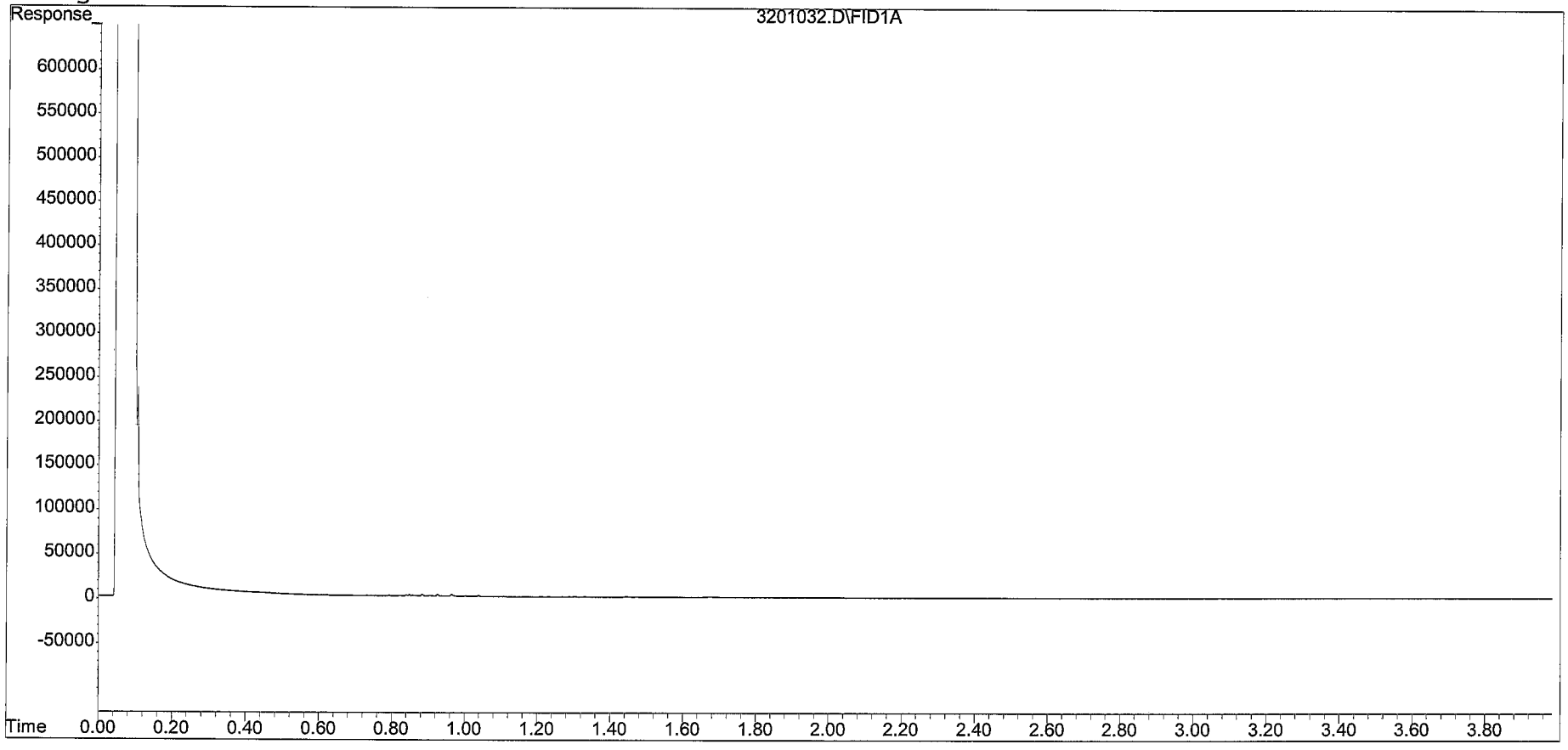
Quantitation Report

Data File : W:\DATA\020112\3201032.D
Acq On : 1 Feb 2012 12:57
Sample : LI=FRAC BLK LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL
IntFile : events.e
Quant Time: Feb 1 14:32 2012 Quant Results File: AROEPHAI.RES

Vial: 32
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3301033.D
Acq On : 1 Feb 2012 13:04
Sample : LI=1794724 MB LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL BLK
IntFile : events.e
Quant Time: Feb 1 14:32 2012 Quant Results File: AROEPHAI.RES

Vial: 33
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

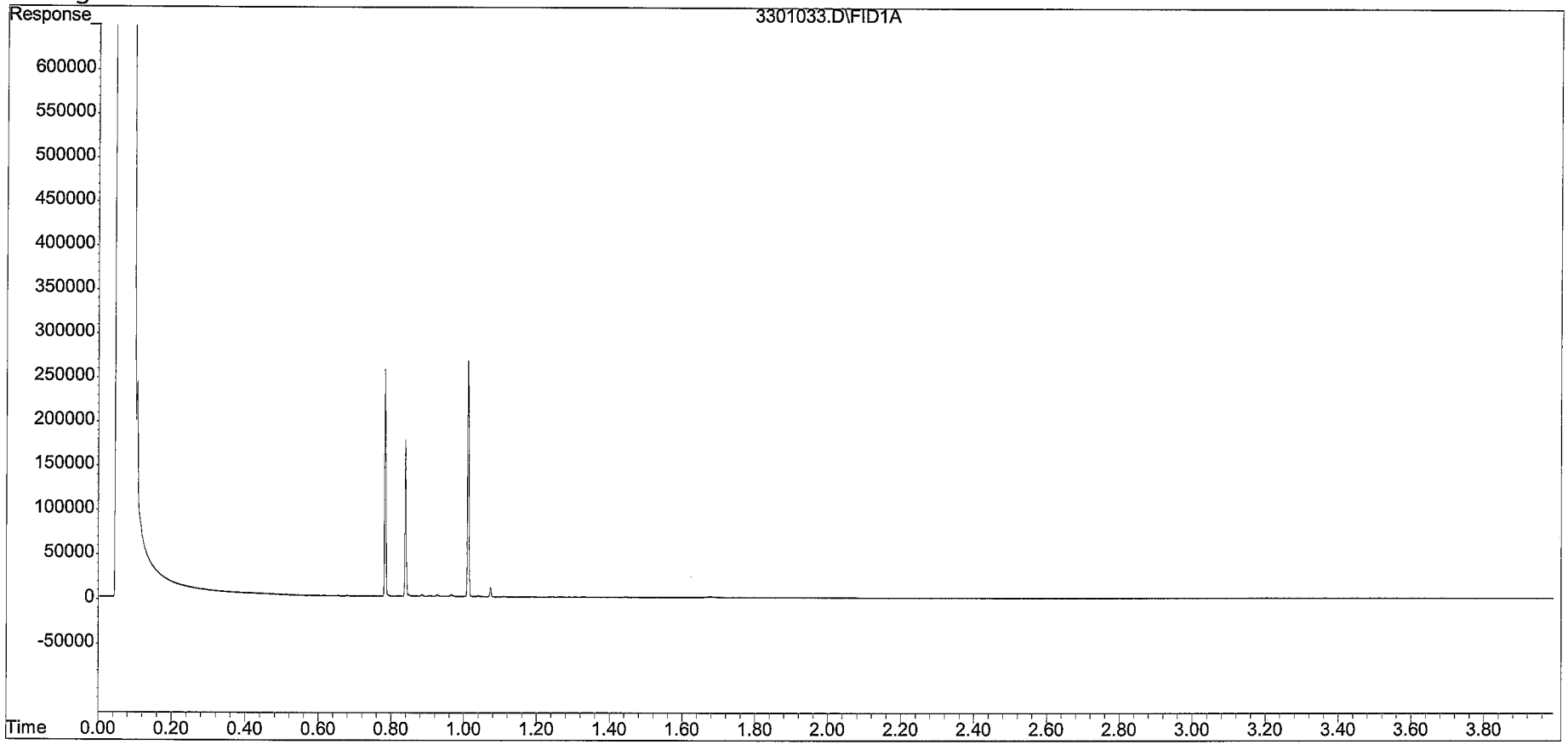
		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
1)	S	o-Terphenyl	1.01	680162	95.122 ug/ml
2)	S	2-Fluorobiphenyl	0.78f	611051	92.337 ug/ml
3)	S	2-Bromonaphthalene	0.84	421002	93.980 ug/ml
		Target Compounds			
4)	HM	C10-C12 Aromatics	0.68	7033	0.924 ppb
5)	HM	C12-C16 Aromatics	0.80	14831	1.988 ppb
6)	HM	C16-C21 Aromatics	1.00	64474	9.451 ppb
7)	HM	C21-C35 Aromatics	1.40	25128	4.964 ppb
8)	HM	C11-C22 Aromatics	0.87	107759	17.516 ppb

Quantitation Report

Data File : W:\DATA\020112\3301033.D Vial: 33
Acq On : 1 Feb 2012 13:04 Operator: KJA
Sample : LI=1794724 MB LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL BLK Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:32 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3401034.D
Vial: 34
Acq On : 1 Feb 2012 13:11
Operator: KJA
Sample : LI=1794722 LCS LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL LCS
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:33 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

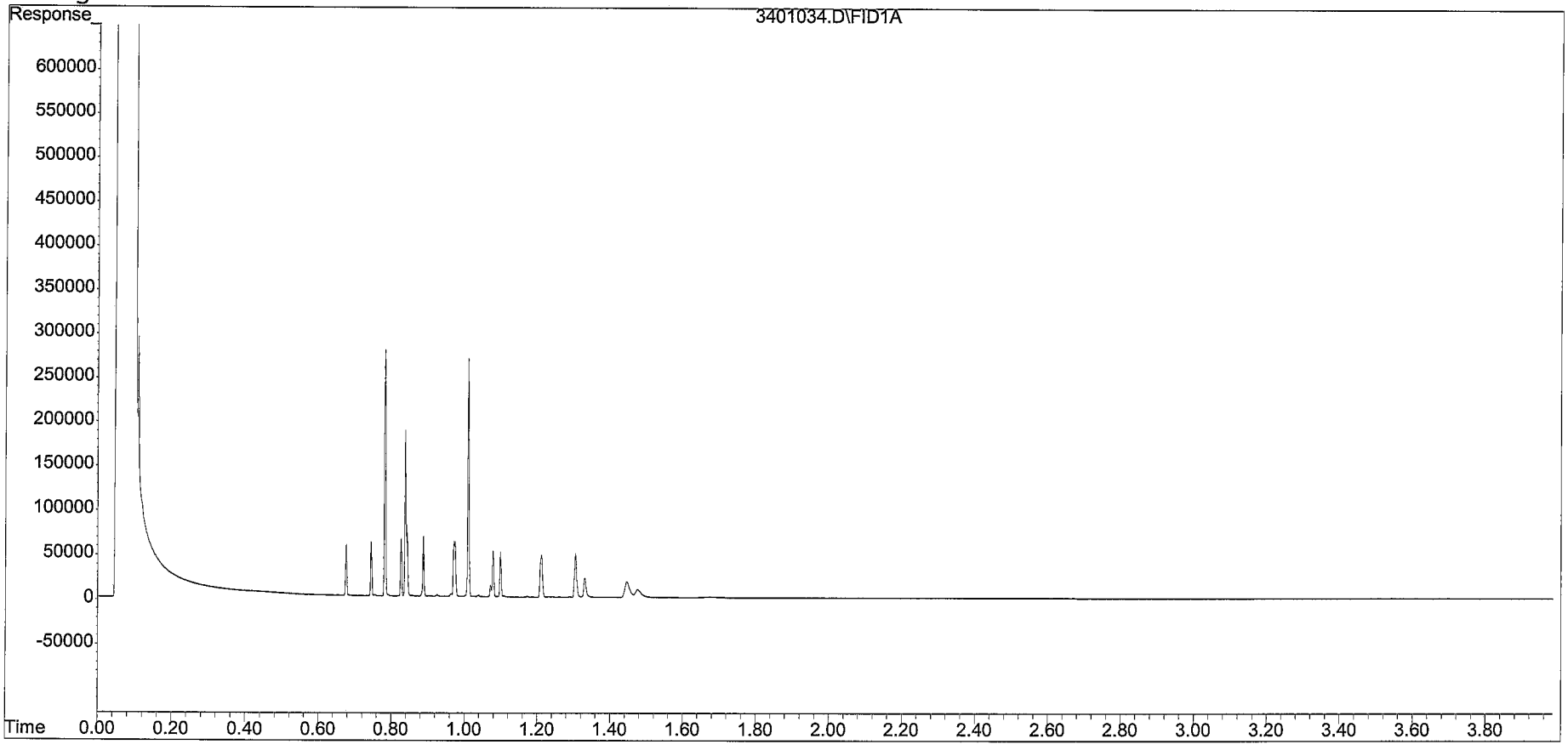
		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.01	696336	97.384	ug/ml
2)	S	2-Fluorobiphenyl	0.78f	655852	99.751	ug/ml
3)	S	2-Bromonaphthalene	0.84	480214	108.375	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	147634	19.404	ppb
5)	HM	C12-C16 Aromatics	0.80	432223	57.948	ppb
6)	HM	C16-C21 Aromatics	1.00	807993	118.445	ppb
7)	HM	C21-C35 Aromatics	1.40	830650	164.079	ppb
8)	HM	C11-C22 Aromatics	0.87	2215204	360.072	ppb

Quantitation Report

Data File : W:\DATA\020112\3401034.D Vial: 34
Acq On : 1 Feb 2012 13:11 Operator: KJA
Sample : LI=1794722 LCS LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL LCS Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:33 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3501035.D
Vial: 35
Acq On : 1 Feb 2012 13:18
Operator: KJA
Sample : LI=1794723 LCSD LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL LCSD
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:33 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.01f	650561	90.982	ug/ml
2)	S	2-Fluorobiphenyl	0.78f	625666	94.756	ug/ml
3)	S	2-Bromonaphthalene	0.84	435958	97.616	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	140743	18.499	ppb
5)	HM	C12-C16 Aromatics	0.80	447973	60.059	ppb
6)	HM	C16-C21 Aromatics	1.00	795549	116.620	ppb
7)	HM	C21-C35 Aromatics	1.40	842881	166.495	ppb
8)	HM	C11-C22 Aromatics	0.87	2223237	361.378	ppb

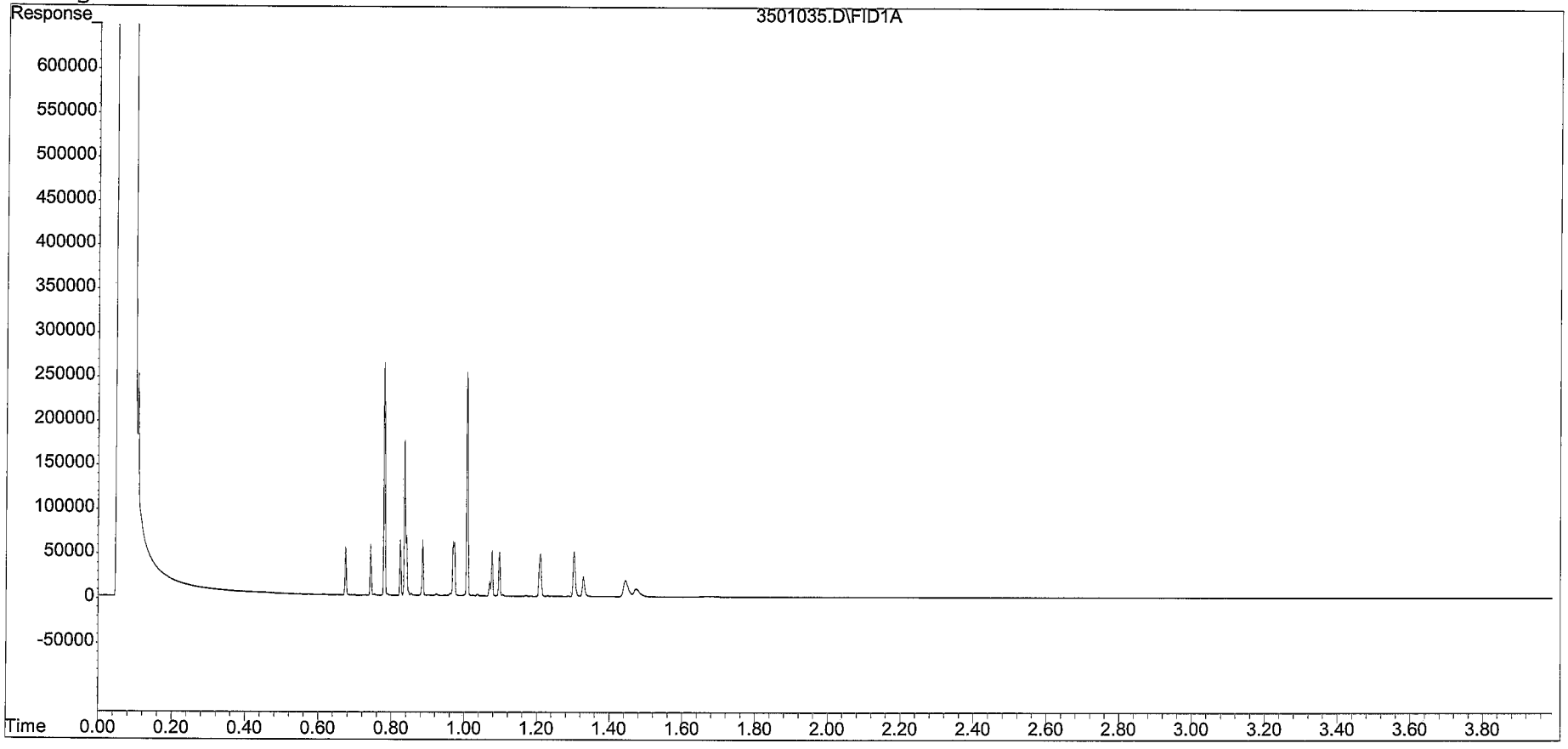
(f)=RT Delta > 1/2 Window
(m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\3501035.D Vial: 35
Acq On : 1 Feb 2012 13:18 Operator: KJA
Sample : LI=1794723 LCSD LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL LCSD Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:33 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3601036.D
Vial: 36
Acq On : 1 Feb 2012 13:25
Operator: KJA
Sample : LI=1794720 MS LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MS
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:29 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
1)	S	o-Terphenyl	1.01	176000	24.614	ug/ml
2)	S	2-Fluorobiphenyl	0.78f	577601	86.803	ug/ml
3)	S	2-Bromonaphthalene	0.84	441808	99.038	ug/ml
		Target Compounds				
4)	HM	C10-C12 Aromatics	0.68	39130	5.143	ppb
5)	HM	C12-C16 Aromatics	0.80	79430	10.649	ppb
6)	HM	C16-C21 Aromatics	1.00	246080	36.073	ppb
7)	HM	C21-C35 Aromatics	1.40	414700	81.916	ppb
8)	HM	C11-C22 Aromatics	0.87	774266	125.854	ppb

(f)=RT Delta > 1/2 Window
(m)=manual int.

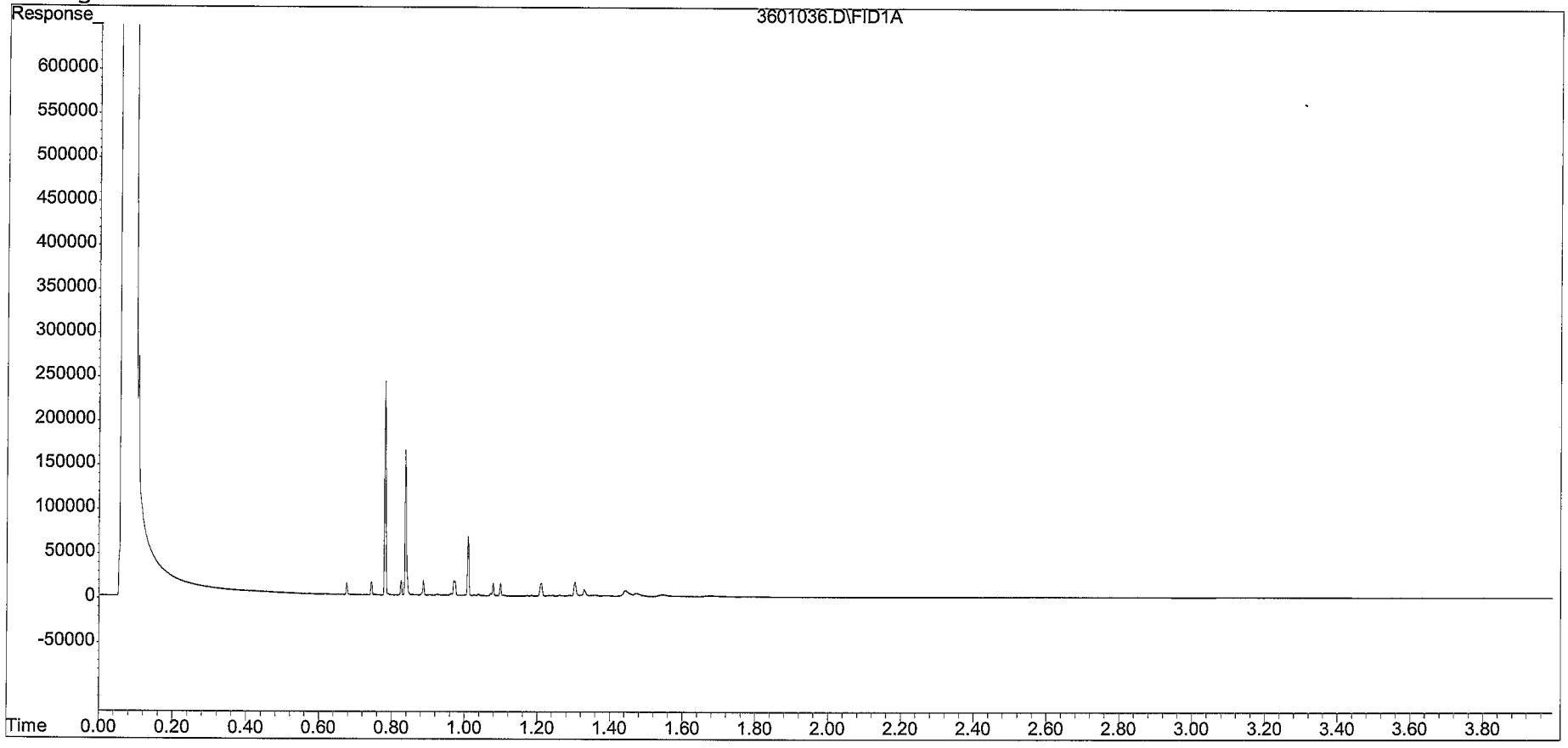
Quantitation Report

Data File : W:\DATA\020112\3601036.D
Acq On : 1 Feb 2012 13:25
Sample : LI=1794720 MS LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62673-1 MS
IntFile : events.e
Quant Time: Feb 1 14:29 2012 Quant Results File: AROEPHAI.RES

Vial: 36
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\3701037.D Vial: 37
Acq On : 1 Feb 2012 13:32 Operator: KJA
Sample : LI=1794721 MSD LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MSD Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:35 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.01f	352726	49.329	ug/ml
2)	S	2-Fluorobiphenyl	0.78f	590222	88.891	ug/ml
3)	S	2-Bromonaphthalene	0.84	399005	88.632	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.68	62484	8.213	ppb
5)	HM	C12-C16 Aromatics	0.80	226830	30.411	ppb
6)	HM	C16-C21 Aromatics	1.00	437665	64.158	ppb
7)	HM	C21-C35 Aromatics	1.40	769302	151.961	ppb
8)	HM	C11-C22 Aromatics	0.87	1494172	242.871	ppb

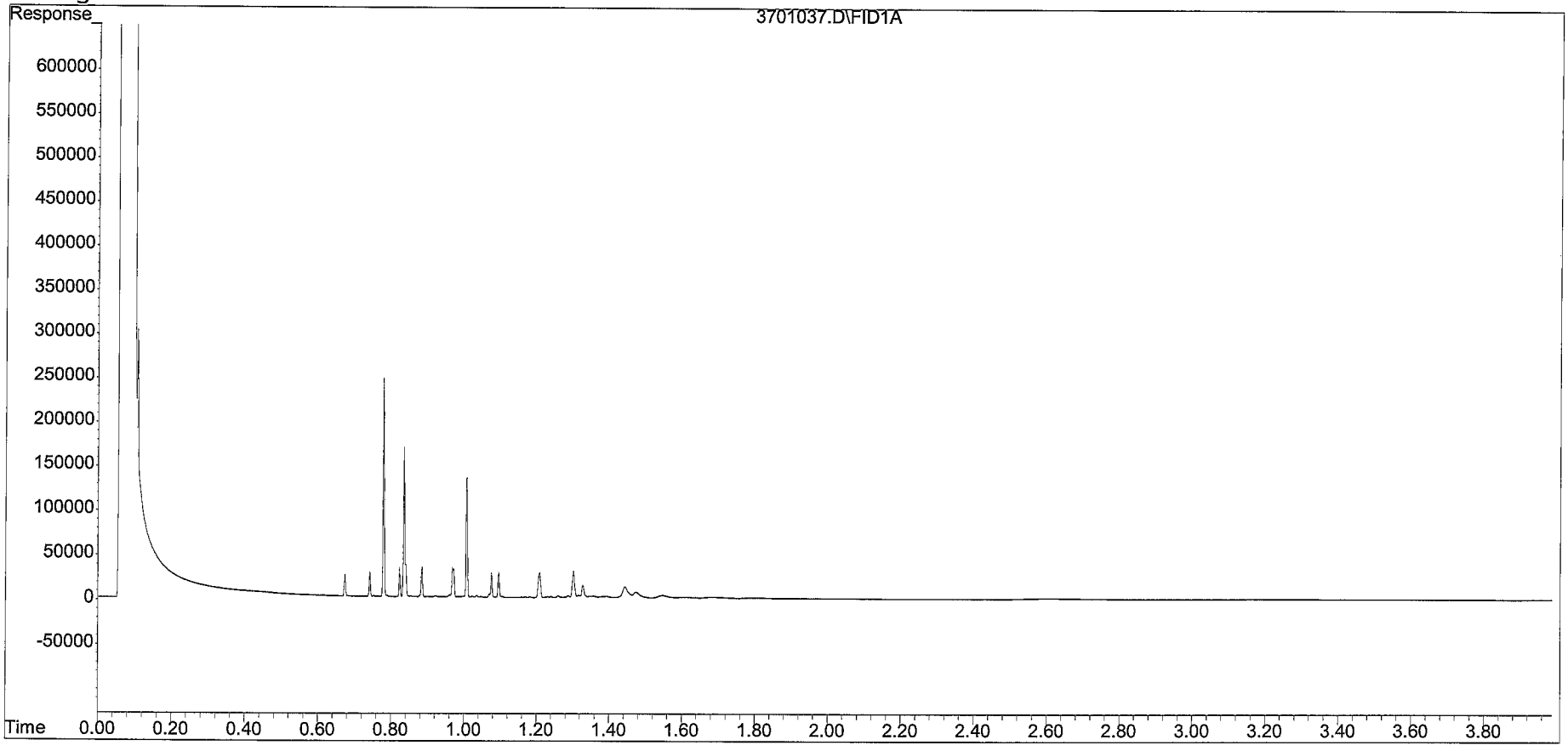
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\3701037.D Vial: 37
Acq On : 1 Feb 2012 13:32 Operator: KJA
Sample : LI=1794721 MSD LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1 MSD Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:35 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\4101041.D
Vial: 41
Acq On : 1 Feb 2012 14:01
Operator: KJA
Sample : LI=1794709 LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL 400-62673-1
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 14:40 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units
System Monitoring Compounds				
1) S o-Terphenyl	1.01	273251	38.215	ug/ml
2) S 2-Fluorobiphenyl	0.78f	552056	82.576	ug/ml
3) S 2-Bromonaphthalene	0.84	381349	84.339	ug/ml
Target Compounds				
4) HM C10-C12 Aromatics	0.00	0	N.D.	ppb
5) HM C12-C16 Aromatics	0.00	0	N.D.	ppb
6) HM C16-C21 Aromatics	0.00	0	N.D.	ppb
7) HM C21-C35 Aromatics	0.00	0	N.D.	ppb
8) HM C11-C22 Aromatics	0.87	177126	28.791	ppb

(f)=RT Delta > 1/2 Window
(m)=manual int.

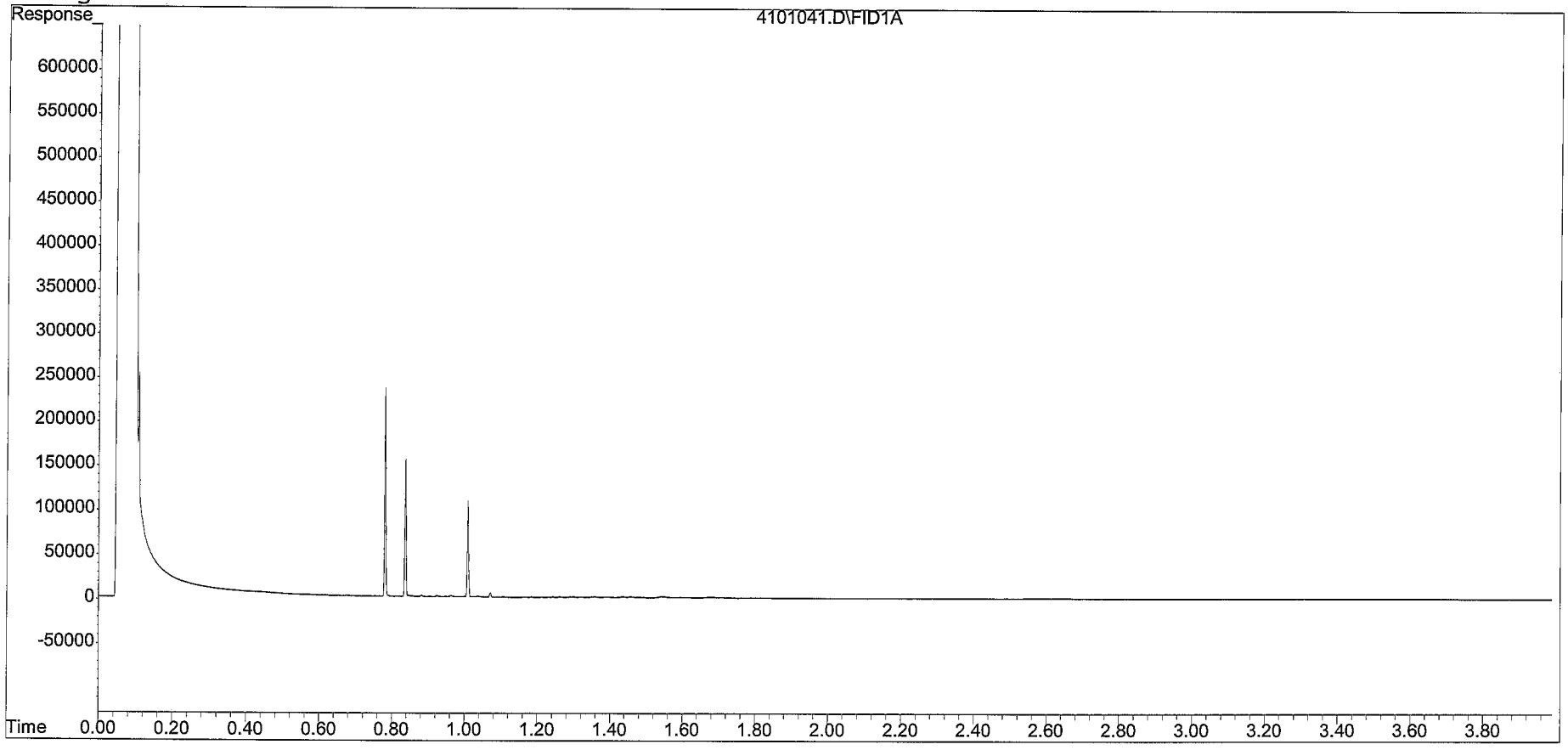
Quantitation Report

Data File : W:\DATA\020112\4101041.D
Acq On : 1 Feb 2012 14:01
Sample : LI=1794709 LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62673-1
IntFile : events.e
Quant Time: Feb 1 14:40 2012 Quant Results File: AROEPHAI.RES

Vial: 41
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5001050.D
Vial: 50
Acq On : 1 Feb 2012 15:05
Operator: KJA
Sample : LI=1794717 LB=S148056Z LM=MAEPH
Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1
Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 15:10 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.01	419413	58.655	ug/mlm
2)	S	2-Fluorobiphenyl	0.78f	466340	68.392	ug/mlm
3)	S	2-Bromonaphthalene	0.84	333761	72.770	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	68716068	11169.499	ppb

(f)=RT Delta > 1/2 Window
(m)=manual int.

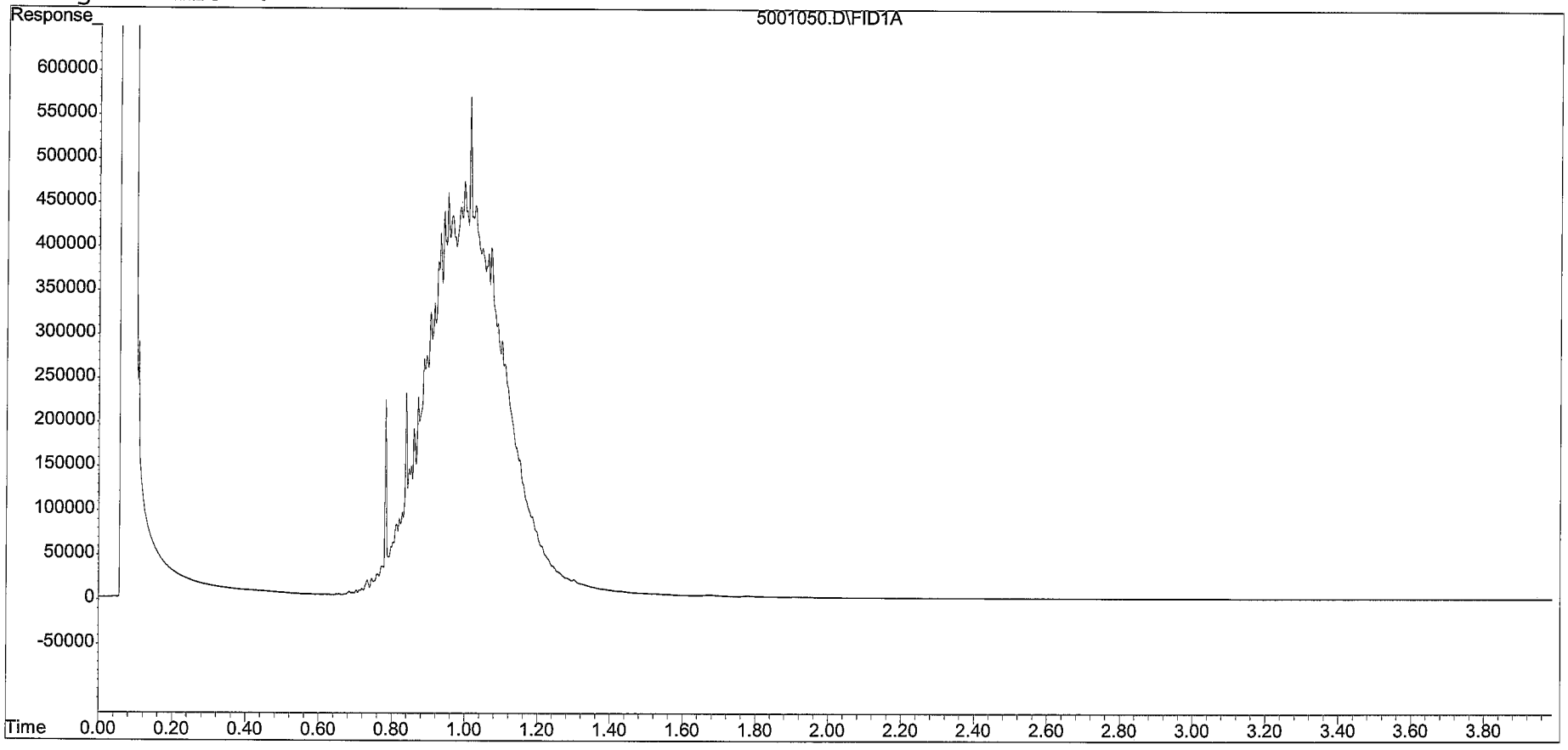
Quantitation Report

Data File : W:\DATA\020112\5001050.D
Acq On : 1 Feb 2012 15:05
Sample : LI=1794717 LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-1
IntFile : events.e
Quant Time: Feb 1 15:10 2012 Quant Results File: AROEPHAI.RES

Vial: 50
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\6301063.D Vial: 63
Acq On : 1 Feb 2012 16:37 Operator: KJA
Sample : LI=1794717 5X LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-1 DF=5 Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 7:45 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.01f	72084	10.081	ug/mlm
2)	S	2-Fluorobiphenyl	0.78f	95136	6.970	ug/mlm
3)	S	2-Bromonaphthalene	0.84	70733	8.824	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	13312946	2163.962	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

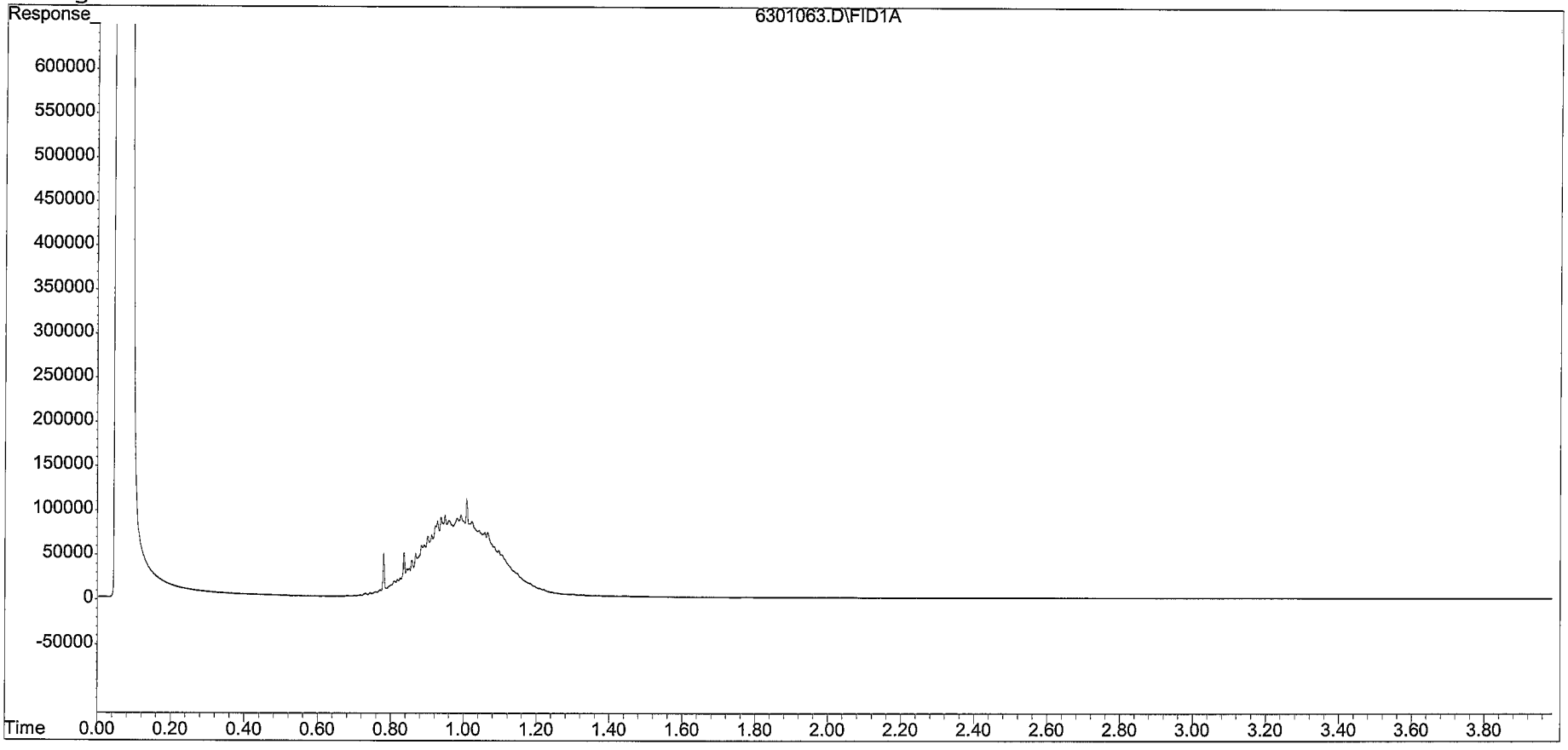
Quantitation Report

Data File : W:\DATA\020112\6301063.D
Acq On : 1 Feb 2012 16:37
Sample : LI=1794717 5X LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-1 DF=5
IntFile : events.e
Quant Time: Feb 2 7:45 2012 Quant Results File: AROEPHAI.RES

Vial: 63
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5101051.D Vial: 51
Acq On : 1 Feb 2012 15:12 Operator: KJA
Sample : LI=1794718 LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 1 15:11 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
1) S o-Terphenyl	1.02	1476691	206.518 ug/mlm
2) S 2-Fluorobiphenyl	0.80	3856699	629.388 ug/mlm
3) S 2-Bromonaphthalene	0.85	3629497	874.016 ug/mlm
Target Compounds			
4) HM C10-C12 Aromatics	0.00	0	N.D. ppb
5) HM C12-C16 Aromatics	0.00	0	N.D. ppb
6) HM C16-C21 Aromatics	0.00	0	N.D. ppb
7) HM C21-C35 Aromatics	0.00	0	N.D. ppb
8) HM C11-C22 Aromatics	0.87	511656823	83167.596 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

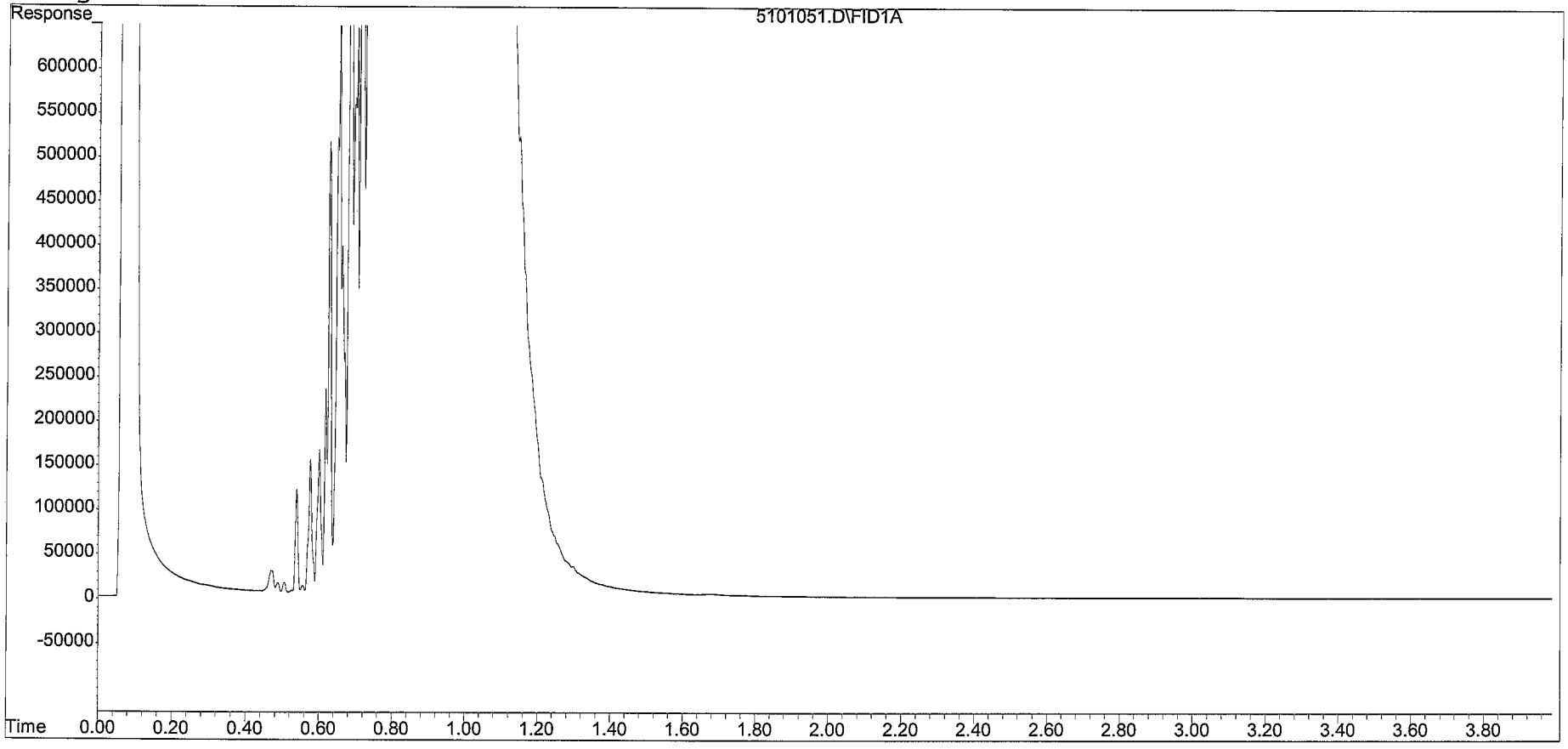
Quantitation Report

Data File : W:\DATA\020112\5101051.D
Acq On : 1 Feb 2012 15:12
Sample : LI=1794718 LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-2
IntFile : events.e
Quant Time: Feb 1 15:11 2012 Quant Results File: AROEPHAI.RES

Vial: 51
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\6401064.D Vial: 64
Acq On : 1 Feb 2012 16:44 Operator: KJA
Sample : LI=1794718 50X LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 DF=50 Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 7:47 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.02	35903	5.021	ug/mlm
2)	S	2-Fluorobiphenyl	0.80	82923	4.949	ug/mlm
3)	S	2-Bromonaphthalene	0.85	83673	11.970	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	8771089	1425.702	ppb

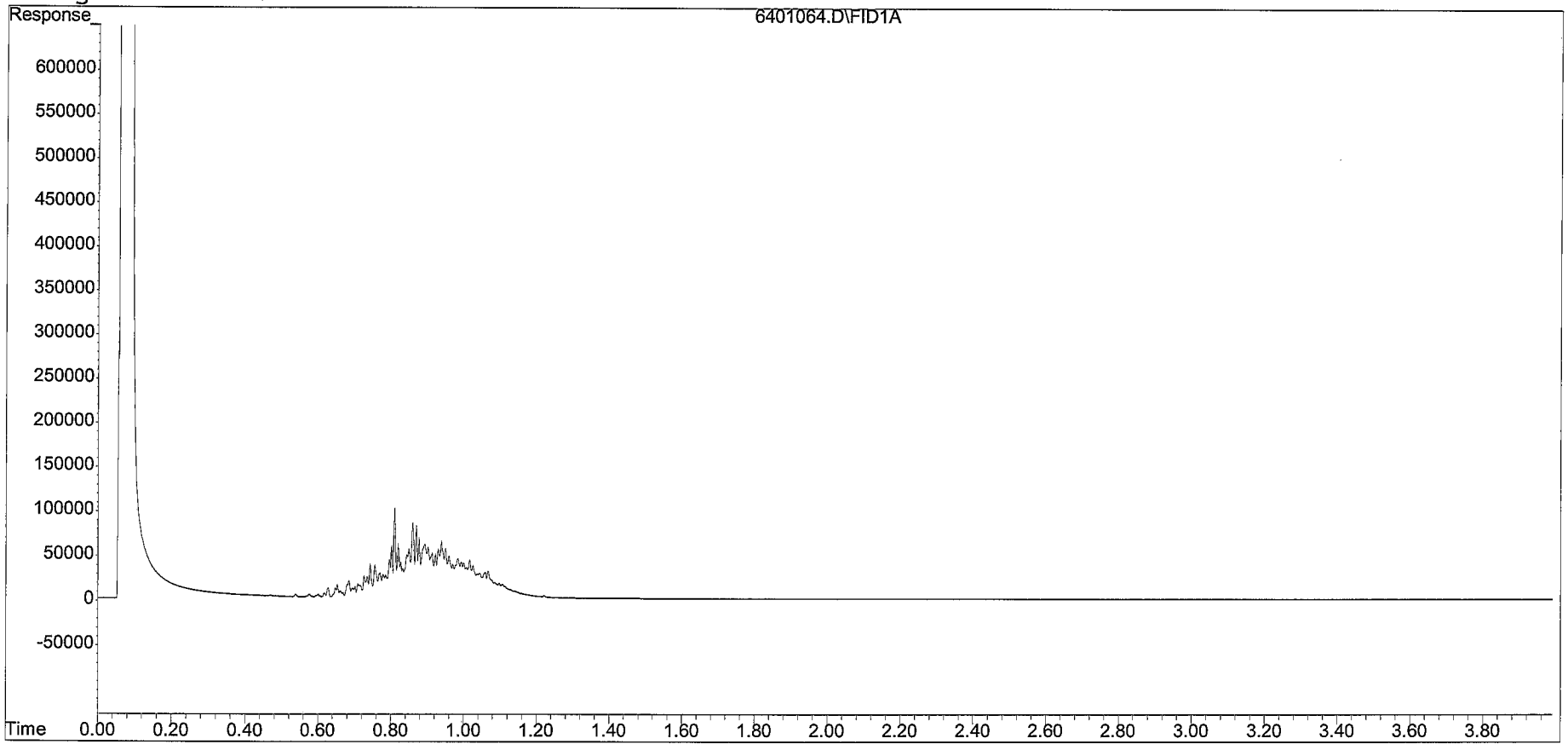
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\DATA\020112\6401064.D Vial: 64
Acq On : 1 Feb 2012 16:44 Operator: KJA
Sample : LI=1794718 50X LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-2 DF=50 Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 7:47 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\5201052.D
Acq On : 1 Feb 2012 15:19
Sample : LI=1794719 LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-3
IntFile : events.e
Quant Time: Feb 1 15:29 2012 Quant Results File: AROEPHAI.RES

Vial: 52
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.03	2046920	286.265	ug/mlm
2)	S	2-Fluorobiphenyl	0.80	2979261	484.200	ug/mlm
3)	S	2-Bromonaphthalene	0.85	3689525	888.609	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	332656102	54071.805	ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

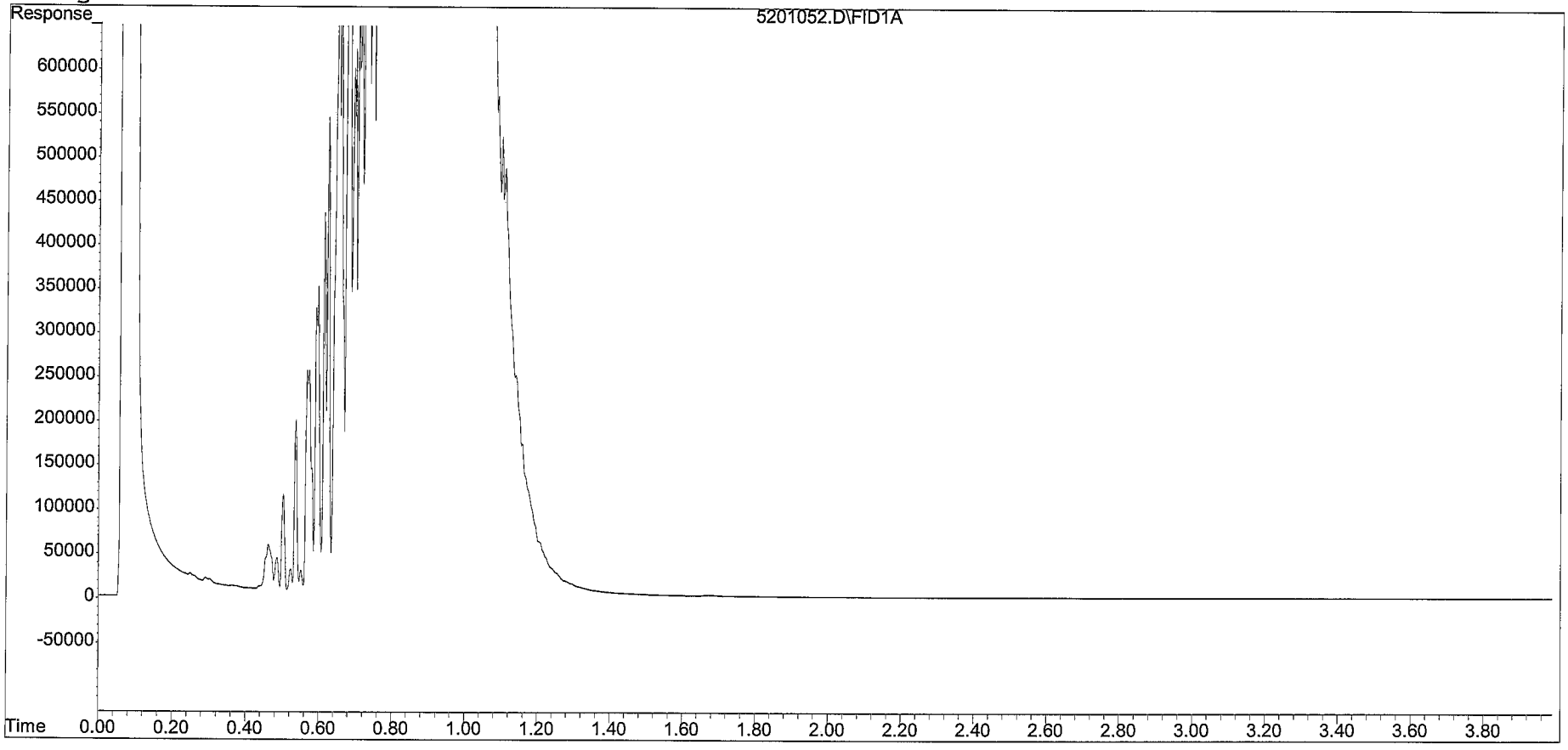
Quantitation Report

Data File : W:\DATA\020112\5201052.D
Acq On : 1 Feb 2012 15:19
Sample : LI=1794719 LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-3
IntFile : events.e
Quant Time: Feb 1 15:29 2012 Quant Results File: AROEPHAI.RES

Vial: 52
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : W:\DATA\020112\6501065.D Vial: 65
Acq On : 1 Feb 2012 16:51 Operator: KJA
Sample : LI=1794719 20X LB=S148056Z LM=MAEPH Inst : Flash
Misc : RDU=UG/ML SOIL 400-62678-3 DF=20 Multiplr: 1.00
IntFile : events.e
Quant Time: Feb 2 7:48 2012 Quant Results File: AROEPHAI.RES

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Initial Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
1)	S	o-Terphenyl	1.02	81485	11.396	ug/mlm
2)	S	2-Fluorobiphenyl	0.80	183400	21.575	ug/mlm
3)	S	2-Bromonaphthalene	0.85	227541	46.946	ug/mlm
Target Compounds						
4)	HM	C10-C12 Aromatics	0.00	0	N.D.	ppb
5)	HM	C12-C16 Aromatics	0.00	0	N.D.	ppb
6)	HM	C16-C21 Aromatics	0.00	0	N.D.	ppb
7)	HM	C21-C35 Aromatics	0.00	0	N.D.	ppb
8)	HM	C11-C22 Aromatics	0.87	15500601	2519.555	ppb

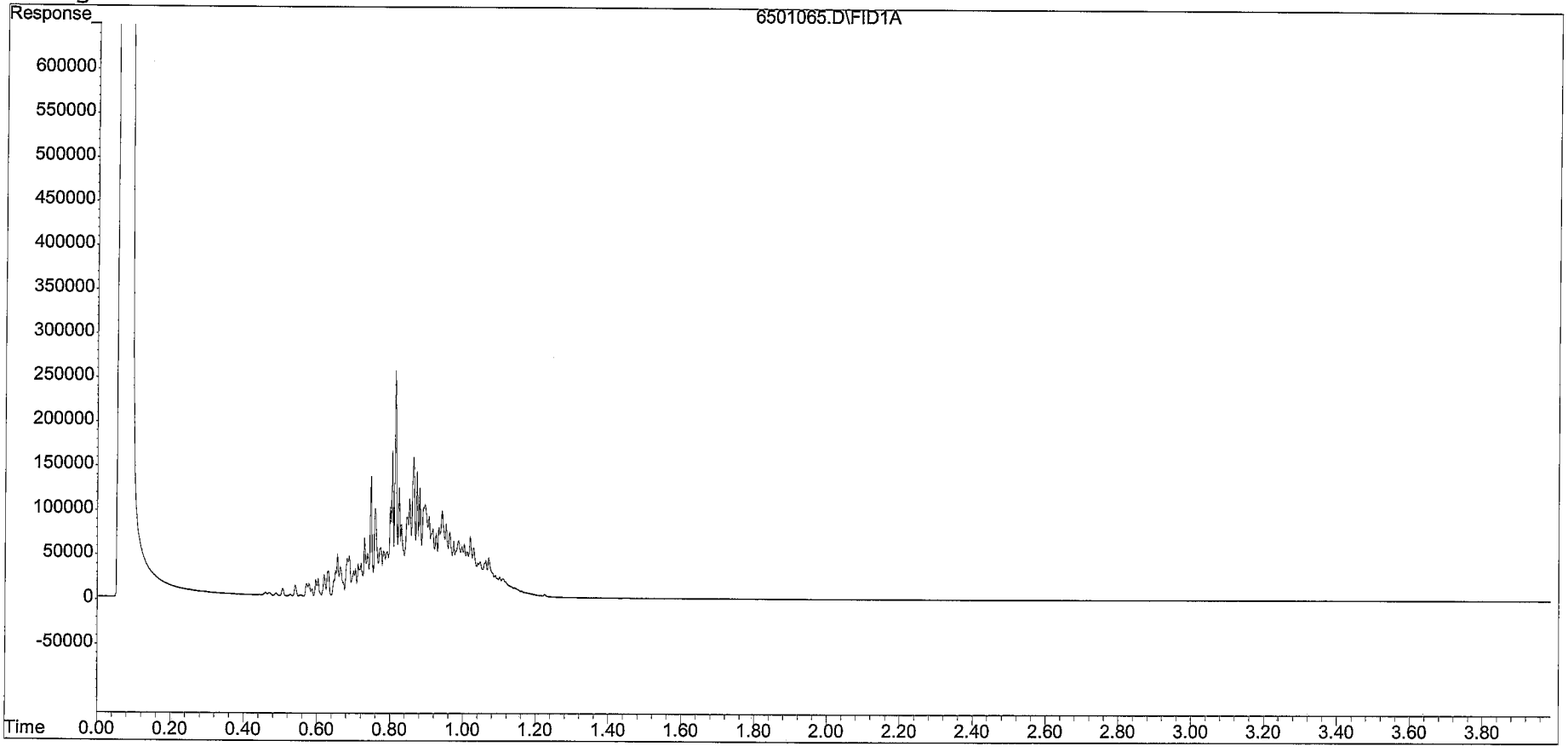
Quantitation Report

Data File : W:\DATA\020112\6501065.D
Acq On : 1 Feb 2012 16:51
Sample : LI=1794719 20X LB=S148056Z LM=MAEPH
Misc : RDU=UG/ML SOIL 400-62678-3 DF=20
IntFile : events.e
Quant Time: Feb 2 7:48 2012 Quant Results File: AROEPHAI.RES

Vial: 65
Operator: KJA
Inst : Flash
Multiplr: 1.00

Quant Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu Dec 22 09:25:28 2011
Response via : Multiple Level Calibration
DataAcq Meth : 8015.M

Volume Inj. :
Signal Phase :
Signal Info :



DATA PACKAGE

FOR MAVPH SOIL

400-62678

Response Factor Report TRACY #1

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:19:43 2011

Calibration Files

1	=T080104.D	5	=T080105.D	25	=T080106.D
50	=T080107.D	100	=T080108.D	200	=T080109.D

		Compound	1	5	25	50	100	200	Avg		%RSD
1)	I	FLUOROBENZENE	----------ISTD----------								
2)	TM	METHYL TERT-BUTYL E	0.773	0.453	0.731	0.673	0.627	0.641	0.647	0	15.71
3)	TM	BENZENE	1.853	1.509	1.509	1.455	1.331	1.362	1.480	0	12.25
4)	SM	a,a,a-Trifluorotolu	0.485	0.483	0.493	0.491	0.487	0.487	0.488	0	0.69
5)	TM	TOLUENE	1.563	1.387	1.445	1.385	1.281	1.311	1.379	0	7.40
6)	TM	ETHYLBENZENE	1.254	1.162	1.201	1.148	1.074	1.111	1.149	0	5.52
7)	TM	M,P-XYLENE	1.304	1.196	1.240	1.185	1.114	1.544	1.245	0	11.77
8)	TM	O-XYLENE	1.068	1.041	1.057	1.022	0.965	1.026	1.028	0	3.28
9)	TM	1,2,4-TRIMETHYLBENZ	0.731	0.733	0.756	0.723	0.712	0.785	0.746	0	3.92
10)	TM	NAPHTHALENE	0.415	0.333	0.411	0.390	0.395	0.426	0.402	0	8.68
11)	HM	C9-C10 AROMATICS	1.127	0.848	0.852	0.835	0.792	0.879	0.886	0	12.43

Signal #2 Calibration Files

1	=T080104.D	5	=T080105.D	25	=T080106.D
50	=T080107.D	100	=T080108.D	200	=T080109.D

		Compound	1	5	25	50	100	200	Avg		%RSD
13)	I	FLUOROBENZENE #2	----------ISTD----------								
14)	SM	a,a,a-Trifluorotolu	0.701	0.691	0.699	0.707	0.711	0.700	0.703	0	1.06
15)	HM	C5-C8 ALIPHATICS #2	1.330	0.986	0.980	0.989	0.918	0.911	1.007	0	14.51
16)	HM	C5-C8 ALIPHATICS (A	1.330	0.986	0.980	0.989	0.918	0.911	1.007	0	14.51
17)	TM	N-PENTANE #2	0.900	0.848	0.877	0.887	0.829	0.802	0.854	0	4.15
18)	TM	2-METHYL PENTANE #2	1.092	0.960	0.973	1.008	0.940	0.905	0.975	0	6.23
19)	TM	METHYL TERT-BUTYL E	0.841	0.512	0.712	0.662	0.610	0.608	0.651	0	15.87
20)	TM	2,2,4-TRIMETHYLPENT	1.034	1.025	0.863	1.033	0.933	0.934	0.968	0	6.72
21)	TM	BENZENE #2	1.365	1.198	1.186	1.144	1.077	1.087	1.166	0	8.52
22)	TM	TOLUENE #2	1.323	1.207	1.236	1.180	1.113	1.125	1.190	0	6.18
23)	HM	C9-C12 ALIPHATICS #	1.116	0.757	0.719	0.760	0.742	0.785	0.815	0	16.79
24)	HM	C9-C12 ALIPHATICS (	1.116	0.757	0.719	0.760	0.742	0.785	0.815	0	16.79
25)	TM	N-NONANE #2	0.545	0.539	0.393	0.621	0.589	0.639	0.574	0	16.72
26)	TM	ETHYLBENZENE #2	1.231	1.095	1.114	1.068	1.016	1.043	1.091	0	6.38
27)	TM	M,P-XYLENE #2	1.083	0.967	0.992	0.955	0.924	0.966	0.983	0	5.09
28)	TM	O-XYLENE #2	0.905	1.000	1.003	0.964	0.934	0.986	0.972	0	4.10
29)	TM	N-DECANE #2	0.594	0.345	0.213	0.349	0.369	0.369	0.382	0	30.09
30)	TM	1,2,4-TRIMETHYLBENZ	0.897	0.641	0.674	0.645	0.657	0.720	0.692	0	13.89
31)	TM	N-BUTYLCYCLOHEXANE	0.404	0.484	0.343	0.507	0.506	0.567	0.489	0	18.70
32)	TM	NAPHTHALENE #2	0.276	0.220	0.267	0.256	0.265	0.281	0.267	0	9.45

(#) = Out of Range ### Number of calibration levels exceeded format ###

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50 Operator: CJL
Sample : STD001 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 10:19 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:06:38 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.80	8241622	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.80	3140356	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.20	10001223	49.773	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.20	5505225	49.881	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.24	318530	1.194	ug/l	0.0
3)	TM	BENZENE	23.14	763697	1.267	ug/l	0.0
5)	TM	TOLUENE	29.23	643985	1.133	ug/l	0.0
6)	TM	ETHYLBENZENE	34.07	516544	1.091	ug/l	0.0
7)	TM	M,P-XYLENE	34.34	1075064	2.095	ug/l	0.0
8)	TM	O-XYLENE	36.03	440119	1.039	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.52	301185	0.976	ug/l m	0.0
10)	TM	NAPHTHALENE	45.08	170891	1.033	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	464517	1.140	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.54	1252689	7.925	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.54	1252689	7.925	ug/l	0.0
17)	TM	N-PENTANE #2	11.05	141252	1.054	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.19	171529	1.135	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.24	132029	1.257	ug/l m	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.78	162350	1.068	ug/l	0.0
21)	TM	BENZENE #2	23.14	214325	1.175	ug/l	0.0
22)	TM	TOLUENE #2	29.23	207797	1.116	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.02	1401397	10.956	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.02	1401397	10.956	ug/l	0.0
25)	TM	N-NONANE #2	33.26	85527	0.941	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.08	193291	1.129	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.34	340071	2.203	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50 Operator: CJL
Sample : STD001 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 10:19 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:06:38 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.02	142122	0.900	ug/l	0.0
29) TM	N-DECANE #2	38.09	93330	1.562	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.52	140817	1.324	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.70	63427	0.797	ug/l	0.0
32) TM	NAPHTHALENE #2	45.07	43336	1.035	ug/l m	0.0

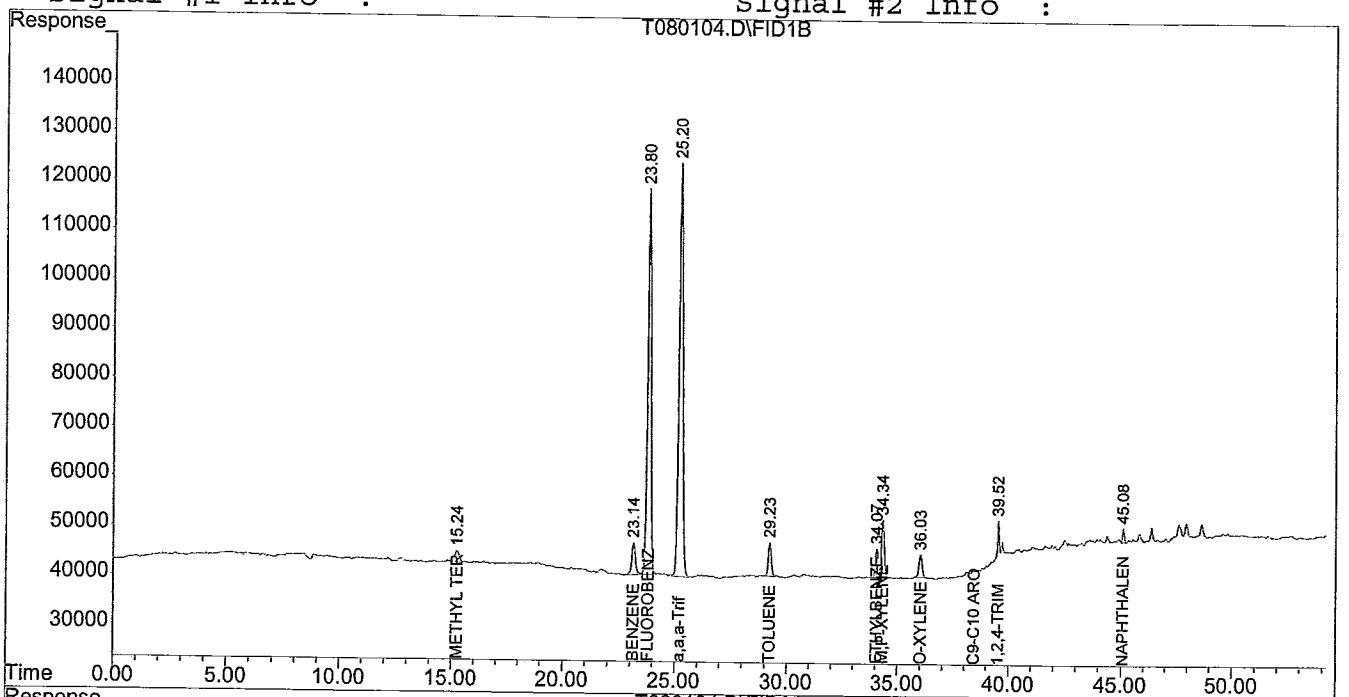
(f)=RT Delta > 1/2 Window (m)=manual int.

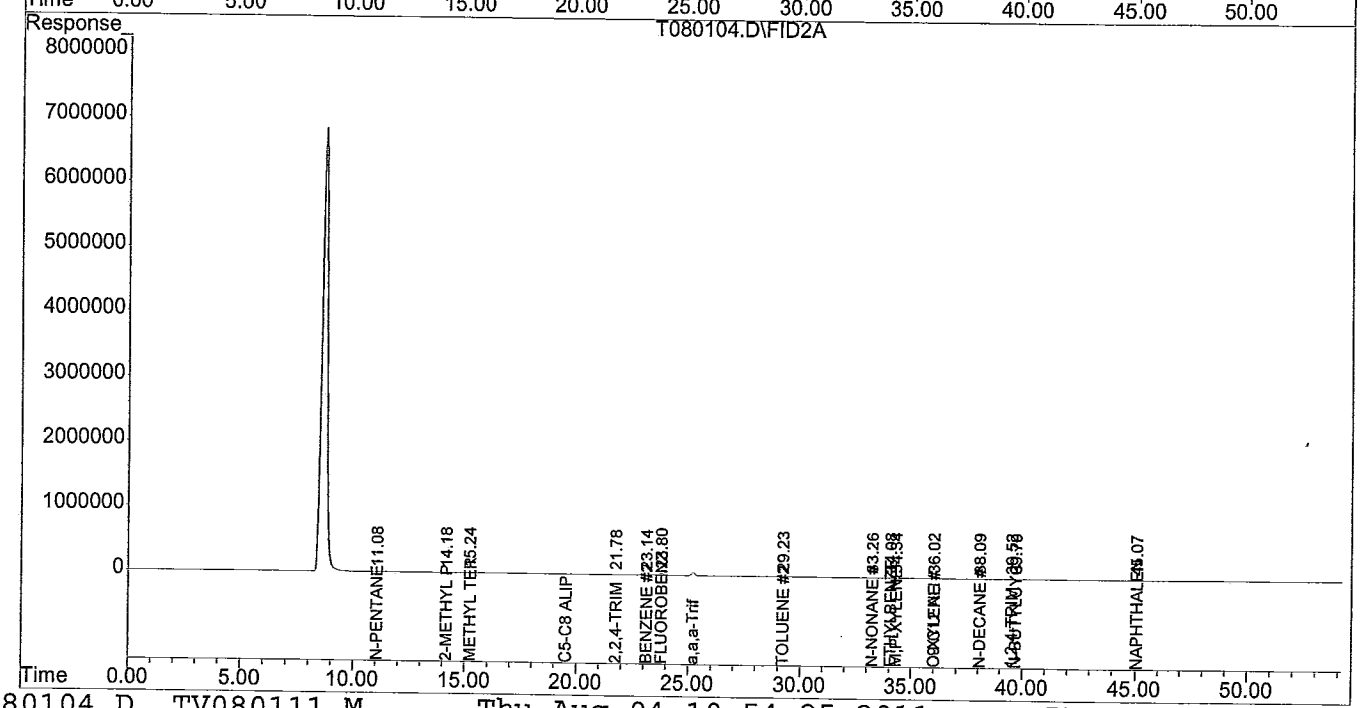
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50 Operator: CJL
Sample : STD001 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:19 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:06:38 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :



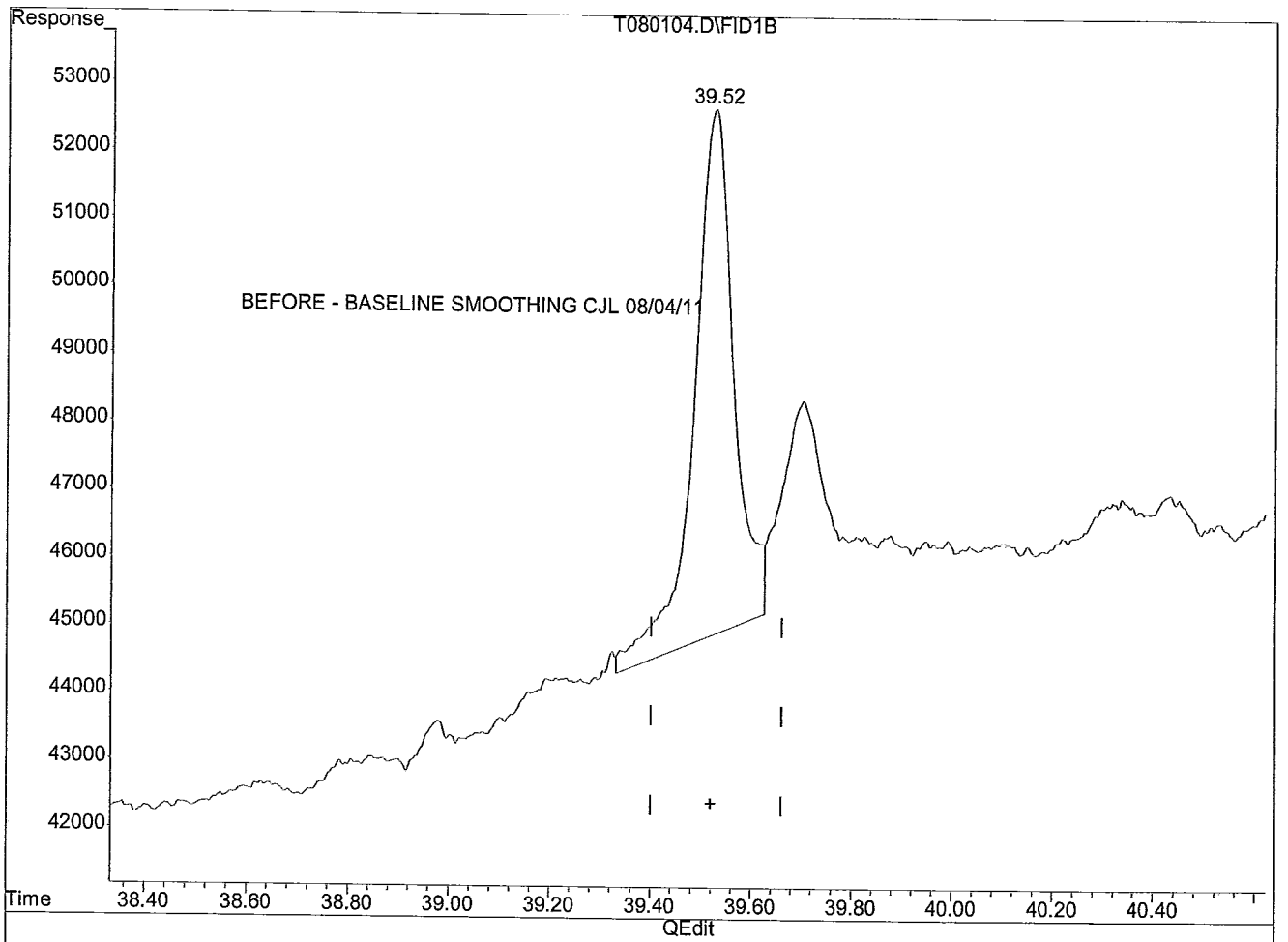


Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:08 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:10:43 2011
Response via : Multiple Level Calibration



(9) 1,2,4-TRIMETHYLBENZENE (TM)

39.52min 1.381ug/l

response 426121

(+) = Expected Retention Time

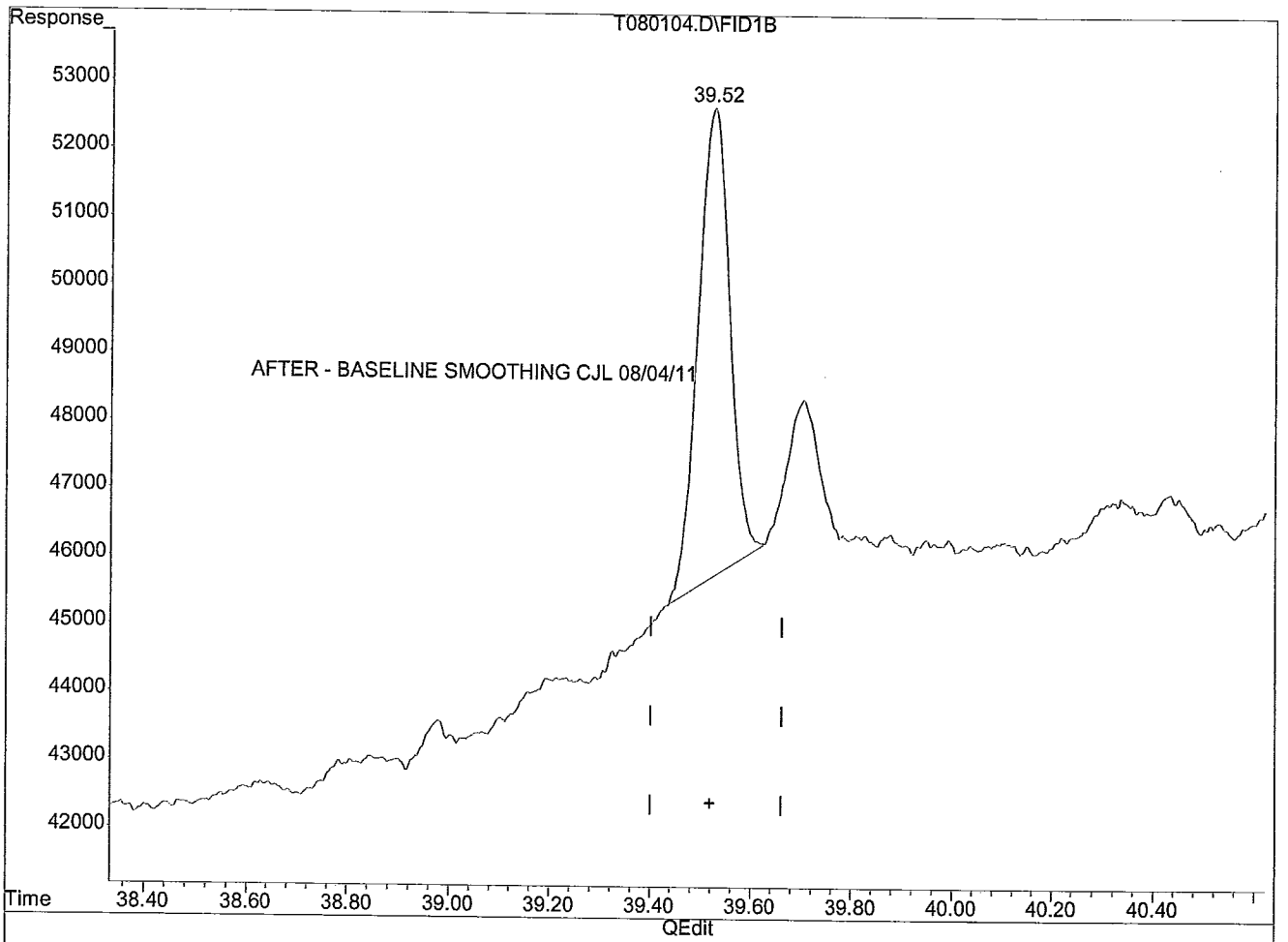
T080104.D TV080111.M Thu Aug 04 10:12:24 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:08 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:10:43 2011
Response via : Multiple Level Calibration



(9) 1,2,4-TRIMETHYLBENZENE (TM)

39.52min 0.976ug/l m

response 301185

(+) = Expected Retention Time

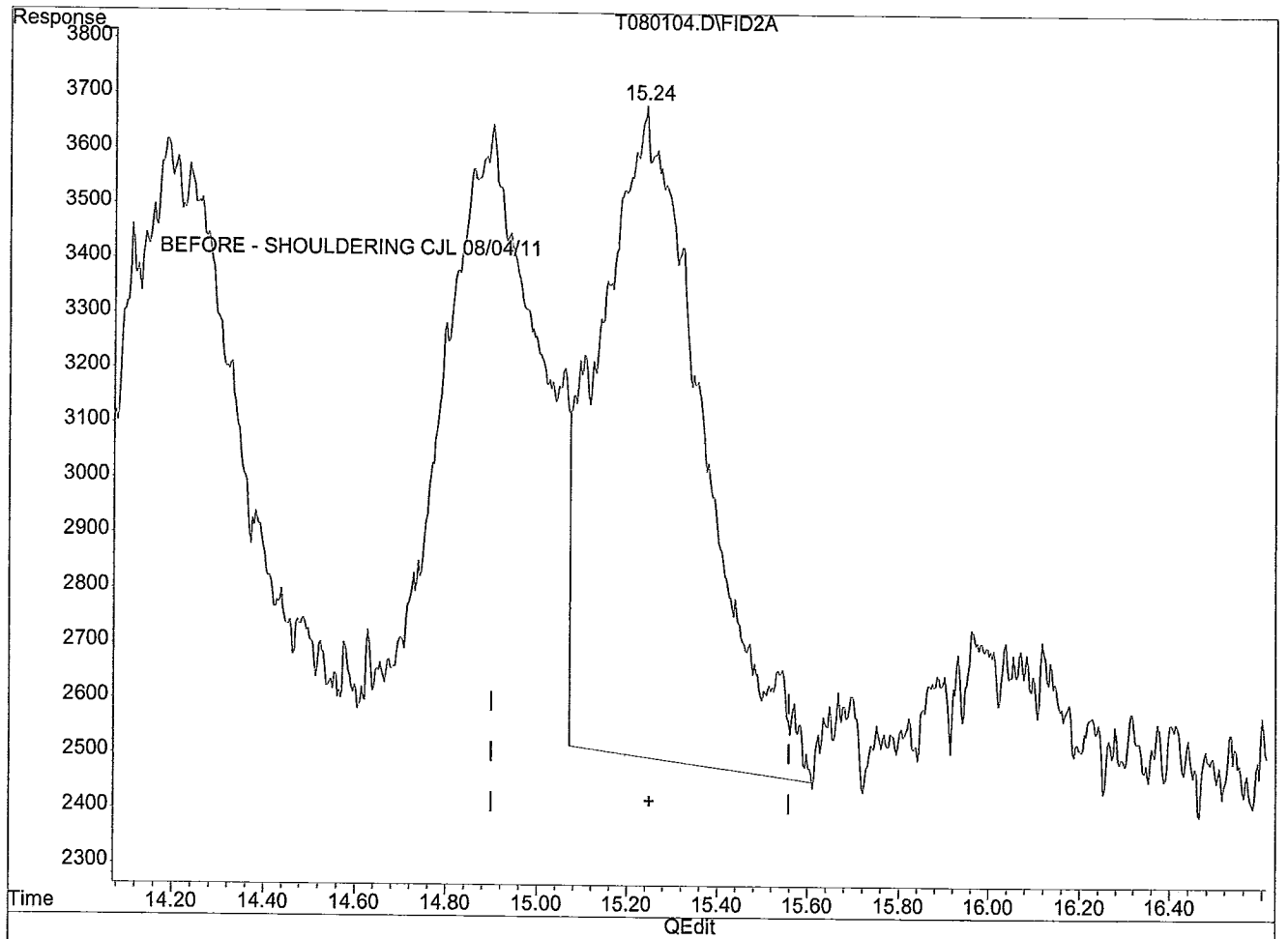
T080104.D TV080111.M Thu Aug 04 10:12:44 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:15 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:16:05 2011
Response via : Multiple Level Calibration



(19) METHYL TERT-BUTYL ETHER #2 (TM)

15.23min 1.828ug/l

response 192081

(+) = Expected Retention Time

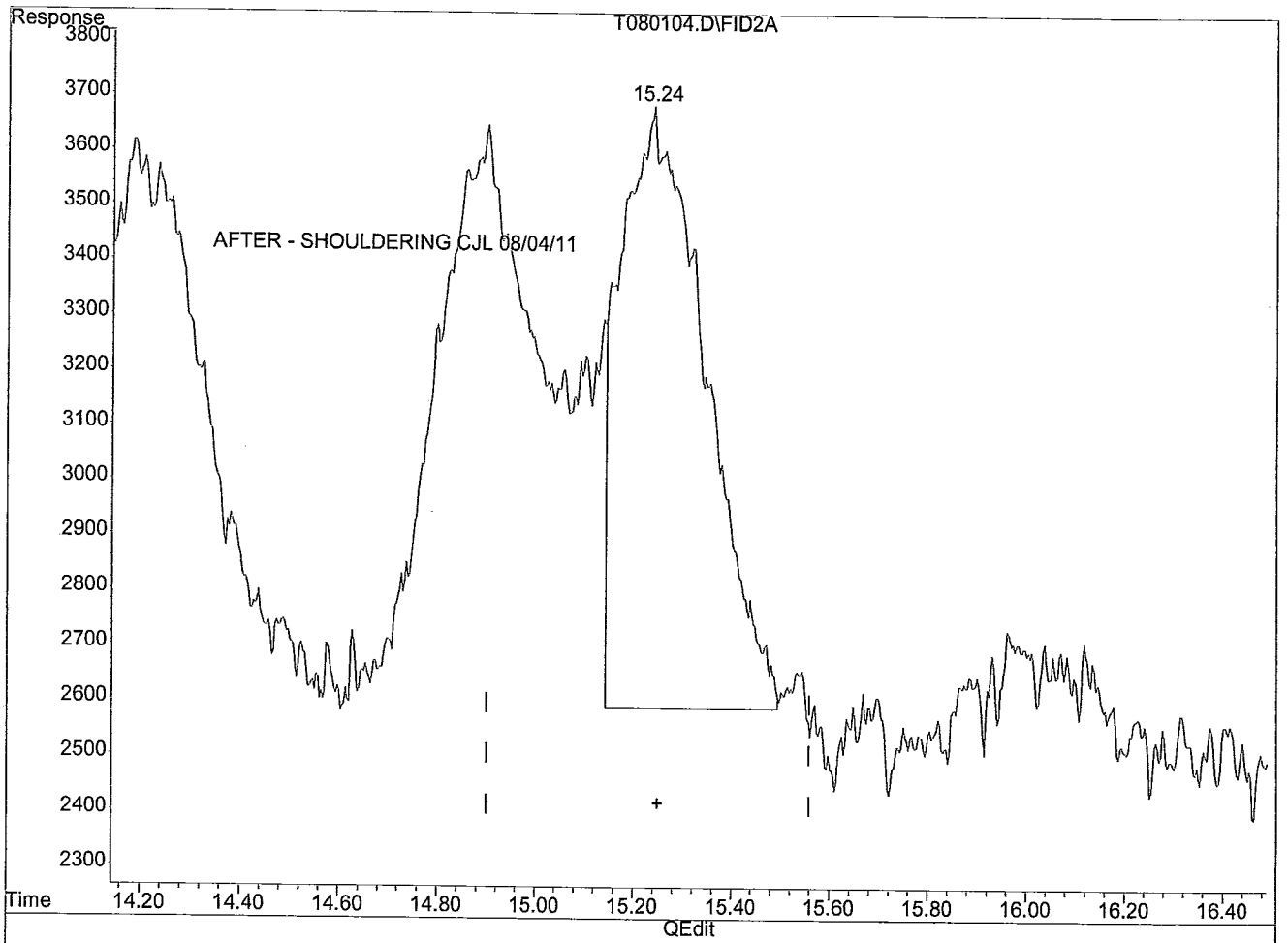
T080104.D TV080111.M Thu Aug 04 10:17:51 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E
Quant Time: Aug 4 10:15 2011

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000
IntFile Signal #2: EVENTS2.E
Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:16:05 2011
Response via : Multiple Level Calibration



(19) METHYL TERT-BUTYL ETHER #2 (TM)

15.24min 1.257ug/l m

response 132029

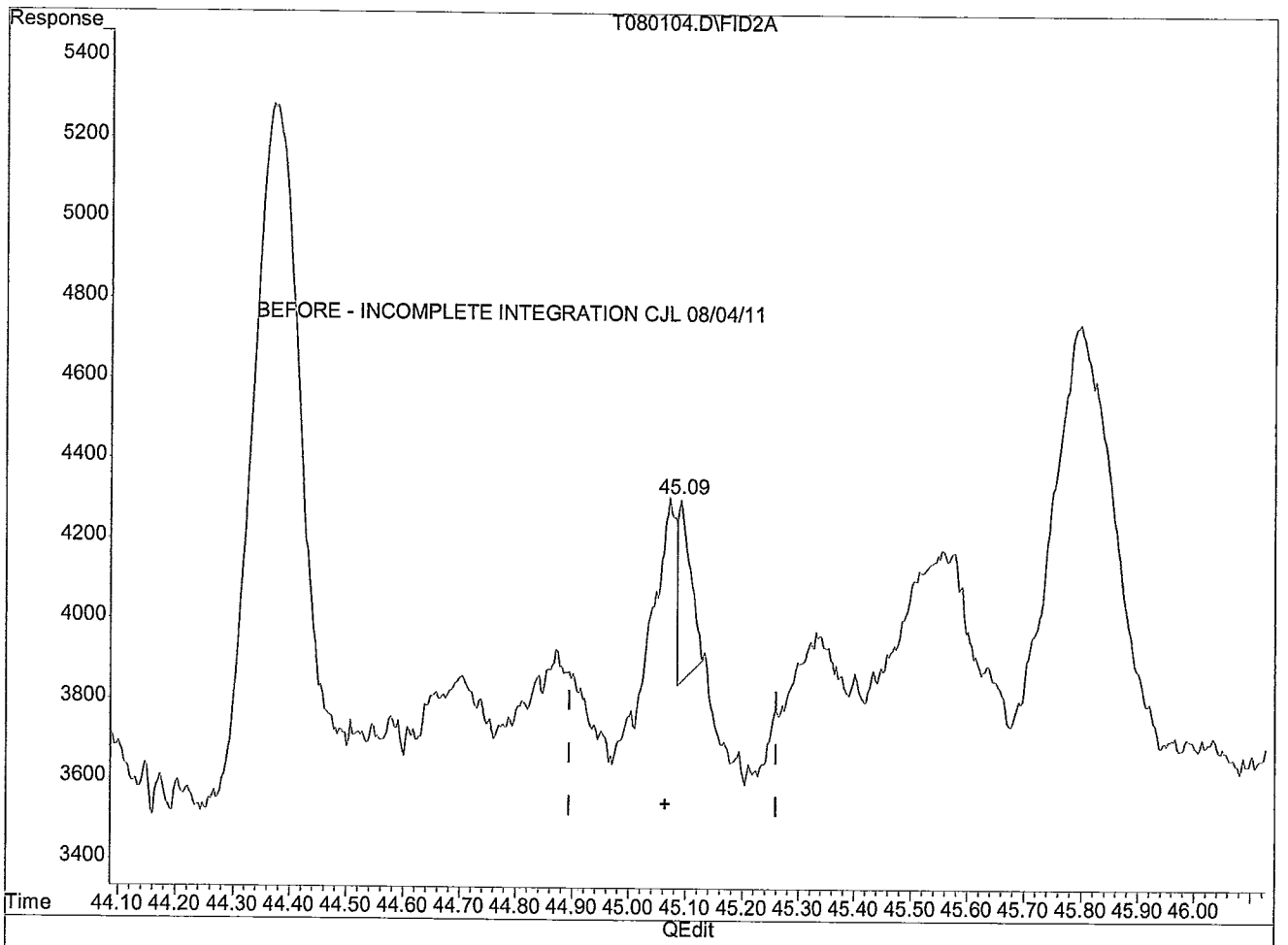
(+) = Expected Retention Time

T080104.D TV080111.M Thu Aug 04 10:18:24 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50 Operator: CJL
Sample : STD001 Inst : TRACY #1
Misc : WATER CM=VPH Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:15 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:16:05 2011
Response via : Multiple Level Calibration



(32) NAPHTHALENE #2 (TM)

45.09min 0.166ug/l

response 6959

(+) = Expected Retention Time

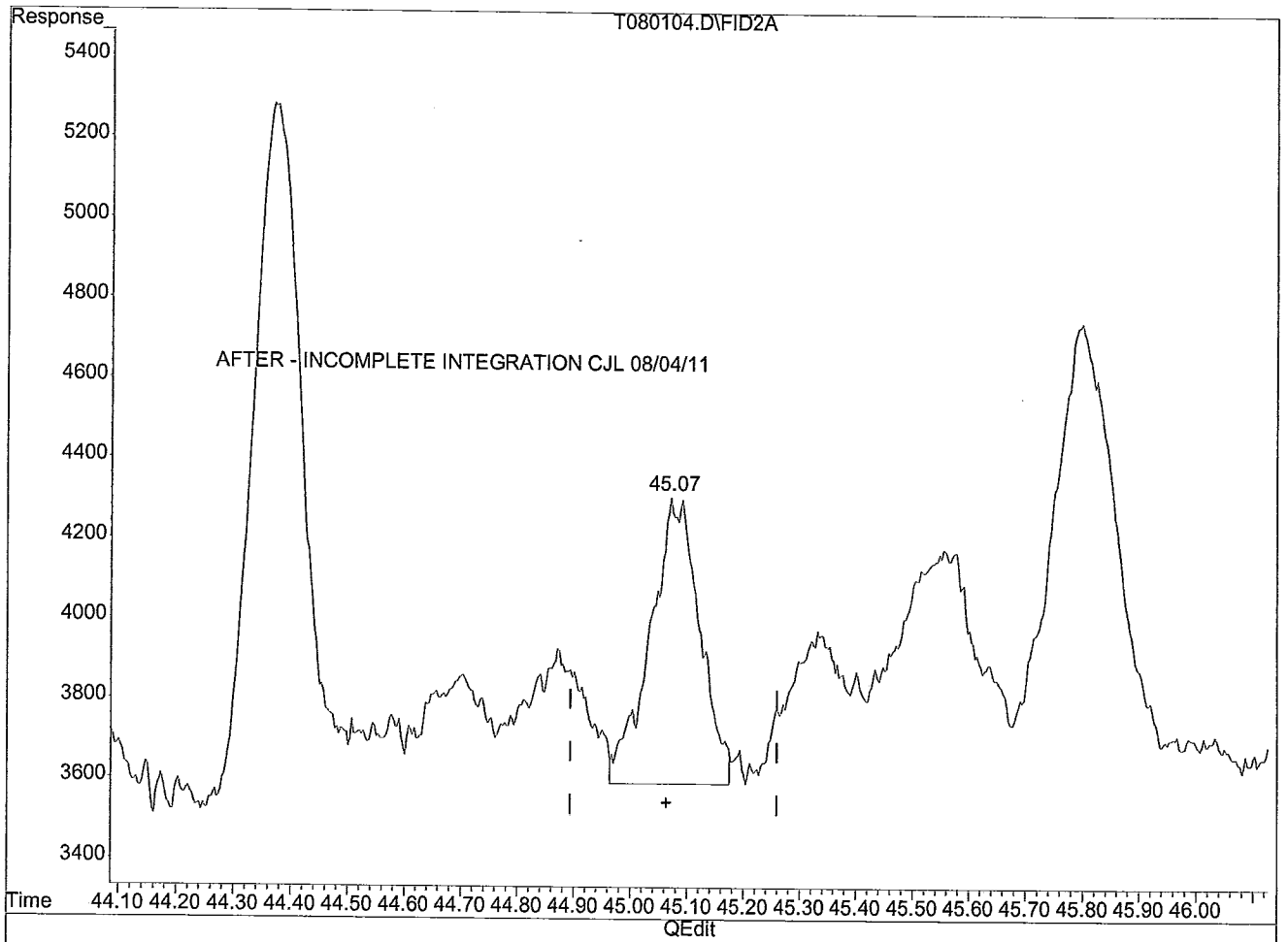
T080104.D TV080111.M Thu Aug 04 10:19:03 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:15 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:16:05 2011
Response via : Multiple Level Calibration



(32) NAPHTHALENE #2 (TM)

45.07min 1.035ug/l m

response 43336

(+) = Expected Retention Time

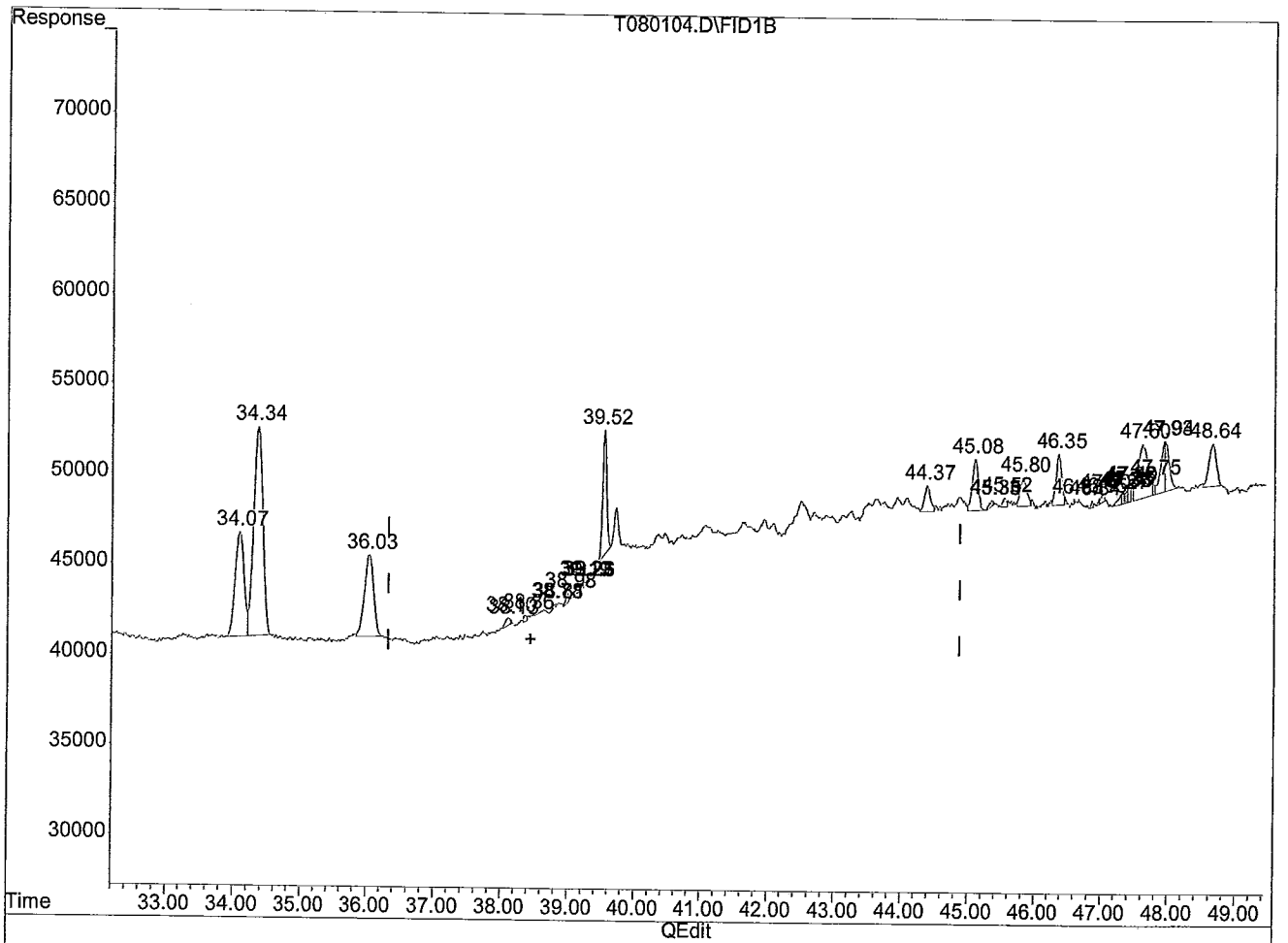
T080104.D TV080111.M Thu Aug 04 10:19:31 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:19 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:19:43 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 1.140ug/l m

response 464517

(+) = Expected Retention Time

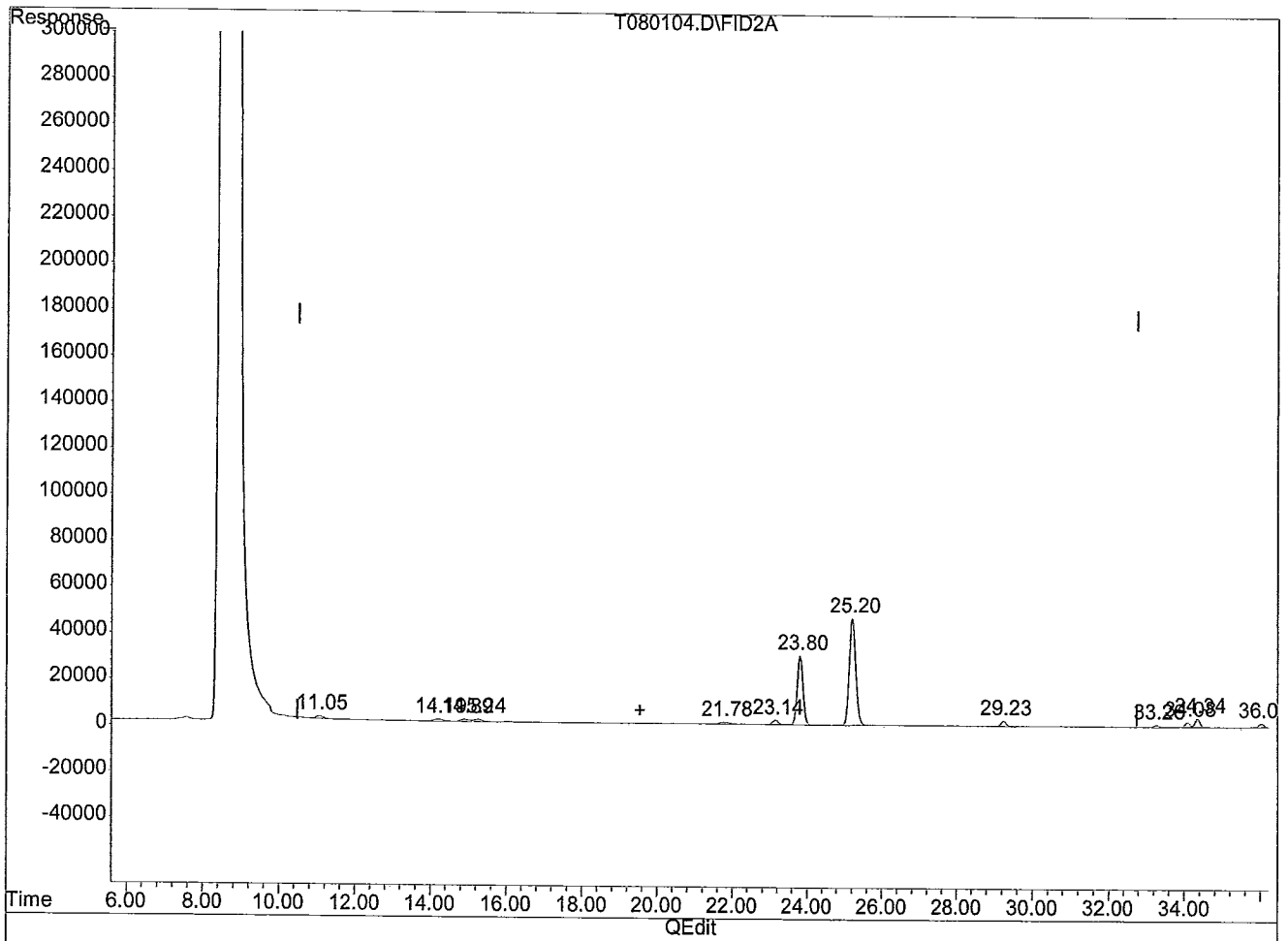
T080104.D TV080111.M Thu Aug 04 10:53:45 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:19 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:19:43 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.54min 7.925ug/l m

response 1252689

(+) = Expected Retention Time

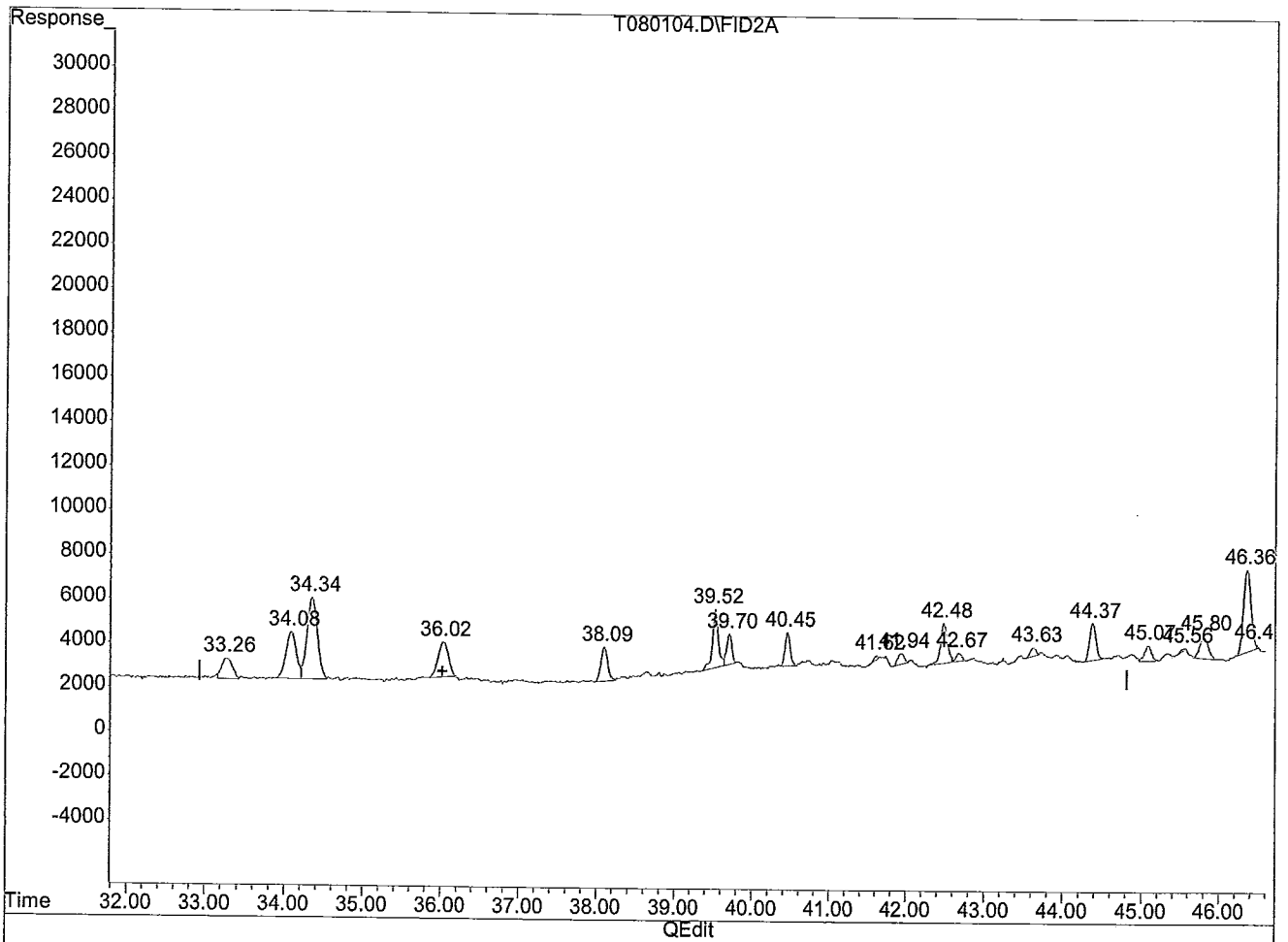
T080104.D TV080111.M Thu Aug 04 10:53:49 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080104.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080104.D\FID2A.CH
Acq On : 1 Aug 2011 16:50
Sample : STD001
Misc : WATER CM=VPH
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 10:19 2011 Quant Results File: TV080111.RES

Vial: 4
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:19:43 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.02min 10.956ug/l m

response 1401397

(+) = Expected Retention Time

T080104.D TV080111.M Thu Aug 04 10:54:01 2011 PENGCVOA10

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50 Operator: CJL
Sample : STD005 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:15 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.80	8292968	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.80	3128435	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.22	10006111	49.489	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 99%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.22	5404939	49.159	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 98%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.22	938518	3.497	ug/l	0.0
3)	TM	BENZENE	23.14	3127702	5.097	ug/l	0.0
5)	TM	TOLUENE	29.25	2876121	5.031	ug/l	0.0
6)	TM	ETHYLBENZENE	34.10	2408988	5.057	ug/l	0.0
7)	TM	M,P-XYLENE	34.36	4958435	9.604	ug/l	0.0
8)	TM	O-XYLENE	36.04	2159084	5.067	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.53	1518999	4.909	ug/l	0.0
10)	TM	NAPHTHALENE	45.10	690254	4.146	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	1757886	4.787	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	4625637	29.373	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	4625637	29.373	ug/l	0.0
17)	TM	N-PENTANE #2	11.05	663366	4.969	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.18	750978	4.925	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.23	400174	3.928	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.78	801572	5.292	ug/l	0.0
21)	TM	BENZENE #2	23.14	937229	5.138	ug/l	0.0
22)	TM	TOLUENE #2	29.25	943664	5.070	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	4737737	37.180	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	4737737	37.180	ug/l	0.0
25)	TM	N-NONANE #2	33.29	421756	4.696	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.09	856236	5.019	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.36	1511989	9.830	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50 Operator: CJL
Sample : STD005 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:15 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.04	782116	5.145	ug/l	0.0
29) TM	N-DECANE #2	38.10f	270105	4.522	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.53f	501661	4.632	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.71f	378475	4.948	ug/l	0.0
32) TM	NAPHTHALENE #2	45.10	172087	4.123	ug/l	0.0

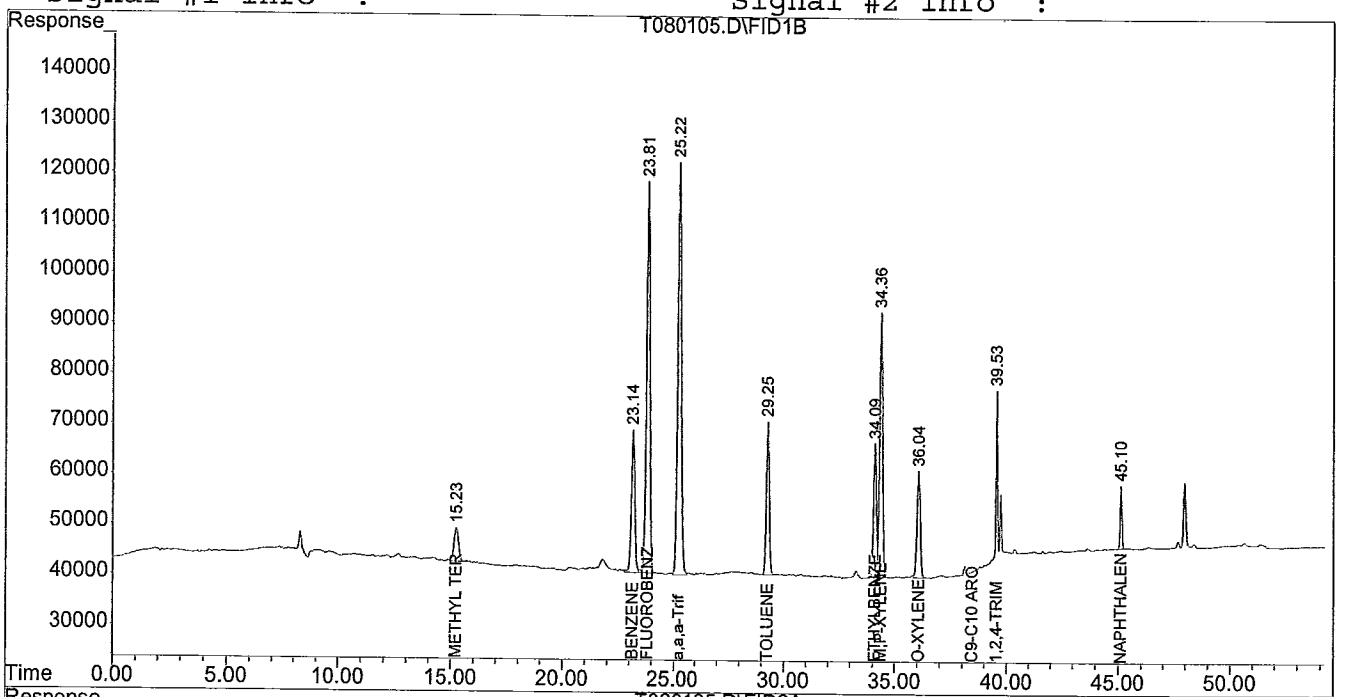
(f)=RT Delta > 1/2 Window (m)=manual int.

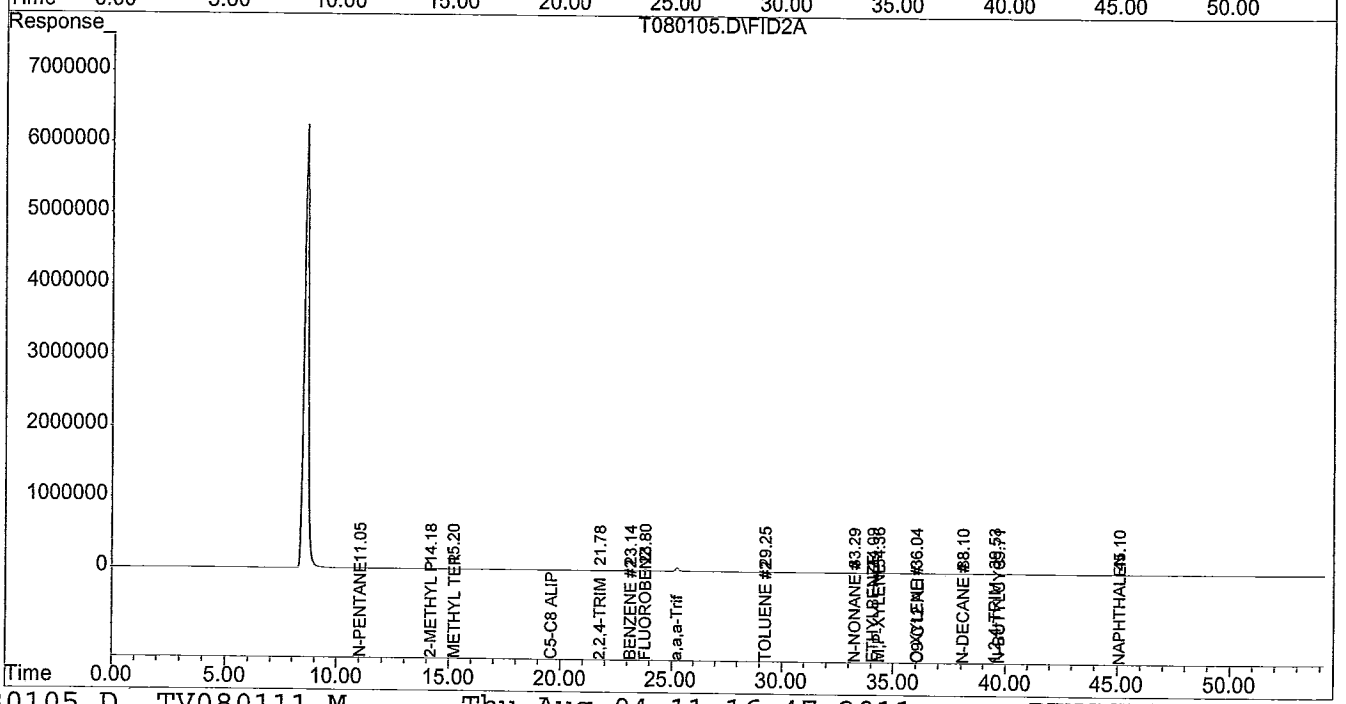
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50 Operator: CJL
Sample : STD005 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:15 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

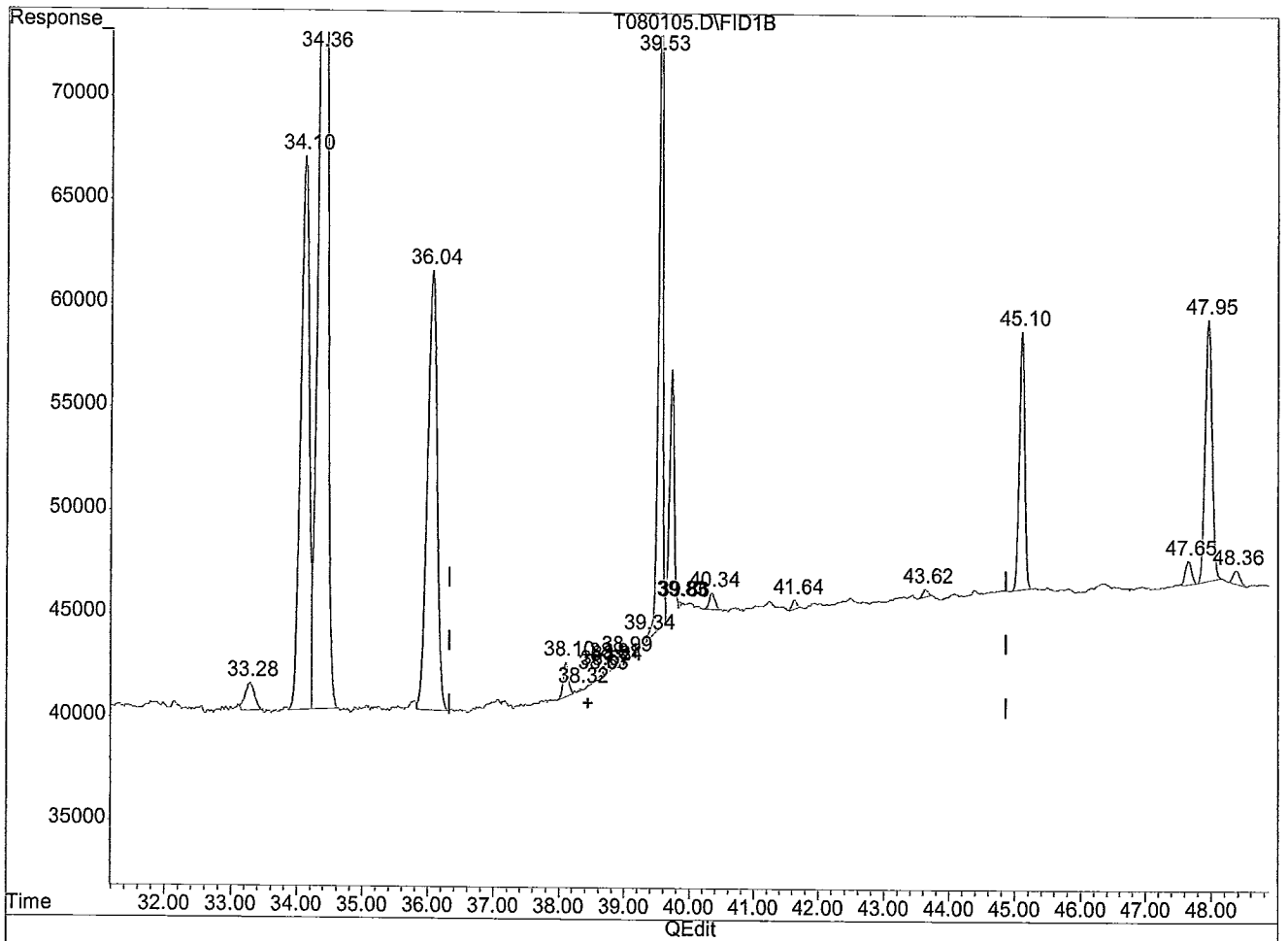




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50 Operator: CJL
Sample : STD005 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 4.787ug/l m

response 1757886

(+) = Expected Retention Time

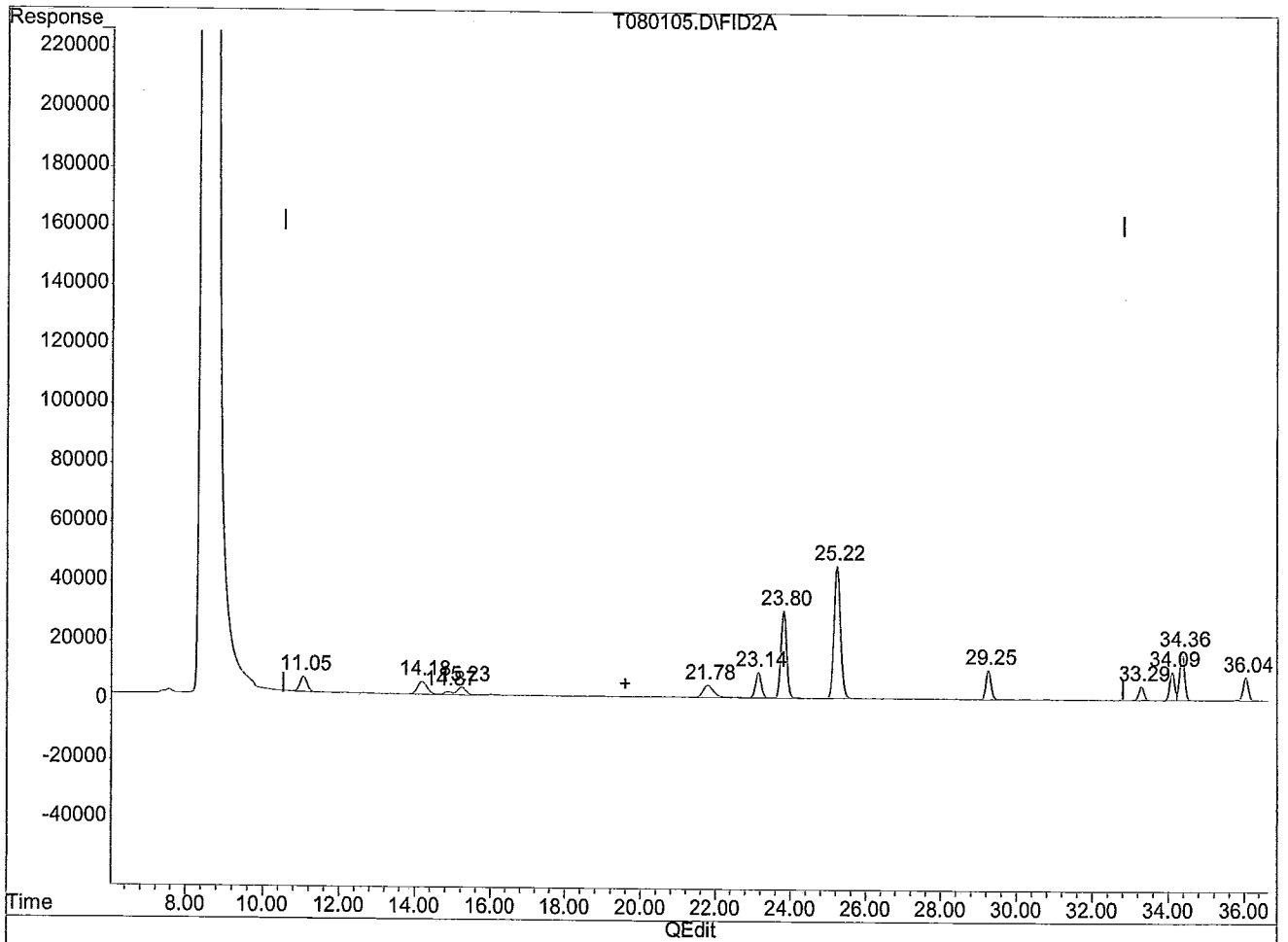
T080105.D TV080111.M Thu Aug 04 11:16:05 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50
Sample : STD005
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 5
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 29.373ug/l m

response 4625637

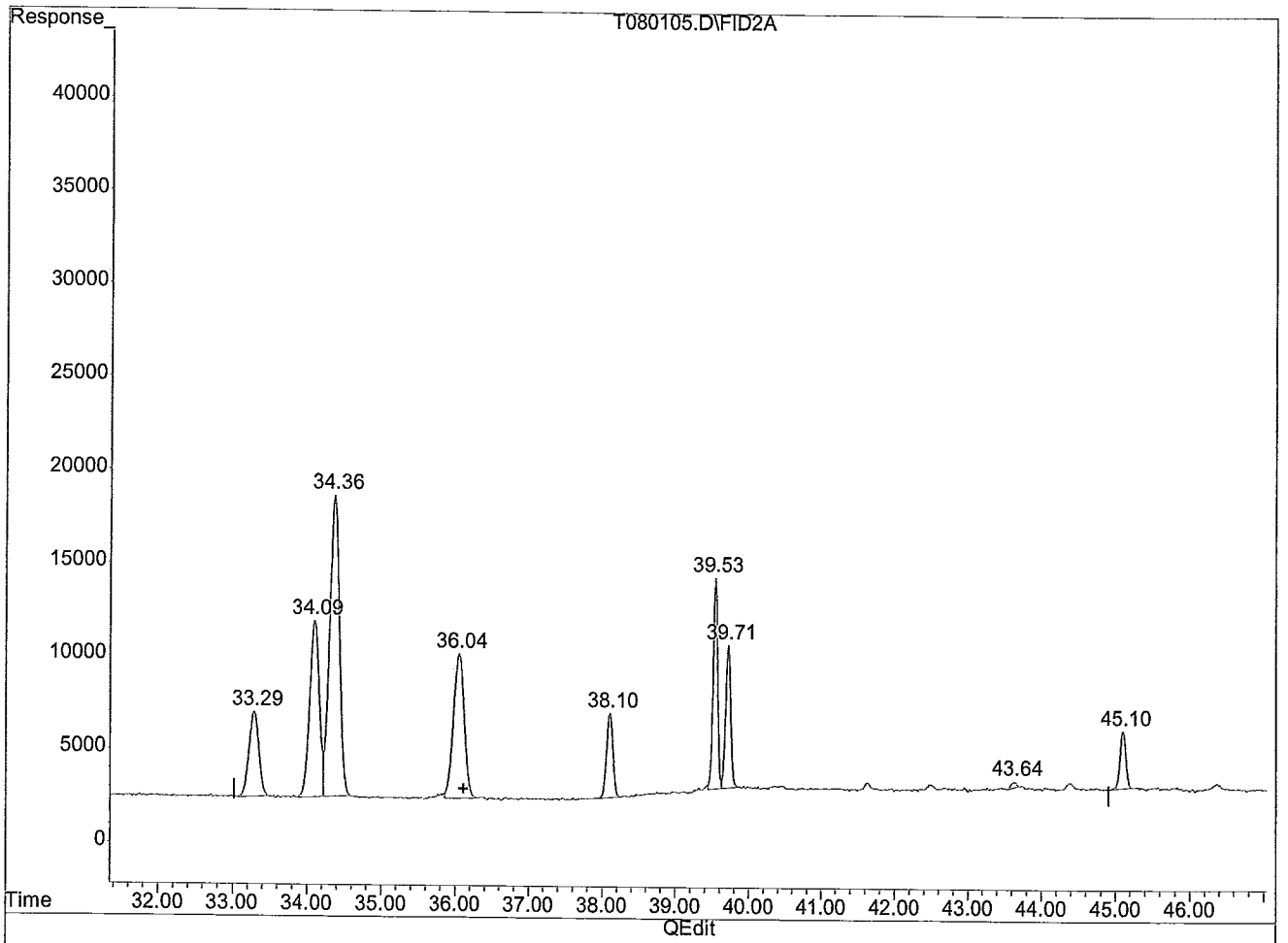
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080105.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080105.D\FID2A.CH
Acq On : 1 Aug 2011 17:50
Sample : STD005
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 5
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 37.180ug/l m

response 4737737

(+) = Expected Retention Time

T080105.D TV080111.M Thu Aug 04 11:16:33 2011 PENGCVOA10

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50 Operator: CJL
Sample : STD025 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:18 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.84	8103558	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.84	3051502	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.25	9979093	50.509	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 101%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.25	5329066	49.691	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 99%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.28	7407993	28.251	ug/l	0.0
3)	TM	BENZENE	23.18	15283701	25.490	ug/l	0.0
5)	TM	TOLUENE	29.28	14635359	26.198	ug/l	0.0
6)	TM	ETHYLBENZENE	34.12	12168436	26.141	ug/l	0.0
7)	TM	M,P-XYLENE	34.38	25128320	49.807	ug/l	0.0
8)	TM	O-XYLENE	36.07	10708292	25.716	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.54	7653309	25.310	ug/l	0.0
10)	TM	NAPHTHALENE	45.10	4162007	25.584	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	8625604	24.037	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	22426292	146.001	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	22426292	146.001	ug/l	0.0
17)	TM	N-PENTANE #2	11.10	3344665	25.683	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.22	3710434	24.948	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.28	2714414	27.319	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.83	3290751	22.272	ug/l	0.0
21)	TM	BENZENE #2	23.18	4522563	25.417	ug/l	0.0
22)	TM	TOLUENE #2	29.28	4714987	25.971	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	21942061	176.533	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	21942061	176.533	ug/l	0.0
25)	TM	N-NONANE #2	33.30	1500832	17.132	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.12	4247332	25.523	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.38	7568550	50.447	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50 Operator: CJL
Sample : STD025 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:18 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.07	3824277	25.790	ug/l	0.0
29) TM	N-DECANE #2	38.11	811550	13.928	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.54f	2572617	24.354	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.72f	1310164	17.561	ug/l	0.0
32) TM	NAPHTHALENE #2	45.10	1019281	25.034	ug/l	0.0

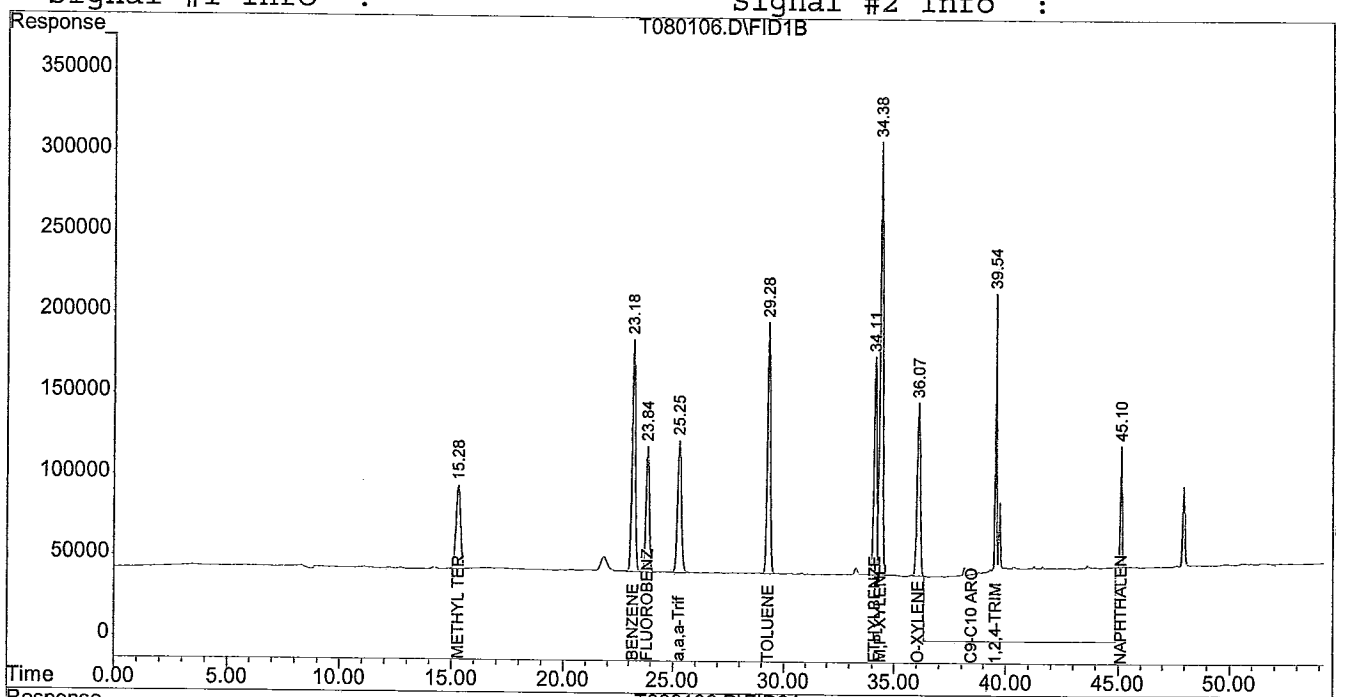
(f)=RT Delta > 1/2 Window (m)=manual int.

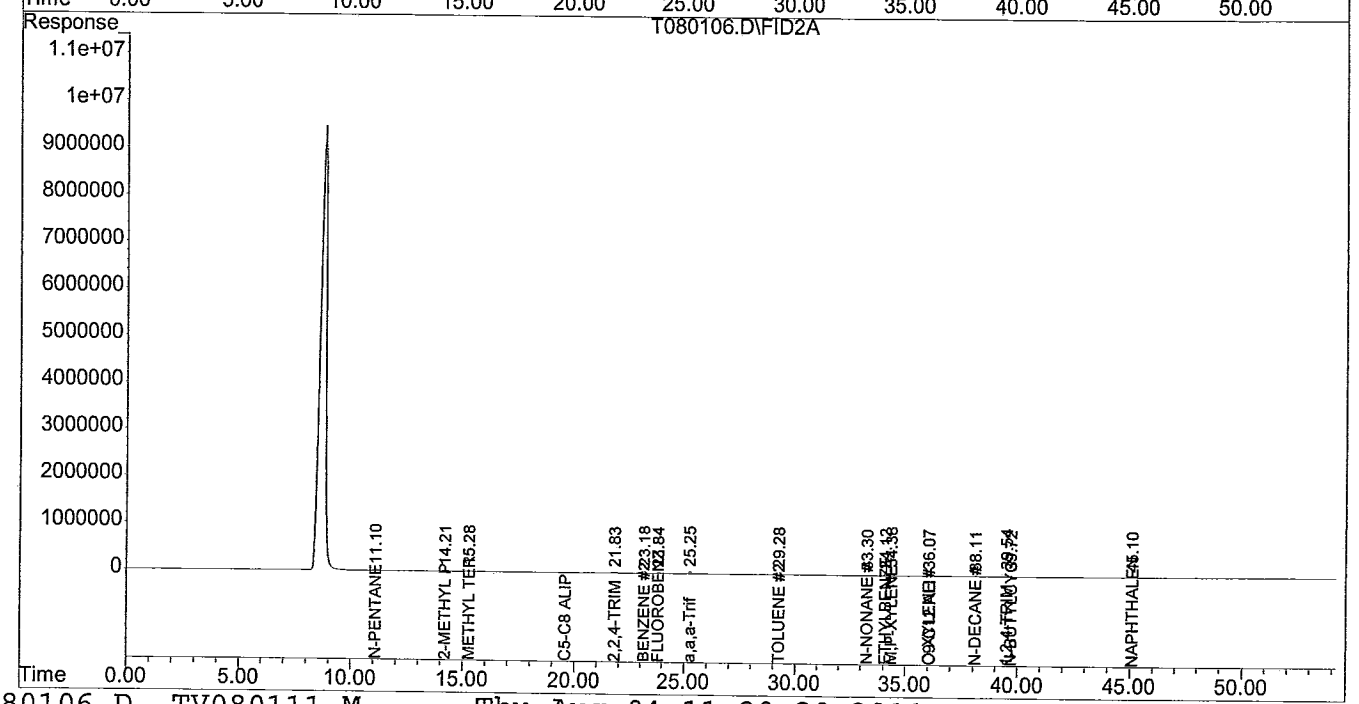
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50 Operator: CJL
Sample : STD025 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:18 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :



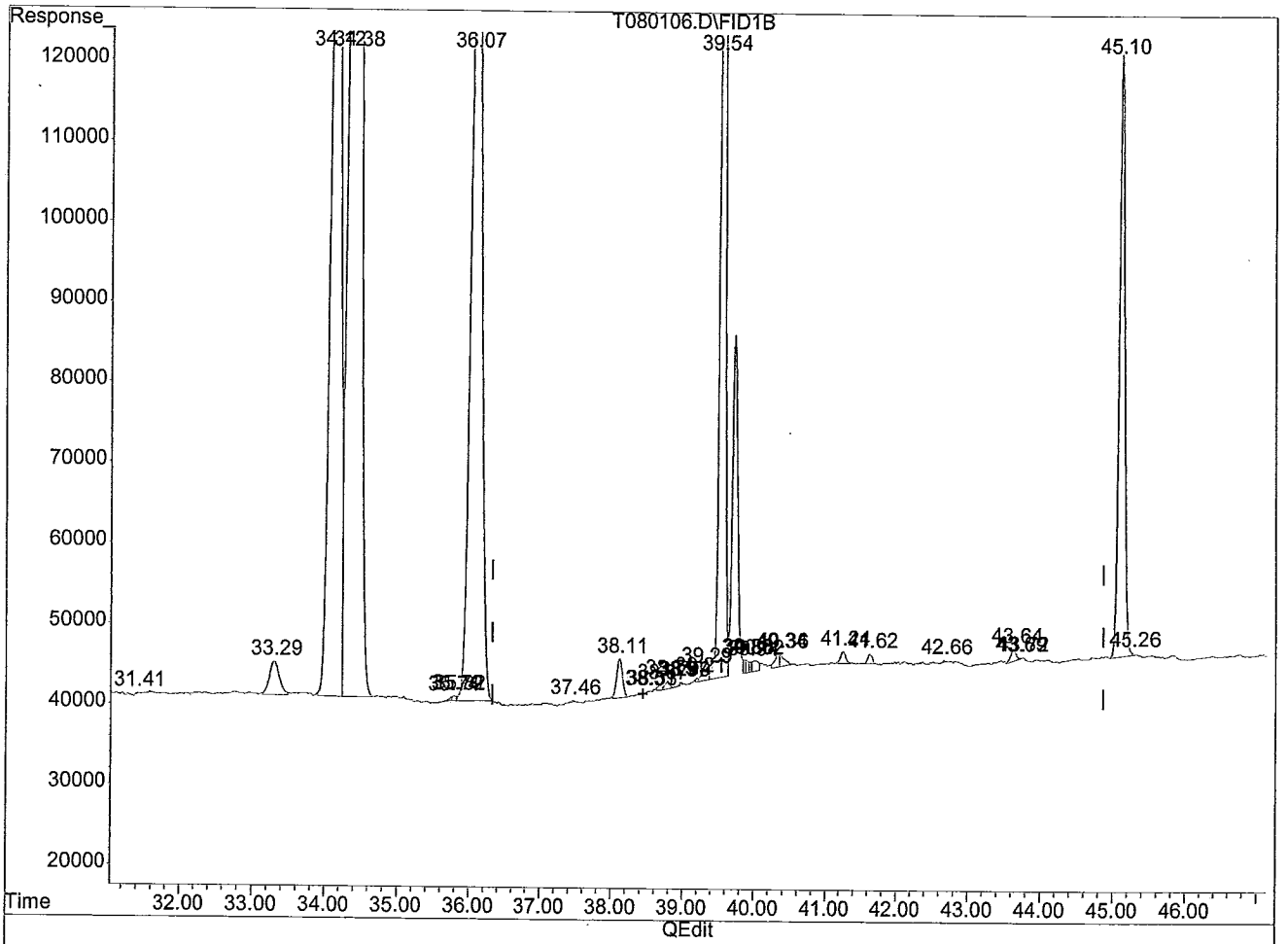


Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50
Sample : STD025
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 6
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 24.037ug/l m

response 8625604

(+) = Expected Retention Time

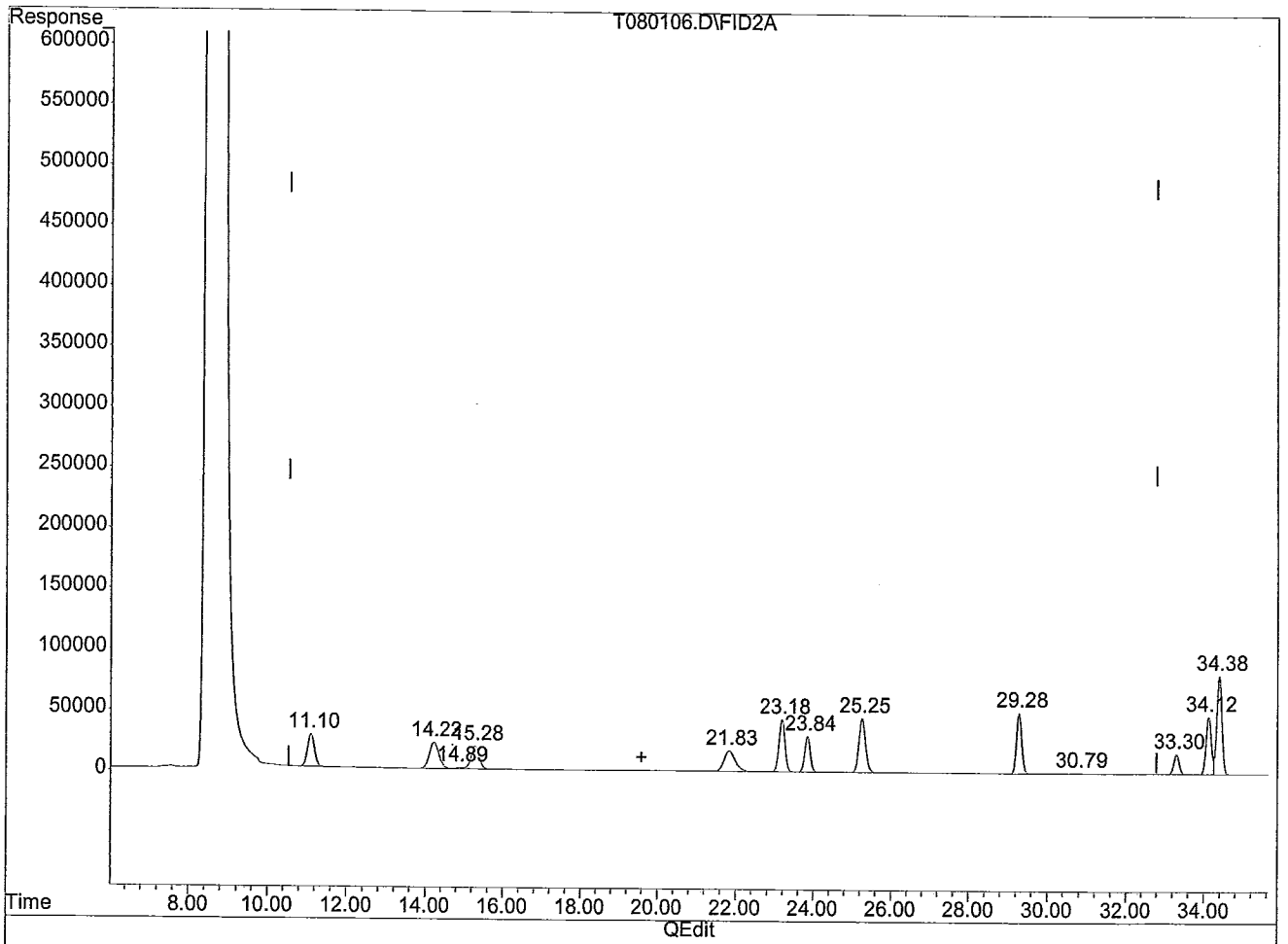
T080106.D TV080111.M Thu Aug 04 11:18:39 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50
Sample : STD025
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 6
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 146.001ug/l m

response 22426292

(+) = Expected Retention Time

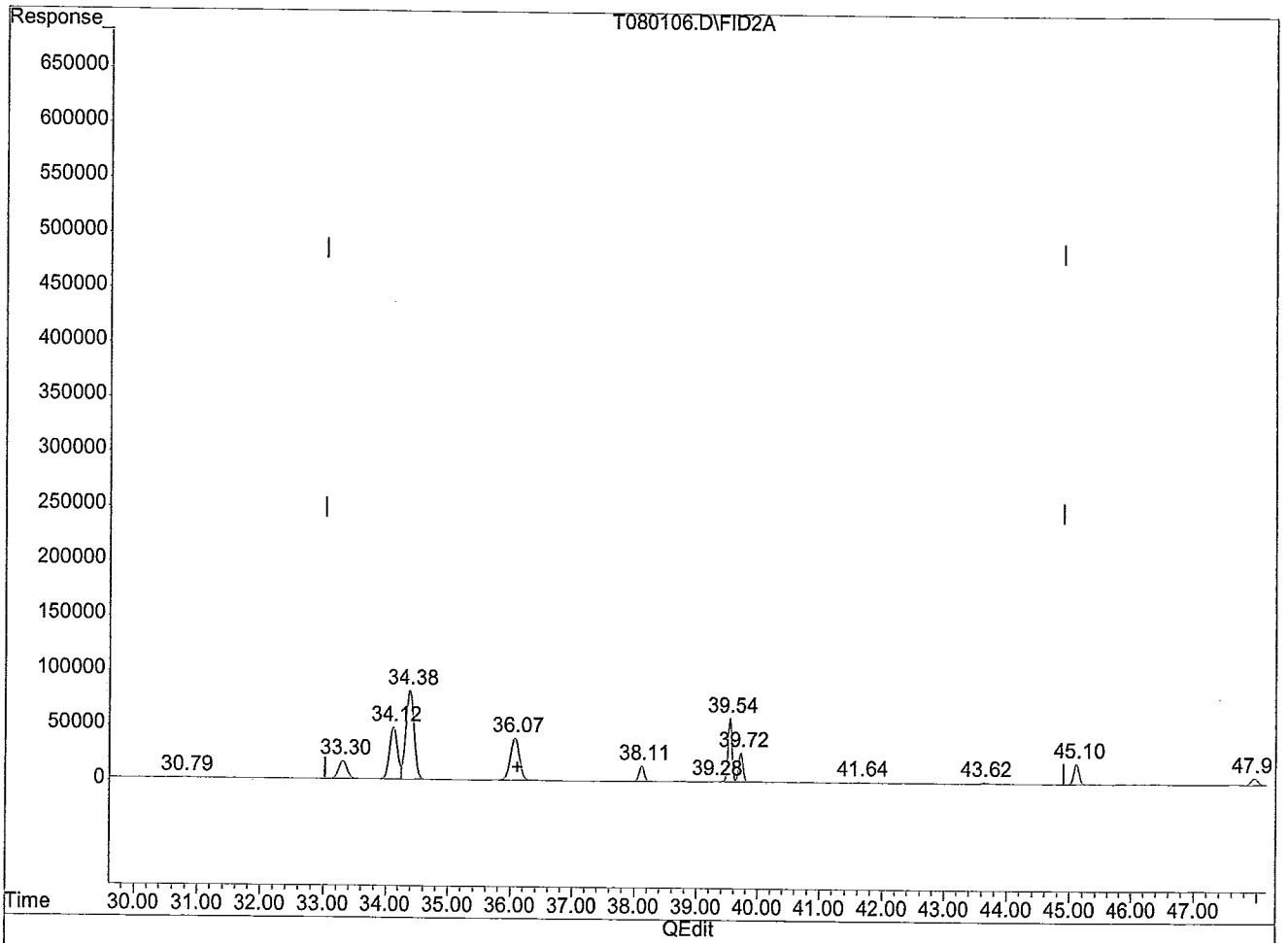
T080106.D TV080111.M Thu Aug 04 11:19:12 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080106.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080106.D\FID2A.CH
Acq On : 1 Aug 2011 18:50
Sample : STD025
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 6
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 176.533ug/l m

response 21942061

(+) = Expected Retention Time

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51 Operator: CJL
Sample : STD050 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:21 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.84	8534375	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.85	3177480	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.26	10480018	50.367	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 }			Recovery = 101%		
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.26	5618119	50.309	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 }			Recovery = 101%		
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.30	14350481	51.964	ug/l	0.0
3)	TM	BENZENE	23.19	31042066	49.158	ug/l	0.0
5)	TM	TOLUENE	29.28	29560420	50.243	ug/l	0.0
6)	TM	ETHYLBENZENE	34.13	24497276	49.969	ug/l	0.0
7)	TM	M,P-XYLENE	34.39	50546570	95.132	ug/l	0.0
8)	TM	O-XYLENE	36.07	21808548	49.729	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.54	15436376	48.471	ug/l	0.0
10)	TM	NAPHTHALENE	45.11	8327011	48.602	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	17820563	47.154	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	47125616	294.635	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	47125616	294.635	ug/l	0.0
17)	TM	N-PENTANE #2	11.10	7046502	51.964	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.22	8004772	51.689	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.29	5258187	50.822	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.84	8208668	53.354	ug/l	0.0
21)	TM	BENZENE #2	23.19	9087283	49.047	ug/l	0.0
22)	TM	TOLUENE #2	29.28	9371706	49.575	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	48301216	373.195	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	48301216	373.195	ug/l	0.0
25)	TM	N-NONANE #2	33.31	4932091	54.069	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.13	8484131	48.961	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.39	15178558	97.160	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51 Operator: CJL
Sample : STD050 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:21 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.07	7659982	49.609	ug/l	0.0
29)	TM	N-DECANE #2	38.12	2772133	45.690	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.54f	5125007	46.593	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.72f	4024775	51.808	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.11	2036514	48.035	ug/l	0.0

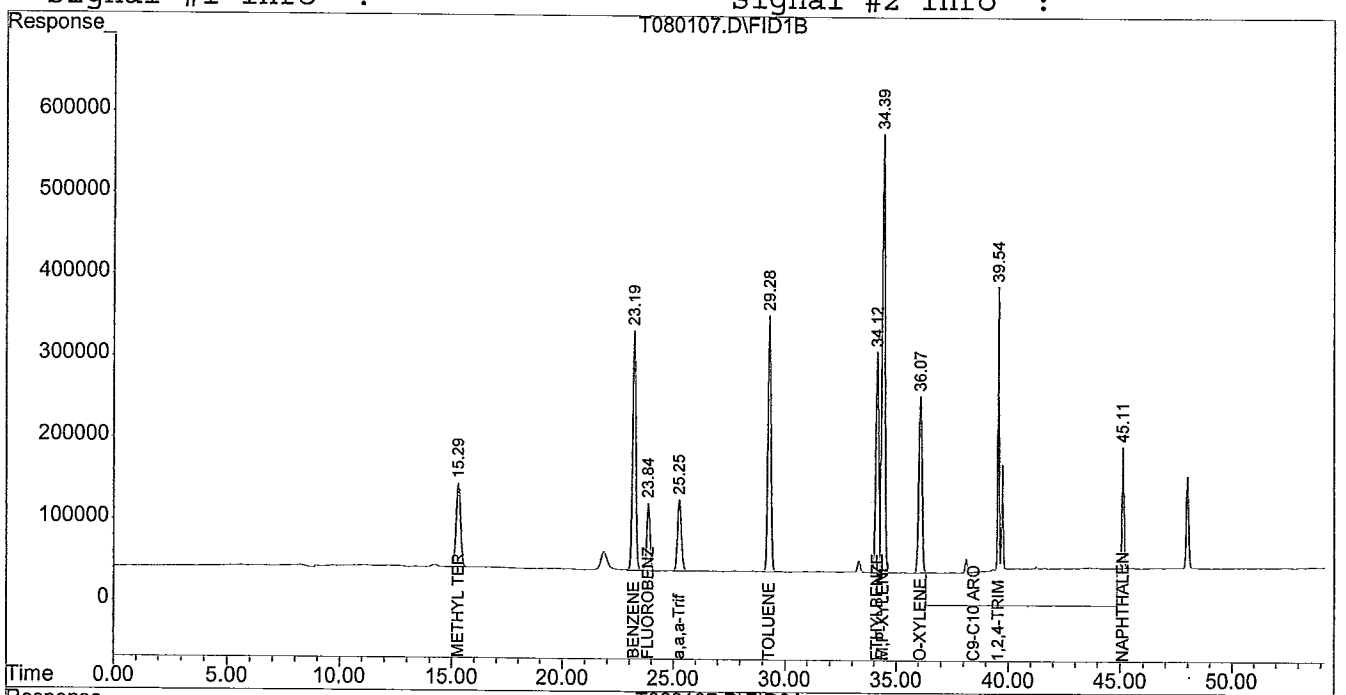
(f)=RT Delta > 1/2 Window (m)=manual int.

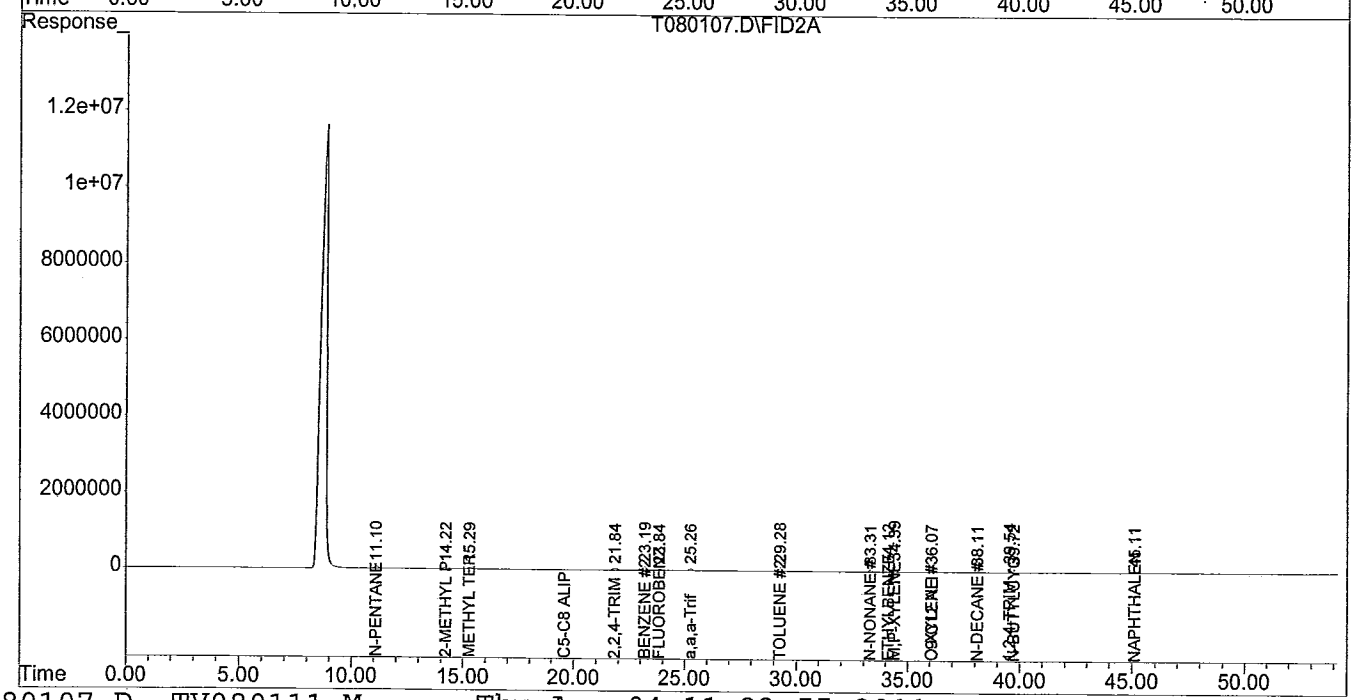
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51 Operator: CJL
Sample : STD050 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:21 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

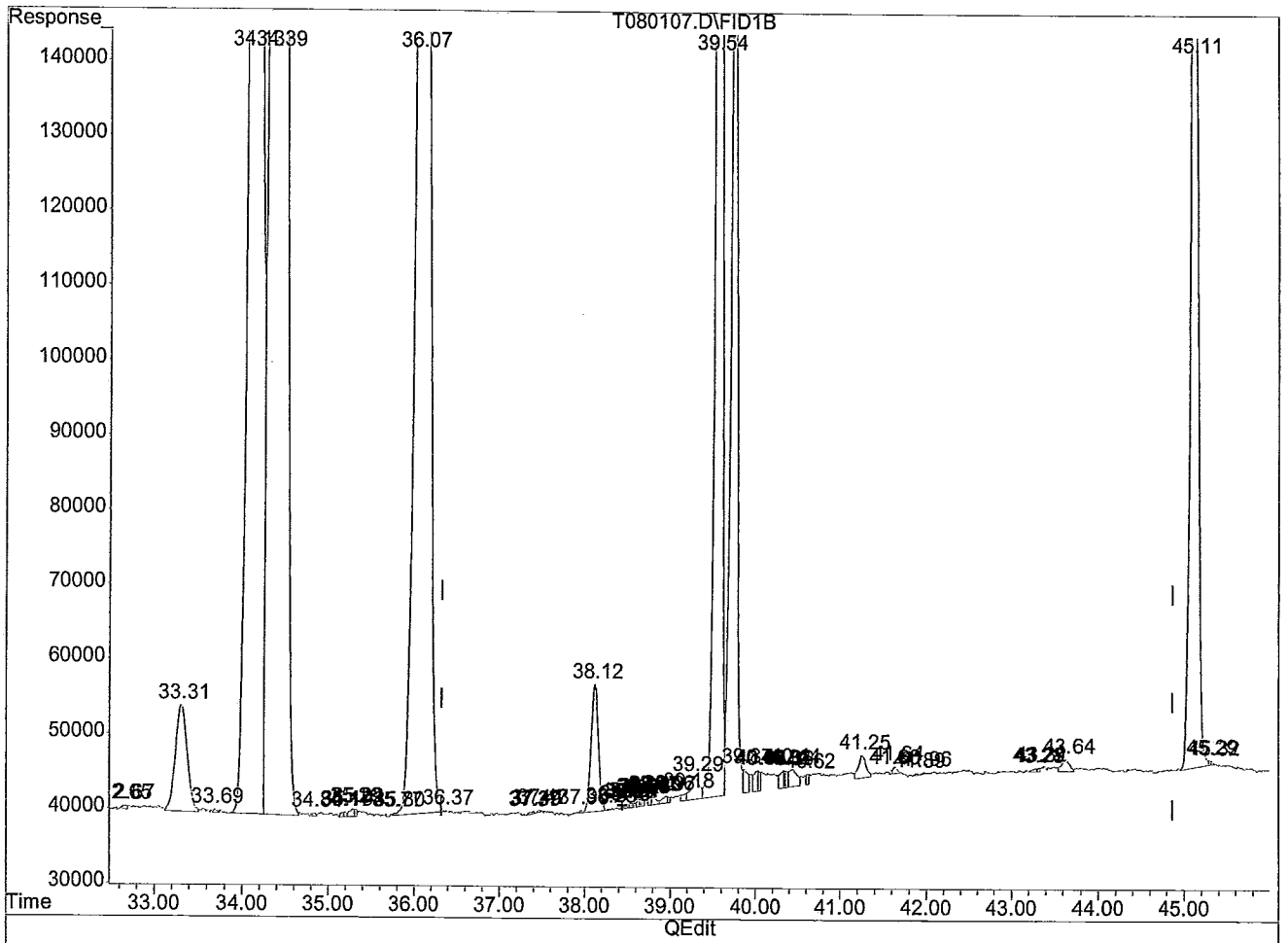




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51 Operator: CJL
Sample : STD050 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 47.154ug/l m

response 17820563

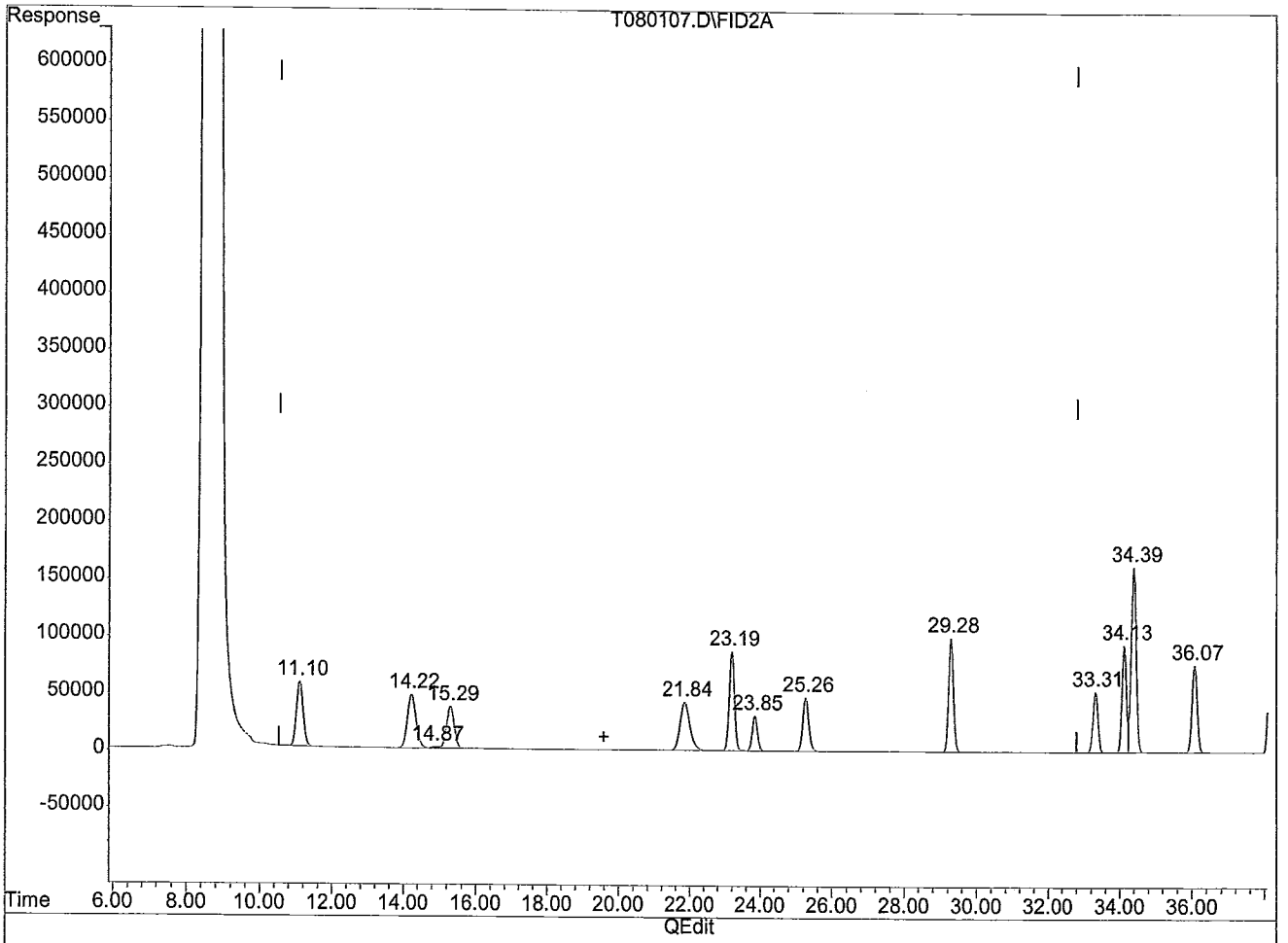
(+) = Expected Retention Time

T080107.D TV080111.M Thu Aug 04 11:22:29 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51 Operator: CJL
Sample : STD050 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 294.635ug/l m

response 47125616

(+) = Expected Retention Time

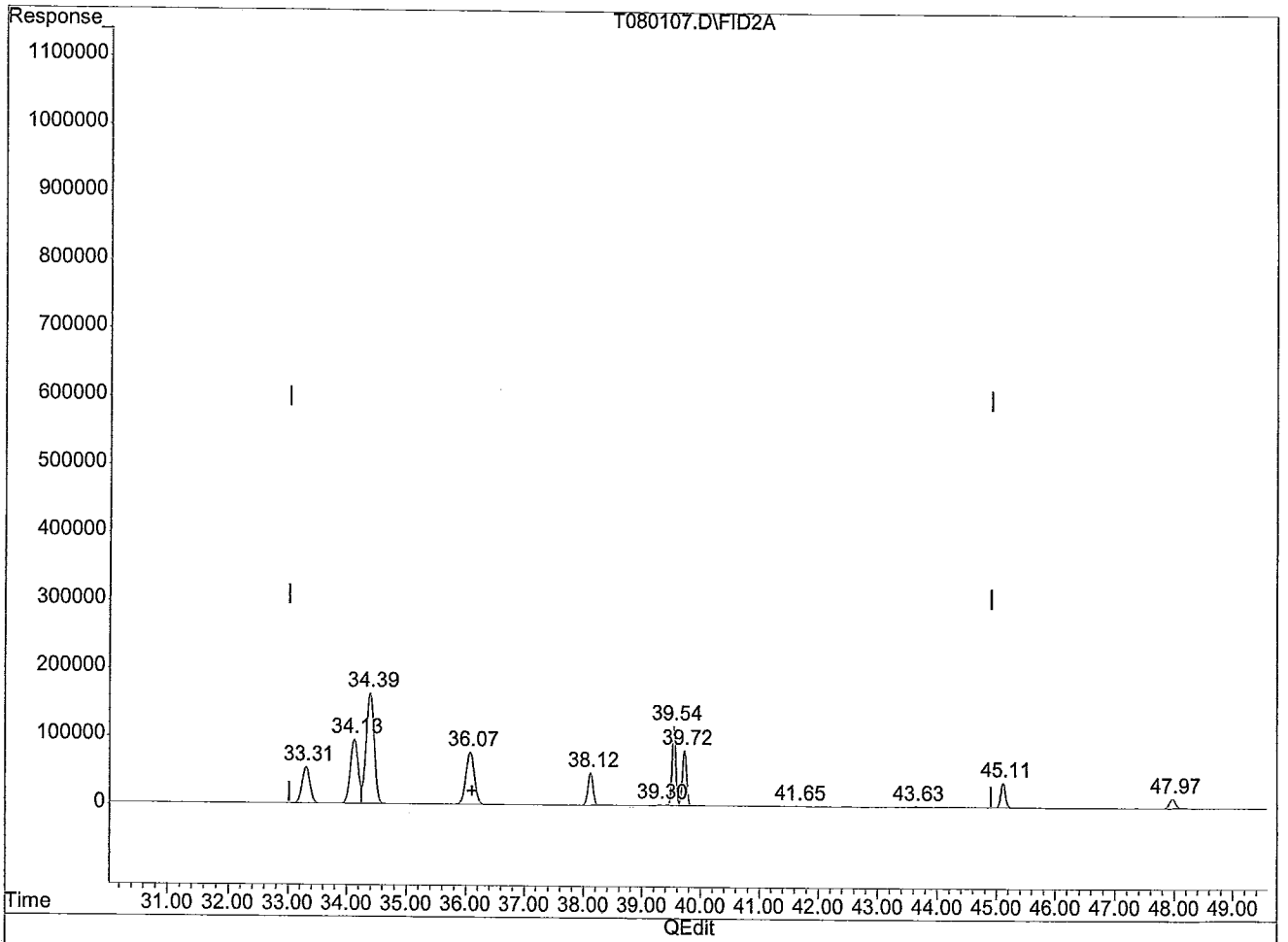
T080107.D TV080111.M Thu Aug 04 11:22:43 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080107.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080107.D\FID2A.CH
Acq On : 1 Aug 2011 19:51
Sample : STD050
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 7
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 373.195ug/l m

response 48301216

(+) = Expected Retention Time

T080107.D TV080111.M Thu Aug 04 11:23:31 2011 PENGCVOA10

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51 Operator: CJL
Sample : STD100 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:25 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.85	8604261	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.85	3149037	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.27	10471125	49.915	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.27	5596458	50.568	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 101%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.31	26973819	96.881	ug/l	0.0
3)	TM	BENZENE	23.20	57254548	89.931	ug/l	0.0
5)	TM	TOLUENE	29.29	55116780	92.920	ug/l	0.0
6)	TM	ETHYLBENZENE	34.13	46207637	93.489	ug/l	0.0
7)	TM	M,P-XYLENE	34.39	95879283	178.985	ug/l	0.0
8)	TM	O-XYLENE	36.08	41523859	93.916	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.54	30643038	95.440	ug/l	0.0
10)	TM	NAPHTHALENE	45.11	16987658	98.345	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	34071005	89.421	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	86751901	547.283	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	86751901	547.283	ug/l	0.0
17)	TM	N-PENTANE #2	11.10	13047472	97.087	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.23	14804239	96.458	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.30	9600370	93.628	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.85	14692915	96.363	ug/l	0.0
21)	TM	BENZENE #2	23.20	16951065	92.316	ug/l	0.0
22)	TM	TOLUENE #2	29.29	17528273	93.560	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	93472962	728.734	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	93472962	728.734	ug/l	0.0
25)	TM	N-NONANE #2	33.31	9278000	102.630	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.13	15999394	93.165	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.39	29099275	187.951	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51 Operator: CJL
Sample : STD100 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:25 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.08	14699831	96.062	ug/l	0.0
29)	TM	N-DECANE #2	38.12	5816870	96.738	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.54f	10343774	94.887	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.72f	7971271	103.536	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.11	4179251	99.467	ug/l	0.0

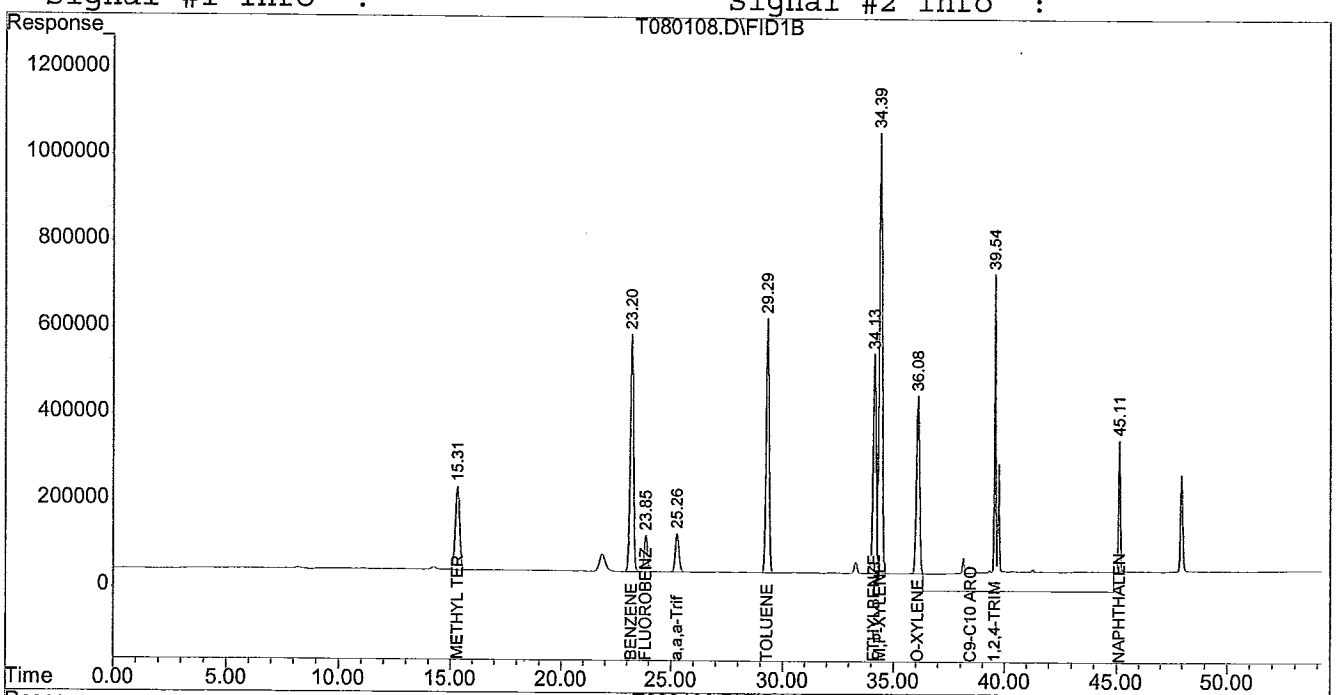
(f)=RT Delta > 1/2 Window (m)=manual int.

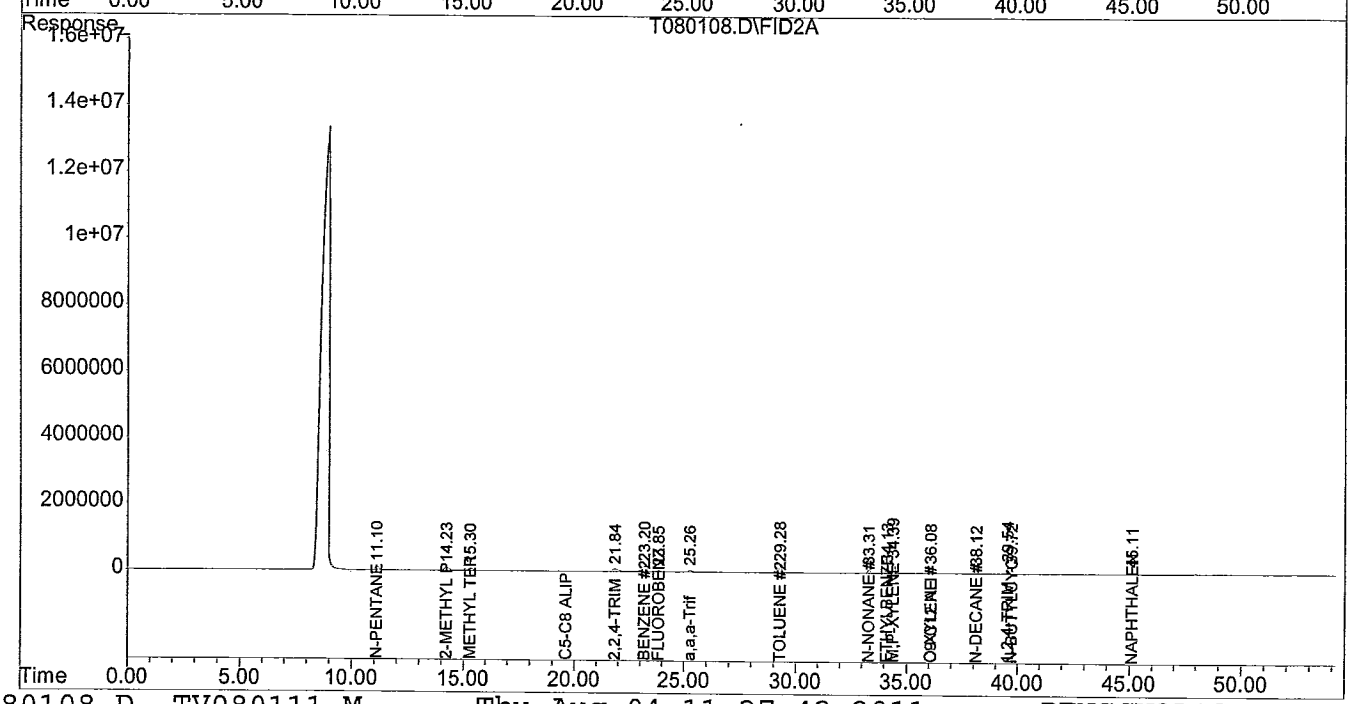
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51 Operator: CJL
Sample : STD100 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:25 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

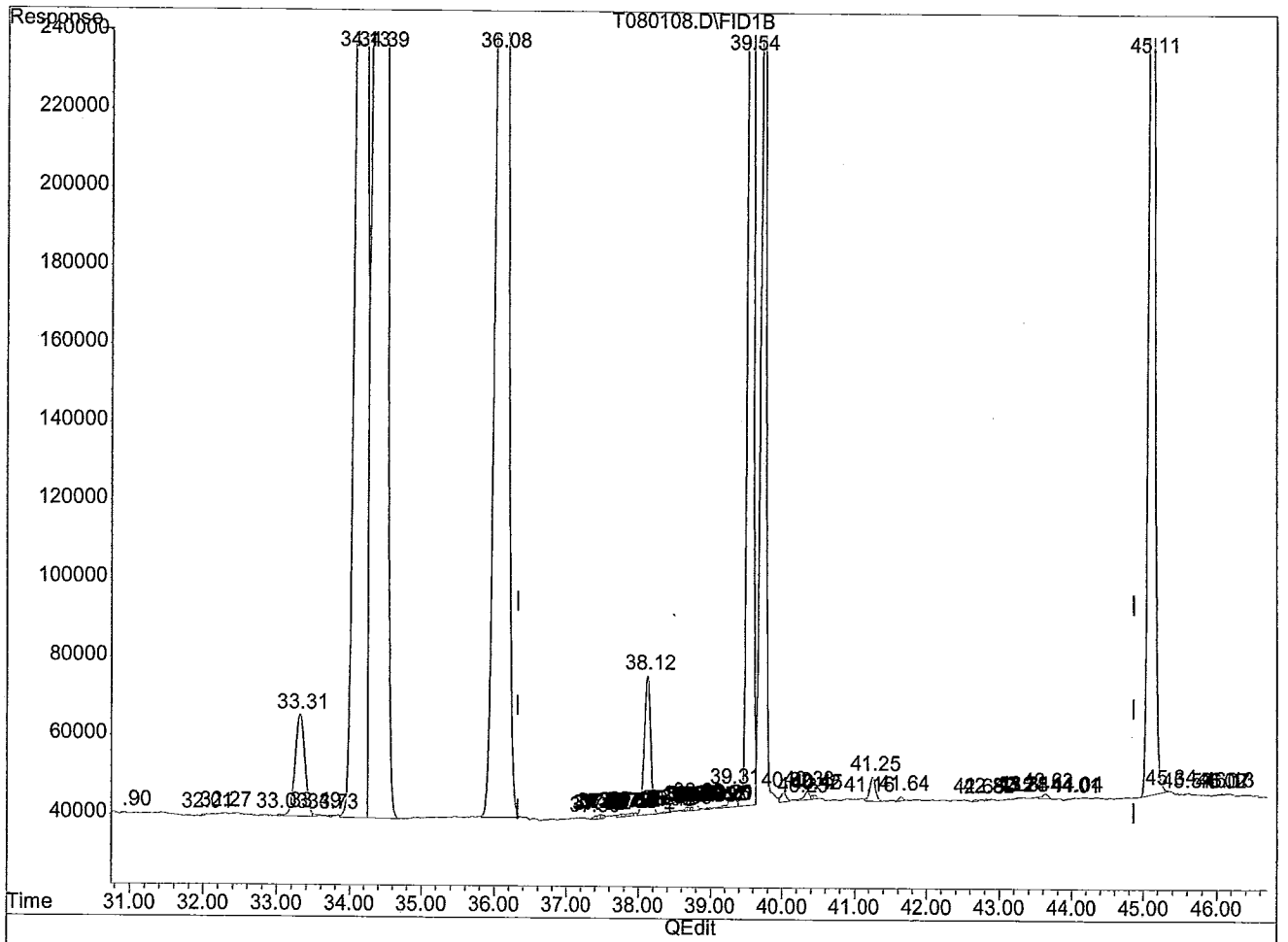




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51 Operator: CJL
Sample : STD100 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 89.421ug/l m

response 34071005

(+) = Expected Retention Time

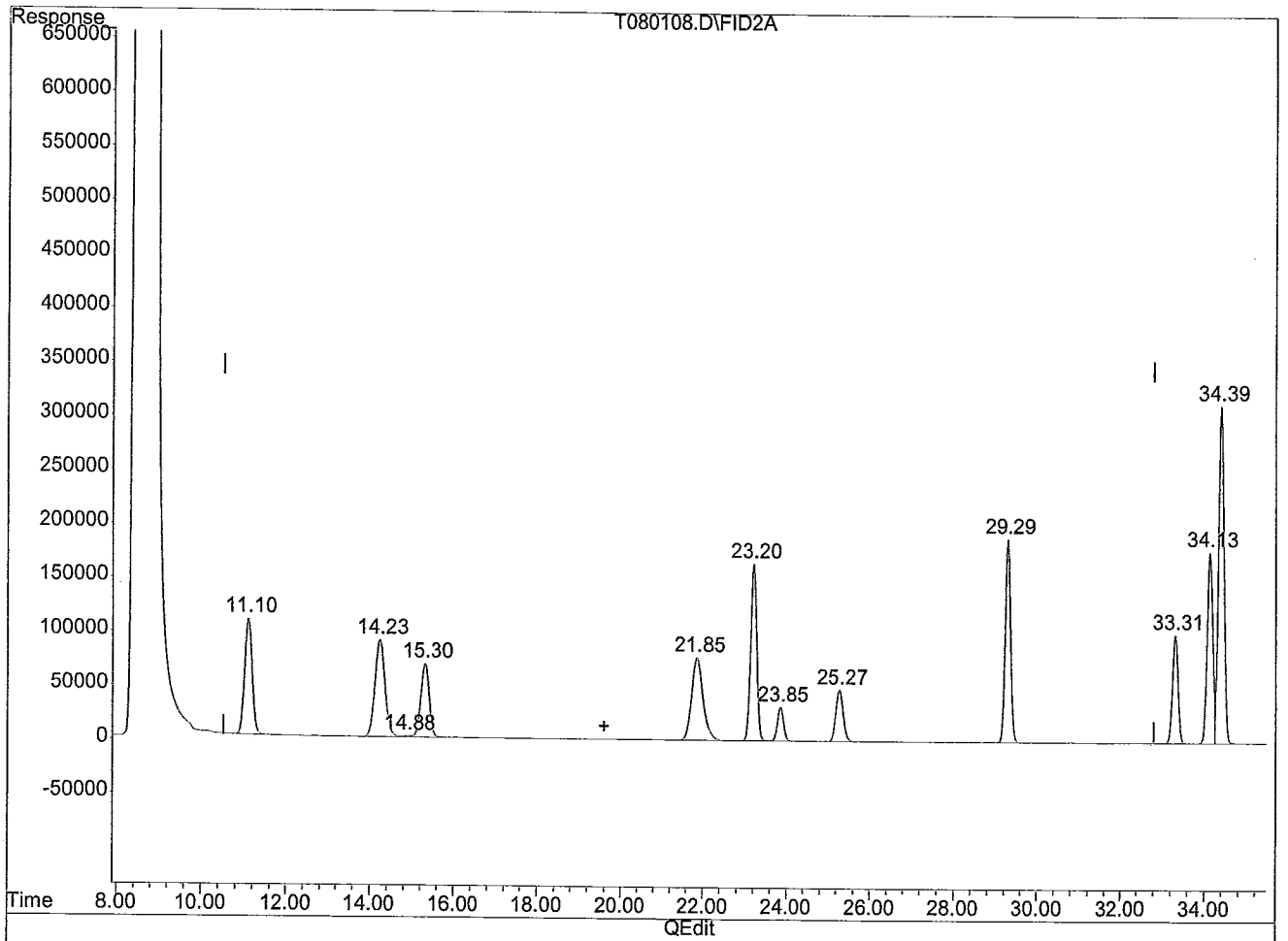
T080108.D TV080111.M Thu Aug 04 11:26:23 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51
Sample : STD100
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 8
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 547.283ug/l m

response 86751901

(+) = Expected Retention Time

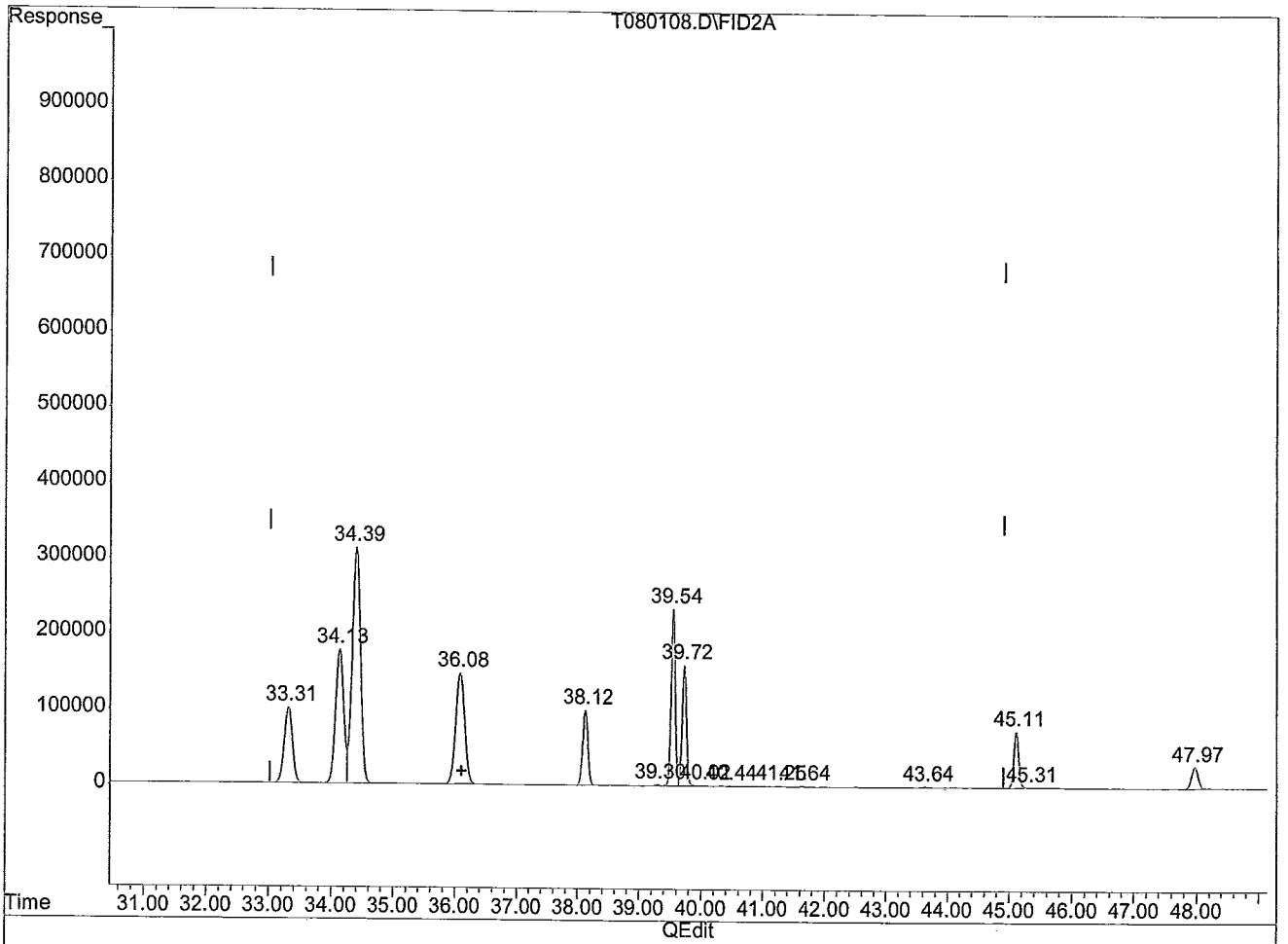
T080108.D TV080111.M Thu Aug 04 11:26:40 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080108.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080108.D\FID2A.CH
Acq On : 1 Aug 2011 20:51
Sample : STD100
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 8
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 728.734ug/l m

response 93472962

(+) = Expected Retention Time

T080108.D TV080111.M Thu Aug 04 11:27:18 2011 PENGCVOA10

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51 Operator: CJL
Sample : STD200 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:28 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.85	8325362	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.85	3109242	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.28	10129956	49.906	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.28	5437425	49.759	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.31	53334538	197.978	ug/l	0.0
3)	TM	BENZENE	23.21	113412867	184.108	ug/l	0.0
5)	TM	TOLUENE	29.30	109126396	190.137	ug/l	0.0
6)	TM	ETHYLBENZENE	34.14	92505695	193.430	ug/l	0.0
7)	TM	M,P-XYLENE	34.40	192849376	372.066	ug/l	0.0
8)	TM	O-XYLENE	36.08	85426278	199.684	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.55	65370969	210.423	ug/l	0.0
10)	TM	NAPHTHALENE	45.11	35456397	212.141	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	73185398	198.514	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	169925421	1085.712	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	169925421	1085.712	ug/l	0.0
17)	TM	N-PENTANE #2	11.09	24945411	187.997	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.23	28134281	185.658	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.31	18905313	186.735	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.86	29037137	192.877	ug/l	0.0
21)	TM	BENZENE #2	23.21	33793907	186.399	ug/l	0.0
22)	TM	TOLUENE #2	29.30	34974939	189.073	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	195209833	1541.375	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	195209833	1541.375	ug/l	0.0
25)	TM	N-NONANE #2	33.32	19881726	222.739	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.14	32428967	191.251	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.40	60056782	392.868	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51 Operator: CJL
Sample : STD200 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:28 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.09	30641744	202.804	ug/l	0.0
29)	TM	N-DECANE #2	38.12	11457818	192.989	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.55f	22382083	207.946	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.73f	17622903	231.828	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.11	8740174	210.680	ug/l	0.0

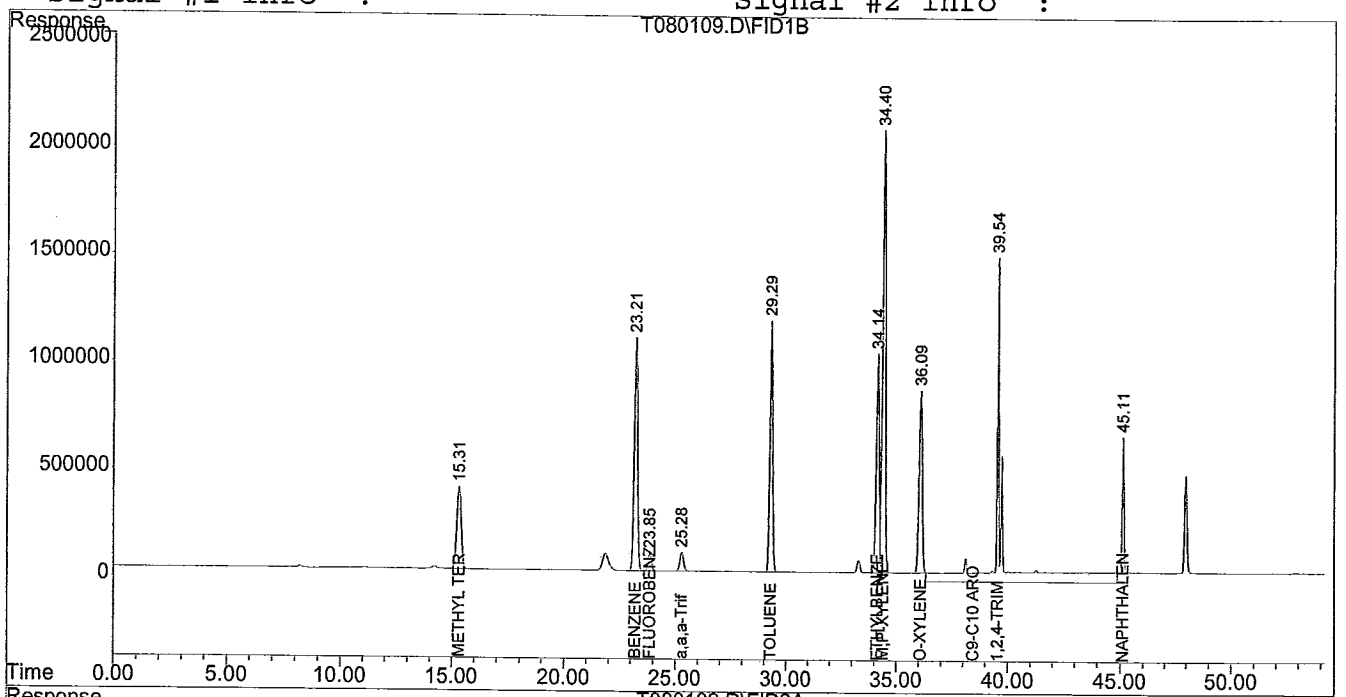
(f)=RT Delta > 1/2 Window (m)=manual int.

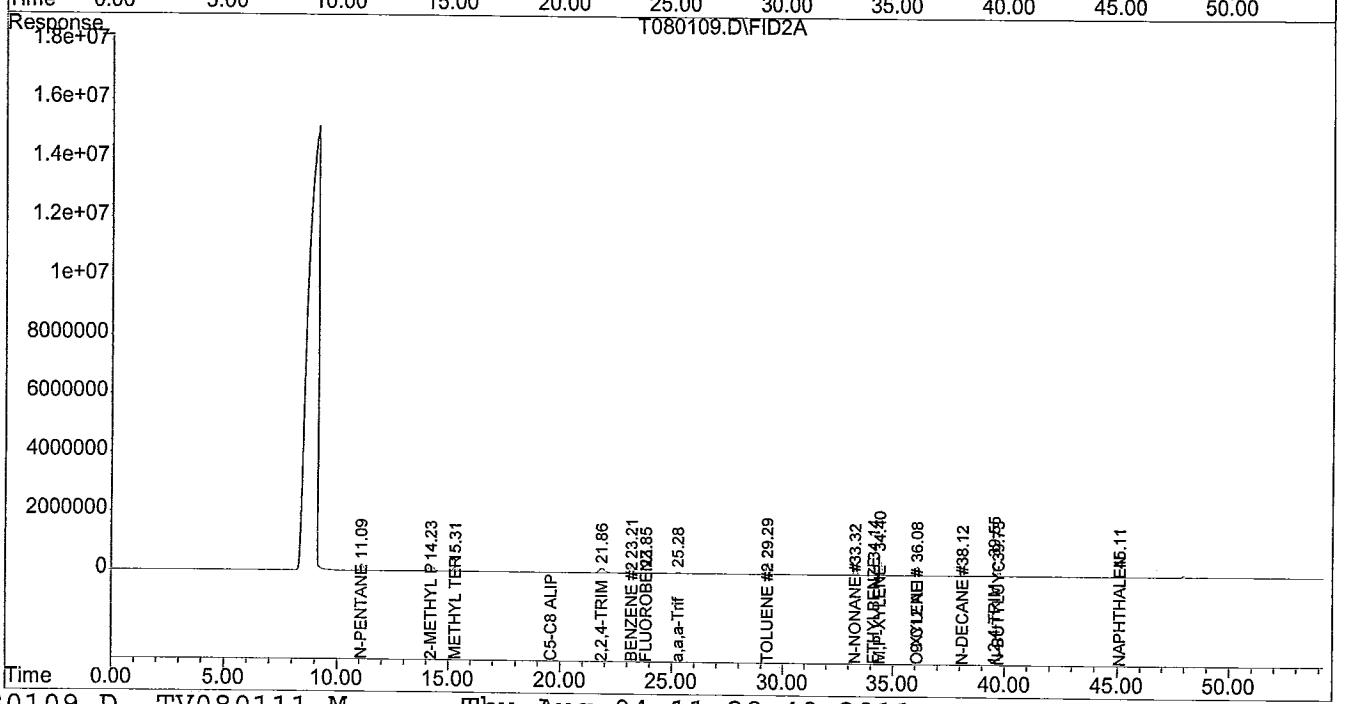
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51 Operator: CJL
Sample : STD200 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:28 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

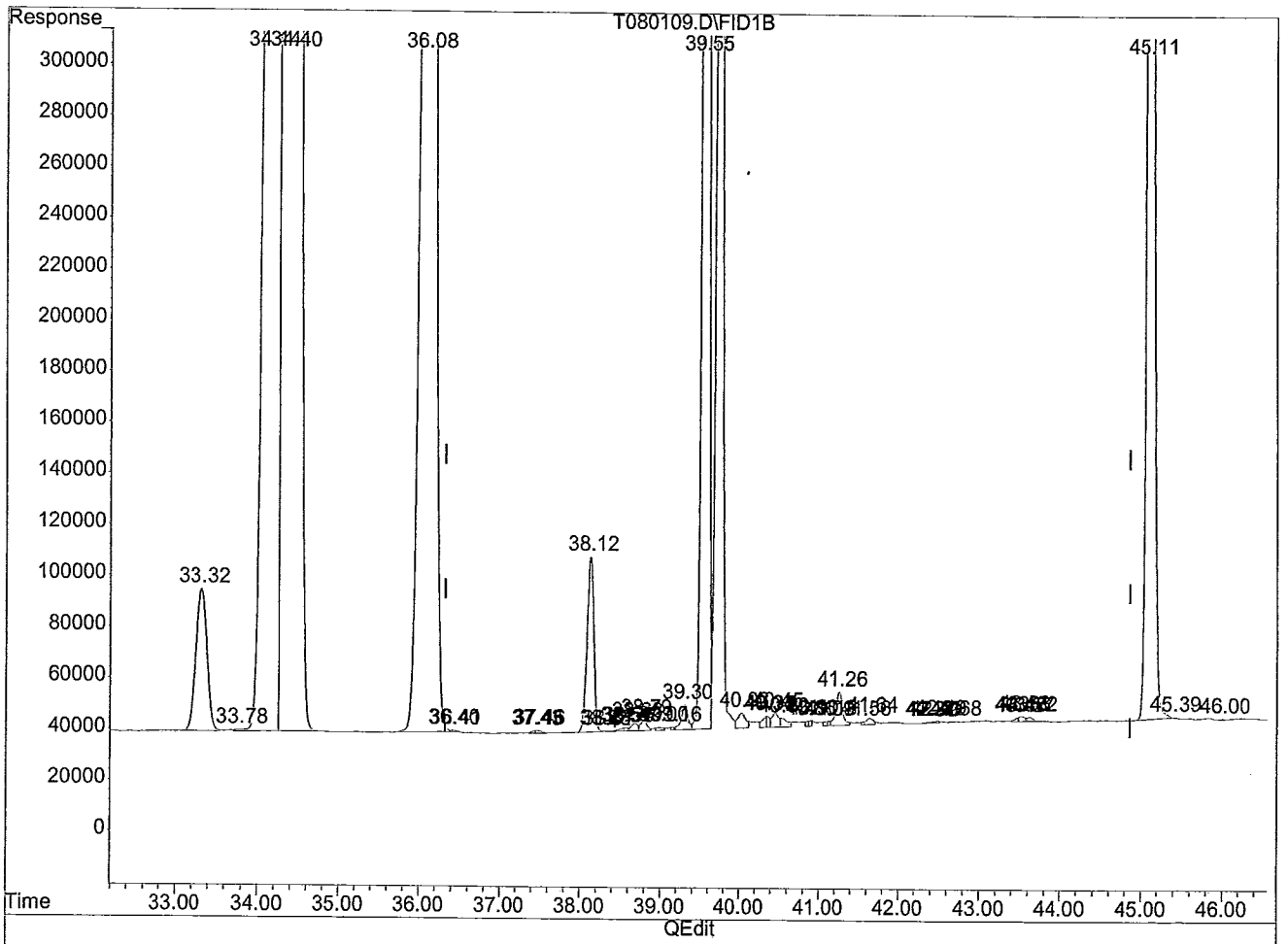




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51 Operator: CJL
Sample : STD200 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 198.514ug/l m

response 73185398

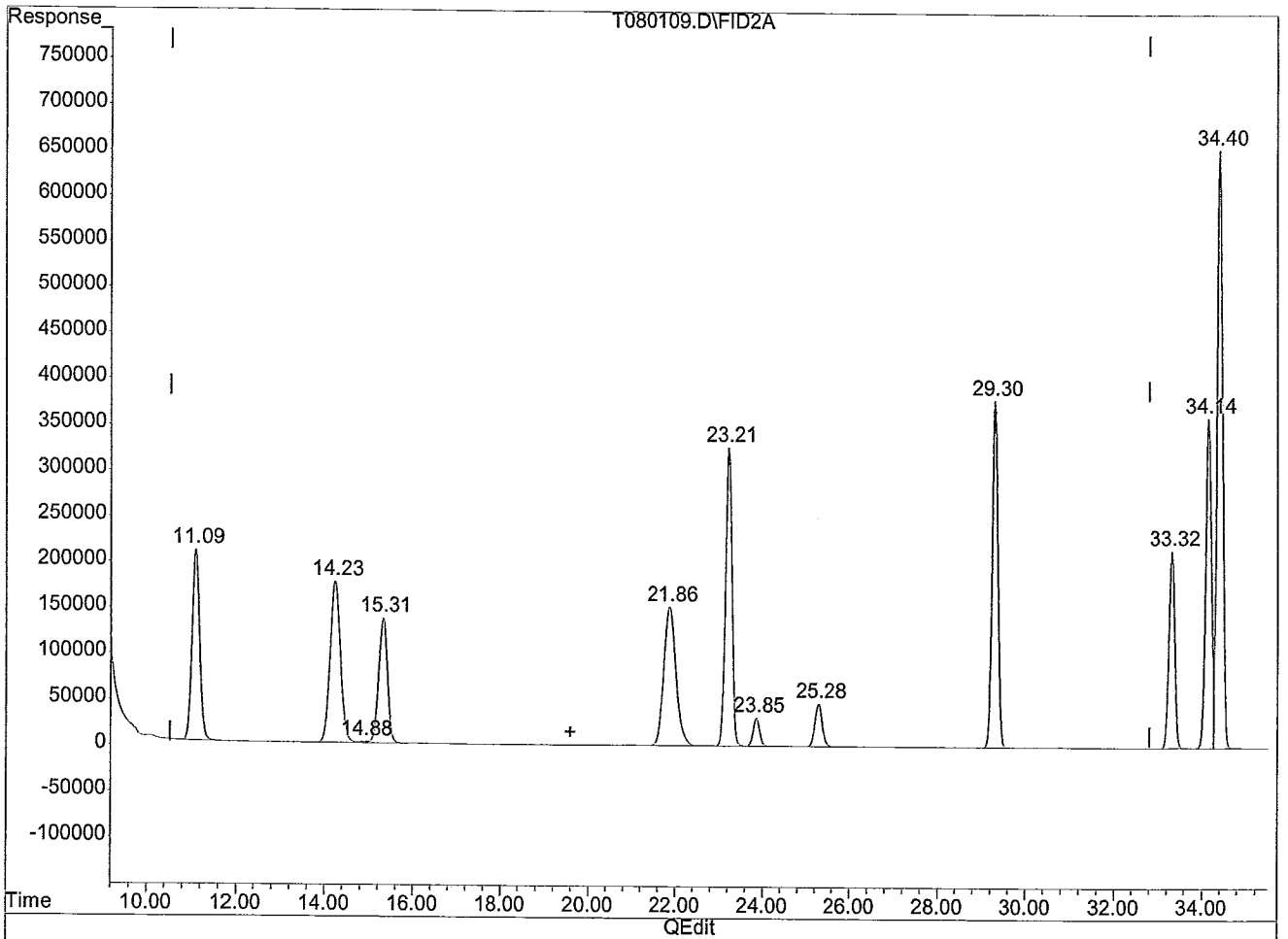
(+) = Expected Retention Time

T080109.D TV080111.M Thu Aug 04 11:28:38 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51 Operator: CJL
Sample : STD200 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 1085.712ug/l m

response 169925421

(+) = Expected Retention Time

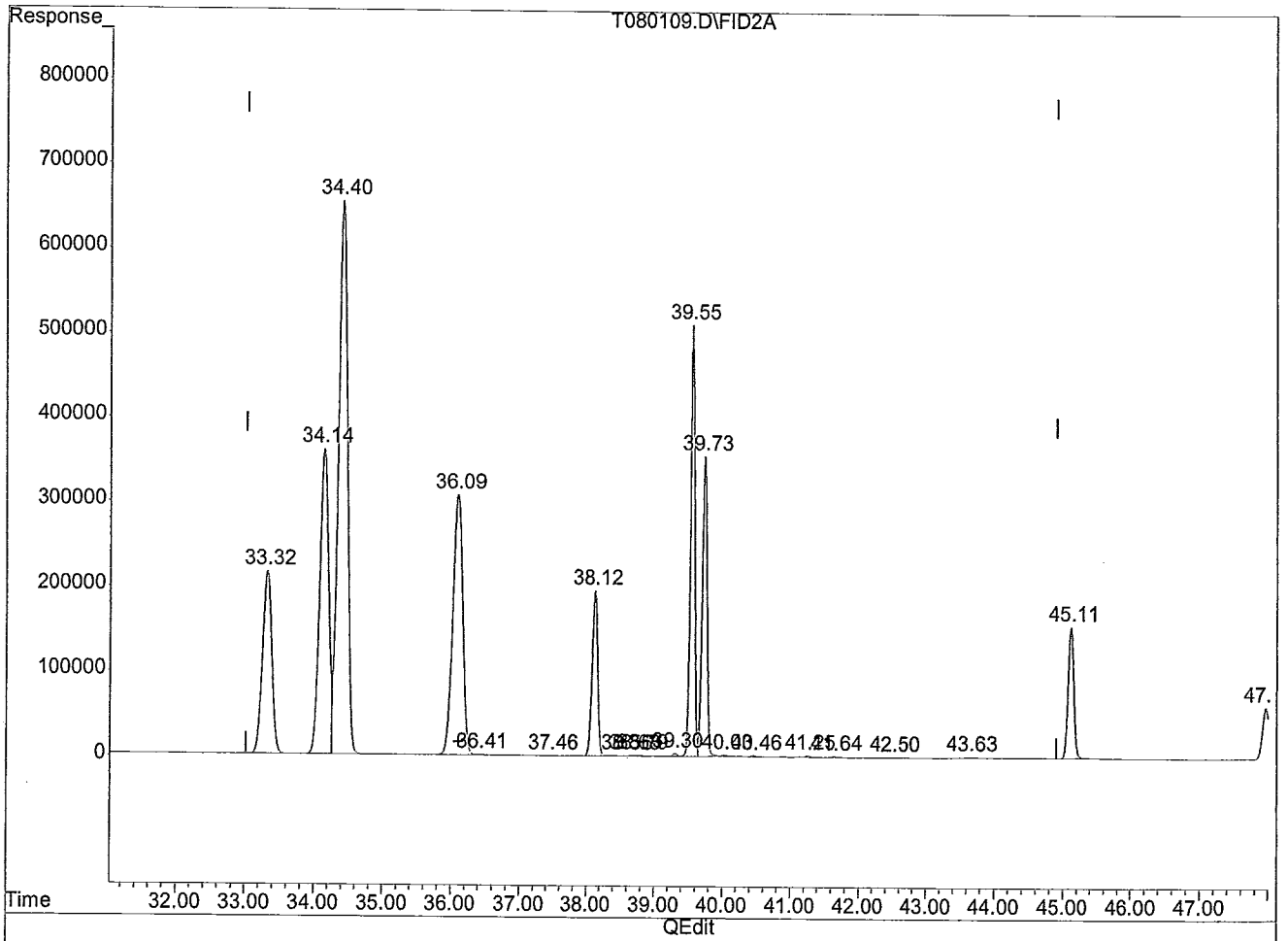
T080109.D TV080111.M Thu Aug 04 11:28:50 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080109.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080109.D\FID2A.CH
Acq On : 1 Aug 2011 21:51
Sample : STD200
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:13 2011 Quant Results File: TV080111.RES

Vial: 9
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 1541.375ug/l m

response 195209833

(+) = Expected Retention Time

T080109.D TV080111.M Thu Aug 04 11:29:24 2011 PENGCVOA10

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51 Operator: CJL
Sample : STD300 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:31 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.85	8449757	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.86	3071853	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.29	10309106	50.041	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 100%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.29	5466516	50.634	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 101%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.32	80228511	293.424	ug/l	0.0
3)	TM	BENZENE	23.21	169865279	271.690	ug/l	0.0
5)	TM	TOLUENE	29.31	162122665	278.317	ug/l	0.0
6)	TM	ETHYLBENZENE	34.14	138406036	285.148	ug/l	0.0
7)	TM	M,P-XYLENE	34.41	287048470	545.652	ug/l	0.0
8)	TM	O-XYLENE	36.09	128523012	296.000	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.55	99379547	315.184	ug/l	0.0
10)	TM	NAPHTHALENE	45.11	55897391	329.520	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	109836970	293.544	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	258227478	1669.986	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	258227478	1669.986	ug/l	0.0
17)	TM	N-PENTANE #2	11.06	38338199	292.446	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.22	43552121	290.898	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.32	28326231	283.195	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.86	44083944	296.388	ug/l	0.0
21)	TM	BENZENE #2	23.21	51005219	284.757	ug/l	0.0
22)	TM	TOLUENE #2	29.31	52767880	288.733	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	303632250	2426.658	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	303632250	2426.658	ug/l	0.0
25)	TM	N-NONANE #2	33.32	31891094	361.632	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.14	49230099	293.871	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.41	91816518	607.938	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51 Operator: CJL
Sample : STD300 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:31 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.09	46631126	312.388	ug/l	0.0
29)	TM	N-DECANE #2	38.12	19990268	340.803	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.73f	28189080	265.086	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.73f	28189080	375.338	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.12	13907537	339.318	ug/l	0.0

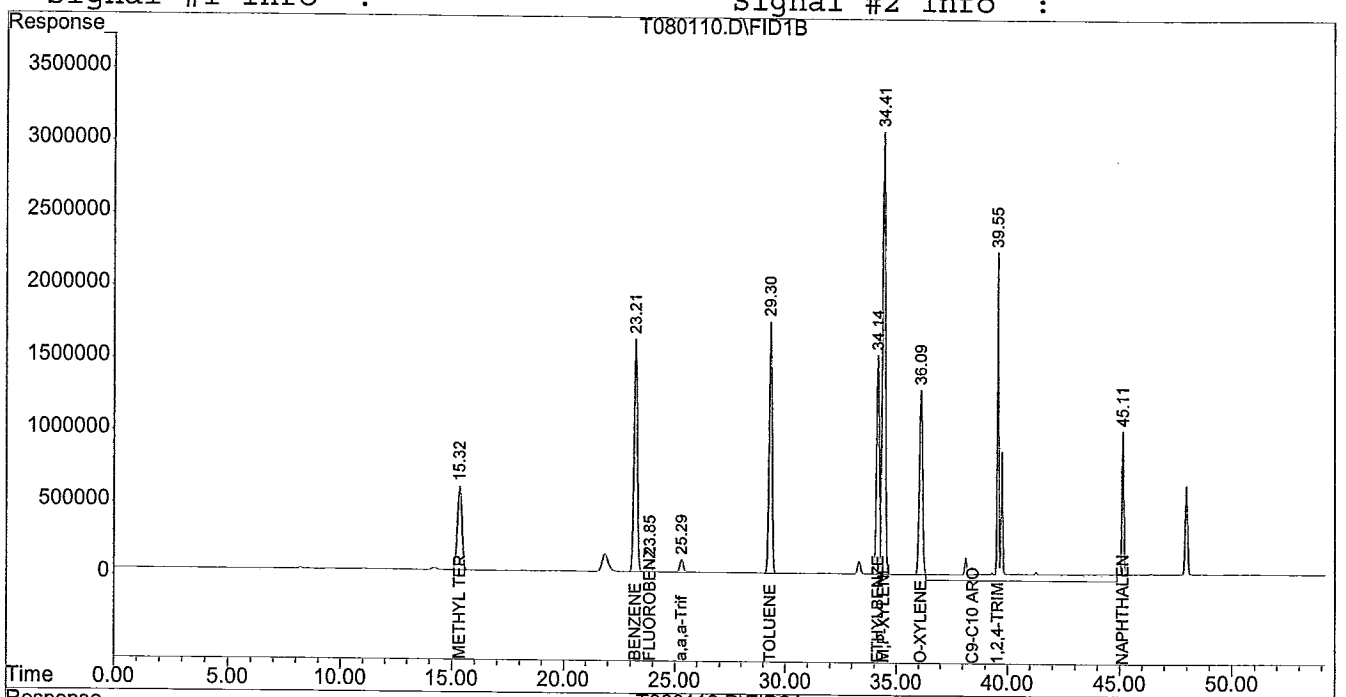
(f)=RT Delta > 1/2 Window (m)=manual int.

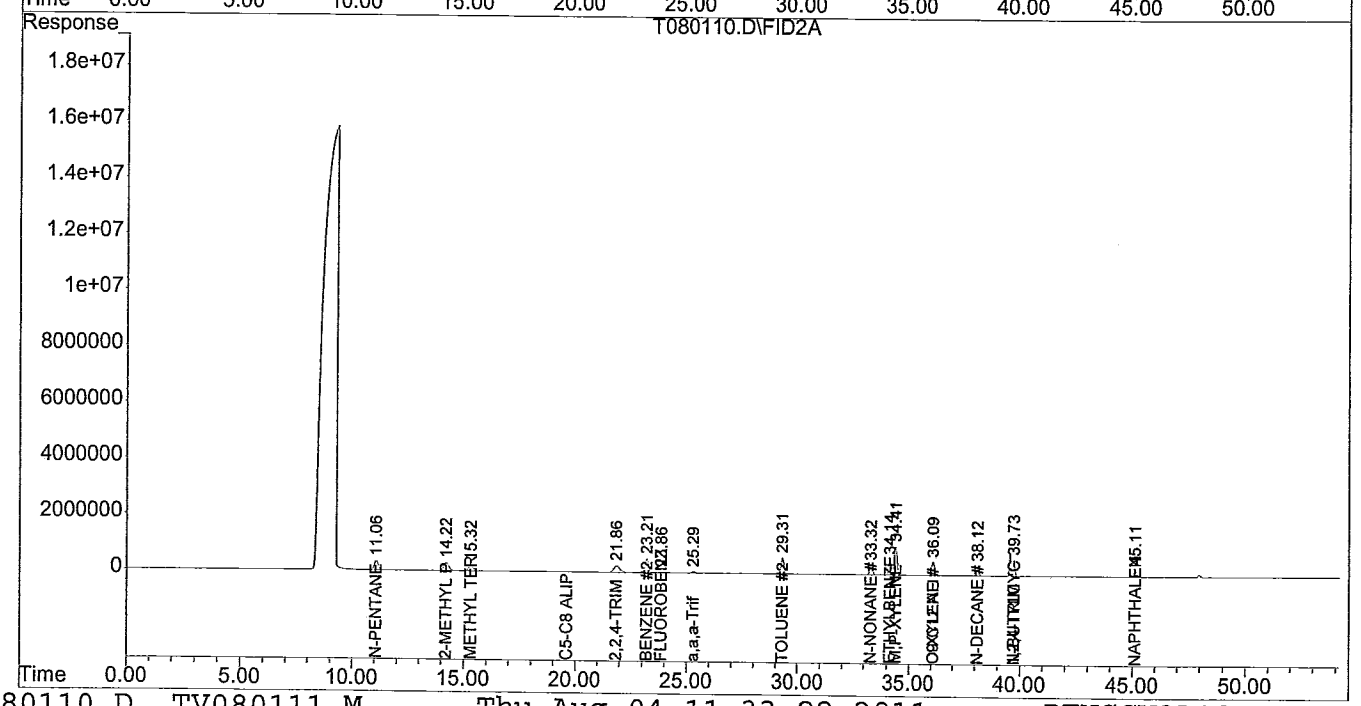
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51 Operator: CJL
Sample : STD300 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:31 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

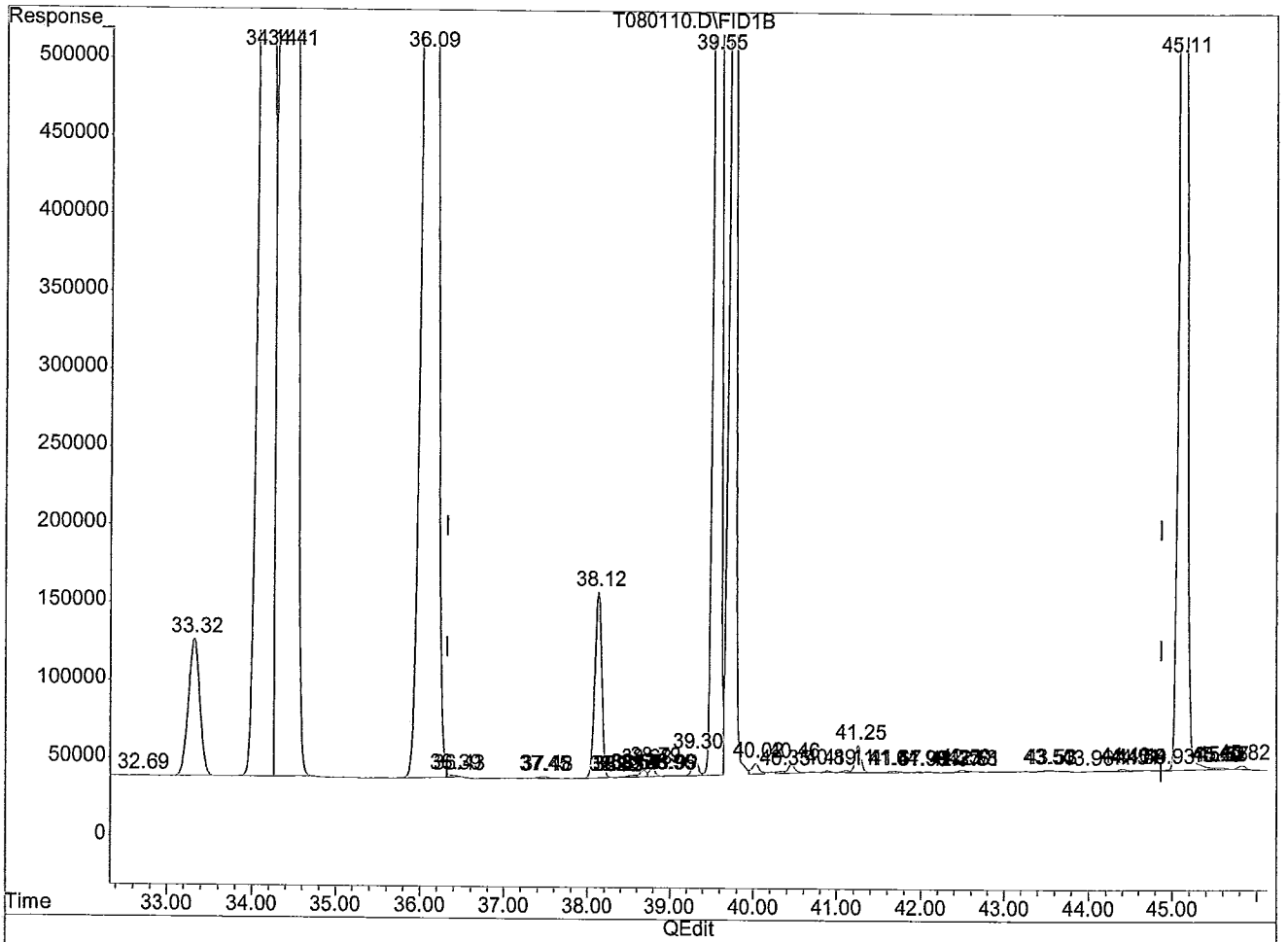




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51 Operator: CJL
Sample : STD300 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:14 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 293.544ug/l m

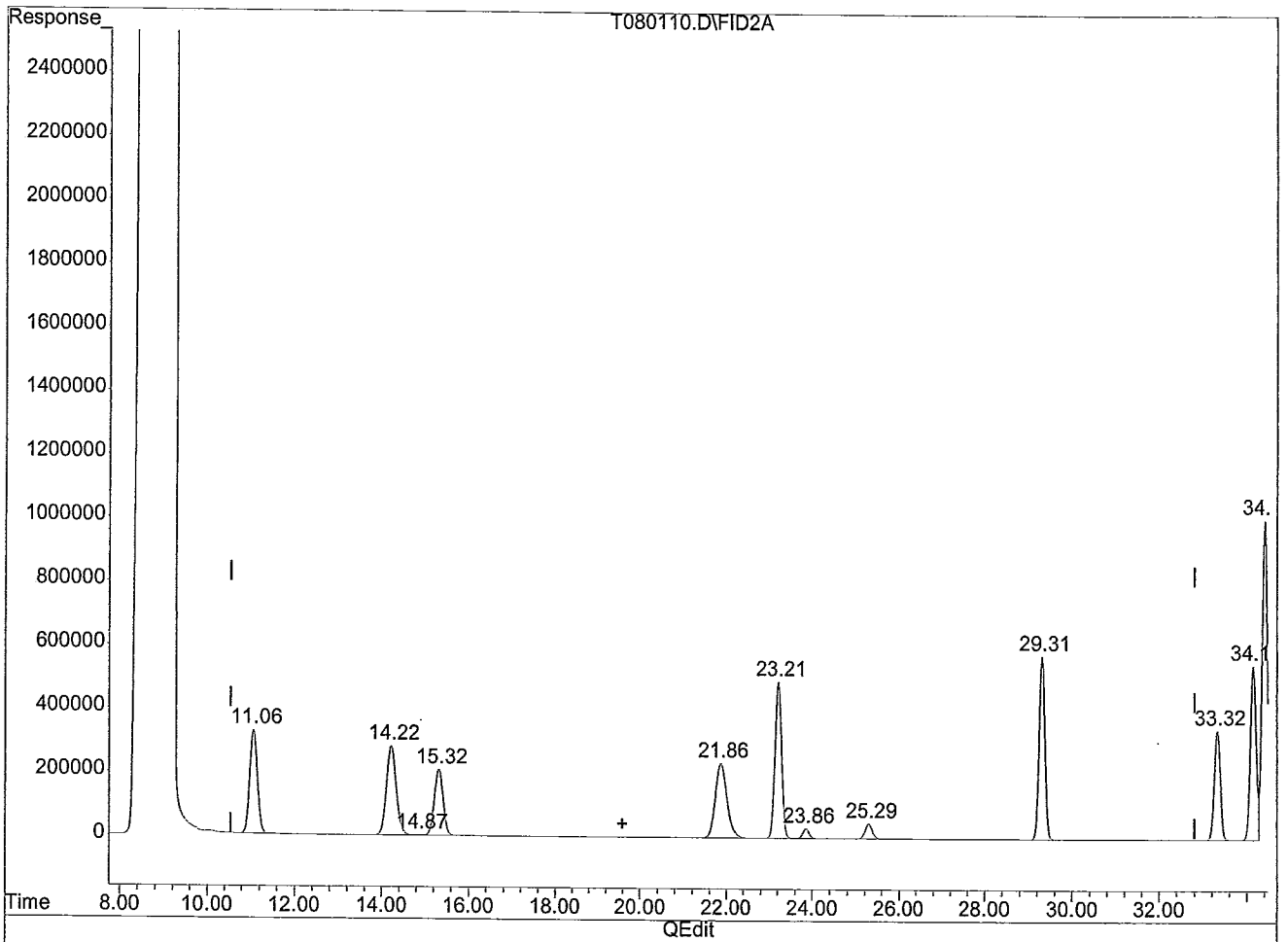
response 109836970

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51 Operator: CJL
Sample : STD300 Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:14 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 1669.986ug/l m

response 258227478

(+) = Expected Retention Time

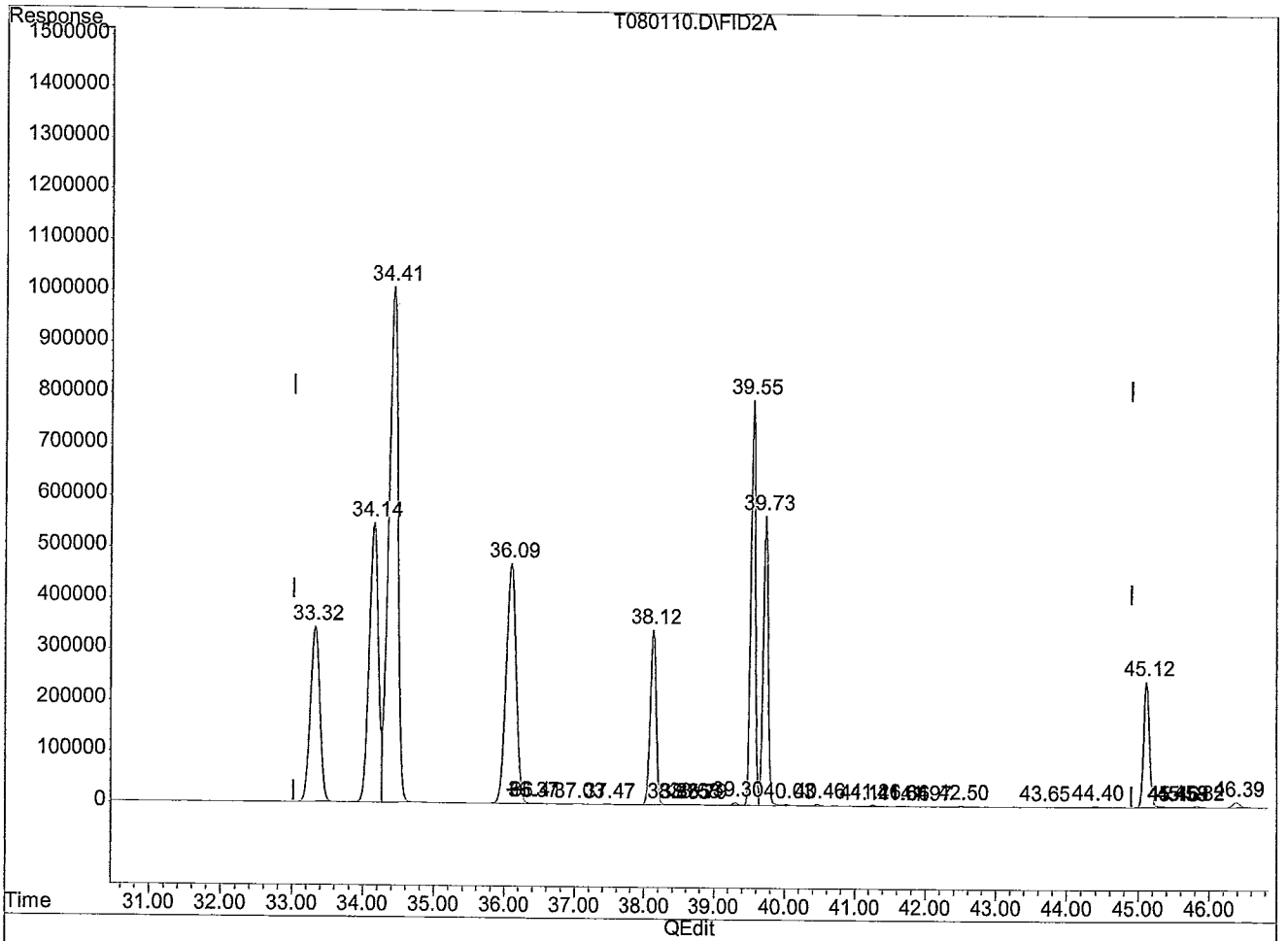
T080110.D TV080111.M Thu Aug 04 11:32:40 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080110.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080110.D\FID2A.CH
Acq On : 1 Aug 2011 22:51
Sample : STD300
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:14 2011 Quant Results File: TV080111.RES

Vial: 10
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:03:18 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 2426.658ug/l m

response 303632250

(+) = Expected Retention Time

T080110.D TV080111.M Thu Aug 04 11:32:58 2011 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	93	0.06
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.645	0.3	90	0.05
3	TM	BENZENE	1.480	1.364	7.8	88	0.08
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.471	3.5	90	0.03
5	TM	TOLUENE	1.379	1.244	9.8	84	0.04
6	TM	ETHYLBENZENE	1.149	1.044	9.1	85	0.04
7	TM	M,P-XYLENE	1.245	1.085	12.9	86	0.05
8	TM	O-XYLENE	1.028	0.950	7.6	87	0.05
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.634	15.0	82	0.02
10	TM	NAPHTHALENE	0.402	0.351	12.7	84	0.05
11	HM	C9-C10 AROMATICS	0.886	0.708	20.1	79	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	94	0.00
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.685	2.6	91	-0.02
15	HM	C5-C8 ALIPHATICS #2	1.007	0.864	14.2	82	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.864	14.2	82	0.00
17	TM	N-PENTANE #2	0.854	0.701	17.9	74	0.02
18	TM	2-METHYL PENTANE #2	0.975	0.803	17.6	75	0.13
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.620	4.8	88	0.02
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.893	7.7	81	0.05
21	TM	BENZENE #2	1.166	1.088	6.7	89	0.02
22	TM	TOLUENE #2	1.190	1.061	10.8	84	-0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.694	14.8	85	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.694	14.8	85	0.00
25	TM	N-NONANE #2	0.574	0.537	6.4	81	-0.03
26	TM	ETHYLBENZENE #2	1.091	0.972	10.9	85	-0.04
27	TM	M,P-XYLENE #2	0.983	0.876	10.9	86	-0.04
28	TM	O-XYLENE #2	0.972	0.902	7.2	88	-0.04
29	TM	N-DECANE #2	0.382	0.305	20.2	82	-0.06
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.572	17.3	83	0.00
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.461	5.7	85	0.00
32	TM	NAPHTHALENE #2	0.267	0.233	12.7	85	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:39 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.85	7977606	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.85	2974499	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.27	9396815	48.313	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 97%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.27	5095523	48.743	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 97%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.30	12868632	49.851	ug/l	0.0
3)	TM	BENZENE	23.20	27193714	46.069	ug/l	0.0
5)	TM	TOLUENE	29.29	24819752	45.130	ug/l	0.0
6)	TM	ETHYLBENZENE	34.13	20812964	45.417	ug/l	0.0
7)	TM	M,P-XYLENE	34.40	43271853	87.124	ug/l	0.0
8)	TM	O-XYLENE	36.08	18956513	46.242	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.54	12642919	42.470	ug/l	0.0
10)	TM	NAPHTHALENE	45.11	7002797	43.725	ug/l	0.0
11)	HM	C9-C10 AROMATICS	38.44	14130239	39.999	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.59	38534751	257.365	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.59	38534751	257.365	ug/l	0.0
17)	TM	N-PENTANE #2	11.12	5215548	41.087	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.23	5974515	41.212	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.30	4612361	47.622	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.85	6642026	46.118	ug/l	0.0
21)	TM	BENZENE #2	23.20	8089613	46.642	ug/l	0.0
22)	TM	TOLUENE #2	29.29	7888824	44.579	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.11	41278923	340.703	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.11	41278923	340.703	ug/l	0.0
25)	TM	N-NONANE #2	33.32	3995178	46.786	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.13	7231518	44.580	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.40	13022284	89.046	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Aug 4 11:39 2011 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

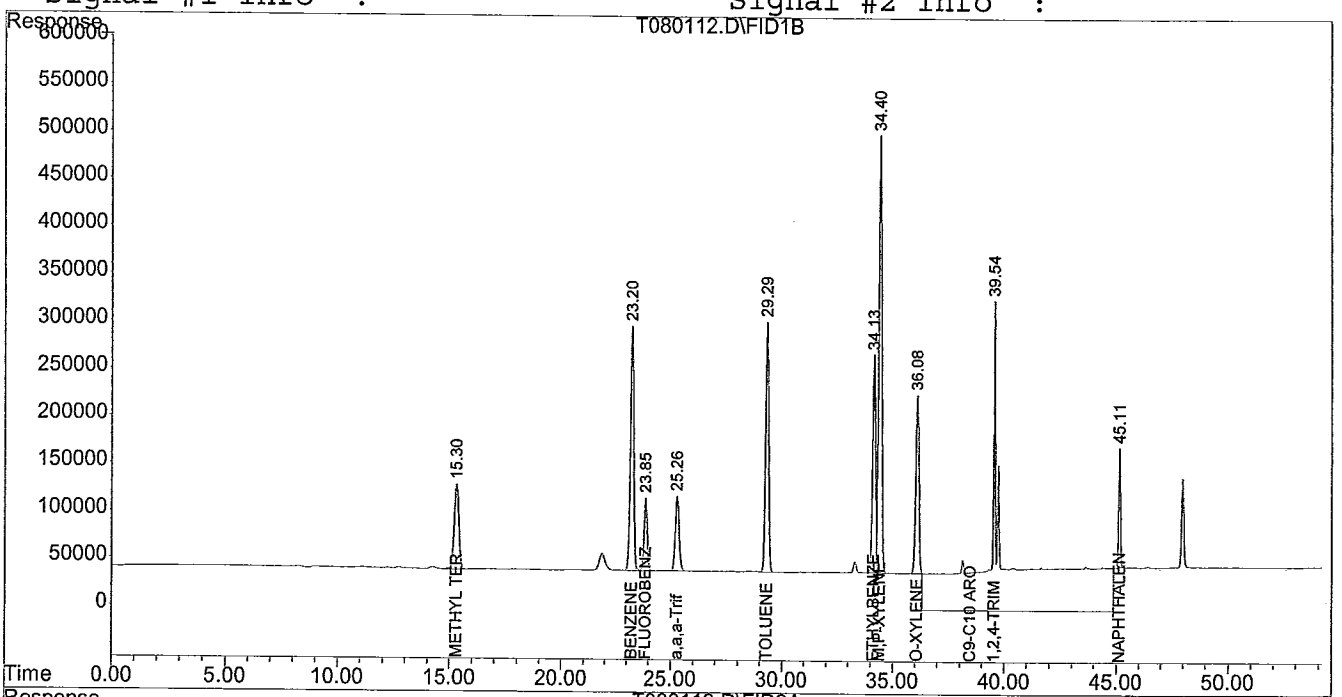
	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.08	6708599	46.413	ug/l	0.0
29) TM	N-DECANE #2	38.12	2267120	39.916	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.54	4254996	41.323	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.73	3425589	47.105	ug/l	0.0
32) TM	NAPHTHALENE #2	45.11	1734862	43.713	ug/l	0.0

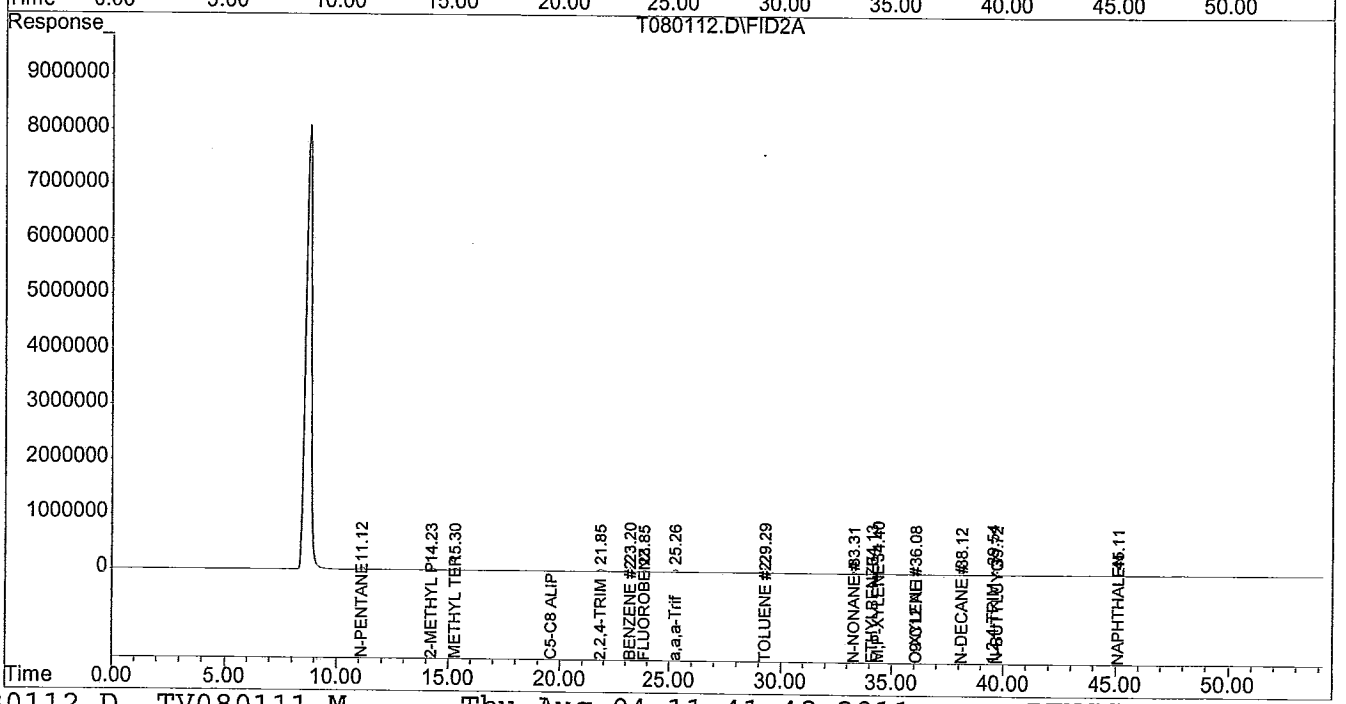
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:39 2011 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

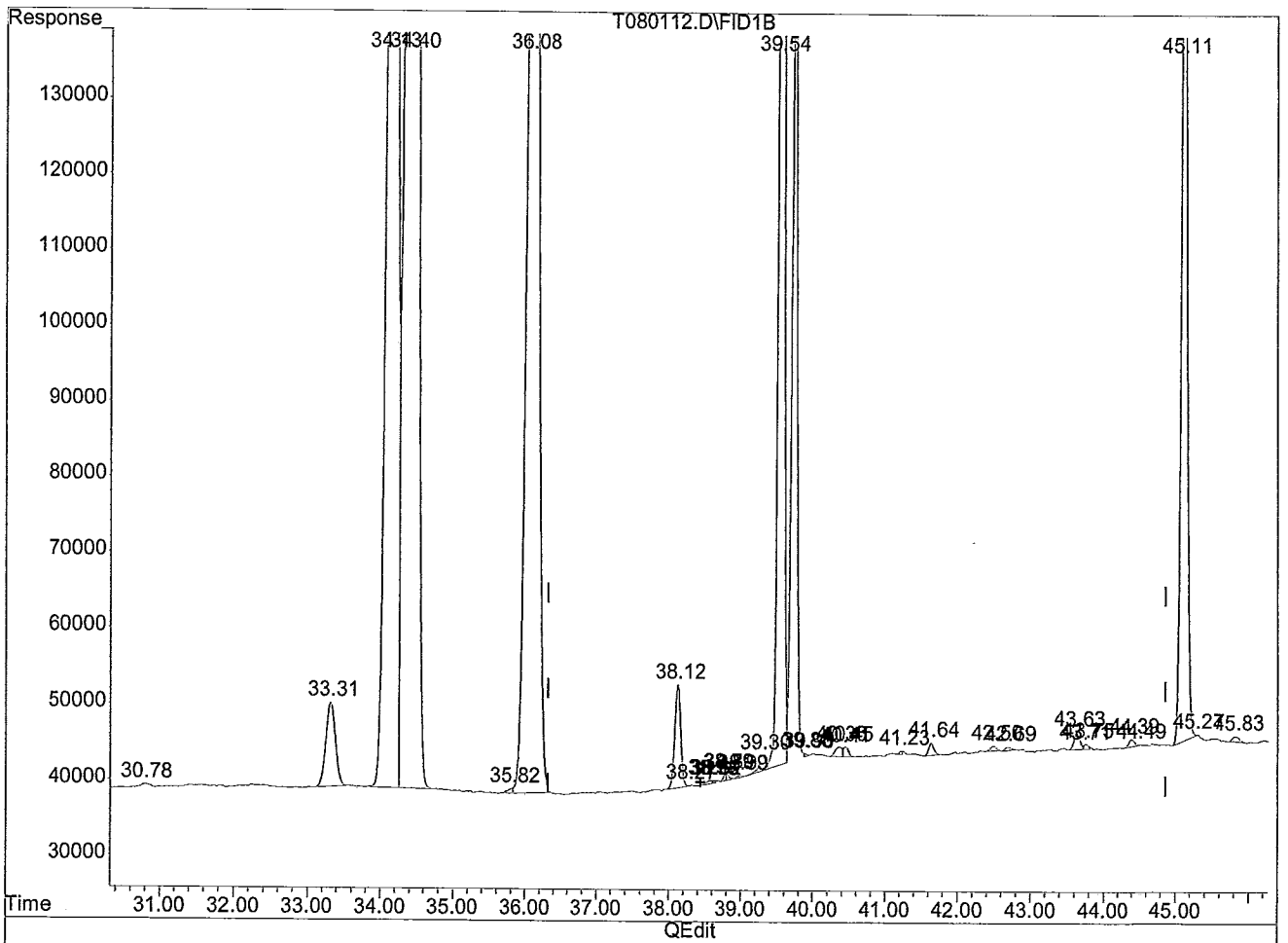




Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:39 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

38.44min 39.999ug/l m

response 14130239

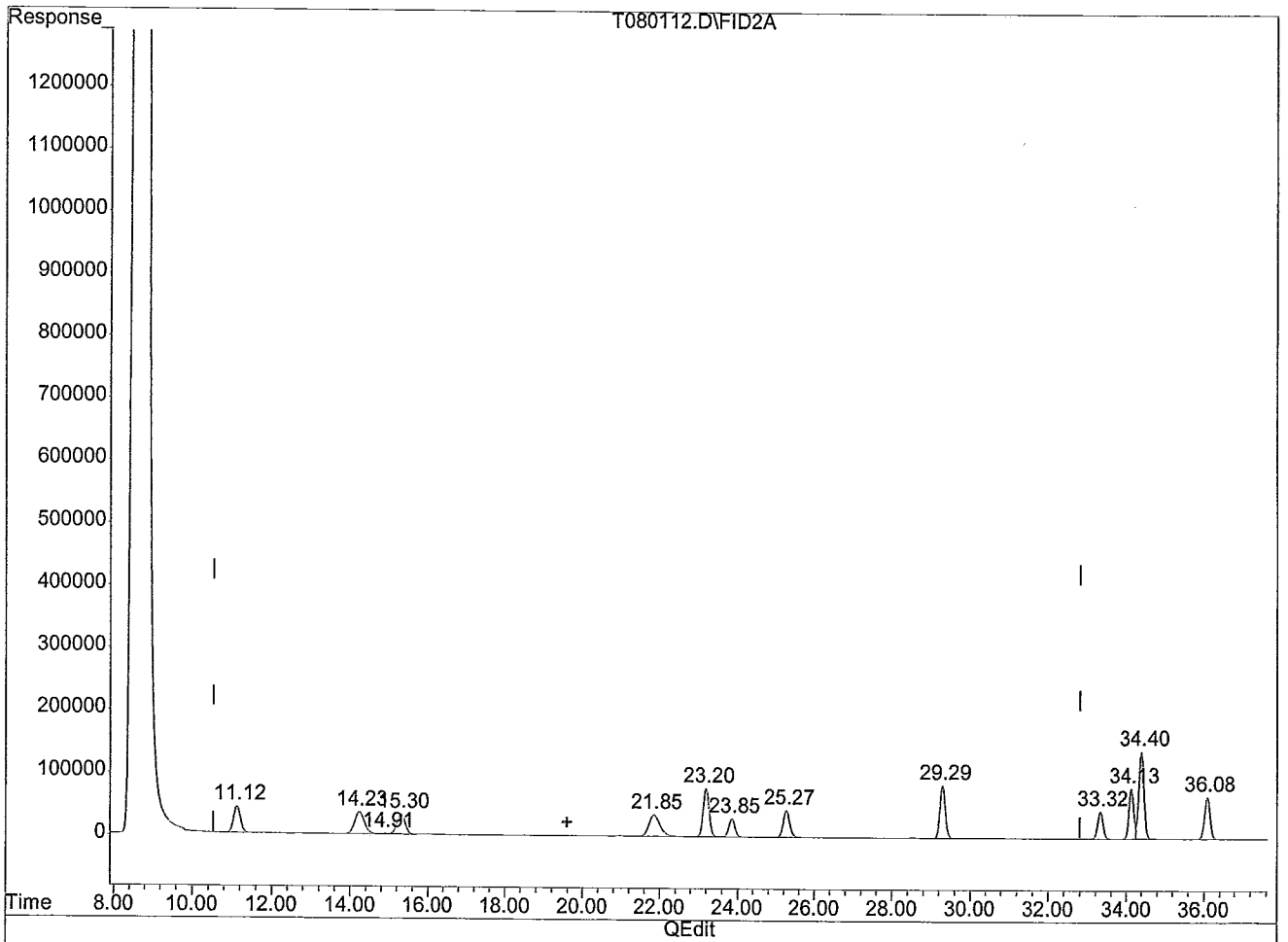
(+) = Expected Retention Time

T080112.D TV080111.M Thu Aug 04 11:41:00 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:39 2011 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.59min 257.365ug/l m

response 38534751

(+) = Expected Retention Time

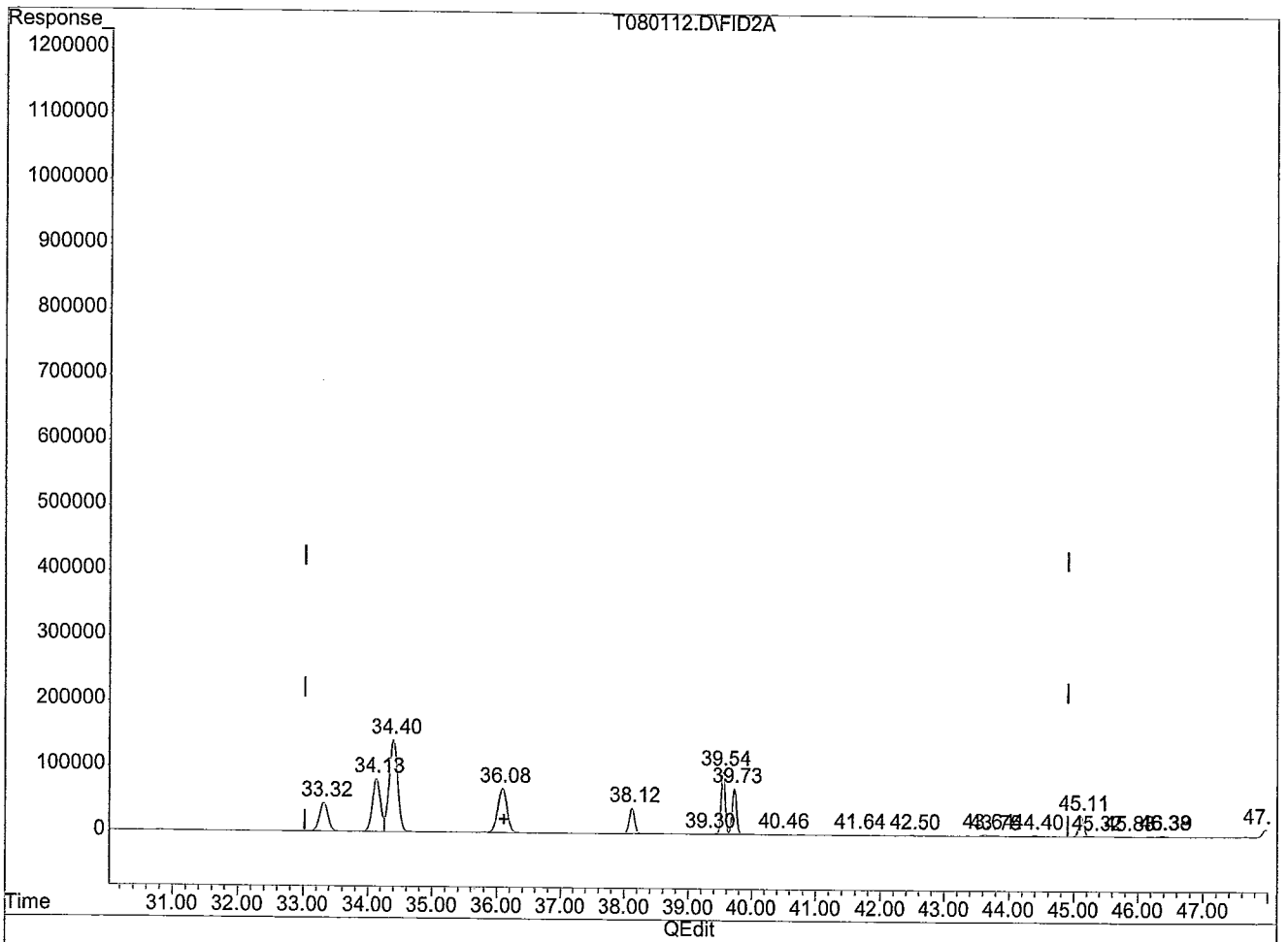
T080112.D TV080111.M Thu Aug 04 11:41:13 2011 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52
Sample : ICV
Misc : WATER
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Aug 4 11:39 2011 Quant Results File: TV080111.RES

Vial: 12
Operator: CJL
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.11min 340.703ug/l m

response 41278923

(+) = Expected Retention Time

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	60	0.01
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.624	3.6	55	0.00
3	TM	BENZENE	1.480	1.399	5.5	57	0.03
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.510	-4.5	62	0.00
5	TM	TOLUENE	1.379	1.369	0.7	59	0.00
6	TM	ETHYLBENZENE	1.149	1.168	-1.7	61	0.00
7	TM	M,P-XYLENE	1.245	1.232	1.0	62	0.00
8	TM	O-XYLENE	1.028	1.060	-3.1	62	0.00
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.798	-7.0	66	0.00
10	TM	NAPHTHALENE	0.402	0.432	-7.5	66	0.02
11	HM	C9-C10 AROMATICS	0.886	0.888	-0.2	64	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	96	0.01
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.738	-5.0	100	0.02
15	HM	C5-C8 ALIPHATICS #2	1.007	0.930	7.6	90	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.930	7.6	90	0.00
17	TM	N-PENTANE #2	0.854	0.772	9.6	83	0.16
18	TM	2-METHYL PENTANE #2	0.975	0.931	4.5	88	0.09
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.618	5.1	89	0.00
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.010	-4.3	93	0.06
21	TM	BENZENE #2	1.166	1.101	5.6	92	0.03
22	TM	TOLUENE #2	1.190	1.147	3.6	93	0.00
23	HM	C9-C12 ALIPHATICS #2	0.815	0.817	-0.2	103	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.817	-0.2	103	0.00
25	TM	N-NONANE #2	0.574	0.664	-15.7	102	0.01
26	TM	ETHYLBENZENE #2	1.091	1.071	1.8	96	0.00
27	TM	M,P-XYLENE #2	0.983	0.974	0.9	98	0.00
28	TM	O-XYLENE #2	0.972	0.986	-1.4	98	0.00
29	TM	N-DECANE #2	0.382	0.431	-12.8	118	0.00
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.718	-3.8	106	0.00
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.627	-28.2#	118	0.00
32	TM	NAPHTHALENE #2	0.267	0.292	-9.4	109	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 27 10:27 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.89	5099014	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.89	3038560	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.30	6496267	52.255	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 105%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.30	5605916	52.495	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 105%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.35	7958096	48.232	ug/l	0.0
3)	TM	BENZENE	23.24	17838029	47.280	ug/l	0.0
5)	TM	TOLUENE	29.32	17454433	49.655	ug/l	0.0
6)	TM	ETHYLBENZENE	34.16	14888969	50.832	ug/l	0.0
7)	TM	M,P-XYLENE	34.43	31401594	98.917	ug/l	0.0
8)	TM	O-XYLENE	36.12	13511852	51.568	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.56	10166584	53.432	ug/l	0.0
10)	TM	NAPHTHALENE	45.13	5501597	53.745	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	11319387	50.131	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	42378404	277.069	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	42378404	277.069	ug/l	0.0
17)	TM	N-PENTANE #2	11.18	5863481	45.217	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.29	7069175	47.734	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.35	4696593	47.469	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.89	7672917	52.152	ug/l	0.0
21)	TM	BENZENE #2	23.24	8361766	47.194	ug/l	0.0
22)	TM	TOLUENE #2	29.32	8714473	48.206	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	49622462	400.933	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	49622462	400.933	ug/l	0.0
25)	TM	N-NONANE #2	33.35	5043795	57.821	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.16	8136161	49.100	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.43	14804347	99.097	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 27 10:27 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.12	7489422	50.722	ug/l	0.0
29) TM	N-DECANE #2	38.14	3276740	56.476	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.56	5455891	51.868	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.75	4765809	64.152	ug/l	0.0
32) TM	NAPHTHALENE #2	45.13	2217131	54.687	ug/l	0.0

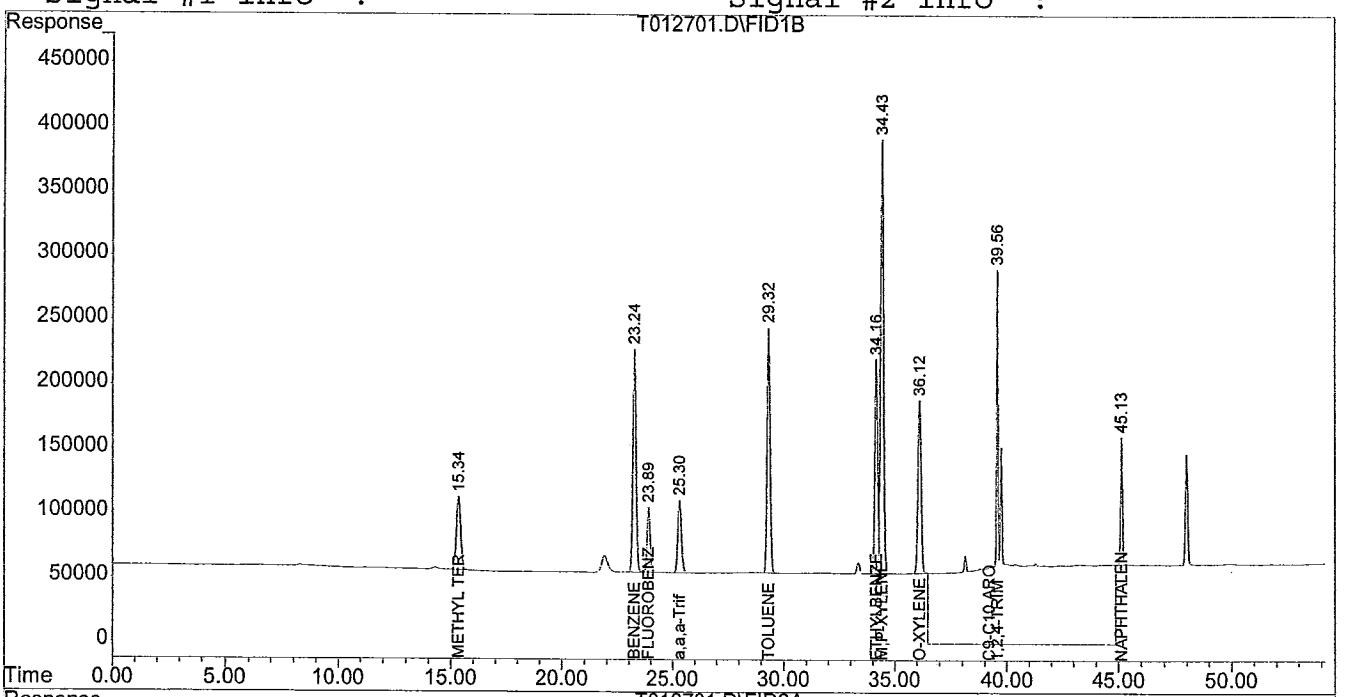
(f)=RT Delta > 1/2 Window (m)=manual int.

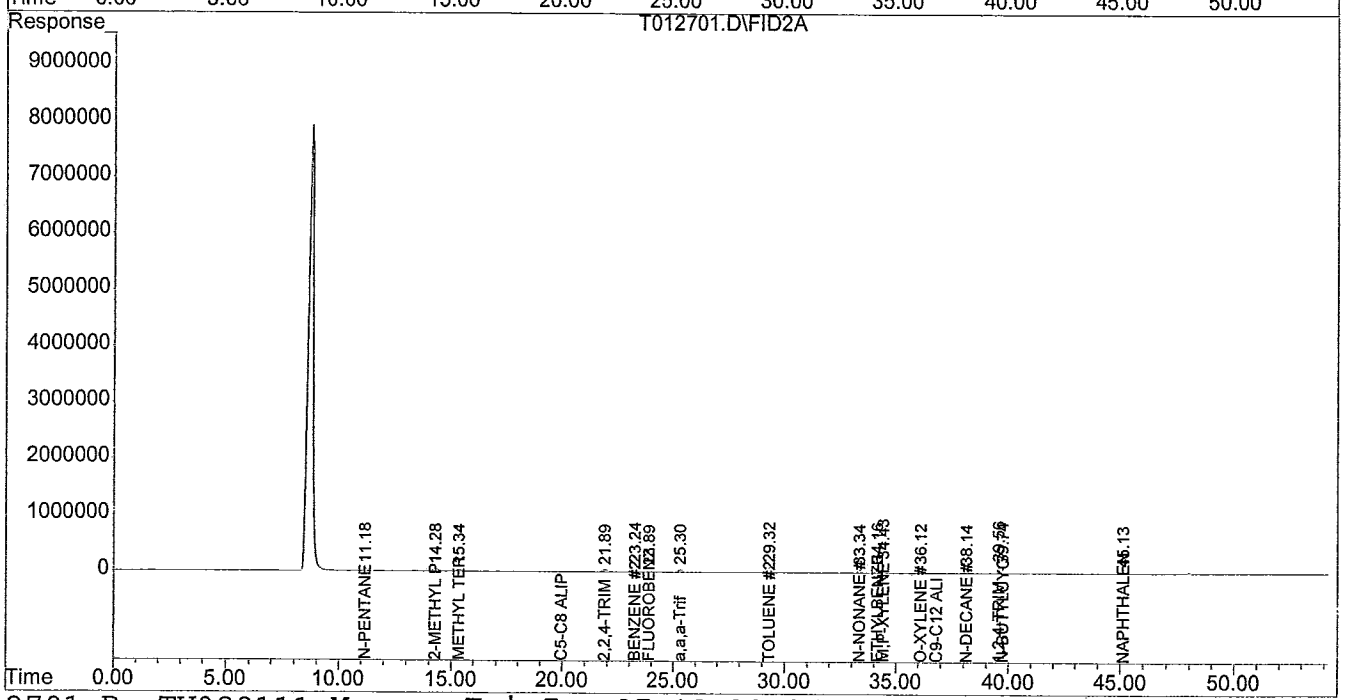
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 10:27 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

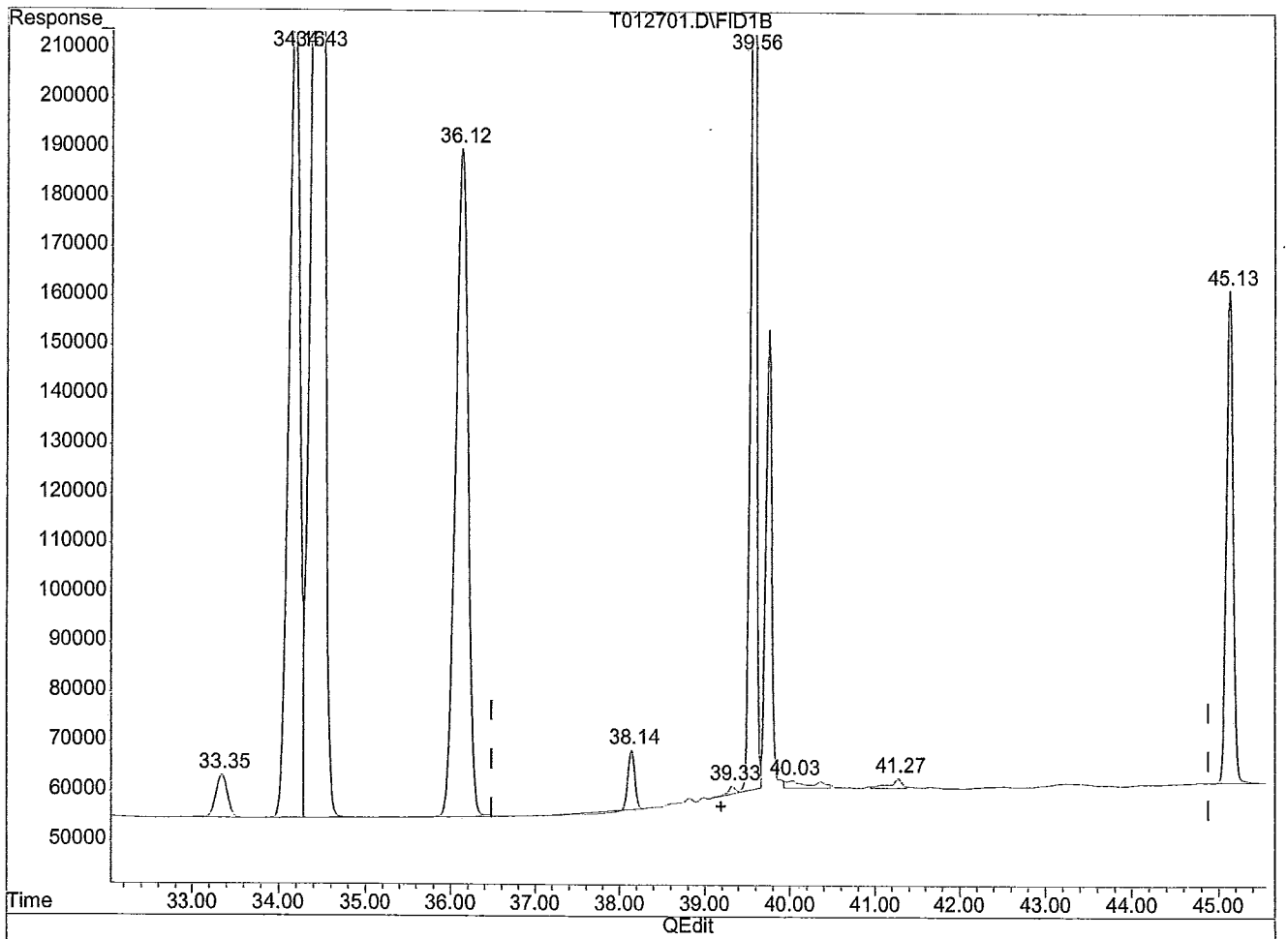




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 10:08 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 50.131ug/l m

response 11319387

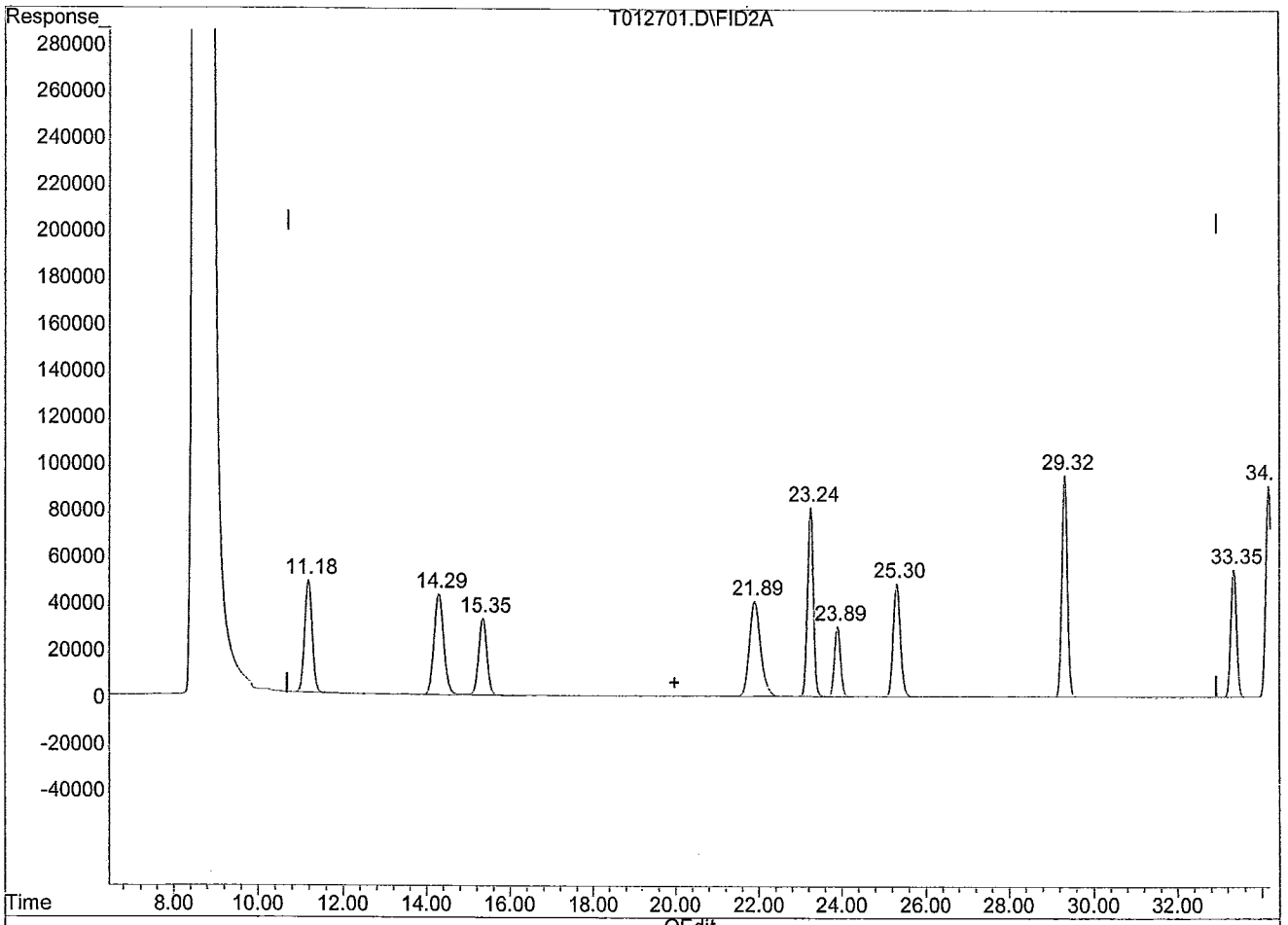
(+) = Expected Retention Time

T012701.D TV080111.M Fri Jan 27 10:27:50 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 10:08 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 277.069ug/l m

response 42378404

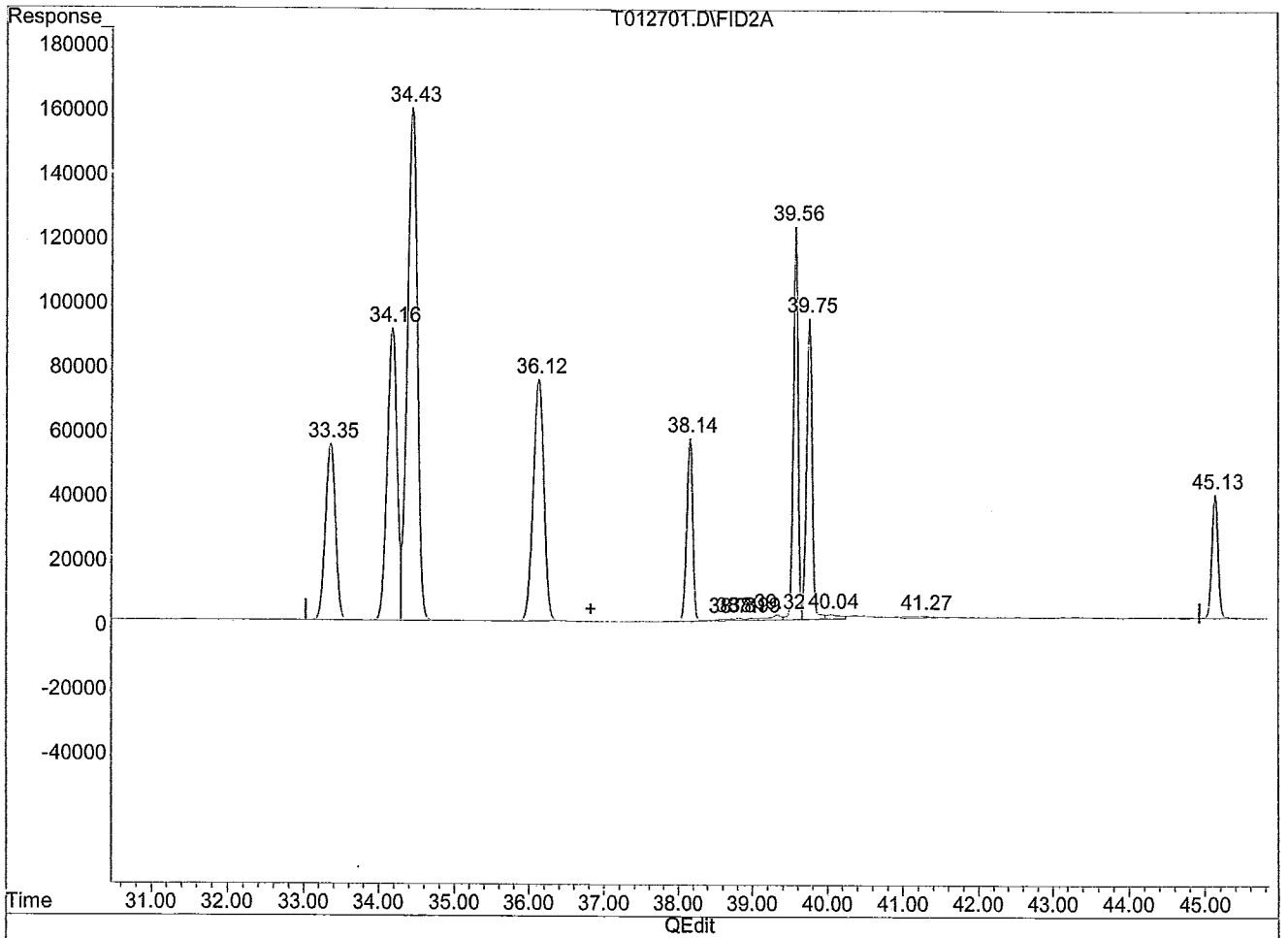
(+) = Expected Retention Time

T012701.D TV080111.M Fri Jan 27 10:27:58 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012701.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0127\T012701.D\FID2A.CH
Acq On : 27 Jan 2012 9:14 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 10:08 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 400.933ug/l m

response 49622462

(+) = Expected Retention Time

T012701.D TV080111.M Fri Jan 27 10:28:08 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	61	0.00
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.629	2.8	57	0.00
3	TM	BENZENE	1.480	1.361	8.0	57	0.02
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.501	-2.7	63	0.00
5	TM	TOLUENE	1.379	1.330	3.6	59	0.00
6	TM	ETHYLBENZENE	1.149	1.111	3.3	59	0.01
7	TM	M,P-XYLENE	1.245	1.165	6.4	60	0.01
8	TM	O-XYLENE	1.028	0.994	3.3	60	0.01
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.732	1.9	62	0.01
10	TM	NAPHTHALENE	0.402	0.412	-2.5	65	0.03
11	HM	C9-C10 AROMATICS	0.886	0.849	4.2	62	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	96	0.00
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.733	-4.3	100	0.02
15	HM	C5-C8 ALIPHATICS #2	1.007	0.914	9.2	89	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.914	9.2	89	0.00
17	TM	N-PENTANE #2	0.854	0.753	11.8	82	0.13
18	TM	2-METHYL PENTANE #2	0.975	0.903	7.4	86	0.08
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.634	2.6	92	-0.01
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.984	-1.7	92	0.05
21	TM	BENZENE #2	1.166	1.086	6.9	91	0.02
22	TM	TOLUENE #2	1.190	1.126	5.4	92	0.00
23	HM	C9-C12 ALIPHATICS #2	0.815	0.770	5.5	98	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.770	5.5	98	0.00
25	TM	N-NONANE #2	0.574	0.643	-12.0	100	0.02
26	TM	ETHYLBENZENE #2	1.091	1.037	4.9	93	0.00
27	TM	M,P-XYLENE #2	0.983	0.935	4.9	94	0.01
28	TM	O-XYLENE #2	0.972	0.953	2.0	95	0.00
29	TM	N-DECANE #2	0.382	0.396	-3.7	109	0.01
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.657	5.1	98	0.01
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.581	-18.8	110	0.01
32	TM	NAPHTHALENE #2	0.267	0.280	-4.9	105	0.03

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:11 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.89	5234524	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.89	3057983	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.30	6557741	51.384	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 103%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.30	5602963	52.134	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 104%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.34	8232303	48.602	ug/l	0.0
3)	TM	BENZENE	23.23	17813008	45.991	ug/l	0.0
5)	TM	TOLUENE	29.33	17410269	48.247	ug/l	0.0
6)	TM	ETHYLBENZENE	34.17	14541898	48.362	ug/l	0.0
7)	TM	M,P-XYLENE	34.44	30491153	93.562	ug/l	0.0
8)	TM	O-XYLENE	36.13	13009423	48.365	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.57	9577986	49.035	ug/l	0.0
10)	TM	NAPHTHALENE	45.15	5395085	51.340	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	11111618	47.937	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	41926541	272.373	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	41926541	272.373	ug/l	0.0
17)	TM	N-PENTANE #2	11.15	5755125	44.099	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.27	6900541	46.300	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.34	4844149	48.650	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.88	7521962	50.801	ug/l	0.0
21)	TM	BENZENE #2	23.23	8299320	46.544	ug/l	0.0
22)	TM	TOLUENE #2	29.33	8605444	47.300	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	47115494	378.259	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	47115494	378.259	ug/l	0.0
25)	TM	N-NONANE #2	33.36	4915715	55.995	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.17	7928003	47.540	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.44	14294756	95.078	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:11 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.13	7286476	49.034	ug/l	0.0
29)	TM	N-DECANE #2	38.15	3029668	51.885	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.57	5021349	47.434	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.75	4441894	59.412	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.15	2136770	52.370	ug/l	0.0

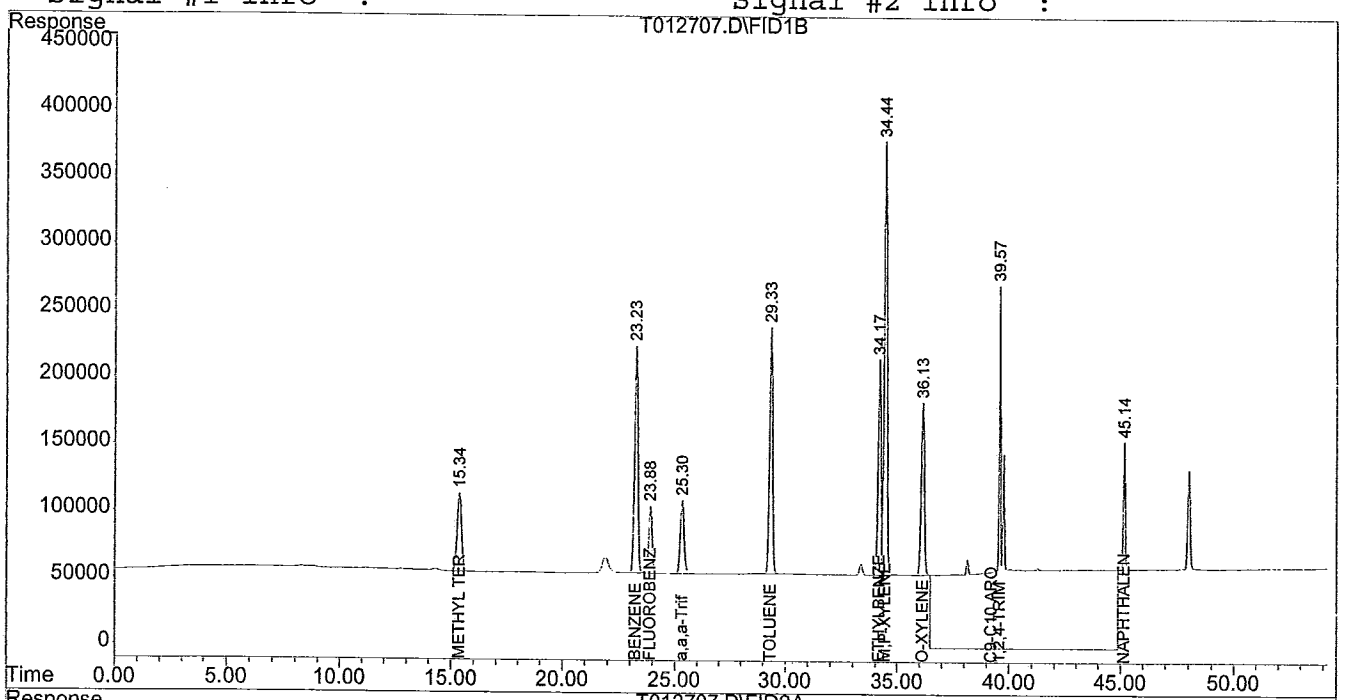
(f)=RT Delta > 1/2 Window (m)=manual int.

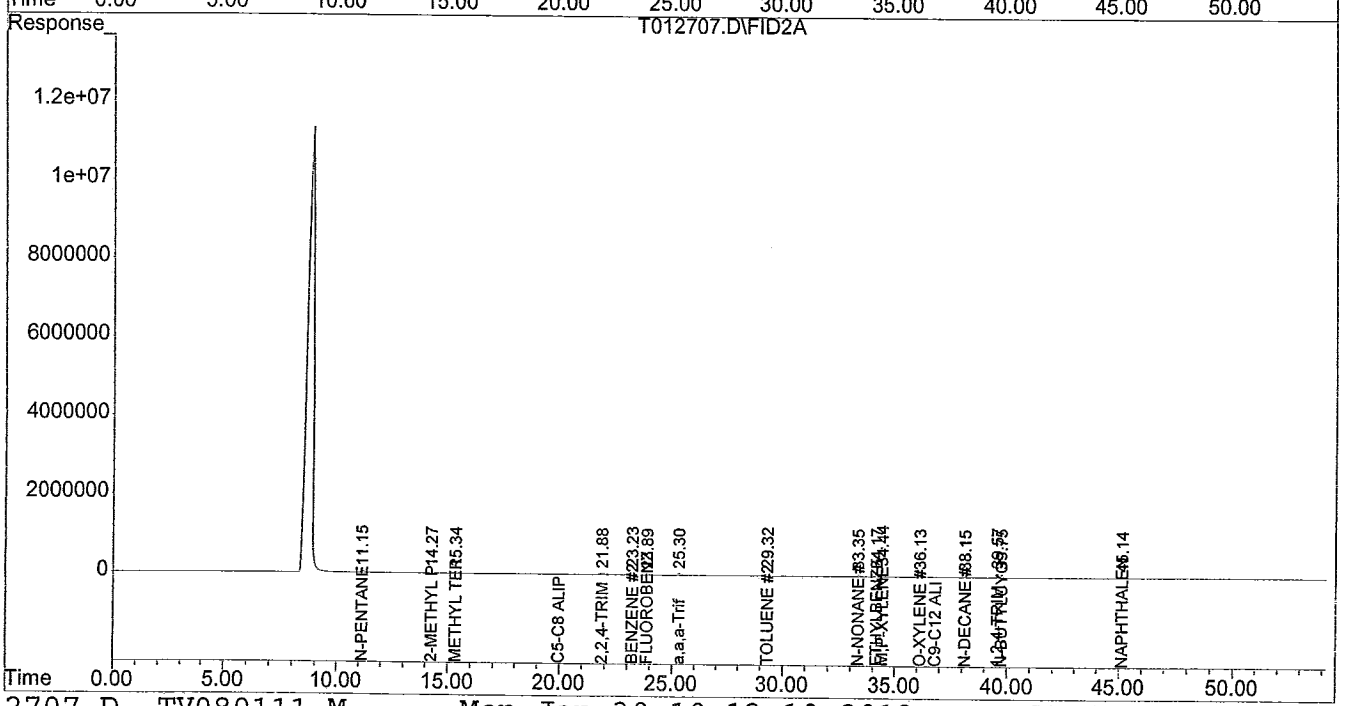
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:11 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

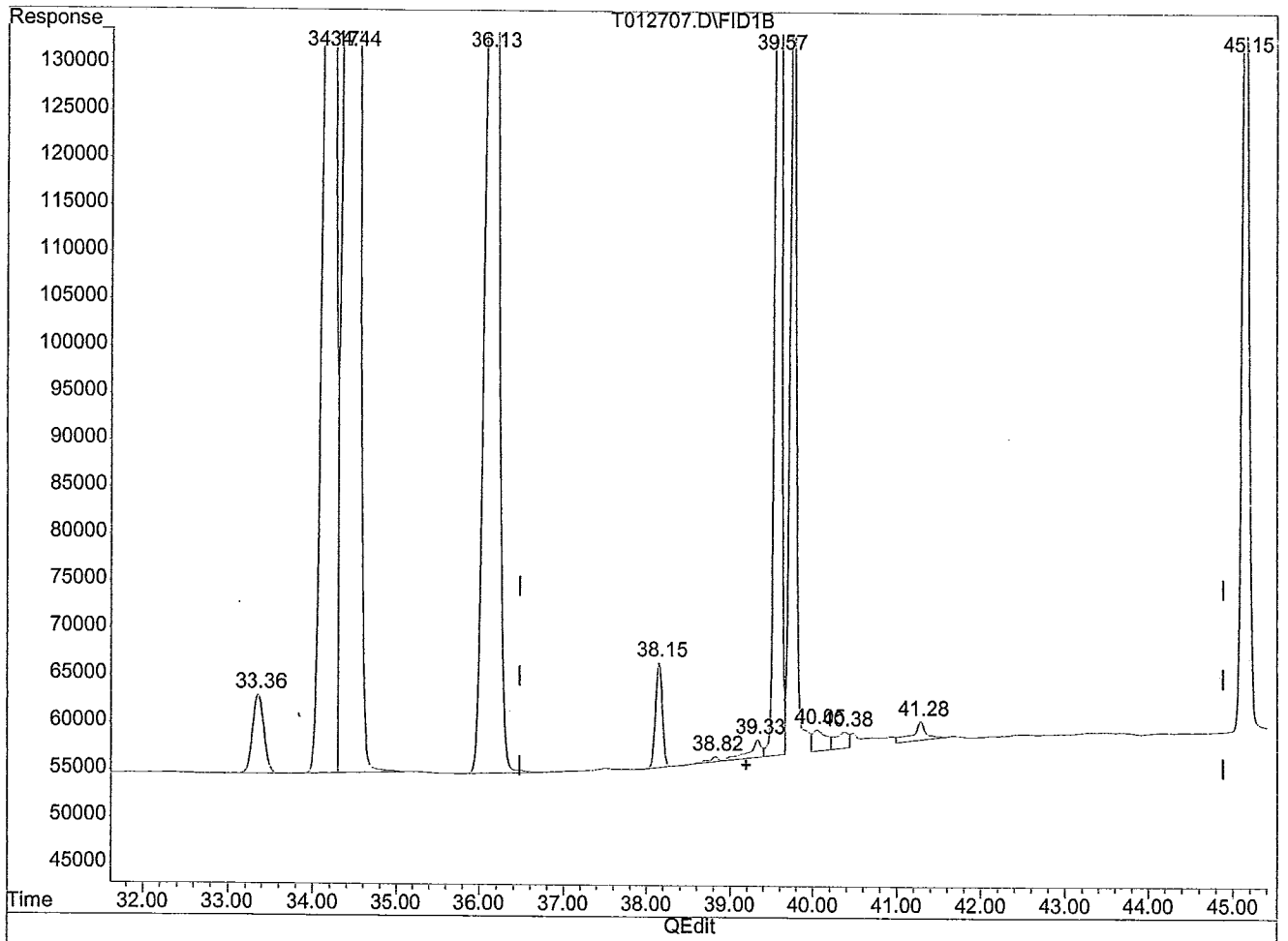




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 21:22 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 47.937ug/l m

response 11111618

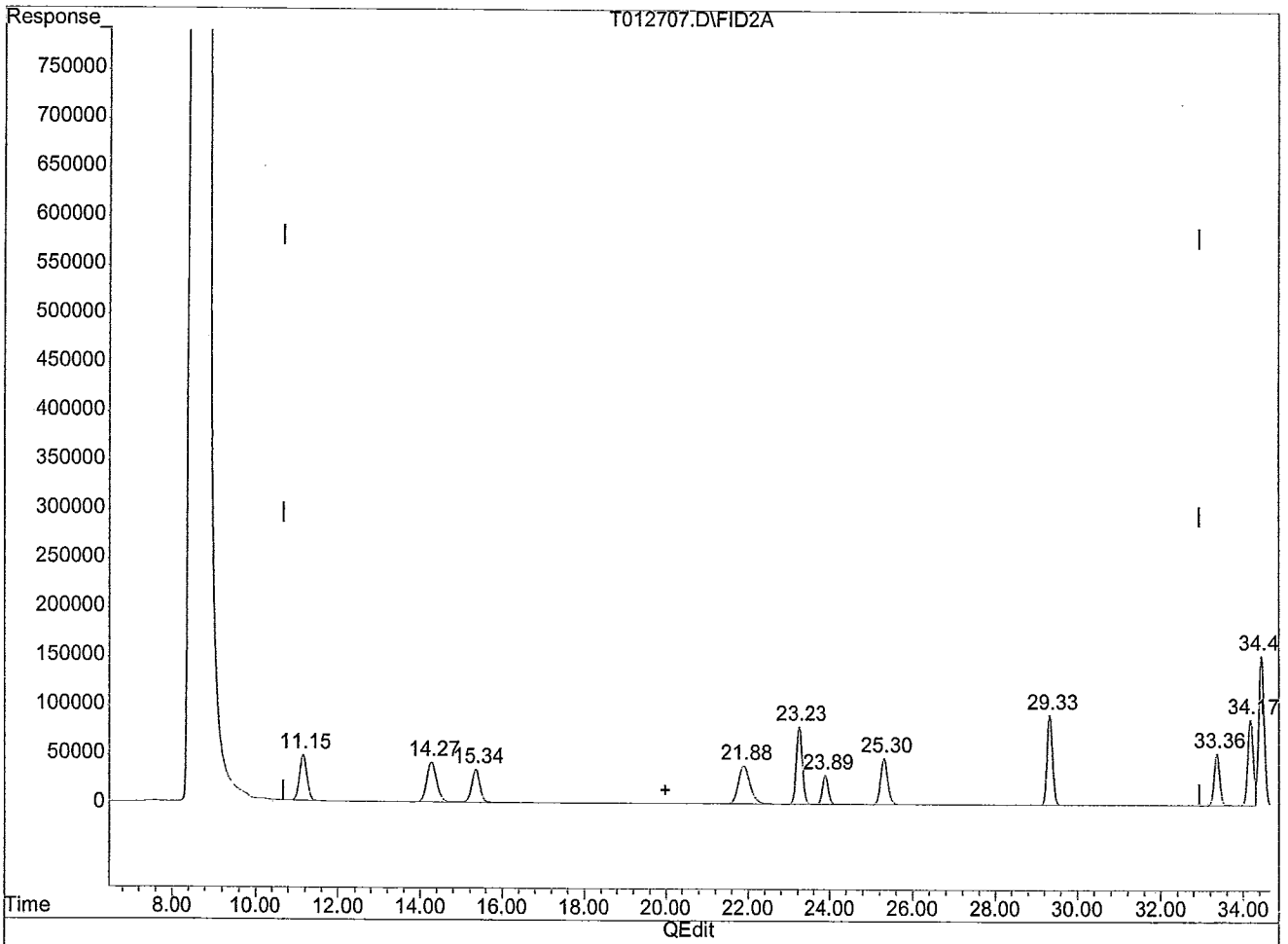
(+) = Expected Retention Time

T012707.D TV080111.M Mon Jan 30 10:11:43 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 21:22 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 272.373ug/l m

response 41926541

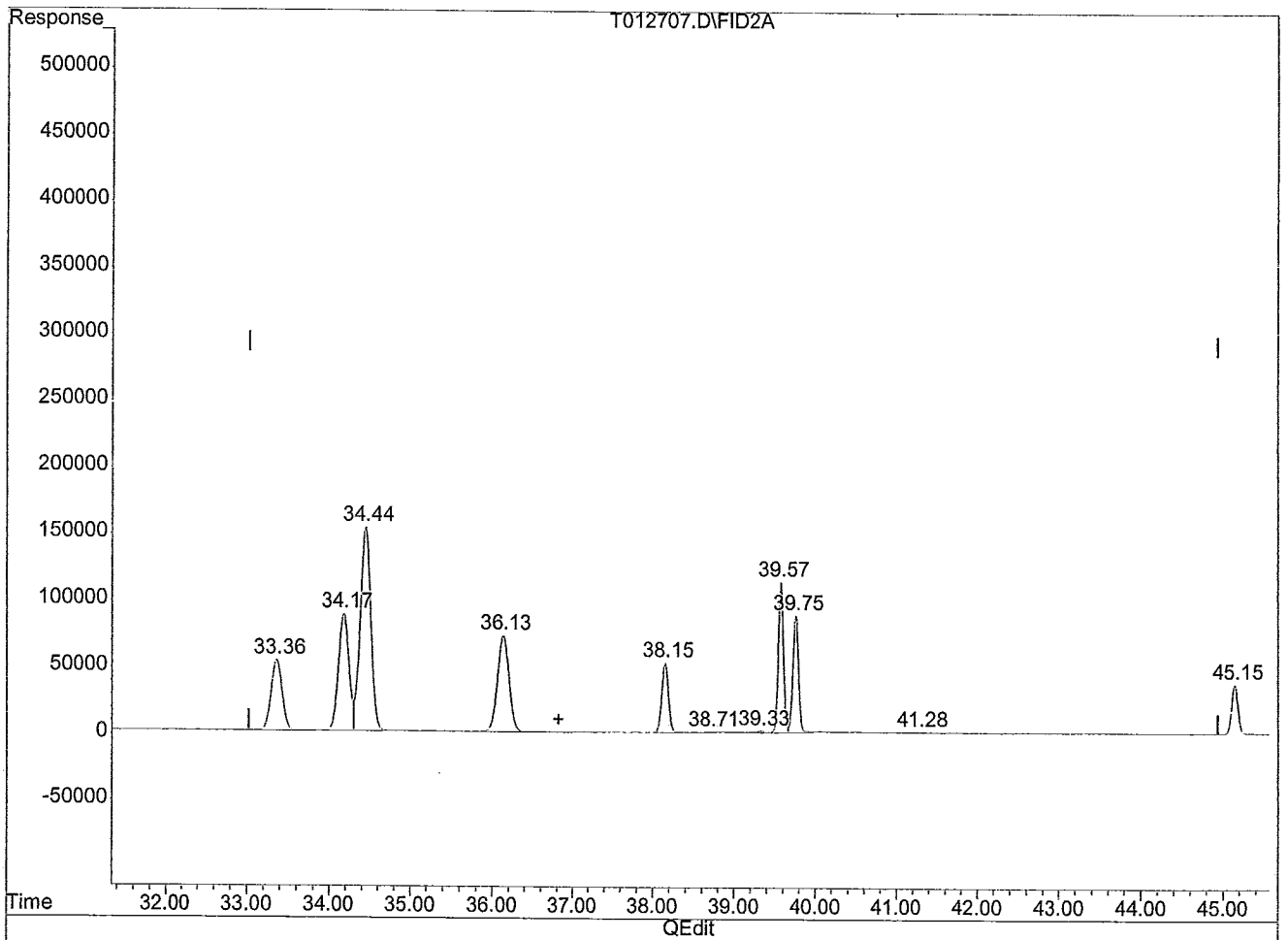
(+) = Expected Retention Time

T012707.D TV080111.M Mon Jan 30 10:11:50 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012707.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0127\T012707.D\FID2A.CH
Acq On : 27 Jan 2012 20:27 Operator: MKA
Sample : CTRVPH 1/27 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 21:22 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 378.259ug/l m

response 47115494

(+) = Expected Retention Time

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	61	0.08
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.661	-2.2	60	0.07
3	TM	BENZENE	1.480	1.435	3.0	60	0.10
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.513	-5.1	64	0.06
5	TM	TOLUENE	1.379	1.417	-2.8	62	0.06
6	TM	ETHYLBENZENE	1.149	1.199	-4.4	64	0.07
7	TM	M,P-XYLENE	1.245	1.267	-1.8	65	0.07
8	TM	O-XYLENE	1.028	1.081	-5.2	64	0.08
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.828	-11.0	70	0.04
10	TM	NAPHTHALENE	0.402	0.504	-25.4#	79	0.07
11	HM	C9-C10 AROMATICS	0.886	0.976	-10.2	71	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	97	0.08
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.742	-5.5	101	0.08
15	HM	C5-C8 ALIPHATICS #2	1.007	0.925	8.1	90	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.925	8.1	90	0.00
17	TM	N-PENTANE #2	0.854	0.675	21.0	74	0.23
18	TM	2-METHYL PENTANE #2	0.975	0.896	8.1	86	0.17
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.640	1.7	93	0.07
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.009	-4.2	94	0.13
21	TM	BENZENE #2	1.166	1.136	2.6	96	0.09
22	TM	TOLUENE #2	1.190	1.194	-0.3	98	0.06
23	HM	C9-C12 ALIPHATICS #2	0.815	0.824	-1.1	105	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.824	-1.1	105	0.00
25	TM	N-NONANE #2	0.574	0.655	-14.1	102	0.08
26	TM	ETHYLBENZENE #2	1.091	1.112	-1.9	101	0.07
27	TM	M,P-XYLENE #2	0.983	1.013	-3.1	102	0.07
28	TM	O-XYLENE #2	0.972	1.024	-5.3	103	0.08
29	TM	N-DECANE #2	0.382	0.407	-6.5	113	0.05
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.724	-4.6	108	0.04
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.592	-21.1	113	0.04
32	TM	NAPHTHALENE #2	0.267	0.320	-19.9	121	0.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:48 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.96	5194095	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.96	3069425	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.36	6658642	52.581	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 105%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.36	5690447	52.750	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 106%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.42	8584899	51.078	ug/l	0.0
3)	TM	BENZENE	23.31	18635620	48.489	ug/l	0.0
5)	TM	TOLUENE	29.38	18394234	51.370	ug/l	0.0
6)	TM	ETHYLBENZENE	34.23	15570101	52.184	ug/l	0.0
7)	TM	M,P-XYLENE	34.50	32914817	101.786	ug/l	0.0
8)	TM	O-XYLENE	36.20	14036700	52.591	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.60	10749730	55.462	ug/l	0.0
10)	TM	NAPHTHALENE	45.19	6548235	62.798	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	12667643	55.075	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	42587894	275.639	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	42587894	275.639	ug/l	0.0
17)	TM	N-PENTANE #2	11.24f	5182639	39.565	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.36	6872869	45.942	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.42	4912706	49.154	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.96	7739065	52.073	ug/l	0.0
21)	TM	BENZENE #2	23.31	8716231	48.700	ug/l	0.0
22)	TM	TOLUENE #2	29.38	9164384	50.185	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	50567271	404.458	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	50567271	404.458	ug/l	0.0
25)	TM	N-NONANE #2	33.41	5028757	57.069	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.23	8531961	50.970	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.50	15548496	103.032	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:48 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

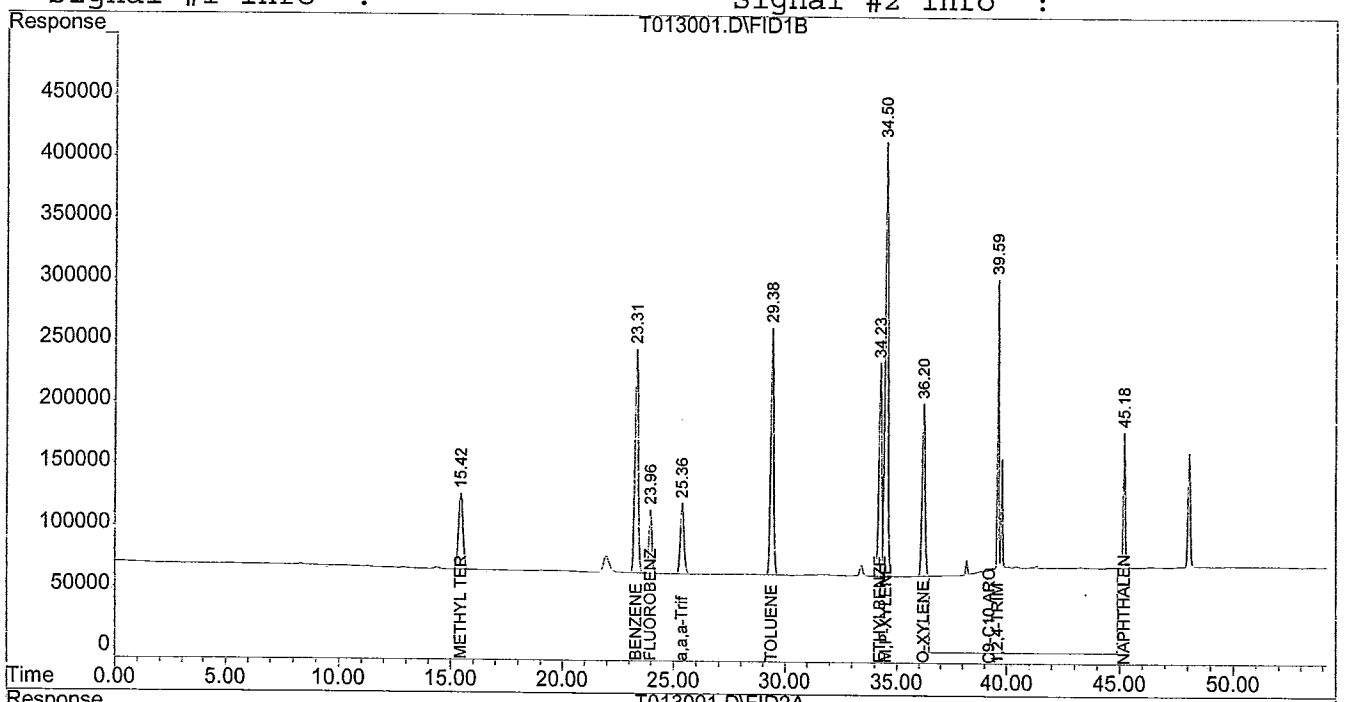
		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.20	7854173	52.658	ug/l	0.0
29)	TM	N-DECANE #2	38.18	3126966	53.352	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.60	5555005	52.280	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.78	4544260	60.555	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.19	2458874	60.039	ug/l	0.0

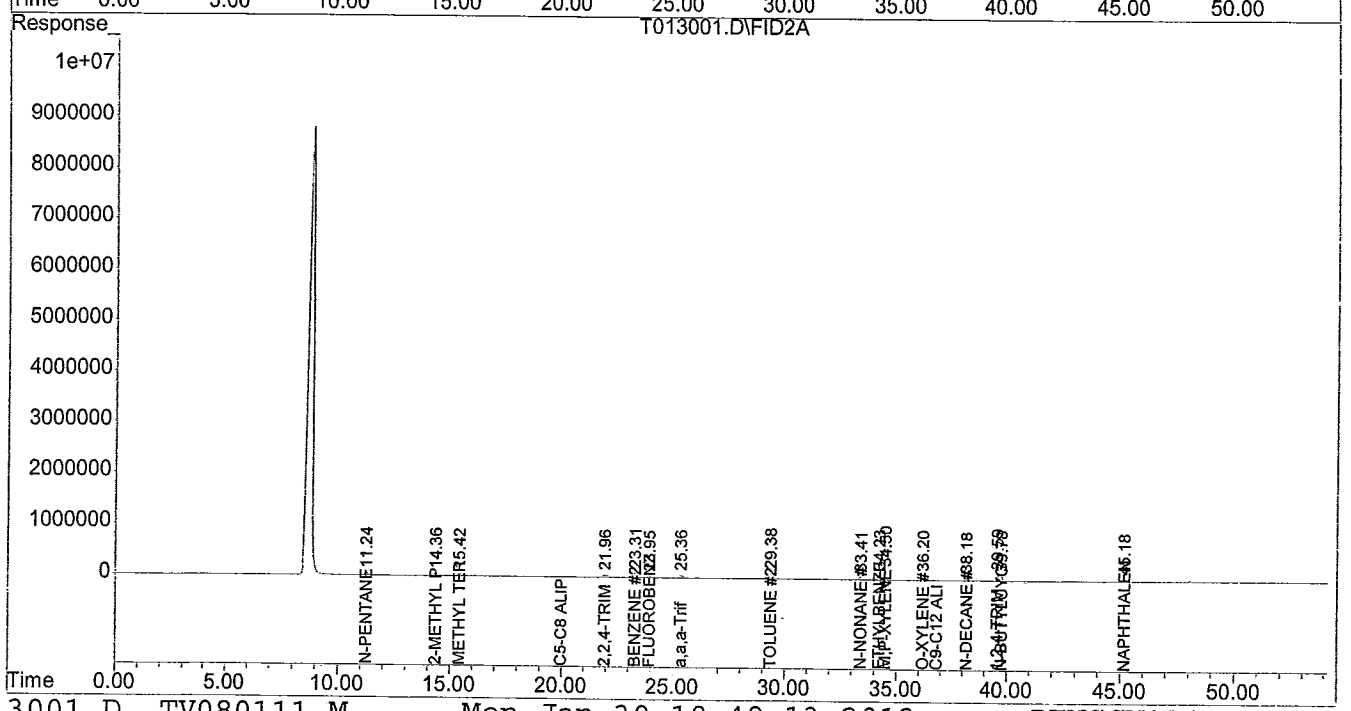
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:48 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

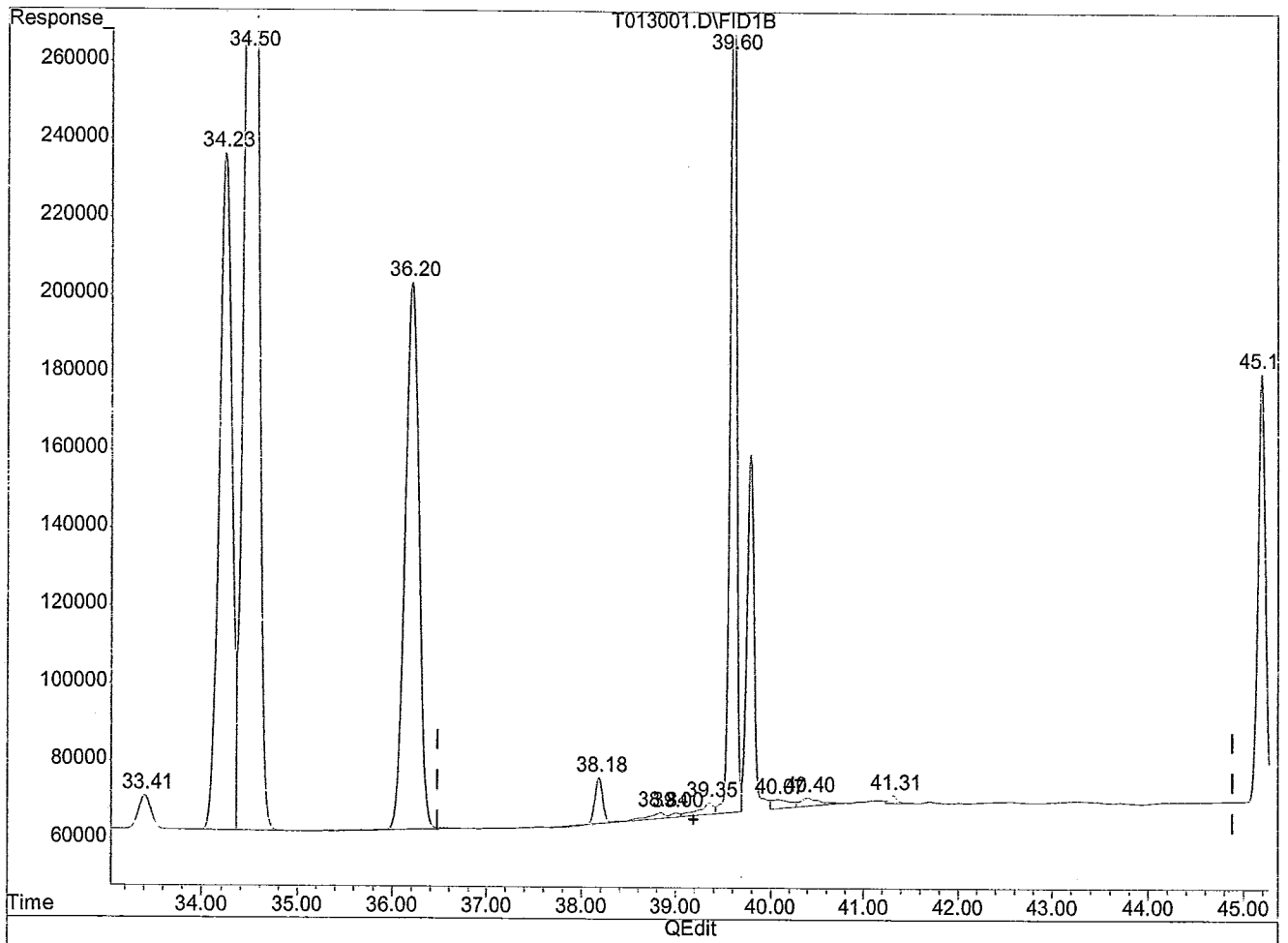




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:31 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 55.075ug/l m

response 12667643

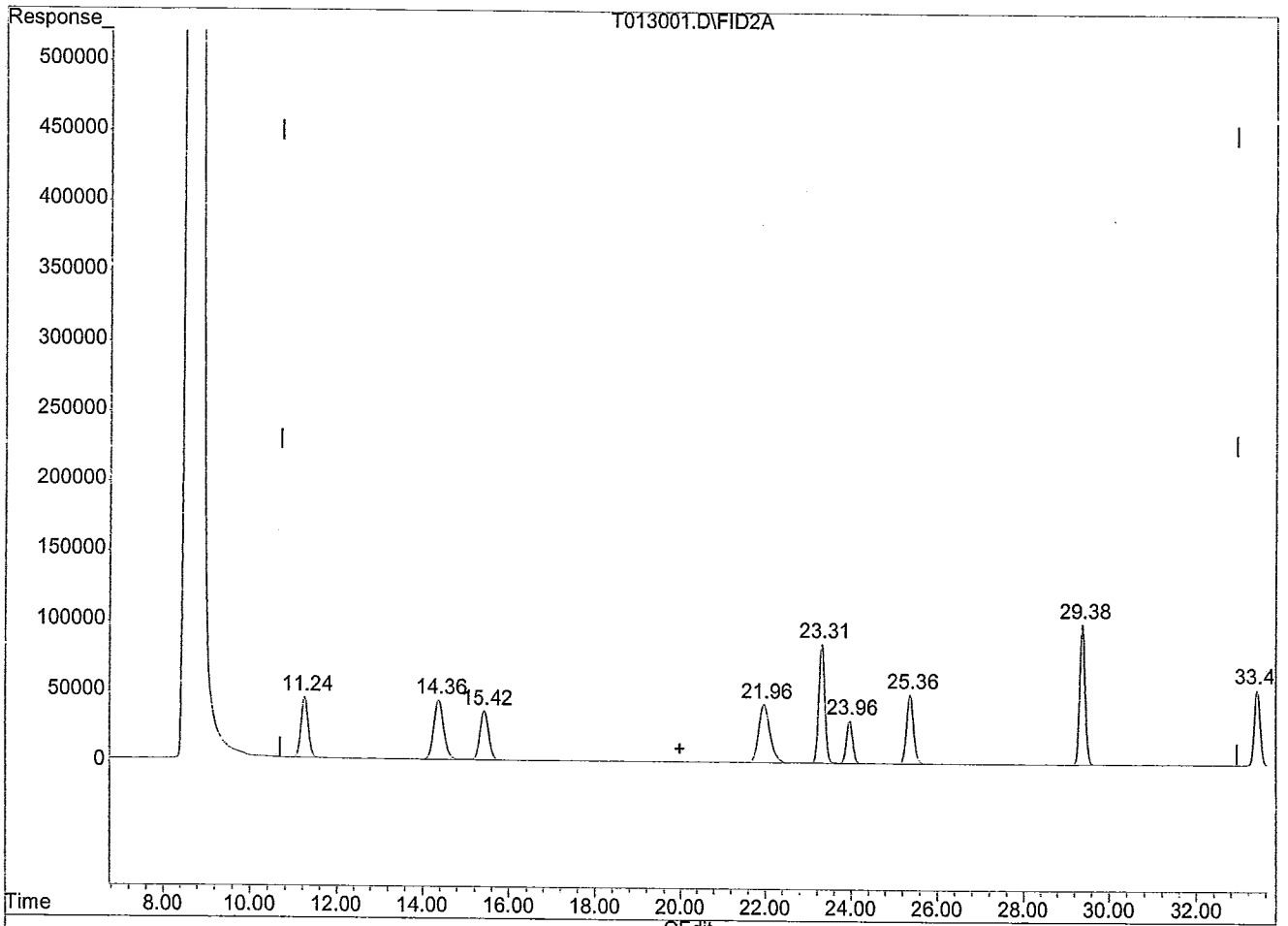
(+) = Expected Retention Time

T013001.D TV080111.M Mon Jan 30 10:48:39 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH Vial: 7
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38 Operator: MKA
Sample : CTRVPH 1/30 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:31 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 275.639ug/l m

response 42587894

(+) = Expected Retention Time

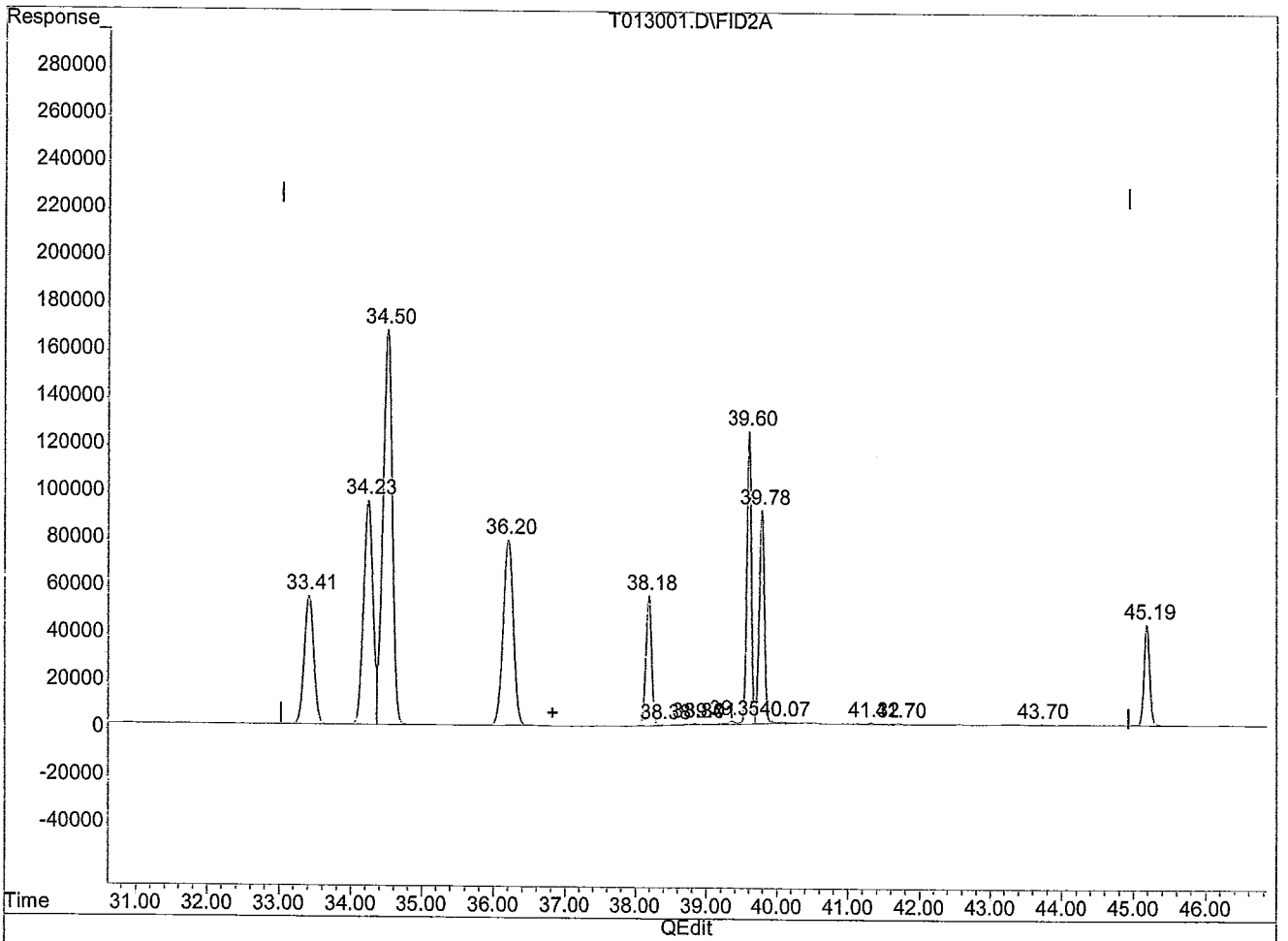
T013001.D TV080111.M Mon Jan 30 10:48:47 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013001.D\FID1B.CH
Signal #2 : T:\DATA\T0130\T013001.D\FID2A.CH
Acq On : 30 Jan 2012 9:38
Sample : CTRVPH 1/30
Misc : WATER DF=1
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:31 2012 Quant Results File: TV080111.RES

Vial: 7
Operator: MKA
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 404.458ug/l m

response 50567271

(+) = Expected Retention Time

T013001.D TV080111.M Mon Jan 30 10:48:57 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	55	0.07
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.670	-3.6	55	0.05
3	TM	BENZENE	1.480	1.423	3.9	54	0.09
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.502	-2.9	56	0.05
5	TM	TOLUENE	1.379	1.397	-1.3	55	0.06
6	TM	ETHYLBENZENE	1.149	1.173	-2.1	56	0.07
7	TM	M,P-XYLENE	1.245	1.234	0.9	57	0.07
8	TM	O-XYLENE	1.028	1.066	-3.7	57	0.08
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.779	-4.4	59	0.04
10	TM	NAPHTHALENE	0.402	0.435	-8.2	61	0.07
11	HM	C9-C10 AROMATICS	0.886	0.835	5.8	55	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	88	0.07
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.736	-4.7	91	0.08
15	HM	C5-C8 ALIPHATICS #2	1.007	0.939	6.8	83	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.939	6.8	83	0.00
17	TM	N-PENTANE #2	0.854	0.677	20.7	67	0.19
18	TM	2-METHYL PENTANE #2	0.975	0.911	6.6	79	0.14
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.673	-3.4	89	0.05
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.069	-10.4	91	0.12
21	TM	BENZENE #2	1.166	1.130	3.1	87	0.08
22	TM	TOLUENE #2	1.190	1.176	1.2	88	0.06
23	HM	C9-C12 ALIPHATICS #2	0.815	0.798	2.1	92	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.798	2.1	92	0.00
25	TM	N-NONANE #2	0.574	0.621	-8.2	88	0.08
26	TM	ETHYLBENZENE #2	1.091	1.086	0.5	89	0.07
27	TM	M,P-XYLENE #2	0.983	0.977	0.6	90	0.07
28	TM	O-XYLENE #2	0.972	1.010	-3.9	92	0.08
29	TM	N-DECANE #2	0.382	0.373	2.4	94	0.05
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.696	-0.6	95	0.04
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.601	-22.9	104	0.04
32	TM	NAPHTHALENE #2	0.267	0.292	-9.4	100	0.07

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 31 11:11 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.95	4692274	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.95	2792803	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.36	5883753	51.431	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 103%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.36	5137867	52.345	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 105%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.40	7863659	51.791	ug/l	0.0
3)	TM	BENZENE	23.30	16697025	48.092	ug/l	0.0
5)	TM	TOLUENE	29.38	16386392	50.657	ug/l	0.0
6)	TM	ETHYLBENZENE	34.23	13759282	51.047	ug/l	0.0
7)	TM	M,P-XYLENE	34.50	28955799	99.119	ug/l	0.0
8)	TM	O-XYLENE	36.20	12499609	51.840	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.60	9143156	52.218	ug/l	0.0
10)	TM	NAPHTHALENE	45.19	5098433	54.124	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	9795661	47.143	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	39348417	279.897	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	39348417	279.897	ug/l	0.0
17)	TM	N-PENTANE #2	11.21f	4727114	39.662	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.33	6363057	46.747	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.40	4697654	51.658	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.95	7462577	55.186	ug/l	0.0
21)	TM	BENZENE #2	23.30	7890246	48.452	ug/l	0.0
22)	TM	TOLUENE #2	29.38	8207769	49.398	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	44574657	391.840	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	44574657	391.840	ug/l	0.0
25)	TM	N-NONANE #2	33.41	4335305	54.073	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.23	7583357	49.791	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.50	13644455	99.370	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 31 11:11 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.20	7053597	51.974	ug/l	0.0
29) TM	N-DECANE #2	38.18	2600827	48.770	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.60	4862593	50.296	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.78	4195974	61.452	ug/l	0.0
32) TM	NAPHTHALENE #2	45.19	2040052	54.747	ug/l	0.0

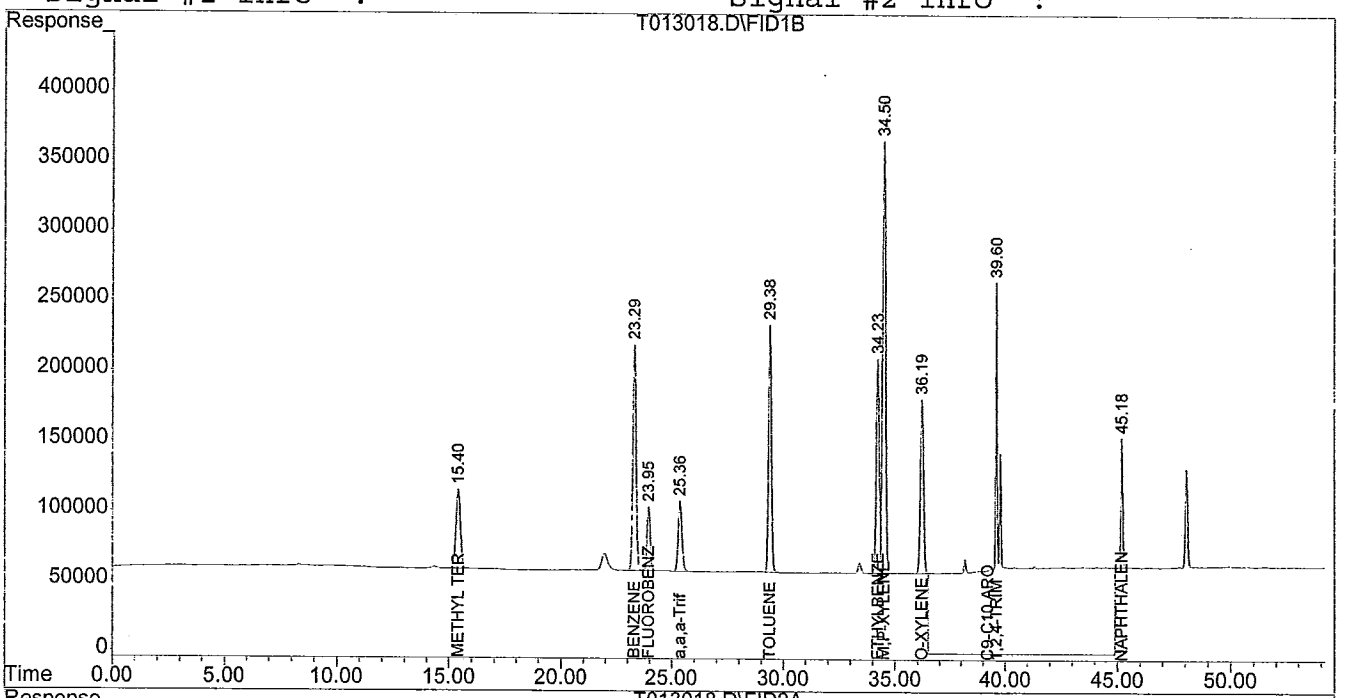
(f)=RT Delta > 1/2 Window (m)=manual int.

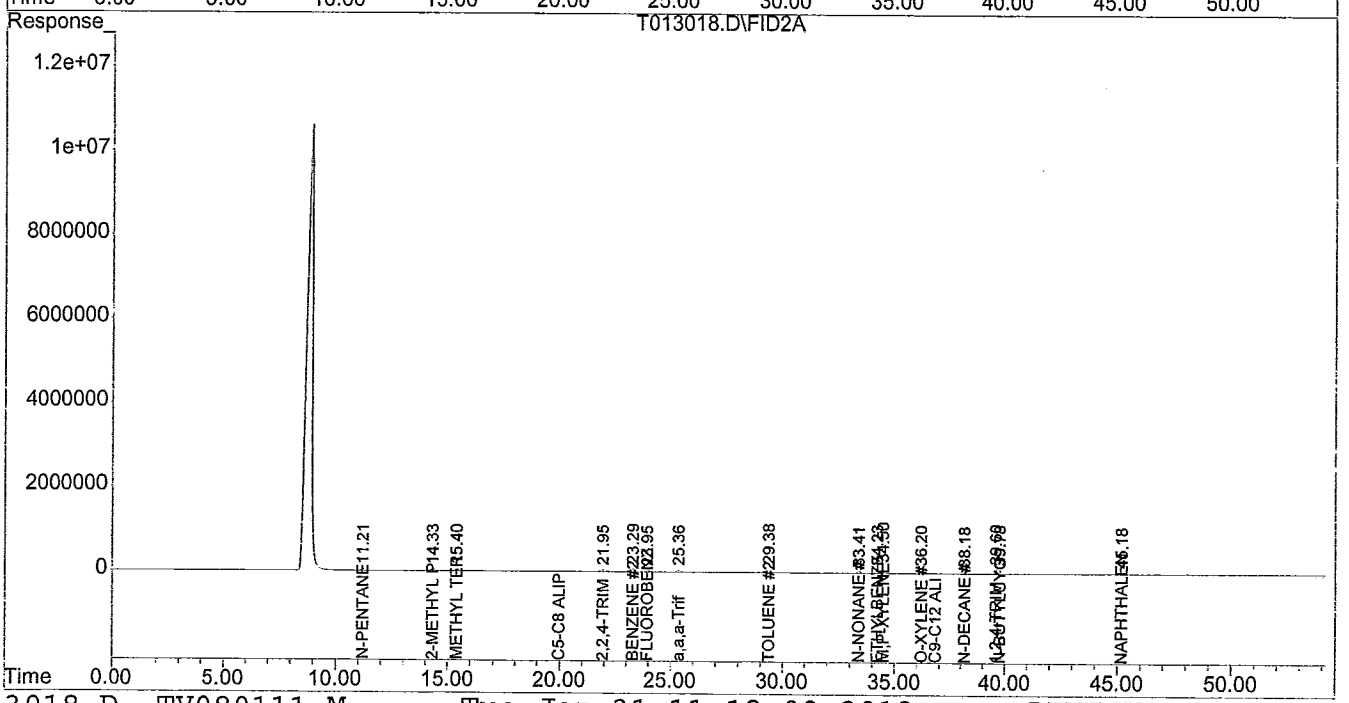
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 31 11:11 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

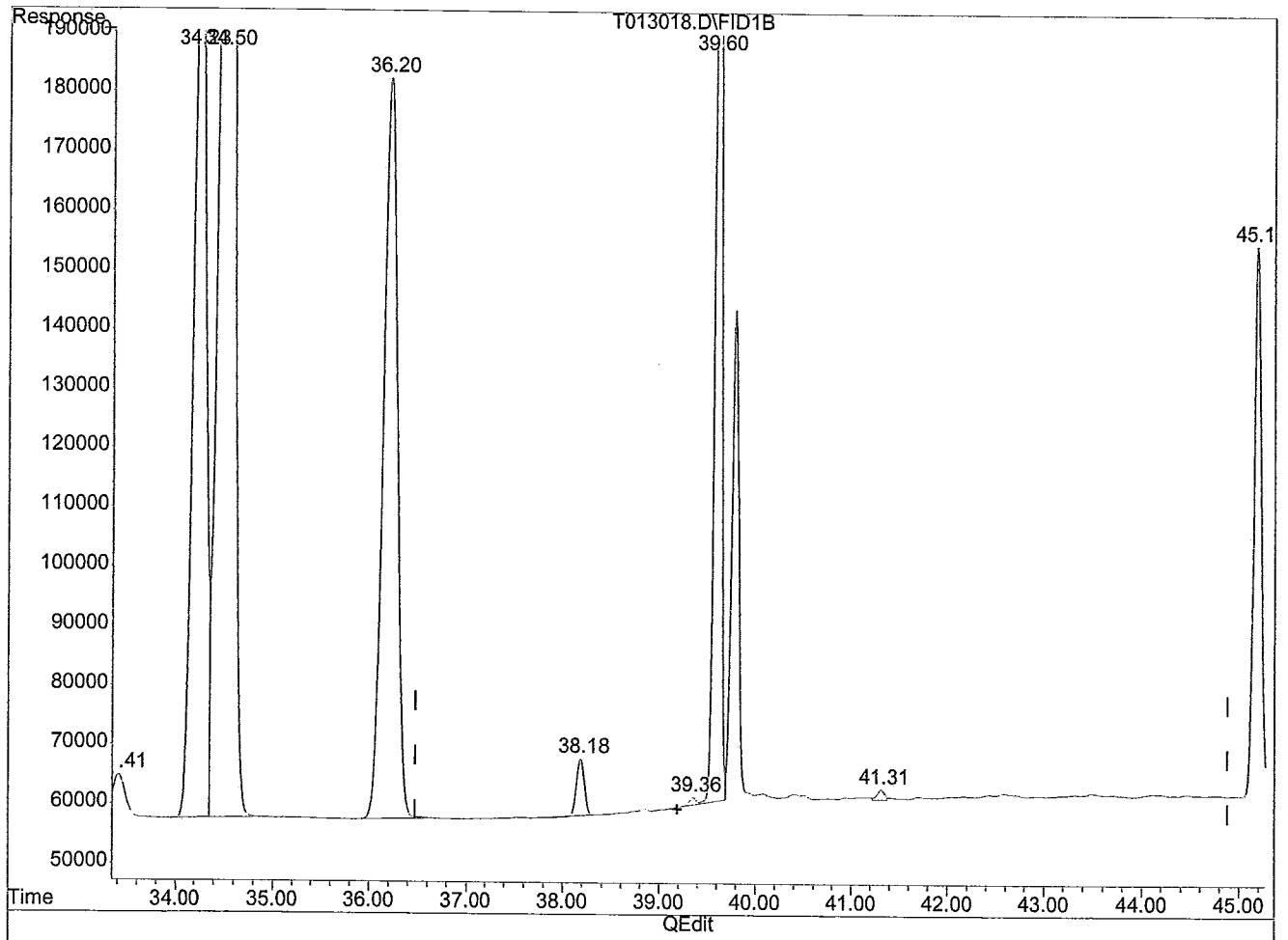




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 31 11:10 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 47.143ug/l m

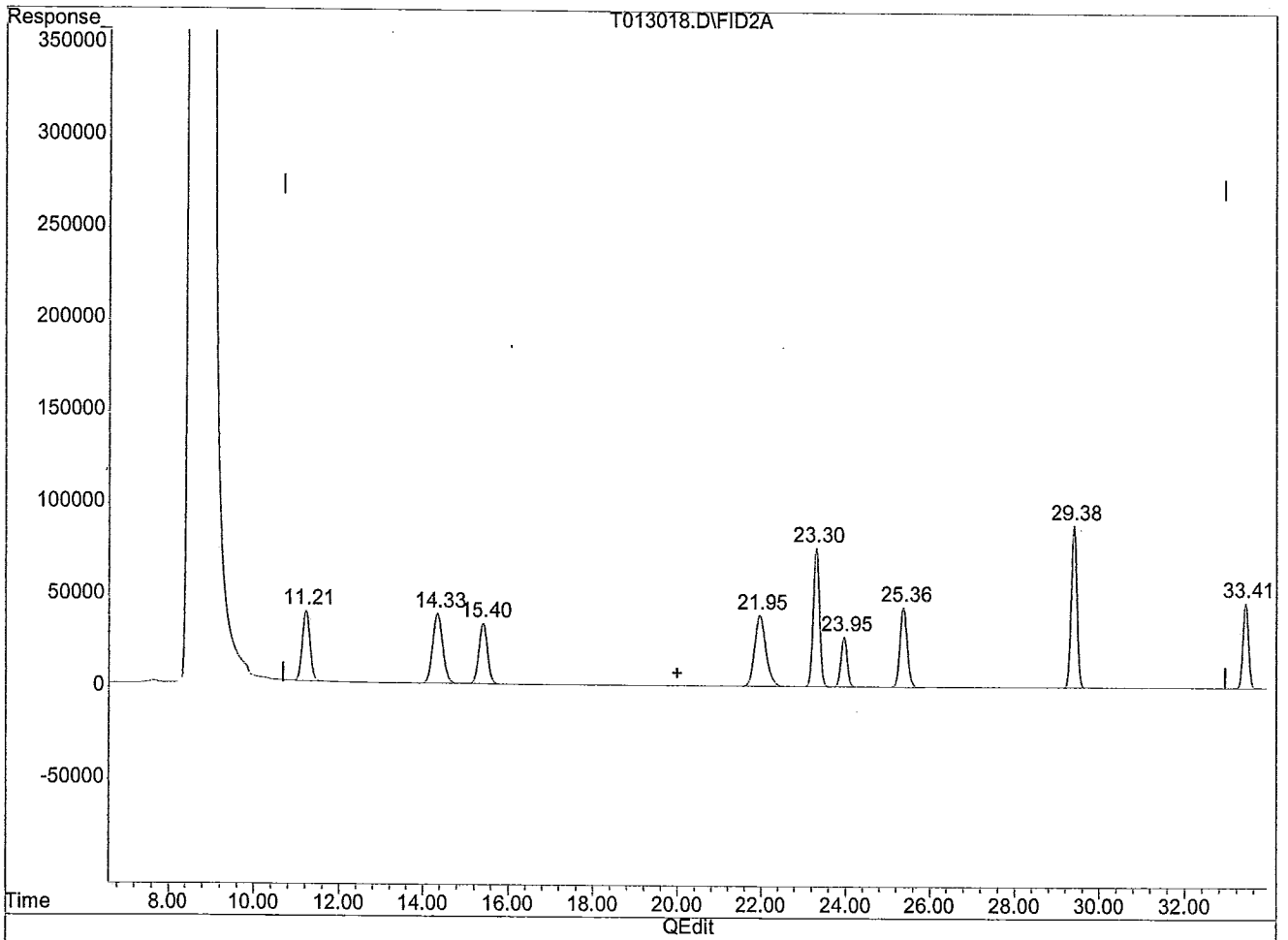
response 9795661

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07 Operator: MKA
Sample : CTRVPH 1/30 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 31 11:10 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 279.897ug/l m

response 39348417

(+) = Expected Retention Time

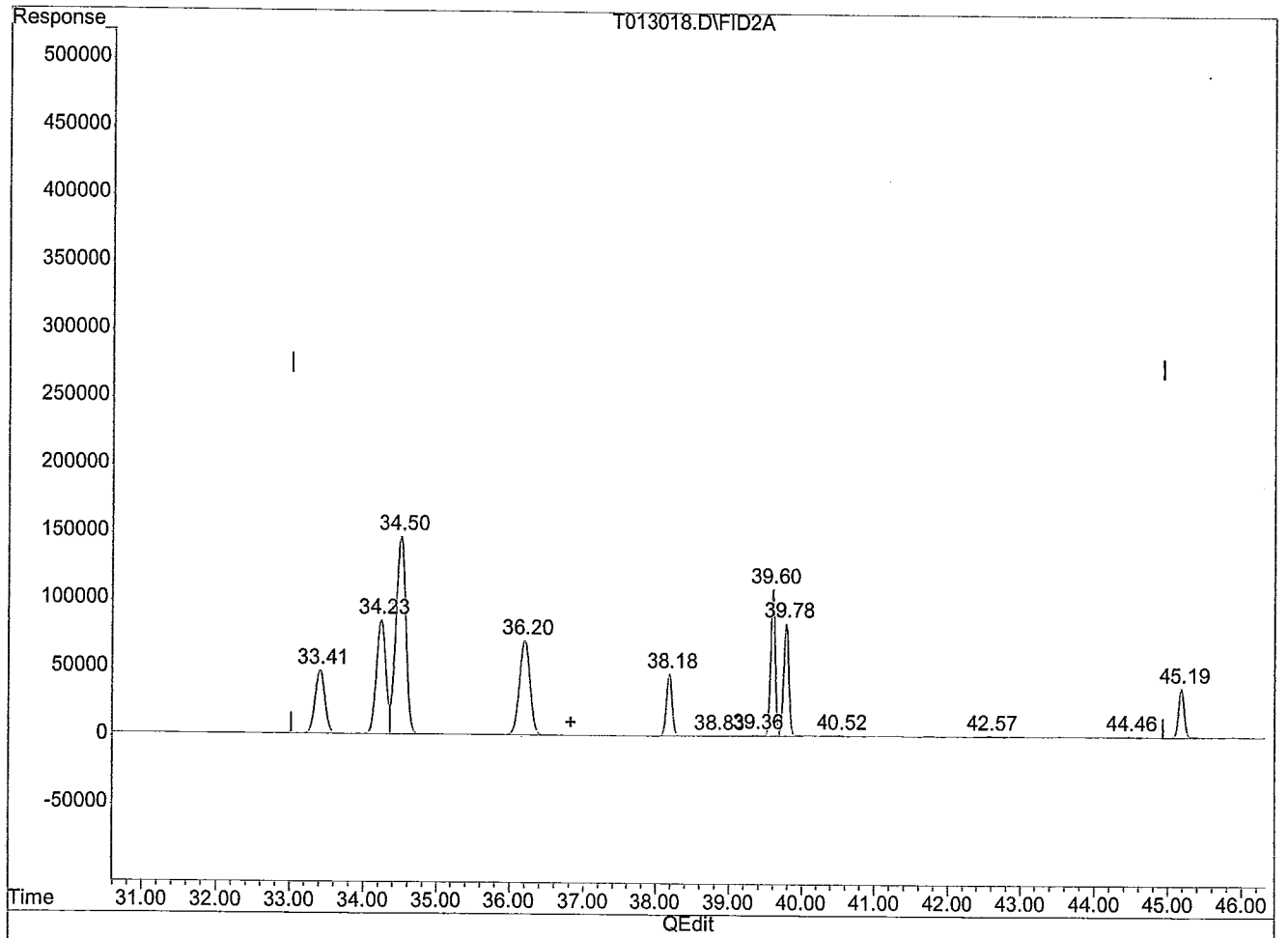
T013018.D TV080111.M Tue Jan 31 11:11:41 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013018.D\FID1B.CH
Signal #2 : T:\DATA\T0130\T013018.D\FID2A.CH
Acq On : 31 Jan 2012 4:07
Sample : CTRVPH 1/30 END
Misc : WATER DF=1
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 31 11:11 2012 Quant Results File: TV080111.RES

Vial: 8
Operator: MKA
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 391.840ug/l m

response 44574657

(+) = Expected Retention Time

T013018.D TV080111.M Tue Jan 31 11:33:23 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	63	0.04
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.389	39.9#	36#	0.01
3	TM	BENZENE	1.480	1.353	8.6	58	0.05
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.506	-3.7	65	0.02
5	TM	TOLUENE	1.379	1.325	3.9	60	0.03
6	TM	ETHYLBENZENE	1.149	1.140	0.8	62	0.04
7	TM	M,P-XYLENE	1.245	1.205	3.2	64	0.04
8	TM	O-XYLENE	1.028	1.025	0.3	63	0.05
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.800	-7.2	69	0.02
10	TM	NAPHTHALENE	0.402	0.317	21.1	51	0.05
11	HM	C9-C10 AROMATICS	0.886	0.898	-1.4	67	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	98	0.04
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.742	-5.5	103	0.05
15	HM	C5-C8 ALIPHATICS #2	1.007	0.857	14.9	85	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.857	14.9	85	0.00
17	TM	N-PENTANE #2	0.854	0.652	23.7	72	0.16
18	TM	2-METHYL PENTANE #2	0.975	0.870	10.8	85	0.11
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.394	39.5#	58	0.00
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.001	-3.4	95	0.08
21	TM	BENZENE #2	1.166	1.085	6.9	93	0.05
22	TM	TOLUENE #2	1.190	1.140	4.2	95	0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.846	-3.8	109	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.846	-3.8	109	0.00
25	TM	N-NONANE #2	0.574	0.721	-25.6#	114	0.05
26	TM	ETHYLBENZENE #2	1.091	1.070	1.9	99	0.04
27	TM	M,P-XYLENE #2	0.983	0.975	0.8	100	0.04
28	TM	O-XYLENE #2	0.972	0.985	-1.3	100	0.04
29	TM	N-DECANE #2	0.382	0.490	-28.3#	138	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.732	-5.8	112	0.02
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.677	-38.4#	131	0.03
32	TM	NAPHTHALENE #2	0.267	0.213	20.2	82	0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 1 11:37 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.92	5352040	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.92	3125507	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	6768963	51.875	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 104%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.33	5801139	52.812	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 106%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.36	5207126	30.067	ug/l	0.0
3)	TM	BENZENE	23.26	18107787	45.726	ug/l	0.0
5)	TM	TOLUENE	29.35	17725646	48.042	ug/l	0.0
6)	TM	ETHYLBENZENE	34.20	15248672	49.599	ug/l	0.0
7)	TM	M,P-XYLENE	34.47	32243477	96.767	ug/l	0.0
8)	TM	O-XYLENE	36.16	13710908	49.854	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	10708511	53.619	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	4245936	39.517	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	12021209	50.722	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	40171320	255.333	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	40171320	255.333	ug/l	0.0
17)	TM	N-PENTANE #2	11.17	5092442	38.179	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.30	6799968	44.639	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.36	3074985	30.215	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.91	7818579	51.664	ug/l	0.0
21)	TM	BENZENE #2	23.26	8478687	46.523	ug/l	0.0
22)	TM	TOLUENE #2	29.35	8906659	47.898	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	52857172	415.188	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	52857172	415.188	ug/l	0.0
25)	TM	N-NONANE #2	33.38	5634766	62.799	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.20	8361871	49.058	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	15240792	99.180	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 1 11:37 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.16	7696590	50.675	ug/l	0.0
29) TM	N-DECANE #2	38.17	3825000	64.091	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5721105	52.877	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.77	5290358	69.232	ug/l	0.0
32) TM	NAPHTHALENE #2	45.16	1666793	39.969	ug/l	0.0

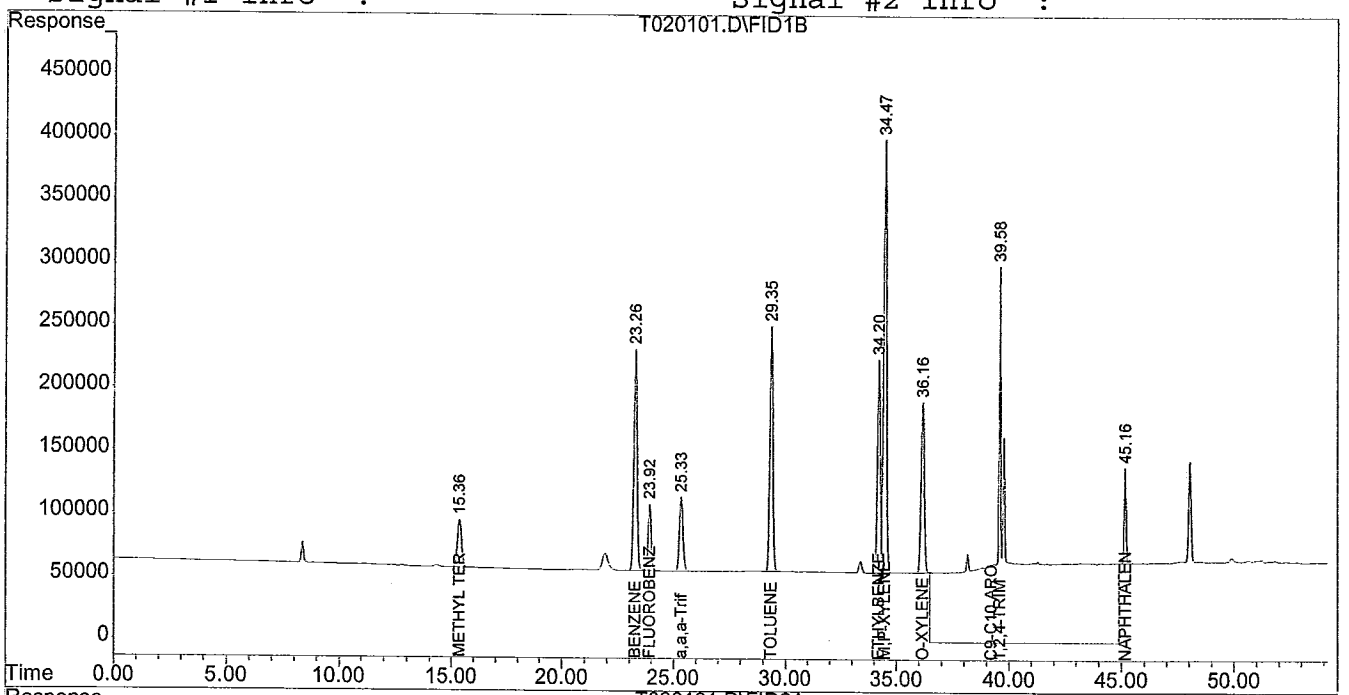
(f)=RT Delta > 1/2 Window (m)=manual int.

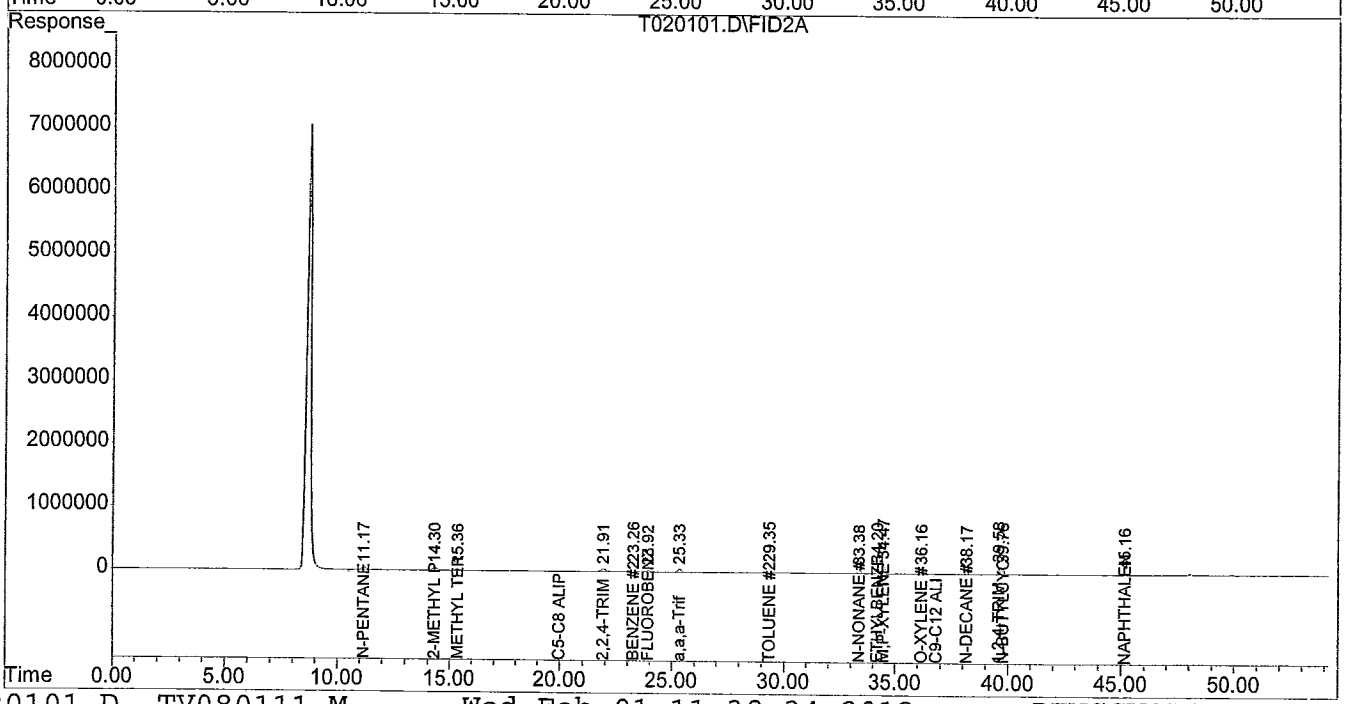
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 11:37 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

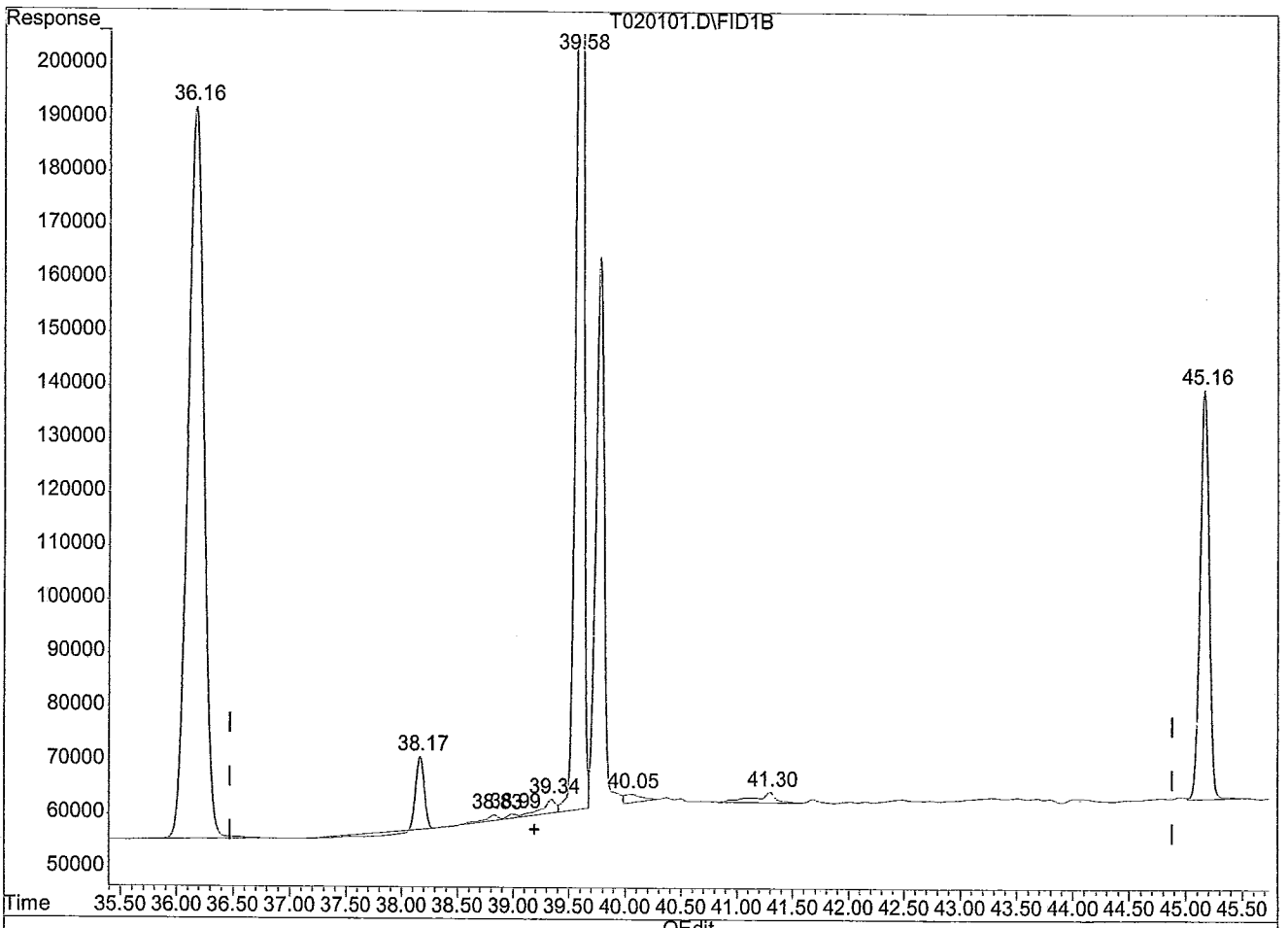




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 11:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 50.722ug/l m

response 12021209

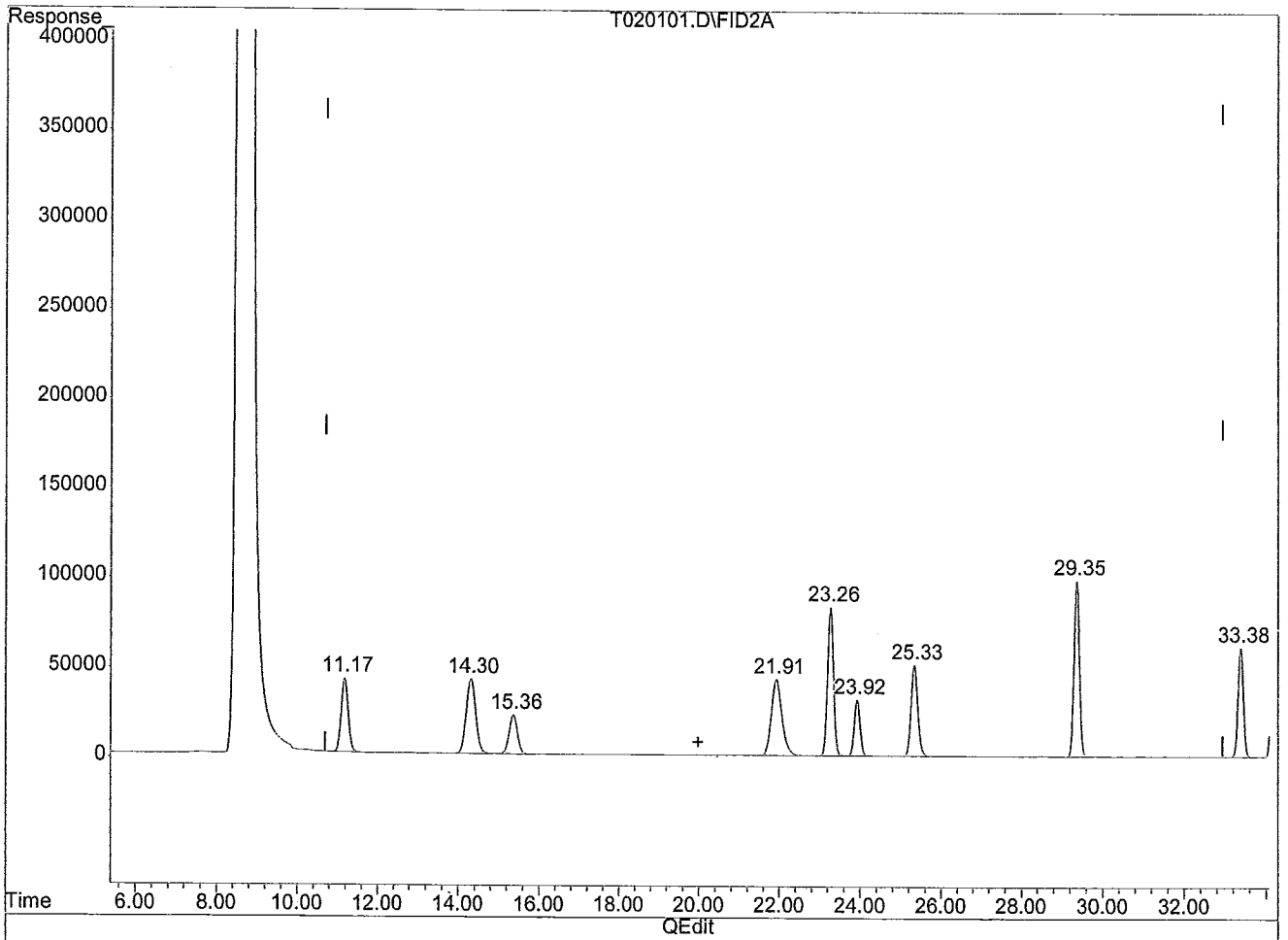
(+) = Expected Retention Time

T020101.D TV080111.M Wed Feb 01 11:37:48 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 11:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 255.333ug/l m

response 40171320

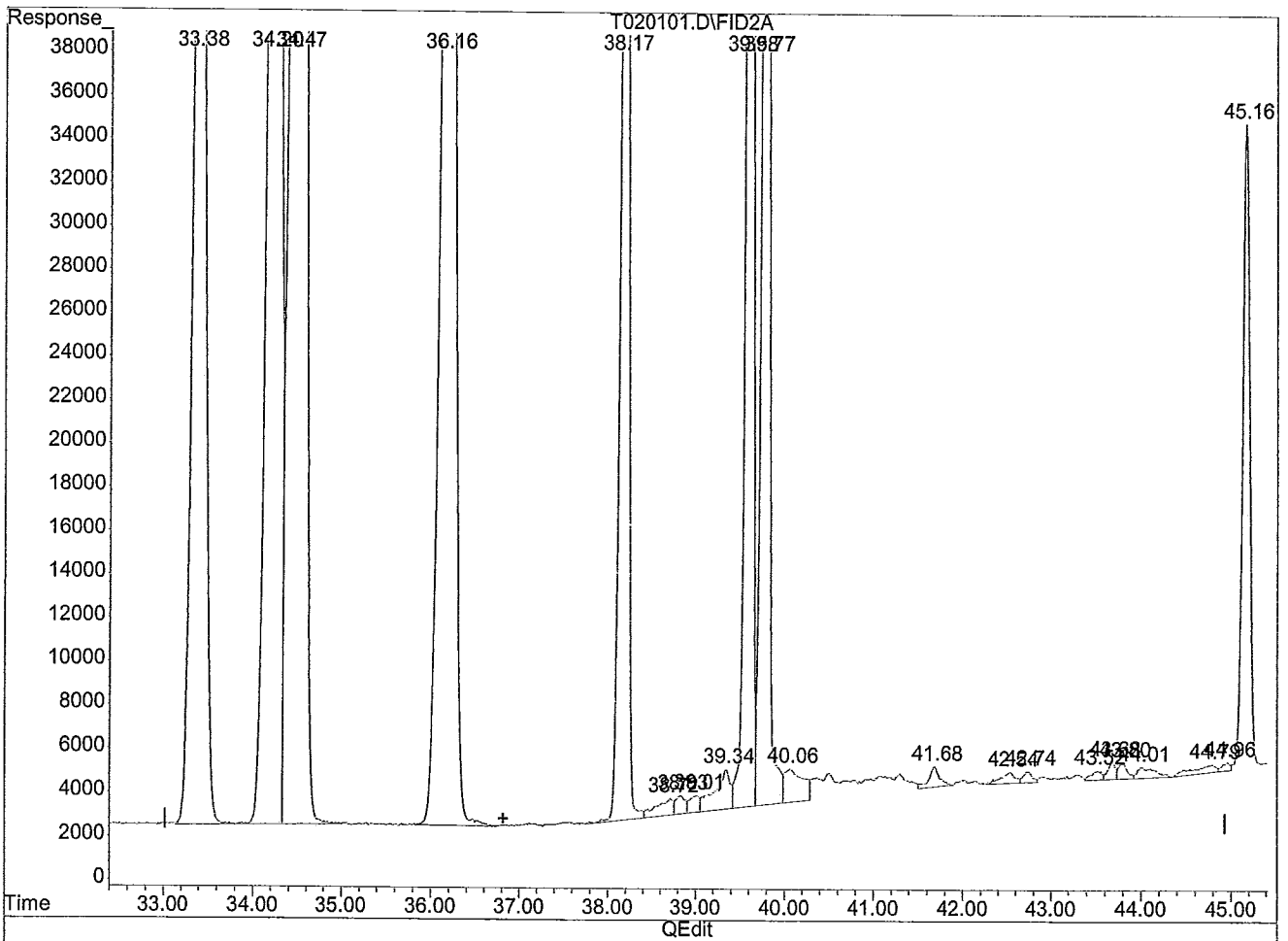
(+) = Expected Retention Time

T020101.D TV080111.M Wed Feb 01 11:37:57 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020101.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0201\T020101.D\FID2A.CH
Acq On : 1 Feb 2012 10:35 Operator: MKA
Sample : CTRVPH 2/1 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 11:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 415.188ug/l m

response 52857172

(+) = Expected Retention Time

T020101.D TV080111.M Wed Feb 01 11:38:14 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	62	0.04
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.625	3.4	58	0.03
3	TM	BENZENE	1.480	1.379	6.8	59	0.06
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.495	-1.4	63	0.02
5	TM	TOLUENE	1.379	1.342	2.7	60	0.03
6	TM	ETHYLBENZENE	1.149	1.134	1.3	62	0.04
7	TM	M,P-XYLENE	1.245	1.187	4.7	62	0.04
8	TM	O-XYLENE	1.028	1.020	0.8	62	0.05
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.758	-1.6	65	0.03
10	TM	NAPHTHALENE	0.402	0.381	5.2	61	0.06
11	HM	C9-C10 AROMATICS	0.886	0.825	6.9	62	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	100	0.04
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.720	-2.4	101	0.05
15	HM	C5-C8 ALIPHATICS #2	1.007	0.867	13.9	87	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.867	13.9	87	0.00
17	TM	N-PENTANE #2	0.854	0.610	28.6#	68	0.17
18	TM	2-METHYL PENTANE #2	0.975	0.816	16.3	81	0.12
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.629	3.4	95	0.03
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.907	6.3	87	0.09
21	TM	BENZENE #2	1.166	1.097	5.9	96	0.06
22	TM	TOLUENE #2	1.190	1.144	3.9	97	0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.772	5.3	101	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.772	5.3	101	0.00
25	TM	N-NONANE #2	0.574	0.565	1.6	91	0.05
26	TM	ETHYLBENZENE #2	1.091	1.056	3.2	99	0.04
27	TM	M,P-XYLENE #2	0.983	0.955	2.8	100	0.04
28	TM	O-XYLENE #2	0.972	0.973	-0.1	101	0.05
29	TM	N-DECANE #2	0.382	0.357	6.5	102	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.695	-0.4	107	0.03
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.519	-6.1	102	0.03
32	TM	NAPHTHALENE #2	0.267	0.264	1.1	103	0.06

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 2 11:40 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.92	5320500	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.92	3166803	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	6585250	50.766	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 102%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.33	5699961	51.214	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 102%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.38	8313976	48.291	ug/l	0.0
3)	TM	BENZENE	23.27	18340430	46.588	ug/l	0.0
5)	TM	TOLUENE	29.35	17850654	48.668	ug/l	0.0
6)	TM	ETHYLBENZENE	34.21	15081392	49.346	ug/l	0.0
7)	TM	M,P-XYLENE	34.47	31582088	95.344	ug/l	0.0
8)	TM	O-XYLENE	36.17	13561689	49.604	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	10082198	50.783	ug/l	0.0
10)	TM	NAPHTHALENE	45.17	5067305	47.442	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	10973273	46.575	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	41182742	258.348	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	41182742	258.348	ug/l	0.0
17)	TM	N-PENTANE #2	11.19	4825628	35.706	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.31	6461171	41.862	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.38	4978365	48.280	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.92	7178652	46.817	ug/l	0.0
21)	TM	BENZENE #2	23.27	8684179	47.029	ug/l	0.0
22)	TM	TOLUENE #2	29.35	9054748	48.060	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	48924503	379.286	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	48924503	379.286	ug/l	0.0
25)	TM	N-NONANE #2	33.38	4469724	49.165	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.21	8358817	48.400	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	15124842	97.142	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 2 11:40 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.17	7704776	50.068	ug/l	0.0
29)	TM	N-DECANE #2	38.17	2824897	46.716	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.59	5504674	50.213	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.77	4111704	53.106	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.17	2093097	49.537	ug/l	0.0

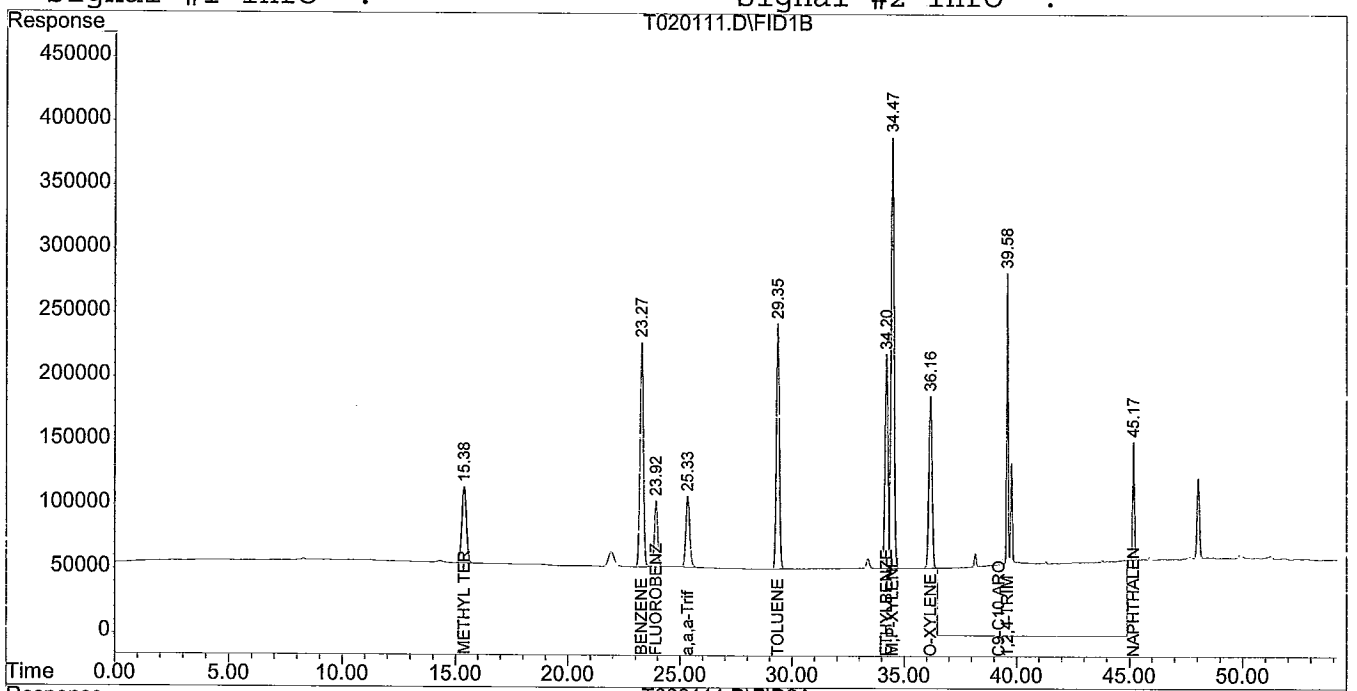
(f)=RT Delta > 1/2 Window (m)=manual int.

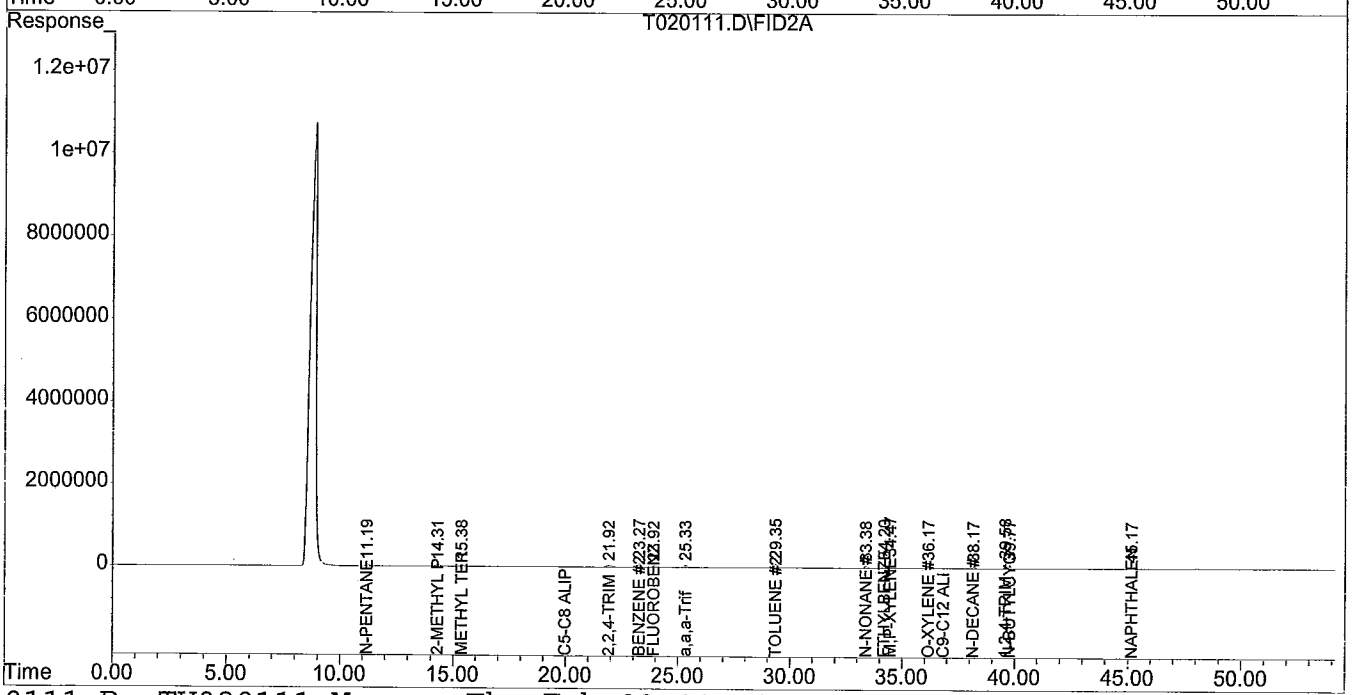
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 11:40 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

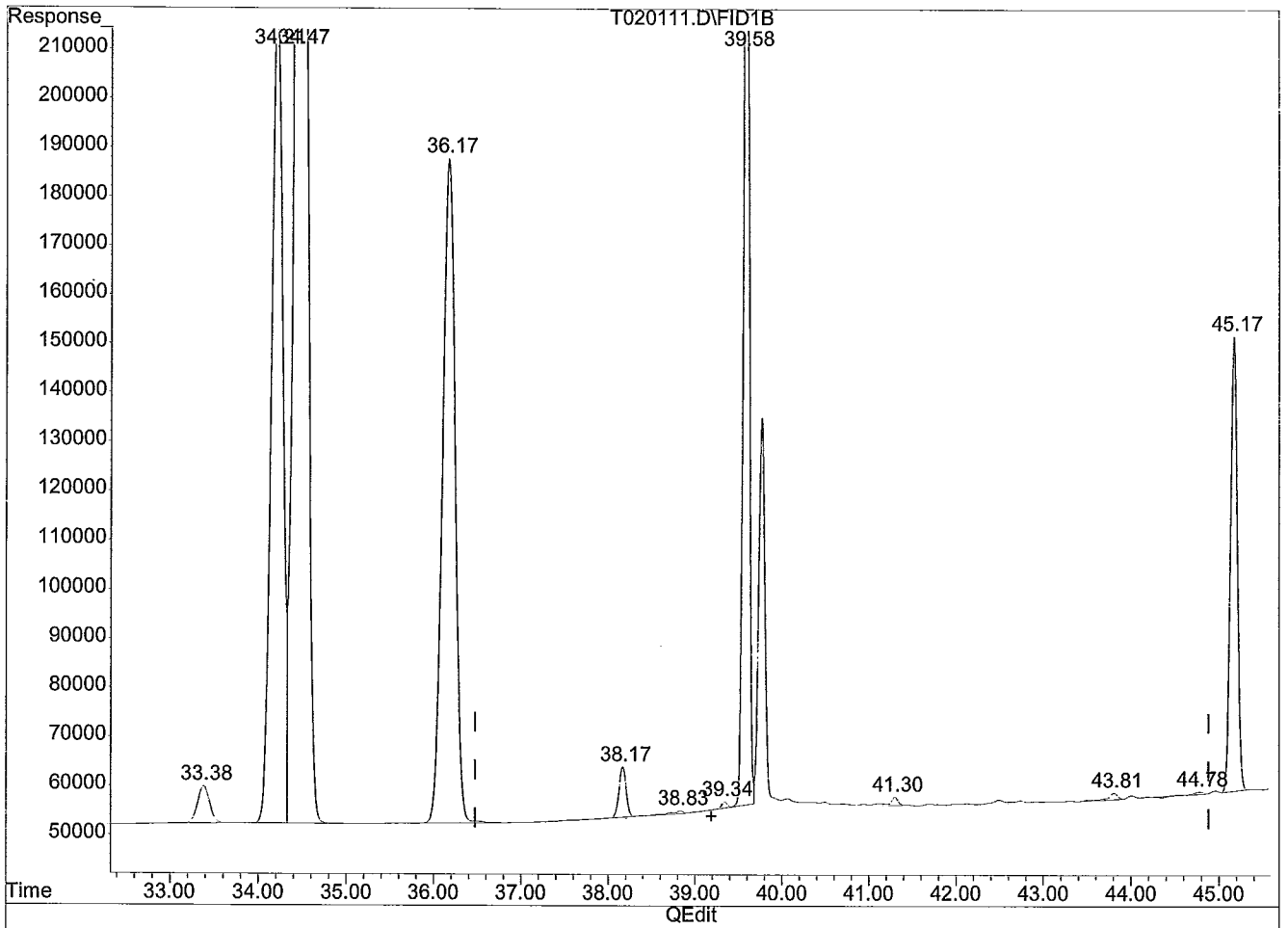




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 22:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 46.575ug/l m

response 10973273

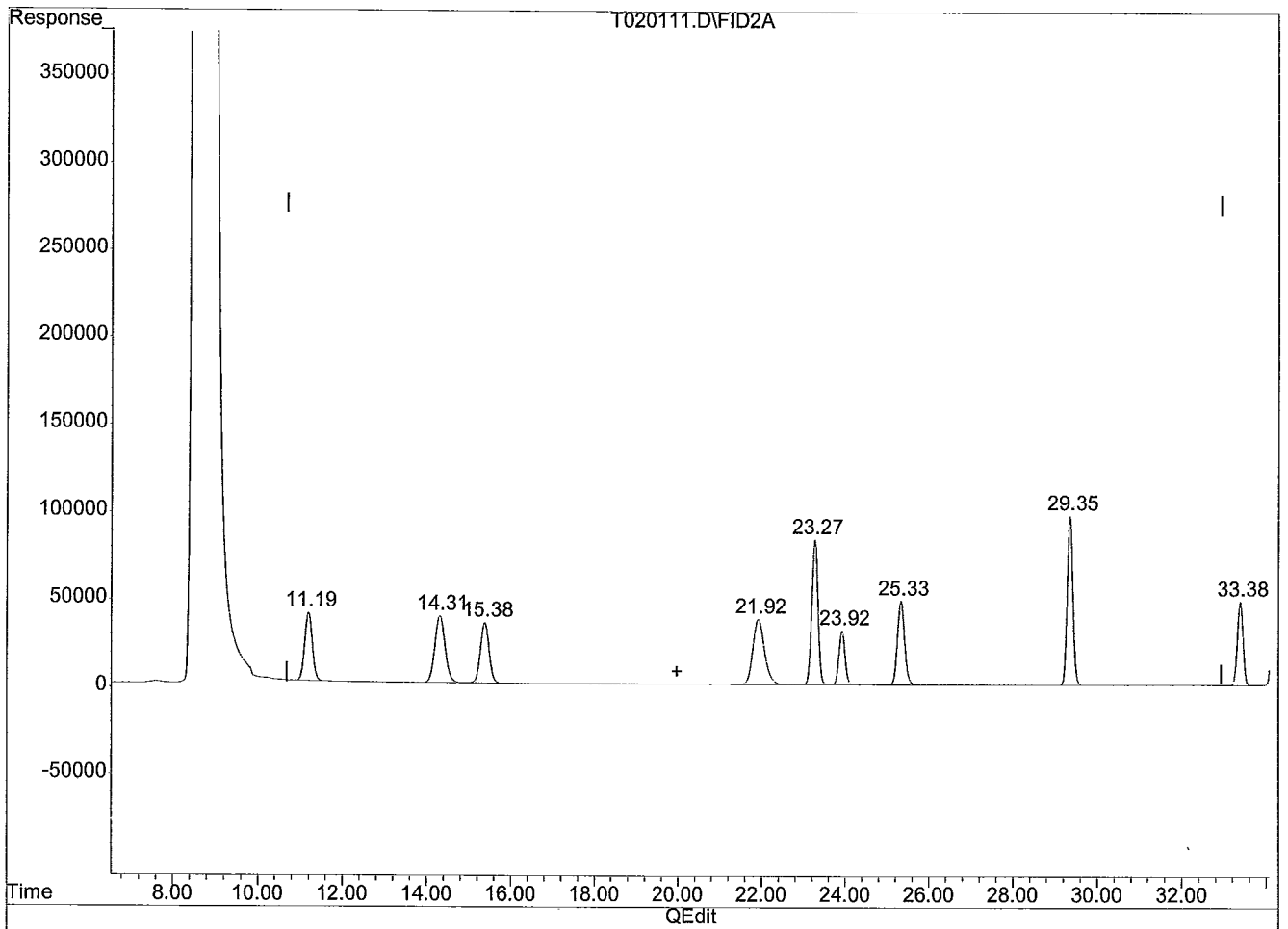
(+) = Expected Retention Time

T020111.D TV080111.M Thu Feb 02 11:40:16 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 22:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 258.348ug/l m

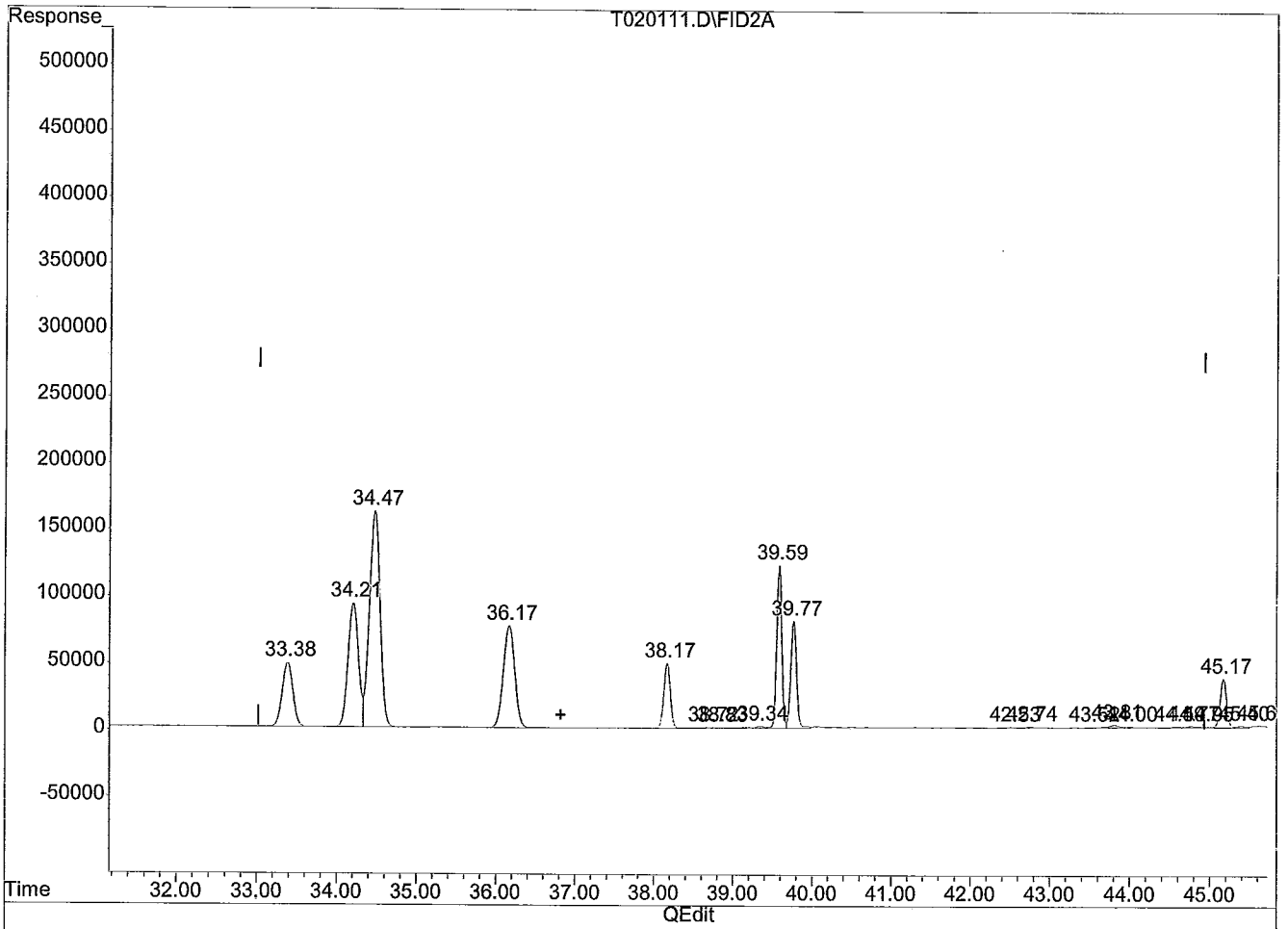
response 41182742

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020111.D\FID1B.CH Vial: 15
Signal #2 : T:\DATA\T0201\T020111.D\FID2A.CH
Acq On : 1 Feb 2012 21:44 Operator: MKA
Sample : CTRVPH 2/1 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 1 22:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 379.286ug/l m

response 48924503

(+) = Expected Retention Time

T020111.D TV080111.M Thu Feb 02 11:40:47 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	62	0.04
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.578	10.7	53	0.02
3	TM	BENZENE	1.480	1.335	9.8	57	0.05
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.508	-4.1	64	0.02
5	TM	TOLUENE	1.379	1.314	4.7	58	0.03
6	TM	ETHYLBENZENE	1.149	1.124	2.2	60	0.03
7	TM	M,P-XYLENE	1.245	1.190	4.4	62	0.03
8	TM	O-XYLENE	1.028	1.016	1.2	61	0.04
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.788	-5.6	67	0.02
10	TM	NAPHTHALENE	0.402	0.396	1.5	62	0.05
11	HM	C9-C10 AROMATICS	0.886	0.884	0.2	65	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	99	0.04
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.734	-4.4	103	0.05
15	HM	C5-C8 ALIPHATICS #2	1.007	0.858	14.8	86	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.858	14.8	86	0.00
17	TM	N-PENTANE #2	0.854	0.618	27.6#	69	0.17
18	TM	2-METHYL PENTANE #2	0.975	0.832	14.7	82	0.11
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.570	12.4	85	0.01
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.962	0.6	92	0.08
21	TM	BENZENE #2	1.166	1.057	9.3	91	0.05
22	TM	TOLUENE #2	1.190	1.106	7.1	93	0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.849	-4.2	110	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.849	-4.2	110	0.00
25	TM	N-NONANE #2	0.574	0.690	-20.2	110	0.04
26	TM	ETHYLBENZENE #2	1.091	1.035	5.1	96	0.03
27	TM	M,P-XYLENE #2	0.983	0.943	4.1	98	0.03
28	TM	O-XYLENE #2	0.972	0.962	1.0	99	0.03
29	TM	N-DECANE #2	0.382	0.471	-23.3	133	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.715	-3.3	110	0.02
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.670	-37.0#	131	0.02
32	TM	NAPHTHALENE #2	0.267	0.279	-4.5	107	0.05

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 2 11:42 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.92	5256137	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.92	3141202	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	6678930	52.119	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 104%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.33	5763353	52.205	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 104%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.37	7589419	44.622	ug/l	0.0
3)	TM	BENZENE	23.26	17545244	45.113	ug/l	0.0
5)	TM	TOLUENE	29.35	17261878	47.639	ug/l	0.0
6)	TM	ETHYLBENZENE	34.20	14776291	48.939	ug/l	0.0
7)	TM	M,P-XYLENE	34.46	31279321	95.586	ug/l	0.0
8)	TM	O-XYLENE	36.15	13350527	49.430	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	10361146	52.827	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	5200622	49.286	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	11611612	49.888	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	40406098	255.542	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	40406098	255.542	ug/l	0.0
17)	TM	N-PENTANE #2	11.18	4851532	36.191	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.30	6536343	42.694	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.37	4476001	43.761	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.91	7554696	49.671	ug/l	0.0
21)	TM	BENZENE #2	23.26	8300464	45.318	ug/l	0.0
22)	TM	TOLUENE #2	29.35	8687061	46.484	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	53311814	416.667	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	53311814	416.667	ug/l	0.0
25)	TM	N-NONANE #2	33.38	5419250	60.095	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.20	8126440	47.438	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.46	14808116	95.883	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 2 11:42 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.15	7551724	49.473	ug/l	0.0
29)	TM	N-DECANE #2	38.16	3695510	61.612	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5612407	51.613	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.76	5261443	68.510	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.16	2188323	52.212	ug/l	0.0

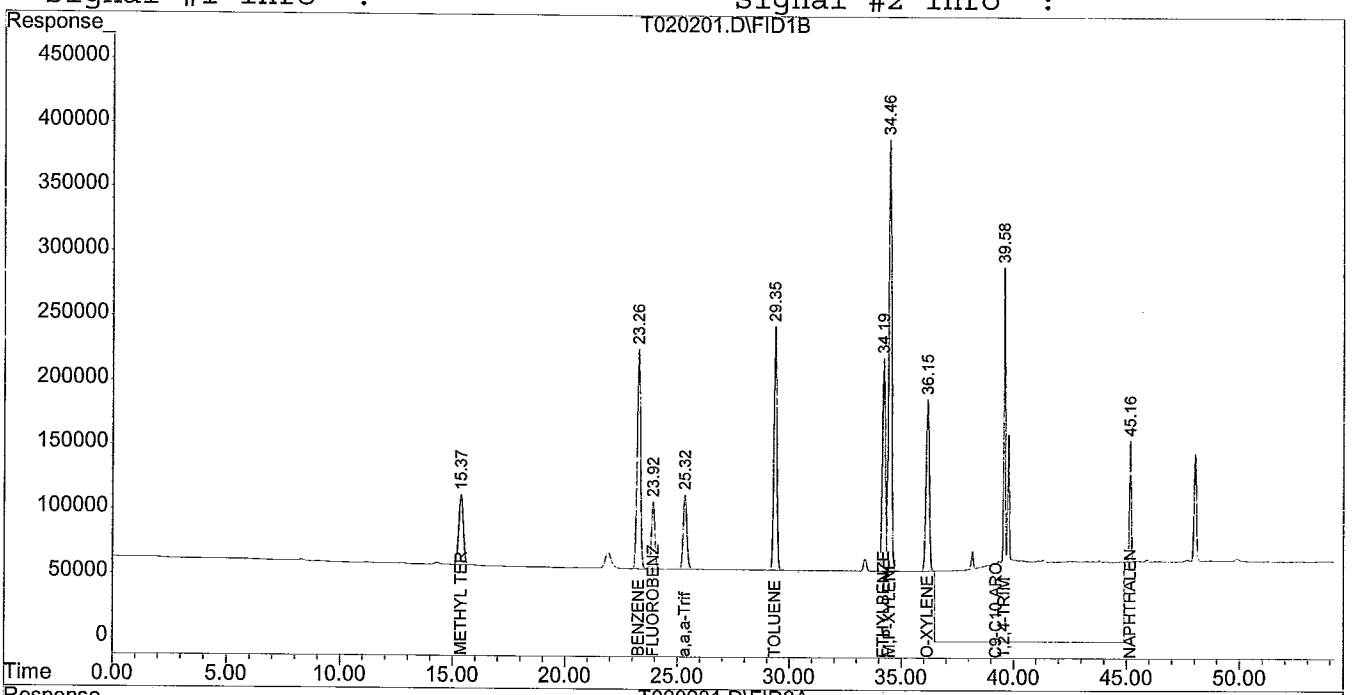
(f)=RT Delta > 1/2 Window (m)=manual int.

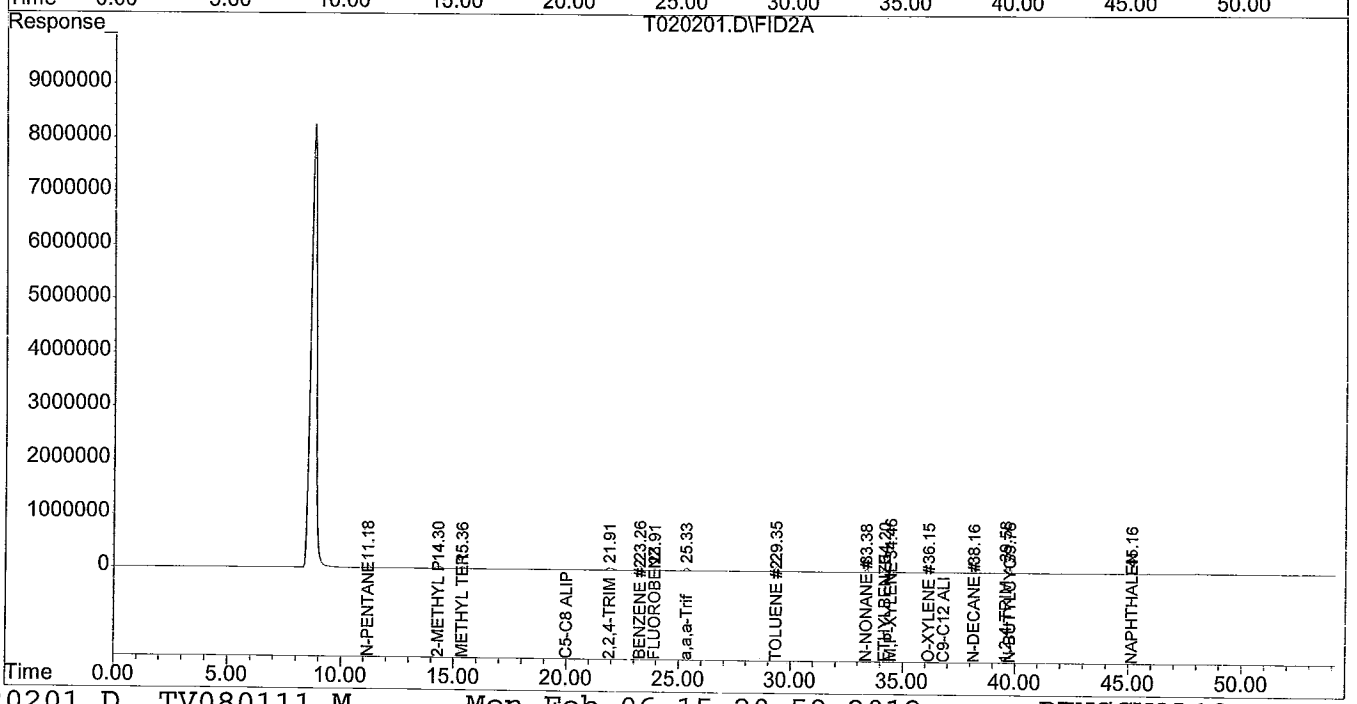
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 11:42 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

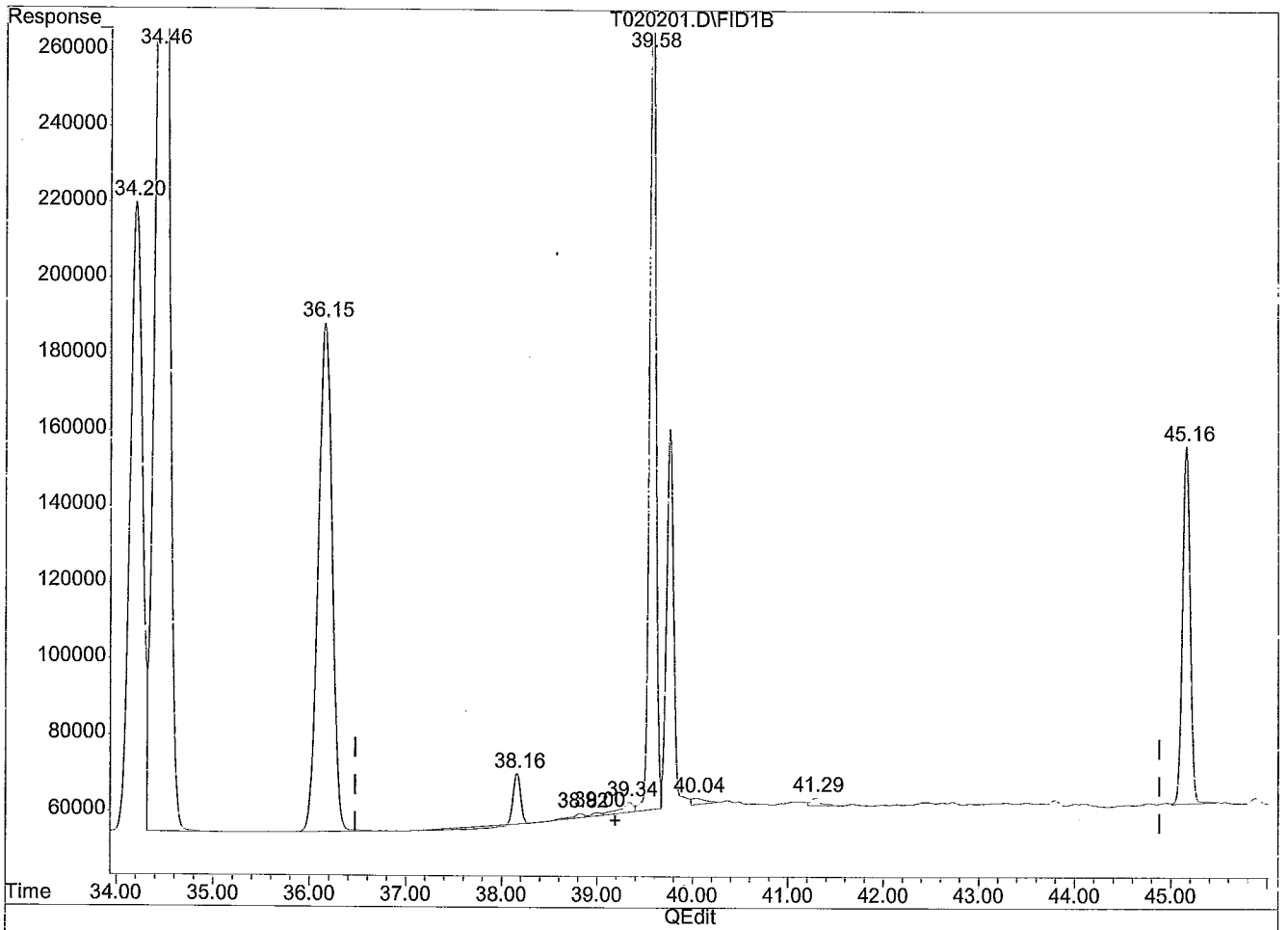




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 11:42 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 49.888ug/l m

response 11611612

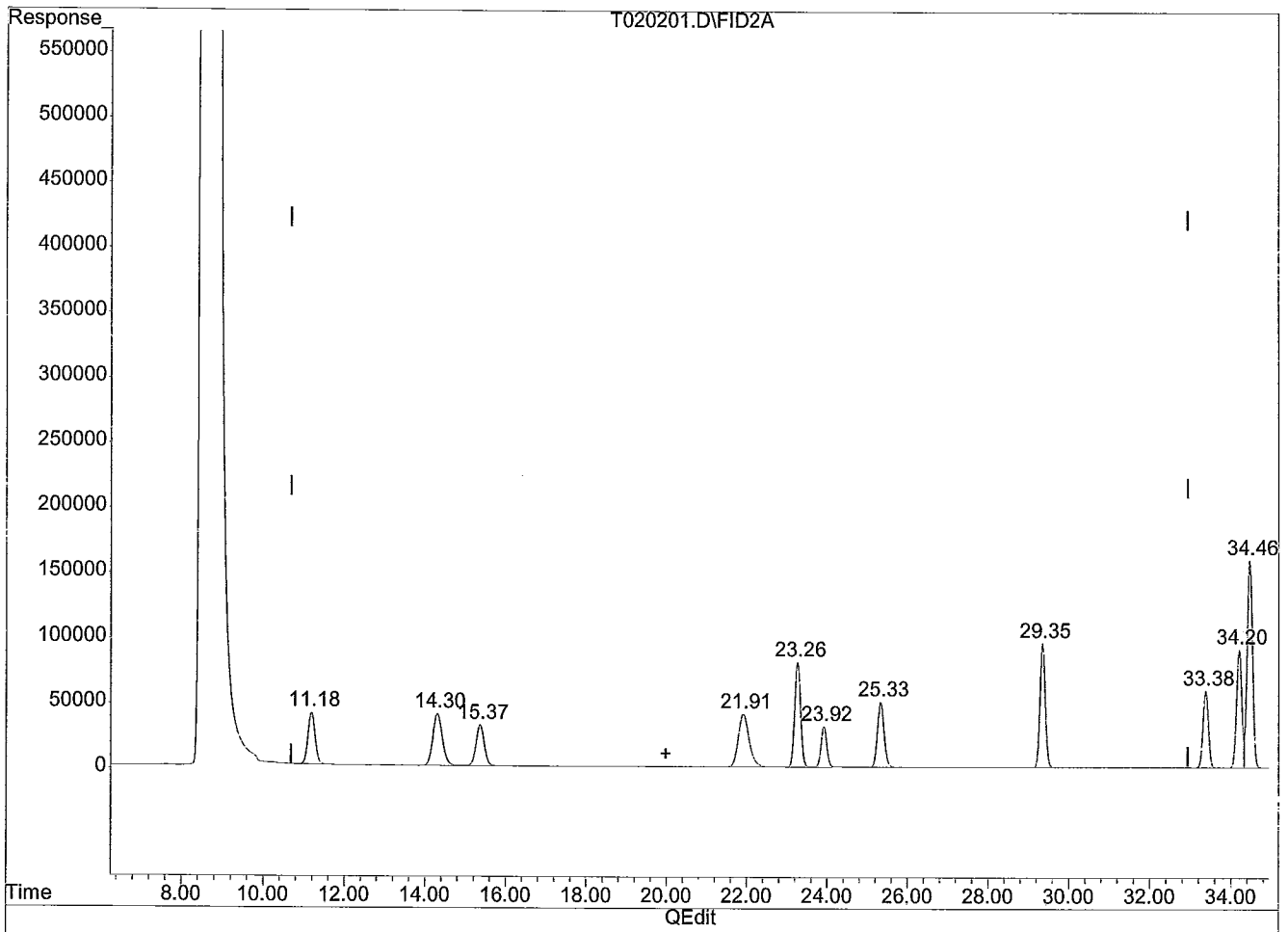
(+) = Expected Retention Time

T020201.D TV080111.M Mon Feb 06 15:20:28 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 11:42 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 255.542ug/l m

response 40406098

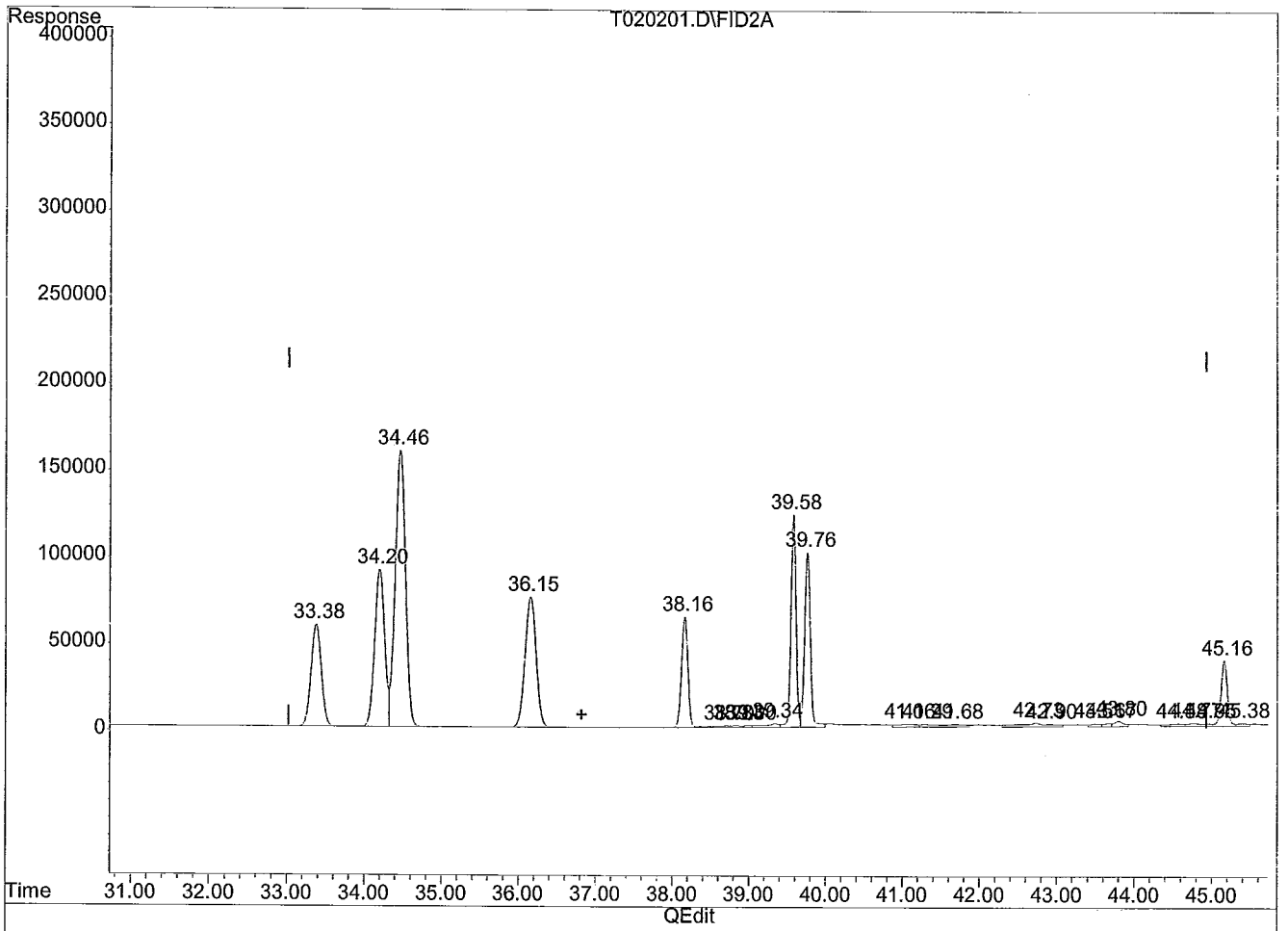
(+) = Expected Retention Time

T020201.D TV080111.M Mon Feb 06 15:20:36 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020201.D\FID1B.CH Vial: 16
Signal #2 : T:\DATA\T0202\T020201.D\FID2A.CH
Acq On : 2 Feb 2012 10:38 Operator: MKA
Sample : CTRVPH 2/2 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 11:42 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 416.667ug/l m

response 53311814

(+) = Expected Retention Time

T020201.D TV080111.M Mon Feb 06 15:20:45 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	60	0.03
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.623	3.7	56	0.02
3	TM	BENZENE	1.480	1.374	7.2	57	0.04
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.499	-2.3	61	0.02
5	TM	TOLUENE	1.379	1.342	2.7	58	0.02
6	TM	ETHYLBENZENE	1.149	1.135	1.2	60	0.03
7	TM	M,P-XYLENE	1.245	1.183	5.0	60	0.04
8	TM	O-XYLENE	1.028	1.019	0.9	60	0.04
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.746	0.0	62	0.02
10	TM	NAPHTHALENE	0.402	0.378	6.0	58	0.05
11	HM	C9-C10 AROMATICS	0.886	0.801	9.6	58	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	97	0.03
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.722	-2.7	99	0.04
15	HM	C5-C8 ALIPHATICS #2	1.007	0.873	13.3	85	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.873	13.3	85	0.00
17	TM	N-PENTANE #2	0.854	0.608	28.8#	66	0.16
18	TM	2-METHYL PENTANE #2	0.975	0.826	15.3	79	0.11
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.629	3.4	92	0.01
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.943	2.6	88	0.08
21	TM	BENZENE #2	1.166	1.091	6.4	92	0.04
22	TM	TOLUENE #2	1.190	1.138	4.4	93	0.02
23	HM	C9-C12 ALIPHATICS #2	0.815	0.725	11.0	92	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.725	11.0	92	0.00
25	TM	N-NONANE #2	0.574	0.495	13.8	77	0.04
26	TM	ETHYLBENZENE #2	1.091	1.051	3.7	95	0.03
27	TM	M,P-XYLENE #2	0.983	0.945	3.9	96	0.03
28	TM	O-XYLENE #2	0.972	0.961	1.1	96	0.04
29	TM	N-DECANE #2	0.382	0.260	31.9#	72	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.660	4.6	99	0.02
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.469	4.1	89	0.03
32	TM	NAPHTHALENE #2	0.267	0.253	5.2	95	0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 10:50 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.91	5136644	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.91	3070277	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.32	6411277	51.194	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 102%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.32	5543013	51.369	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 103%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.37	8005704	48.165	ug/l	0.0
3)	TM	BENZENE	23.26	17645497	46.427	ug/l	0.0
5)	TM	TOLUENE	29.35	17227803	48.651	ug/l	0.0
6)	TM	ETHYLBENZENE	34.20	14577424	49.404	ug/l	0.0
7)	TM	M,P-XYLENE	34.46	30383907	95.010	ug/l	0.0
8)	TM	O-XYLENE	36.16	13080561	49.557	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	9578684	49.973	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	4857148	47.102	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	10286039	45.221	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	40183288	260.003	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	40183288	260.003	ug/l	0.0
17)	TM	N-PENTANE #2	11.18	4664348	35.598	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.30	6339709	42.367	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.37	4827390	48.287	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.91	7240512	48.705	ug/l	0.0
21)	TM	BENZENE #2	23.26	8373285	46.771	ug/l	0.0
22)	TM	TOLUENE #2	29.35	8738044	47.837	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	44490310	355.753	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	44490310	355.753	ug/l	0.0
25)	TM	N-NONANE #2	33.38	3800675	43.120	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.20	8065871	48.173	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.46	14500990	96.064	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 10:50 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.16	7373484	49.421	ug/l	0.0
29)	TM	N-DECANE #2	38.16	1997315	34.069	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5066578	47.670	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.76	3598593	47.940	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.16	1940973	47.380	ug/l	0.0

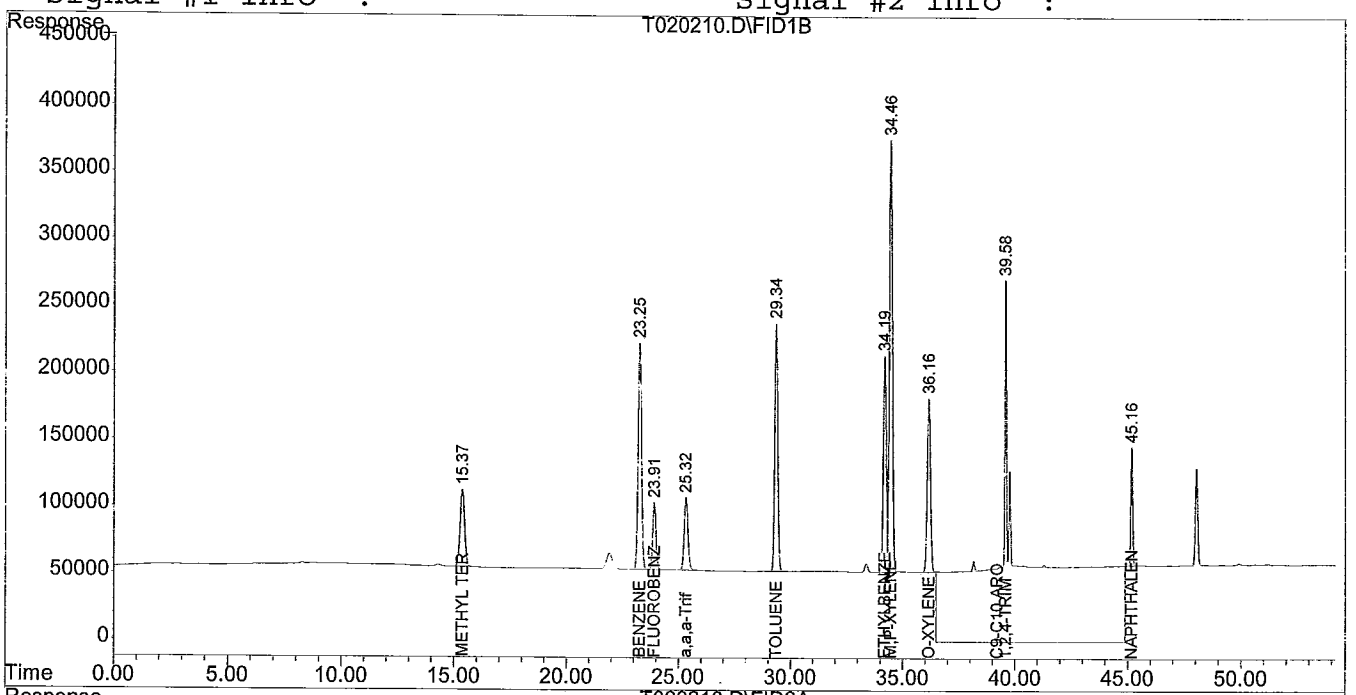
(f)=RT Delta > 1/2 Window (m)=manual int.

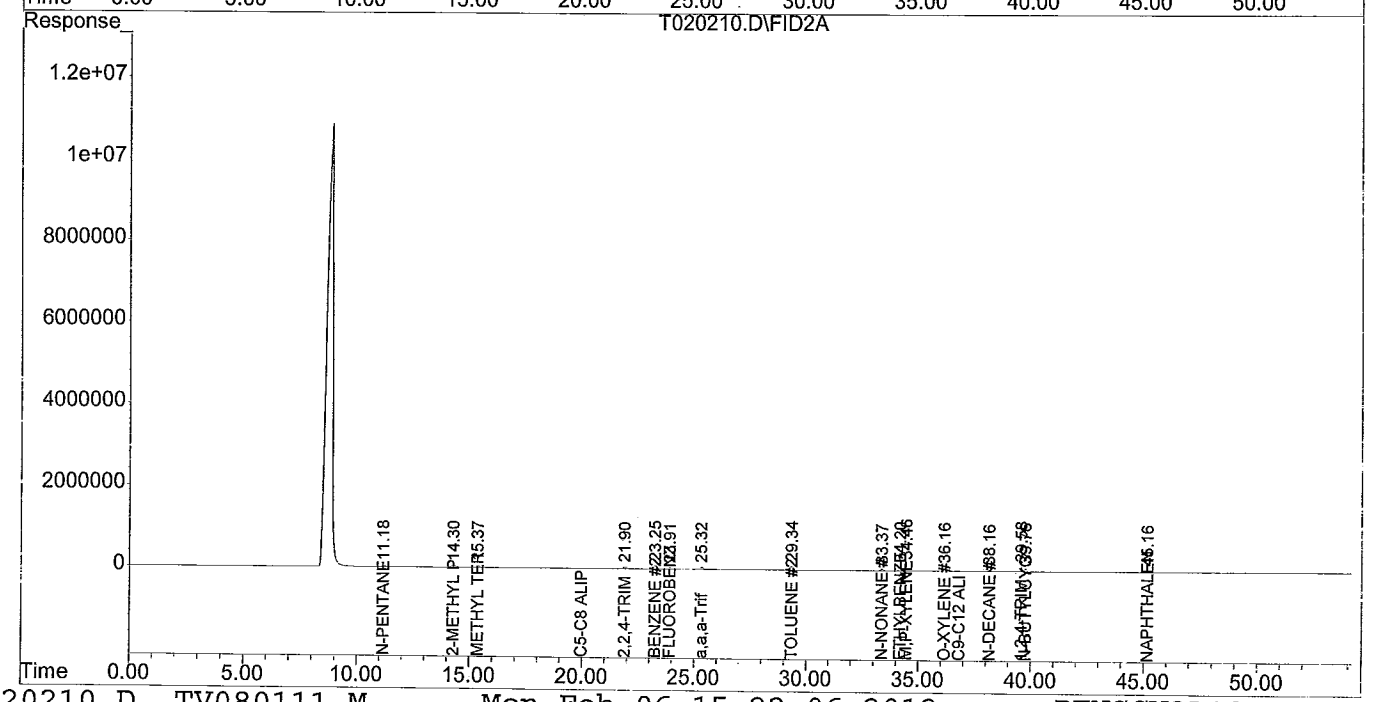
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 10:50 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

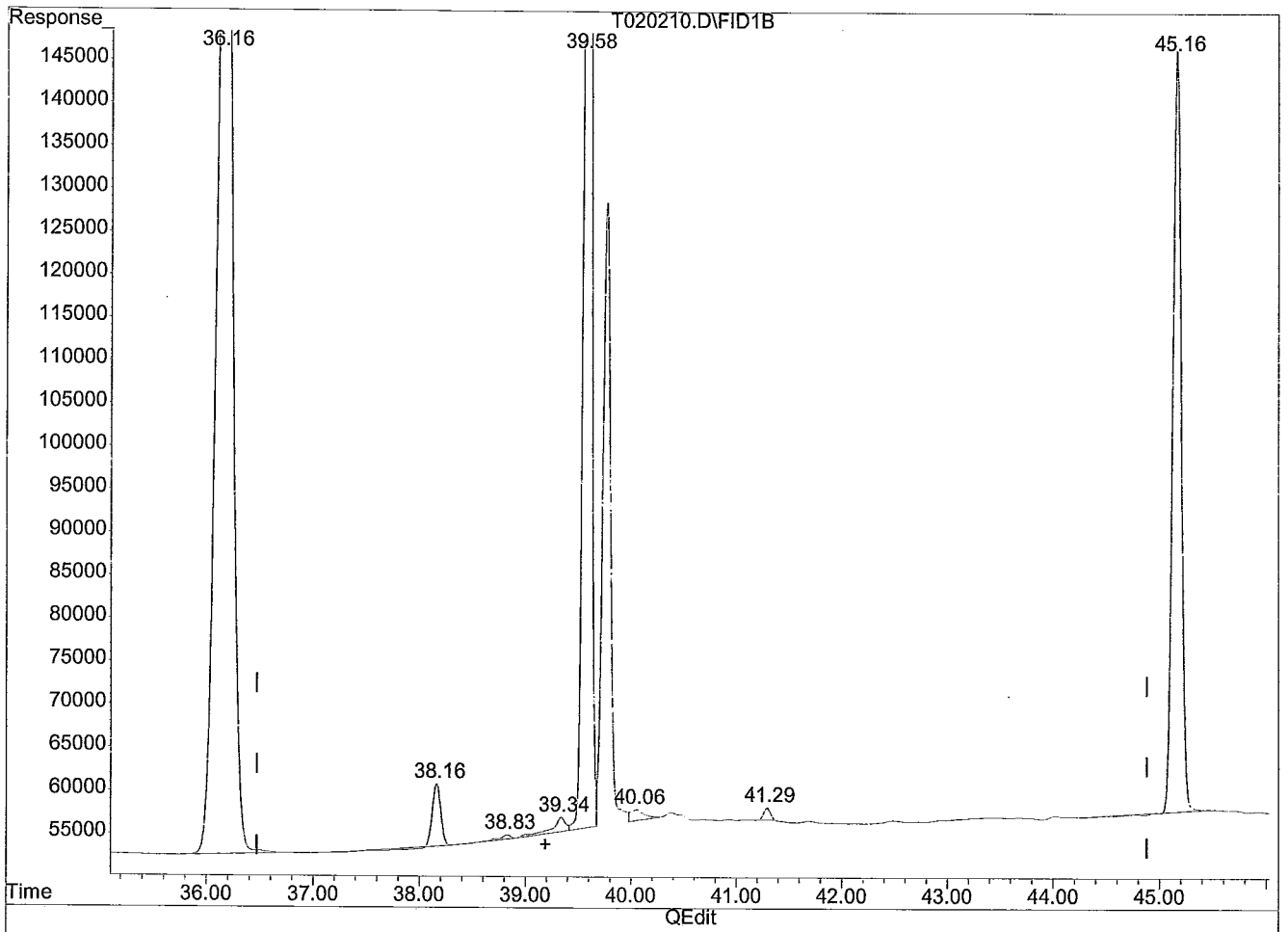




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 10:50 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 45.221ug/l m

response 10286039

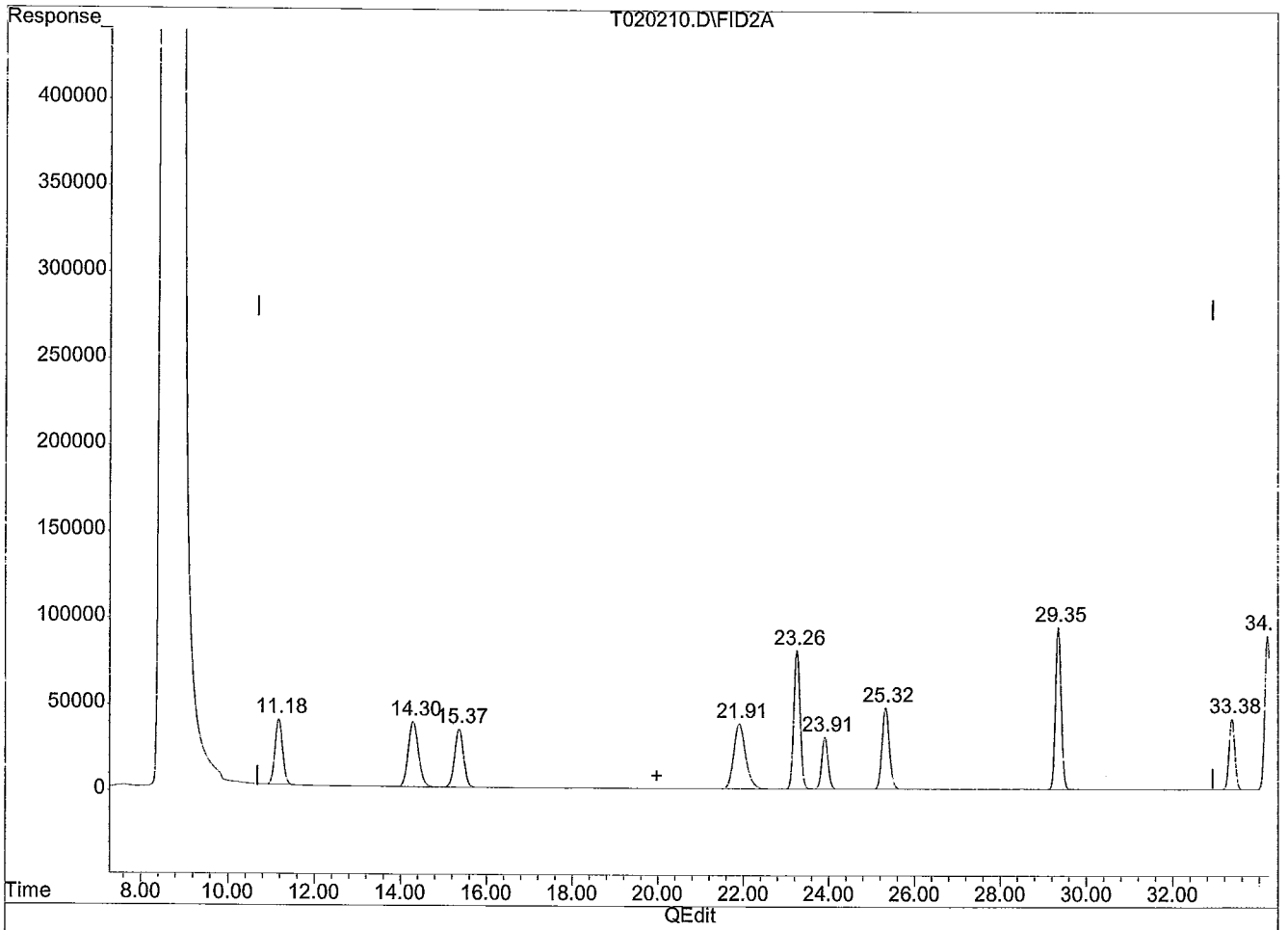
(+) = Expected Retention Time

T020210.D TV080111.M Mon Feb 06 15:21:34 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 10:50 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 260.003ug/l m

response 40183288

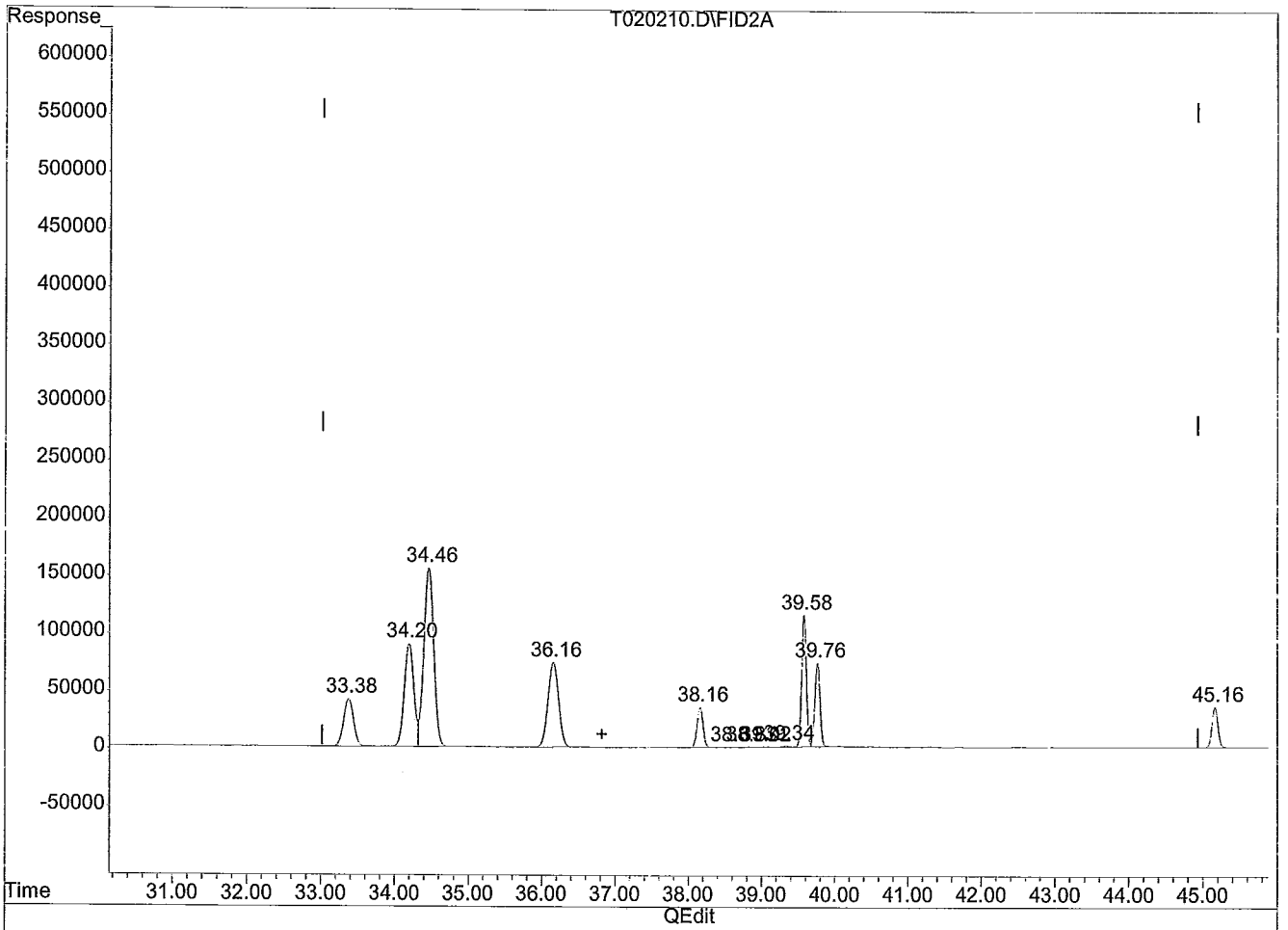
(+) = Expected Retention Time

T020210.D TV080111.M Mon Feb 06 15:21:42 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020210.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0202\T020210.D\FID2A.CH
Acq On : 2 Feb 2012 22:02 Operator: MKA
Sample : CTRVPH 2/2 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 10:50 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 355.753ug/l m

response 44490310

(+) = Expected Retention Time

T020210.D TV080111.M Mon Feb 06 15:21:52 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	60	0.04
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.623	3.7	56	0.03
3	TM	BENZENE	1.480	1.416	4.3	59	0.06
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.509	-4.3	62	0.02
5	TM	TOLUENE	1.379	1.385	-0.4	60	0.03
6	TM	ETHYLBENZENE	1.149	1.186	-3.2	62	0.04
7	TM	M,P-XYLENE	1.245	1.250	-0.4	64	0.04
8	TM	O-XYLENE	1.028	1.075	-4.6	63	0.04
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.826	-10.7	69	0.02
10	TM	NAPHTHALENE	0.402	0.466	-15.9	72	0.05
11	HM	C9-C10 AROMATICS	0.886	0.958	-8.1	69	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	99	0.04
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.735	-4.6	103	0.05
15	HM	C5-C8 ALIPHATICS #2	1.007	0.924	8.2	92	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.924	8.2	92	0.00
17	TM	N-PENTANE #2	0.854	0.743	13.0	83	0.19
18	TM	2-METHYL PENTANE #2	0.975	0.908	6.9	89	0.13
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.599	8.0	89	0.03
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.012	-4.5	97	0.09
21	TM	BENZENE #2	1.166	1.116	4.3	96	0.05
22	TM	TOLUENE #2	1.190	1.164	2.2	97	0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.809	0.7	105	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.809	0.7	105	0.00
25	TM	N-NONANE #2	0.574	0.646	-12.5	103	0.05
26	TM	ETHYLBENZENE #2	1.091	1.088	0.3	101	0.04
27	TM	M,P-XYLENE #2	0.983	0.989	-0.6	102	0.04
28	TM	O-XYLENE #2	0.972	1.012	-4.1	104	0.04
29	TM	N-DECANE #2	0.382	0.401	-5.0	113	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.718	-3.8	110	0.02
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.591	-20.9	115	0.02
32	TM	NAPHTHALENE #2	0.267	0.309	-15.7	119	0.05

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 11:30 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.92	5138740	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.92	3135355	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	6539252	52.194	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 104%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.33	5763786	52.307	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 105%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.38	8006231	48.149	ug/l	0.0
3)	TM	BENZENE	23.27	18195976	47.856	ug/l	0.0
5)	TM	TOLUENE	29.35	17795532	50.234	ug/l	0.0
6)	TM	ETHYLBENZENE	34.20	15242066	51.635	ug/l	0.0
7)	TM	M,P-XYLENE	34.47	32105537	100.352	ug/l	0.0
8)	TM	O-XYLENE	36.16	13805859	52.283	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	10614747	55.356	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	5985690	58.022	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	12310703	54.100	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	43441452	275.251	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	43441452	275.251	ug/l	0.0
17)	TM	N-PENTANE #2	11.20	5826254	43.543	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.32	7119123	46.588	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.38	4695220	45.990	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.92	7932398	52.251	ug/l	0.0
21)	TM	BENZENE #2	23.27	8747096	47.845	ug/l	0.0
22)	TM	TOLUENE #2	29.35	9121360	48.899	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	50715992	397.118	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	50715992	397.118	ug/l	0.0
25)	TM	N-NONANE #2	33.38	5064833	56.270	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.20	8530962	49.893	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	15511439	100.625	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 11:30 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.16	7932103	52.062	ug/l	0.0
29)	TM	N-DECANE #2	38.16	3144493	52.523	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5625115	51.826	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.76	4629967	60.400	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.16	2424635	57.959	ug/l	0.0

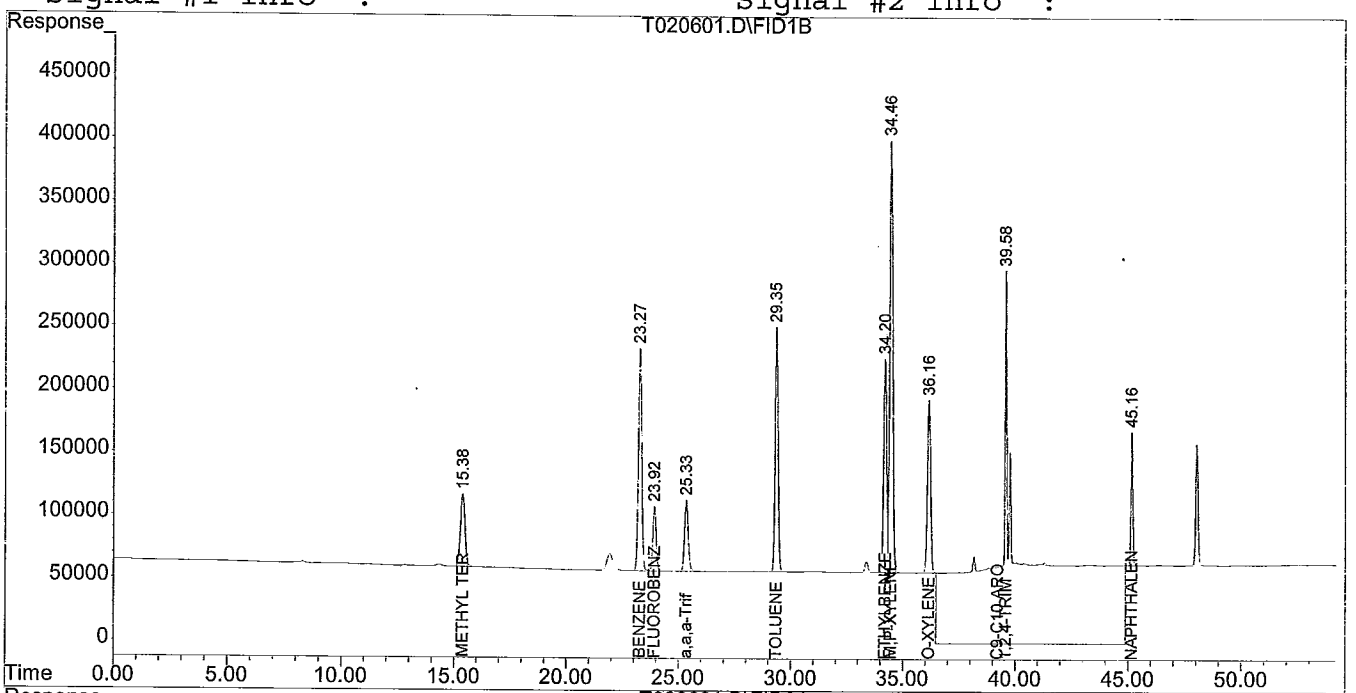
(f)=RT Delta > 1/2 Window (m)=manual int.

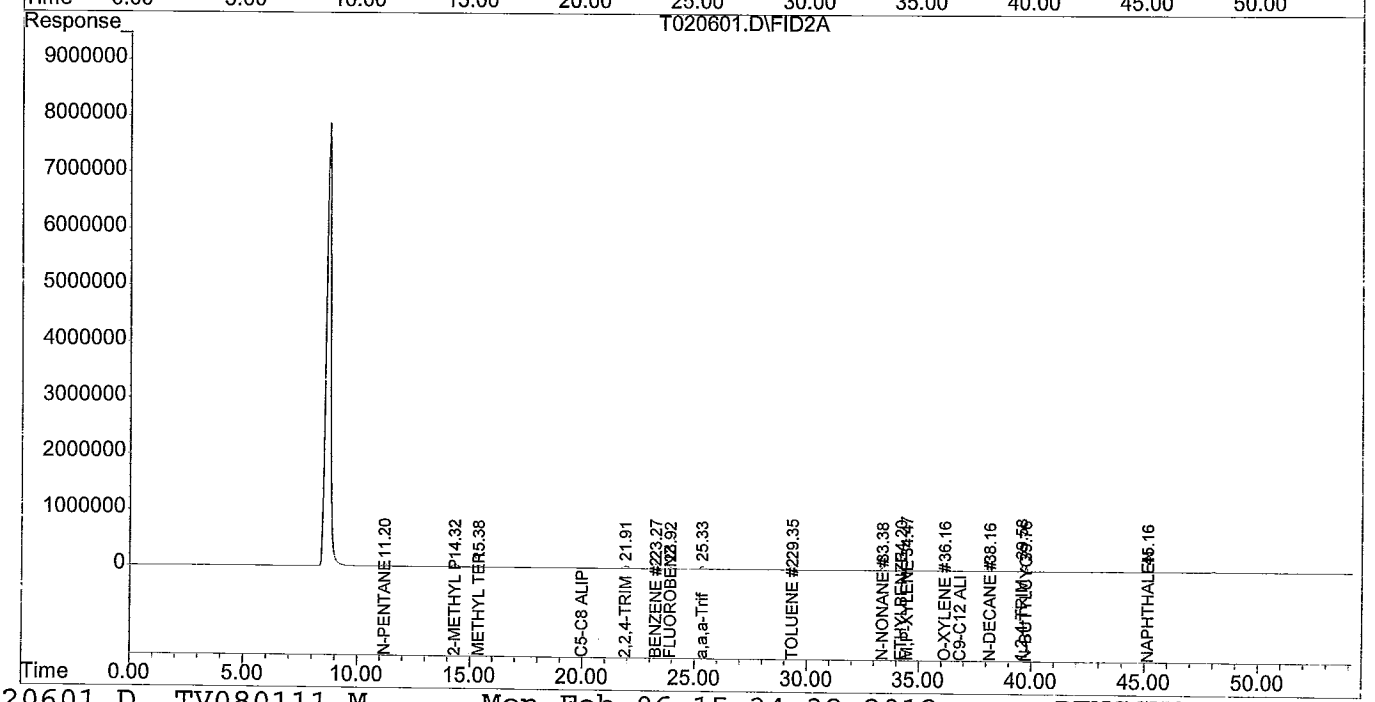
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:30 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

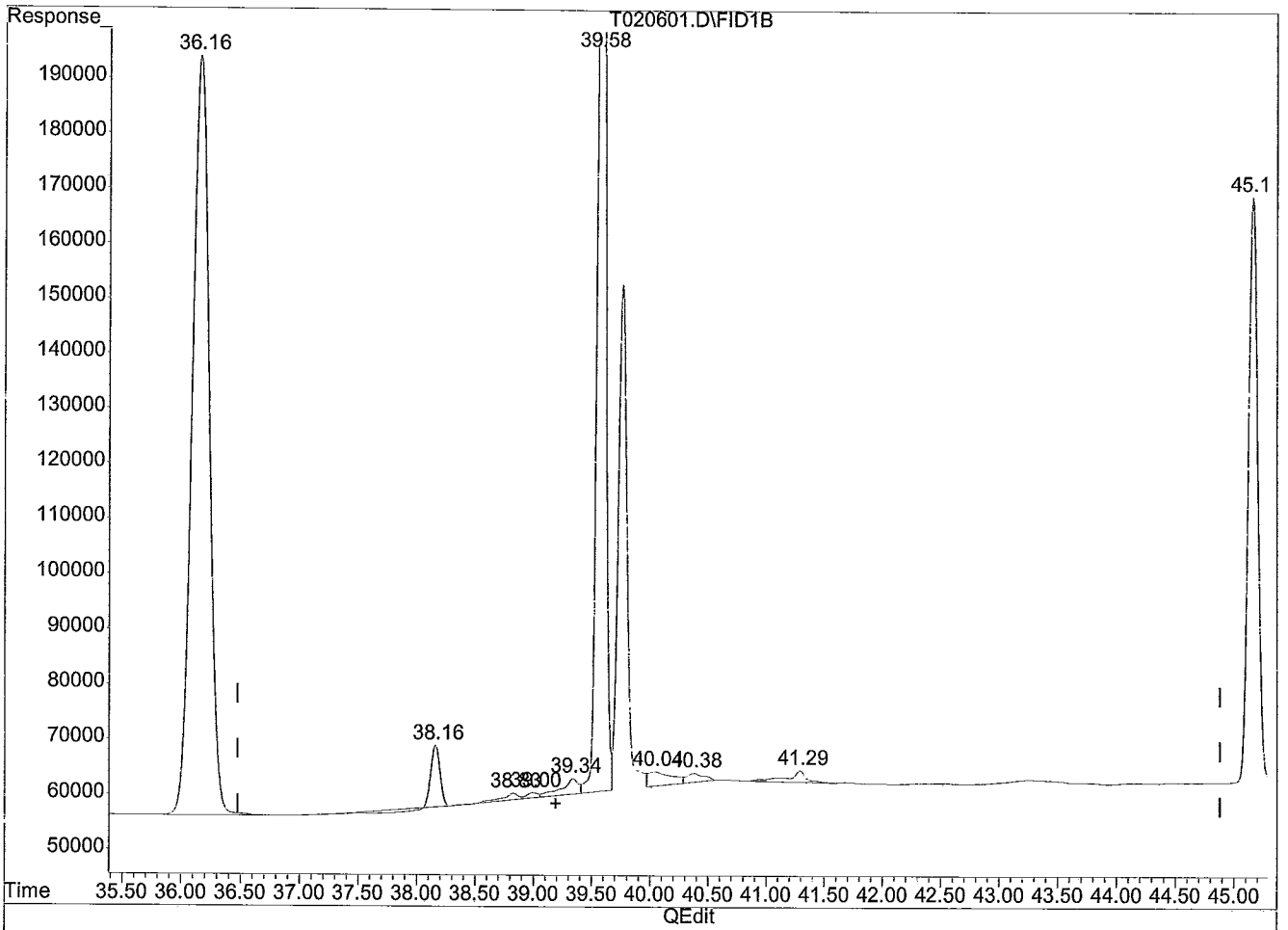




Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:30 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 54.100ug/l m

response 12310703

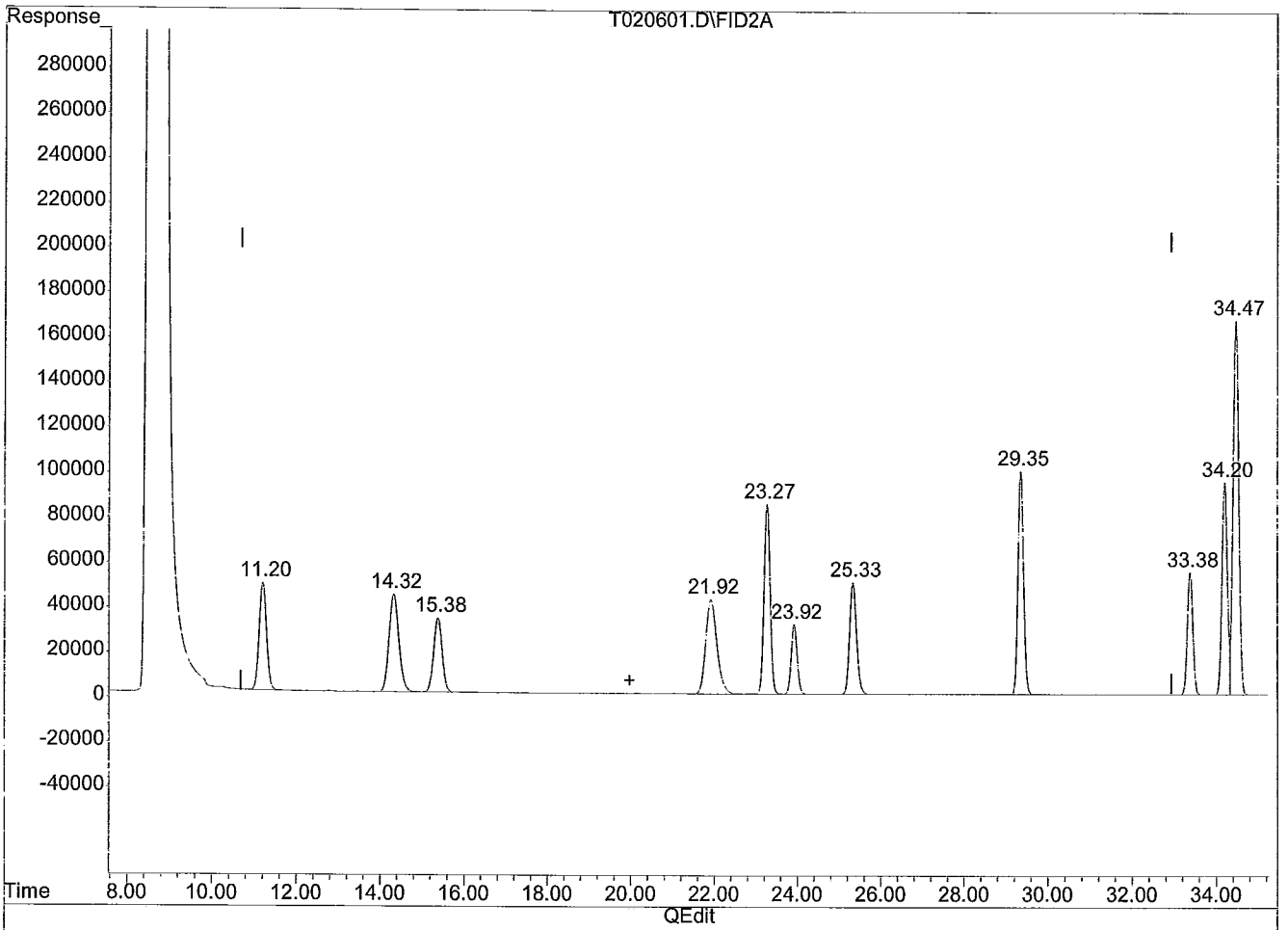
(+) = Expected Retention Time

T020601.D TV080111.M Mon Feb 06 15:33:51 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:30 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 275.251ug/l m

response 43441452

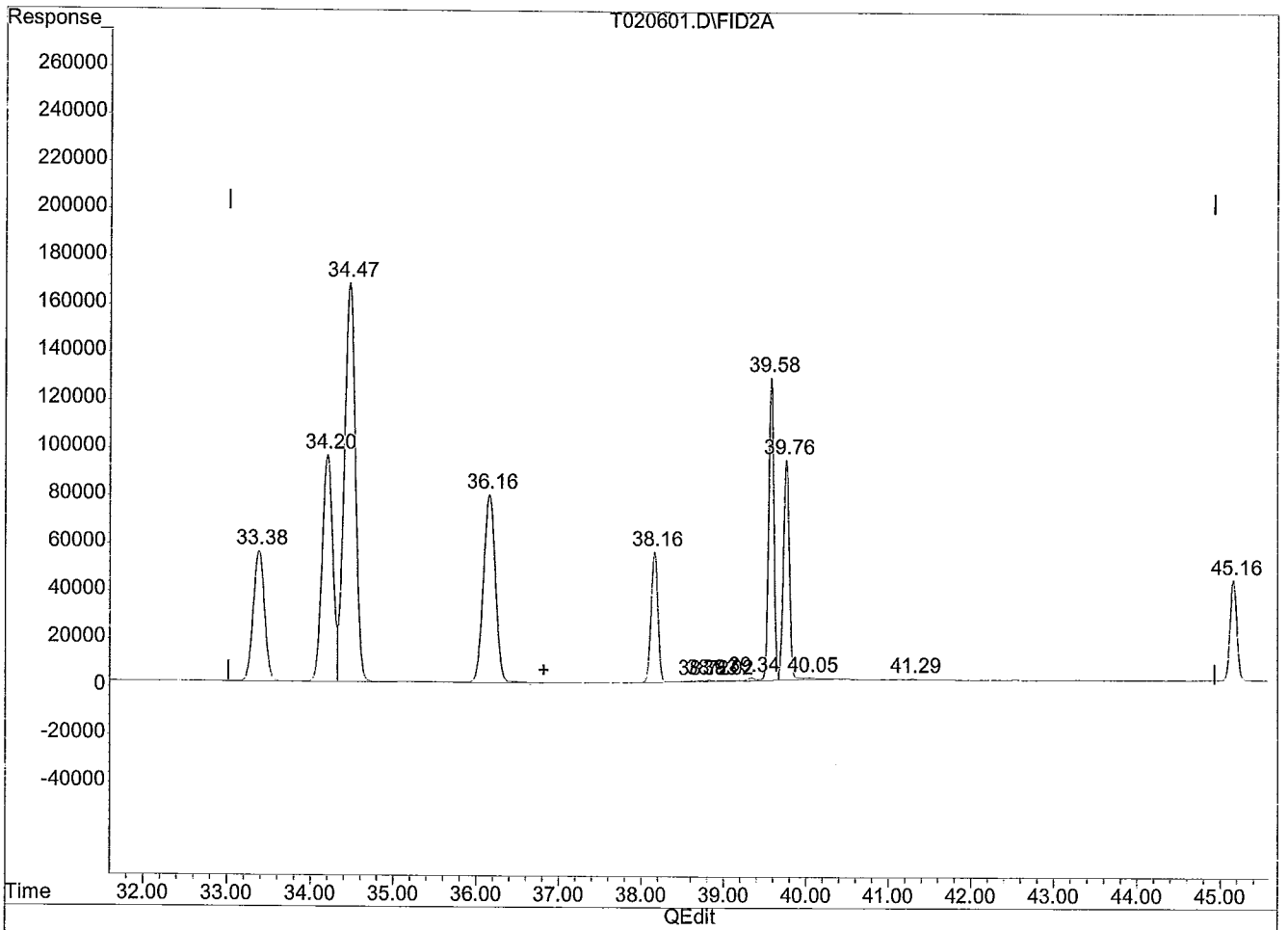
(+) = Expected Retention Time

T020601.D TV080111.M Mon Feb 06 15:34:01 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020601.D\FID1B.CH Vial: 10
Signal #2 : T:\DATA\T0206\T020601.D\FID2A.CH
Acq On : 6 Feb 2012 10:04 Operator: MKA
Sample : CTRVPH 2/6 Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:30 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 397.118ug/l m

response 50715992

(+) = Expected Retention Time

T020601.D TV080111.M Mon Feb 06 15:34:11 2012 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33 Operator: MKA
Sample : CTRVPH 2/6 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	59	0.03
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.652	-0.8	57	0.01
3	TM	BENZENE	1.480	1.414	4.5	57	0.04
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.475	2.7	57	0.01
5	TM	TOLUENE	1.379	1.370	0.7	58	0.02
6	TM	ETHYLBENZENE	1.149	1.148	0.1	59	0.03
7	TM	M,P-XYLENE	1.245	1.200	3.6	59	0.04
8	TM	O-XYLENE	1.028	1.042	-1.4	60	0.04
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.776	-4.0	63	0.02
10	TM	NAPHTHALENE	0.402	0.398	1.0	60	0.05
11	HM	C9-C10 AROMATICS	0.886	0.935	-5.5	66	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	95	0.03
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.694	1.3	93	0.04
15	HM	C5-C8 ALIPHATICS #2	1.007	0.892	11.4	86	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.892	11.4	86	0.00
17	TM	N-PENTANE #2	0.854	0.667	21.9	72	0.16
18	TM	2-METHYL PENTANE #2	0.975	0.836	14.3	79	0.10
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.658	-1.1	95	0.00
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.915	5.5	84	0.07
21	TM	BENZENE #2	1.166	1.119	4.0	93	0.04
22	TM	TOLUENE #2	1.190	1.158	2.7	93	0.02
23	HM	C9-C12 ALIPHATICS #2	0.815	0.752	7.7	94	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.752	7.7	94	0.00
25	TM	N-NONANE #2	0.574	0.552	3.8	85	0.04
26	TM	ETHYLBENZENE #2	1.091	1.064	2.5	95	0.03
27	TM	M,P-XYLENE #2	0.983	0.958	2.5	95	0.04
28	TM	O-XYLENE #2	0.972	0.988	-1.6	97	0.04
29	TM	N-DECANE #2	0.382	0.315	17.5	86	0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.677	2.2	100	0.02
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.496	-1.4	93	0.03
32	TM	NAPHTHALENE #2	0.267	0.269	-0.7	100	0.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33 Operator: MKA
Sample : CTRVPH 2/6 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 7 9:37 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.91	5005696	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.91	3020948	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.32	5948072	48.738	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 97%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.32	5244193	49.394	ug/l	0.0
		{ Spiked Amount 50.000 Range 70 - 130 } Recovery = 99%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.36	8153198	50.336	ug/l	0.0
3)	TM	BENZENE	23.26	17691288	47.765	ug/l	0.0
5)	TM	TOLUENE	29.34	17150511	49.700	ug/l	0.0
6)	TM	ETHYLBENZENE	34.20	14366097	49.961	ug/l	0.0
7)	TM	M,P-XYLENE	34.46	30030077	96.360	ug/l	0.0
8)	TM	O-XYLENE	36.16	13035252	50.677	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	9706440	51.965	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	4975833	49.515	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	11695214	52.761	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	40429895	265.871	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	40429895	265.871	ug/l	0.0
17)	TM	N-PENTANE #2	11.18	5039272	39.088	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.29	6310079	42.857	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.36	4972741	50.553	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.90	6906776	47.219	ug/l	0.0
21)	TM	BENZENE #2	23.26	8453184	47.989	ug/l	0.0
22)	TM	TOLUENE #2	29.35	8747844	48.673	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	45451190	369.371	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	45451190	369.371	ug/l	0.0
25)	TM	N-NONANE #2	33.38	4171366	48.099	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.20	8032538	48.757	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	14472553	97.441	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - WATER

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33 Operator: MKA
Sample : CTRVPH 2/6 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 7 9:37 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

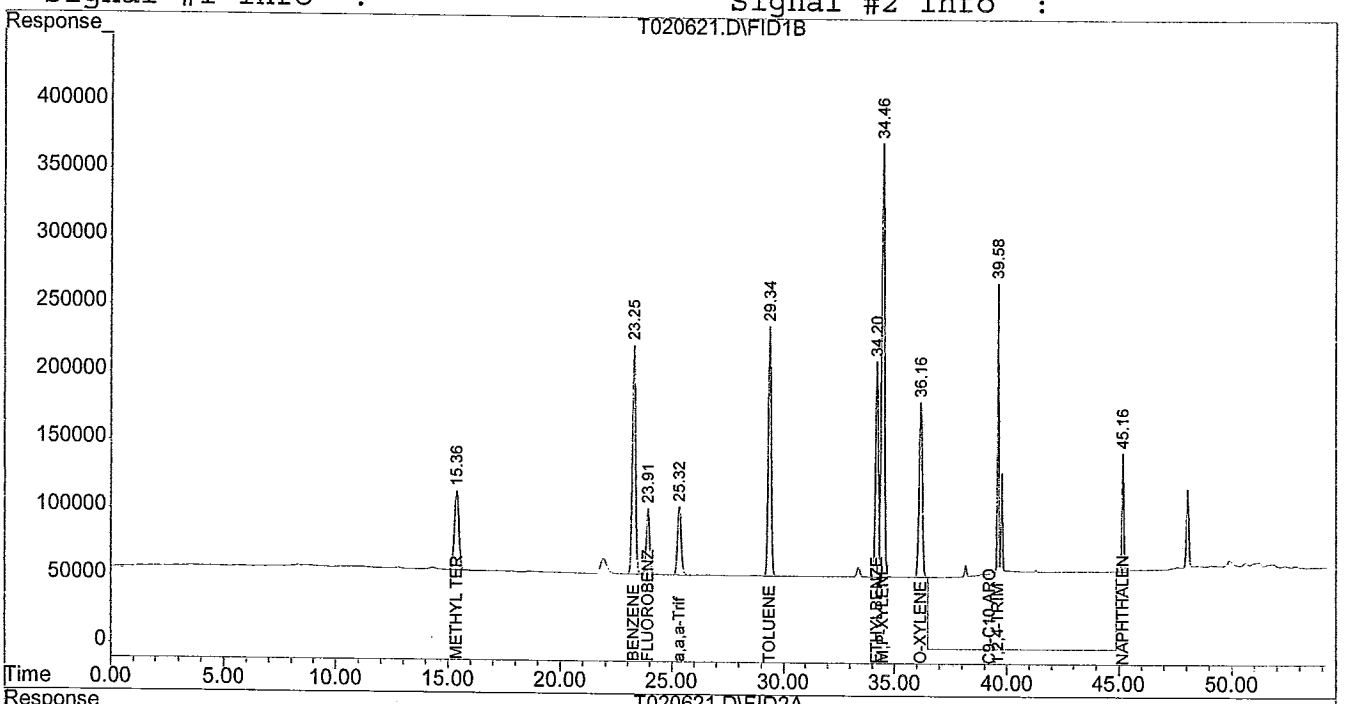
	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.16	7464004	50.845	ug/l	0.0
29) TM	N-DECANE #2	38.16	2379464	41.250	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5109804	48.861	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.76	3743981	50.691	ug/l	0.0
32) TM	NAPHTHALENE #2	45.16	2032534	50.426	ug/l	0.0

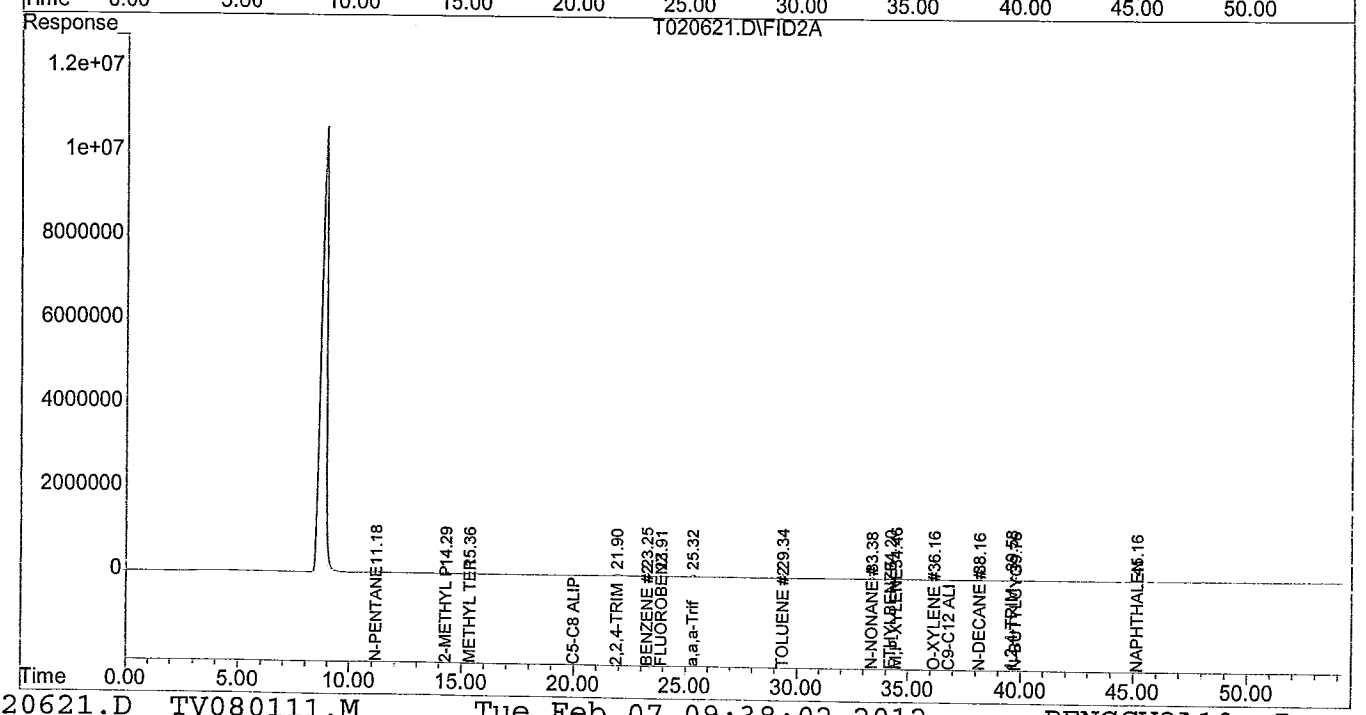
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33 Operator: MKA
Sample : CTRVPH 2/6 END Inst : TRACY #1
Misc : WATER DF=1 Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 7 9:37 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :



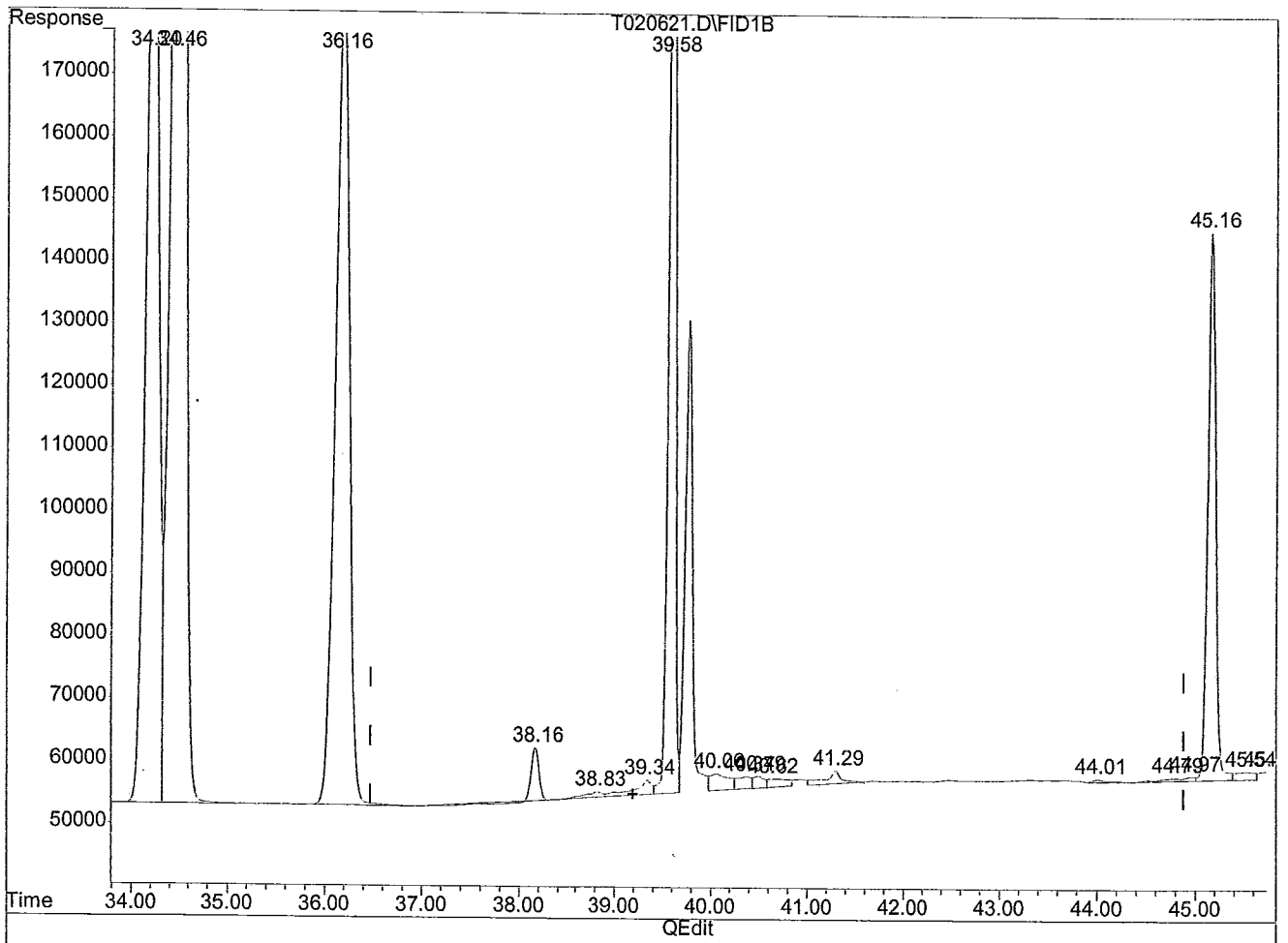


Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33
Sample : CTRVPH 2/6 END
Misc : WATER DF=1
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 7 8:26 2012 Quant Results File: TV080111.RES

Vial: 14
Operator: MKA
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 52.761ug/l m

response 11695214

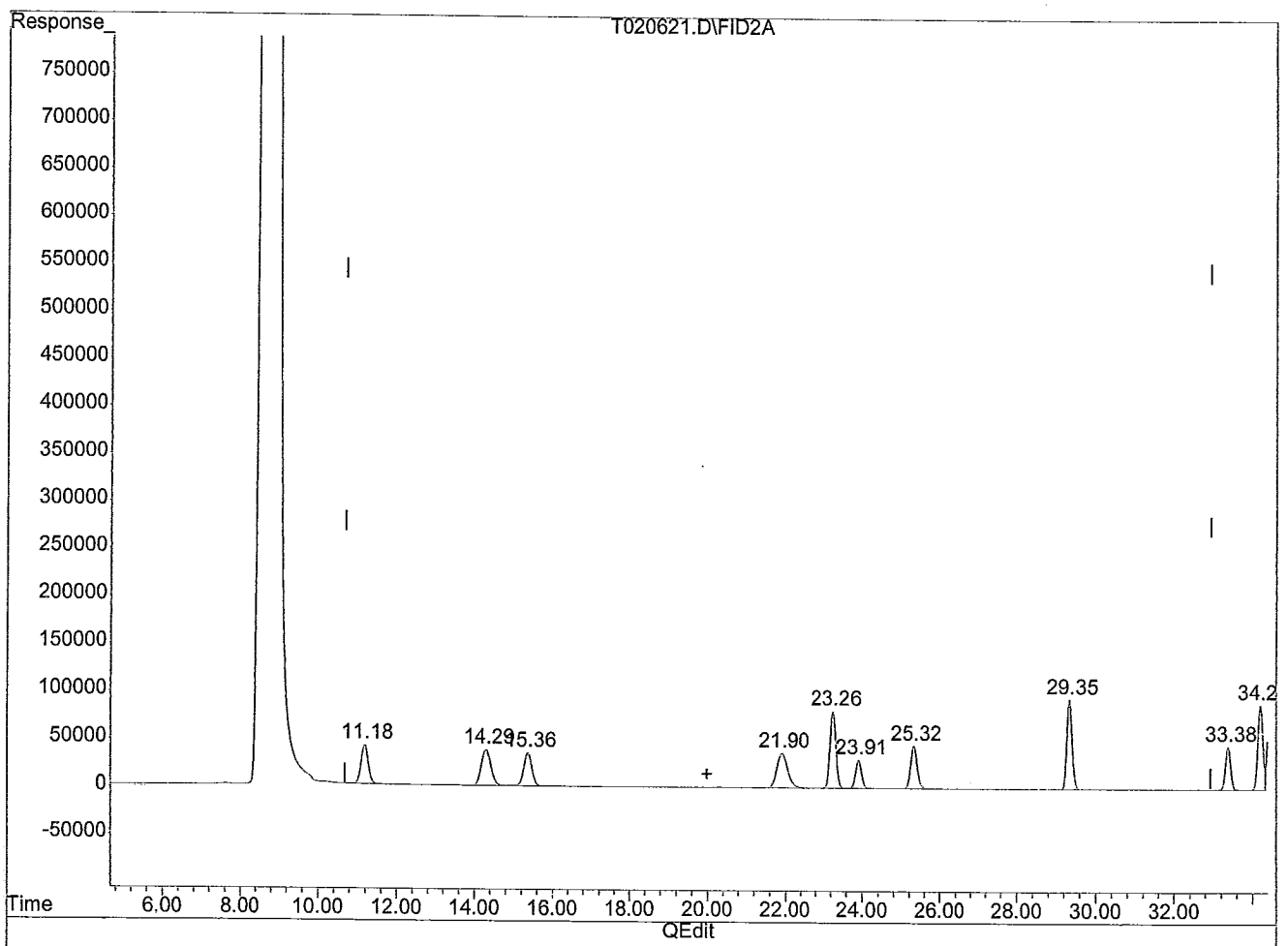
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33
Sample : CTRVPH 2/6 END
Misc : WATER DF=1
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 7 8:26 2012 Quant Results File: TV080111.RES

Vial: 14
Operator: MKA
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 265.871ug/l m

response 40429895

(+) = Expected Retention Time

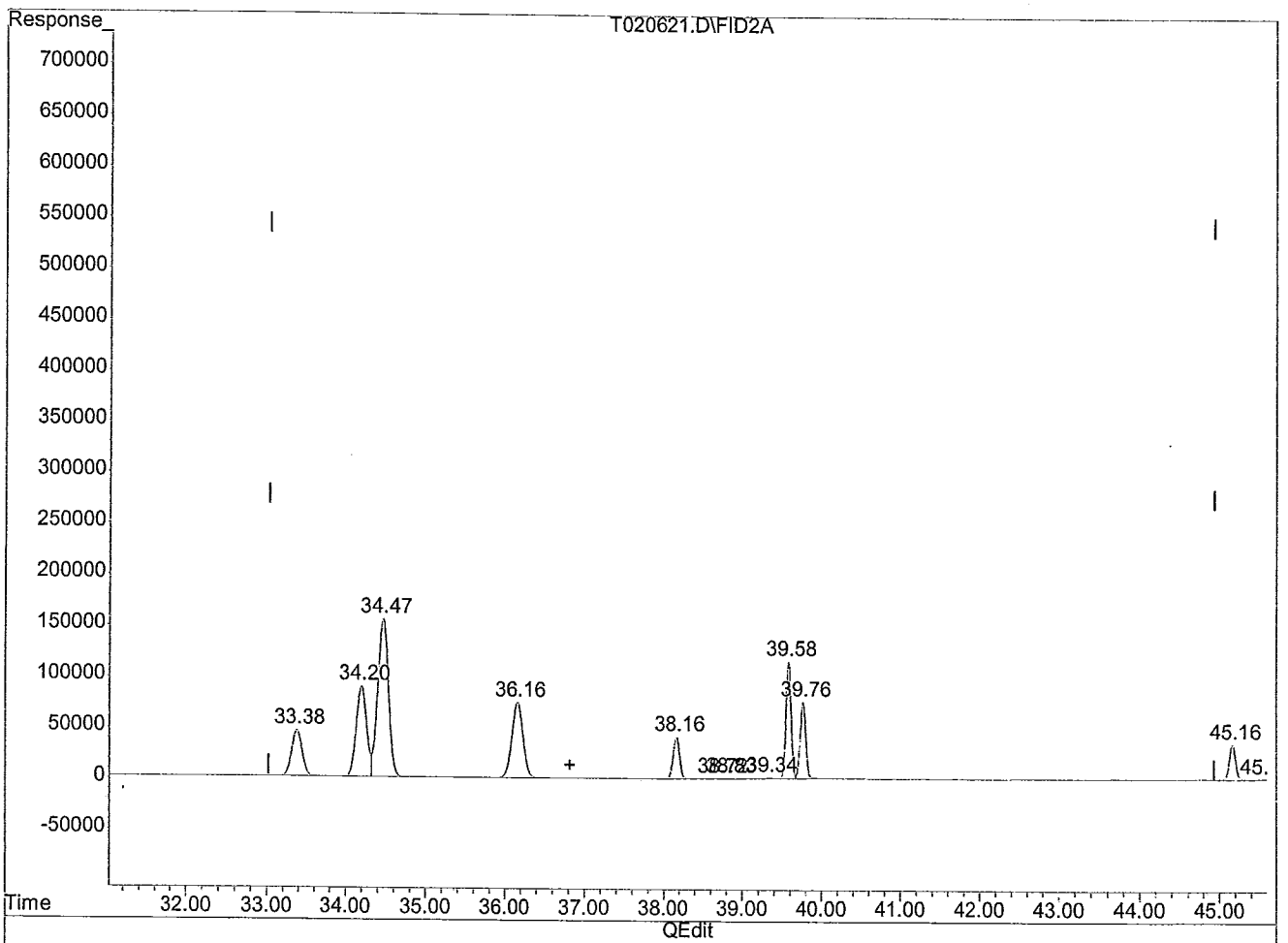
T020621.D TV080111.M Tue Feb 07 09:37:31 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020621.D\FID1B.CH
Signal #2 : T:\DATA\T0206\T020621.D\FID2A.CH
Acq On : 7 Feb 2012 7:33
Sample : CTRVPH 2/6 END
Misc : WATER DF=1
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 7 8:26 2012 Quant Results File: TV080111.RES

Vial: 14
Operator: MKA
Inst : TRACY #1
Multiplr: 1.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 369.371ug/l m

response 45451190

(+) = Expected Retention Time

T020621.D TV080111.M Tue Feb 07 09:37:42 2012 PENGCVOA10

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:13 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.92	5007057	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.92	3067626	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.34	12827774	105.080	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 105%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.34	11077857	102.752	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 103%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	0.00	0	N.D.	ug/l	0.0
3)	TM	BENZENE	0.00	0	N.D.	ug/l	0.0
5)	TM	TOLUENE	0.00	0	N.D.	ug/l	0.0
6)	TM	ETHYLBENZENE	0.00	0	N.D.	ug/l	0.0
7)	TM	M,P-XYLENE	0.00	0	N.D.	ug/l	0.0
8)	TM	O-XYLENE	36.08	312029	60.637	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	0.00	0	N.D.	ug/l	0.0
10)	TM	NAPHTHALENE	0.00	0	N.D.	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	1029252	232.102	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	435290	140.947	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	435290	140.947	ug/l	0.0
17)	TM	N-PENTANE #2	0.00	0	N.D.	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	0.00	0	N.D.	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.47	257730	129.012	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	0.00	0	N.D.	ug/l	0.0
21)	TM	BENZENE #2	0.00	0	N.D.	ug/l	0.0
22)	TM	TOLUENE #2	0.00	0	N.D.	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	543596	217.523	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	543596	217.523	ug/l	0.0
25)	TM	N-NONANE #2	0.00	0	N.D.	ug/l	0.0
26)	TM	ETHYLBENZENE #2	0.00	0	N.D.	ug/l	0.0
27)	TM	M,P-XYLENE #2	0.00	0	N.D.	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:13 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	35.92f	144090	48.330	ug/l	0.0
29)	TM	N-DECANE #2	0.00	0	N.D.	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.47f	289903	136.498	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	0.00	0	N.D.	ug/l	0.0
32)	TM	NAPHTHALENE #2	0.00	0	N.D.	ug/l	0.0

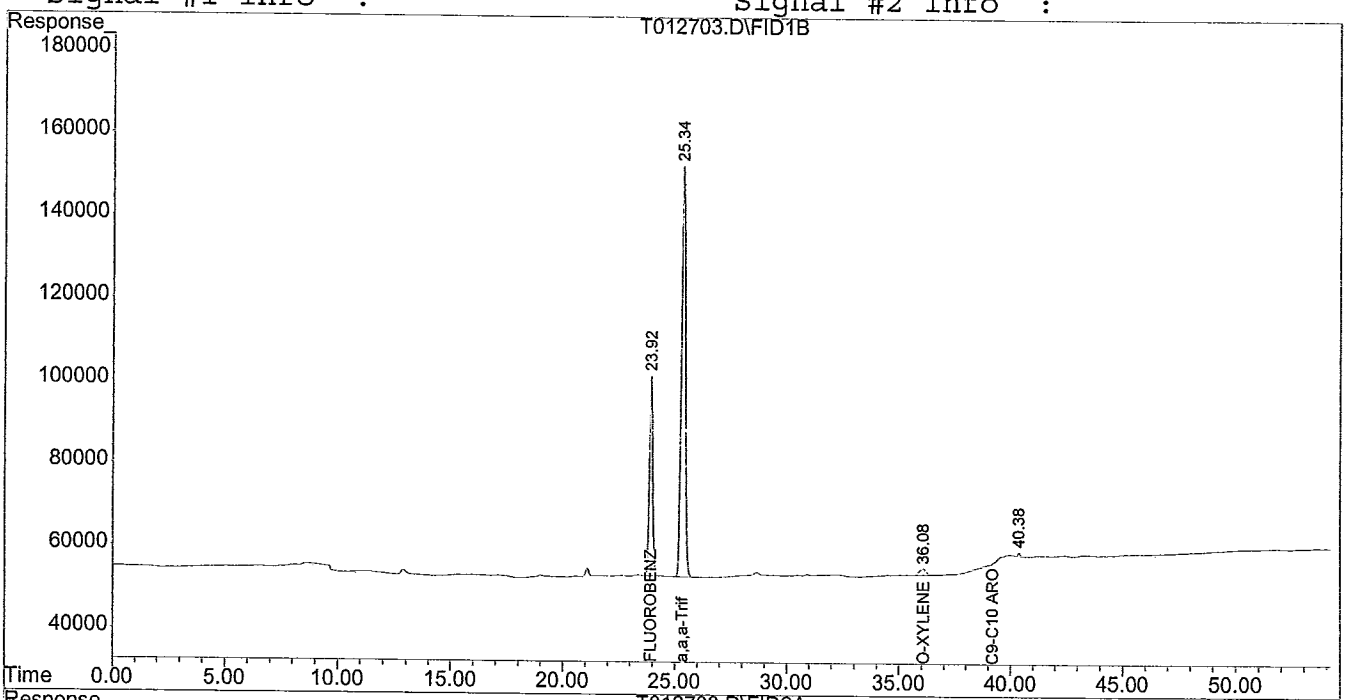
(f)=RT Delta > 1/2 Window (m)=manual int.

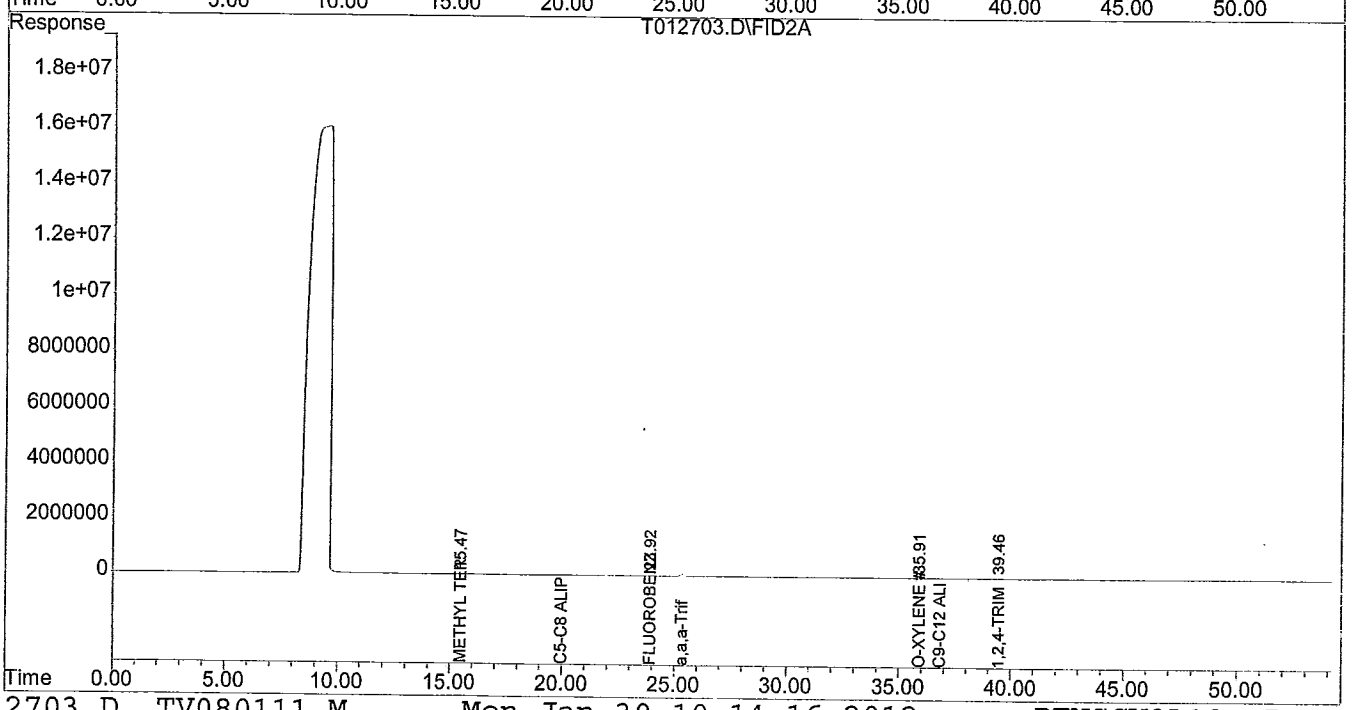
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:13 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T012703.D - (QT Reviewed)

at ... T:\DATA\T0127\

generated on ... Mon Jan 30 10:14:16 2012

Sample Multiplier : 50.000 @1.000

2)	METHYL TERT-BUTYL ETHER	0.000	0.000	in SubTot Grp 1
3)	BENZENE	0.000	0.000	in SubTot Grp 1
5)	TOLUENE	0.000	0.000	in SubTot Grp 1
6)	ETHYLBENZENE	0.000	0.000	in SubTot Grp 3
7)	M,P-XYLENE	0.000	0.000	in SubTot Grp 3
8)	O-XYLENE	60.637	1.213	in SubTot Grp 3
11)	C9-C10 AROMATICS	232.102	4.642	with Grp 2
15)	C5-C8 ALIPHATICS #2	140.947	2.819	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	140.947	2.819*	
23)	C9-C12 ALIPHATICS #2	217.523	4.350*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	217.523	4.350*	

Group 1 ----------

C5-C8 ALIPHATICS #2	140.947	2.819
Sub-Total Group 1	0.000	0.000
C5-C8 ALIPHATICS (ADJUSTED) #2	140.947	2.819**

Group 2 ----------

C9-C12 ALIPHATICS #2	217.523	4.350	
C9-C10 AROMATICS	232.102	4.642	
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	-14.579	-0.292**	report as ND

Group 3 ----------

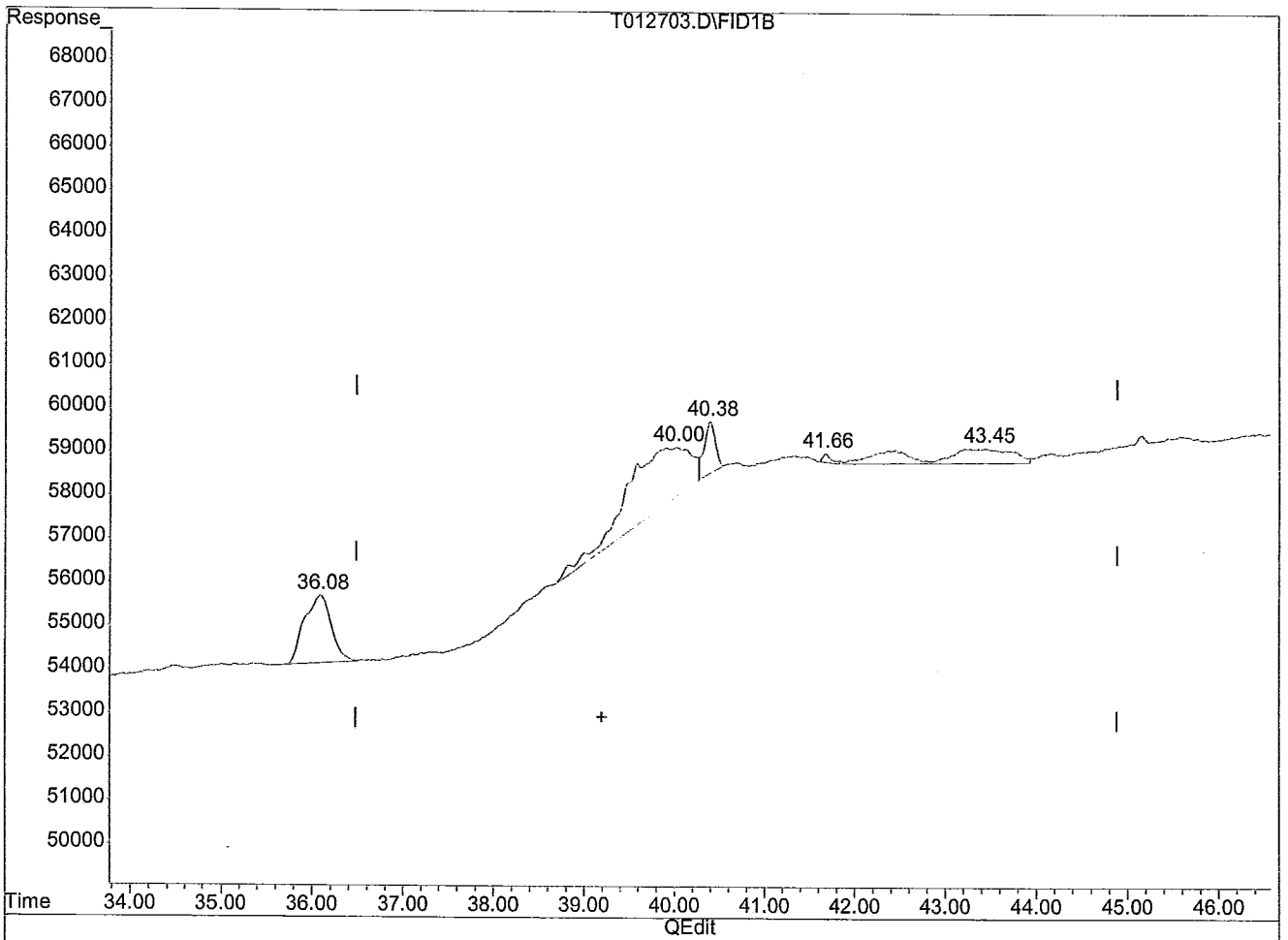
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	-14.579	0.000	
Sub-Total Group 3	60.637	1.213	
C9-C12 ALIPHATICS (ADJUSTED) #2	-75.216	-1.213**	report as ND

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 17:21 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 232.102ug/l m

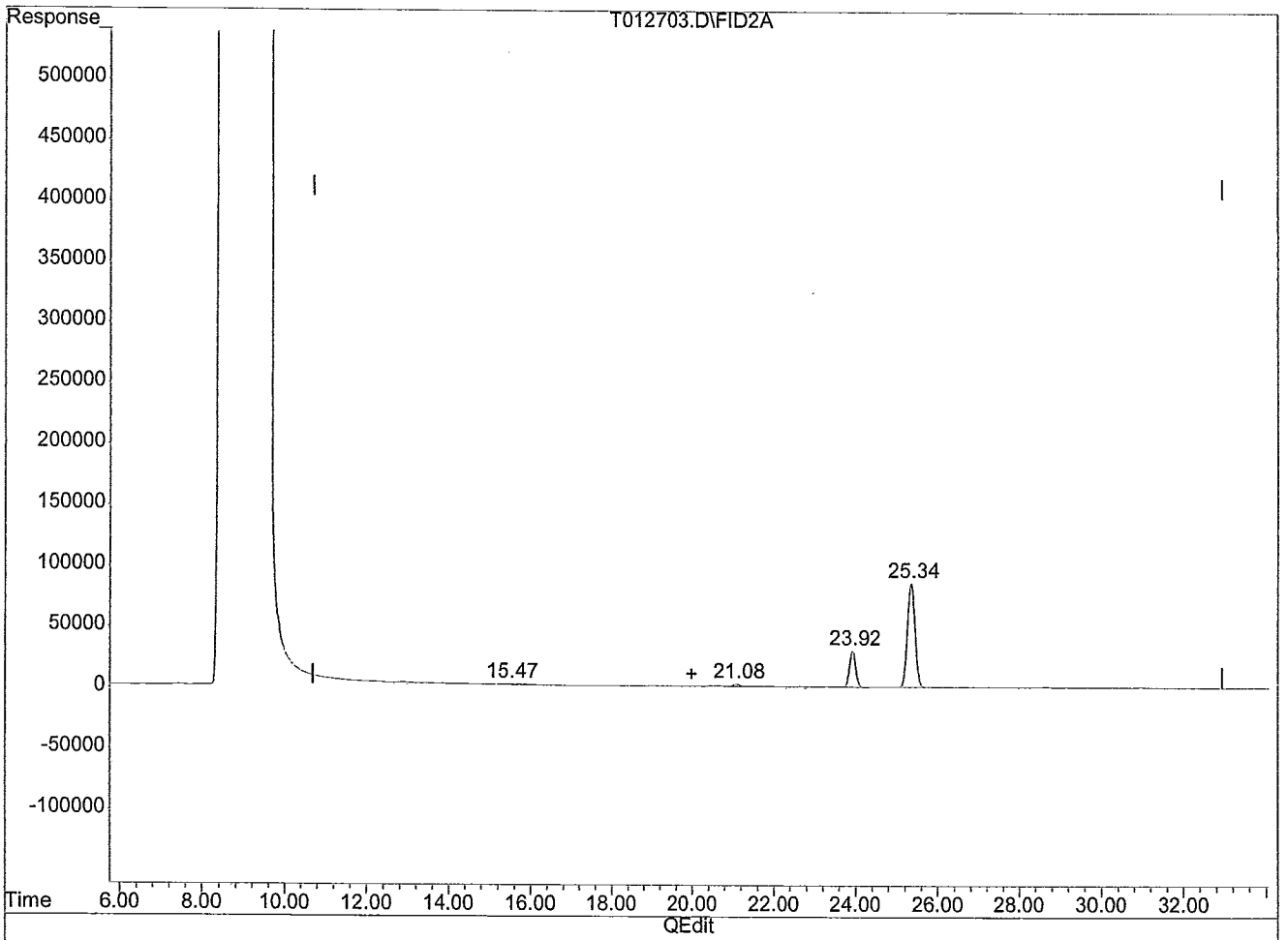
response 1029252

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 17:21 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 140.947ug/l m

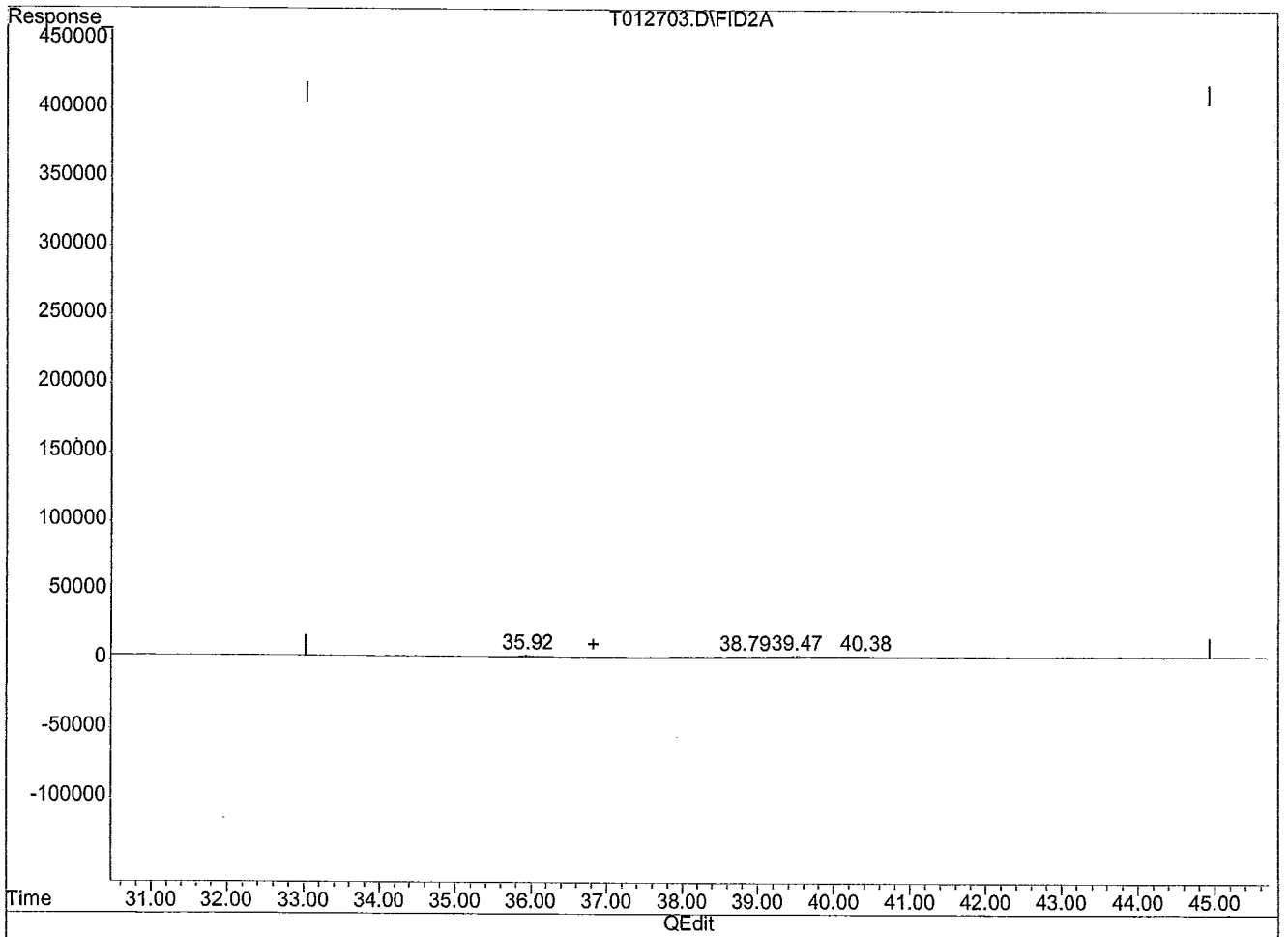
response 435290

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012703.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0127\T012703.D\FID2A.CH
Acq On : 27 Jan 2012 16:26 Operator: MKA
Sample : LI=MB LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 27 17:21 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 217.523ug/l m

response 543596

(+) = Expected Retention Time

T012703.D TV080111.M Mon Jan 30 10:13:59 2012 PENGCVOA10

Laboratory Control Sample (LCS)

File ID : T012704.D
Path: T:\DATA\T0127\
Sample : LI=LCS LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50
Acq Time: 27 Jan 2012 17:27
Inst : TRACY #1 SM: 50.000

Method : TV080111.M (Chemstation Integrator)
Path : T:\METHODS\
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration

System Monitoring Compounds (Type S)	Result Conc	Added	% Rec	QC Limits Lower	Upper
a,a,a-Trifluorotoluene (pid)	96.907	100.000	97	70	130
a,a,a-Trifluorotoluene (fid) #2	96.889	100.000	97	70	130

Target Compounds (Type T,H,$)	Result Conc	Added	% Rec	QC Limits Lower	Upper	
METHYL TERT-BUTYL ETHER	2326.416	2500.000	93	70	130	
BENZENE	2324.059	2500.000	93	70	130	
TOLUENE	2309.881	2500.000	92	70	130	
ETHYLBENZENE	2379.350	2500.000	95	70	130	
M,P-XYLENE	4605.620	5000.000	92	70	130	
O-XYLENE	2418.339	2500.000	97	70	130	
1,2,4-TRIMETHYLBENZENE	2399.967	2500.000	96	70	130	
NAPHTHALENE	2457.125	2500.000	98	70	130	
C9-C10 AROMATICS	2338.562	2500.000	94	70	130	
C5-C8 ALIPHATICS #2	12495.025	15000.000	83	70	130	
C5-C8 ALIPHATICS (ADJUSTED) #2	12495.025	15000.000	83	70	130	
N-PENTANE #2	1385.443	2500.000	55	70	130	<LCL
2-METHYL PENTANE #2	2081.117	2500.000	83	70	130	
METHYL TERT-BUTYL ETHER #2	2376.212	2500.000	95	70	130	
2,2,4-TRIMETHYLPENTANE #2	2449.564	2500.000	98	70	130	
BENZENE #2	2353.295	2500.000	94	70	130	
TOLUENE #2	2272.681	2500.000	91	70	130	
C9-C12 ALIPHATICS #2	18655.459	20000.000	93	70	130	
C9-C12 ALIPHATICS (ADJUSTED) #2	18655.459	20000.000	93	70	130	
N-NONANE #2	2736.137	2500.000	109	70	130	
ETHYLBENZENE #2	2332.836	2500.000	93	70	130	
M,P-XYLENE #2	4679.216	5000.000	94	70	130	
O-XYLENE #2	2439.616	2500.000	98	70	130	
N-DECANE #2	2657.805	2500.000	106	70	130	
1,2,4-TRIMETHYLBENZENE #2	2308.000	2500.000	92	70	130	
N-BUTYLCYCLOHEXANE #2	2958.826	2500.000	118	70	130	
NAPHTHALENE #2	2529.492	2500.000	101	70	130	

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH Vial: 3
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27 Operator: MKA
Sample : LI=LCS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:14 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.88	5377178	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.88	3159255	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	12704515	96.907	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 97%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.33	10757785	96.889	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 97%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.35	8095805	2326.416	ug/l	0.0
3)	TM	BENZENE	23.21	18493473	2324.059	ug/l	0.0
5)	TM	TOLUENE	29.34	17125159	2309.881	ug/l	0.0
6)	TM	ETHYLBENZENE	34.19	14698870	2379.350	ug/l	0.0
7)	TM	M,P-XYLENE	34.46	30836677	4605.620	ug/l	0.0
8)	TM	O-XYLENE	36.15	13364318	2418.339	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.57	9631148	2399.967	ug/l	0.0
10)	TM	NAPHTHALENE	45.14	5304907	2457.125	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	11136884	2338.562	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	39741202	12495.025	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	39741202	12495.025	ug/l	0.0
17)	TM	N-PENTANE #2	10.95	3735851	1385.443	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.15	6408848	2081.117	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.35	4888804	2376.212	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.84	7494162	2449.564	ug/l	0.0
21)	TM	BENZENE #2	23.21	8670237	2353.295	ug/l	0.0
22)	TM	TOLUENE #2	29.35	8543301	2272.681	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	48013073	18655.459	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	48013073	18655.459	ug/l	0.0
25)	TM	N-NONANE #2	33.36	4963122	2736.137	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.19	8038459	2332.836	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.46	14536121	4679.216	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH Vial: 3
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27 Operator: MKA
Sample : LI=LCS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 10:14 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

	Compound	R.T.	Response	Conc	Units	MDL
28) TM	O-XYLENE #2	36.15	7490621	2439.616	ug/l	0.0
29) TM	N-DECANE #2	38.15	3206653	2657.805	ug/l	0.0
30) TM	1,2,4-TRIMETHYLBENZENE #2	39.57	5048297	2308.000	ug/l	0.0
31) TM	N-BUTYLCYCLOHEXANE #2	39.75	4570796	2958.826	ug/l	0.0
32) TM	NAPHTHALENE #2	45.15	2132507	2529.492	ug/l	0.0

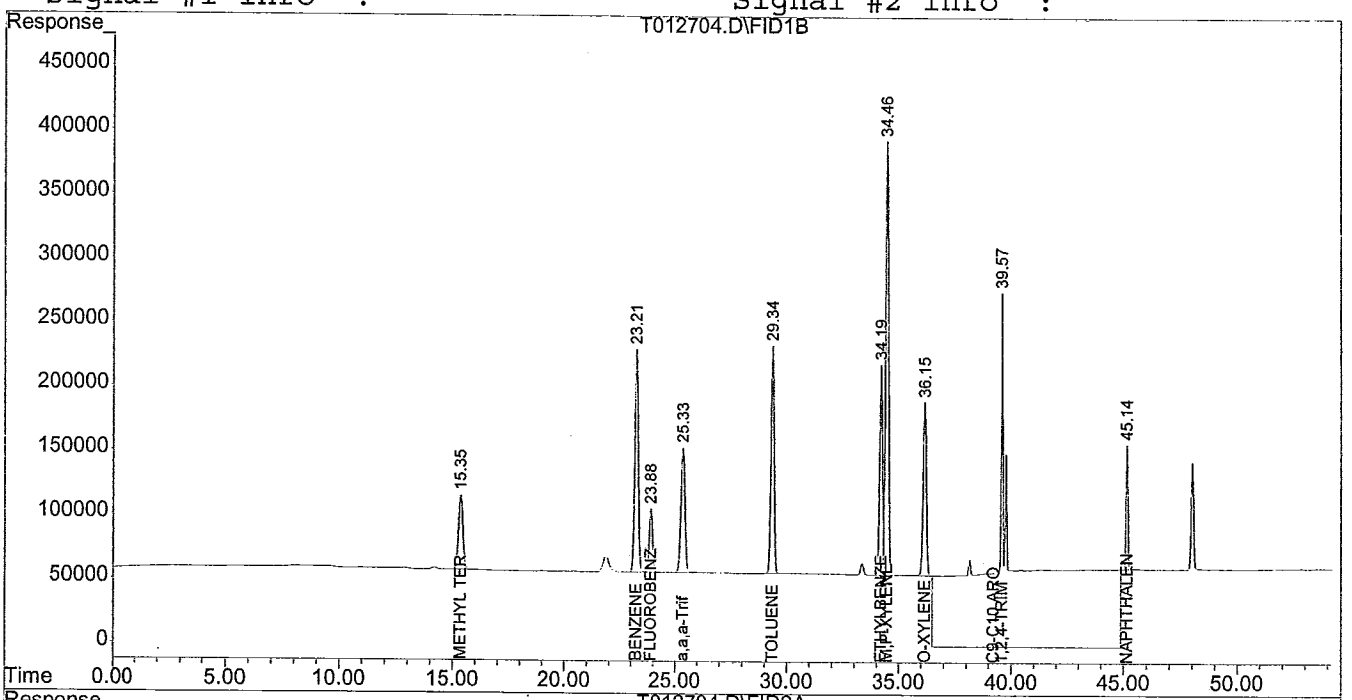
(f)=RT Delta > 1/2 Window (m)=manual int.

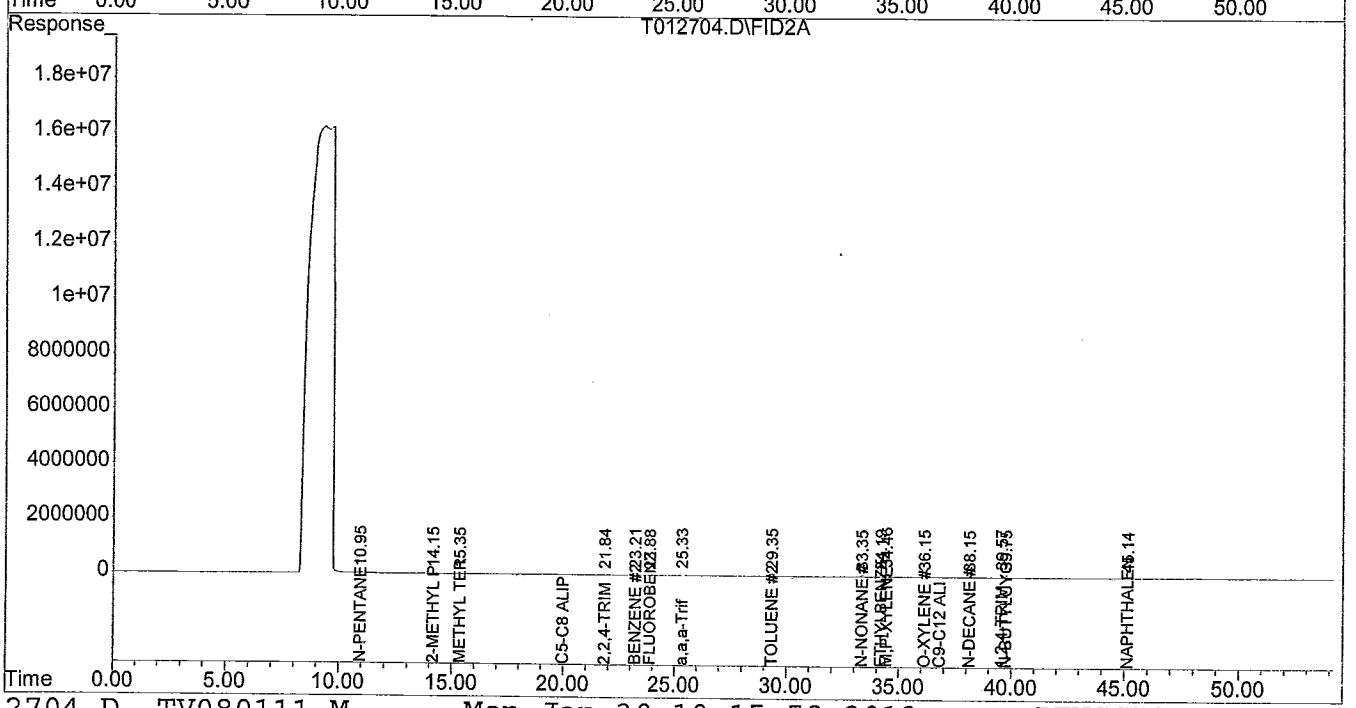
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH Vial: 3
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27 Operator: MKA
Sample : LI=LCS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:14 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T012704.D - (QT Reviewed)

at ... T:\DATA\T0127\

generated on ... Mon Jan 30 10:15:59 2012

Sample Multiplier : 50.000 @1.000

2)	METHYL TERT-BUTYL ETHER	2326.416	46.528	in SubTot Grp 1
3)	BENZENE	2324.059	46.481	in SubTot Grp 1
5)	TOLUENE	2309.881	46.198	in SubTot Grp 1
6)	ETHYLBENZENE	2379.350	47.587	in SubTot Grp 3
7)	M,P-XYLENE	4605.620	92.112	in SubTot Grp 3
8)	O-XYLENE	2418.339	48.367	in SubTot Grp 3
11)	C9-C10 AROMATICS	2338.562	46.771	with Grp 2
15)	C5-C8 ALIPHATICS #2	12495.025	249.900	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	12495.025	249.900*	
23)	C9-C12 ALIPHATICS #2	18655.459	373.109*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	18655.459	373.109*	

Group 1 ----------

C5-C8 ALIPHATICS #2	12495.025	249.900
Sub-Total Group 1	6960.356	139.207
C5-C8 ALIPHATICS (ADJUSTED) #2	5534.669	110.693**

Group 2 ----------

C9-C12 ALIPHATICS #2	18655.459	373.109
C9-C10 AROMATICS	2338.562	46.771
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	16316.897	326.338**

Group 3 ----------

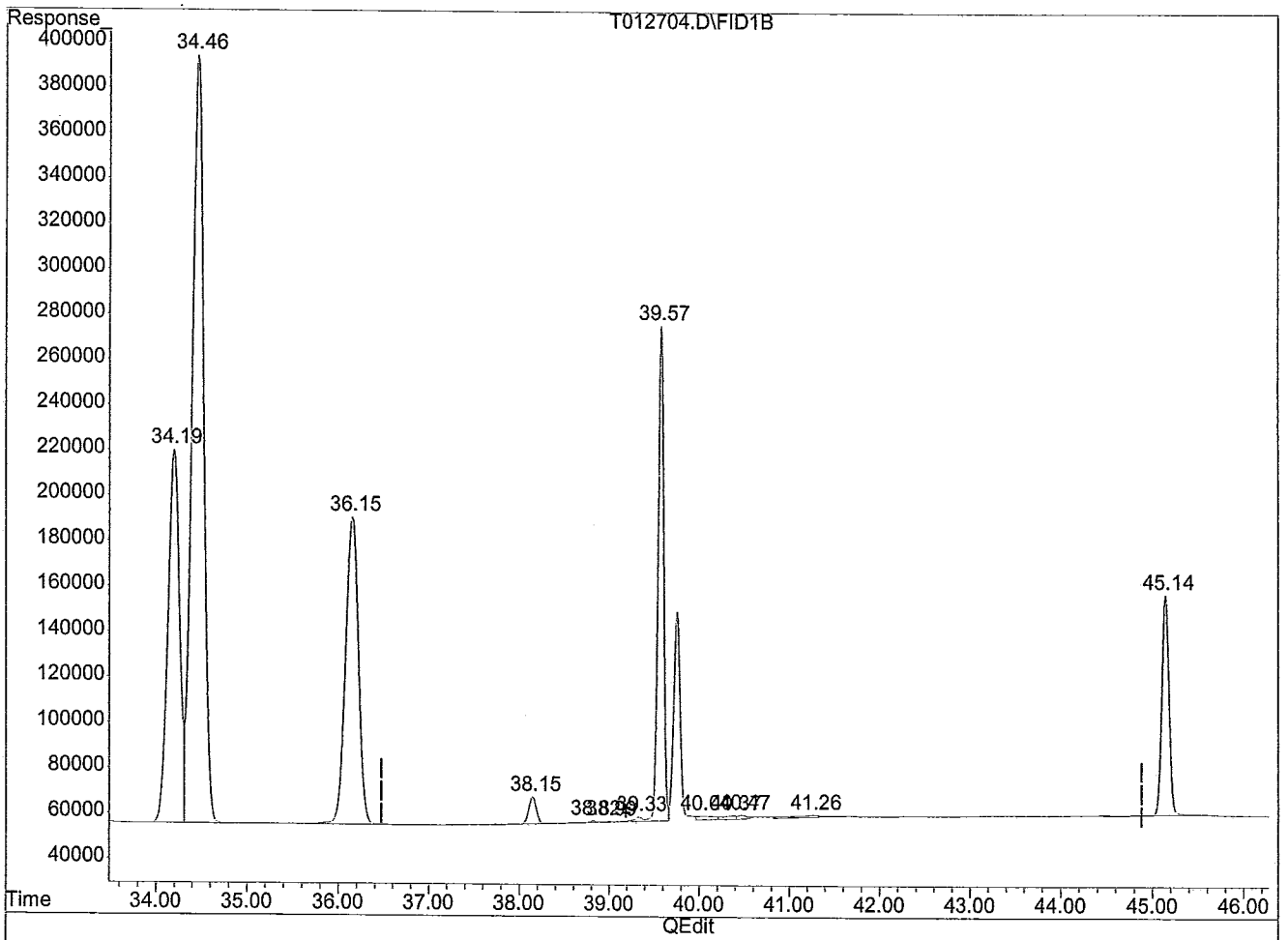
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	16316.897	326.338
Sub-Total Group 3	9403.309	188.066
C9-C12 ALIPHATICS (ADJUSTED) #2	6913.588	138.272**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH Vial: 3
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27 Operator: MKA
Sample : LI=LCS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:14 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 2338.562ug/l m

response 11136884

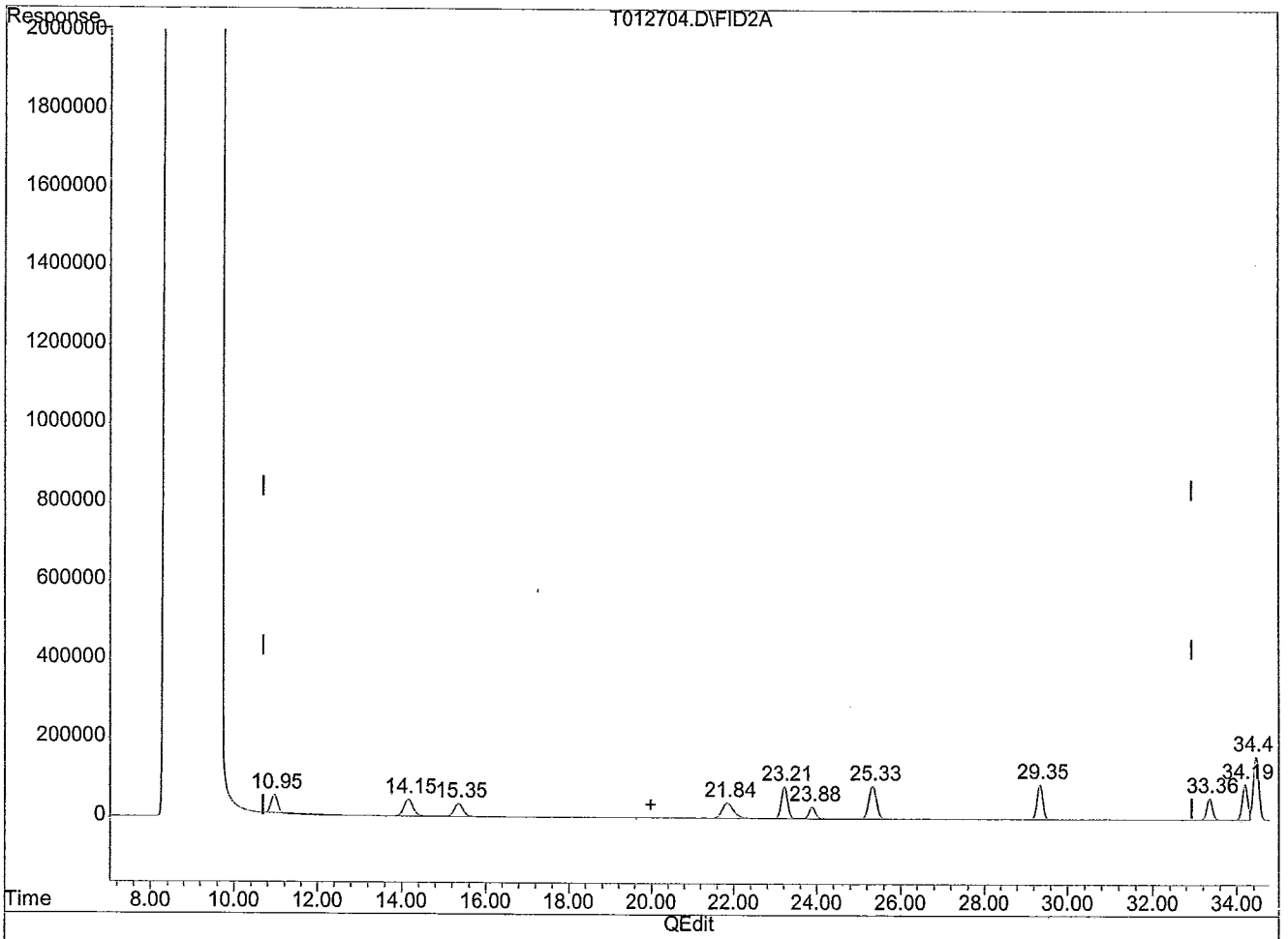
(+) = Expected Retention Time

T012704.D TV080111.M Mon Jan 30 10:15:27 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH Vial: 3
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27 Operator: MKA
Sample : LI=LCS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:14 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 12495.025ug/l m

response 39741202

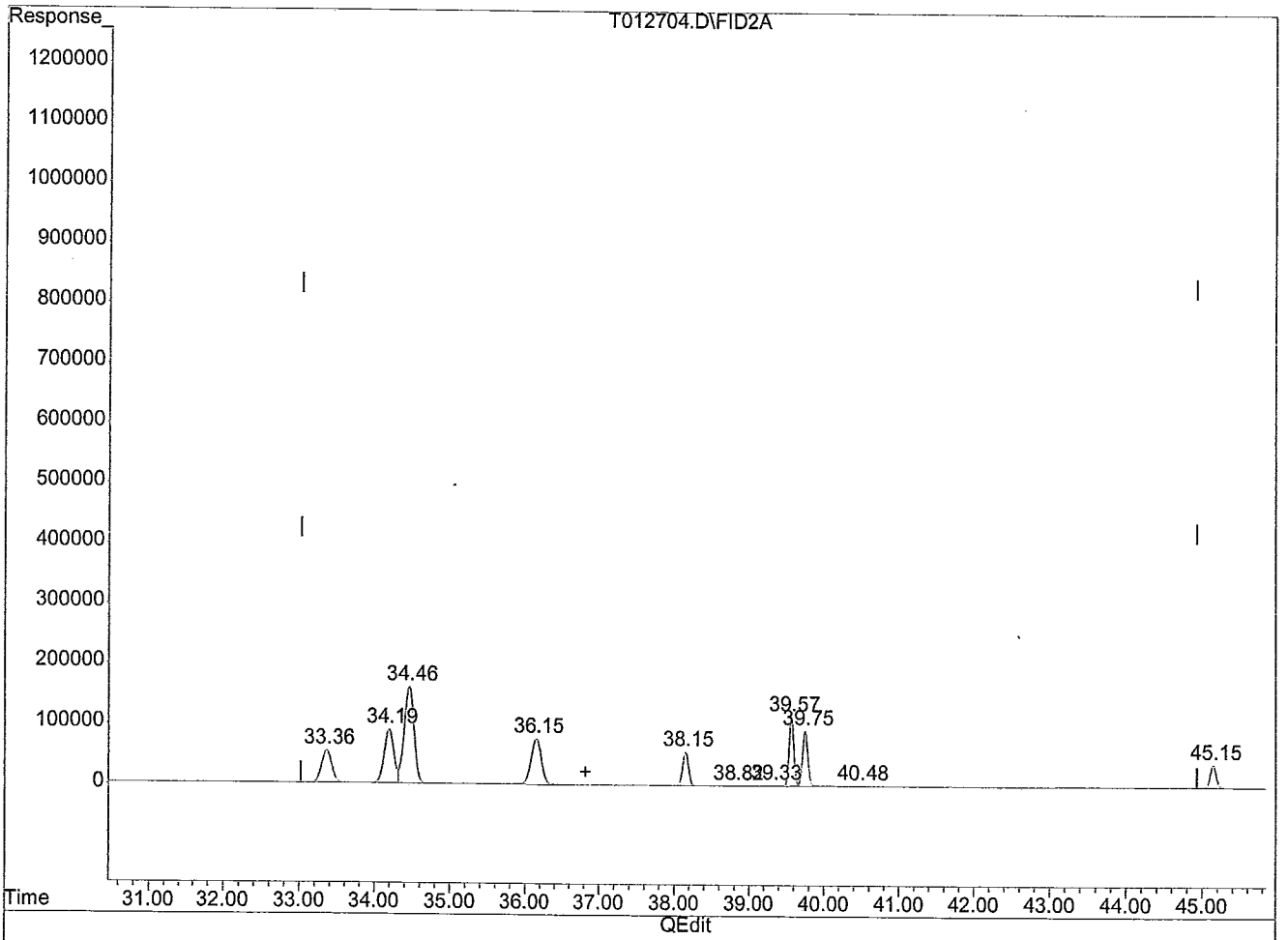
(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0127\T012704.D\FID1B.CH
Signal #2 : T:\DATA\T0127\T012704.D\FID2A.CH
Acq On : 27 Jan 2012 17:27
Sample : LI=LCS LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 10:14 2012 Quant Results File: TV080111.RES

Vial: 3
Operator: MKA
Inst : TRACY #1
Multiplr: 50.000

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 18655.459ug/l m

response 48013073

(+) = Expected Retention Time

T012704.D TV080111.M Mon Jan 30 10:15:45 2012 PENGCVOA10

Laboratory Control Sample (LCS)

File ID : T013003.D
Path: T:\DATA\T0130\
Sample : LI=LCSD LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50
Acq Time: 30 Jan 2012 12:11
Inst : TRACY #1 SM: 50.000

Method : TV080111.M (Chemstation Integrator)
Path : T:\METHODS\
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration

System Monitoring Compounds (Type S)	Result Conc	Added	% Rec	QC Limits Lower	Upper
a,a,a-Trifluorotoluene (pid)	96.699	100.000	97	70	130
a,a,a-Trifluorotoluene (fid) #2	99.242	100.000	99	70	130

Target Compounds (Type T,H,$)	Result Conc	Added	% Rec	QC Limits Lower	Upper	
METHYL TERT-BUTYL ETHER	2218.854	2500.000	89	70	130	
BENZENE	2350.761	2500.000	94	70	130	
TOLUENE	2314.926	2500.000	93	70	130	
ETHYLBENZENE	2388.053	2500.000	96	70	130	
M,P-XYLENE	4608.945	5000.000	92	70	130	
O-XYLENE	2412.737	2500.000	97	70	130	
1,2,4-TRIMETHYLBENZENE	2343.122	2500.000	94	70	130	
NAPHTHALENE	2200.673	2500.000	88	70	130	
C9-C10 AROMATICS	2185.456	2500.000	87	70	130	
C5-C8 ALIPHATICS #2	12799.427	15000.000	85	70	130	
C5-C8 ALIPHATICS (ADJUSTED) #2	12799.427	15000.000	85	70	130	
N-PENTANE #2	1645.021	2500.000	66	70	130	<LCL
2-METHYL PENTANE #2	2108.631	2500.000	84	70	130	
METHYL TERT-BUTYL ETHER #2	2337.857	2500.000	94	70	130	
2,2,4-TRIMETHYLPENTANE #2	2442.851	2500.000	98	70	130	
BENZENE #2	2383.346	2500.000	95	70	130	
TOLUENE #2	2318.495	2500.000	93	70	130	
C9-C12 ALIPHATICS #2	18183.604	20000.000	91	70	130	
C9-C12 ALIPHATICS (ADJUSTED) #2	18183.604	20000.000	91	70	130	
N-NONANE #2	2442.149	2500.000	98	70	130	
ETHYLBENZENE #2	2379.208	2500.000	95	70	130	
M,P-XYLENE #2	4754.704	5000.000	95	70	130	
O-XYLENE #2	2467.247	2500.000	99	70	130	
N-DECANE #2	2218.690	2500.000	89	70	130	
1,2,4-TRIMETHYLBENZENE #2	2281.499	2500.000	91	70	130	
N-BUTYLCYCLOHEXANE #2	2576.264	2500.000	103	70	130	
NAPHTHALENE #2	2246.003	2500.000	90	70	130	

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 13:24 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.94	5423867	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.94	3129453	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.38	12787334	96.699	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 97%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.38	10915117	99.242	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 99%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.40	7788540	2218.854	ug/l	0.0
3)	TM	BENZENE	23.27	18868372	2350.761	ug/l	0.0
5)	TM	TOLUENE	29.39	17311578	2314.926	ug/l	0.0
6)	TM	ETHYLBENZENE	34.24	14880724	2388.053	ug/l	0.0
7)	TM	M,P-XYLENE	34.51	31126884	4608.945	ug/l	0.0
8)	TM	O-XYLENE	36.21	13449131	2412.737	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.60	9484672	2343.122	ug/l	0.0
10)	TM	NAPHTHALENE	45.18	4792484	2200.673	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	10498118	2185.456	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	40325351	12799.427	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	40325351	12799.427	ug/l	0.0
17)	TM	N-PENTANE #2	11.05	4393962	1645.021	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.24	6432323	2108.631	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.40	4764519	2337.857	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.91	7403122	2442.851	ug/l	0.0
21)	TM	BENZENE #2	23.27	8698120	2383.346	ug/l	0.0
22)	TM	TOLUENE #2	29.39	8633305	2318.495	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	46357209	18183.604	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	46357209	18183.604	ug/l	0.0
25)	TM	N-NONANE #2	33.41	4388064	2442.149	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.24	8120912	2379.208	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.51	14631293	4754.704	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Jan 30 13:24 2012 Quant Results File: TV080111.RES
Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.21	7503998	2467.247	ug/l	0.0
29)	TM	N-DECANE #2	38.18	2651608	2218.690	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.60	4943257	2281.499	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.78	3942271	2576.264	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.18	1875648	2246.003	ug/l	0.0

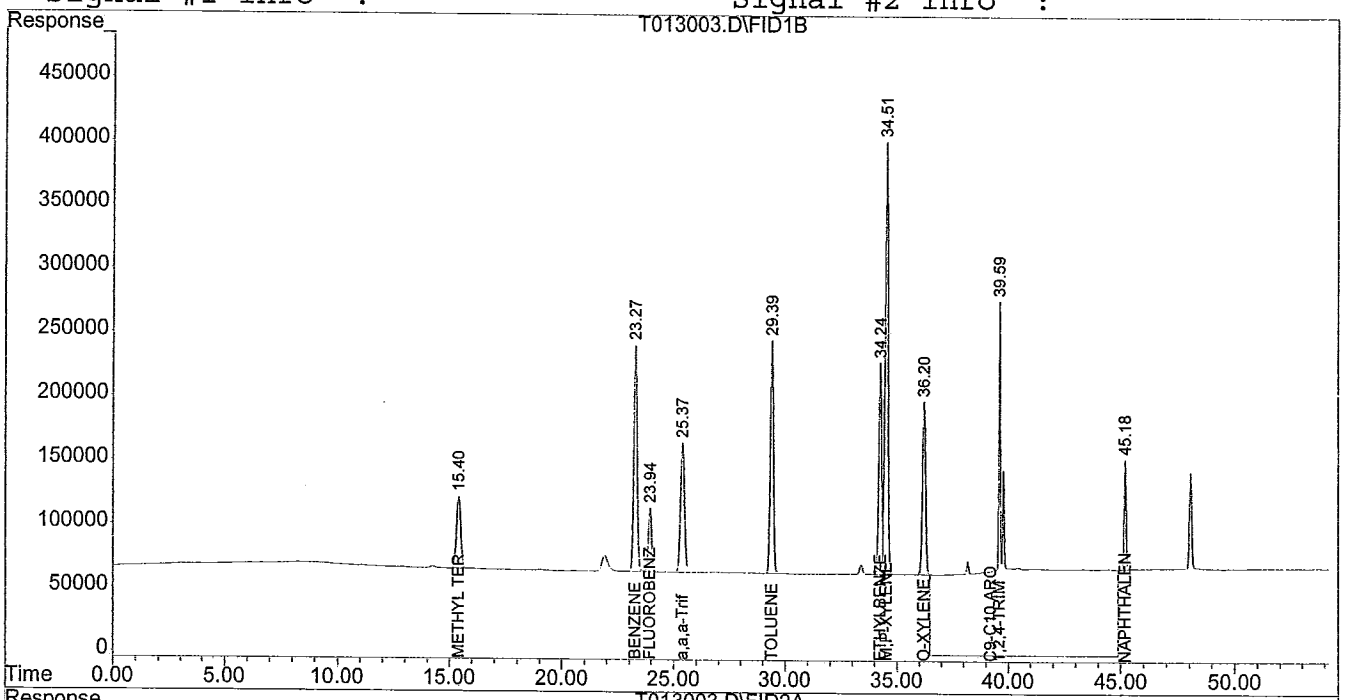
(f)=RT Delta > 1/2 Window (m)=manual int.

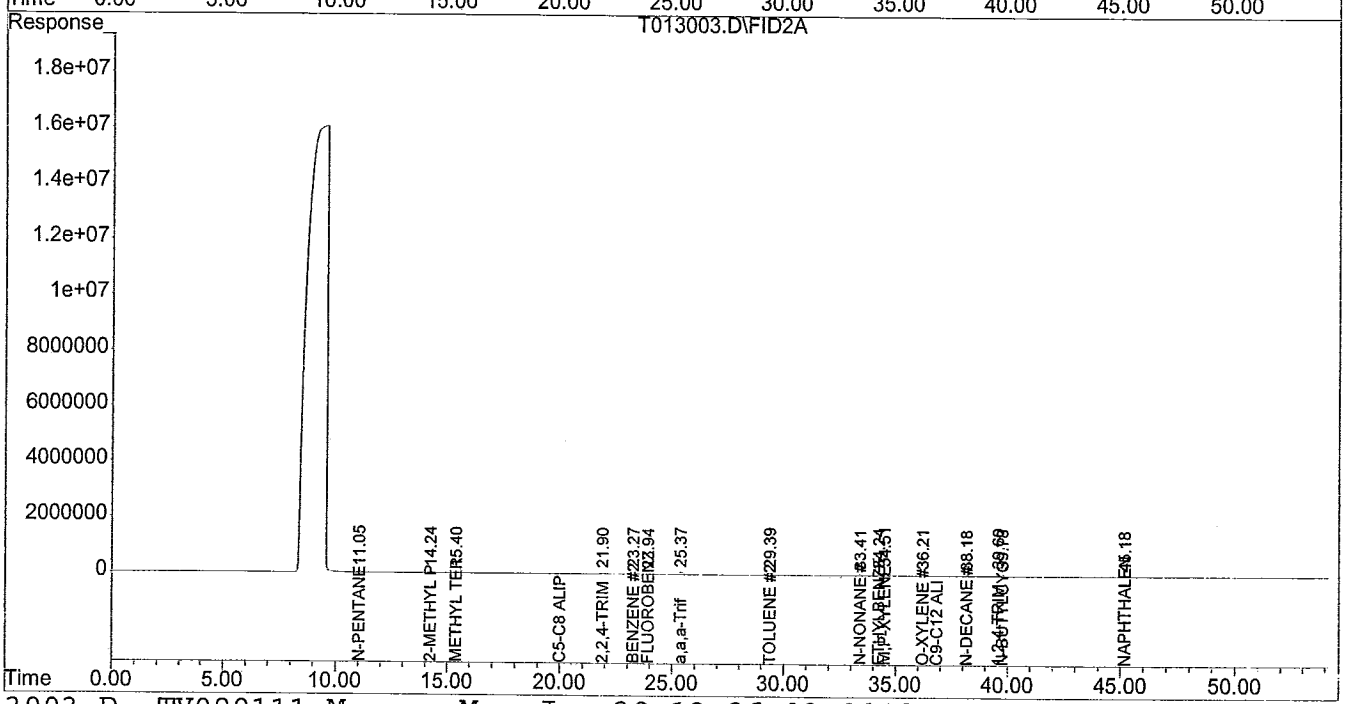
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 13:24 2012 Quant Results File: TV080111.RES

Quant Method : D:\HPCHEM\1\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T013003.D - (QT Reviewed)

at ... T:\DATA\T0130\

generated on ... Mon Jan 30 13:26:04 2012

Sample Multiplier : 50.000 @1.000

2)	METHYL TERT-BUTYL ETHER	2218.854	44.377	in SubTot Grp 1
3)	BENZENE	2350.761	47.015	in SubTot Grp 1
5)	TOLUENE	2314.926	46.299	in SubTot Grp 1
6)	ETHYLBENZENE	2388.053	47.761	in SubTot Grp 3
7)	M,P-XYLENE	4608.945	92.179	in SubTot Grp 3
8)	O-XYLENE	2412.737	48.255	in SubTot Grp 3
11)	C9-C10 AROMATICS	2185.456	43.709	with Grp 2
15)	C5-C8 ALIPHATICS #2	12799.427	255.989	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	12799.427	255.989*	
23)	C9-C12 ALIPHATICS #2	18183.604	363.672*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	18183.604	363.672*	

Group 1 ----------

C5-C8 ALIPHATICS #2	12799.427	255.989
Sub-Total Group 1	6884.541	137.691
C5-C8 ALIPHATICS (ADJUSTED) #2	5914.886	118.298**

Group 2 ----------

C9-C12 ALIPHATICS #2	18183.604	363.672
C9-C10 AROMATICS	2185.456	43.709
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	15998.148	319.963**

Group 3 ----------

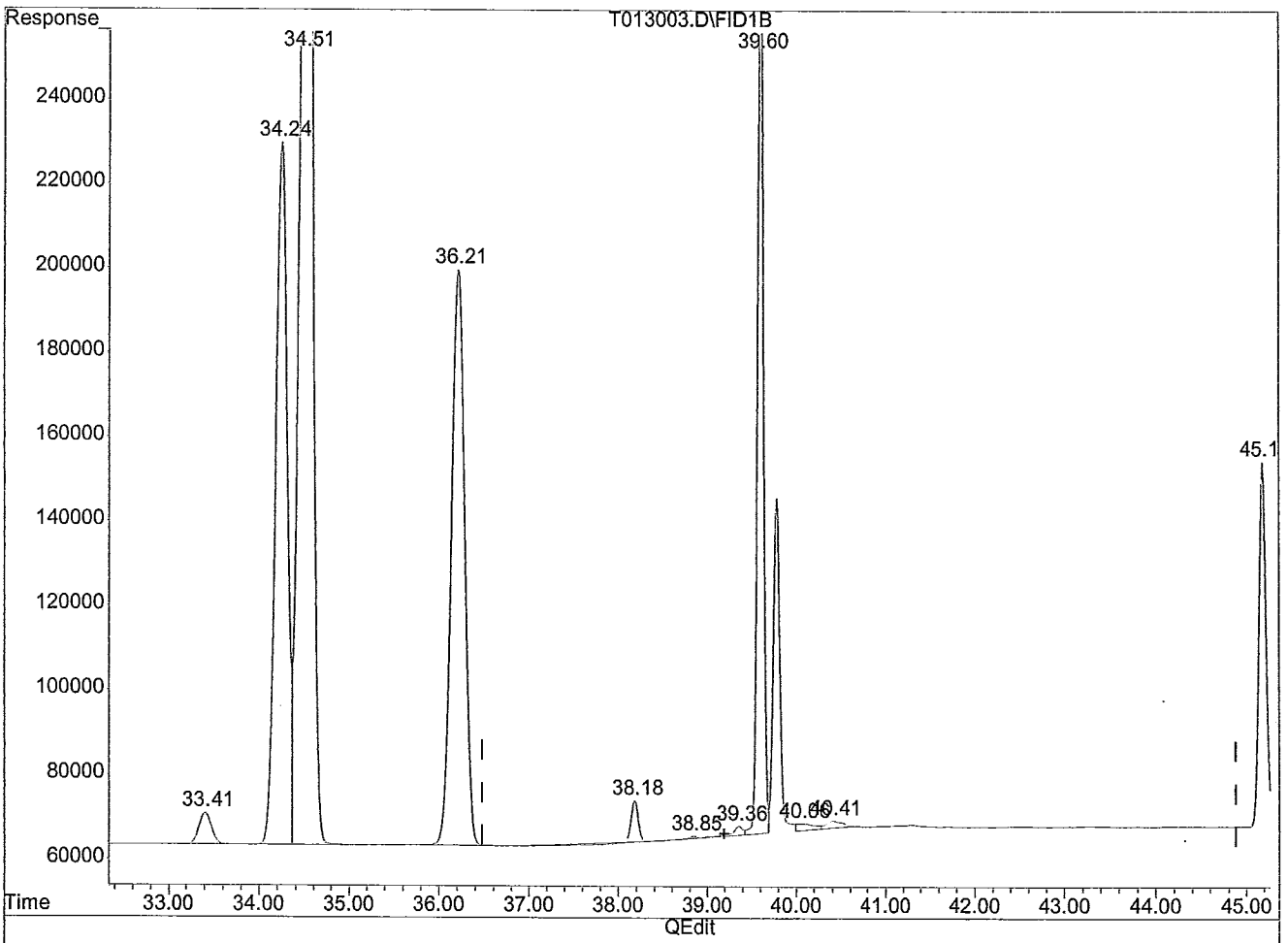
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	15998.148	319.963
Sub-Total Group 3	9409.735	188.195
C9-C12 ALIPHATICS (ADJUSTED) #2	6588.413	131.768**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 13:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 2185.456ug/l m

response 10498118

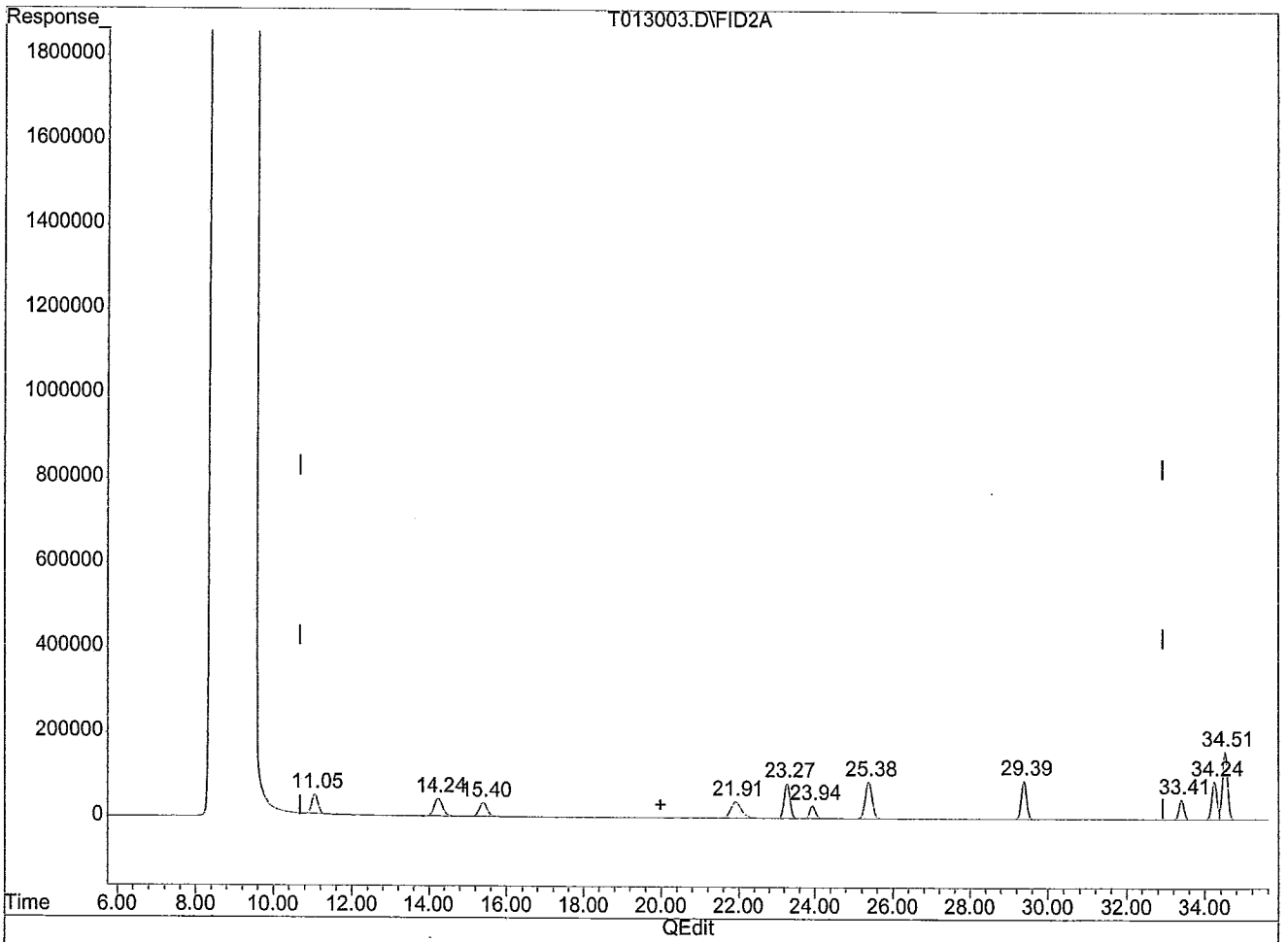
(+) = Expected Retention Time

T013003.D TV080111.M Mon Jan 30 13:25:31 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 13:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 12799.427ug/l m

response 40325351

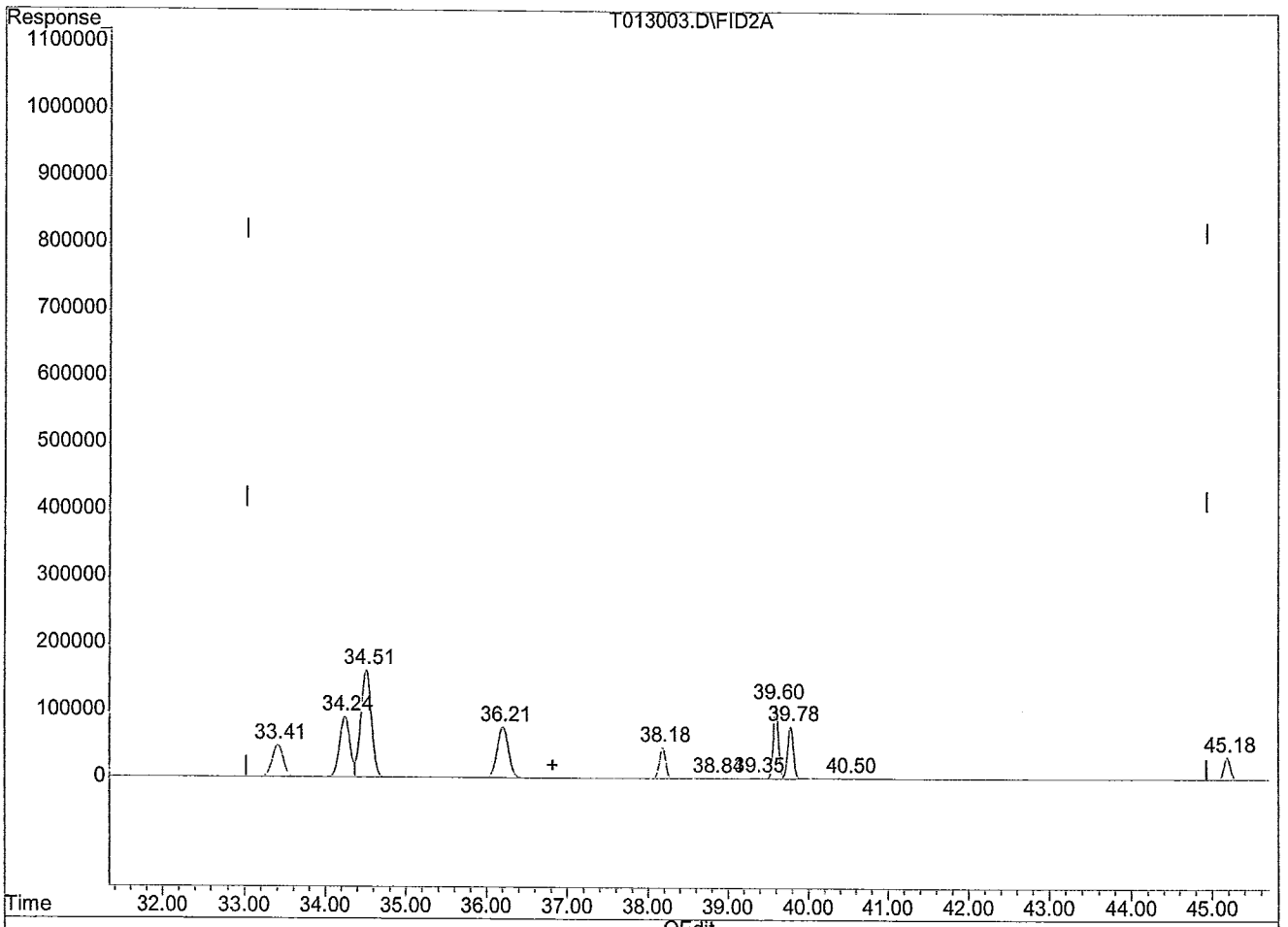
(+) = Expected Retention Time

T013003.D TV080111.M Mon Jan 30 13:25:39 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0130\T013003.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0130\T013003.D\FID2A.CH
Acq On : 30 Jan 2012 12:11 Operator: MKA
Sample : LI=LCSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 Multiplr: 50.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Jan 30 13:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 18183.604ug/l m

response 46357209

(+) = Expected Retention Time

T013003.D TV080111.M Mon Jan 30 13:25:47 2012 PENGCVOA10

Non-Spiked Sample (N-S)

File ID : T020105.D
Path: T:\DATA\T0201\
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86
Acq Time: 1 Feb 2012 15:43
Inst : TRACY #1 SM: 173.000

	Matrix Spiked Sample (MS)	Matrix Spiked Duplicate Sample (MSD)
File ID :	T020203.D	T020605.D
Path :	T:\DATA\T0202\	
Sample :	LI=62678-A-1MS LB=S1729 LM=	LI=62678-A-1MSD LB=S1729 LM
Misc :	SOIL CM=VPH DF=50 G=5.048	SOIL CM=VPH DF=50 G=5.04
Acq Time:	2 Feb 2012 15:01	6 Feb 2012 14:58
Inst :	TRACY #1 SM: 173.000	TRACY #1 SM: 173.000

Method : TV080111.M (Chemstation Integrator)
Path : T:\METHODS\
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration

System Monitoring Compounds (Type SM)		Result Conc	Added	%Rec	QC Limits Lower	Upper	RPD
a,a,a-Trifluorotoluene (pid) >	N-S	96.884					
	MS	83.957	100.000	84	70	130	
	MSD	98.249	100.000	98	70	130	
						50	15
a,a,a-Trifluorotoluene (fid) #2 >	N-S	96.479					
	MS	83.679	100.000	84	70	130	
	MSD	98.896	100.000	99	70	130	
						50	16

Target Compounds (Type TM,HM,$M)		Result Conc	Added	%Rec	QC Limits Lower	Upper	RPD
METHYL TERT-BUTYL ETHER	N-S	0.000					
	MS	6653.269	8650.000	77	70	130	
	MSD	8185.389	8650.000	95	70	130	
						50	21
BENZENE	N-S	0.000					
	MS	7078.084	8650.000	82	70	130	
	MSD	8311.713	8650.000	96	70	130	
						50	16
TOLUENE	N-S	0.000					
	MS	7058.934	8650.000	82	70	130	
	MSD	8256.799	8650.000	95	70	130	
						50	15

Non-Spiked Sample (N-S) MS/MSD continued ...

File ID : T020105.D
Path: T:\DATA\T0201\
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86

Compounds		Result Conc	Added	%Rec	QC Limits Lower	Upper	RPD
ETHYLBENZENE	N-S	0.000					
	MS	7352.501	8650.000	85	70	130	
	MSD	8663.048	8650.000	100	70	130	
						50	16
M,P-XYLENE	N-S	0.000					
	MS	14543.107	17300.000	84	70	130	
	MSD	17042.235	17300.000	99	70	130	
						50	16
O-XYLENE	N-S	0.000					
	MS	7686.766	8650.000	89	70	130	
	MSD	8896.861	8650.000	103	70	130	
						50	15
1,2,4-TRIMETHYLBENZENE	N-S	0.000					
	MS	4686.383	8650.000	54#	70	130	
	MSD	10081.333	8650.000	117	70	130	
						50	74#
NAPHTHALENE	N-S	2147.835					
	MS	11135.654	8650.000	104	70	130	
	MSD	14236.097	8650.000	140#	70	130	
						50	30
C9-C10 AROMATICS	N-S	24413.257					
31794.034 - 24413.257 = 7380.777 / 8650	MS	31794.034	8650.000	85 ✓	70	130	
32905.383 - ↓ = 8492.125 / 8650	MSD	32905.383	8650.000	98 ✓	70	130	
						50	14
C5-C8 ALIPHATICS #2	N-S	33.620					
	MS	38693.076	51900.000	74.5 74 ~75%	70	130	
	MSD	43609.544	51900.000	84.0 84 ~84%	70	130	
						50	13
C5-C8 ALIPHATICS (ADJUSTED |) #2	N-S	33.620					
	MS	38693.076	51900.000	74	70	130	
	MSD	43609.544	51900.000	84	70	130	
						50	13
N-PENTANE #2	N-S	0.000					
	MS	4968.371	8650.000	57#	70	130	
	MSD	4953.264	8650.000	57#	70	130	
						50	0
2-METHYL PENTANE #2	N-S	0.000					
	MS	6256.657	8650.000	72	70	130	
	MSD	7055.200	8650.000	82	70	130	
						50	13
METHYL TERT-BUTYL ETHER #2	N-S	51.973					
	MS	7150.490	8650.000	82	70	130	
	MSD	8530.896	8650.000	98	70	130	
						50	18

Non-Spiked Sample (N-S) MS/MSD continued ...

File ID : T020105.D
Path: T:\DATA\T0201\
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86

Compounds		Result Conc	Added	%Rec	QC Limits Lower	Upper	RPD
2,2,4-TRIMETHYLPENTANE #2	N-S	0.000					
	MS	7551.292	8650.000	87	70	130	
	MSD	7963.579	8650.000	92	70	130	
						50	6
BENZENE #2	N-S	0.000					
	MS	7128.010	8650.000	82	70	130	
	MSD	8401.096	8650.000	97	70	130	
						50	17
TOLUENE #2	N-S	0.000					
	MS	6904.721	8650.000	80	70	130	
	MSD	8180.757	8650.000	95	70	130	
						50	17
C9-C12 ALIPHATICS #2	N-S	16393.091					
	MS	81780.419	69200.000	94	70	130	
	MSD	85990.420	69200.000	101	70	130	
						50	7
C9-C12 ALIPHATICS (ADJUSTED) #2	N-S	16393.091					
	MS	81780.419	69200.000	~~94~~ 83%	70	130	
	MSD	85990.420	69200.000	~~101~~ 88%	70	130	
						50	7
N-NONANE #2	N-S	0.000					
	MS	8337.417	8650.000	96	70	130	
	MSD	6108.078	8650.000	71	70	130	
						50	30
ETHYLBENZENE #2	N-S	0.000					
	MS	7136.857	8650.000	83	70	130	
	MSD	8506.424	8650.000	98	70	130	
						50	17
M,P-XYLENE #2	N-S	0.000					
	MS	14606.352	17300.000	84	70	130	
	MSD	17332.721	17300.000	100	70	130	
						50	17
O-XYLENE #2	N-S	0.000					
	MS	7600.135	8650.000	88	70	130	
	MSD	8988.749	8650.000	104	70	130	
						50	17
N-DECANE #2	N-S	53.285					
	MS	5307.003	8650.000	61#	70	130	
	MSD	4630.773	8650.000	53#	70	130	
						50	14
1,2,4-TRIMETHYLBENZENE #2	N-S	150.817					
	MS	7093.020	8650.000	80	70	130	
	MSD	9591.635	8650.000	109	70	130	
						50	31

Non-Spiked Sample (N-S) MS/MSD continued ...

File ID : T020105.D
Path: T:\DATA\T0201\
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86

Compounds		Result Conc	Added	%Rec	QC Limits Lower	Upper	RPD
N-BUTYLCYCLOHEXANE #2	N-S	204.470					
	MS	10043.102	8650.000	114	70	130	
	MSD	7549.115	8650.000	85	70	130	
						50	29
NAPHTHALENE #2	N-S	3313.955					
	MS	13412.333	8650.000	117	70	130	
	MSD	16871.267	8650.000	157#	70	130	
						50	29
				#			#

= Fails Limit Check if flagged in the column(s) above.
Limit Check error(s) were found on this report !

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 11:24 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.97	5065122	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.97	3061881	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.39	10368037	83.957	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 84%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.39	9004740	83.679	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 84%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.45	6303287	6653.269	ug/l	0.0
3)	TM	BENZENE	23.31	15333678	7078.084	ug/l	0.0
5)	TM	TOLUENE	29.40	14247656	7058.934	ug/l	0.0
6)	TM	ETHYLBENZENE	34.25	12365737	7352.501	ug/l	0.0
7)	TM	M,P-XYLENE	34.52	26509167	14543.107	ug/l	0.0
8)	TM	O-XYLENE	36.22	11564655	7686.766	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.79f	5120000	4686.383	ug/l	0.0
10)	TM	NAPHTHALENE	45.19	6545240	11135.654	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	41221121	31794.034	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	34471853	38693.076	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	34471853	38693.076	ug/l	0.0
17)	TM	N-PENTANE #2	11.14	3752689	4968.371	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.31	5397011	6256.657	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.45	4120792	7150.490	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.94	6471172	7551.292	ug/l	0.0
21)	TM	BENZENE #2	23.31	7356147	7128.010	ug/l	0.0
22)	TM	TOLUENE #2	29.40	7270441	6904.721	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	58956325	81780.419	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	58956325	81780.419	ug/l	0.0
25)	TM	N-NONANE #2	33.42	4236197	8337.417	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.26	6888476	7136.857	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.52	12709975	14606.352	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 11:24 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.22	6536498	7600.135	ug/l	0.0
29)	TM	N-DECANE #2	38.19	1793518	5307.003	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.79f	4345780	7093.020	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.79	4345780	10043.102	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.20	3167299	13412.333	ug/l	0.0

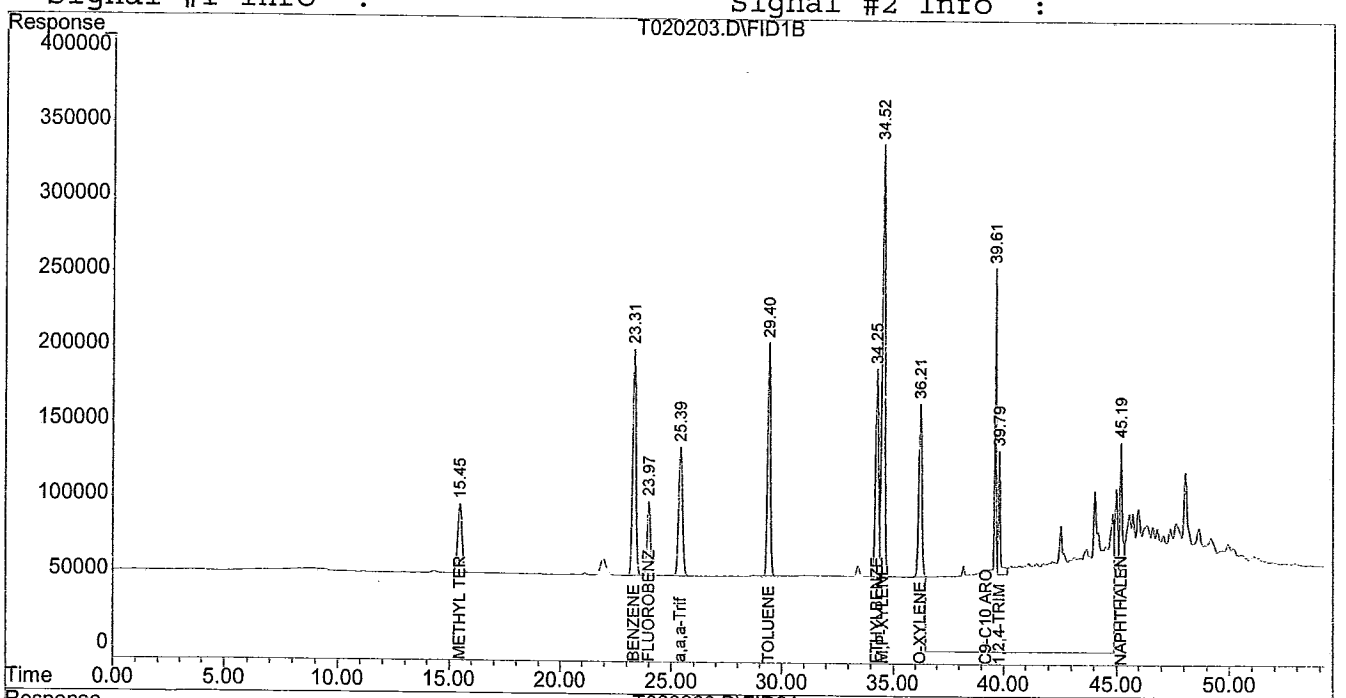
(f)=RT Delta > 1/2 Window (m)=manual int.

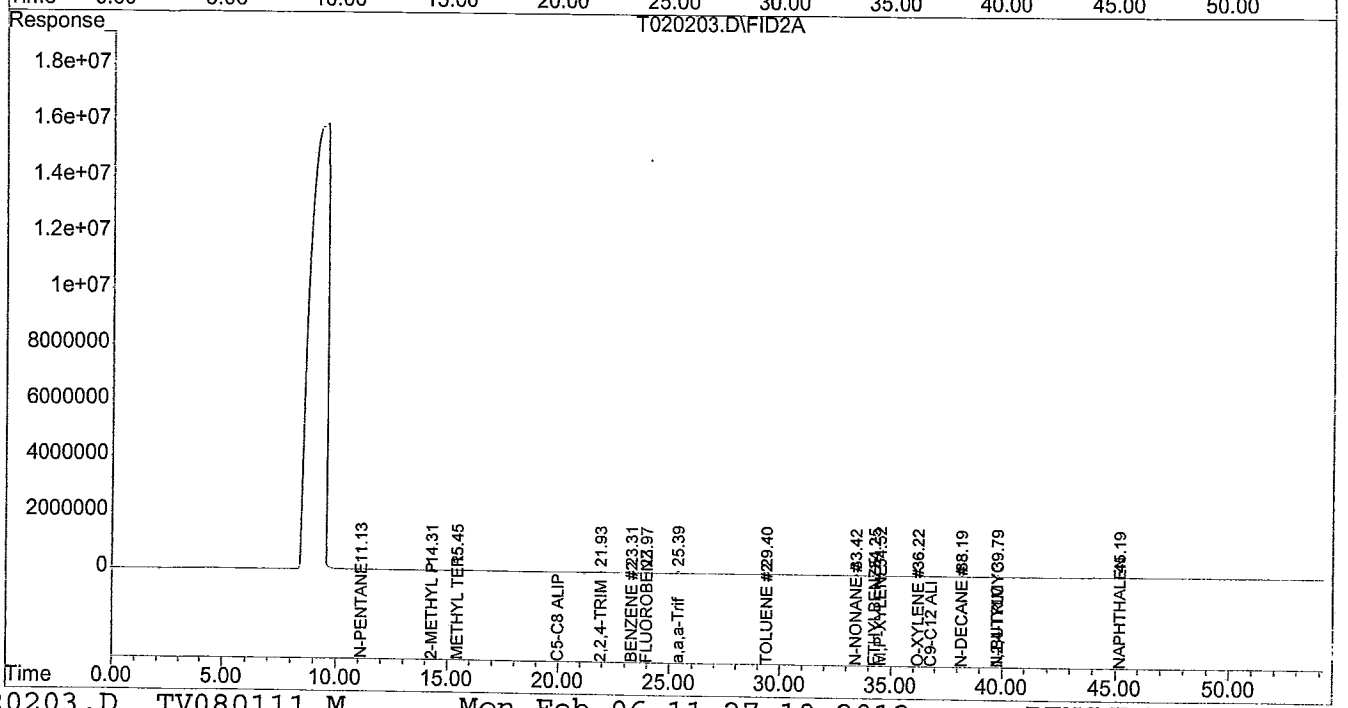
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:24 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T020203.D - (QT Reviewed)

at ... T:\DATA\T0202\

generated on ... Mon Feb 06 11:27:20 2012

Sample Multiplier : 173.000 @1.000

2) METHYL TERT-BUTYL ETHER	6653.269	38.458	in SubTot Grp 1
3) BENZENE	7078.084	40.914	in SubTot Grp 1
5) TOLUENE	7058.934	40.803	in SubTot Grp 1
6) ETHYLBENZENE	7352.501	42.500	in SubTot Grp 3
7) M,P-XYLENE	14543.107	84.064	in SubTot Grp 3
8) O-XYLENE	7686.766	44.432	in SubTot Grp 3
11) C9-C10 AROMATICS	31794.034	183.781	with Grp 2
15) C5-C8 ALIPHATICS #2	38693.076	223.659	with Grp 1
16) C5-C8 ALIPHATICS (ADJUSTED) #2	38693.076	223.659*	
23) C9-C12 ALIPHATICS #2	81780.419	472.719*	with Grp 2
{aka C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24) C9-C12 ALIPHATICS (ADJUSTED) #2	81780.419	472.719*	

Group 1 ----------

C5-C8 ALIPHATICS #2	38693.076	223.659
Sub-Total Group 1	20790.287	120.175
C5-C8 ALIPHATICS (ADJUSTED) #2	17902.789	103.484**

Group 2 ----------

C9-C12 ALIPHATICS #2	81780.419	472.719
C9-C10 AROMATICS	31794.034	183.781
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	49986.385	288.938**

350 = 82.5

Group 3 ----------

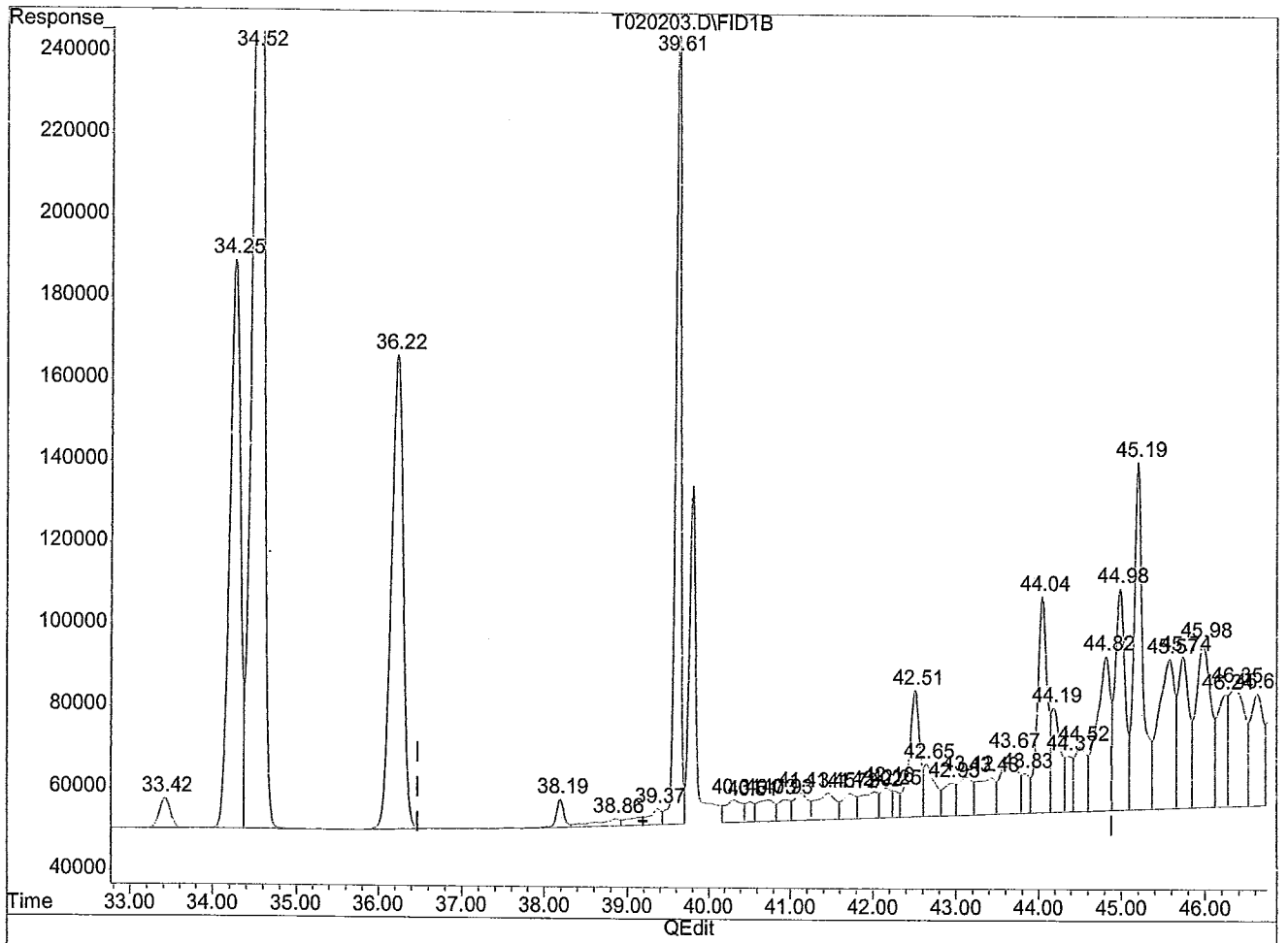
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	49986.385	288.938
Sub-Total Group 3	29582.374	170.996
C9-C12 ALIPHATICS (ADJUSTED) #2	20404.011	117.942**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 31794.034ug/l m

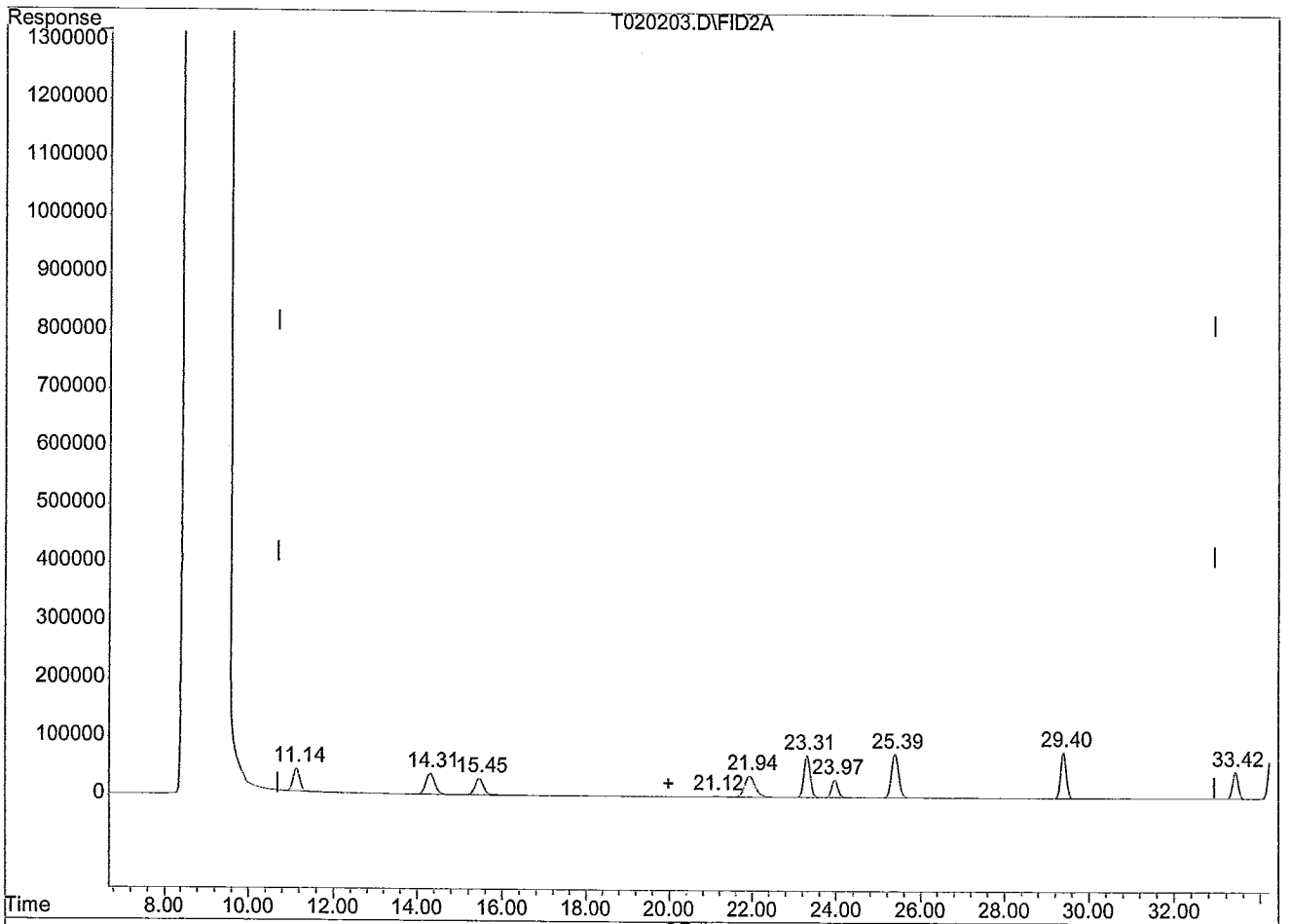
response 41221121

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 38693.076ug/l m

response 34471853

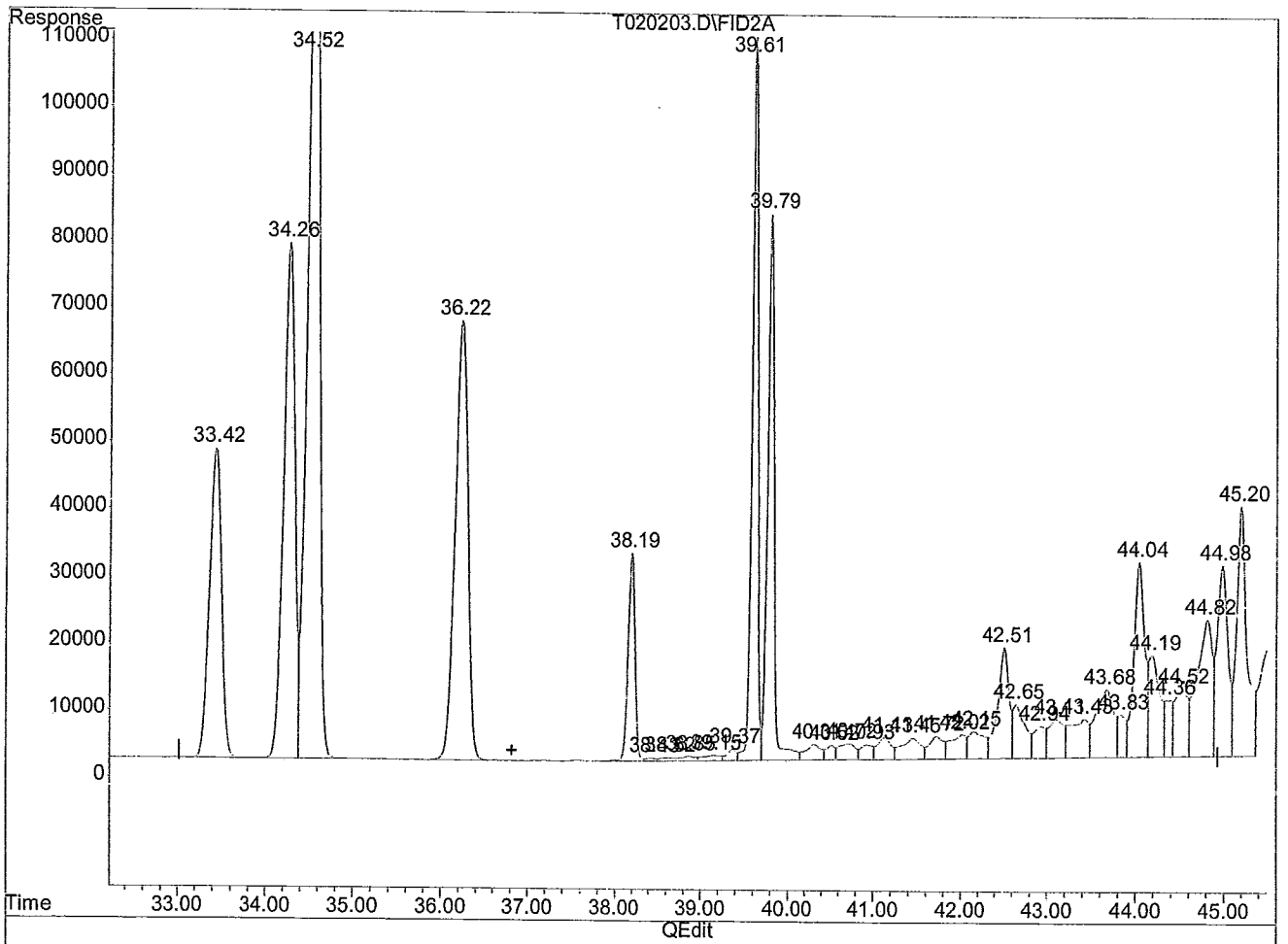
(+) = Expected Retention Time

T020203.D TV080111.M Mon Feb 06 11:26:53 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020203.D\FID1B.CH Vial: 2
Signal #2 : T:\DATA\T0202\T020203.D\FID2A.CH
Acq On : 2 Feb 2012 15:01 Operator: MKA
Sample : LI=62678-A-1MS LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 11:24 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 81780.419ug/l m

response 58956325

(+) = Expected Retention Time

T020203.D TV080111.M Mon Feb 06 11:27:05 2012 PENGCVOA10

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 16:15 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.90	4896878	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.90	2943656	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.33	11729897	98.249	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 98%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.34	10231323	98.896	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 99%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	15.37	7497227	8185.389	ug/l	0.0
3)	TM	BENZENE	23.24	17408065	8311.713	ug/l	0.0
5)	TM	TOLUENE	29.35	16111848	8256.799	ug/l	0.0
6)	TM	ETHYLBENZENE	34.21	14085912	8663.048	ug/l	0.0
7)	TM	M,P-XYLENE	34.48	30032730	17042.235	ug/l	0.0
8)	TM	O-XYLENE	36.17	12940624	8896.861	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	10648280	10081.333	ug/l	0.0
10)	TM	NAPHTHALENE	45.16	8089659	14236.097	ug/l	0.0
11)	HM	C9-C10 AROMATICS	39.19	41244923	32905.383	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	37351809	43609.544	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	37351809	43609.544	ug/l	0.0
17)	TM	N-PENTANE #2	11.02	3596820	4953.264	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	14.20	5850850	7055.200	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.37	4726485	8530.896	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	21.86	6560981	7963.579	ug/l	0.0
21)	TM	BENZENE #2	23.24	8335214	8401.096	ug/l	0.0
22)	TM	TOLUENE #2	29.36	8281459	8180.757	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	59597751	85990.420	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	59597751	85990.420	ug/l	0.0
25)	TM	N-NONANE #2	33.38	2983650	6108.078	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.21	7893359	8506.424	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.48	14500014	17332.721	ug/l	0.0

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 16:15 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.17	7432276	8988.749	ug/l	0.0
29)	TM	N-DECANE #2	38.17	1504557	4630.773	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.58	5649733	9591.635	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.77	3140470	7549.115	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.16	3830286	16871.267	ug/l	0.0

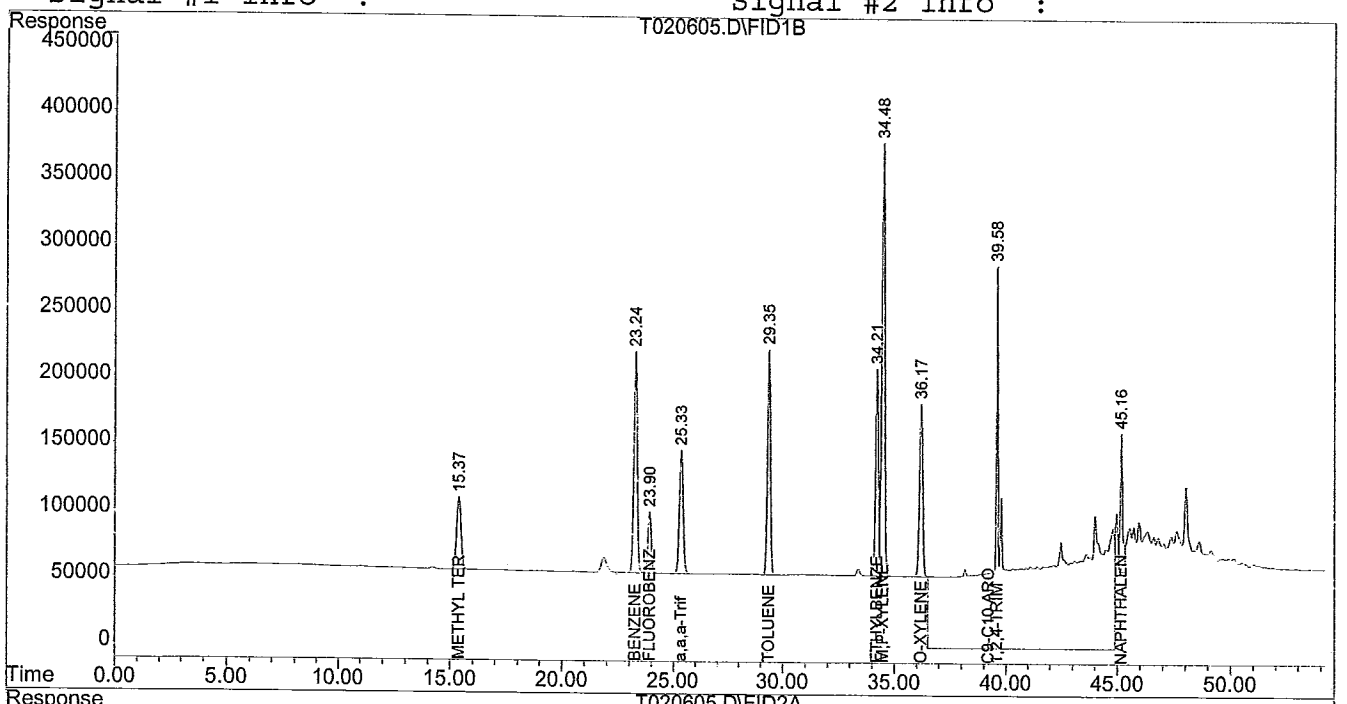
(f)=RT Delta > 1/2 Window (m)=manual int.

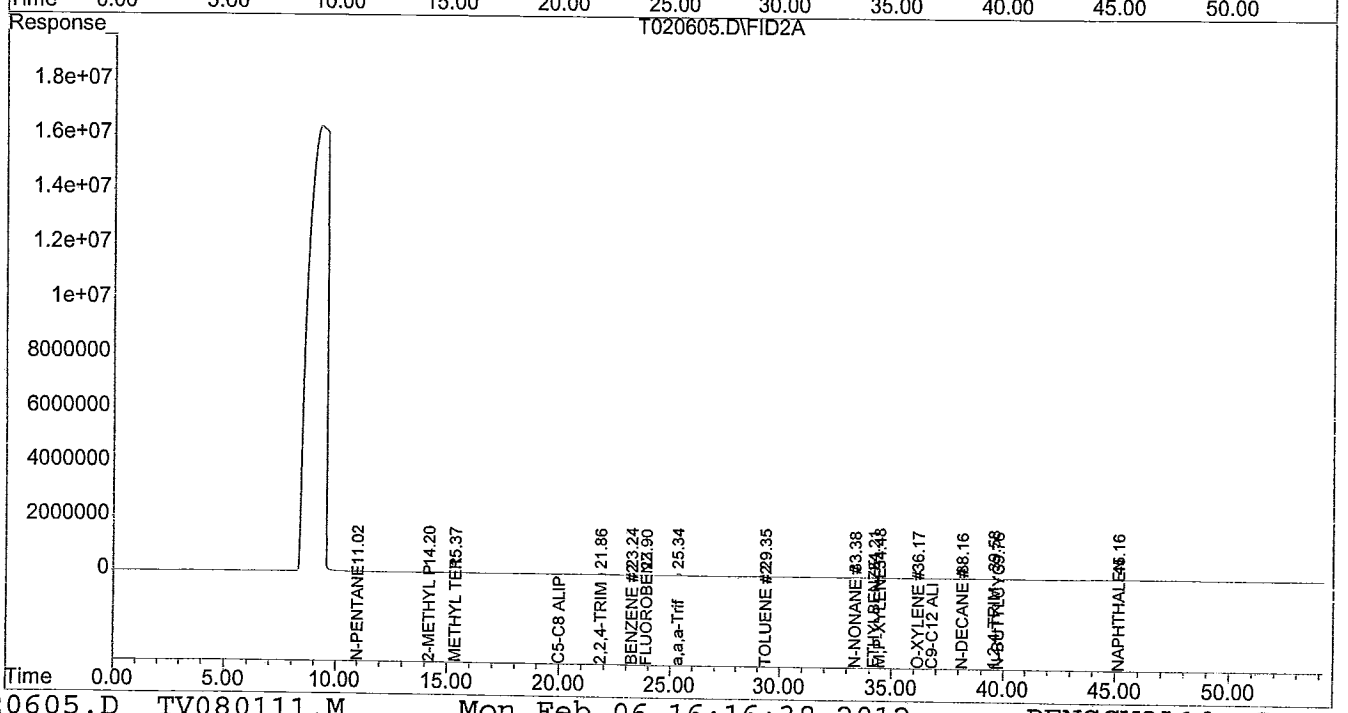
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 16:15 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T020605.D - (QT Reviewed)

at ... T:\DATA\T0206\

generated on ... Mon Feb 06 16:16:39 2012

Sample Multiplier : 173.000 @1.000

2)	METHYL TERT-BUTYL ETHER	8185.389	47.314	in SubTot Grp 1
3)	BENZENE	8311.713	48.045	in SubTot Grp 1
5)	TOLUENE	8256.799	47.727	in SubTot Grp 1
6)	ETHYLBENZENE	8663.048	50.075	in SubTot Grp 3
7)	M,P-XYLENE	17042.235	98.510	in SubTot Grp 3
8)	O-XYLENE	8896.861	51.427	in SubTot Grp 3
11)	C9-C10 AROMATICS	32905.383	190.205	with Grp 2
15)	C5-C8 ALIPHATICS #2	43609.544	252.078	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	43609.544	252.078*	
23)	C9-C12 ALIPHATICS #2	85990.420	497.054*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	85990.420	497.054*	

Group 1 ----------

C5-C8 ALIPHATICS #2	43609.544	252.078
Sub-Total Group 1	24753.901	143.086
C5-C8 ALIPHATICS (ADJUSTED) #2	18855.643	108.992**

Group 2 ----------

C9-C12 ALIPHATICS #2	85990.420	497.054
C9-C10 AROMATICS	32905.383	190.205
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	53085.037	306.849**

306.849 / 350 = 87.6%

Group 3 ----------

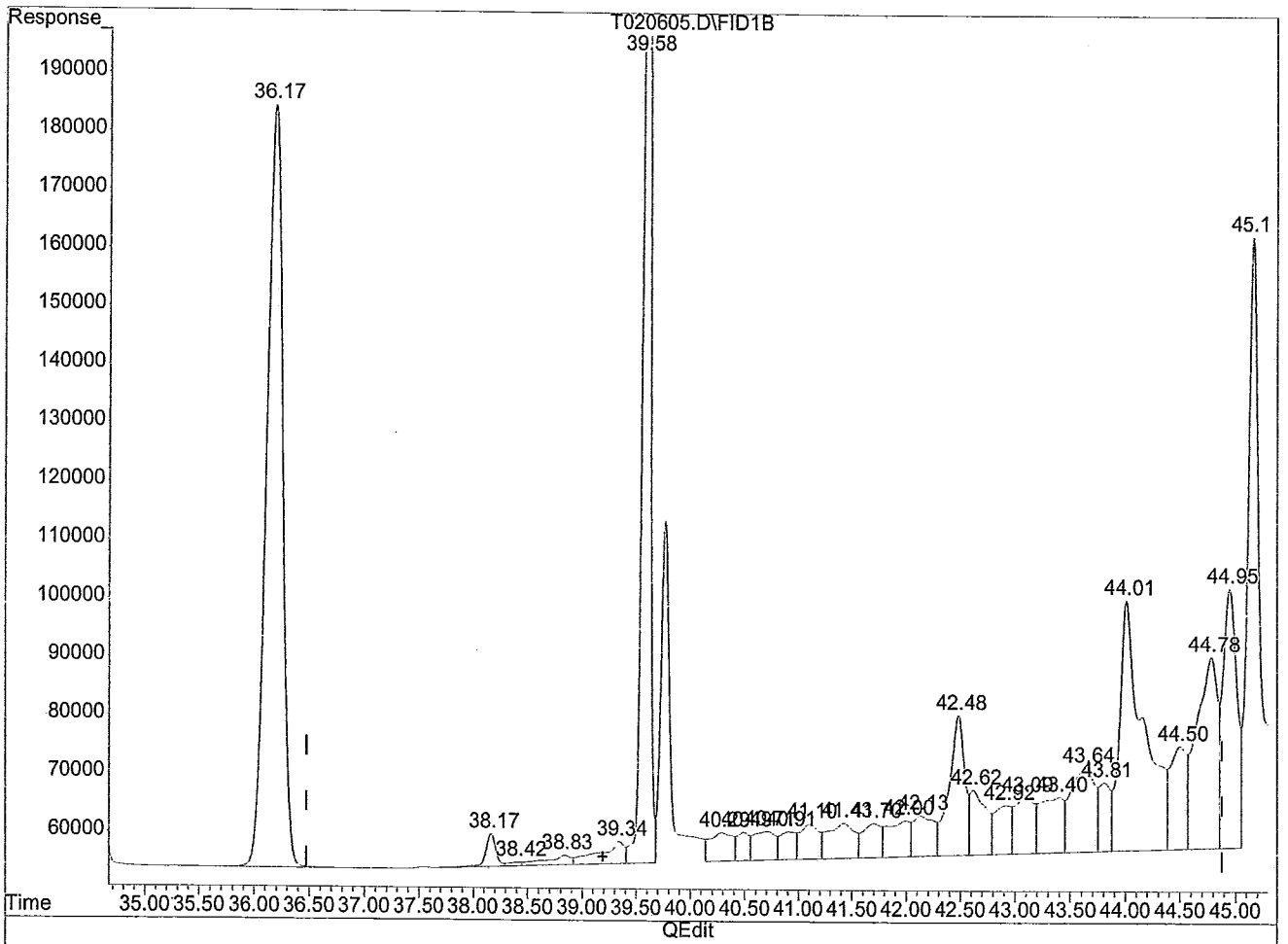
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	53085.037	306.849
Sub-Total Group 3	34602.144	200.012
C9-C12 ALIPHATICS (ADJUSTED) #2	18482.893	106.837**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 16:15 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 32905.383ug/l m

response 41244923

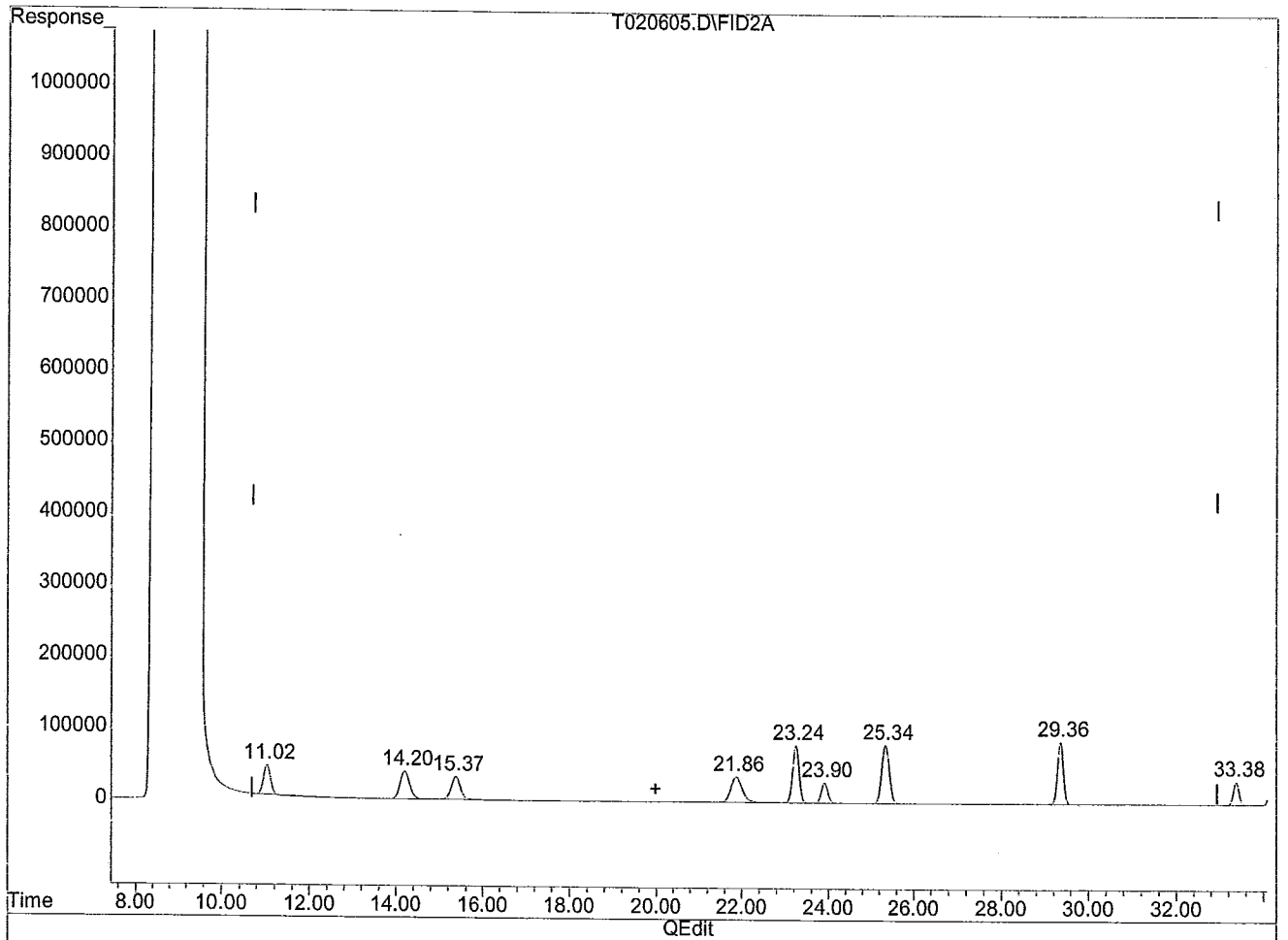
(+) = Expected Retention Time

T020605.D TV080111.M Mon Feb 06 16:15:57 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 16:15 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 43609.544ug/l m

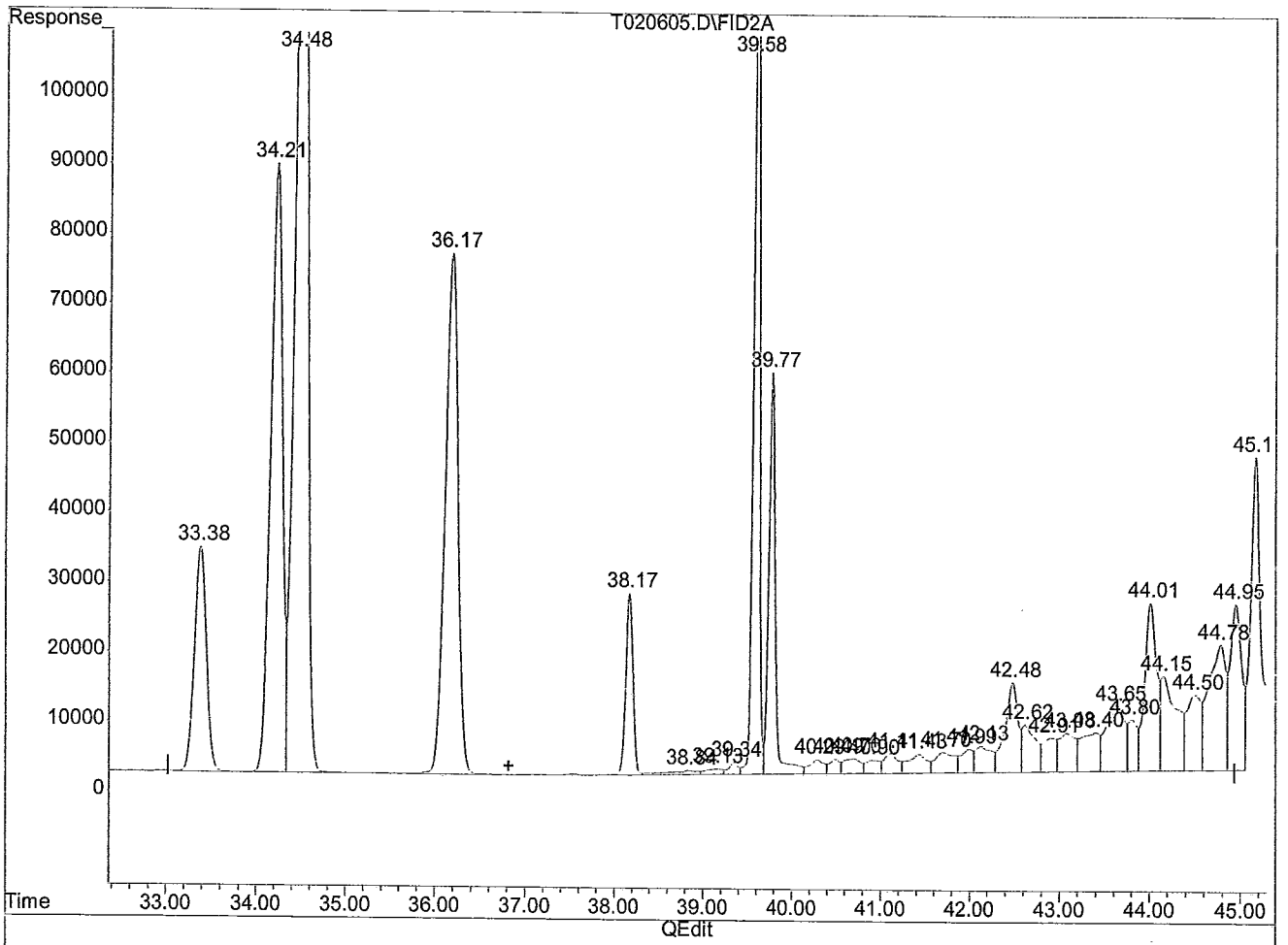
response 37351809

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0206\T020605.D\FID1B.CH Vial: 14
Signal #2 : T:\DATA\T0206\T020605.D\FID2A.CH
Acq On : 6 Feb 2012 14:58 Operator: MKA
Sample : LI=62678-A-1MSD LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 16:15 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 85990.420ug/l m

response 59597751

(+) = Expected Retention Time

T020605.D TV080111.M Mon Feb 06 16:16:20 2012 PENGCVOA10

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

RL= 2.59 ✓

Quant Time : Feb 2 10:34 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.90	4979814	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.90	3049979	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.32	11762870	96.884	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 97%					
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.32	10341765	96.479	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 } Recovery = 96%					
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	0.00	0	N.D.	ug/l	0.0
3)	TM	BENZENE	0.00	0	N.D.	ug/l	0.0
5)	TM	TOLUENE	0.00	0	N.D.	ug/l	0.0
6)	TM	ETHYLBENZENE	0.00	0	N.D.	ug/l	0.0
7)	TM	M,P-XYLENE	0.00	0	N.D.	ug/l	0.0
8)	TM	O-XYLENE	0.00	0	N.D.	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	0.00	0	N.D.	ug/l	0.0
10)	TM	NAPHTHALENE	45.17	1241178	2147.835	ug/l	0.0
11)	HM	C9-C10 AROMATICS 141.117	39.19	31118823	24413.257	ug/l	0.0
15)	HM	C5-C8 ALIPHATICS #2	19.98	29835	33.620	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	29835	33.620	ug/l	0.0
17)	TM	N-PENTANE #2	0.00	0	N.D.	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	0.00	0	N.D.	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.47	29835	51.973	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	0.00	0	N.D.	ug/l	0.0
21)	TM	BENZENE #2	0.00	0	N.D.	ug/l	0.0
22)	TM	TOLUENE #2	0.00	0	N.D.	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	11772007	16393.091	ug/l	0.0
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	11772007	16393.091	ug/l	0.0
25)	TM	N-NONANE #2	0.00	0	N.D.	ug/l	0.0
26)	TM	ETHYLBENZENE #2	0.00	0	N.D.	ug/l	0.0
27)	TM	M,P-XYLENE #2	0.00	0	N.D.	ug/l	0.0

USE

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 2 10:34 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	0.00	0	N.D.	ug/l	0.0
29)	TM	N-DECANE #2	38.17	17938	53.285	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.59	92044	150.817	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.78	88133	204.470	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.16	779543	3313.955	ug/l	0.0

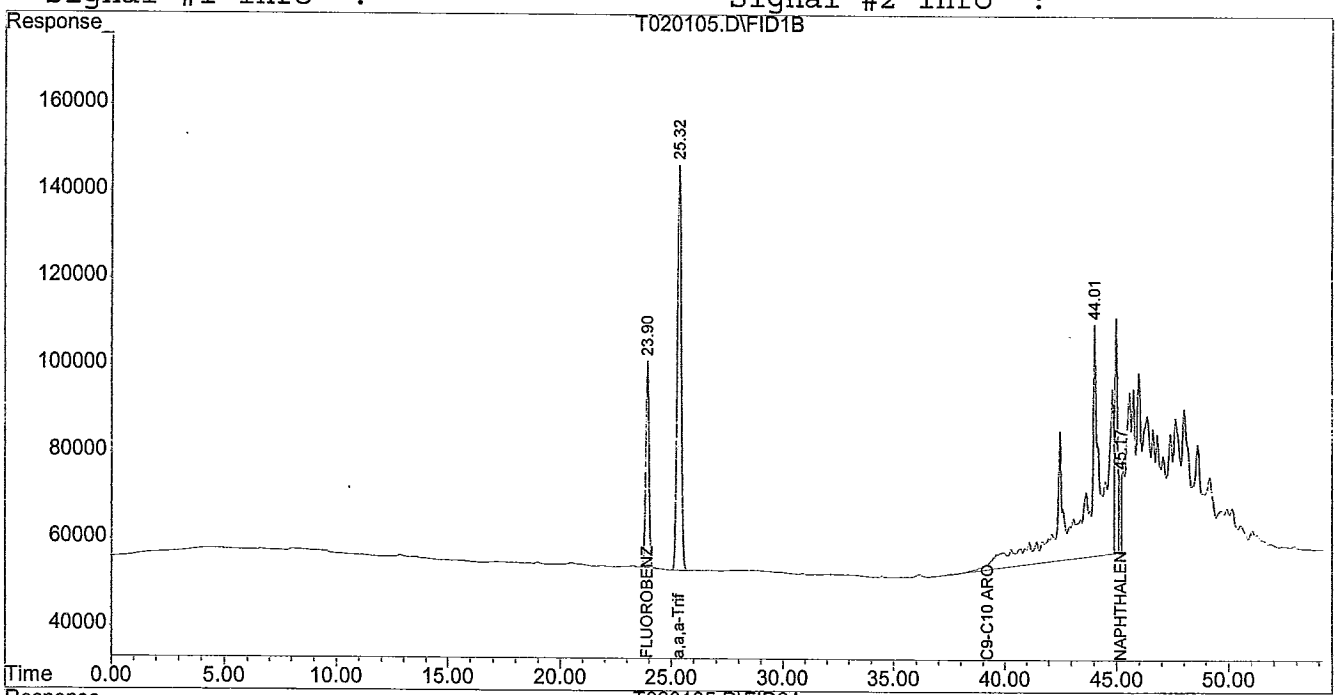
(f)=RT Delta > 1/2 Window (m)=manual int.

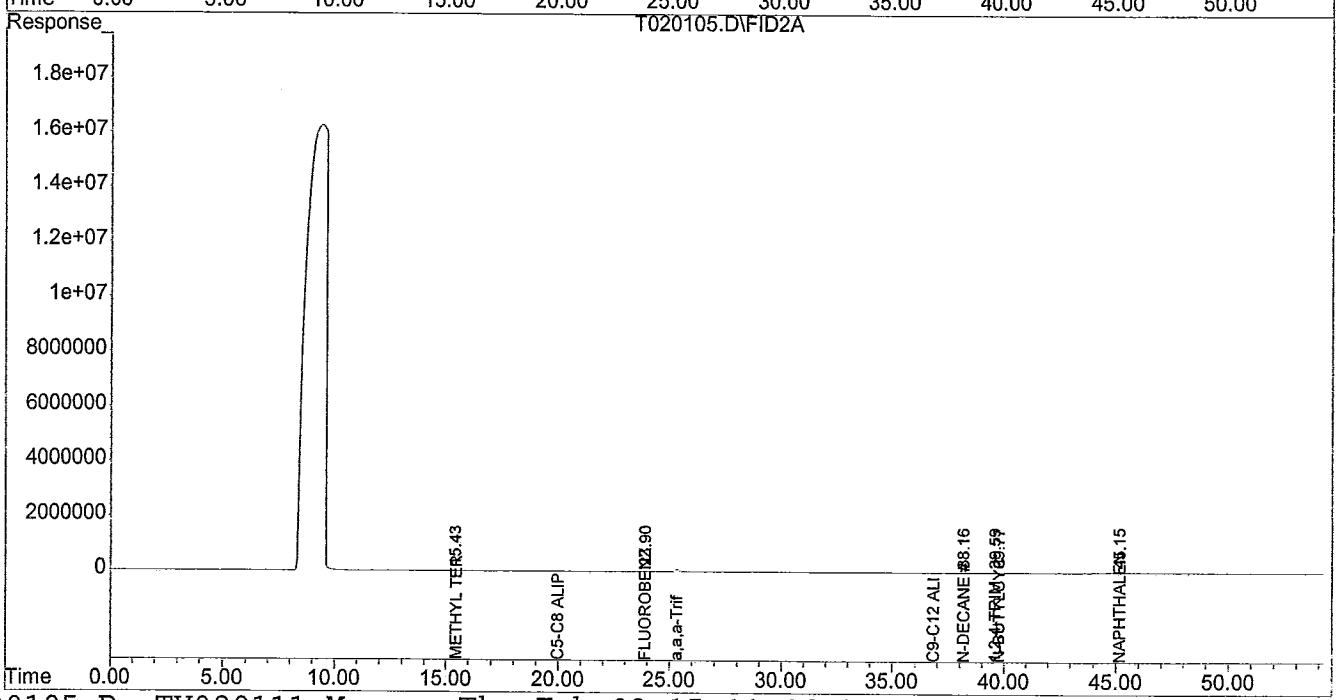
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 10:34 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T020105.D - (QT Reviewed)

at ... T:\DATA\T0201\

generated on ... Thu Feb 02 15:11:47 2012

Sample Multiplier : 173.000 @1.000

2)	METHYL TERT-BUTYL ETHER	0.000	0.000	in SubTot Grp 1
3)	BENZENE	0.000	0.000	in SubTot Grp 1
5)	TOLUENE	0.000	0.000	in SubTot Grp 1
6)	ETHYLBENZENE	0.000	0.000	in SubTot Grp 3
7)	M,P-XYLENE	0.000	0.000	in SubTot Grp 3
8)	O-XYLENE	0.000	0.000	in SubTot Grp 3
11)	C9-C10 AROMATICS	24413.257	141.117	with Grp 2
15)	C5-C8 ALIPHATICS #2	33.620	0.194	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	33.620	0.194*	
23)	C9-C12 ALIPHATICS #2	16393.091	94.758*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	16393.091	94.758*	

Group 1 ----------

C5-C8 ALIPHATICS #2	33.620	0.194
Sub-Total Group 1	0.000	0.000
C5-C8 ALIPHATICS (ADJUSTED) #2	33.620	0.194**

Group 2 ----------

C9-C12 ALIPHATICS #2	16393.091	94.758	
C9-C10 AROMATICS	24413.257	141.117	
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	-8020.166	-46.359**	report as ND

Group 3 ----------

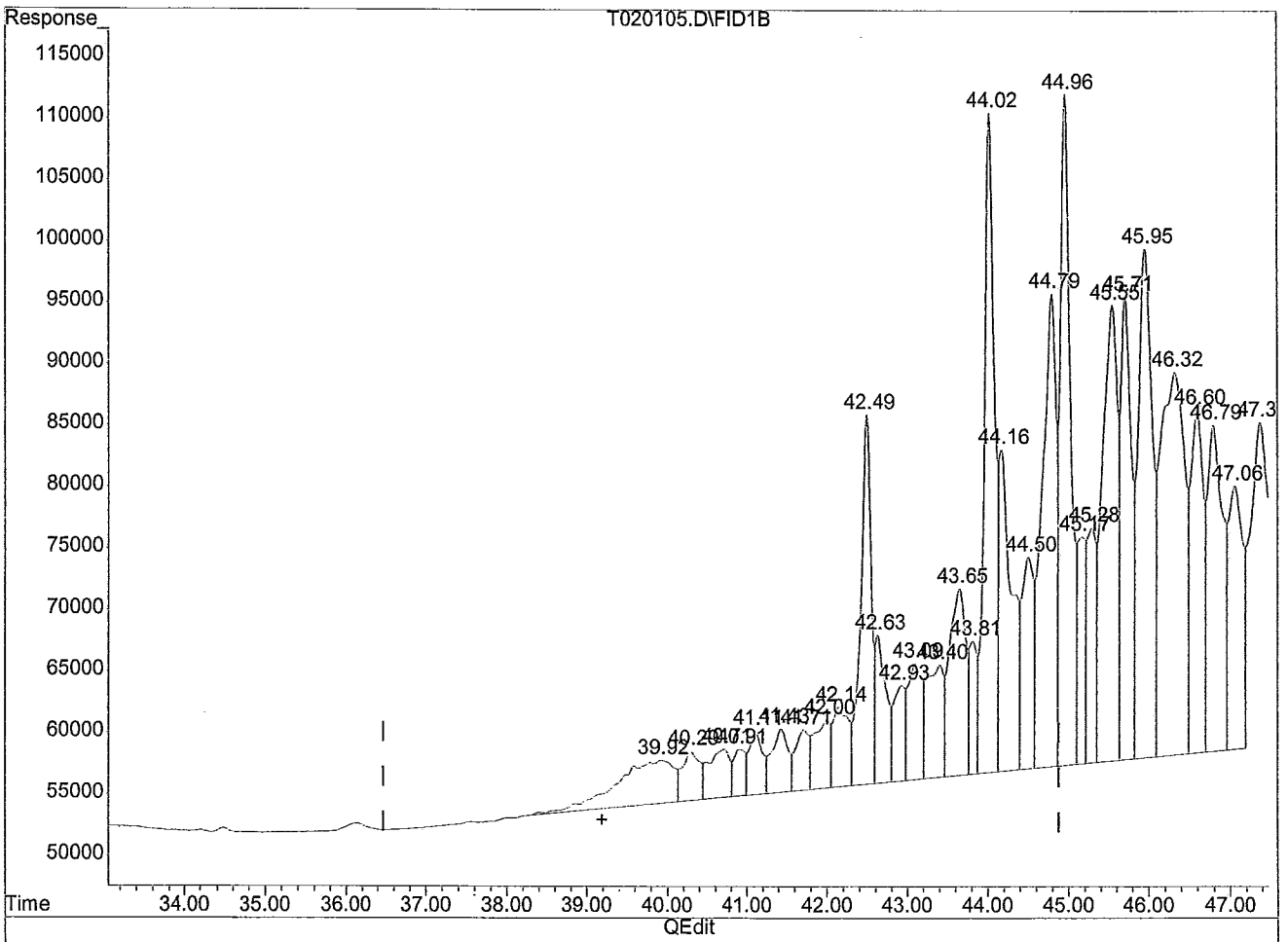
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	-8020.166	0.000
Sub-Total Group 3	0.000	0.000
C9-C12 ALIPHATICS (ADJUSTED) #2	-8020.166	0.000**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 10:34 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 24413.257ug/l m

response 31118823

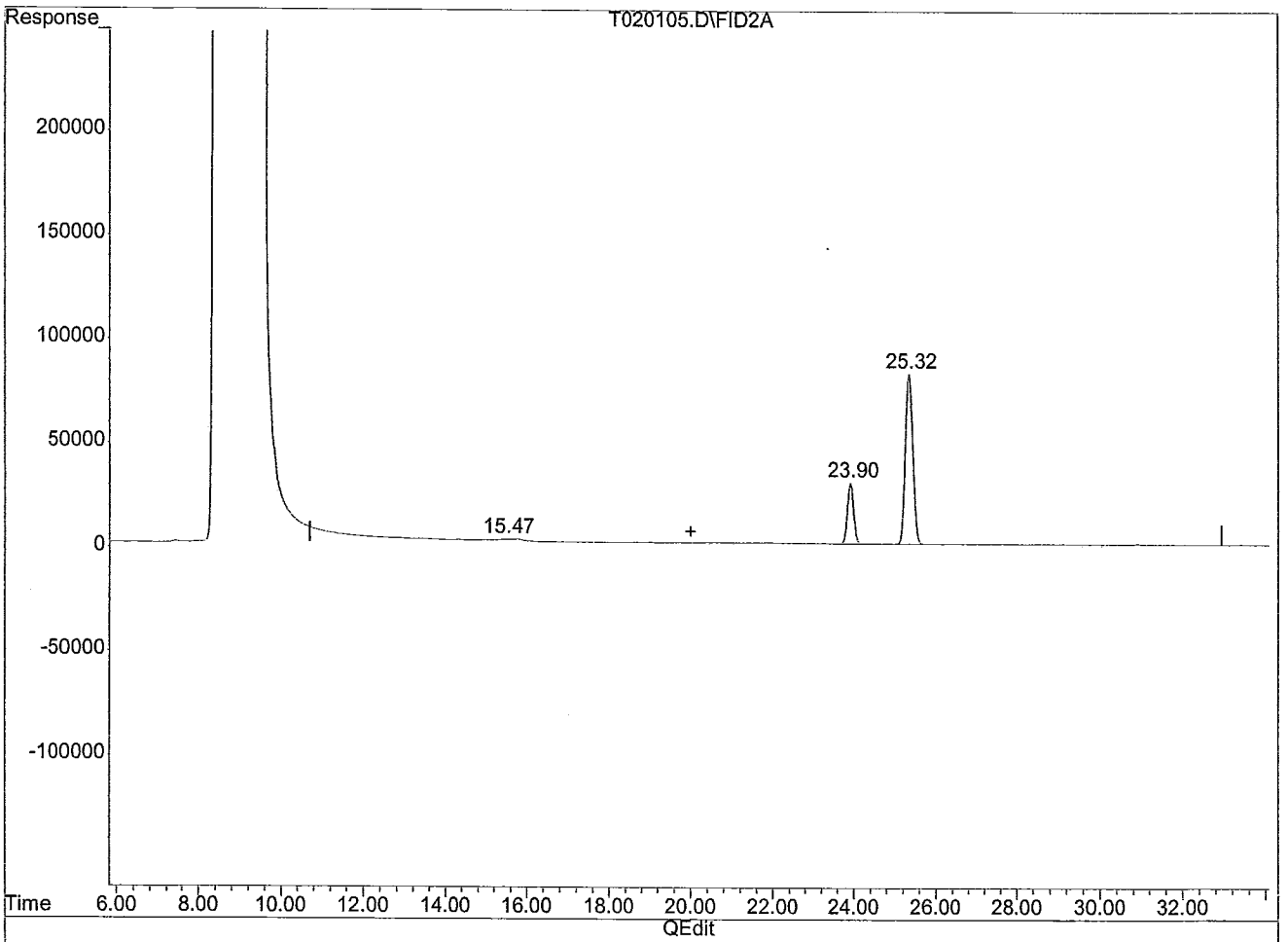
(+) = Expected Retention Time

T020105.D TV080111.M Thu Feb 02 10:34:51 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 10:34 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 33.620ug/l m

response 29835

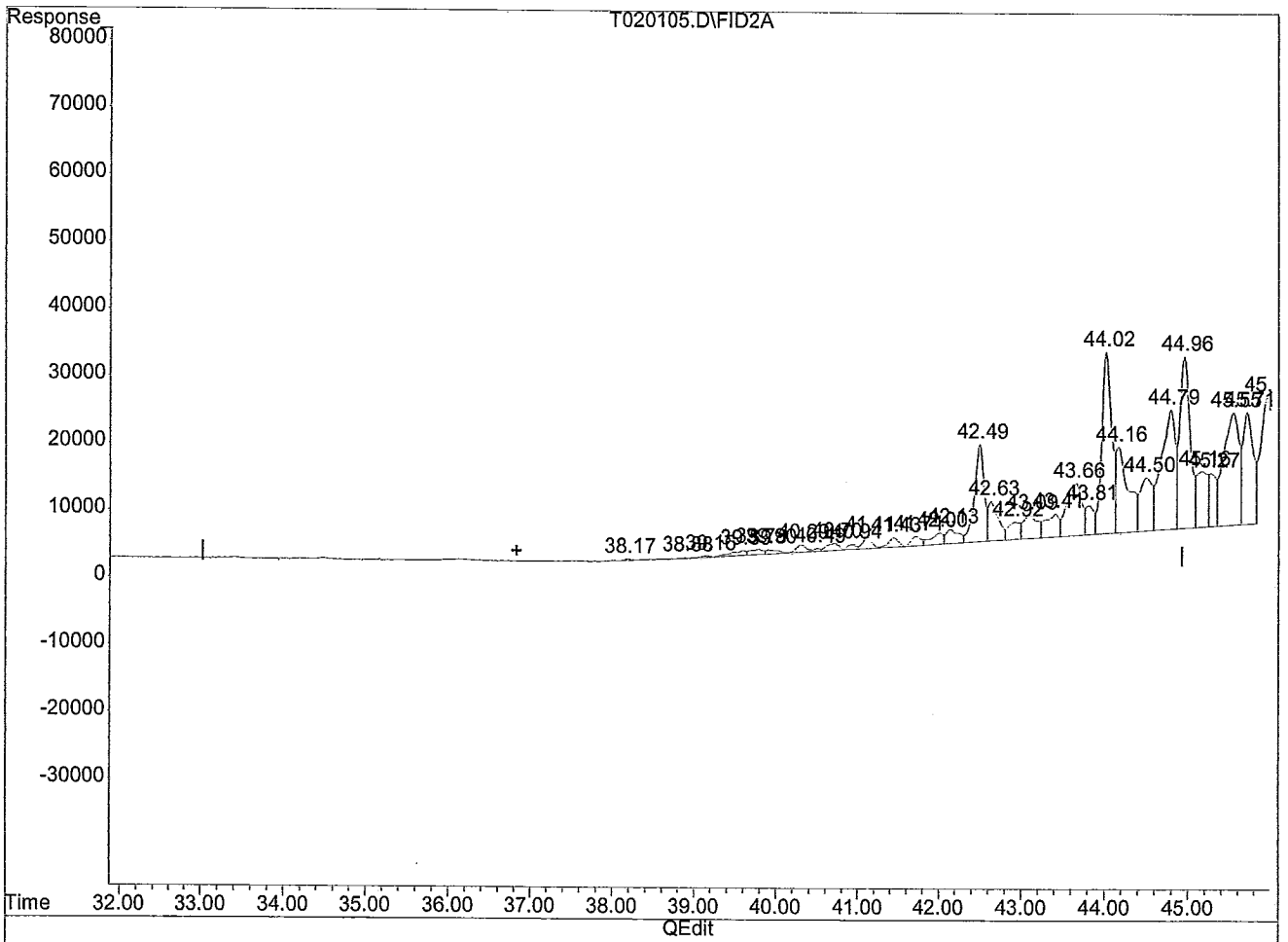
(+) = Expected Retention Time

T020105.D TV080111.M Thu Feb 02 10:35:02 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0201\T020105.D\FID1B.CH Vial: 9
Signal #2 : T:\DATA\T0201\T020105.D\FID2A.CH
Acq On : 1 Feb 2012 15:43 Operator: MKA
Sample : LI=62678-A-1 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : CM=VPH DF=50 G=5.048 DW=86 Multiplr: 173.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 2 10:34 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 16393.091ug/l m

response 11772007

(+) = Expected Retention Time

T020105.D TV080111.M Thu Feb 02 10:35:16 2012 PENGCVOA10

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 13:37 2012 Quant Results File: TV080111.RES RL=129.7 ✓
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator) 130 ✓
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.91	4846023	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.90	3022236	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.30	256476	2.171	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 }			Recovery = ~~2%#~~ 109%		
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.30	213348	2.009	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 }			Recovery = ~~2%#~~ 100%		
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	0.00	0	N.D.	ug/l	0.0
3)	TM	BENZENE	0.00	0	N.D.	ug/l	0.0
5)	TM	TOLUENE	0.00	0	N.D.	ug/l	0.0
6)	TM	ETHYLBENZENE	34.10	152096	4727.226	ug/l	0.0
7)	TM	M,P-XYLENE	34.47	53647	1538.436	ug/l	0.0
8)	TM	O-XYLENE	36.13	68276	2372.216	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.65f	1142600	54668.477	ug/l	0.0
10)	TM	NAPHTHALENE	45.18	2165223	192560.663	ug/l	0.0
11)	HM	C9-C10 AROMATICS 233,849	39.19	50182454	2023264.085	ug/l	0.
15)	HM	C5-C8 ALIPHATICS #2	19.98	464022	26389.905	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	464022	26389.905	ug/l	0.0
17)	TM	N-PENTANE #2	0.00	0	N.D.	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	0.00	0	N.D.	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	15.35	149010	13100.849	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	0.00	0	N.D.	ug/l	0.0
21)	TM	BENZENE #2	0.00	0	N.D.	ug/l	0.0
22)	TM	TOLUENE #2	0.00	0	N.D.	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	36073735	2535364.340	ug/l	0.
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	36073735	2535364.340	ug/l	0.
25)	TM	N-NONANE #2	33.40	176456	17596.370	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.09	130229	6836.288	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	30973	1803.451	ug/l	0.0

USE

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 13:37 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	0.00	0	N.D.	ug/l	0.0
29)	TM	N-DECANE #2	38.17	463521	69493.437	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.66f	1411634	116738.958	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.88f	810593	94914.650	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.18	1359736	291742.927	ug/l	0.0

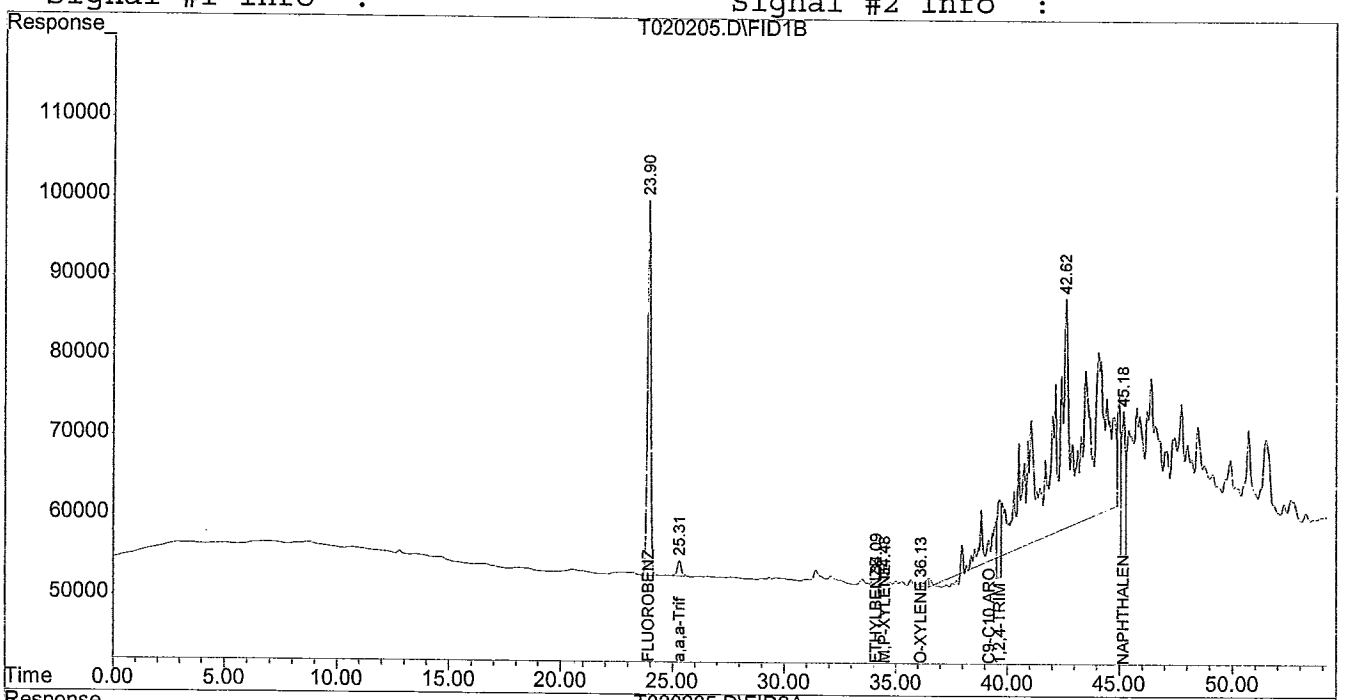
(f)=RT Delta > 1/2 Window (m)=manual int.

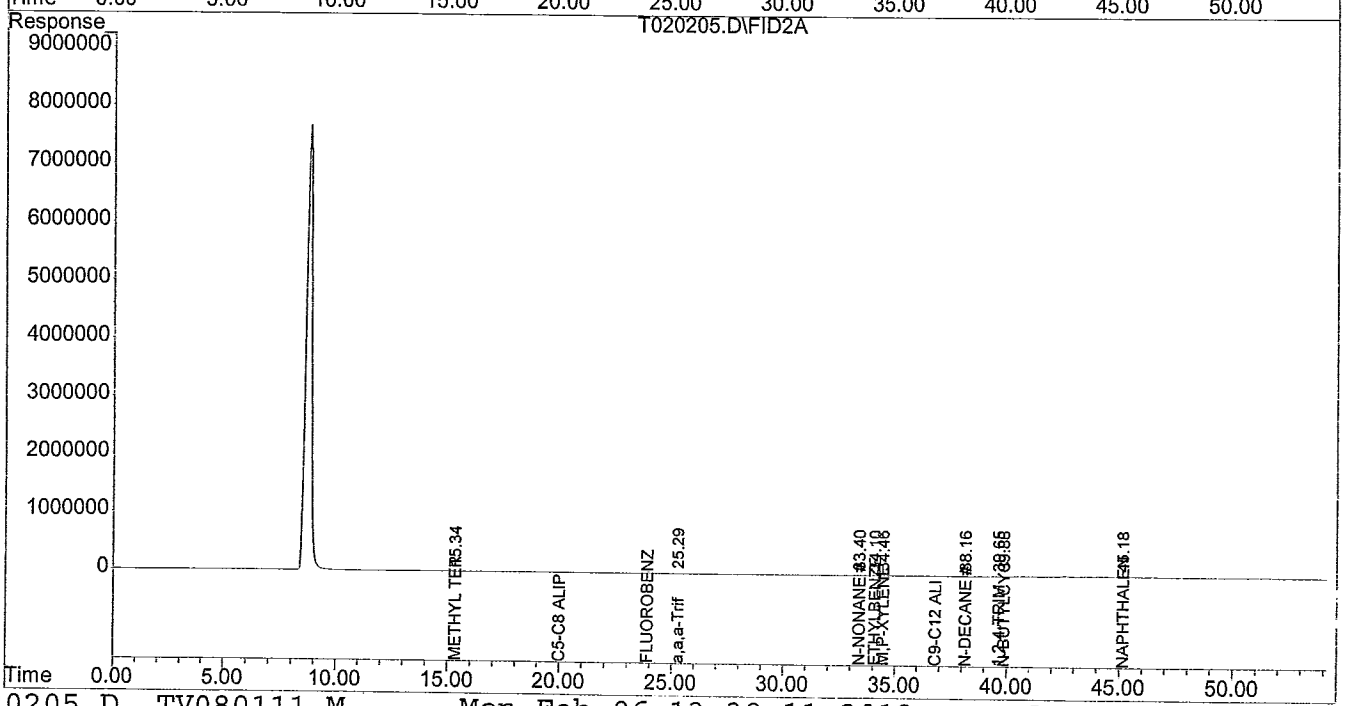
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:37 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T020205.D - (QT Reviewed)

at ... T:\DATA\T0202\

generated on ... Mon Feb 06 13:39:12 2012

Sample Multiplier : 8652.000 @1.000

2)	METHYL TERT-BUTYL ETHER	0.000	0.000	in SubTot Grp 1
3)	BENZENE	0.000	0.000	in SubTot Grp 1
5)	TOLUENE	0.000	0.000	in SubTot Grp 1
6)	ETHYLBENZENE	4727.226	0.546	in SubTot Grp 3
7)	M,P-XYLENE	1538.436	0.178	in SubTot Grp 3
8)	O-XYLENE	2372.216	0.274	in SubTot Grp 3
11)	C9-C10 AROMATICS	2023264.085	233.849	with Grp 2
15)	C5-C8 ALIPHATICS #2	26389.905	3.050	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	26389.905	3.050*	
23)	C9-C12 ALIPHATICS #2	2535364.340	293.038*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	2535364.340	293.038*	

Group 1 ----------

C5-C8 ALIPHATICS #2	26389.905	3.050	< RL (54)
Sub-Total Group 1	0.000	0.000	
C5-C8 ALIPHATICS (ADJUSTED) #2	26389.905	3.050**	

Group 2 ----------

C9-C12 ALIPHATICS #2	2535364.340	293.038	
C9-C10 AROMATICS	2023264.085	233.849	
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	512100.255	59.189**	>RL (28)

Group 3 ----------

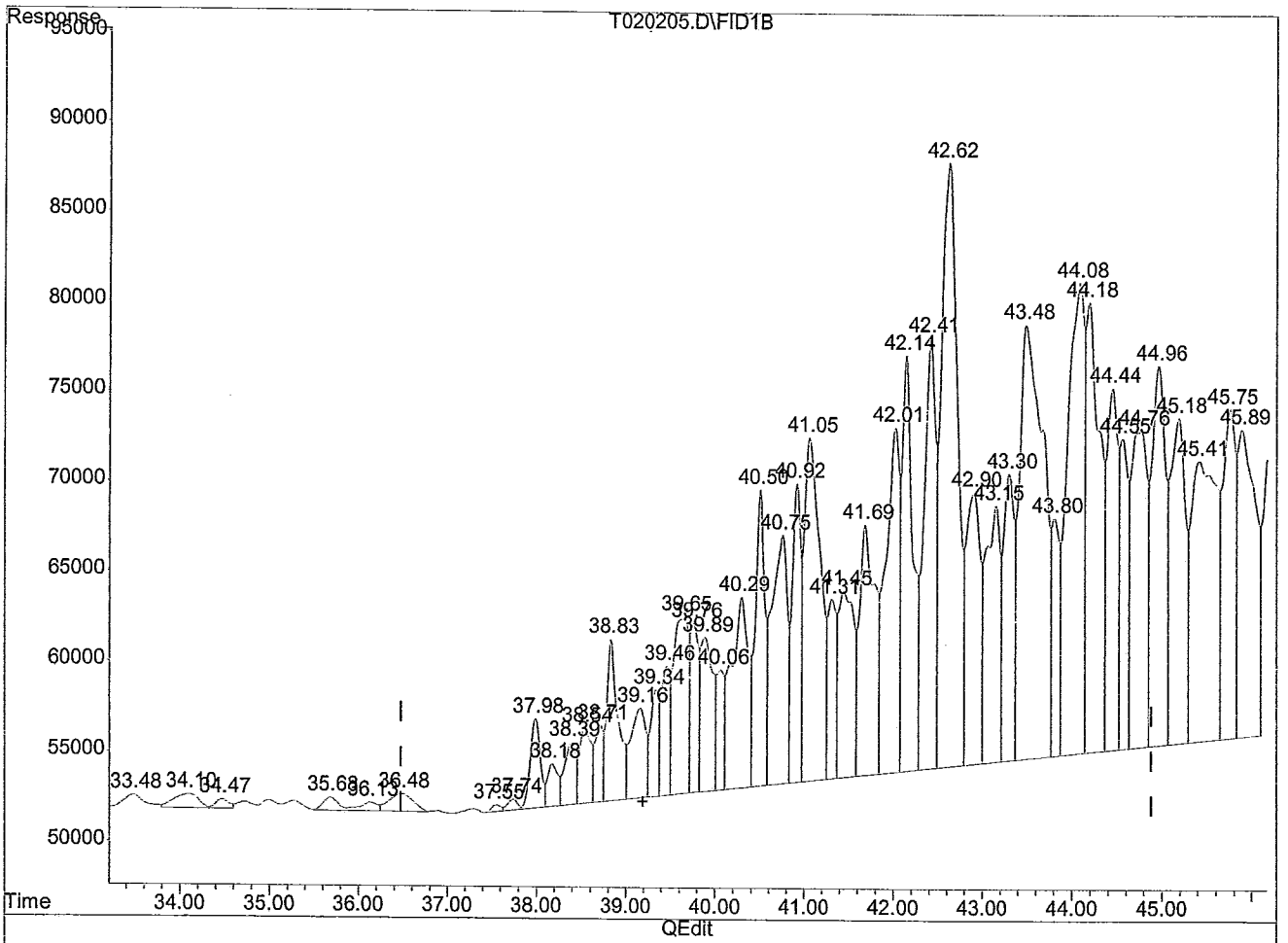
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	512100.255	59.189
Sub-Total Group 3	8637.878	0.998
C9-C12 ALIPHATICS (ADJUSTED) #2	503462.377	58.191**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 2023264.085ug/l m

response 50182454

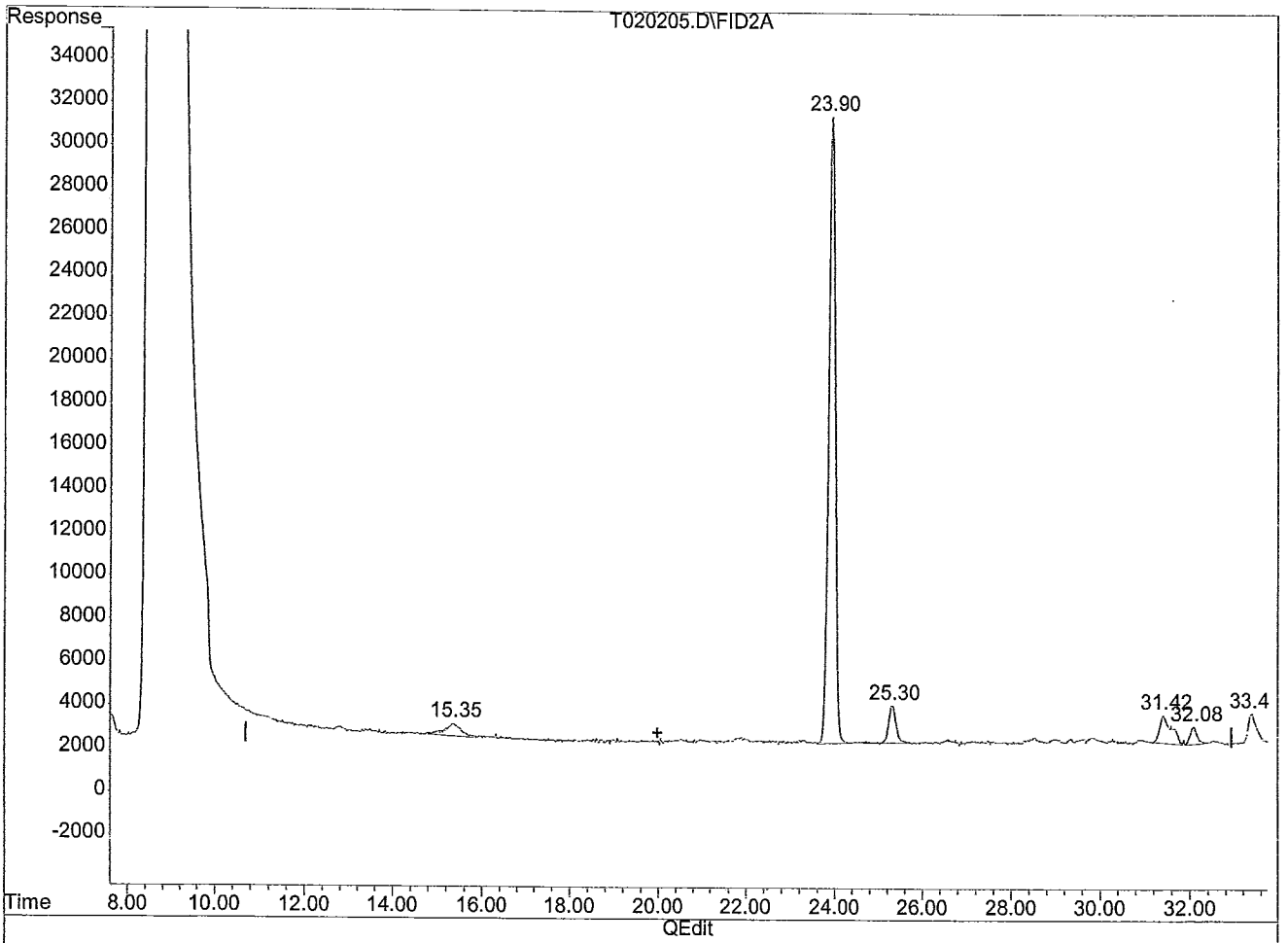
(+) = Expected Retention Time

T020205.D TV080111.M Mon Feb 06 13:38:26 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 26389.905ug/l m

response 464022

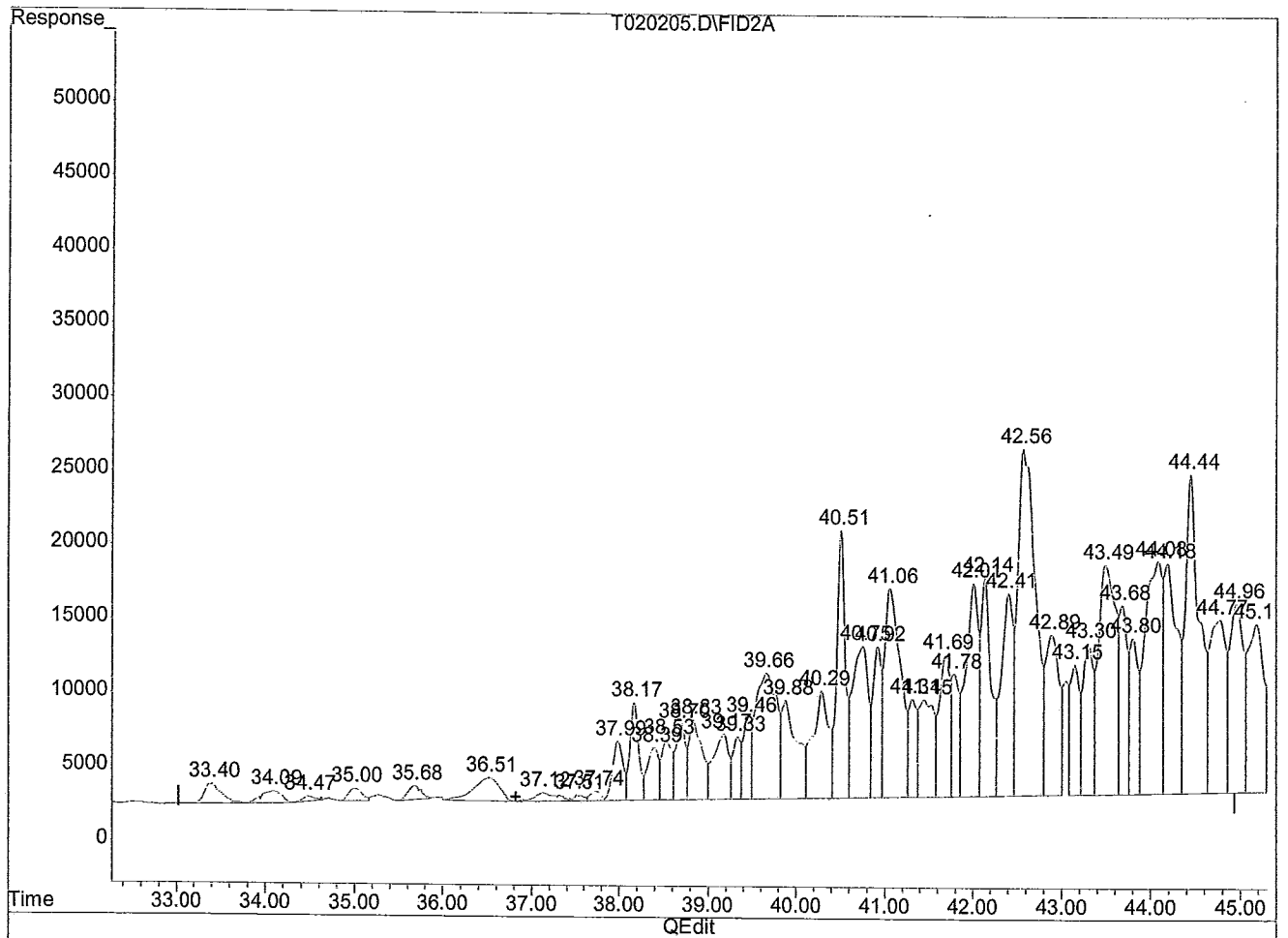
(+) = Expected Retention Time

T020205.D TV080111.M Mon Feb 06 13:38:42 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020205.D\FID1B.CH Vial: 4
Signal #2 : T:\DATA\T0202\T020205.D\FID2A.CH
Acq On : 2 Feb 2012 17:01 Operator: MKA
Sample : LI=62678-B-2 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=4.87 DW=89 Multiplr: 8652.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:37 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 2535364.340ug/l m

response 36073735

(+) = Expected Retention Time

T020205.D TV080111.M Mon Feb 06 13:38:56 2012 PENGCVOA10

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 13:39 2012 Quant Results File: TV080111.RES RL=125.4
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator) 130 ✓
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
		Internal Standards					
1)	I	FLUOROBENZENE	23.90	4946029	20.000	ug/l	0.0
13)	I	FLUOROBENZENE #2	23.90	3063539	20.000	ug/l	0.0
		System Monitoring Compounds					
4)	SM	a,a,a-Trifluorotoluene (pid)	25.31	303218	~~2.514~~ 2	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 }			Recovery = ~~3%~~# 126%		
14)	SM	a,a,a-Trifluorotoluene (fid) #2	25.31	278899	~~2.590~~ 2	ug/l	0.0
		{ Spiked Amount 100.000 Range 70 - 130 }			Recovery = ~~3%~~# 130%		
		Target Compounds (@SM)					
2)	TM	METHYL TERT-BUTYL ETHER	0.00	0	N.D.	ug/l	0.0
3)	TM	BENZENE	0.00	0	N.D.	ug/l	0.0
5)	TM	TOLUENE	29.59f	38244	937.686	ug/l	0.0
6)	TM	ETHYLBENZENE	34.01f	262368	7720.038	ug/l	0.0
7)	TM	M,P-XYLENE	34.47	187835	5099.539	ug/l	0.0
8)	TM	O-XYLENE	36.15	271368	8926.140	ug/l	0.0
9)	TM	1,2,4-TRIMETHYLBENZENE	39.58	2101892	95207.612	ug/l	0.0
10)	TM	NAPHTHALENE	45.17	1915202	161249.404	ug/l	0.0
11)	HM	C9-C10 AROMATICS 234.989	39.19	51467757	1964510.838	ug/l	0.
15)	HM	C5-C8 ALIPHATICS #2	19.98	1217624	66009.556	ug/l	0.0
16)	HM	C5-C8 ALIPHATICS (ADJUSTED) #2	19.98	1217624	66009.556	ug/l	0.0
17)	TM	N-PENTANE #2	0.00	0	N.D.	ug/l	0.0
18)	TM	2-METHYL PENTANE #2	0.00	0	N.D.	ug/l	0.0
19)	TM	METHYL TERT-BUTYL ETHER #2	0.00	0	N.D.	ug/l	0.0
20)	TM	2,2,4-TRIMETHYLPENTANE #2	0.00	0	N.D.	ug/l	0.0
21)	TM	BENZENE #2	0.00	0	N.D.	ug/l	0.0
22)	TM	TOLUENE #2	29.60f	54242	2487.987	ug/l	0.0
23)	HM	C9-C12 ALIPHATICS #2	36.82	43736952	2930167.278	ug/l	0.
24)	HM	C9-C12 ALIPHATICS (ADJUSTED) #2	36.82	43736952	2930167.278	ug/l	0.
25)	TM	N-NONANE #2	33.38	424124	40315.571	ug/l	0.0
26)	TM	ETHYLBENZENE #2	34.06	344784	17252.668	ug/l	0.0
27)	TM	M,P-XYLENE #2	34.47	180917	10041.544	ug/l	0.0

USE

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed) - SOIL

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Quant Time : Feb 6 13:39 2012 Quant Results File: TV080111.RES
Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Initial Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :

		Compound	R.T.	Response	Conc	Units	MDL
28)	TM	O-XYLENE #2	36.16	207914	11675.770	ug/l	0.0
29)	TM	N-DECANE #2	38.16	1209524	172855.482	ug/l	0.0
30)	TM	1,2,4-TRIMETHYLBENZENE #2	39.58	2005543	158095.790	ug/l	0.0
31)	TM	N-BUTYLCYCLOHEXANE #2	39.75	657693	73408.879	ug/l	0.0
32)	TM	NAPHTHALENE #2	45.17	1228583	251272.359	ug/l	0.0

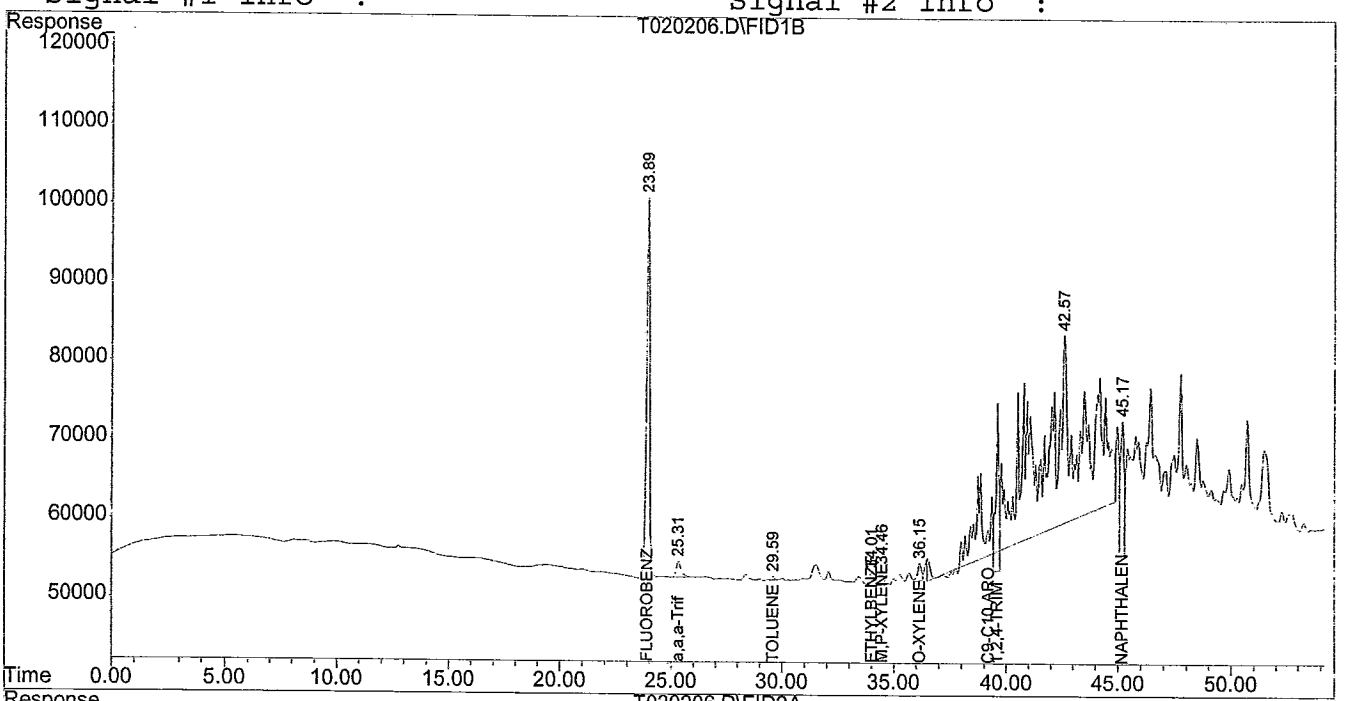
(f)=RT Delta > 1/2 Window (m)=manual int.

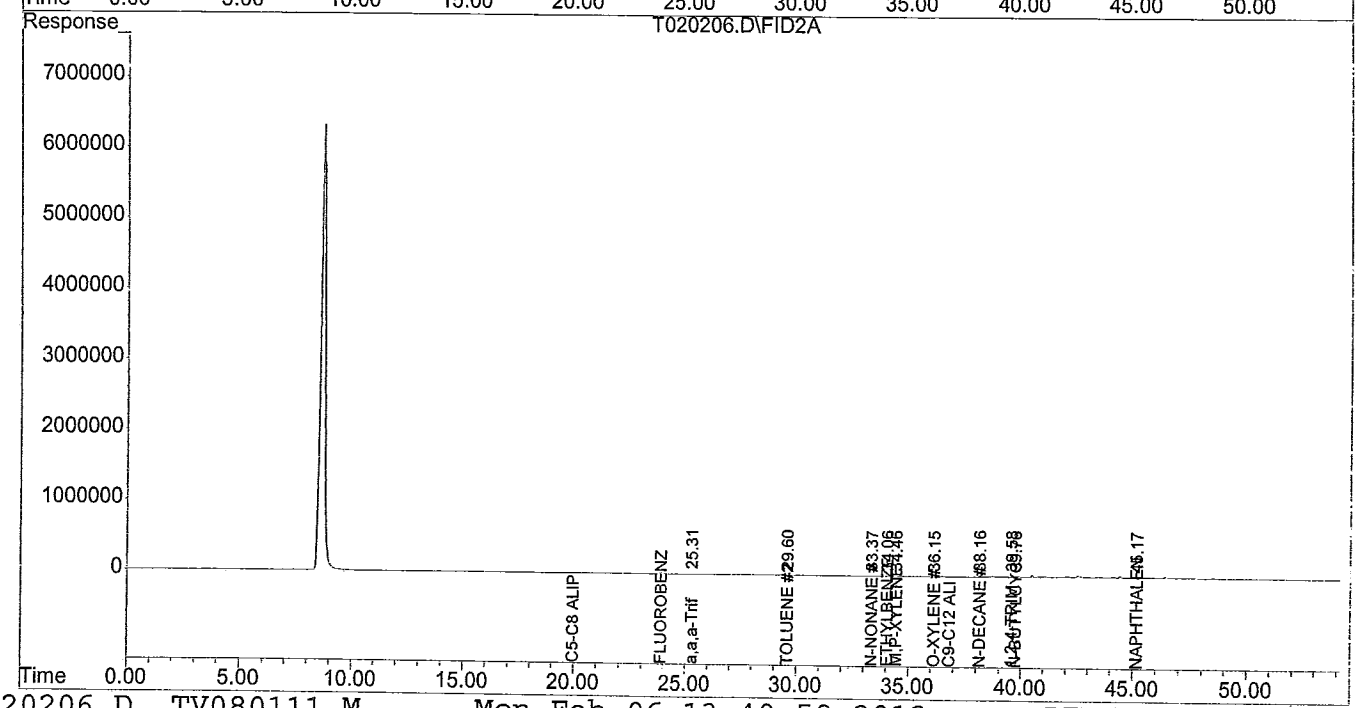
Quantitation Report (QT Reviewed)

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:39 2012 Quant Results File: TV080111.RES

Quant Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration
DataAcq Meth : TV080111.M

Volume Inj. :
Signal #1 Phase : Signal #2 Phase :
Signal #1 Info : Signal #2 Info :





This is the VPH.mac worksheet for ... T020206.D - (QT Reviewed)

at ... T:\DATA\T0202\

generated on ... Mon Feb 06 13:40:59 2012

Sample Multiplier : 8360.000 @1.000

2)	METHYL TERT-BUTYL ETHER	0.000	0.000	in SubTot Grp 1
3)	BENZENE	0.000	0.000	in SubTot Grp 1
5)	TOLUENE	937.686	0.112	in SubTot Grp 1
6)	ETHYLBENZENE	7720.038	0.923	in SubTot Grp 3
7)	M,P-XYLENE	5099.539	0.610	in SubTot Grp 3
8)	O-XYLENE	8926.140	1.068	in SubTot Grp 3
11)	C9-C10 AROMATICS	1964510.838	234.989	with Grp 2
15)	C5-C8 ALIPHATICS #2	66009.556	7.896	with Grp 1
16)	C5-C8 ALIPHATICS (ADJUSTED) #2	66009.556	7.896*	
23)	C9-C12 ALIPHATICS #2	2930167.278	350.498*	with Grp 2
{aka	C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2}			
24)	C9-C12 ALIPHATICS (ADJUSTED) #2	2930167.278	350.498*	

Group 1 ----------

C5-C8 ALIPHATICS #2	66009.556	7.896	< RL (54)
Sub-Total Group 1	937.686	0.112	
C5-C8 ALIPHATICS (ADJUSTED) #2	65071.870	7.784**	

Group 2 ----------

C9-C12 ALIPHATICS #2	2930167.278	350.498	
C9-C10 AROMATICS	1964510.838	234.989	
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	965656.440	115.509**	> RL (28)

Group 3 ----------

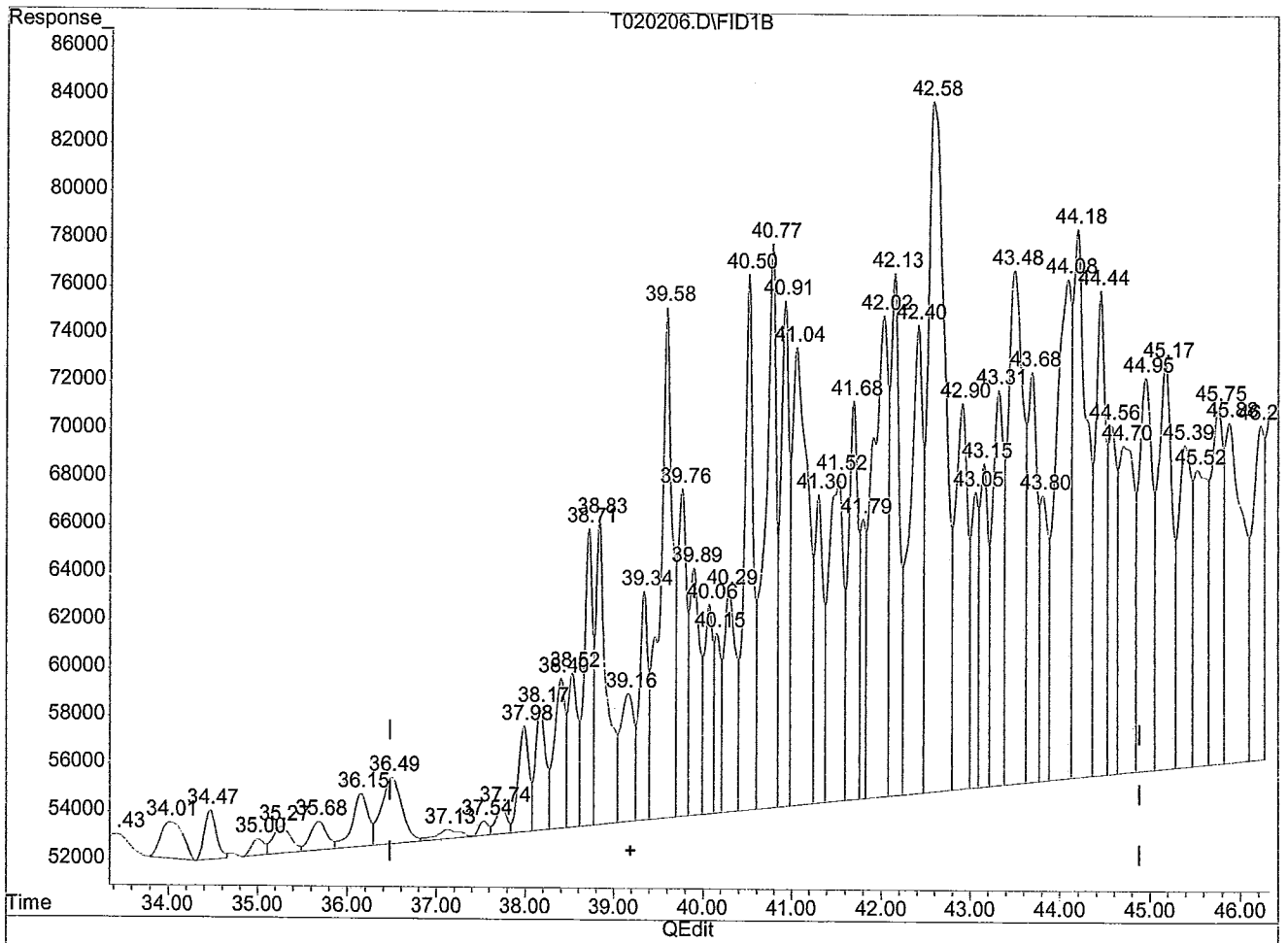
C9-C12 ALIPHATICS (SEMI-ADJUSTED) #2 {aka C9-C12 ALIPHATICS #2}	965656.440	115.509
Sub-Total Group 3	21745.717	2.601
C9-C12 ALIPHATICS (ADJUSTED) #2	943910.723	112.908**

* = Original Conc in chromatogram. (Conc to be replaced !)
** = The new re-calculated Conc to be sent to LIMS !

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:39 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(11) C9-C10 AROMATICS (HM)

39.19min 1964510.838ug/l m

response 51467757

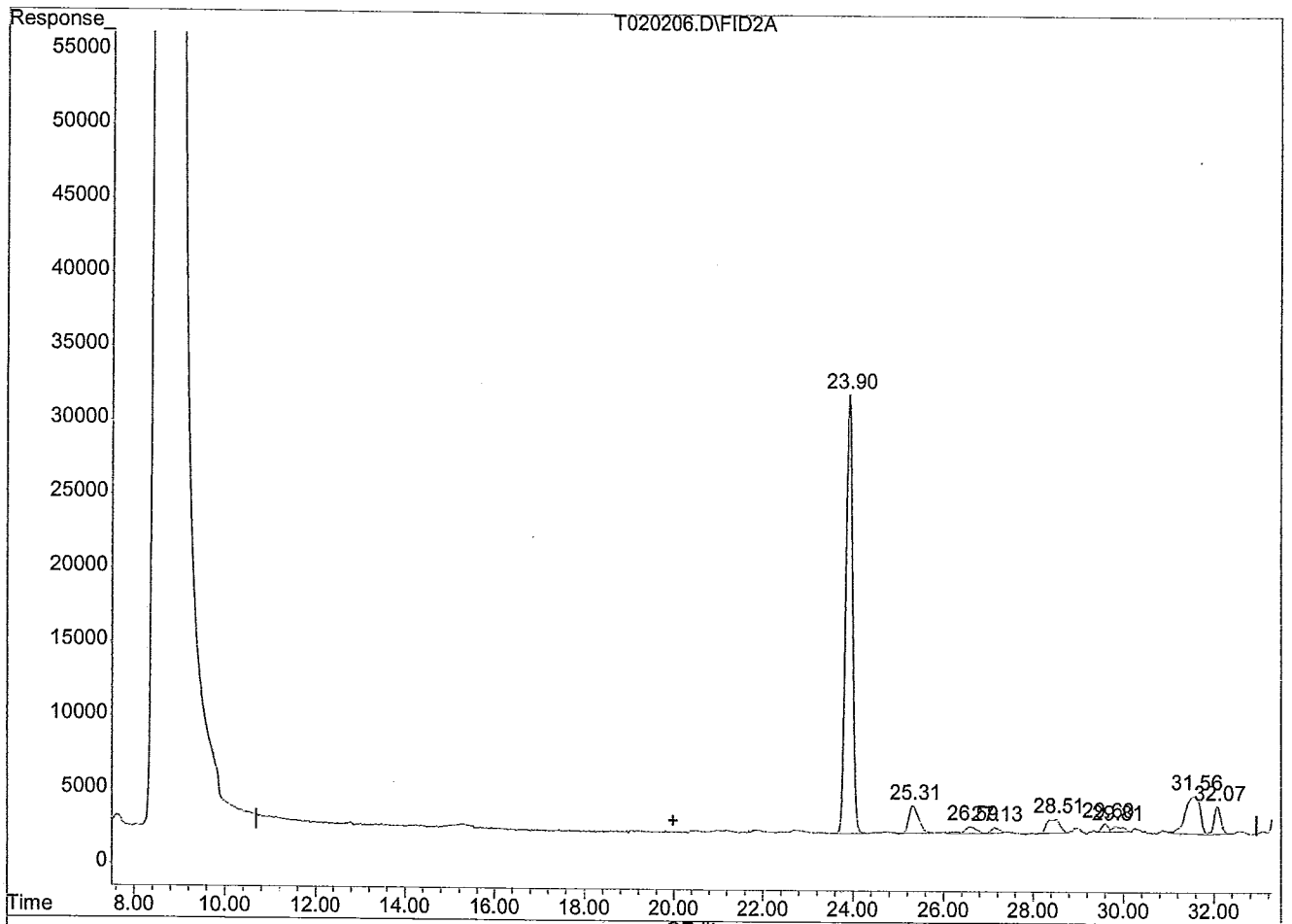
(+) = Expected Retention Time

T020206.D TV080111.M Mon Feb 06 13:39:57 2012 PENGCVOA10

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:39 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(15) C5-C8 ALIPHATICS #2 (HM)

19.98min 66009.556ug/l m

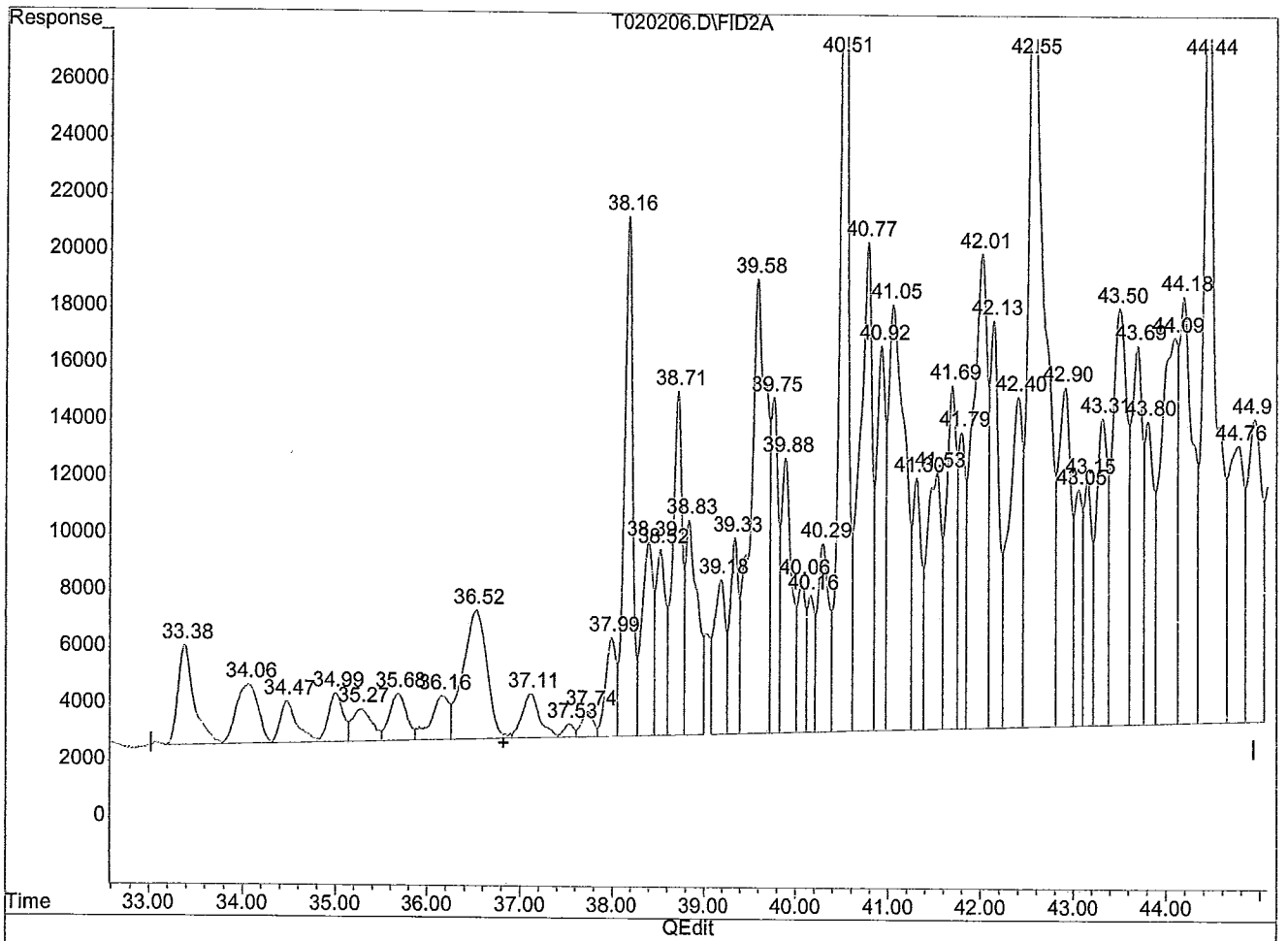
response 1217624

(+) = Expected Retention Time

Quantitation Report (Qedit)

Signal #1 : T:\DATA\T0202\T020206.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0202\T020206.D\FID2A.CH
Acq On : 2 Feb 2012 18:01 Operator: MKA
Sample : LI=62678-B-3 LB=S1729 LM=MAVPH Inst : TRACY #1
Misc : SOIL CM=VPH DF=2500 G=5.47 DW=82 Multiplr: 8360.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E
Quant Time: Feb 6 13:39 2012 Quant Results File: TV080111.RES

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Jan 26 16:44:11 2012
Response via : Multiple Level Calibration



(23) C9-C12 ALIPHATICS #2 (HM)

36.82min 2930167.278ug/l m

response 43736952

(+) = Expected Retention Time

8021IS_00310
8021SURR_00361

Instrument: TRACY

Date: 1/27/12

IS/SURR -00156

Analyst: MKA

Page 1 of 1

Spike VPHCal_00013
VPH SOIL_00017

Batch ~~TRS 1728 cont~~ MKA 1/27
TRS1729

Worklist #

Instrument Loading List

DATE	POS	SAMPLE NAME	DF	PH = 2	Cl	NOTES	USE / RR
1/27/12	16	CTRVPH				Good	✓
	1	BLK				Clean	✓
Level IV	2	MB	X50			TRS 1729	USF
Batch	3	LCS	X50				USF
	4	LCSD	X50			under	recovered RF
	5	660-45837-A-1	X100/122			13.63g DW 90 C9-C10 over	R(X500)
	6	CTRVPH end				Good	✓

8021 SURR -00361
8021 IS -00310

Instrument: TRACY

Date: 1/30/12

IS/SURR -00156

Analyst: MKA

Page 1 of 1

Spike VPH Cal -00013
VPH Soil -00017

Batch TRS 1729

Worklist #

Instrument Loading List

DATE	POS	SAMPLE NAME	DF	PH = 2	Cl	NOTES	USE / RR
1/30	7	CTRVPH				GOOD	✓
	8	BLK				Clean	✓
	9	LCSD RR	X50			TRS1729	USE
	10	660-45837-A-1 R	X500/611			G=13.63 DW=90 Run verif. x500	USE
	11	62673-D-1	X50/68.28			13.56 DW=81	USE
	12	E-2	X50/78.40			11.81 81	USE
	13	D-3 DUP	X50/58.63			15.60 82 Possible Dup of #2	USE
	14	E-4 DUP	X50/71.72			12.91 81 possible Dup of #2	USE
	15	D-5	X50/48.19			18.98 82	USE
	16	D-6	X50/42.74			21.40 82	USE
	1	D-7	X50/63.02			15.66 76	USE
	2	D-8	X50/64.72			15.05 77	USE
	3	D-8	X50/ ↓			sample (Batch) dup	7% RPD Cg-C10 crom
	4	660-45837-A-1 V	X500/611			13.63 90	verification
Level IV	5	62678-A-1	X200/691			5.048g 86 25µl:5ml	R(x100)
↓	6	A-3	X200/751			4.874g 82	R(x2500)
↓	7	A-2	X100/335			5.038g 89	R(x1000)
	8	CTRVPH end				OK	✓

8021 IS – 00310
8021 SURR – 00361

Instrument: TRACY

Date: 2/1/12

IS/SURR – 00156

Analyst: MKA

Page 1 of 1

Spike VPH Cal – 00013
VPH SOIL – 00017

Batch TRS 1729 con't

Worklist #

Instrument Loading List

DATE	POS	SAMPLE NAME	DF	PH = 2	CI	NOTES	USE / RR
2/1/12	5	CTR VPH				Good	✓
	6	BLK				OK	✓
	7	62673-D-1 MS	X50/68.28			G = 13.56 DW = 81 (TRS 1729)	possible report contamination (R)
	8	D-1 MSD	X50/			↓ ↓ OK	USE
level IV	9	62678-A-1 R	X50/173			G = 5.048 DW = 86	USE
	10	A-2 R	X2500/8363			G = 5.038 DW = 89 20ml:50ml	Run with "B"
	11	A-3 R	X2500/9383			G = 4.874 DW = 82 ↓	↓
	12	660-45869-B-1 R	X50/130			G = 6.01 DW = 96	R (X50)
	13	660-45868-B-1 R	X200/202			G = 16.91 DW = 88 25µl:5ml	R (X500)
	14	660-45897-A-1	X300/233			G = 14.79 DW = 87 ↓	R (X50)
	15	CTR VPH end				GOOD	✓

8021 IS -00310
8021 SURR -00361

Instrument: TRACY

Date: 2/2/12

IS/SURR 00156

Analyst: MKA

Page 1 of 1

Spike VPH Cal-00013
VPH Soil-00017

Batch TRS 1729 cont

Worklist #

Instrument Loading List

DATE	POS	SAMPLE NAME	DF	PH = 2	CI	NOTES	USE / RR
2/2/12	16	CTRVPH				GOOD	✓
	1	62673-D-1MS R	X50/68.28			G=13.56 DW=81 TRS1729	USE
Level IV	2	62678-A-1MS	X50/173			~~G=5.048 DW 86~~	USE
	3	A-1MSD	X50/				Rerun
	4	Vial Dup B-2	X2500/8652			G=4.87 DW=89 2gal:50ml	USE
	5	Vial Dup B-3	X2500/8360			G=5.47 DW=82 ↓	USE
	6	660-45869-B-1R	X50/130			G=6.01 DW=96	USE
	7	660-45897-A-1R	X50/58.29			G=14.79 DW=87	USE
	8	660-45868-B-1R	X500/504			G=16.91 DW=88	USE
	9	CTRVPH				GOOD	✓

8021 IS_00310
8021 SURR_00361

Instrument: TRACY

Date: 2/6/12

IS/SURR -00156

Analyst: MKA

Page 1 of 1

Spike VPHCal_00014
VPH SOIL_00018 + -00017
Recap Soil -00018

Batch TRS 1730
TRS 1731

Worklist #

Instrument Loading List

DATE	POS	SAMPLE NAME	DF	PH = 2	CI	NOTES	USE / RR
	10	CTRVPH				GOOD	✓
	11	BLK				Clean	✓
	12	MB	X50			TRS 1730 / TRS 1731 (Recap)	USE
Level IV	13	62678-A-1 MS(R)	X50/173		VPH SOIL-00017	(TRS 1729) G=5.048 DW=86	DNR
↓	14	A-1 MSD(R)	X50/173				USE
	15	LCS	X50			TRS 1730 / TRS 1731 (Recap)	Valve open
	16	LCSD	X50				
	1	660-45959-B-11	X50/94.21			g = 8.56 DW = 93	USE
	2	B-12	X50/113			g = 7.16 DW = 93	USE
	3	B-13	X50/95.44			g = 8.45 DW = 93	USE
Recap	4	62922-A-1	X500/1451			5.17g 10µl:5ml	R x 2500
TRS 1731	5	A-2	X500/1540			4.87	
	6	A-3	X500/1659			4.52	
	7	A-4	X500/1468			5.11	
	8	A-5	X500/1374			5.46	
	9	A-6	X500/1576			4.76	
	10	A-7	X500/1512			4.96	
	11	A-8	X500/1166			4.93	RX5000 + 2500
	12	LCS RR	X50				USE
	13	LCSD RR	X50				USE
	14	CTRVPH end				GOOD	✓

C_6-C_8 aliph overcal on all 62922

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPH Cal_00013

Reagent ID: VPH Cal_00013

		Expiration Date:	02/03/2012
Description:	VPH Std - 25 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	3	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	5.000 mL	Solvent Lot:	113540
Creation Date:	01/03/2012		
Container(s):	1780874, 1780875, 1780876		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2,4-Trimethylbenzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
2,5-Dibromotoluene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
2-Methylpentane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Benzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Butylcyclohexane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
C5-C8 Aliphatics	VPHW/SURR_00003	08/16/2014	60000.00	ug/mL	150.00000	ug/mL
C9-C10 Aromatics	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
C9-C12 Aliphatics	VPHW/SURR_00003	08/16/2014	70000.00	ug/mL	175.00000	ug/mL
Ethylbenzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Isooctane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Methyl tert-butyl ether	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
m-Xylene & p-Xylene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Naphthalene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
n-Decane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
n-Nonane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
o-Xylene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Pentane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPH Cal_00013

Reagent ID: VPH Cal_00013

		Expiration Date:	02/03/2012
Description:	VPH Std - 25 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	3	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	5.000 mL	Solvent Lot:	113540
Creation Date:	01/03/2012		
Container(s):	1780874, 1780875, 1780876		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Toluene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
VPHW/SURR_00003	VPH CALIBRATION MIX	ASTD	08/16/14	ACCUSTANDARD	B4080130	GRH-004S/SS-	12.5000	uL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPH Cal_00014

Reagent ID: VPH Cal_00014

		Expiration Date:	03/06/2012
Description:	VPH Std - 25 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	3	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	5.000 mL	Solvent Lot:	114965
Creation Date:	02/06/2012		
Container(s):	1800146, 1800147, 1800148		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2,4-Trimethylbenzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
2,5-Dibromotoluene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
2-Methylpentane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Benzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Butylcyclohexane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
C5-C8 Aliphatics	VPHW/SURR_00003	08/16/2014	60000.00	ug/mL	150.00000	ug/mL
C9-C10 Aromatics	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
C9-C12 Aliphatics	VPHW/SURR_00003	08/16/2014	70000.00	ug/mL	175.00000	ug/mL
Ethylbenzene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Isooctane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Methyl tert-butyl ether	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
m-Xylene & p-Xylene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Naphthalene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
n-Decane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
n-Nonane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
o-Xylene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL
Pentane	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPH Cal_00014

Reagent ID: VPH Cal_00014

		Expiration Date:	03/06/2012
Description:	VPH Std - 25 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	3	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	5.000 mL	Solvent Lot:	114965
Creation Date:	02/06/2012		
Container(s):	1800146, 1800147, 1800148		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Toluene	VPHW/SURR_00003	08/16/2014	10000.00	ug/mL	25.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
VPHW/SURR_00003	VPH CALIBRATION MIX	ASTD	08/16/14	ACCUSTANDARD	B4080130	GRH-004S/SS-	12.5000	uL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8021ISSURR_00156

Reagent ID: 8021ISSURR_00156

		Expiration Date:	07/24/2012
Description:	8021 IS/SURR - 10/25 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	11	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	20.000 mL	Solvent Lot:	114965
Creation Date:	01/24/2012		
Container(s):	1789361, 1789362, 1789363, 1789364, 1789365, 1789366, 1789367, 1789368, 1789369,		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
a,a,a-Trifluorotoluene (fid)	8021 SURR_00362	08/31/2014	10000.00	ug/mL	25.00000	ug/mL
a,a,a-Trifluorotoluene (pid)	8021 SURR_00362	08/31/2014	10000.00	ug/mL	25.00000	ug/mL
Fluorobenzene	FLBENZ IS_00047	04/30/2013	2000.000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
8021 SURR_00362	a,a,a-Trifluorotoluene-10 000 ppm	ASTD	08/31/14	SUPELCO	LB86990	47582-U	50.0000	uL
FLBENZ IS_00047	Fluorobenzene - 2000 ppm	ASTD	04/30/13	ACCUSTANDARD	B3040356	M-524-IS-2	100.0000	uL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8021 IS_00310

Reagent ID: 8021 IS_00310

		Expiration Date:	02/10/2012
Description:	8021 IS - 10 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	3	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	5.000 mL	Solvent Lot:	113540
Creation Date:	01/10/2012		
Container(s):	1782557, 1782558, 1782559		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
Fluorobenzene	FLBENZ IS_00047	04/30/2013	2000.000	ug/mL	10.00000	ug/mL

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
FLBENZ IS_00047	Fluorobenzene - 2000 ppm	ASTD	04/30/13	ACCUSTANDARD	B3040356	M-524-IS-2	25.0000	uL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

8021 SURR_00361

Reagent ID: 8021 SURR_00361

Type:	ASTD	Expiration Date:	10/28/2014
Description:	8021 SURR - 2000 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	5	Prepared By:	Kearley, Shelley
Storage Location:	COUNTER	Vendor:	ACCUSTANDARD
Reagent Volume:	1.000 mL	Vendor Lot #:	B4100288
Creation Date:	12/20/2011	Vendor Cat #:	M-602-SS-10X
Container(s):	1775417, 1775418, 1775419, 1775420, 1775421		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
a,a,a-Trifluorotoluene					2000.00000	ug/mL
a,a,a-Trifluorotoluene (fid)					2000.00000	ug/mL
a,a,a-Trifluorotoluene (pid)					2000.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPHSoil_00017

Reagent ID: VPHSoil_00017

		Expiration Date:	02/10/2012
Description:	VPH Soil Spike - 500 ppm	Laboratory:	TestAmerica Pensacola
No. of Bottles:	1	Prepared By:	Arbuckle, Mardy
Storage Location:	ORG015 (VOA)	Solvent:	MEOH
Reagent Volume:	2.000 mL	Solvent Lot:	113540
Creation Date:	01/10/2012		
Container(s):	1782556		
Comment:			

Reagent Analyte Information

Analyte	Source ID	Source Expiration Date	Source Conc.	Source Conc. Units	Final Conc.	Final Conc. Units
1,2,4-Trimethylbenzene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
2,5-Dibromotoluene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
2-Methylpentane	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
Benzene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
C5-C8 Aliphatics	VPH SPIKE_00020	06/30/2016	15000.00	ug/mL	3000.00000	ug/mL
C9-C10 Aromatics	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
C9-C12 Aliphatics	VPH SPIKE_00020	06/30/2016	17500.00	ug/mL	3500.00000	ug/mL
Ethylbenzene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
Isooctane	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
Methyl tert-butyl ether	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
m-Xylene & p-Xylene	VPH SPIKE_00020	06/30/2016	5000.000	ug/mL	1000.00000	ug/mL
Naphthalene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
n-Nonane	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
o-Xylene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
Pentane	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL
Toluene	VPH SPIKE_00020	06/30/2016	2500.000	ug/mL	500.00000	ug/mL

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

VPHSoil_00017

Source Reagents

Reagent	Description	Type	Expiration	Vendor	Vendor Lot #	Vendor Cat Lot #	Volume Used	Volume Units
VPH SPIKE_00020	VPH Spike - 2500 ppm	ASTD	06/30/16	RESTEK	A067502	30454	400.0000	uL

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

OK Thru 2/3/12

GC/VOA Extraction Batch Sheet

P 148143

BATCH NUMBER 11-EXT- TRS 1729 A 148117

	Sample Name	Extract Date	Acquire Date	Instrument	Analyst	Lot Numbers	Expiration Date	Time Extracted
BLANK ✓	MB	1/27/12	1/27/12	TRACY	MKA	114965		1430
LCS ✓		↓	↓	↓	↓	VPHSOIL-00017	2/10/12	↓
LCSD ✓		↓	1/30/12	↓	↓	↓	↓	↓
Balance S/N: 24950232						8021 SURR 00361	10/28/14	
						8021 IS 00310	2/10/12	
MS		1/30/12				Sample Spiked		
MSD		↓				62678-A-1 (		

Sample Dup Aquired

MS	2/2/12
MSD	2/1/12

Ext. Date 1/27

62673-D-8 (x50) 7% RPD C_9-C_{10}

62673-D-1 (x50)

	Sample	Ext. Date	Acq. Date	Instrument	Analyst	Sample Weight	MeOH Volume	Unique Identifier
nd	660-45837-A-1 ✓	1/27/12 1430	1/30/12	TRACY	MKA	13.63	15ml	x500
nd	62673-D-1 ✓	↓	1/30/12	TRACY	↓	13.56	↓	x 50
	F-2 ✓	↓	↓	↓	↓	11.81	↓	x50
	D-3 ✓	↓	↓	↓	↓	15.60	↓	x50
	E-4 ✓	↓	↓	↓	↓	12.91	↓	x50
	D-5 ✓	↓	↓	↓	↓	18.98	↓	x50
	D-6 ✓	↓	↓	↓	↓	21.40	↓	x50
	D-7 ✓	↓	↓	↓	↓	15.66	↓	x50
	D-8 ✓	↓	↓	↓	↓	15.05	↓	x50
	62678-A-1	1/30/12 1530	2/1/12	↓	↓	5.048	↓	x50
	B A-2	↓	2/2/12	↓	↓	4.87 ~~5.038~~ MKA 2/6	↓	x2500
	B A-3 MKA 2/6	↓	↓	↓	↓	5.47 ~~4.874~~	↓	x2500
nd	660-45867-B-1 ✓	1/31/12 0930	1/31/12	TRACY	MKA	13.13	↓	x200
	660-45868-B-1	↓	2/2/12	↓	↓	16.91	↓	x500
	660-45869-B-1	↓	↓	↓	↓	6.01	↓	x50
	B-2 ✓	↓	1/31/12	TRACY	MKA	12.60	↓	x50
	660-45897-A-1	2/1 1445	2/2/12	↓	↓	14.79	15ml	x50

Low sample wt NCM

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143

Method Code: 400-5035A_M-400

Analyst: Arbuckle, Mardy

Batch Open: 1/27/2012 2:30:00PM

Batch End:

Closed System Purge and Trap

	Input Sample Lab ID	Input Sample Lab ID (Analytical Method)	SDG	Initial Amount	Final Amount	Due Date	Analytical TAT	Div Rank	Comments
1	400-1795376	MB~400-148143/1 N/A	N/A	15.00 g	15.00 mL	N/A	N/A	N/A	
2	400-1795377	LCS~400-148143/2 N/A	N/A	15.00 g	15.00 mL	N/A	N/A	N/A	
3	400-1795378	LCSD~400-148143/3 N/A	N/A	15.00 g	15.00 mL	N/A	N/A	N/A	
4	400-1795379	660-45837-A-1 (MAVPH)	N/A	13.63 g	15.00 mL	2/1/12	6_Days - E	2	
5	400-1795380	400-62673-D-1 (MAVPH)	N/A	13.56 g	15.00 mL	2/2/12	5_Days - R	2	
6	400-1795381	400-62673-E-2 (MAVPH)	N/A	11.81 g	15.00 mL	2/2/12	5_Days - R	2	
7	400-1795382	400-62673-D-3 (MAVPH)	N/A	15.60 g	15.00 mL	2/2/12	5_Days - R	2	
8	400-1795383	400-62673-E-4 (MAVPH)	N/A	12.91 g	15.00 mL	2/2/12	5_Days - R	2	
9	400-1795384	400-62673-D-5 (MAVPH)	N/A	18.98 g	15.00 mL	2/2/12	5_Days - R	2	
10	400-1795385	400-62673-D-6 (MAVPH)	N/A	21.40 g	15.00 mL	2/2/12	5_Days - R	2	
11	400-1795386	400-62673-D-7 (MAVPH)	N/A	15.66 g	15.00 mL	2/2/12	5_Days - R	2	
12	400-1795387	400-62673-D-8 (MAVPH)	N/A	15.05 g	15.00 mL	2/2/12	5_Days - R	2	
13	400-1795388	400-62678-A-1 (MAVPH)	N/A	5.048 g	15.00 mL	2/7/12	8_Days - R	4	
14	400-1800411	400-62678-B-2 (MAVPH)	N/A	4.87 g	15.00 mL	2/7/12	8_Days - R	4	
15	400-1800412	400-62678-B-3 (MAVPH)	N/A	5.47 g	15.00 mL	2/7/12	8_Days - R	4	

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143 | Analyst: Arbuckle, Mardy | Batch Open: 1/27/2012 2:30:00PM

Method Code: 400-5035A_M-400 | Batch End:

16	400-1796923	660-45867-B-1 (MAVPH)	N/A	13.13 g	15.00 mL	2/8/12	9_Days - E	2	
17	400-1796924	660-45868-B-1 (MAVPH)	N/A	16.91 g	15.00 mL	2/8/12	9_Days - E	2	
18	400-1796925	660-45869-B-1 (MAVPH)	N/A	6.01 g	15.00 mL	2/8/12	9_Days - E	2	
19	400-1796926	660-45869-B-2 (MAVPH)	N/A	12.60 g	15.00 mL	2/8/12	9_Days - E	2	
20	400-1796927	660-45897-A-1 (MAVPH)	N/A	14.79 g	15.00 mL	2/9/12	9_Days - E	2	
21	400-1796928	400-62673-D-1~MS (MAVPH)	N/A	13.56 g	15.00 mL	2/2/12	5_Days - R	2	
22	400-1796929	400-62673-D-1~MSD (MAVPH)	N/A	13.56 g	15.00 mL	2/2/12	5_Days - R	2	
23	400-1800413	400-62678-A-1~MS (MAVPH)	N/A	5.048 g	15.00 mL	2/7/12	8_Days - R	4	
24	400-1800414	400-62678-A-1~MSD (MAVPH)	N/A	5.048 g	15.00 mL	2/7/12	8_Days - R	4	

Batch Notes

Balance ID _____

Methanol Lot Number _____

Batch Comment _____

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143

Method Code: 400-5035A_M-400

Analyst: Arbuckle, Mardy

Batch Open: 1/27/2012 2:30:00PM

Batch End:

Comments

400-62678-A-1	Method Comments:	LEVEL 4 RAW DATA PAPER PACKAGE REQUIRED
400-62678-B-2	Method Comments:	LEVEL 4 RAW DATA PAPER PACKAGE REQUIRED
400-62678-B-3	Method Comments:	LEVEL 4 RAW DATA PAPER PACKAGE REQUIRED
400-62678-A-1~MS	Method Comments:	LEVEL 4 RAW DATA PAPER PACKAGE REQUIRED
400-62678-A-1~MSD	Method Comments:	LEVEL 4 RAW DATA PAPER PACKAGE REQUIRED

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143

Method Code: 400-5035A_M-400

Analyst: Arbuckle, Mardy

Batch Open: 1/27/2012 2:30:00PM

Batch End:

Reagent Additions Worksheet

Lab ID	Reagent Code	Amount Added	Final Amount	By	Witness
MB 400-148143/1	8021 SURR_00361	37.5 uL	15.00 mL		
LCS 400-148143/2	8021 SURR_00361	37.5 uL	15.00 mL		
LCS 400-148143/2	VPHSoil_00017	75.00 uL	15.00 mL		
LCSD 400-148143/3	8021 SURR_00361	37.5 uL	15.00 mL		
LCSD 400-148143/3	VPHSoil_00017	75.00 uL	15.00 mL		
660-45837-A-1	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-1	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-E-2	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-3	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-E-4	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-5	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-6	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-7	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-8	8021 SURR_00361	37.5 uL	15.00 mL		
400-62678-A-1	8021 SURR_00361	37.5 uL	15.00 mL		
400-62678-B-2	8021 SURR_00361	37.5 uL	15.00 mL		
400-62678-B-3	8021 SURR_00361	37.5 uL	15.00 mL		

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143

Analyst: Arbuckle, Mardy

Batch Open: 1/27/2012 2:30:00PM

Method Code: 400-5035A_M-400

Batch End:

660-45867-B-1	8021 SURR_00361	37.5 uL	15.00 mL		
660-45868-B-1	8021 SURR_00361	37.5 uL	15.00 mL		
660-45869-B-1	8021 SURR_00361	37.5 uL	15.00 mL		
660-45869-B-2	8021 SURR_00361	37.5 uL	15.00 mL		
660-45897-A-1	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-1 MS	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-1 MS	VPHSoil_00017	75.00 uL	15.00 mL		
400-62673-D-1 MSD	8021 SURR_00361	37.5 uL	15.00 mL		
400-62673-D-1 MSD	VPHSoil_00017	75.00 uL	15.00 mL		
400-62678-A-1 MS	8021 SURR_00361	37.5 uL	15.00 mL		
400-62678-A-1 MS	VPHSoil_00017	75.00 uL	15.00 mL		
400-62678-A-1 MSD	8021 SURR_00361	37.5 uL	15.00 mL		
400-62678-A-1 MSD	VPHSoil_00017	75.00 uL	15.00 mL		

Solid SW-846-3500 Prep Worksheet

(Used for Collecting Prep Info)

Batch Number: 400-148143

Analyst: Arbuckle, Mardy

Batch Open: 1/27/2012 2:30:00PM

Method Code: 400-5035A_M-400

Batch End:

Other Reagents:

Reagent	Amount/Units	Lot#:

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**D. SIEFKEN**	**DATE:**	**JUNE 25, 2012**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – TRPH**
LIMITED REVIEW
CTO JM60, NAVSTA MAYPORT
SAMPLE DELIVERY GROUP (SDG) – 1205032

SAMPLES: 2/Soil/TRPH

MPT-289-SS17-07-20120503 MPT-289-SS18-07-20120503

OVERVIEW

The sample set for NAVSTA Mayport CTO JM60, SDG 1205032 consists of two (2) soil environmental samples. All samples were analyzed for total recoverable petroleum hydrocarbons (TRPH).

The samples were collected by Tetra Tech on May 3, 2012 and analyzed for Florida-PRO by Empirical Laboratories, Inc. and for MADEP by Test America (Nashville). The analyses were conducted in accordance with Florida-PRO and MDDEP analysis and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/Continuing Calibrations
* • Laboratory Method Blank Results
• Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

Florida-PRO

No qualification of the data was necessary.

MADEP

The MADEP volatile portion of the samples were collected using approximately 5 gram aliquot instead of 15 gram aliquot. No action was taken on this basis and is noted for completeness only.

Notes

Positive results reported below the limit of quantitation (LOQ) but above the method detection limit (MDL) were qualified as estimated, (J). All results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: MADEP VOC soil aliquot approximately 5 grams instead of 15 grams.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation, October 1999 and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % 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 = ICP PDS Recovery Noncompliance; 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 (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% 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 less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 03576	NSAMPLE	MPT-289-SS17-07-20120503			MPT-289-SS18-07-20120503		
SDG: 1205032	LAB_ID	1205032-02RE1			1205032-01RE1		
FRACTION: PET	SAMP_DATE	5/3/2012			5/3/2012		
MEDIA: SOIL	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	77.5			75.5		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		14	U		86.5		

PROJ_NO: 03576	NSAMPLE	MPT-289-SS17-07-20120503			MPT-289-SS18-07-20120503		
SDG: 1205032	LAB_ID	400-65243-2			400-65243-1		
FRACTION: PETV	SAMP_DATE	5/3/2012			5/3/2012		
MEDIA: SOIL	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	73.1			71.7		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
C5-C8 ALIPHATICS		11	U		9.2	U	
C9-C10 AROMATICS		3	U		22		
C9-C12 ALIPHATICS		5.5	U		4.8	U	

PROJ_NO: 03576	NSAMPLE	MPT-289-SS17-07-20120503			MPT-289-SS18-07-20120503		
SDG: 1205032	LAB_ID	400-65243-2			400-65243-1		
FRACTION: PETS	SAMP_DATE	5/3/2012			5/3/2012		
MEDIA: SOIL	QC_TYPE	NM			NM		
	UNITS	MG/KG			MG/KG		
	PCT_SOLIDS	73.1			71.7		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
C11-C22 AROMATICS		3.3			54		
C19-C36 ALIPHATICS		5.4			100		
C9-C18 ALIPHATICS		2.2	U		46		

Appendix B

Results as Reported by the Laboratory

ANALYSIS DATA SHEET

MPT-289-SS17-07-20120503

Laboratory:	Empirical Laboratories, LLC			SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1205032-02RE1	File ID:	008F0801.D
Sampled:	05/03/12 15:00	Prepared:	05/15/12 11:00	Analyzed:	05/15/12 15:38
Solids:	77.48	Preparation:	EXT_3546	Dilution:	1

Batch: 2E15013 Sequence: 2E13702 Calibration: 2097002 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics		14.0	28.0	56.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.246	3.531	83.2	50 - 150	
o-Terphenyl	4.246	3.751	88.3	35 - 140	

ANALYSIS DATA SHEET

MPT-289-SS18-07-20120503

Laboratory:	Empirical Laboratories, LLC			SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1205032-01RE1	File ID:	005F0501.D
Sampled:	05/03/12 13:40	Prepared:	05/15/12 11:00	Analyzed:	05/15/12 13:58
Solids:	75.51	Preparation:	EXT_3546	Dilution:	1

Batch: 2E15013 Sequence: 2E13702 Calibration: 2097002 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	86.5	14.6	29.1	58.3	N

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.414	3.423	77.6	50 - 150	
o-Terphenyl	4.414	3.747	84.9	35 - 140	

Client Sample Results

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Client Sample ID: MPT-289-SS18-07-20120503

Lab Sample ID: 400-65243-1

Date Collected: 05/03/12 13:40
Date Received: 05/08/12 10:19

Matrix: Solid
Percent Solids: 71.7

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	9.2	U	9.2	9.2	mg/Kg	☼	05/16/12 10:30	05/16/12 19:12	50
C9-C12 Aliphatics	4.8	U	4.8	4.8	mg/Kg	☼	05/16/12 10:30	05/16/12 19:12	50
C9-C10 Aromatics	**22**		2.6	2.6	mg/Kg	☼	05/16/12 10:30	05/16/12 19:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*83*		*70 - 130*	*05/16/12 10:30*	*05/16/12 19:12*	*50*
a,a,a-Trifluorotoluene (pid)	*85*		*70 - 130*	*05/16/12 10:30*	*05/16/12 19:12*	*50*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	**46**		2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/14/12 20:03	1
C19-C36 Aliphatics	**100**		2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/14/12 20:03	1
C11-C22 Aromatics	**54**		2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/15/12 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*49*		*40 - 140*	*05/10/12 11:34*	*05/14/12 20:03*	*1*
o-Terphenyl	*49*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:07*	*1*
2-Fluorobiphenyl	*101*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:07*	*1*
2-Bromonaphthalene	*102*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:07*	*1*

Client Sample ID: MPT-289-SS17-07-20120503

Lab Sample ID: 400-65243-2

Date Collected: 05/03/12 15:00
Date Received: 05/08/12 10:19

Matrix: Solid
Percent Solids: 73.1

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	11	U	11	11	mg/Kg	☼	05/16/12 10:30	05/16/12 21:12	50
C9-C12 Aliphatics	5.5	U	5.5	5.5	mg/Kg	☼	05/16/12 10:30	05/16/12 21:12	50
C9-C10 Aromatics	3.0	U	3.0	3.0	mg/Kg	☼	05/16/12 10:30	05/16/12 21:12	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*95*		*70 - 130*	*05/16/12 10:30*	*05/16/12 21:12*	*50*
a,a,a-Trifluorotoluene (pid)	*96*		*70 - 130*	*05/16/12 10:30*	*05/16/12 21:12*	*50*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	2.2	U	2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/14/12 20:10	1
C19-C36 Aliphatics	**5.4**		2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/14/12 20:10	1
C11-C22 Aromatics	**3.3**		2.2	2.2	mg/Kg	☼	05/10/12 11:34	05/15/12 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*76*		*40 - 140*	*05/10/12 11:34*	*05/14/12 20:10*	*1*
o-Terphenyl	*68*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:14*	*1*
2-Fluorobiphenyl	*94*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:14*	*1*
2-Bromonaphthalene	*101*		*40 - 140*	*05/10/12 11:34*	*05/15/12 00:14*	*1*

Appendix C

Support Documentation

HOLDTIME

SDG 1205032

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	MG/KG	MPT-289-SS18-07-201205	1205032-01RE1	NM	5/3/2012	5/15/2012	5/15/2012	12	0	12
TPH	MG/KG	MPT-289-SS17-07-201205	1205032-02RE1	NM	5/3/2012	5/15/2012	5/15/2012	12	0	12
EPH	MG/KG	MPT-289-SS18-07-201205	400-65243-1	NM	5/3/2012	5/10/2012	5/15/2012	7	5	12
EPH	MG/KG	MPT-289-SS18-07-201205	400-65243-1	NM	5/3/2012	5/10/2012	5/14/2012	7	4	11
EPH	MG/KG	MPT-289-SS17-07-201205	400-65243-2	NM	5/3/2012	5/10/2012	5/15/2012	7	5	12
EPH	MG/KG	MPT-289-SS17-07-201205	400-65243-2	NM	5/3/2012	5/10/2012	5/14/2012	7	4	11
VPH	MG/KG	MPT-289-SS18-07-201205	400-65243-1	NM	5/16/2012	5/16/2012	5/16/2012	0	0	0
VPH	MG/KG	MPT-289-SS17-07-201205	400-65243-2	NM	5/16/2012	5/16/2012	5/16/2012	0	0	0

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1205032

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Brian Richard
Tel (615)345-1115
Fax (866)417-0548
Email: brichard@empirlabs.com

Original Report Date: May 24, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 53

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. Samples were subcontracted to Test America for MADEP TRPH.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

FLPRO:
The following matrix spikes exceeded criteria:
2E15013-MSD1 (1205032-01RE1) with a positive bias for Petroleum Range Organics

The following surrogates exceeded the retention time window:
o-Terphenyl in 2E15013-BLK1; note – the result bias due to the retention time shift was determined to be negligible for all affected samples

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And **"RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

1205032

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER № 2396

PAGE 1 OF 1

PROJECT NO: 1129 03576	FACILITY: Mayport / Site 289	PROJECT MANAGER Dave Siefker	PHONE NUMBER 904.334-7260	LABORATORY NAME AND CONTACT: EMPIRICAL / Brian
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Jeff Krone	PHONE NUMBER 904-334-7260	ADDRESS 621 Mainstream Dr, Ste 270
		CARRIER/WAYBILL NUMBER Fedex Airbill 8643 5452 1550		CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR May 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TRPH	MADEP TRPH	COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	
PRESERVATIVE USED									/	/	
5/3	1340	MPT-289-5518-07-20120503						5	1	4	Cool to 4°C
5/3	1500	MPT-289-5517-07-20120503						5	1	4	

1. RELINQUISHED BY	DATE 5/3/12	TIME 1800	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE 5/4/12	TIME 0820

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 05/04/12 @ 0820

WO# 1205032

1. Tracking # 1550 (last 4 digits, FedEx)

Courier: ____FED-EX

2. Temperature of rep. sample or temp blank when opened: 1.7 *Degrees Celsius + correction factor -0.2* = 1.5

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #____

I certify that I unloaded the cooler and answered questions 7-14 (intial) ____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ____

I certify that I attached a label with the unique LIMS number to each container (intial) ____

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#____

Additional Details:

Data for FLPRO Forms

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1205032

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS18-07-20120503	05/03/12 13:40	05/04/12 08:20	05/15/12 11:00	11.93	14.00	05/15/12 13:58	0.12	40.00	
MPT-289-SS17-07-20120503	05/03/12 15:00	05/04/12 08:20	05/15/12 11:00	11.88	14.00	05/15/12 15:38	0.19	40.00	

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2D09714	Instrument:	GL-GCFID2
Calibration:	2097002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2D09714-CAL6	002F0201.D	04/04/12 12:34
Cal Standard	2D09714-CAL5	003F0301.D	04/04/12 13:07
Cal Standard	2D09714-CAL4	004F0401.D	04/04/12 13:41
Cal Standard	2D09714-CAL3	005F0501.D	04/04/12 14:15
Cal Standard	2D09714-CAL2	006F0601.D	04/04/12 14:48
Cal Standard	2D09714-CAL1	007F0701.D	04/04/12 15:22
Initial Cal Check	2D09714-ICV1	008F0801.D	04/04/12 15:55

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2D09714	Instrument:	GL-GCFID2
Calibration:	2097002		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12B0856	FLPRO CAL1 85ppm	2D09714-CAL6	002F0201.D	04/04/12 12:34
12B0855	FLPRO CAL2 850ppm	2D09714-CAL5	003F0301.D	04/04/12 13:07
12B0854	FLPRO CAL3 2550ppm	2D09714-CAL4	004F0401.D	04/04/12 13:41
12B0841	FLPRO CAL4 4250ppm	2D09714-CAL3	005F0501.D	04/04/12 14:15
12B0840	FLPRO CAL5 5950ppm	2D09714-CAL2	006F0601.D	04/04/12 14:48
12B0839	FLPRO CAL6 8500ppm	2D09714-CAL1	007F0701.D	04/04/12 15:22

INITIAL CALIBRATION DATA
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032	
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60	
Calibration:	2097002	Instrument:	GL-GCFID2	
Matrix:	Water	Calibration Dates:	4/4/12 12:34	4/4/12 15:22

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	8500	1027.083	5950	1055.556	4250	999.1478	2550	969.358	850	1022.555	85	993.5059
2-Fluorobiphenyl	50	1194.48	35	1181.771	25	1106	15	1100.133	10	1149.5	5	1163.4
o-Terphenyl	50	1370.66	35	1395.457	25	1275.24	15	1295.933	10	1317.9	5	1320.2

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2097002	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	4/4/12 12:34 4/4/12 15:22

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1011.201	2.98575	4.413	1.957789E-02			20	
2-Fluorobiphenyl	1149.214	3.389535	9.150833	7.536967E-02			20	
o-Terphenyl	1329.232	3.420503	11.363	0.1590986			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2097002
Lab File ID:	008F0801.D	Calibration Date:	04/04/12 15:30
Sequence:	2D09714	Injection Date:	04/04/12
Lab Sample ID:	2D09714-ICV1	Injection Time:	15:55

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4163	1011.201	1052.4		4.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY
FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2E13702	Instrument:	GL-GCFID2
Calibration:	2097002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2E13702-CCV1	002F0201.D	05/15/12 11:49
Blank	2E15013-BLK1	003F0301.D	05/15/12 12:51
LCS	2E15013-BS1	004F0401.D	05/15/12 13:24
MPT-289-SS18-07-20120503	1205032-01RE1	005F0501.D	05/15/12 13:58
MPT-289-SS18-07-20120503	2E15013-MS1	006F0601.D	05/15/12 14:31
MPT-289-SS18-07-20120503	2E15013-MSD1	007F0701.D	05/15/12 15:05
MPT-289-SS17-07-20120503	1205032-02RE1	008F0801.D	05/15/12 15:38
Calibration Check	2E13702-CCV2	009F0901.D	05/15/12 16:12

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2097002
Lab File ID:	002F0201.D	Calibration Date:	04/04/12 15:30
Sequence:	2E13702	Injection Date:	05/15/12
Lab Sample ID:	2E13702-CCV1	Injection Time:	11:49

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3403	1011.201	809.6435		-19.9	25
2-Fluorobiphenyl	A	25.00	23.68	1149.214	1088.68		-5.3	25
o-Terphenyl	A	25.00	24.76	1329.232	1316.28		-1.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1205032
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2097002
Lab File ID:	009F0901.D	Calibration Date:	04/04/12 15:30
Sequence:	2E13702	Injection Date:	05/15/12
Lab Sample ID:	2E13702-CCV2	Injection Time:	16:12

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4127	1011.201	981.9995		-2.9	25
2-Fluorobiphenyl	A	25.00	28.03	1149.214	1288.68		12.1	25
o-Terphenyl	A	25.00	29.50	1329.232	1568.68		18.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1205032

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2E15013 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS18-07-20120503	1205032-01RE1	05/15/12 11:00	15.00	2.00
MPT-289-SS17-07-20120503	1205032-02RE1	05/15/12 11:00	15.20	2.00
Blank	2E15013-BLK1	05/15/12 11:00	15.00	2.00
LCS	2E15013-BS1	05/15/12 11:00	15.00	2.00
MPT-289-SS18-07-20120503	2E15013-MS1	05/15/12 11:00	15.50	2.00
MPT-289-SS18-07-20120503	2E15013-MSD1	05/15/12 11:00	15.30	2.00

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	1205032	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	2E15013-BLK1	File ID:	003F0301.D
Sampled:		Prepared:		Analyzed:	05/15/12 12:51
Solids:		Preparation:	EXT_3546	Dilution:	

Batch: 2E15013 Sequence: 2E13702 Calibration: 2097002 Instrument: GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.0	22.0	44.0	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	2.829	84.9	50 - 150	
o-Terphenyl	3.333	3.048	91.4	35 - 140	

Subcontractor Data Package
TestAmerica

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-65243-1
Client Project/Site: 1205032

For:
Empirical Laboratories, LLC
621 Mainstream Drive
Suite 270
Nashville, Tennessee 37228

Attn: Mr. Brian Richard

Cheyenne Whitmire

Authorized for release by:
5/23/2012 9:00:43 AM

Cheyenne Whitmire
Project Manager II
cheyenne.whitmire@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Job ID: 400-65243-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-65243-1

Receipt
The samples were received on 5/8/2012 10:19 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8° C.

GC VOA
Method(s) MAVPH: Elevated reporting limits are provided for the following samples due to insufficient sample provided for analysis: MPT-289-SS17-07-20120503 (400-65243-2), MPT-289-SS18-07-20120503 (400-65243-1). The samples contained 6.14 and 5.21 grams of soil and 15 mls of MeOH rather than the recommended 15 grams and 15 mls.

Login Sample Receipt Checklist

Client: Empirical Laboratories, LLC

Job Number: 400-65243-1

Login Number: 65243
List Number: 1
Creator: Hollinger, Raven

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.8°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Preservative leaked out of 1 of 2 vials for SS17-07
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	VPH vials only have 5g of soil per 15ml of Methonal.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pensacola	Alabama	State Program	4	40150
TestAmerica Pensacola	Arizona	State Program	9	AZ0710
TestAmerica Pensacola	Arkansas DEQ	State Program	6	88-0689
TestAmerica Pensacola	Florida	NELAC	4	E81010
TestAmerica Pensacola	Georgia	State Program	4	N/A
TestAmerica Pensacola	Illinois	NELAC	5	200041
TestAmerica Pensacola	Iowa	State Program	7	367
TestAmerica Pensacola	Kansas	NELAC	7	E-10253
TestAmerica Pensacola	Kentucky (UST)	State Program	4	53
TestAmerica Pensacola	Louisiana	NELAC	6	30976
TestAmerica Pensacola	Maryland	State Program	3	233
TestAmerica Pensacola	Massachusetts	State Program	1	M-FL094
TestAmerica Pensacola	Michigan	State Program	5	9912
TestAmerica Pensacola	New Hampshire	NELAC	1	2505
TestAmerica Pensacola	New Jersey	NELAC	2	FL006
TestAmerica Pensacola	North Carolina DENR	State Program	4	314
TestAmerica Pensacola	Oklahoma	State Program	6	9810
TestAmerica Pensacola	Pennsylvania	NELAC	3	68-00467
TestAmerica Pensacola	Rhode Island	State Program	1	LAO00307
TestAmerica Pensacola	South Carolina	State Program	4	96026
TestAmerica Pensacola	Tennessee	State Program	4	TN02907
TestAmerica Pensacola	Texas	NELAC	6	T104704286-12-4
TestAmerica Pensacola	USDA	Federal		P330-10-00407
TestAmerica Pensacola	Virginia	NELAC	3	460166
TestAmerica Pensacola	Washington	State Program	10	C915
TestAmerica Pensacola	West Virginia DEP	State Program	3	136

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Method	Method Description	Protocol	Laboratory
MAVPH	Massachusetts - Volatile Petroleum Hydrocarbons (GC)	MA DEP	TAL PEN
MA-EPH	Massachusetts - Extractable Petroleum Hydrocarbons (GC)	MA DEP	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-65243-1	MPT-289-SS18-07-20120503	Solid	05/03/12 13:40	05/08/12 10:19
400-65243-2	MPT-289-SS17-07-20120503	Solid	05/03/12 15:00	05/08/12 10:19

Definitions/Glossary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Lab Chronicle

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Client Sample ID: MPT-289-SS18-07-20120503

Lab Sample ID: 400-65243-1

Date Collected: 05/03/12 13:40
Matrix: Solid
Date Received: 05/08/12 10:19
Percent Solids: 71.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			155133	05/16/12 10:30	MA	TAL PEN
Total/NA	Analysis	MAVPH		50	155136	05/16/12 19:12	MA	TAL PEN
Total/NA	Prep	3541			154506	05/10/12 11:34	RT	TAL PEN
Total/NA	Analysis	MA-EPH		1	154766	05/14/12 20:03	DW	TAL PEN
Total/NA	Analysis	MA-EPH		1	154768	05/15/12 00:07	DW	TAL PEN
Total/NA	Analysis	Moisture		1	154425	05/09/12 13:06	MS	TAL PEN

Client Sample ID: MPT-289-SS17-07-20120503

Lab Sample ID: 400-65243-2

Date Collected: 05/03/12 15:00
Matrix: Solid
Date Received: 05/08/12 10:19
Percent Solids: 73.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			155133	05/16/12 10:30	MA	TAL PEN
Total/NA	Analysis	MAVPH		50	155136	05/16/12 21:12	MA	TAL PEN
Total/NA	Prep	3541			154506	05/10/12 11:34	RT	TAL PEN
Total/NA	Analysis	MA-EPH		1	154766	05/14/12 20:10	DW	TAL PEN
Total/NA	Analysis	MA-EPH		1	154768	05/15/12 00:14	DW	TAL PEN
Total/NA	Analysis	Moisture		1	154425	05/09/12 13:06	MS	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

QC Association Summary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

GC VOA

Prep Batch: 155133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	5035	
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	5035	
400-65243-2 MS	MPT-289-SS17-07-20120503	Total/NA	Solid	5035	
400-65243-2 MSD	MPT-289-SS17-07-20120503	Total/NA	Solid	5035	
LCS 400-155133/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 400-155133/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 400-155133/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 155136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	MAVPH	155133
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	MAVPH	155133
400-65243-2 MS	MPT-289-SS17-07-20120503	Total/NA	Solid	MAVPH	155133
400-65243-2 MSD	MPT-289-SS17-07-20120503	Total/NA	Solid	MAVPH	155133
LCS 400-155133/2-A	Lab Control Sample	Total/NA	Solid	MAVPH	155133
LCSD 400-155133/3-A	Lab Control Sample Dup	Total/NA	Solid	MAVPH	155133
MB 400-155133/1-A	Method Blank	Total/NA	Solid	MAVPH	155133

GC Semi VOA

Prep Batch: 154506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	3541	
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	3541	
400-65243-2 MS	MPT-289-SS17-07-20120503	Total/NA	Solid	3541	
400-65243-2 MSD	MPT-289-SS17-07-20120503	Total/NA	Solid	3541	
LCS 400-154506/5-A	Lab Control Sample	Total/NA	Solid	3541	
LCSD 400-154506/6-A	Lab Control Sample Dup	Total/NA	Solid	3541	
MB 400-154506/7-A	Method Blank	Total/NA	Solid	3541	

Analysis Batch: 154766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2 MS	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2 MSD	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
LCS 400-154506/5-A	Lab Control Sample	Total/NA	Solid	MA-EPH	154506
LCSD 400-154506/6-A	Lab Control Sample Dup	Total/NA	Solid	MA-EPH	154506
MB 400-154506/7-A	Method Blank	Total/NA	Solid	MA-EPH	154506

Analysis Batch: 154768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2 MS	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
400-65243-2 MSD	MPT-289-SS17-07-20120503	Total/NA	Solid	MA-EPH	154506
LCS 400-154506/5-A	Lab Control Sample	Total/NA	Solid	MA-EPH	154506
LCSD 400-154506/6-A	Lab Control Sample Dup	Total/NA	Solid	MA-EPH	154506
MB 400-154506/7-A	Method Blank	Total/NA	Solid	MA-EPH	154506

QC Association Summary

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

General Chemistry

Analysis Batch: 154425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-65243-1	MPT-289-SS18-07-20120503	Total/NA	Solid	Moisture	
400-65243-2	MPT-289-SS17-07-20120503	Total/NA	Solid	Moisture	

QC Sample Results

Client: Empirical Laboratories, LLC
Project/Site: 1205032

TestAmerica Job ID: 400-65243-1

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 400-155133/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 155136 — **Prep Batch: 155133**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C5-C8 Aliphatics	2.7	U	2.7	2.7	mg/Kg		05/16/12 10:30	05/16/12 13:09	50
C9-C12 Aliphatics	1.4	U	1.4	1.4	mg/Kg		05/16/12 10:30	05/16/12 13:09	50
C9-C10 Aromatics	0.75	U	0.75	0.75	mg/Kg		05/16/12 10:30	05/16/12 13:09	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*92*		*70 - 130*	*05/16/12 10:30*	*05/16/12 13:09*	*50*
a,a,a-Trifluorotoluene (pid)	*95*		*70 - 130*	*05/16/12 10:30*	*05/16/12 13:09*	*50*

Lab Sample ID: LCS 400-155133/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 155136 — **Prep Batch: 155133**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C5-C8 Aliphatics	15.0	14.3		mg/Kg		95	70 - 130
C9-C12 Aliphatics	17.5	17.0		mg/Kg		97	70 - 130
C9-C10 Aromatics	2.50	2.33		mg/Kg		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*92*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*92*		*70 - 130*

Lab Sample ID: LCSD 400-155133/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 155136 — **Prep Batch: 155133**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C5-C8 Aliphatics	15.0	14.0		mg/Kg		93	70 - 130	2	50
C9-C12 Aliphatics	17.5	17.0		mg/Kg		97	70 - 130	0	50
C9-C10 Aromatics	2.50	2.47		mg/Kg		99	70 - 130	6	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*91*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*92*		*70 - 130*

Lab Sample ID: 400-65243-2 MS — **Client Sample ID: MPT-289-SS17-07-20120503**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 155136 — **Prep Batch: 155133**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
C5-C8 Aliphatics	11	U	59.1	53.6		mg/Kg	☼	91	70 - 130
C9-C12 Aliphatics	5.5	U	68.9	62.1		mg/Kg	☼	90	70 - 130
C9-C10 Aromatics	3.0	U	9.85	7.66		mg/Kg	☼	78	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*86*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*86*		*70 - 130*

Method: MAVPH - Massachusetts - Volatile Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: 400-65243-2 MSD — **Client Sample ID: MPT-289-SS17-07-20120503**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 155136 — **Prep Batch: 155133**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C5-C8 Aliphatics	11	U	59.1	56.2		mg/Kg	☼	95	70 - 130	5	50
C9-C12 Aliphatics	5.5	U	68.9	67.3		mg/Kg	☼	98	70 - 130	8	50
C9-C10 Aromatics	3.0	U	9.85	8.42		mg/Kg	☼	85	70 - 130	9	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*91*		*70 - 130*
a,a,a-Trifluorotoluene (pid)	*90*		*70 - 130*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 400-154506/7-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154766 — **Prep Batch: 154506**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	1.6	U	1.6	1.6	mg/Kg		05/10/12 11:34	05/14/12 19:28	1
C19-C36 Aliphatics	1.6	U	1.6	1.6	mg/Kg		05/10/12 11:34	05/14/12 19:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane	*85*		*40 - 140*	*05/10/12 11:34*	*05/14/12 19:28*	*1*

Lab Sample ID: MB 400-154506/7-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154768 — **Prep Batch: 154506**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C11-C22 Aromatics	1.6	U	1.6	1.6	mg/Kg		05/10/12 11:34	05/14/12 23:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*40 - 140*	*05/10/12 11:34*	*05/14/12 23:32*	*1*
2-Fluorobiphenyl	*89*		*40 - 140*	*05/10/12 11:34*	*05/14/12 23:32*	*1*
2-Bromonaphthalene	*93*		*40 - 140*	*05/10/12 11:34*	*05/14/12 23:32*	*1*

Lab Sample ID: LCS 400-154506/5-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154766 — **Prep Batch: 154506**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C18 Aliphatics	9.91	6.80		mg/Kg		69	40 - 140
C19-C36 Aliphatics	13.2	12.4		mg/Kg		94	40 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctadecane	*88*		*40 - 140*

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: LCS 400-154506/5-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154768 — **Prep Batch: 154506**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C11-C22 Aromatics			28.1	25.7		mg/Kg		91	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*40 - 140*
2-Fluorobiphenyl	*94*		*40 - 140*
2-Bromonaphthalene	*103*		*40 - 140*

Lab Sample ID: LCSD 400-154506/6-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154766 — **Prep Batch: 154506**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C18 Aliphatics			10.0	8.68		mg/Kg		87	40 - 140	24	50
C19-C36 Aliphatics			13.3	13.4		mg/Kg		100	40 - 140	8	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctadecane	*100*		*40 - 140*

Lab Sample ID: LCSD 400-154506/6-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154768 — **Prep Batch: 154506**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C11-C22 Aromatics			28.3	23.1		mg/Kg		81	40 - 140	11	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*90*		*40 - 140*
2-Fluorobiphenyl	*97*		*40 - 140*
2-Bromonaphthalene	*111*		*40 - 140*

Lab Sample ID: 400-65243-2 MS — **Client Sample ID: MPT-289-SS17-07-20120503**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154766 — **Prep Batch: 154506**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C9-C18 Aliphatics	2.2	U	13.5	6.61		mg/Kg	☼	49	40 - 140		
C19-C36 Aliphatics	5.4		18.0	76.2	J3	mg/Kg	☼	393	40 - 140		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1-Chlorooctadecane	*59*		*40 - 140*

Lab Sample ID: 400-65243-2 MS — **Client Sample ID: MPT-289-SS17-07-20120503**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 154768 — **Prep Batch: 154506**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C11-C22 Aromatics	3.3		38.3	34.7		mg/Kg	☼	82	40 - 140		

Method: MA-EPH - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: 400-65243-2 MS
Matrix: Solid
Analysis Batch: 154768

Client Sample ID: MPT-289-SS17-07-20120503
Prep Type: Total/NA
Prep Batch: 154506

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*68*		*40 - 140*
2-Fluorobiphenyl	*97*		*40 - 140*
2-Bromonaphthalene	*129*		*40 - 140*

Lab Sample ID: 400-65243-2 MSD
Matrix: Solid
Analysis Batch: 154766

Client Sample ID: MPT-289-SS17-07-20120503
Prep Type: Total/NA
Prep Batch: 154506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C18 Aliphatics	2.2	U	13.6	6.29		mg/Kg	☼	46	40 - 140	5	50
C19-C36 Aliphatics	5.4		18.1	80.1	J3	mg/Kg	☼	413	40 - 140	5	50

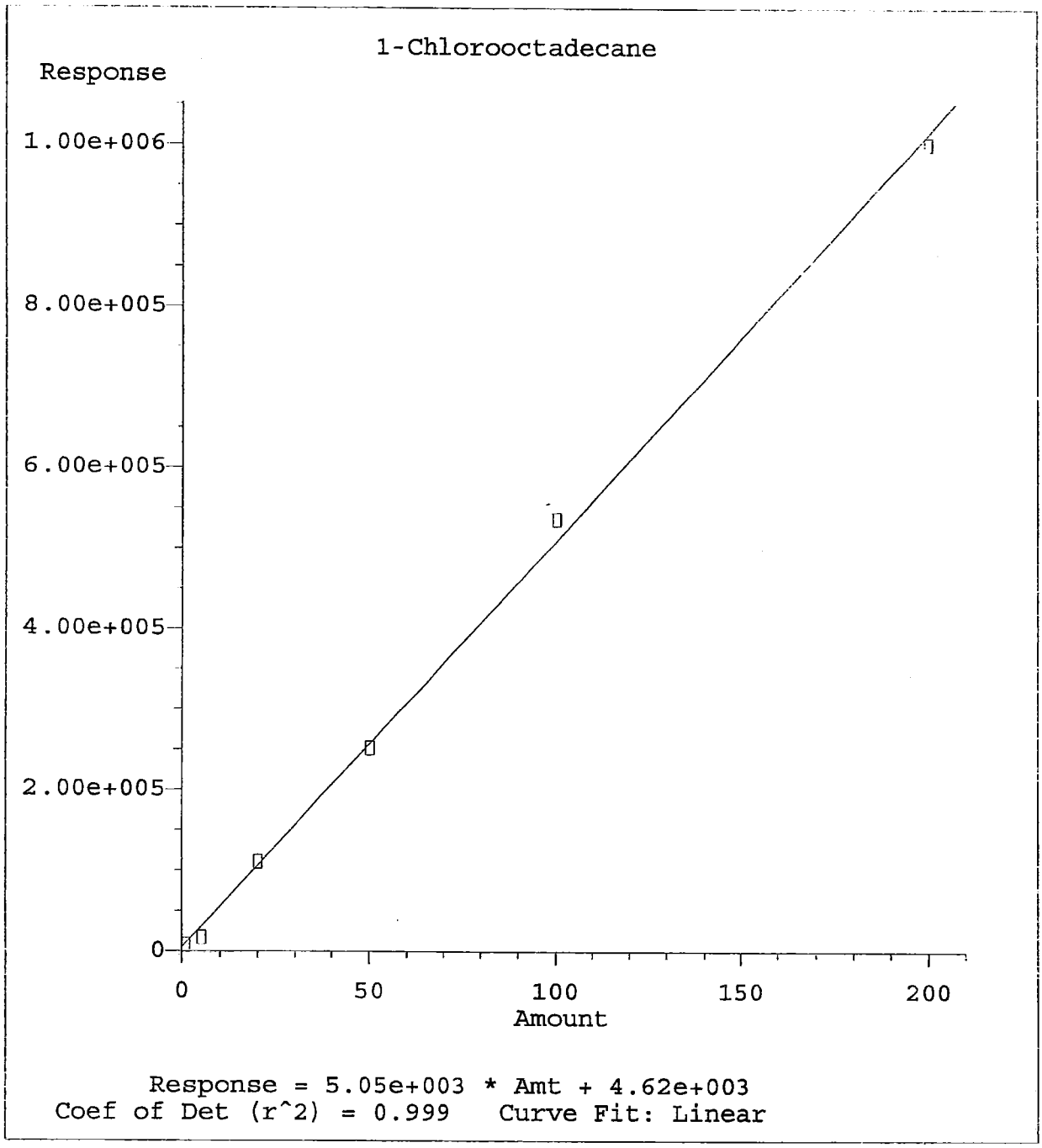
Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1-Chlorooctadecane	*61*		*40 - 140*

Lab Sample ID: 400-65243-2 MSD
Matrix: Solid
Analysis Batch: 154768

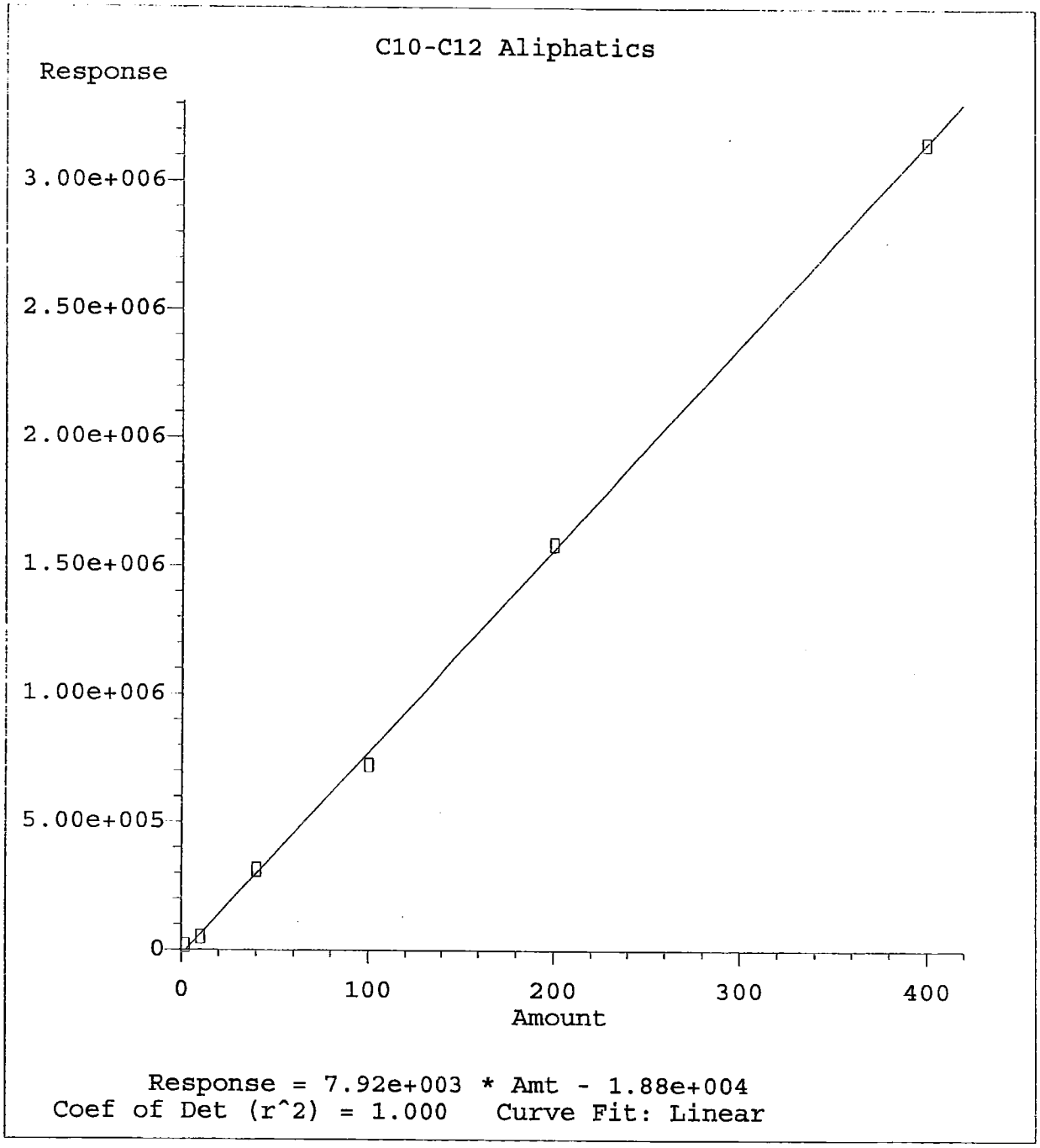
Client Sample ID: MPT-289-SS17-07-20120503
Prep Type: Total/NA
Prep Batch: 154506

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C11-C22 Aromatics	3.3		38.4	38.9		mg/Kg	☼	93	40 - 140	11	50

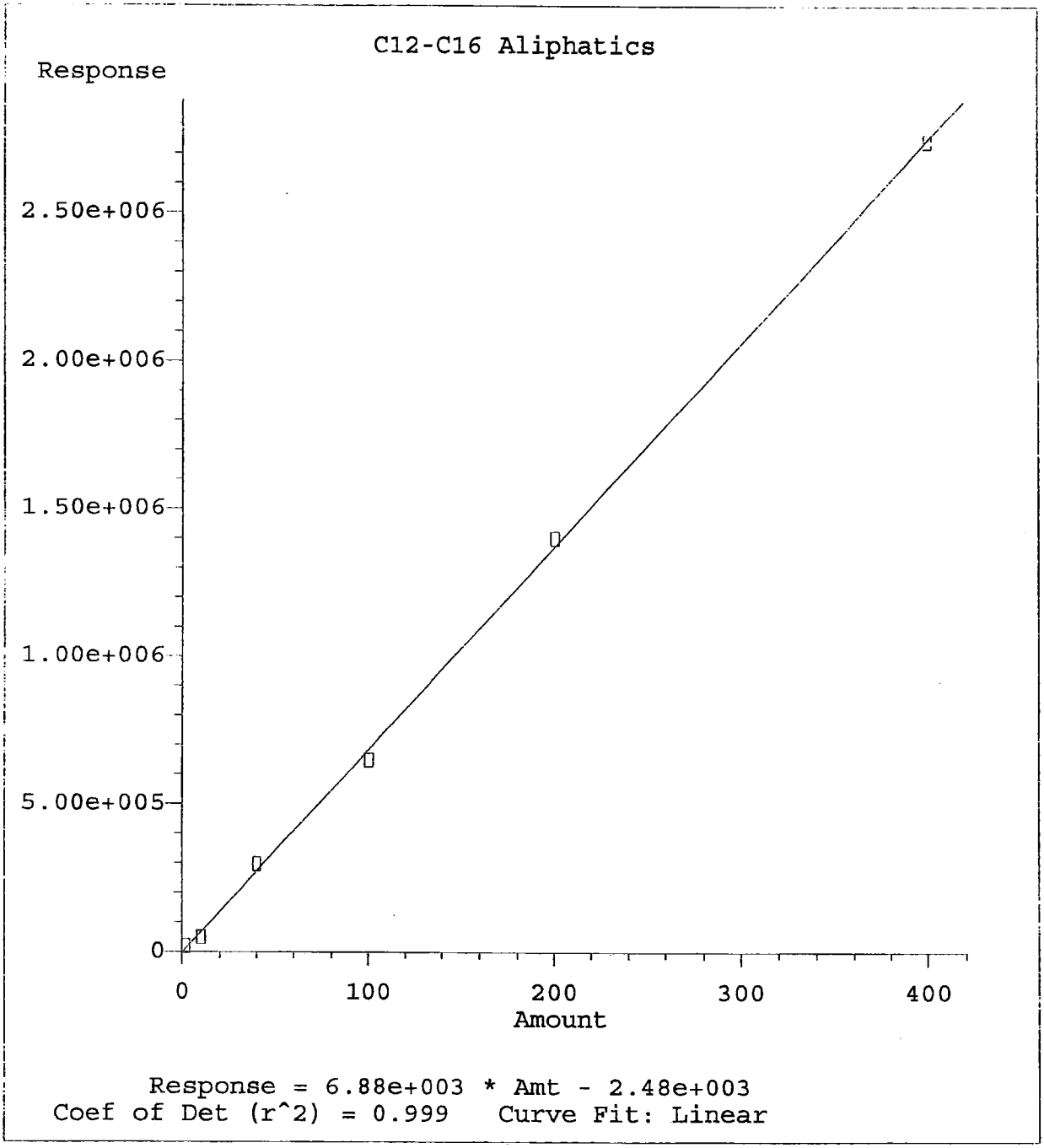
Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*76*		*40 - 140*
2-Fluorobiphenyl	*101*		*40 - 140*
2-Bromonaphthalene	*135*		*40 - 140*



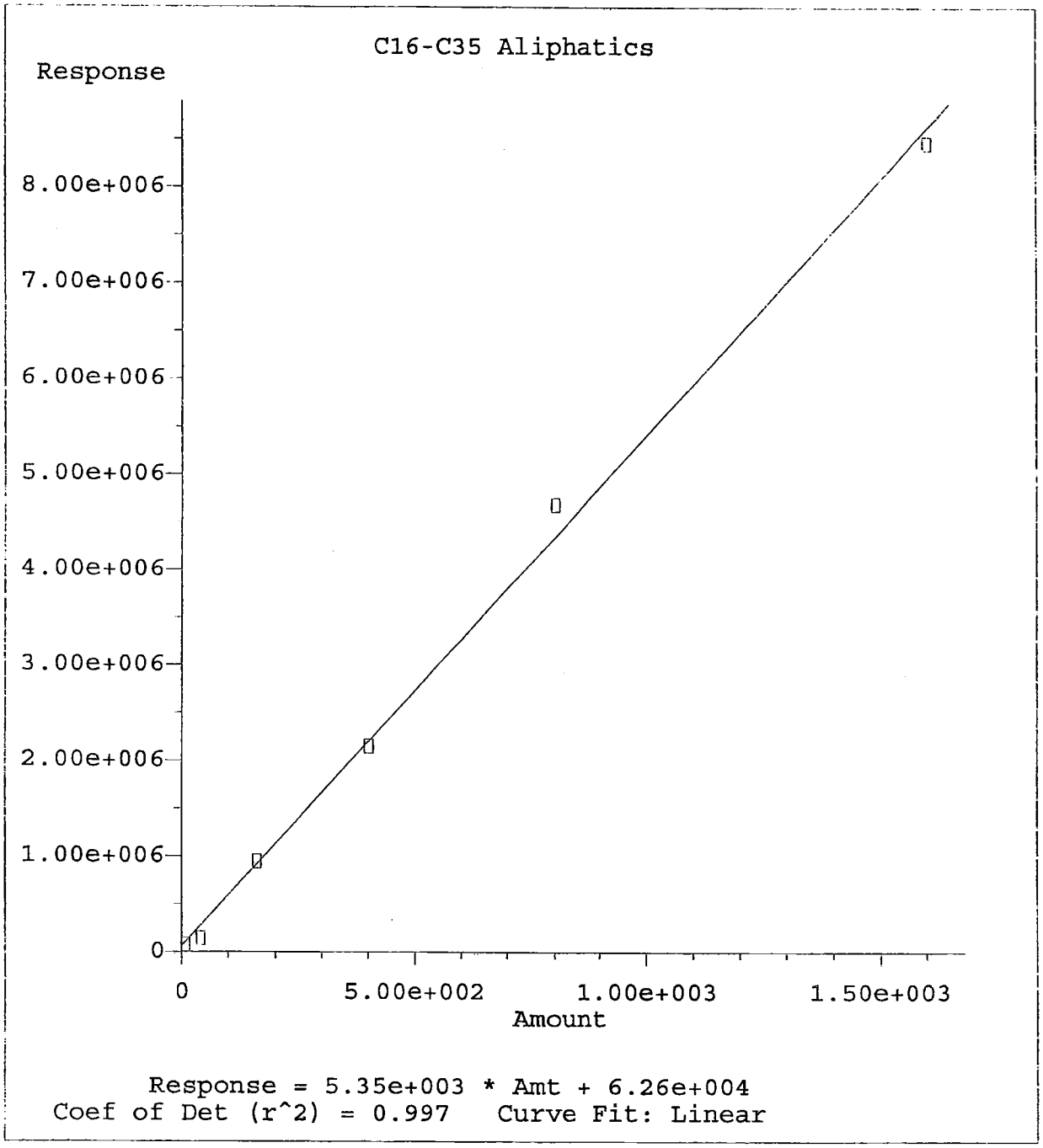
Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



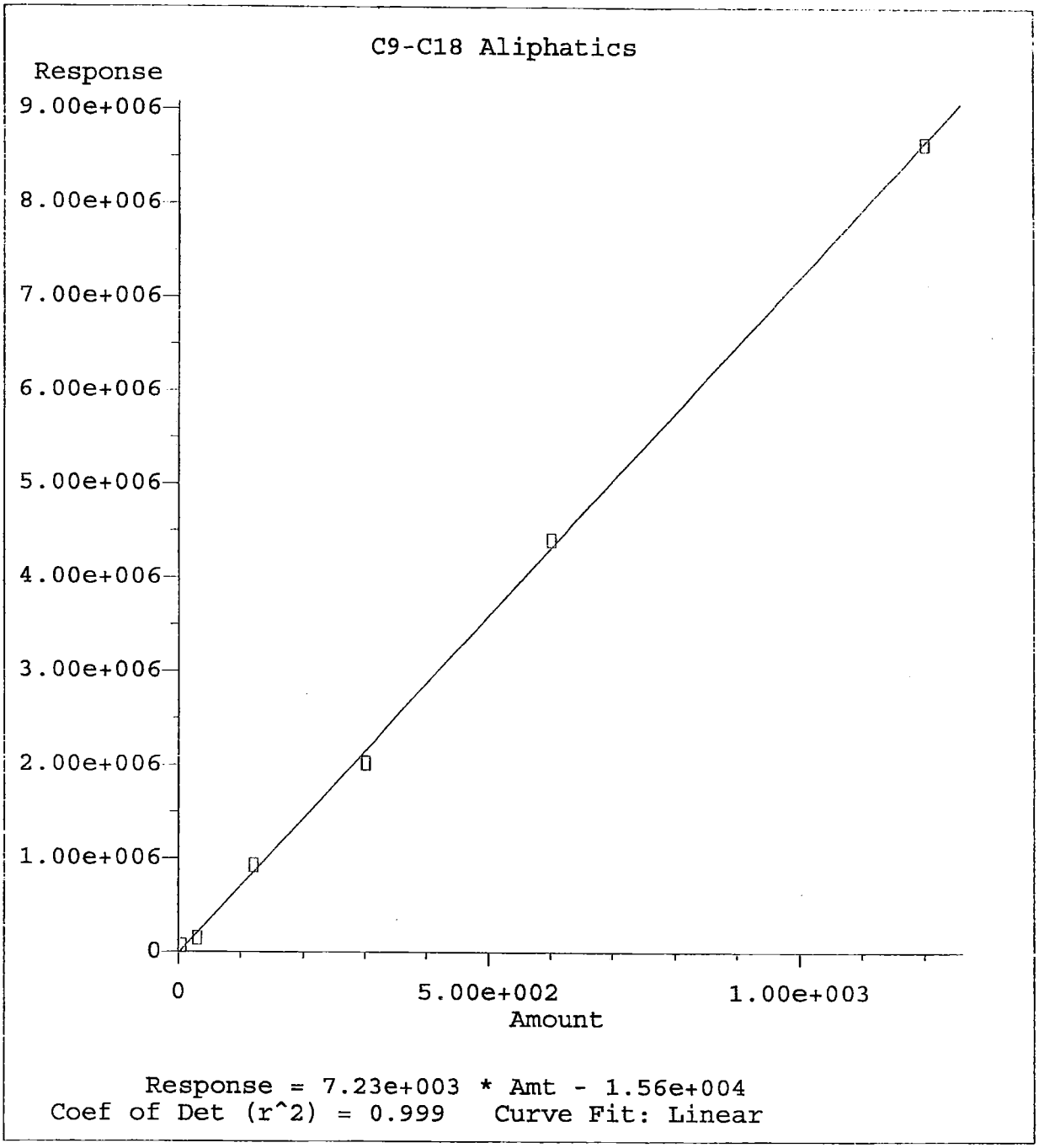
Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



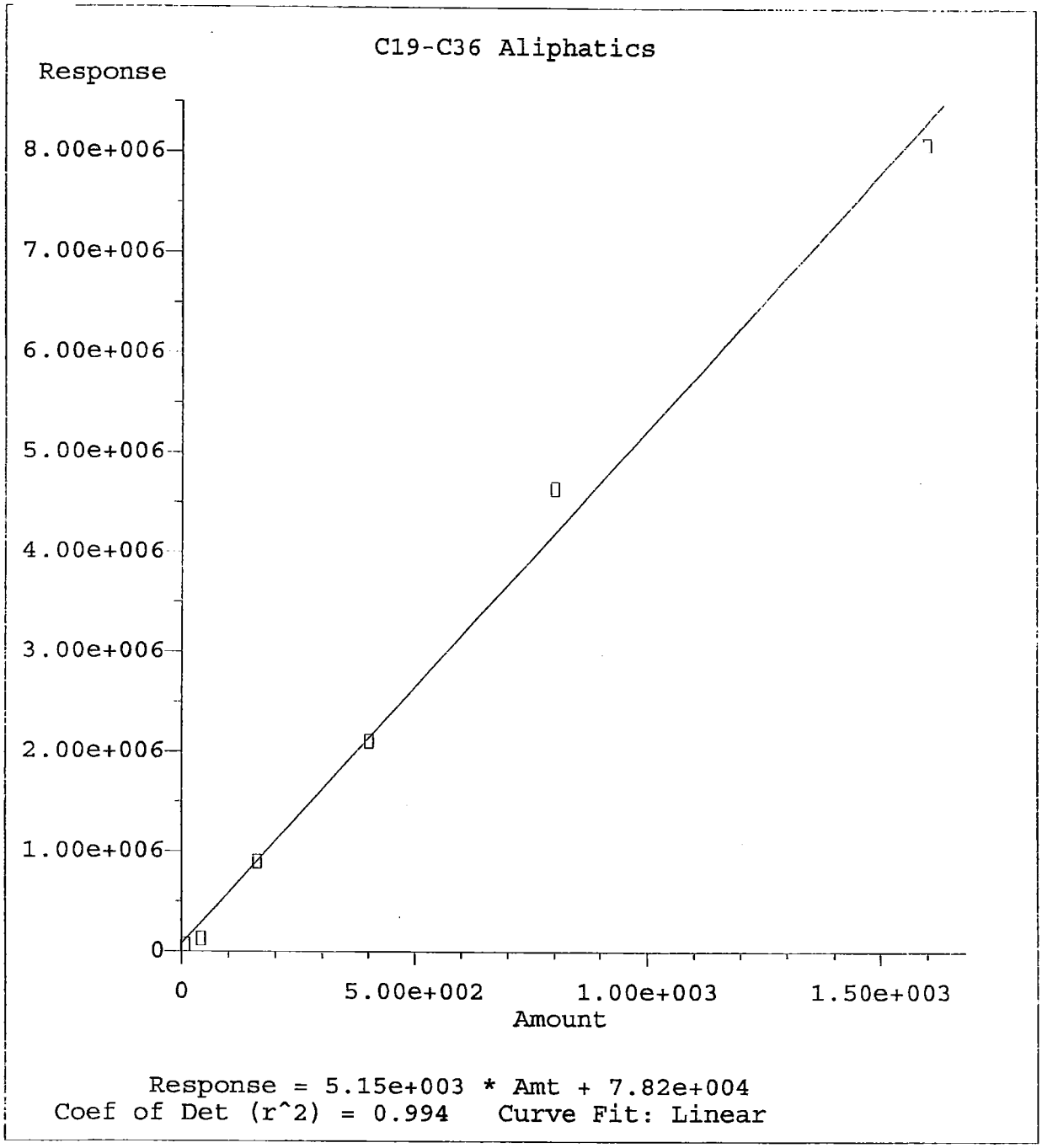
Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011



Method Name: W:\METHODS\PROCESS\ALIEPHAI.M
Calibration Table Last Updated: Fri Dec 16 09:11:29 2011

Evaluate Continuing Calibration Report

Data File : W:\DATA\121511C\1201012.D
Acq On : 15 Dec 2011 16:05
Sample : 100 PPM ALIPHATIC ICV
Misc : EPHALICCV_00044
IntFile : EVENTS.E

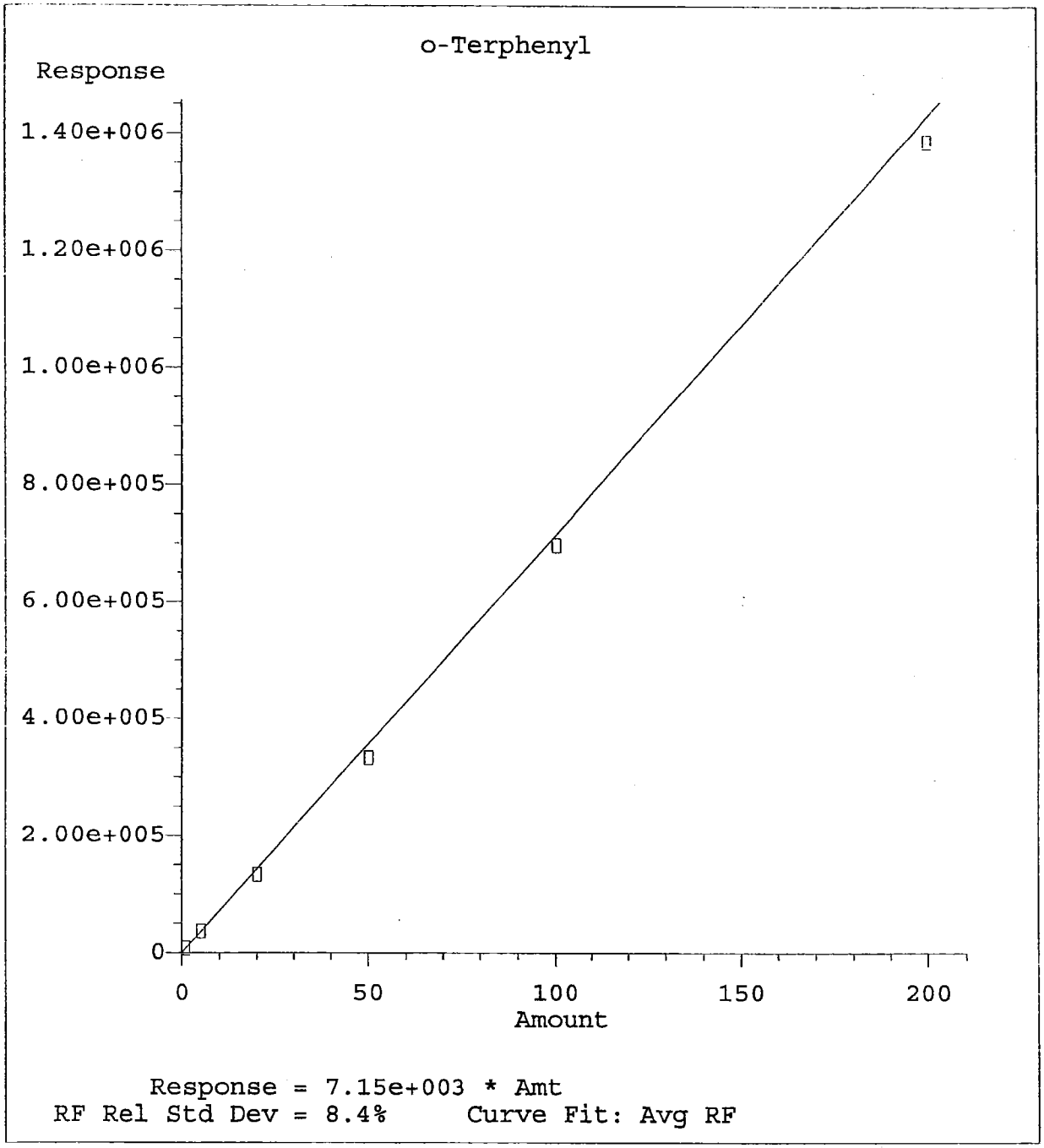
Vial: 12
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 09:11:29 2011
Response via : Multiple Level Calibration

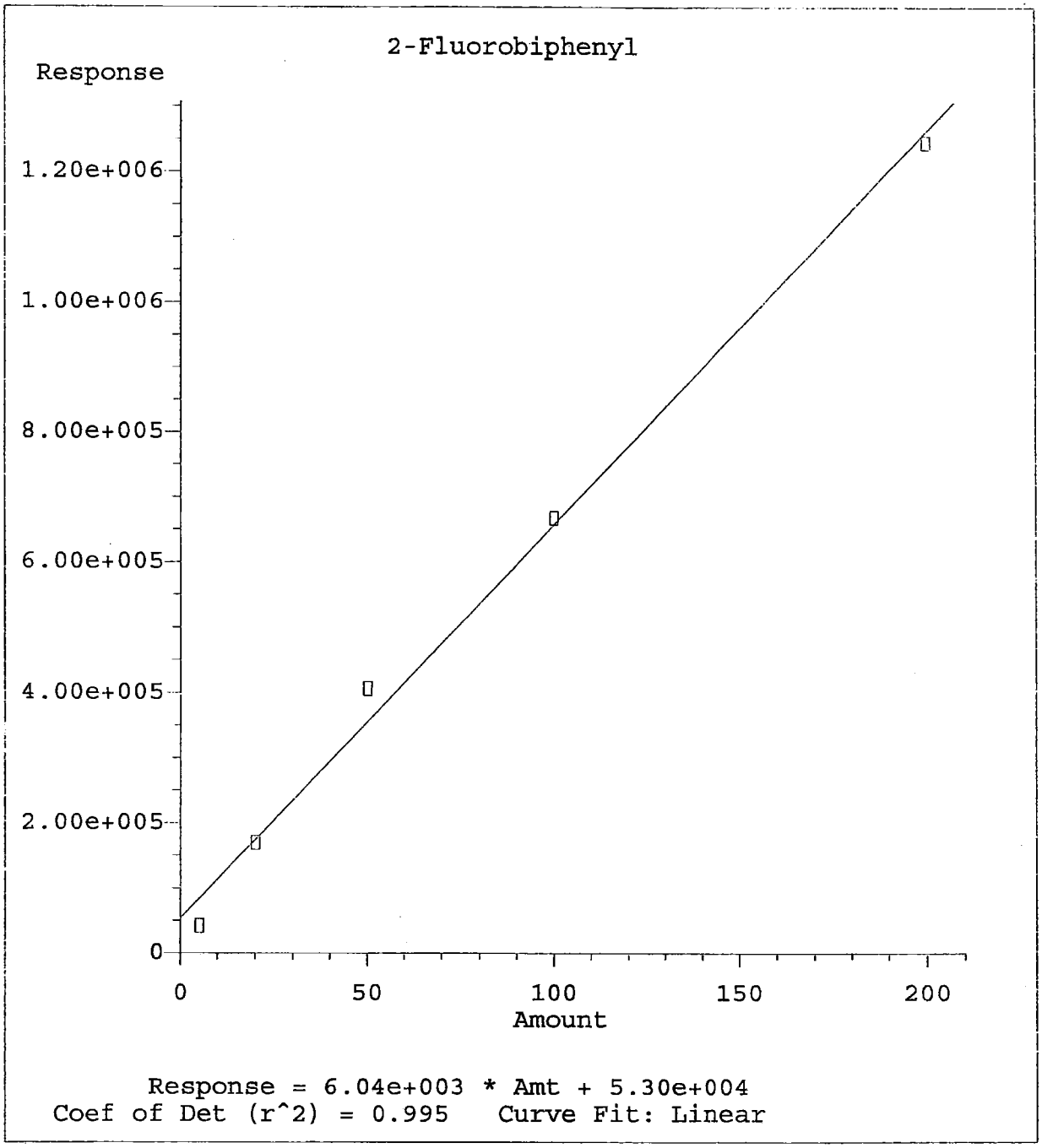
Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
2 HM	C10-C12 Aliphatics	200.000	199.942	0.0	99	0.00
3 HM	C12-C16 Aliphatics	200.000	216.883	-8.4	106	0.00
4 HM	C16-C35 Aliphatics	800.000	870.250	-8.8	101	0.00
5 HM	C9-C18 Aliphatics	600.000	649.300	-8.2	106	0.00
6 HM	C19-C36 Aliphatics	800.000	849.590	-6.2	96	0.00

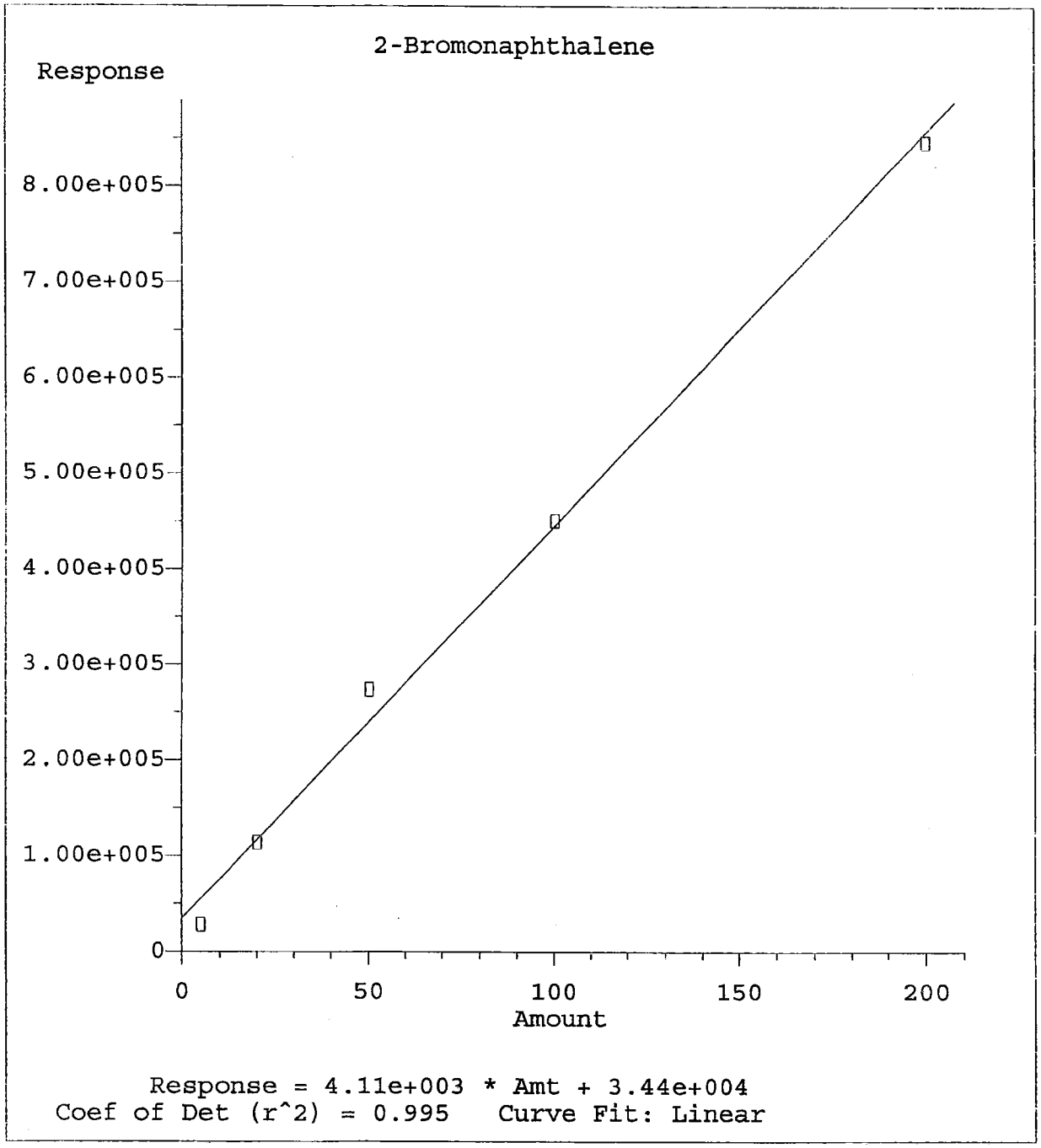
(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Fri Dec 16 09:13:19 2011 FLO



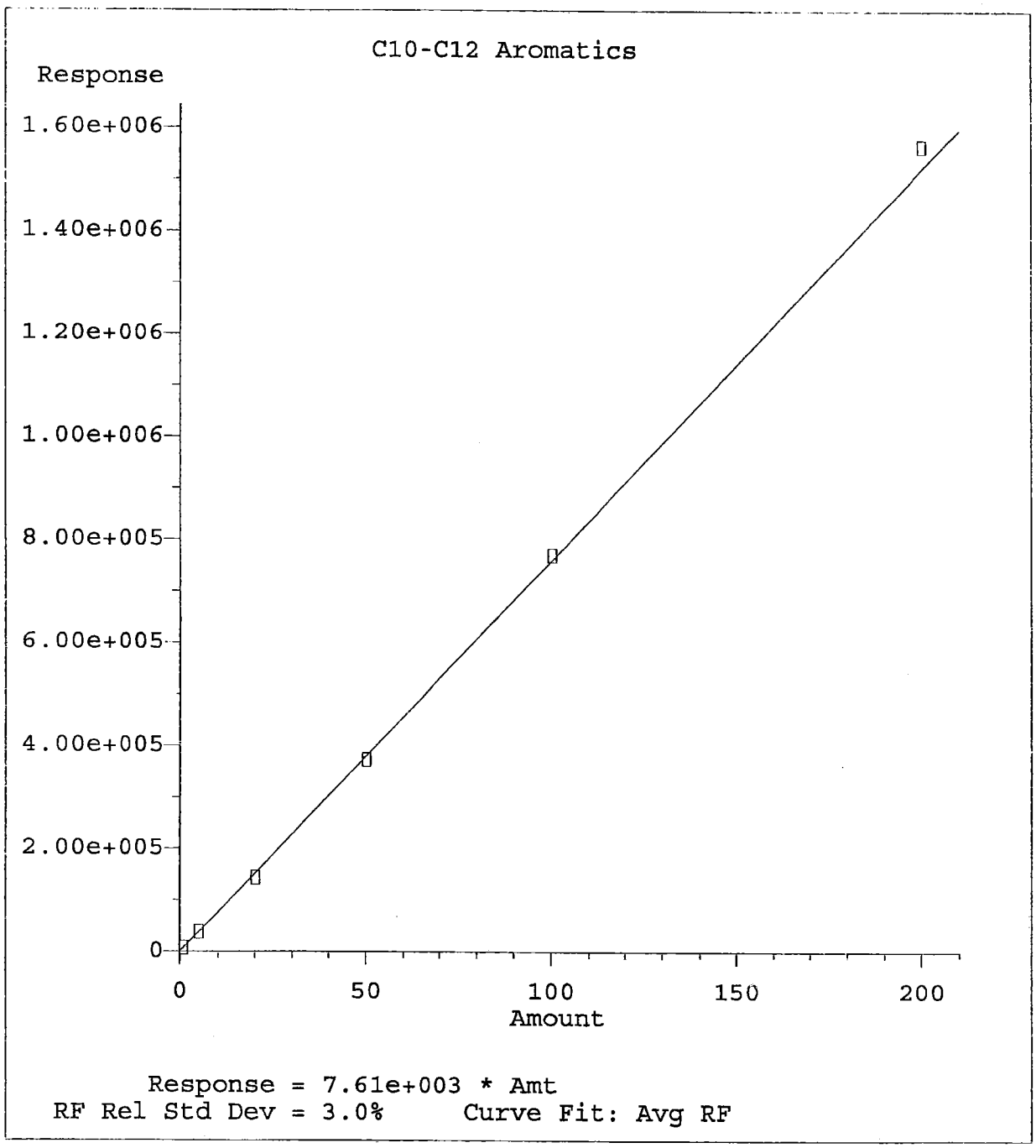
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



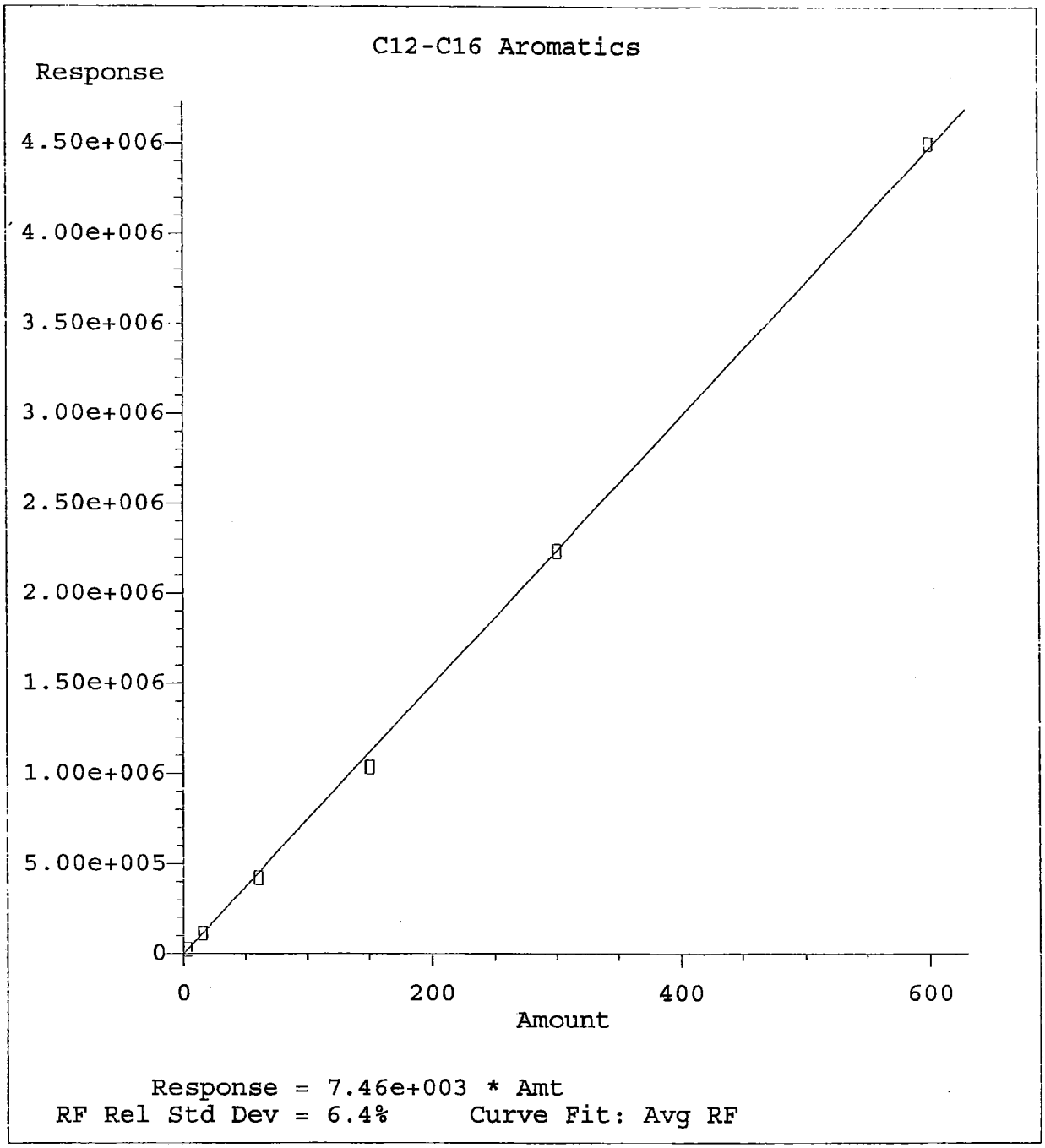
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



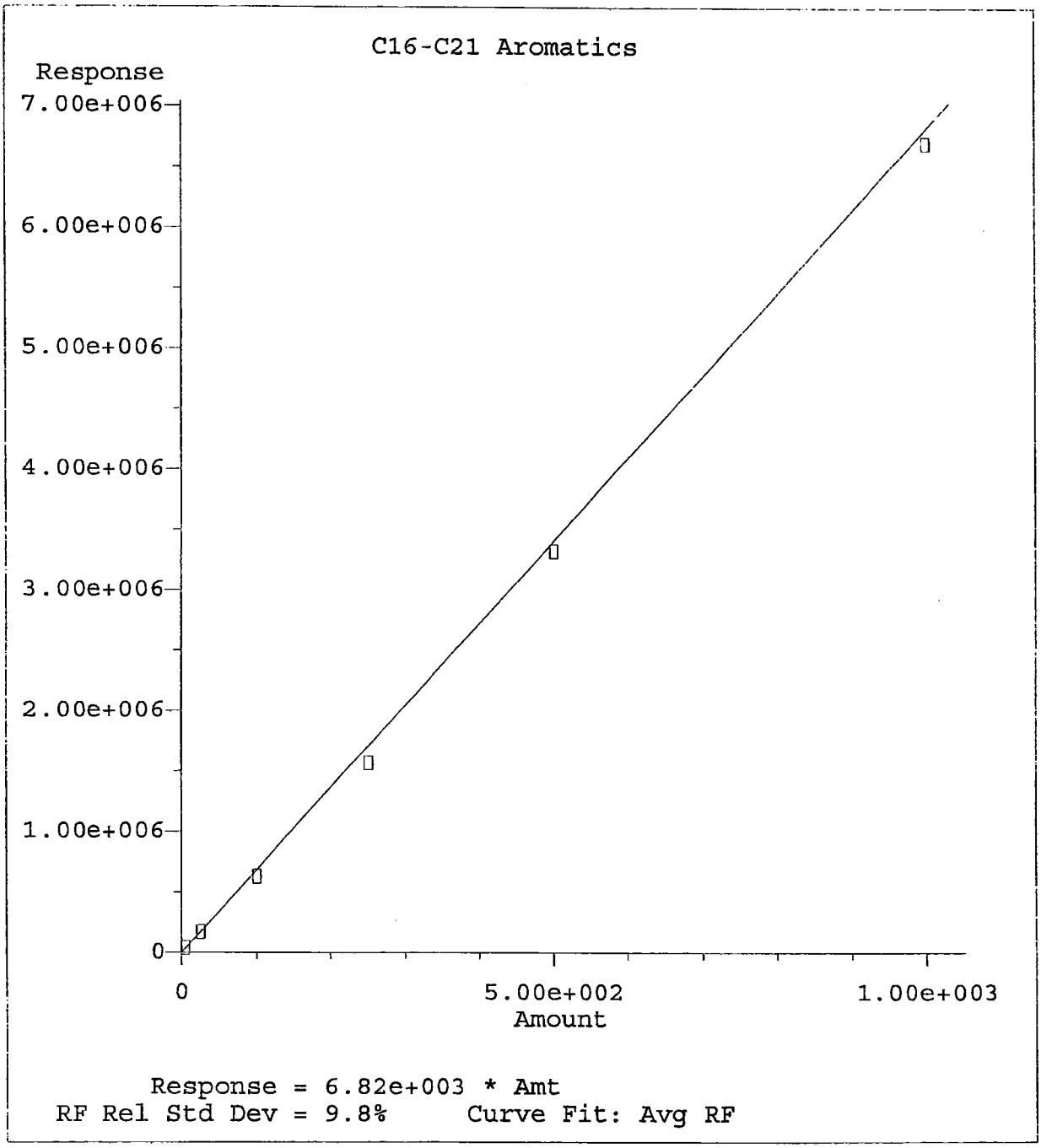
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



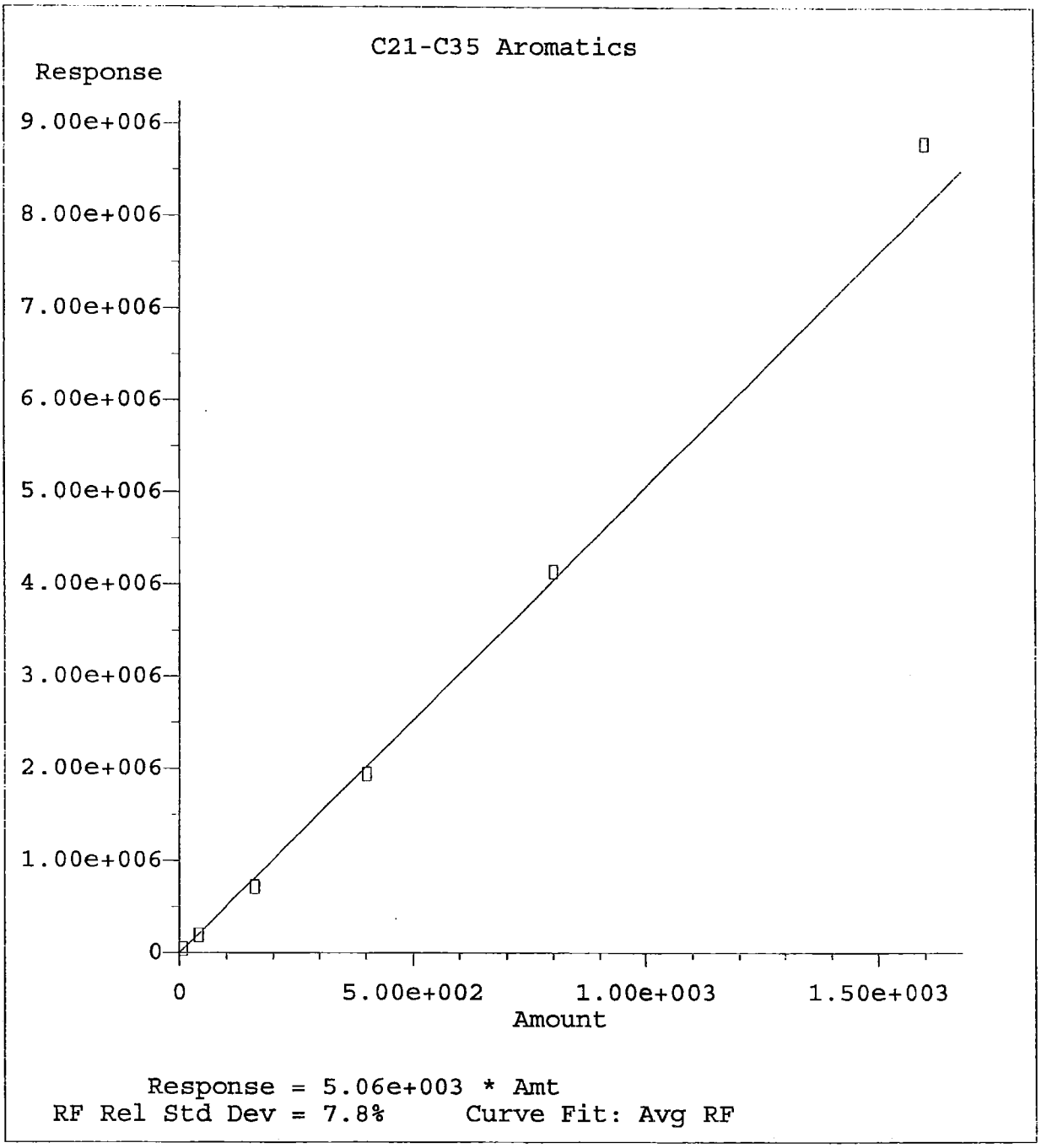
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



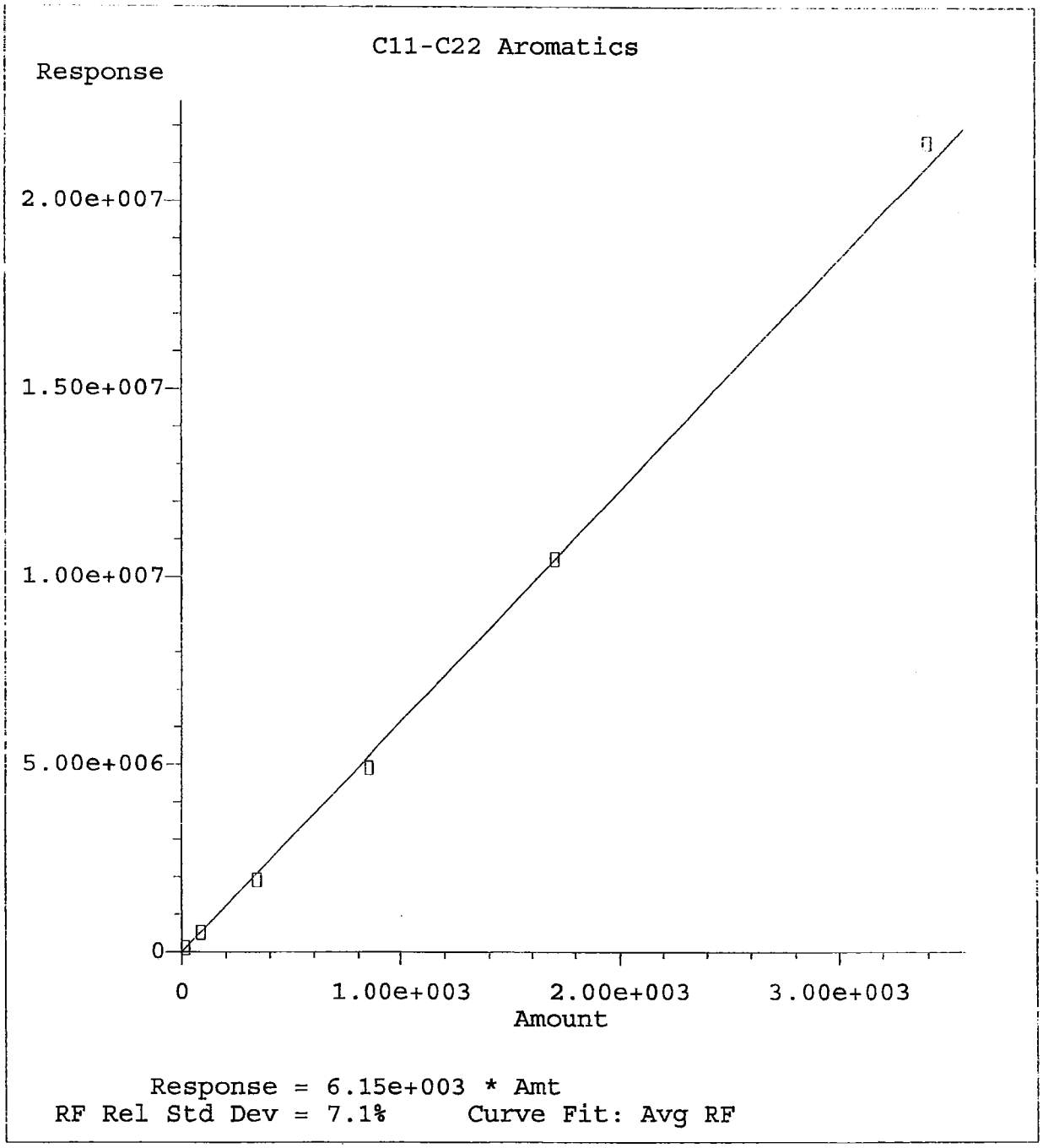
Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011



Method Name: W:\METHODS\PROCESS\AROEPHAI.M
Calibration Table Last Updated: Fri Dec 16 10:37:17 2011

Evaluate Continuing Calibration Report

Data File : W:\DATA\121511C\1901019.D
Acq On : 15 Dec 2011 16:55
Sample : 100 PPM AROMATIC ICV
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 19
Operator: KJA
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Fri Dec 16 10:37:17 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
4 HM C10-C12 Aromatics	100.000	100.514	-0.5	99	0.00
5 HM C12-C16 Aromatics	300.000	300.927	-0.3	100	0.00
6 HM C16-C21 Aromatics	500.000	464.922	7.0	95	0.00
7 HM C21-C35 Aromatics	800.000	774.947	3.1	95	0.00
8 HM C11-C22 Aromatics	1700.000	1642.366	3.4	96	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Fri Dec 16 10:42:30 2011 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCALI001.D
Acq On : 14 May 2012 16:20
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 6
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Wed May 09 10:37:17 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
5 HM	C9-C18 Aliphatics	600.000	598.510	0.2	98	0.00
6 HM	C19-C36 Aliphatics	800.000	781.173	2.4	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Tue May 15 10:19:33 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCALI002.D
Acq On : 14 May 2012 17:37
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 17
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Wed May 09 10:37:17 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
5 HM	C9-C18 Aliphatics	600.000	620.474	-3.4	102	0.00
6 HM	C19-C36 Aliphatics	800.000	785.226	1.8	89	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Tue May 15 10:20:19 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCALI003.D
Acq On : 14 May 2012 18:53
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 28
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Wed May 09 10:37:17 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
5 HM C9-C18 Aliphatics	600.000	637.008	-6.2	104	0.00
6 HM C19-C36 Aliphatics	800.000	807.957	-1.0	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Tue May 15 10:20:52 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCALI004.D
Acq On : 14 May 2012 20:17
Sample : 100 PPM ALIPHATIC STD
Misc : EPHALICCV_00044
IntFile : EVENTS.E

Vial: 40
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\ALIEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Wed May 09 10:37:17 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
5 HM	C9-C18 Aliphatics	600.000	634.060	-5.7	104	0.00
6 HM	C19-C36 Aliphatics	800.000	814.308	-1.8	92	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
1001010.D ALIEPHAI.M Tue May 15 10:21:21 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCARO001.D
Acq On : 14 May 2012 20:24
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 41
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu May 10 08:39:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
8 HM C11-C22 Aromatics	1700.000	1608.428	5.4	94	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Tue May 15 10:26:01 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCARO002.D
Acq On : 14 May 2012 21:41
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 52
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu May 10 08:39:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
8 HM C11-C22 Aromatics	1700.000	1798.548	-5.8	106	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Tue May 15 10:26:32 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCARO002.D
Acq On : 14 May 2012 21:41
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 52
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu May 10 08:39:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
8 HM C11-C22 Aromatics	1700.000	1798.548	-5.8	106	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Tue May 15 10:26:32 2012 FLO

Evaluate Continuing Calibration Report

Data File : W:\DATA\051412\CCARO004.D
Acq On : 15 May 2012 00:21
Sample : 100 PPM AROMATIC STD
Misc : EPHAROCCV_00044
IntFile : events.e

Vial: 75
Operator: DHW
Inst : Flash
Multiplr: 1.00

Method : W:\METHODS\PROCESS\AROEPHAI.M (Chemstation Integrator)
Title : MA/NC EPH'S ON FLASH
Last Update : Thu May 10 08:39:05 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	Amount	Calc.	%Dev	Area%	Dev(Min)
8 HM C11-C22 Aromatics	1700.000	1556.018	8.5	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2401024.D AROEPHAI.M Tue May 15 10:27:17 2012 FLO

Response Factor Report TRACY #1

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 10:19:43 2011

Calibration Files

1	=T080104.D	5	=T080105.D	25	=T080106.D
50	=T080107.D	100	=T080108.D	200	=T080109.D

		Compound	1	5	25	50	100	200	Avg		%RSD
1)	I	FLUOROBENZENE	----------ISTD----------								
2)	TM	METHYL TERT-BUTYL E	0.773	0.453	0.731	0.673	0.627	0.641	0.647	0	15.71
3)	TM	BENZENE	1.853	1.509	1.509	1.455	1.331	1.362	1.480	0	12.25
4)	SM	a,a,a-Trifluorotolu	0.485	0.483	0.493	0.491	0.487	0.487	0.488	0	0.69
5)	TM	TOLUENE	1.563	1.387	1.445	1.385	1.281	1.311	1.379	0	7.40
6)	TM	ETHYLBENZENE	1.254	1.162	1.201	1.148	1.074	1.111	1.149	0	5.52
7)	TM	M,P-XYLENE	1.304	1.196	1.240	1.185	1.114	1.544	1.245	0	11.77
8)	TM	O-XYLENE	1.068	1.041	1.057	1.022	0.965	1.026	1.028	0	3.28
9)	TM	1,2,4-TRIMETHYLBENZ	0.731	0.733	0.756	0.723	0.712	0.785	0.746	0	3.92
10)	TM	NAPHTHALENE	0.415	0.333	0.411	0.390	0.395	0.426	0.402	0	8.68
11)	HM	C9-C10 AROMATICS	1.127	0.848	0.852	0.835	0.792	0.879	0.886	0	12.43

Signal #2 Calibration Files

1	=T080104.D	5	=T080105.D	25	=T080106.D
50	=T080107.D	100	=T080108.D	200	=T080109.D

		Compound	1	5	25	50	100	200	Avg		%RSD
13)	I	FLUOROBENZENE #2	----------ISTD----------								
14)	SM	a,a,a-Trifluorotolu	0.701	0.691	0.699	0.707	0.711	0.700	0.703	0	1.06
15)	HM	C5-C8 ALIPHATICS #2	1.330	0.986	0.980	0.989	0.918	0.911	1.007	0	14.51
16)	HM	C5-C8 ALIPHATICS (A	1.330	0.986	0.980	0.989	0.918	0.911	1.007	0	14.51
17)	TM	N-PENTANE #2	0.900	0.848	0.877	0.887	0.829	0.802	0.854	0	4.15
18)	TM	2-METHYL PENTANE #2	1.092	0.960	0.973	1.008	0.940	0.905	0.975	0	6.23
19)	TM	METHYL TERT-BUTYL E	0.841	0.512	0.712	0.662	0.610	0.608	0.651	0	15.87
20)	TM	2,2,4-TRIMETHYLPENT	1.034	1.025	0.863	1.033	0.933	0.934	0.968	0	6.72
21)	TM	BENZENE #2	1.365	1.198	1.186	1.144	1.077	1.087	1.166	0	8.52
22)	TM	TOLUENE #2	1.323	1.207	1.236	1.180	1.113	1.125	1.190	0	6.18
23)	HM	C9-C12 ALIPHATICS #	1.116	0.757	0.719	0.760	0.742	0.785	0.815	0	16.79
24)	HM	C9-C12 ALIPHATICS (	1.116	0.757	0.719	0.760	0.742	0.785	0.815	0	16.79
25)	TM	N-NONANE #2	0.545	0.539	0.393	0.621	0.589	0.639	0.574	0	16.72
26)	TM	ETHYLBENZENE #2	1.231	1.095	1.114	1.068	1.016	1.043	1.091	0	6.38
27)	TM	M,P-XYLENE #2	1.083	0.967	0.992	0.955	0.924	0.966	0.983	0	5.09
28)	TM	O-XYLENE #2	0.905	1.000	1.003	0.964	0.934	0.986	0.972	0	4.10
29)	TM	N-DECANE #2	0.594	0.345	0.213	0.349	0.369	0.369	0.382	0	30.09
30)	TM	1,2,4-TRIMETHYLBENZ	0.897	0.641	0.674	0.645	0.657	0.720	0.692	0	13.89
31)	TM	N-BUTYLCYCLOHEXANE	0.404	0.484	0.343	0.507	0.506	0.567	0.489	0	18.70
32)	TM	NAPHTHALENE #2	0.276	0.220	0.267	0.256	0.265	0.281	0.267	0	9.45

(#) = Out of Range ### Number of calibration levels exceeded format ###

TV080111.M Thu Aug 04 10:19:46 2011 PENGCVOA10

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\TVI0801\T080112.D\FID1B.CH Vial: 12
Signal #2 : T:\DATA\TVI0801\T080112.D\FID2A.CH
Acq On : 2 Aug 2011 00:52 Operator: CJL
Sample : ICV Inst : TRACY #1
Misc : WATER Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu Aug 04 11:38:21 2011
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	93	0.06
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.645	0.3	90	0.05
3	TM	BENZENE	1.480	1.364	7.8	88	0.08
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.471	3.5	90	0.03
5	TM	TOLUENE	1.379	1.244	9.8	84	0.04
6	TM	ETHYLBENZENE	1.149	1.044	9.1	85	0.04
7	TM	M,P-XYLENE	1.245	1.085	12.9	86	0.05
8	TM	O-XYLENE	1.028	0.950	7.6	87	0.05
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.634	15.0	82	0.02
10	TM	NAPHTHALENE	0.402	0.351	12.7	84	0.05
11	HM	C9-C10 AROMATICS	0.886	0.708	20.1	79	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	94	0.00
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.685	2.6	91	-0.02
15	HM	C5-C8 ALIPHATICS #2	1.007	0.864	14.2	82	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.864	14.2	82	0.00
17	TM	N-PENTANE #2	0.854	0.701	17.9	74	0.02
18	TM	2-METHYL PENTANE #2	0.975	0.803	17.6	75	0.13
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.620	4.8	88	0.02
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.893	7.7	81	0.05
21	TM	BENZENE #2	1.166	1.088	6.7	89	0.02
22	TM	TOLUENE #2	1.190	1.061	10.8	84	-0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.694	14.8	85	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.694	14.8	85	0.00
25	TM	N-NONANE #2	0.574	0.537	6.4	81	-0.03
26	TM	ETHYLBENZENE #2	1.091	0.972	10.9	85	-0.04
27	TM	M,P-XYLENE #2	0.983	0.876	10.9	86	-0.04
28	TM	O-XYLENE #2	0.972	0.902	7.2	88	-0.04
29	TM	N-DECANE #2	0.382	0.305	20.2	82	-0.06
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.572	17.3	83	0.00
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.461	5.7	85	0.00
32	TM	NAPHTHALENE #2	0.267	0.233	12.7	85	0.00

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0515\T051521.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0515\T051521.D\FID2A.CH
Acq On : 16 May 2012 7:42 Operator: MKA
Sample : CTRVPH 5/15 END 5/16 Begin Inst : TRACY #1
Misc : WATER CM=VPH Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu May 10 09:34:03 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	84	-0.06
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.724	-11.9	91	-0.06
3	TM	BENZENE	1.480	1.462	1.2	85	-0.06
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.478	2.0	82	-0.05
5	TM	TOLUENE	1.379	1.423	-3.2	87	-0.06
6	TM	ETHYLBENZENE	1.149	1.197	-4.2	88	-0.06
7	TM	M,P-XYLENE	1.245	1.252	-0.6	89	-0.06
8	TM	O-XYLENE	1.028	1.091	-6.1	90	-0.07
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.774	-3.8	90	-0.02
10	TM	NAPHTHALENE	0.402	0.440	-9.5	95	-0.03
11	HM	C9-C10 AROMATICS	0.886	0.897	-1.2	90	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	86	-0.06
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.699	0.6	85	-0.06
15	HM	C5-C8 ALIPHATICS #2	1.007	0.949	5.8	83	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.949	5.8	83	0.00
17	TM	N-PENTANE #2	0.854	0.697	18.4	68	-0.05
18	TM	2-METHYL PENTANE #2	0.975	0.871	10.7	75	-0.06
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.763	-17.2	99	-0.06
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	0.964	0.4	80	-0.06
21	TM	BENZENE #2	1.166	1.171	-0.4	88	-0.06
22	TM	TOLUENE #2	1.190	1.227	-3.1	90	-0.06
23	HM	C9-C12 ALIPHATICS #2	0.815	0.784	3.8	89	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.784	3.8	89	0.00
25	TM	N-NONANE #2	0.574	0.513	10.6	71	-0.06
26	TM	ETHYLBENZENE #2	1.091	1.134	-3.9	92	-0.06
27	TM	M,P-XYLENE #2	0.983	1.021	-3.9	92	-0.06
28	TM	O-XYLENE #2	0.972	1.056	-8.6	94	-0.07
29	TM	N-DECANE #2	0.382	0.281	26.4#	69	-0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.705	-1.9	94	-0.03
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.479	2.0	82	-0.03
32	TM	NAPHTHALENE #2	0.267	0.301	-12.7	101	-0.03

Evaluate Continuing Calibration Report - Not Founds

Signal #1 : T:\DATA\T0515\T051521.D\FID1B.CH Vial: 6
Signal #2 : T:\DATA\T0515\T051521.D\FID2A.CH
Acq On : 16 May 2012 7:42 Operator: MKA
Sample : CTRVPH 5/15 END Inst : TRACY #1
Misc : WATER CM=VPH Multiplr: 1.000

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0516\T051618.D\FID1B.CH Vial: 8
Signal #2 : T:\DATA\T0516\T051618.D\FID2A.CH
Acq On : 17 May 2012 8:16 Operator: MKA
Sample : CTRVPH 5/16 END 5/17 Begin Inst : TRACY #1
Misc : WATER CM=VPH Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu May 10 09:34:03 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	83	-0.03
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.695	-7.4	86	-0.03
3	TM	BENZENE	1.480	1.472	0.5	84	-0.03
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.493	-1.0	84	-0.03
5	TM	TOLUENE	1.379	1.430	-3.7	86	-0.03
6	TM	ETHYLBENZENE	1.149	1.201	-4.5	87	-0.04
7	TM	M,P-XYLENE	1.245	1.244	0.1	88	-0.04
8	TM	O-XYLENE	1.028	1.078	-4.9	88	-0.04
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.734	1.6	85	-0.01
10	TM	NAPHTHALENE	0.402	0.379	5.7	81	-0.02
11	HM	C9-C10 AROMATICS	0.886	0.861	2.8	86	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	86	-0.03
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.718	-2.1	87	-0.03
15	HM	C5-C8 ALIPHATICS #2	1.007	0.971	3.6	85	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.971	3.6	85	0.00
17	TM	N-PENTANE #2	0.854	0.736	13.8	71	-0.03
18	TM	2-METHYL PENTANE #2	0.975	0.927	4.9	79	-0.03
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.720	-10.6	94	-0.03
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.047	-8.2	87	-0.03
21	TM	BENZENE #2	1.166	1.174	-0.7	88	-0.03
22	TM	TOLUENE #2	1.190	1.223	-2.8	89	-0.03
23	HM	C9-C12 ALIPHATICS #2	0.815	0.795	2.5	90	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.795	2.5	90	0.00
25	TM	N-NONANE #2	0.574	0.625	-8.9	87	-0.03
26	TM	ETHYLBENZENE #2	1.091	1.127	-3.3	91	-0.04
27	TM	M,P-XYLENE #2	0.983	1.008	-2.5	91	-0.04
28	TM	O-XYLENE #2	0.972	1.039	-6.9	93	-0.04
29	TM	N-DECANE #2	0.382	0.347	9.2	86	-0.02
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.659	4.8	88	-0.01
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.522	-6.7	89	-0.01
32	TM	NAPHTHALENE #2	0.267	0.258	3.4	87	-0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Signal #1 : T:\DATA\T0517\T051713.D\FID1B.CH Vial: 5
Signal #2 : T:\DATA\T0517\T051713.D\FID2A.CH
Acq On : 18 May 2012 1:58 Operator: MKA
Sample : CTRVPH END 5/17 Inst : TRACY #1
Misc : WATER CM=VPH Multiplr: 1.000
IntFile Signal #1: EVENTS1.E IntFile Signal #2: EVENTS2.E

Method : T:\METHODS\TV080111.M (Chemstation Integrator)
Title : MASS VPH
Last Update : Thu May 10 09:34:03 2012
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	FLUOROBENZENE	1.000	1.000	0.0	88	-0.03
2	TM	METHYL TERT-BUTYL ETHER	0.647	0.588	9.1	77	-0.03
3	TM	BENZENE	1.480	1.445	2.4	87	-0.03
4	SM	a,a,a-Trifluorotoluene (pid	0.488	0.496	-1.6	89	-0.03
5	TM	TOLUENE	1.379	1.461	-5.9	93	-0.05
6	TM	ETHYLBENZENE	1.149	1.196	-4.1	92	-0.06
7	TM	M,P-XYLENE	1.245	1.239	0.5	92	-0.06
8	TM	O-XYLENE	1.028	1.072	-4.3	92	-0.07
9	TM	1,2,4-TRIMETHYLBENZENE	0.746	0.750	-0.5	91	-0.03
10	TM	NAPHTHALENE	0.402	0.424	-5.5	96	-0.03
11	HM	C9-C10 AROMATICS	0.886	0.832	6.1	88	0.00

Signal #2

13	I	FLUOROBENZENE #2	1.000	1.000	0.0	91	-0.03
14	SM	a,a,a-Trifluorotoluene (fid	0.703	0.722	-2.7	93	-0.03
15	HM	C5-C8 ALIPHATICS #2	1.007	0.941	6.6	87	0.00
16	HM	C5-C8 ALIPHATICS (ADJUSTED)	1.007	0.941	6.6	87	0.00
17	TM	N-PENTANE #2	0.854	0.716	16.2	74	-0.03
18	TM	2-METHYL PENTANE #2	0.975	0.897	8.0	81	-0.03
19	TM	METHYL TERT-BUTYL ETHER #2	0.651	0.617	5.2	85	-0.03
20	TM	2,2,4-TRIMETHYLPENTANE #2	0.968	1.020	-5.4	90	-0.03
21	TM	BENZENE #2	1.166	1.152	1.2	92	-0.03
22	TM	TOLUENE #2	1.190	1.245	-4.6	96	-0.04
23	HM	C9-C12 ALIPHATICS #2	0.815	0.808	0.9	97	0.00
24	HM	C9-C12 ALIPHATICS (ADJUSTED	0.815	0.808	0.9	97	0.00
25	TM	N-NONANE #2	0.574	0.635	-10.6	93	-0.05
26	TM	ETHYLBENZENE #2	1.091	1.121	-2.7	96	-0.06
27	TM	M,P-XYLENE #2	0.983	1.004	-2.1	96	-0.06
28	TM	O-XYLENE #2	0.972	1.034	-6.4	98	-0.07
29	TM	N-DECANE #2	0.382	0.373	2.4	97	-0.03
30	TM	1,2,4-TRIMETHYLBENZENE #2	0.692	0.681	1.6	96	-0.03
31	TM	N-BUTYLCYCLOHEXANE #2	0.489	0.578	-18.2	104	-0.03
32	TM	NAPHTHALENE #2	0.267	0.284	-6.4	101	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1207141

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

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Original Report Date: August 8, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 31

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

FLPRO:
No anomalies or deviations are noted.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

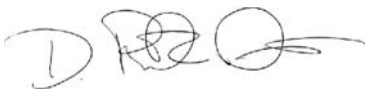
BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



_____
Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

TETRA TECH NUS, INC. 120714 CHAIN OF CUSTODY | NUMBER № 2195 | PAGE 1 OF 1

PROJECT NO: 112603576	FACILITY: NAUSTA Mayport Site 289	PROJECT MANAGER: Dave Siefken	PHONE NUMBER: 904 636 6125	LABORATORY NAME AND CONTACT: Empirical / Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Jeff Krow	PHONE NUMBER: 904 699 7473	ADDRESS: 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER: FEDEX Airbill 7986 6084 7802		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: —

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TPH - FL PRO								COMMENTS
7/25	1130	MPT-289-SS19-07-20120725		6.5	7.0	SO	G	1	X			-01					cool to 4°c

1. RELINQUISHED BY	DATE 7/25/12	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE 7/26/12	TIME 0800
COMMENTS					

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 07/26/12 @ 0820

1. Tracking # 7802 (last 4 digits, FedEx) WO# 1207141

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 3.2 *Degrees Celsius + correction factor - 0.2* = 3.0

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # ___

I certify that I unloaded the cooler and answered questions 7-14 (intial) [illegible]

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) [illegible]

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) [illegible]

I certify that I attached a label with the unique LIMS number to each container (intial) [illegible]

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#___

Additional Details:

WORK ORDER

Printed: 7/30/2012 11:28:35AM

1207141

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60

Project Manager: Brian Richard
Project Number: TET_CTOJM60

Report To:
Tetra Tech NUS, Inc. (T010)
Tobrena Sedlmyer
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Due to Client: 08/09/2012 16:00 *This is the projected due date to the client, at the time of receipt, and is for report delivery via upload, and/or email, and/or shipment to meet TAT as setup by project*

Received By: Benjamin C. Wright
Date Received: 07/26/2012 08:20
Logged In By: Benjamin C. Wright
Date Logged In: 07/26/2012 12:38

Samples Received at: **3°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirme	Yes		

Method	Test Code	Due	TAT	Expires	Comments
1207141-01 MPT-289-SS19-07-20120725 [Solid] Sampled 07/25/2012 11:30 Eastern 'Client Sample'					
SM2540B	WC_PERCENT_SOLIDS_2540B	08/06/2012 14:00	10	08/01/2012 10:30	
FLPRO	SGC_FLPRO_3546	08/06/2012 14:00	10	08/08/2012 10:30	

Reviewed By

Date

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: NAS Mayport CTO JM60
SDG #: 1207141

QC LEVEL: Level IV
Report Due: 8/9/2012
Client Sample Count: 1

Sample Type	Sampled	Received	Lab ID	Client ID	Lab Matrix	Report Matrix	FLPRO	SM2540B
Client Sample	7/25/2012	7/26/2012	1207141-01	MPT-289-SS19-07-20120725	Solid	Solid	X	X

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20802	Instrument:	GL-GCFID2
Calibration:	2208001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2G20802-CAL6	002F0201.D	07/24/12 16:37
Cal Standard	2G20802-CAL5	003F0301.D	07/24/12 17:11
Cal Standard	2G20802-CAL4	004F0401.D	07/24/12 17:45
Cal Standard	2G20802-CAL3	005F0501.D	07/24/12 18:18
Cal Standard	2G20802-CAL2	006F0601.D	07/24/12 18:52
Cal Standard	2G20802-CAL1	007F0701.D	07/24/12 19:25
Initial Cal Check	2G20802-ICV1	008F0801.D	07/24/12 19:58

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2H22011	Instrument:	GL-GCFID2
Calibration:	2208001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2H22011-CCV1	030F3001.D	08/06/12 15:34
Blank	2H03005-BLK1	031F3101.D	08/06/12 16:08
LCS	2H03005-BS1	032F3201.D	08/06/12 16:41
MPT-289-SS19-07-20120725	1207141-01	033F3301.D	08/06/12 17:15
MPT-289-SS19-07-20120725	2H03005-MS1	034F3401.D	08/06/12 17:48
MPT-289-SS19-07-20120725	2H03005-MSD1	035F3501.D	08/06/12 18:21
Calibration Check	2H22011-CCV2	036F3601.D	08/06/12 18:55

ANALYSIS DATA SHEET

MPT-289-SS19-07-20120725

Laboratory:	Empirical Laboratories, LLC			SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Solid	Laboratory ID:	1207141-01	File ID:	033F3301.D
Sampled:	07/25/12 11:30	Prepared:	08/03/12 09:47	Analyzed:	08/06/12 17:15
Solids:	78.57	Preparation:	EXT_3546	Dilution:	1

Batch: 2H03005 Sequence: 2H22011 Calibration: 2208001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/Kg dry)	DL	LOD	LOQ	Q
	Petroleum Range Organics	35.5	13.6	27.1	54.3	I

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.002	3.934	98.3	50 - 150	
o-Terphenyl	4.002	4.220	105	35 - 140	

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Solid		
Batch:	2H03005	Laboratory ID:	2H03005-BS1
Preparation:	EXT_3546	Initial/Final:	15 g / 2 mL

ANALYTE	SPIKE ADDED (mg/Kg wet)	LCS CONCENTRATION (mg/Kg wet)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	213.3	176.1	82.5	50 - 140

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

FLPRO

MPT-289-SS19-07-20120725

Laboratory: Empirical Laboratories, LLC

SDG: 1207141

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Solid

Batch: 2H03005

% Solids: 78.57

Source Sample Name: **1207141-01**

ANALYTE	SPIKE ADDED (mg/Kg dry)	SAMPLE CONCENTRATION (mg/Kg dry)	MS CONCENTRATION (mg/Kg dry)	MS % REC.	Q	QC LIMITS REC.
Petroleum Range Organics	264.5	35.52	242.0	78.1		50 - 140

ANALYTE	SPIKE ADDED (mg/Kg dry)	MSD CONCENTRATION (mg/Kg dry)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	256.2	230.1	76.0	5.03		40	50 - 140

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1207141

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2H03005 Batch Matrix: Solid Preparation: EXT_3546

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-SS19-07-20120725	1207141-01	08/03/12 09:47	15.90	2.00
Blank	2H03005-BLK1	08/03/12 09:47	15.00	2.00
LCS	2H03005-BS1	08/03/12 09:47	15.00	2.00
MPT-289-SS19-07-20120725	2H03005-MS1	08/03/12 09:47	15.40	2.00
MPT-289-SS19-07-20120725	2H03005-MSD1	08/03/12 09:47	15.90	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20802	Instrument:	GL-GCFID2
Calibration:	2208001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12B0856	FLPRO CAL1 85ppm	2G20802-CAL6	002F0201.D	07/24/12 16:37
12B0855	FLPRO CAL2 850ppm	2G20802-CAL5	003F0301.D	07/24/12 17:11
12B0854	FLPRO CAL3 2550ppm	2G20802-CAL4	004F0401.D	07/24/12 17:45
12B0841	FLPRO CAL4 4250ppm	2G20802-CAL3	005F0501.D	07/24/12 18:18
12B0840	FLPRO CAL5 5950ppm	2G20802-CAL2	006F0601.D	07/24/12 18:52
12B0839	FLPRO CAL6 8500ppm	2G20802-CAL1	007F0701.D	07/24/12 19:25

INITIAL CALIBRATION DATA

FLPRO

Laboratory:	Empirical Laboratories, LLC		SDG:	1207141	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Calibration:	2208001		Instrument:	GL-GCFID2	
Matrix:	Water		Calibration Dates:	7/24/12 16:37	7/24/12 19:25

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	8500	1093.322	5950	1068.61	4250	1170.593	2550	1092.536	850	1006.582	85	773.9412
2-Fluorobiphenyl	50	1361.92	35	1317.114	25	1304.04	15	1231.133	10	1159.6	5	1183
o-Terphenyl	50	1552.38	35	1506.286	25	1521.64	15	1437.6	10	1345.4	5	1389.8

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2208001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	7/24/12 16:37 7/24/12 19:25

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1034.264	13.34023	3.897	1.569081E-02			20	
2-Fluorobiphenyl	1259.468	6.394422	8.9485	6.574825E-02			20	
o-Terphenyl	1458.851	5.571404	11.13583	0.170943			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2208001
Lab File ID:	008F0801.D	Calibration Date:	07/24/12 11:40
Sequence:	2G20802	Injection Date:	07/24/12
Lab Sample ID:	2G20802-ICV1	Injection Time:	19:58

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4467	1034.264	1155.068		11.7	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2208001
Lab File ID:	030F3001.D	Calibration Date:	07/24/12 11:40
Sequence:	2H22011	Injection Date:	08/06/12
Lab Sample ID:	2H22011-CCV1	Injection Time:	15:34

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3446	1034.264	838.7224		-18.9	25
2-Fluorobiphenyl	A	25.00	25.48	1259.468	1283.48		1.9	25
o-Terphenyl	A	25.00	24.58	1458.851	1434.16		-1.7	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2208001
Lab File ID:	036F3601.D	Calibration Date:	07/24/12 11:40
Sequence:	2H22011	Injection Date:	08/06/12
Lab Sample ID:	2H22011-CCV2	Injection Time:	18:55

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3697	1034.264	899.7936		-13.0	25
2-Fluorobiphenyl	A	25.00	25.95	1259.468	1307.56		3.8	25
o-Terphenyl	A	25.00	25.29	1458.851	1475.68		1.2	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2H22011	Instrument:	GL-GCFID2
		Calibration:	2208001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2H22011-CCV1) mg/L				Lab File ID: 030F3001.D		Analyzed: 08/06/12 15:34		
2-Fluorobiphenyl	25.00	102	75 - 125	8.956	8.956	0.0000	+/-0.050	
o-Terphenyl	25.00	98.3	75 - 125	11.166	11.166	0.0000	+/-0.050	
Blank (2H03005-BLK1) mg/Kg wet				Lab File ID: 031F3101.D		Analyzed: 08/06/12 16:08		
2-Fluorobiphenyl	3.333	84.0	50 - 150	8.956	8.956	0.0000	+/-0.050	
o-Terphenyl	3.333	89.8	35 - 140	11.156	11.166	-0.0100	+/-0.050	
LCS (2H03005-BS1) mg/Kg wet				Lab File ID: 032F3201.D		Analyzed: 08/06/12 16:41		
2-Fluorobiphenyl	3.333	89.1	50 - 150	8.96	8.956	0.0040	+/-0.050	
o-Terphenyl	3.333	97.0	35 - 140	11.17	11.166	0.0040	+/-0.050	
MPT-289-SS19-07-20120725 (1207141-01) mg/Kg dry				Lab File ID: 033F3301.D		Analyzed: 08/06/12 17:15		
2-Fluorobiphenyl	4.002	98.3	50 - 150	8.96	8.956	0.0040	+/-0.050	
o-Terphenyl	4.002	105	35 - 140	11.16	11.166	-0.0060	+/-0.050	
Matrix Spike (2H03005-MS1) mg/Kg dry				Lab File ID: 034F3401.D		Analyzed: 08/06/12 17:48		
2-Fluorobiphenyl	4.132	87.4	50 - 150	8.956	8.956	0.0000	+/-0.050	
o-Terphenyl	4.132	93.5	35 - 140	11.15	11.166	-0.0160	+/-0.050	
Matrix Spike Dup (2H03005-MSD1) mg/Kg dry				Lab File ID: 035F3501.D		Analyzed: 08/06/12 18:21		
2-Fluorobiphenyl	4.002	88.1	50 - 150	8.956	8.956	0.0000	+/-0.050	
o-Terphenyl	4.002	91.9	35 - 140	11.136	11.166	-0.0300	+/-0.050	
Calibration Check (2H22011-CCV2) mg/L				Lab File ID: 036F3601.D		Analyzed: 08/06/12 18:55		
2-Fluorobiphenyl	25.00	104	75 - 125	8.956	8.956	0.0000	+/-0.050	
o-Terphenyl	25.00	101	75 - 125	11.16	11.166	-0.0060	+/-0.050	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1207141

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-SS19-07-20120725	07/25/12 11:30	07/26/12 08:20	08/03/12 09:47	8.97	14.00	08/06/12 17:15	3.31	40.00	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	1207141	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	2H03005-BLK1	File ID:	031F3101.D
Sampled:		Prepared:		Analyzed:	08/06/12 16:08
Solids:		Preparation:	EXT_3546	Dilution:	

Batch: 2H03005 Sequence: 2H22011 Calibration: 2208001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics		11.3	22.6	45.2	U

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	2.800	84.0	50 - 150	
o-Terphenyl	3.333	2.994	89.8	35 - 140	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2H03005-BS1	File ID:	032F3201.D
Sampled:		Prepared:		Analyzed:	08/06/12 16:41
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2H03005	Sequence:	2H22011	Calibration:	2208001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg we	DL	LOD	LOQ	Q
	Petroleum Range Organics	176.1	11.3	22.6	45.2	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg wet)	CONC (mg/Kg wet)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	3.333	2.972	89.1	50 - 150	
o-Terphenyl	3.333	3.234	97.0	35 - 140	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2H03005-MS1	File ID:	034F3401.D
Sampled:		Prepared:		Analyzed:	08/06/12 17:48
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2H03005	Sequence:	2H22011	Calibration:	2208001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg dr	DL	LOD	LOQ	Q
	Petroleum Range Organics	242.0	14.0	28.0	56.0	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.132	3.613	87.4	50 - 150	
o-Terphenyl	4.132	3.863	93.5	35 - 140	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory:	Empirical Laboratories, LLC	SDG:	1207141
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2H03005-MSD1	File ID:	035F3501.D
Sampled:		Prepared:		Analyzed:	08/06/12 18:21
Solids:		Preparation:	EXT_3546	Dilution:	

Batch:	2H03005	Sequence:	2H22011	Calibration:	2208001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	ONC. (mg/Kg dr	DL	LOD	LOQ	Q
	Petroleum Range Organics	230.1	13.6	27.1	54.3	

SYSTEM MONITORING COMPOUND	ADDED (mg/Kg dry)	CONC (mg/Kg dry)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	4.002	3.527	88.1	50 - 150	
o-Terphenyl	4.002	3.678	91.9	35 - 140	

APPENDIX G

GROUNDWATER LABORATORY ANALYTICAL RESULTS

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1112148

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Tobrena Sedlmeyer
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Brian Richard
Tel (615)345-1115
Fax (866)417-0548
Email: brichard@empirlabs.com

Original Report Date: January 11, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 98

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verifications exceeded criteria in 1L35602-CCV1 with a negative bias for 2-Chloroethyl vinyl ether and Chloromethane and in 1L35701-CCV1 with a negative bias for 2-Chloroethyl vinyl ether.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270D PAH:
No anomalies or deviations are noted.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in 1112148-01, -02, 1L23002-BS1, and –BSD1. The surrogate o-Terphenyl exceeded the retention time window in 1L23002-BLK1, -BS1, and -BSD1. The result bias due to the retention time shift was determined to be negligible for all associated batch QC.

The continuing calibration verification 2A00606-CCV1 exceeded criteria with a negative bias for o-Terphenyl.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers
As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

MDL: The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The MDL is determined from analysis of a sample containing the analyte in a given matrix. For DoD QSM 4.2 reporting purposes, this definition is also applied to the reported Detection Limit (DL).

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: An exceeding quality control criteria is associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the EQL. One should feel confident that the result is greater than zero and less than the EQL. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters MDL/RL has been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard failed criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:
The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity or an approved technical designee is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

1112148

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2210 | PAGE 1 OF 1

PROJECT NO: 112G03576	FACILITY: NAVSTAMPT-SITE 289	PROJECT MANAGER: DAVE SIEFKEN	PHONE NUMBER: 904-636-6125
SAMPLERS (SIGNATURE): [signature]		FIELD OPERATIONS LEADER: ZACH SCRIBNER	PHONE NUMBER: 904-636-6125
		CARRIER/WAYBILL NUMBER: 8660 1730 1094	

LABORATORY NAME AND CONTACT: EMPIRICAL LABORATORIES LLC / B. RICHARD
ADDRESS: 621 MAINSTREAM DR. SUITE 270
CITY, STATE: NASHVILLE, TN 37228

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	VOC	TRPH-FL PRO	PAH-LL	[redacted]					COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G	G	G	[redacted]					
PRESERVATIVE USED									HCl	HCl	/	[redacted]					
12/19	0830	PZ-1-20111219				GW	G	~~8~~ 7	3	2	2	[redacted]		01			Cool to 4°C
12/19	0930	PZ-2-20111219				GW	G	~~8~~ 7	3	2	2	[redacted]		02			
12/19	0000	TRIP BLANK 0581				QC		2	2					03			

1. RELINQUISHED BY [signature]	DATE 12/19/2011	TIME 1530	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY [signature]	DATE ~~12/20/11~~ 12/20/11	TIME 0820

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

10

1112148 Summ Package

1112148

Cooler Received/Opened On ~~12/22/11~~ 12/22/11 @ 0820

1. Tracking # 1094 (last 4 digits, FedEx)

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 1.5 *Degrees Celsius + correction factor* 0.0 = 1.5

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2-FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # —

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#_____

Additional Details:

WORK ORDER

1112148

Printed: 1/11/2012 12:51:19PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60

Project Manager: Brian Richard
Project Number: NAS Mayport CTO JM60

Report To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Date Due: 01/06/2012 16:00 (10 day TAT)
Received By: Benjamin C. Wright
Logged In By: Benjamin C. Wright
Date Received: 12/20/2011 08:20
Date Logged In 12/20/2011 14:44

Samples Received at: **1.5°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confir	Yes		

Analysis	Due	TAT	Expires	Version	Comments
1112148-01 PZ-1-20111219 [Water] Sampled 12/19/2011 08:30 Eastern					
SW8260B	01/03/2012 14:00	10	01/02/2012 07:30	specific list	
SW8270D	01/03/2012 14:00	10	12/26/2011 07:30		
FLPRO	01/03/2012 14:00	10	12/26/2011 07:30		
1112148-02 PZ-2-20111219 [Water] Sampled 12/19/2011 09:30 Eastern					
SW8260B	01/03/2012 14:00	10	01/02/2012 08:30	specific list	
SW8270D	01/03/2012 14:00	10	12/26/2011 08:30		
FLPRO	01/03/2012 14:00	10	12/26/2011 08:30		

WORK ORDER

1112148

Printed: 1/11/2012 12:51:19PM

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60

Project Manager: Brian Richard
Project Number: NAS Mayport CTO JM60

Analysis	Due	TAT	Expires	Version	Comments
1112148-03 Trip Blank 0581 [Water] Sampled 12/19/2011 00:00 Eastern					
SW8260B	01/03/2012 14:00	10	01/01/2012 23:00	specific list	

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: NAS Mayport CTO JM60
SDG #: 1112148
MATRIX: Water

QC LEVEL: Level IV
Report Due: 1/6/2012
Client Sample Count: 2

Sample Type	Sampled	Received	Lab ID	Client ID	FLPRO	SW8260B	SW8270D
Client Sample	12/19/2011	12/20/2011	1112148-01	PZ-1-20111219	X	X	X
Client Sample	12/19/2011	12/20/2011	1112148-02	PZ-2-20111219	X	X	X
Trip Blank	12/19/2011	12/20/2011	1112148-03	Trip Blank 0581		X	

Data for SW8260B Forms

ANALYSIS DATA SHEET

PZ-1-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-01	File ID:	1214801.D
Sampled:	12/19/11 08:30	Prepared:	12/22/11 00:00	Analyzed:	12/22/11 10:45
Solids:		Preparation:	5030B	Dilution:	1

Batch: 1L22008 Sequence: 1L35701 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	Y, U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.92	103	75 - 120	
Dibromofluoromethane	30.00	30.15	100	85 - 115	
1,2-Dichloroethane-d4	30.00	30.65	102	70 - 120	
Toluene-d8	30.00	29.89	99.6	85 - 120	

ANALYSIS DATA SHEET

PZ-2-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-02	File ID:	1214802.D
Sampled:	12/19/11 09:30	Prepared:	12/22/11 00:00	Analyzed:	12/22/11 11:12
Solids:		Preparation:	5030B	Dilution:	1

Batch: 1L22008 Sequence: 1L35701 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	Y, U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.31	101	75 - 120	
Dibromofluoromethane	30.00	30.60	102	85 - 115	
1,2-Dichloroethane-d4	30.00	30.52	102	70 - 120	
Toluene-d8	30.00	30.05	100	85 - 120	

ANALYSIS DATA SHEET

Trip Blank 0581

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-03	File ID:	1214803.D
Sampled:	12/19/11 00:00	Prepared:	12/21/11 00:00	Analyzed:	12/21/11 10:19
Solids:		Preparation:	5030B	Dilution:	1

Batch: 1L21008 Sequence: 1L35602 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform	0.255	0.250	0.500	1.00	I
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	Y, U
74-87-3	Chloromethane		0.500	1.00	2.00	Y, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.95	103	75 - 120	
Dibromofluoromethane	30.00	30.00	100	85 - 115	
1,2-Dichloroethane-d4	30.00	30.37	101	70 - 120	
Toluene-d8	30.00	30.77	103	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35602	Instrument:	MS-VOA6
		Calibration:	1339001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1L35602-CCV1) ug/L				Lab File ID: 1221CCV1.D		Analyzed: 12/21/11 07:30		
Bromofluorobenzene	30.00	106	80 - 120	12.245	12.245	0.0000	+/-1.000	
Dibromofluoromethane	30.00	101	80 - 120	6.928	6.928	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	80 - 120	7.421	7.421	0.0000	+/-1.000	
Toluene-d8	30.00	105	80 - 120	9.626	9.626	0.0000	+/-1.000	
LCS (1L21008-BS1) ug/L				Lab File ID: 1221LCS1.D		Analyzed: 12/21/11 08:04		
Bromofluorobenzene	30.00	103	75 - 120	12.244	12.245	-0.0010	+/-1.000	
Dibromofluoromethane	30.00	99.7	85 - 115	6.937	6.928	0.0090	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.7	70 - 120	7.43	7.421	0.0090	+/-1.000	
Toluene-d8	30.00	102	85 - 120	9.625	9.626	-0.0010	+/-1.000	
Blank (1L21008-BLK1) ug/L				Lab File ID: 1221BLK1.D		Analyzed: 12/21/11 09:25		
Bromofluorobenzene	30.00	103	75 - 120	12.241	12.245	-0.0040	+/-1.000	
Dibromofluoromethane	30.00	102	85 - 115	6.924	6.928	-0.0040	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.426	7.421	0.0050	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.622	9.626	-0.0040	+/-1.000	
Trip Blank 0581 (1112148-03) ug/L				Lab File ID: 1214803.D		Analyzed: 12/21/11 10:19		
Bromofluorobenzene	30.00	103	75 - 120	12.235	12.245	-0.0100	+/-1.000	
Dibromofluoromethane	30.00	100	85 - 115	6.928	6.928	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.421	7.421	0.0000	+/-1.000	
Toluene-d8	30.00	103	85 - 120	9.626	9.626	0.0000	+/-1.000	
LCS Dup (1L21008-BSD1) ug/L				Lab File ID: 1221LCD1.D		Analyzed: 12/21/11 13:54		
Bromofluorobenzene	30.00	103	75 - 120	12.235	12.245	-0.0100	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	6.928	6.928	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.42	7.421	-0.0010	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.626	9.626	0.0000	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35701	Instrument:	MS-VOA6
		Calibration:	1339001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1L35701-CCV1) ug/L				Lab File ID: 1222CCV1.D		Analyzed: 12/22/11 07:02		
Bromofluorobenzene	30.00	105	80 - 120	12.24	12.24	0.0000	+/-1.000	
Dibromofluoromethane	30.00	101	80 - 120	6.923	6.923	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	80 - 120	7.415	7.415	0.0000	+/-1.000	
Toluene-d8	30.00	103	80 - 120	9.621	9.621	0.0000	+/-1.000	
LCS (1L22008-BS1) ug/L				Lab File ID: 1222LCS1.D		Analyzed: 12/22/11 07:37		
Bromofluorobenzene	30.00	103	75 - 120	12.235	12.24	-0.0050	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	6.918	6.923	-0.0050	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.411	7.415	-0.0040	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.616	9.621	-0.0050	+/-1.000	
Blank (1L22008-BLK1) ug/L				Lab File ID: 1222BLK1.D		Analyzed: 12/22/11 08:58		
Bromofluorobenzene	30.00	100	75 - 120	12.23	12.24	-0.0100	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	6.924	6.923	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	70 - 120	7.416	7.415	0.0010	+/-1.000	
Toluene-d8	30.00	100	85 - 120	9.621	9.621	0.0000	+/-1.000	
PZ-1-20111219 (1112148-01) ug/L				Lab File ID: 1214801.D		Analyzed: 12/22/11 10:45		
Bromofluorobenzene	30.00	103	75 - 120	12.231	12.24	-0.0090	+/-1.000	
Dibromofluoromethane	30.00	100	85 - 115	6.924	6.923	0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.417	7.415	0.0020	+/-1.000	
Toluene-d8	30.00	99.6	85 - 120	9.622	9.621	0.0010	+/-1.000	
PZ-2-20111219 (1112148-02) ug/L				Lab File ID: 1214802.D		Analyzed: 12/22/11 11:12		
Bromofluorobenzene	30.00	101	75 - 120	12.238	12.24	-0.0020	+/-1.000	
Dibromofluoromethane	30.00	102	85 - 115	6.922	6.923	-0.0010	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	7.414	7.415	-0.0010	+/-1.000	
Toluene-d8	30.00	100	85 - 120	9.619	9.621	-0.0020	+/-1.000	
LCS Dup (1L22008-BSD1) ug/L				Lab File ID: 1222LCD1.D		Analyzed: 12/22/11 12:33		
Bromofluorobenzene	30.00	102	75 - 120	12.233	12.24	-0.0070	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	6.927	6.923	0.0040	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.1	70 - 120	7.419	7.415	0.0040	+/-1.000	
Toluene-d8	30.00	101	85 - 120	9.624	9.621	0.0030	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L21008	Laboratory ID:	1L21008-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	48.3	96.5	75 - 120
Bromoform	50.00	45.2	90.4	70 - 130
Bromomethane	50.00	42.7	85.5	30 - 145
Carbon tetrachloride	50.00	52.8	106	65 - 140
Chlorobenzene	50.00	50.0	100	80 - 120
Chloroethane	50.00	56.7	113	60 - 135
Chloroform	50.00	46.4	92.8	65 - 135
2-Chloroethyl vinyl ether	99.75	61.7	61.8	10 - 165
Chloromethane	50.00	41.2	82.4	40 - 125
Dibromochloromethane	50.00	52.6	105	60 - 135
1,2-Dibromoethane (EDB)	50.00	49.7	99.3	80 - 120
1,2-Dichlorobenzene	50.00	49.5	99.0	70 - 120
1,3-Dichlorobenzene	50.00	49.5	99.1	75 - 125
1,4-Dichlorobenzene	50.00	50.0	100	75 - 125
Dichlorodifluoromethane	50.00	44.5	88.9	30 - 155
1,1-Dichloroethane	50.00	50.1	100	70 - 135
1,2-Dichloroethane	50.00	46.7	93.5	70 - 130
1,1-Dichloroethene	50.00	49.0	98.0	70 - 130
cis-1,2-Dichloroethene	50.00	51.0	102	70 - 125
trans-1,2-Dichloroethene	50.00	49.7	99.3	60 - 140
1,2-Dichloropropane	50.00	50.3	101	75 - 125
cis-1,3-Dichloropropene	50.00	54.0	108	70 - 130
trans-1,3-Dichloropropene	50.00	46.9	93.7	55 - 140
Methylene chloride	50.00	48.6	97.2	55 - 140
1,1,2,2-Tetrachloroethane	50.00	48.3	96.6	65 - 130
Tetrachloroethene	50.00	51.9	104	45 - 150
1,1,2-Trichloroethane	50.00	51.9	104	75 - 125
1,1,1-Trichloroethane	50.00	51.3	103	65 - 130
Trichloroethene	50.00	50.4	101	70 - 125
Trichlorofluoromethane	50.00	51.5	103	60 - 145

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L21008	Laboratory ID:	1L21008-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	57.7	115	50 - 145

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50.00	48.4	96.7	0.215	30	75 - 120
Bromoform	50.00	44.8	89.5	1.02	30	70 - 130
Bromomethane	50.00	42.6	85.3	0.257	30	30 - 145
Carbon tetrachloride	50.00	51.4	103	2.67	30	65 - 140
Chlorobenzene	50.00	49.1	98.2	1.83	30	80 - 120
Chloroethane	50.00	56.2	112	0.835	30	60 - 135
Chloroform	50.00	46.5	93.0	0.153	30	65 - 135
2-Chloroethyl vinyl ether	99.75	69.5	69.7	12.0	30	10 - 165
Chloromethane	50.00	43.9	87.9	6.51	30	40 - 125
Dibromochloromethane	50.00	51.6	103	2.05	30	60 - 135
1,2-Dibromoethane (EDB)	50.00	50.1	100	0.935	30	80 - 120
1,2-Dichlorobenzene	50.00	50.4	101	1.79	30	70 - 120
1,3-Dichlorobenzene	50.00	48.9	97.7	1.36	30	75 - 125
1,4-Dichlorobenzene	50.00	50.5	101	0.981	30	75 - 125
Dichlorodifluoromethane	50.00	45.7	91.4	2.79	30	30 - 155
1,1-Dichloroethane	50.00	49.7	99.4	0.859	30	70 - 135
1,2-Dichloroethane	50.00	47.6	95.1	1.77	30	70 - 130
1,1-Dichloroethene	50.00	48.0	96.0	2.04	30	70 - 130
cis-1,2-Dichloroethene	50.00	51.4	103	0.649	30	70 - 125
trans-1,2-Dichloroethene	50.00	49.5	98.9	0.408	30	60 - 140
1,2-Dichloropropane	50.00	51.5	103	2.32	30	75 - 125
cis-1,3-Dichloropropene	50.00	54.0	108	0.147	30	70 - 130
trans-1,3-Dichloropropene	50.00	46.5	93.0	0.793	30	55 - 140
Methylene chloride	50.00	48.6	97.3	0.0685	30	55 - 140
1,1,2,2-Tetrachloroethane	50.00	50.7	101	4.96	30	65 - 130
Tetrachloroethene	50.00	49.5	99.0	4.82	30	45 - 150

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L21008	Laboratory ID:	1L21008-BSD1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,2-Trichloroethane	50.00	53.0	106	2.05	30	75 - 125
1,1,1-Trichloroethane	50.00	50.7	101	1.31	30	65 - 130
Trichloroethene	50.00	50.2	100	0.406	30	70 - 125
Trichlorofluoromethane	50.00	50.1	100	2.72	30	60 - 145
Vinyl chloride	50.00	54.9	110	5.06	30	50 - 145

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L22008	Laboratory ID:	1L22008-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Bromodichloromethane	50.00	49.5	98.9	75 - 120
Bromoform	50.00	46.0	92.0	70 - 130
Bromomethane	50.00	42.8	85.6	30 - 145
Carbon tetrachloride	50.00	53.1	106	65 - 140
Chlorobenzene	50.00	49.7	99.4	80 - 120
Chloroethane	50.00	57.3	115	60 - 135
Chloroform	50.00	46.8	93.7	65 - 135
2-Chloroethyl vinyl ether	99.75	69.9	70.0	10 - 165
Chloromethane	50.00	41.2	82.5	40 - 125
Dibromochloromethane	50.00	53.1	106	60 - 135
1,2-Dibromoethane (EDB)	50.00	50.1	100	80 - 120
1,2-Dichlorobenzene	50.00	50.0	100	70 - 120
1,3-Dichlorobenzene	50.00	49.9	99.7	75 - 125
1,4-Dichlorobenzene	50.00	50.9	102	75 - 125
Dichlorodifluoromethane	50.00	46.0	91.9	30 - 155
1,1-Dichloroethane	50.00	51.0	102	70 - 135
1,2-Dichloroethane	50.00	47.5	95.0	70 - 130
1,1-Dichloroethene	50.00	49.7	99.4	70 - 130
cis-1,2-Dichloroethene	50.00	51.5	103	70 - 125
trans-1,2-Dichloroethene	50.00	51.1	102	60 - 140
1,2-Dichloropropane	50.00	52.7	105	75 - 125
cis-1,3-Dichloropropene	50.00	54.9	110	70 - 130
trans-1,3-Dichloropropene	50.00	47.8	95.5	55 - 140
Methylene chloride	50.00	49.4	98.9	55 - 140
1,1,2,2-Tetrachloroethane	50.00	50.7	101	65 - 130
Tetrachloroethene	50.00	51.3	103	45 - 150
1,1,2-Trichloroethane	50.00	52.3	105	75 - 125
1,1,1-Trichloroethane	50.00	52.0	104	65 - 130
Trichloroethene	50.00	51.2	102	70 - 125
Trichlorofluoromethane	50.00	51.8	104	60 - 145

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L22008	Laboratory ID:	1L22008-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Vinyl chloride	50.00	57.9	116	50 - 145

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Bromodichloromethane	50.00	47.9	95.7	3.31	30	75 - 120
Bromoform	50.00	42.3	84.7	8.30	30	70 - 130
Bromomethane	50.00	45.1	90.2	5.23	30	30 - 145
Carbon tetrachloride	50.00	51.4	103	3.24	30	65 - 140
Chlorobenzene	50.00	48.0	96.1	3.37	30	80 - 120
Chloroethane	50.00	56.9	114	0.607	30	60 - 135
Chloroform	50.00	45.6	91.2	2.71	30	65 - 135
2-Chloroethyl vinyl ether	99.75	62.7	62.8	10.8	30	10 - 165
Chloromethane	50.00	45.0	89.9	8.66	30	40 - 125
Dibromochloromethane	50.00	49.5	98.9	7.12	30	60 - 135
1,2-Dibromoethane (EDB)	50.00	48.0	95.9	4.31	30	80 - 120
1,2-Dichlorobenzene	50.00	49.7	99.4	0.666	30	70 - 120
1,3-Dichlorobenzene	50.00	48.2	96.3	3.50	30	75 - 125
1,4-Dichlorobenzene	50.00	49.2	98.5	3.27	30	75 - 125
Dichlorodifluoromethane	50.00	46.0	91.9	0.0172	30	30 - 155
1,1-Dichloroethane	50.00	49.9	99.8	2.28	30	70 - 135
1,2-Dichloroethane	50.00	46.8	93.5	1.55	30	70 - 130
1,1-Dichloroethene	50.00	48.3	96.6	2.93	30	70 - 130
cis-1,2-Dichloroethene	50.00	50.8	102	1.38	30	70 - 125
trans-1,2-Dichloroethene	50.00	49.0	98.1	4.06	30	60 - 140
1,2-Dichloropropane	50.00	50.9	102	3.58	30	75 - 125
cis-1,3-Dichloropropene	50.00	53.0	106	3.59	30	70 - 130
trans-1,3-Dichloropropene	50.00	45.4	90.8	5.09	30	55 - 140
Methylene chloride	50.00	48.6	97.3	1.62	30	55 - 140
1,1,2,2-Tetrachloroethane	50.00	47.3	94.6	6.92	30	65 - 130
Tetrachloroethene	50.00	49.4	98.8	3.82	30	45 - 150

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L22008	Laboratory ID:	1L22008-BSD1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1,2-Trichloroethane	50.00	51.2	102	2.17	30	75 - 125
1,1,1-Trichloroethane	50.00	50.5	101	2.81	30	65 - 130
Trichloroethene	50.00	49.7	99.4	2.95	30	70 - 125
Trichlorofluoromethane	50.00	52.6	105	1.42	30	60 - 145
Vinyl chloride	50.00	57.5	115	0.683	30	50 - 145

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 1L21008 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
Trip Blank 0581	1112148-03	12/21/11 00:00	5.00	5.00
Blank	1L21008-BLK1	12/21/11 00:00	5.00	5.00
LCS	1L21008-BS1	12/21/11 00:00	5.00	5.00
LCS Dup	1L21008-BSD1	12/21/11 00:00	5.00	5.00

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 1L22008 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PZ-1-20111219	1112148-01	12/22/11 00:00	5.00	5.00
PZ-2-20111219	1112148-02	12/22/11 00:00	5.00	5.00
Blank	1L22008-BLK1	12/22/11 00:00	5.00	5.00
LCS	1L22008-BS1	12/22/11 00:00	5.00	5.00
LCS Dup	1L22008-BSD1	12/22/11 00:00	5.00	5.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	1202TUN1.D	Injection Date:	12/02/11
Instrument ID:	MS-VOA6	Injection Time:	11:11
Sequence:	1L33901	Lab Sample ID:	1L33901-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	29.9	PASS
75	30 - 60% of 95	53.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.98	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	52.9	PASS
175	5 - 9% of 174	7.77	PASS
176	95 - 101% of 174	95.3	PASS
177	5 - 9% of 176	6.78	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	1221TUN1.D	Injection Date:	12/21/11
Instrument ID:	MS-VOA6	Injection Time:	07:03
Sequence:	1L35602	Lab Sample ID:	1L35602-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	50.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.85	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	64.6	PASS
175	5 - 9% of 174	7.72	PASS
176	95 - 101% of 174	97	PASS
177	5 - 9% of 176	6.63	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	1222TUN1.D	Injection Date:	12/22/11
Instrument ID:	MS-VOA6	Injection Time:	06:35
Sequence:	1L35701	Lab Sample ID:	1L35701-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	51	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.75	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	67.7	PASS
175	5 - 9% of 174	7.21	PASS
176	95 - 101% of 174	98.2	PASS
177	5 - 9% of 176	6.52	PASS

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L33901	Instrument:	MS-VOA6
Calibration:	1339001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1L33901-TUN1	1202TUN1.D	12/02/11 11:11
Cal Standard	1L33901-CAL1	1201CAL1.D	12/02/11 12:56
Cal Standard	1L33901-CAL2	1201CAL2.D	12/02/11 13:22
Cal Standard	1L33901-CAL3	1201CAL3.D	12/02/11 13:49
Cal Standard	1L33901-CAL4	1201CAL4.D	12/02/11 14:16
Cal Standard	1L33901-CAL5	1201CAL5.D	12/02/11 14:43
Cal Standard	1L33901-CAL6	1201CAL6.D	12/02/11 15:10
Cal Standard	1L33901-CAL7	1201CAL7.D	12/02/11 15:37
Cal Standard	1L33901-CAL8	1201CAL8.D	12/02/11 16:03
Cal Standard	1L33901-CAL9	1201CAL9.D	12/02/11 16:30
Initial Cal Check	1L33901-ICV2	1202ICV2.D	12/02/11 17:51

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35602	Instrument:	MS-VOA6
Calibration:	1339001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1L35602-TUN1	1221TUN1.D	12/21/11 07:03
Calibration Check	1L35602-CCV1	1221CCV1.D	12/21/11 07:30
LCS	1L21008-BS1	1221LCS1.D	12/21/11 08:04
Blank	1L21008-BLK1	1221BLK1.D	12/21/11 09:25
Trip Blank 0581	1112148-03	1214803.D	12/21/11 10:19
LCS Dup	1L21008-BSD1	1221LCD1.D	12/21/11 13:54

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35701	Instrument:	MS-VOA6
Calibration:	1339001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1L35701-TUN1	1222TUN1.D	12/22/11 06:35
Calibration Check	1L35701-CCV1	1222CCV1.D	12/22/11 07:02
LCS	1L22008-BS1	1222LCS1.D	12/22/11 07:37
Blank	1L22008-BLK1	1222BLK1.D	12/22/11 08:58
PZ-1-20111219	1112148-01	1214801.D	12/22/11 10:45
PZ-2-20111219	1112148-02	1214802.D	12/22/11 11:12
LCS Dup	1L22008-BSD1	1222LCD1.D	12/22/11 12:33

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35602	Instrument:	MS-VOA6
		Calibration:	1339001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1L35602-CCV1)			Lab File ID: 1221CCV1.D			Analyzed: 12/21/11 07:30			
Fluorobenzene	1001869	7.943	912087	7.912	110	50 - 200	0.0310	+/-0.50	
Chlorobenzene-d5	425208	11.054	399003	11.023	107	50 - 200	0.0310	+/-0.50	
1,4-Dichlorobenzene-d4	362575	13.446	322907	13.406	112	50 - 200	0.0400	+/-0.50	
LCS (1L21008-BS1)			Lab File ID: 1221LCS1.D			Analyzed: 12/21/11 08:04			
Fluorobenzene	983682	7.951	1001869	7.943	98	50 - 200	0.0080	+/-0.50	
Chlorobenzene-d5	425462	11.053	425208	11.054	100	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	359692	13.445	362575	13.446	99	50 - 200	-0.0010	+/-0.50	
Blank (1L21008-BLK1)			Lab File ID: 1221BLK1.D			Analyzed: 12/21/11 09:25			
Fluorobenzene	958159	7.938	1001869	7.943	96	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	413302	11.049	425208	11.054	97	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	351337	13.442	362575	13.446	97	50 - 200	-0.0040	+/-0.50	
Trip Blank 0581 (1112148-03)			Lab File ID: 1214803.D			Analyzed: 12/21/11 10:19			
Fluorobenzene	960538	7.942	1001869	7.943	96	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	411322	11.044	425208	11.054	97	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	350987	13.436	362575	13.446	97	50 - 200	-0.0100	+/-0.50	
LCS Dup (1L21008-BSD1)			Lab File ID: 1221LCD1.D			Analyzed: 12/21/11 13:54			
Fluorobenzene	931274	7.942	1001869	7.943	93	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	411681	11.044	425208	11.054	97	50 - 200	-0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	341708	13.436	362575	13.446	94	50 - 200	-0.0100	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L35701	Instrument:	MS-VOA6
		Calibration:	1339001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1L35701-CCV1)			Lab File ID: 1222CCV1.D			Analyzed: 12/22/11 07:02			
Fluorobenzene	972929	7.937	912087	7.912	107	50 - 200	0.0250	+/-0.50	
Chlorobenzene-d5	418558	11.048	399003	11.023	105	50 - 200	0.0250	+/-0.50	
1,4-Dichlorobenzene-d4	354340	13.441	322907	13.406	110	50 - 200	0.0350	+/-0.50	
LCS (1L22008-BS1)			Lab File ID: 1222LCS1.D			Analyzed: 12/22/11 07:37			
Fluorobenzene	956236	7.932	972929	7.937	98	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	418288	11.044	418558	11.048	100	50 - 200	-0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	349389	13.436	354340	13.441	99	50 - 200	-0.0050	+/-0.50	
Blank (1L22008-BLK1)			Lab File ID: 1222BLK1.D			Analyzed: 12/22/11 08:58			
Fluorobenzene	940939	7.938	972929	7.937	97	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	412553	11.039	418558	11.048	99	50 - 200	-0.0090	+/-0.50	
1,4-Dichlorobenzene-d4	336911	13.432	354340	13.441	95	50 - 200	-0.0090	+/-0.50	
PZ-1-20111219 (1112148-01)			Lab File ID: 1214801.D			Analyzed: 12/22/11 10:45			
Fluorobenzene	927589	7.938	972929	7.937	95	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	406995	11.04	418558	11.048	97	50 - 200	-0.0080	+/-0.50	
1,4-Dichlorobenzene-d4	332598	13.432	354340	13.441	94	50 - 200	-0.0090	+/-0.50	
PZ-2-20111219 (1112148-02)			Lab File ID: 1214802.D			Analyzed: 12/22/11 11:12			
Fluorobenzene	917634	7.936	972929	7.937	94	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	407173	11.047	418558	11.048	97	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	333139	13.439	354340	13.441	94	50 - 200	-0.0020	+/-0.50	
LCS Dup (1L22008-BSD1)			Lab File ID: 1222LCD1.D			Analyzed: 12/22/11 12:33			
Fluorobenzene	939635	7.941	972929	7.937	97	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	412351	11.052	418558	11.048	99	50 - 200	0.0040	+/-0.50	
1,4-Dichlorobenzene-d4	342757	13.435	354340	13.441	97	50 - 200	-0.0060	+/-0.50	

INITIAL CALIBRATION DATA

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1339001	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	12/2/11 12:56 12/2/11 16:30

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	1	~~0.1335068~~	2	0.115004	4	0.1026466	10	8.805739E-02	20	9.520158E-02	100	8.970188E-02
Acrolein	2.502	~~5.448614E-02~~	5.005	3.794261E-02	10.01	3.488523E-02	25.02	4.195848E-02	50.05	3.095955E-02	250.2	3.152662E-02
Acrylonitrile	2.498	9.892984E-02	4.997	9.193731E-02	9.994	0.0854141	24.98	8.660182E-02	49.97	8.492225E-02	249.8	8.480822E-02
Benzene	0.5	1.002005	1	0.9758361	2	0.9595949	5	0.978979	10	0.9794671	50	0.9909189
Bromobenzene	0.5	0.7391788	1	0.6681687	2	0.6894439	5	0.6865754	10	0.6952162	50	0.6960435
Bromochloromethane	0.5	0.1324911	1	0.1218955	2	0.1282403	5	0.1260209	10	0.1296094	50	0.1341506
Tert-Amyl Methyl Ether	0.5	0.7624464	1	0.7558796	2	0.7334115	5	0.7284437	10	0.7254022	50	0.7422215
Bromodichloromethane	0.5	0.3331935	1	0.3240349	2	0.3209468	5	0.3336853	10	0.3364801	50	0.3567313
Bromoform	0.5	0.2331787	1	0.2405203	2	0.2240867	5	0.2703438	10	0.2829285	50	0.3404156
Bromomethane	0.5	0.1444822	1	0.1341993	2	0.1277955	5	0.131823	10	0.1269451	50	0.1435023
Bromofluorobenzene	30	0.8541456	35	0.8436867	40	0.8297531	50	0.7954482	60	0.7980153	70	0.8121436
n-Butylbenzene	0.5	1.98795	1	1.781137	2	1.882095	5	1.993521	10	2.02932	50	2.056779
2-Butanone	1	0.1303616	2	0.1540838	4	0.1595014	10	0.158452	20	0.1680283	100	0.1684123
sec-Butylbenzene	0.5	2.483589	1	2.363522	2	2.555168	5	2.619856	10	2.656116	50	2.736126
tert-Butylbenzene	0.5	1.953531	1	1.89139	2	1.934006	5	2.05692	10	2.032876	50	2.0767
Carbon disulfide	0.5	0.5808772	1	0.5571692	2	0.5490907	5	0.5657355	10	0.5841041	50	0.599884
Carbon tetrachloride	0.5	0.2254053	1	0.2244611	2	0.2392809	5	0.2581596	10	0.2718225	50	0.2852396
Chlorobenzene	0.5	1.533055	1	1.460602	2	1.445997	5	1.479192	10	1.487546	50	1.477133
Chloroethane	0.5	0.1324911	1	0.135107	2	0.1320625	5	0.1522552	10	0.1509981	50	0.1539355
Chloroform	0.5	0.6031557	1	0.5231151	2	0.4763212	5	0.4660608	10	0.456383	50	0.451927
2-Chloroethyl vinyl ether	0.9975	0.1822542	1.995	0.1767971	3.99	0.1830155	9.975	0.1841501	19.95	0.1870279	99.75	0.1888081
Chloromethane	0.5	0.3318831	1	0.336137	2	0.3108807	5	0.293972	10	0.3069757	50	0.3034021
1-Chlorohexane	0.5	0.8930669	1	0.7044626	2	0.687695	5	0.6963406	10	0.698309	50	0.6997354
2-Chlorotoluene	0.5	2.158745	1	1.992133	2	2.116465	5	2.120673	10	2.088939	50	2.058458
4-Chlorotoluene	0.5	2.550753	1	2.339514	2	2.37103	5	2.408384	10	2.367994	50	2.39072
Cyclohexane	0.5	0.4145098	1	0.4069009	2	0.4081318	5	0.4436222	10	0.4451632	50	0.4491153
Dibromochloromethane	0.5	~~0.4374949~~	1	0.4411956	2	0.4540983	5	0.4996053	10	0.5192106	50	0.5784628
1,2-Dibromo-3-chloropropane	0.5	~~9.060662E-02~~	1	9.390929E-02	2	0.1036358	5	0.1139957	10	0.1172084	50	0.1291988
1,2-Dibromoethane (EDB)	0.5	0.5783136	1	0.5343962	2	0.5237999	5	0.5272742	10	0.5423116	50	0.5557494
Dibromomethane	0.5	0.170561	1	0.1671104	2	0.1622774	5	0.1689247	10	0.1688625	50	0.169655
1,2-Dichlorobenzene	0.5	1.201701	1	1.162647	2	1.19531	5	1.216716	10	1.204904	50	1.216591

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 1339001

Instrument: MS-VOA6

Matrix: Water

Calibration Dates: 12/2/11 12:56 12/2/11 16:30

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	0.5	1.266818	1	1.245475	2	1.283741	5	1.262816	10	1.26732	50	1.280375
1,4-Dichlorobenzene	0.5	1.364867	1	1.232086	2	1.30333	5	1.285652	10	1.255977	50	1.277823
Dichlorodifluoromethane	0.5	0.1733786	1	0.1679845	2	0.1980608	5	0.2103747	10	0.2373484	50	0.234764
1,1-Dichloroethane	0.5	0.5333062	1	0.5024742	2	0.4966512	5	0.510471	10	0.5104416	50	0.5192727
1,2-Dichloroethane	0.5	0.4359364	1	0.4319456	2	0.4249197	5	0.4350177	10	0.4290417	50	0.4271111
1,1-Dichloroethene	0.5	0.1794724	1	0.1720521	2	0.1787358	5	0.1727927	10	0.177266	50	0.1754209
cis-1,2-Dichloroethene	0.5	0.2685206	1	0.2552207	2	0.2641415	5	0.2606396	10	0.2566904	50	0.2573129
trans-1,2-Dichloroethene	0.5	0.2340545	1	0.228159	2	0.2366285	5	0.2381549	10	0.2363687	50	0.2313858
1,2-Dichloroethene (total)	1	0.2512876	2	0.2416899	4	0.250385	10	0.2493973	20	0.2465295	100	0.2443493
1,2-Dichloropropane	0.5	0.2845742	1	0.2876612	2	0.292643	5	0.300695	10	0.2974696	50	0.3003158
1,3-Dichloropropane	0.5	0.937424	1	0.9039929	2	0.9104232	5	0.929181	10	0.9175159	50	0.9163508
2,2-Dichloropropane	0.5	0.3592724	1	0.3162693	2	0.3315072	5	0.3397636	10	0.3362344	50	0.3368897
1,1-Dichloropropene	0.5	0.3378458	1	0.336137	2	0.345725	5	0.3499206	10	0.3487637	50	0.3481776
cis-1,3-Dichloropropene	0.5	0.392559	1	0.3932188	2	0.386039	5	0.3991001	10	0.4014546	50	0.4224178
trans-1,3-Dichloropropene	0.5	0.9261829	1	0.845752	2	0.8467973	5	0.8682491	10	0.9171167	50	0.9478911
Diisopropyl Ether	0.5	1.212798	1	1.152023	2	1.180309	5	1.170869	10	1.187482	50	1.170344
Ethylbenzene	0.5	2.539445	1	2.461764	2	2.421141	5	2.486778	10	2.470395	50	2.534855
Ethyl tert-Butyl Ether	0.5	0.9231787	1	0.9304866	2	0.9137453	5	0.9168204	10	0.9091511	50	0.9219623
Ethyl Methacrylate	0.5	0.7680467	1	0.7746112	2	0.7892095	5	0.8097533	10	0.8173916	50	0.8206621
Hexachlorobutadiene	0.5	0.246703	1	0.2473776	2	0.2613283	5	0.2661757	10	0.2865042	50	0.2857134
2-Hexanone	1	0.4875486	2	0.5340527	4	0.4947607	10	0.5060864	20	0.5162769	100	0.5174374
Iodomethane	0.5	0.1737062	1	0.1821036	2	0.2086871	5	0.2429045	10	0.2606771	50	0.28194
Isopropylbenzene	0.5	2.026148	1	1.930269	2	1.998101	5	2.033473	10	2.077852	50	2.123442
p-Isopropyltoluene	0.5	2.145349	1	1.957228	2	2.161147	5	2.198788	10	2.20484	50	2.251905
Methylene chloride	0.5	0.2826084	1	0.2411016	2	0.2240252	5	0.2126442	10	0.2118662	50	0.209038
Methyl Acetate	0.5	~~0.2769733~~	1	0.2230492	2	0.1836618	5	0.1813248	10	0.1829438	50	0.1735973
Methylcyclohexane	0.5	0.274942	1	0.2619105	2	0.283483	5	0.311865	10	0.3164753	50	0.3224161
Naphthalene	0.5	1.5885	1	1.664697	2	1.633033	5	1.698935	10	1.700216	50	1.750177
Methyl Methacrylate	0.5	0.3451846	1	0.3392634	2	0.302149	5	0.3225679	10	0.3027173	50	0.3121504
4-Methyl-2-pentanone	1	0.3091787	2	0.3391121	4	0.3165892	10	0.313059	20	0.3127666	100	0.3168388
Methyl t-Butyl Ether	0.5	0.7098956	1	0.6671642	2	0.6562926	5	0.6598384	10	0.6532626	50	0.6610719

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 1339001

Instrument: MS-VOA6

Matrix: Water

Calibration Dates: 12/2/11 12:56 12/2/11 16:30

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	0.5	3.316723	1	3.053945	2	3.201376	5	3.311244	10	3.329717	50	3.354984
Styrene	0.5	1.614022	1	1.581587	2	1.583061	5	1.607236	10	1.619222	50	1.675655
1,1,2,2-Tetrachloroethane	0.5	0.8052268	1	0.7738051	2	0.8065123	5	0.8251726	10	0.8210343	50	0.809272
1,1,1,2-Tetrachloroethane	0.5	0.4501033	1	0.4262346	2	0.4443997	5	0.4567033	10	0.4761345	50	0.5069457
tert-Butyl alcohol	2.5	0.0153197	5	1.742036E-02	10	1.738757E-02	25	1.675366E-02	50	1.631297E-02	250	1.607894E-02
Tetrachloroethene	0.5	0.4897513	1	0.4618814	2	0.4568909	5	0.485064	10	0.4875532	50	0.4936236
Toluene	0.5	1.375223	1	1.295268	2	1.289121	5	1.297088	10	1.311957	50	1.298828
1,2,3-Trichlorobenzene	0.5	0.5873616	1	0.5966056	2	0.6072629	5	0.6305531	10	0.6251325	50	0.6535163
1,2,4-Trichlorobenzene	0.5	0.7255971	1	0.6719546	2	0.695274	5	0.7152276	10	0.7112657	50	0.7380298
1,1,2-Trichloroethane	0.5	0.4137973	1	0.4069228	2	0.4336822	5	0.3782678	10	0.4411404	50	0.4408192
1,1,1-Trichloroethane	0.5	0.3041005	1	0.3060161	2	0.3272402	5	0.3252387	10	0.3342038	50	0.3449766
Tetrahydrofuran	0.5	~~0.1486102~~	1	0.1211895	2	9.128721E-02	5	0.1038651	10	0.0824896	50	8.214604E-02
Trichloroethene	0.5	0.2489287	1	0.238345	2	0.239528	5	0.2488842	10	0.2437795	50	0.2512145
Trichlorofluoromethane	0.5	0.2765801	1	0.2766348	2	0.2887055	5	0.3094376	10	0.3154794	50	0.3167173
1,2,3-Trichloropropane	0.5	0.1917079	1	0.1813634	2	0.1695934	5	0.1724047	10	0.1719354	50	0.1780242
1,3,5-Trimethylbenzene	0.5	2.216234	1	2.064896	2	2.194122	5	2.219803	10	2.228759	50	2.215423
1,2,4-Trimethylbenzene	0.5	2.307027	1	2.196111	2	2.252003	5	2.331569	10	2.314326	50	2.322284
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.1418612	1	0.1570925	2	0.1615525	5	0.1714244	10	0.181049	50	0.1771013
Vinyl chloride	0.5	0.2279607	1	0.2161577	2	0.2166444	5	0.2024149	10	0.2247415	50	0.2158719
m,p-Xylene	1	1.986804	2	1.855235	4	1.882095	10	1.921309	20	1.933239	100	1.900597
o-Xylene	0.5	2.05972	1	1.98996	2	1.939758	5	1.979218	10	1.983467	50	1.994397
Vinyl acetate	0.996	0.7294896	1.992	0.7054183	3.984	0.7498626	9.96	0.7611268	19.92	0.7239881	99.62	0.7667232
Xylenes (total)	1.5	2.01111	3	1.900143	6	1.901316	15	1.940612	30	1.949982	150	1.931863
Dibromofluoromethane	30	0.2843011	35	0.282926	40	0.2744935	50	0.2732338	60	0.2679904	70	0.2718021
1,2-Dichloroethane-d4	30	6.265917E-02	35	6.214546E-02	40	6.073376E-02	50	5.965812E-02	60	5.817955E-02	70	5.887879E-02
Toluene-d8	30	2.190576	35	2.146662	40	2.085626	50	2.050112	60	2.031659	70	2.014296
tert-Amyl alcohol	2.5	1.344569E-02	5	1.530249E-02	10	1.413873E-02	25	1.493673E-02	50	1.475772E-02	250	1.523969E-02
tert-Amyl ethyl ether	0.5	0.7491449	1	0.7449877	2	0.7572341	5	0.7536715	10	0.7405085	50	0.7641413

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1112148
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 1339001
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 12/2/11 12:56 12/2/11 16:30

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	200	8.840897E-02	300	8.644501E-02	400	9.108873E-02						
Acrolein	500.5	3.149494E-02	750.8	0.0318388	1001	3.384793E-02						
Acrylonitrile	499.7	8.496367E-02	749.6	8.649634E-02	999.4	9.186434E-02						
Benzene	100	0.9894263	150	0.9715035	200	0.9818608						
Bromobenzene	100	0.714747	150	0.7092306	200	0.7305181						
Bromochloromethane	100	0.1344122	150	0.1305726	200	0.1311365						
Tert-Amyl Methyl Ether	100	0.7537619	150	0.7446632	200	0.786556						
Bromodichloromethane	100	0.3589106	150	0.3571183	200	0.3630629						
Bromoform	100	0.3661335	150	0.391121	200	0.4160858						
Bromomethane	100	0.1574809	150	0.1587643	200	0.1680458						
Bromofluorobenzene	30	0.8980685	30	0.9115712	30	0.9192461						
n-Butylbenzene	100	2.073833	150	2.048648	200	2.092546						
2-Butanone	200	0.1640302	300	0.1697161	400	0.1806348						
sec-Butylbenzene	100	2.767019	150	2.730533	200	2.757759						
tert-Butylbenzene	100	2.089633	150	2.100392	200	2.129154						
Carbon disulfide	100	0.609053	150	0.6069116	200	0.6313036						
Carbon tetrachloride	100	0.2952832	150	0.2995244	200	0.3102955						
Chlorobenzene	100	1.527017	150	1.524809	200	1.546824						
Chloroethane	100	0.154309	150	0.1530577	200	0.1573824						
Chloroform	100	0.4550283	150	0.4438055	200	0.4509299						
2-Chloroethyl vinyl ether	199.5	0.1876605	299.2	0.1824008	399	0.1904231						
Chloromethane	100	0.3088806	150	0.2990345	200	0.3002767						
1-Chlorohexane	100	0.7122009	150	0.718332	200	0.7326156						
2-Chlorotoluene	100	2.099223	150	2.065336	200	2.121417						
4-Chlorotoluene	100	2.409792	150	2.36533	200	2.400291						
Cyclohexane	100	0.441049	150	0.4466005	200	0.4521092						
Dibromochloromethane	100	0.6191405	150	0.6384233	200	~~0.6634735~~						
1,2-Dibromo-3-chloropropane	100	0.134974	150	0.1449978	200	~~0.1594623~~						
1,2-Dibromoethane (EDB)	100	0.5720409	150	0.588615	200	0.6034833						
Dibromomethane	100	0.1705194	150	0.1688986	200	0.1732102						
1,2-Dichlorobenzene	100	1.234286	150	1.224689	200	1.282363						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1112148
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 1339001
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 12/2/11 12:56 12/2/11 16:30

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	100	1.292089	150	1.283864	200	1.333423						
1,4-Dichlorobenzene	100	1.293533	150	1.280083	200	1.322659						
Dichlorodifluoromethane	100	0.2385143	150	0.2358743	200	0.2429939						
1,1-Dichloroethane	100	0.5183913	150	0.5120131	200	0.5291962						
1,2-Dichloroethane	100	0.4186895	150	0.4164762	200	0.4226428						
1,1-Dichloroethene	100	0.1785253	150	0.1823586	200	0.1891092						
cis-1,2-Dichloroethene	100	0.2597177	150	0.2531185	200	0.2579039						
trans-1,2-Dichloroethene	100	0.2306269	150	0.2199495	200	0.2343372						
1,2-Dichloroethene (total)	200	0.2451723	300	0.236534	400	0.2461206						
1,2-Dichloropropane	100	0.3000777	150	0.2887026	200	0.2929761						
1,3-Dichloropropane	100	0.9393526	150	0.9494214	200	0.9579985						
2,2-Dichloropropane	100	0.3368294	150	0.3300862	200	0.3372767						
1,1-Dichloropropene	100	0.3470379	150	0.3414935	200	0.3493534						
cis-1,3-Dichloropropene	100	0.4267715	150	0.4135858	200	0.4245388						
trans-1,3-Dichloropropene	100	0.972261	150	0.9734898	200	0.9599525						
Diisopropyl Ether	100	1.175522	150	1.159228	200	1.166127						
Ethylbenzene	100	2.568226	150	2.57405	200	2.597315						
Ethyl tert-Butyl Ether	100	0.9217934	150	0.8974108	200	0.927432						
Ethyl Methacrylate	100	0.8418982	150	0.85206	200	0.8814133						
Hexachlorobutadiene	100	0.2996034	150	0.3146827	200	0.3253979						
2-Hexanone	200	0.5244386	300	0.5449157	400	0.5752291						
Iodomethane	100	0.297591	150	0.2948543	200	0.3052985						
Isopropylbenzene	100	2.187137	150	2.169812	200	2.198334						
p-Isopropyltoluene	100	2.282021	150	2.252886	200	2.281687						
Methylene chloride	100	0.2087665	150	0.2059103	200	0.2110542						
Methyl Acetate	100	0.1787537	150	0.1988192	200	0.1921216						
Methylcyclohexane	100	0.322653	150	0.3283052	200	0.3352882						
Naphthalene	100	1.748949	150	1.834333	200	1.976985						
Methyl Methacrylate	100	0.3082128	150	0.3107941	200	0.3194078						
4-Methyl-2-pentanone	200	0.3108313	300	0.3172145	400	0.3253686						
Methyl t-Butyl Ether	100	0.66349	150	0.6612446	200	0.7103944						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: 1112148
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Calibration: 1339001
Instrument: MS-VOA6
Matrix: Water
Calibration Dates: 12/2/11 12:56 12/2/11 16:30

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	100	3.441499	150	3.335973	200	3.408908						
Styrene	100	1.695862	150	1.676053	200	1.705701						
1,1,2,2-Tetrachloroethane	100	0.8282633	150	0.8489838	200	0.8841465						
1,1,1,2-Tetrachloroethane	100	0.5233785	150	0.5314258	200	0.5418289						
tert-Butyl alcohol	500	1.621478E-02	750	1.714877E-02	1000	1.970285E-02						
Tetrachloroethene	100	0.5100607	150	0.5260919	200	0.5322746						
Toluene	100	1.319835	150	1.290192	200	1.262059						
1,2,3-Trichlorobenzene	100	0.6654253	150	0.6790509	200	0.7161985						
1,2,4-Trichlorobenzene	100	0.7626978	150	0.7655099	200	0.8032105						
1,1,2-Trichloroethane	100	0.4504669	150	0.4539716	200	0.4569663						
1,1,1-Trichloroethane	100	0.3492062	150	0.3484508	200	0.3608943						
Tetrahydrofuran	100	8.127669E-02	150	8.455516E-02	200	9.106678E-02						
Trichloroethene	100	0.2501071	150	0.2462037	200	0.2529705						
Trichlorofluoromethane	100	0.3192711	150	0.317632	200	0.333782						
1,2,3-Trichloropropane	100	0.1805381	150	0.1855056	200	0.1923391						
1,3,5-Trimethylbenzene	100	2.27872	150	2.247244	200	2.268678						
1,2,4-Trimethylbenzene	100	2.343087	150	2.310269	200	2.327643						
1,1,2-Trichloro-1,2,2-trifluoroethan	100	0.1796221	150	0.1867588	200	0.1905967						
Vinyl chloride	100	0.2275457	150	0.215752	200	0.217276						
m,p-Xylene	200	1.941335	300	1.901735	400	1.901628						
o-Xylene	100	2.000015	150	1.997585	200	2.034674						
Vinyl acetate	199.2	0.7657224	298.9	0.7166116	398.5	0.7906878						
Xylenes (total)	300	1.960895	450	1.933685	600	1.945977						
Dibromofluoromethane	30	0.2854826	30	0.2818059	30	0.2898564						
1,2-Dichloroethane-d4	30	6.268374E-02	30	6.257563E-02	30	6.451151E-02						
Toluene-d8	30	2.26642	30	2.330644	30	2.330357						
tert-Amyl alcohol	500	1.514499E-02	750	1.649139E-02	1000	1.840683E-02						
tert-Amyl ethyl ether	100	0.7643227	150	0.7422557	200	0.7530616						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1339001	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	12/2/11 12:56 12/2/11 16:30

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	9.456927E-02	10.30949	3.796125	9.293671E-02			15	
Acrolein	3.430677E-02	11.30235	3.676625	7.809149E-02			15	
Acrylonitrile	8.843754E-02	5.480833	4.627667	0.1299552			15	
Benzene	0.9810657	1.244646	7.651333	5.109562E-02			15	
Bromobenzene	0.7032358	3.186943	12.37278	2.888442E-02			15	
Bromochloromethane	0.1298366	3.093364	6.754222	4.976159E-02			15	
Tert-Amyl Methyl Ether	0.7480873	2.56294	7.847111	4.524242E-02			15	
Bromodichloromethane	0.3426849	4.743756	8.632666	3.748277E-02			15	
Bromoform	0.3072015	23.65786	11.78089	3.841048E-02	0.9964697		SPCC (0.1)	
Bromomethane	0.1436709	10.3684	2.844444	0.104006			15	
Bromofluorobenzene	0.851342	5.642258	12.21067	2.850399E-02			15	
n-Butylbenzene	1.993981	5.081419	13.79922	2.634329E-02			15	
2-Butanone	0.1614689	8.671298	6.222556	5.469666E-02			15	
sec-Butylbenzene	2.629965	5.297701	13.26211	2.095415E-02			15	
tert-Butylbenzene	2.0294	4.105309	13.02589	2.441336E-02			15	
Carbon disulfide	0.5871254	4.600465	4.785222	7.274708E-02			15	
Carbon tetrachloride	0.2677191	12.15376	7.620667	4.266387E-02			15	
Chlorobenzene	1.498019	2.380656	11.05689	2.792981E-02			SPCC (0.3)	
Chloroethane	0.1468443	7.079039	2.979	0.113385			15	
Chloroform	0.4807474	10.74666	6.728	5.512917E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1847264	2.270002	8.989222	0.037974			15	
Chloromethane	0.3101603	4.683572	2.260444	0.1500729			SPCC (0.1)	
1-Chlorohexane	0.7269731	8.762584	11.02389	3.711602E-02			15	
2-Chlorotoluene	2.091265	2.306145	12.59256	2.281191E-02			15	
4-Chlorotoluene	2.400423	2.538382	12.65489	2.093695E-02			15	
Cyclohexane	0.4341335	4.282556	7.550778	5.139886E-02			15	
Dibromochloromethane	0.5357338	14.56021	10.29414	3.788382E-02			15	
1,2-Dibromo-3-chloropropane	0.1197028	14.96539	14.39957	2.629119E-02			15	
1,2-Dibromoethane (EDB)	0.5584427	5.118421	10.50533	3.471372E-02			15	
Dibromomethane	0.168891	1.771221	8.569111	3.221419E-02			15	
1,2-Dichlorobenzene	1.215467	2.668239	13.75767	1.437621E-02			15	
1,3-Dichlorobenzene	1.279547	1.924144	13.35089	2.124435E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1339001	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	12/2/11 12:56 12/2/11 16:30

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.290668	2.954774	13.43933	2.530624E-02			15	
Dichlorodifluoromethane	0.2154771	13.64077	2.044778	0.1891542			15	
1,1-Dichloroethane	0.5146908	2.287848	5.771778	5.562889E-02			SPCC (0.1)	
1,2-Dichloroethane	0.4268645	1.605534	7.482889	4.150366E-02			15	
1,1-Dichloroethene	0.1784148	2.895736	4.26	0.0960822			CCC (20)	
cis-1,2-Dichloroethene	0.2592518	1.819308	6.478444	5.016468E-02			15	
trans-1,2-Dichloroethene	0.232185	2.40763	5.401	6.347852E-02			15	
1,2-Dichloroethene (total)	0.2457184	1.875522	0	0			15	
1,2-Dichloropropane	0.2939017	2.061186	8.456333	3.039512E-02			CCC (20)	
1,3-Dichloropropane	0.9290734	1.976735	10.036	2.607692E-02			15	
2,2-Dichloropropane	0.3360143	3.332965	6.582667	4.900901E-02			15	
1,1-Dichloropropene	0.3449394	1.499759	7.501333	5.641364E-02			15	
cis-1,3-Dichloropropene	0.4066317	3.799258	9.201667	3.429753E-02			15	
trans-1,3-Dichloropropene	0.9175214	5.651074	9.671667	2.872507E-02			15	
Diisopropyl Ether	1.174967	1.506658	6.148222	4.787027E-02			15	
Ethylbenzene	2.517108	2.370301	11.20433	2.912745E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.9179978	1.105193	6.606444	4.809911E-02			15	
Ethyl Methacrylate	0.8172273	4.543462	9.861	3.290663E-02			15	
Hexachlorobutadiene	0.2814985	10.05995	15.75867	1.874251E-02			15	
2-Hexanone	0.5223051	5.13048	9.973778	2.997856E-02			15	
Iodomethane	0.2497514	20.34564	4.453556	8.760914E-02	0.9994937		0.995	
Isopropylbenzene	2.08273	4.477281	12.10033	2.645974E-02			15	
p-Isopropyltoluene	2.192872	4.613879	13.40011	0.0287984			15	
Methylene chloride	0.2230016	11.14927	4.740556	9.654804E-02			15	
Methyl Acetate	0.1892839	8.30823	4.614625	8.504183E-02			15	
Methylcyclohexane	0.3063709	8.527561	8.781222	3.546714E-02			15	
Naphthalene	1.732869	6.708777	15.62956	1.520968E-02			15	
Methyl Methacrylate	0.3180497	4.820813	8.590889	4.146269E-02			15	
4-Methyl-2-pentanone	0.3178843	2.91065	9.127111	3.875109E-02			15	
Methyl t-Butyl Ether	0.671406	3.323622	5.406444	7.033515E-02			15	
n-Propylbenzene	3.306041	3.505189	12.50856	2.923911E-02			15	
Styrene	1.639822	2.959544	11.67711	3.154861E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1339001	Instrument:	MS-VOA6
Matrix:	Water	Calibration Dates:	12/2/11 12:56 12/2/11 16:30

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.8224907	3.758332	12.027	2.930954E-02			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.4841283	8.803367	11.09944	2.521904E-02			15	
tert-Butyl alcohol	1.692662E-02	7.363223	4.423222	0.1062945			15	
Tetrachloroethene	0.493688	5.21373	10.40267	2.952502E-02			15	
Toluene	1.304397	2.379552	9.673889	3.873018E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.640123	6.580751	15.91478	1.556871E-02			15	
1,2,4-Trichlorobenzene	0.7320852	5.480661	15.47733	2.096431E-02			15	
1,1,2-Trichloroethane	0.4306705	6.056433	9.827222	3.637868E-02			15	
1,1,1-Trichloroethane	0.3333697	5.885625	7.282778	5.190059E-02			15	
Tetrahydrofuran	9.223451E-02	15.06605	6.94425	3.706035E-02	0.9966094		0.995	
Trichloroethene	0.2466624	2.082319	8.407222	3.474499E-02			15	
Trichlorofluoromethane	0.3060266	6.663545	3.475667	0.1016077			15	
1,2,3-Trichloropropane	0.1803791	4.619362	12.14956	2.892179E-02			15	
1,3,5-Trimethylbenzene	2.214875	2.817883	12.68667	2.284223E-02			15	
1,2,4-Trimethylbenzene	2.30048	2.037037	13.05644	3.054658E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1718954	9.128151	4.335556	8.367357E-02			15	
Vinyl chloride	0.2182628	3.598105	2.404667	0.1885356			CCC (20)	
m,p-Xylene	1.913775	1.974659	11.31489	2.314191E-02			15	
o-Xylene	1.997644	1.69672	11.70644	2.887201E-02			15	
Vinyl acetate	0.7455145	3.771553	5.848333	6.087468E-02			15	
Xylenes (total)	1.941731	1.707398	0	0			15	
Dibromofluoromethane	0.2790991	2.650415	6.901	4.303995E-02			15	
1,2-Dichloroethane-d4	6.133619E-02	3.411187	7.393111	3.928713E-02			15	
Toluene-d8	2.160706	5.805526	9.598444	3.439024E-02			15	
tert-Amyl alcohol	1.531825E-02	9.321093	7.108778	4.275988E-02			15	
tert-Amyl ethyl ether	0.7521476	1.165375	8.723333	4.038806E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1202ICV2.D	Calibration Date:	12/02/11 12:56
Sequence:	1L33901	Injection Date:	12/02/11
Lab Sample ID:	1L33901-ICV2	Injection Time:	17:51

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Bromodichloromethane	A	100.0	95.41	0.3426849	0.3269566		-4.6	20
Bromoform	L	100.0	94.10	0.3072015	0.3719793	0.1	-5.9	20
Bromomethane	A	100.0	113.2	0.1436709	0.1626795		13.2	20
Carbon tetrachloride	A	100.0	108.4	0.2677191	0.290305		8.4	20
Chlorobenzene	A	100.0	98.32	1.498019	1.472813	0.3	-1.7	20
Chloroethane	A	100.0	105.8	0.1468443	0.1553361		5.8	20
Chloroform	A	100.0	89.48	0.4807474	0.4301593		-10.5	20
2-Chloroethyl vinyl ether	A	199.5	188.4	0.1847264	0.174032		-5.8	20
Chloromethane	A	100.0	93.81	0.3101603	0.2909525	0.1	-6.2	20
Dibromochloromethane	A	100.0	111.3	0.5357338	0.5964436		11.3	20
1,2-Dibromoethane (EDB)	A	100.0	101.3	0.5584427	0.5658607		1.3	20
1,2-Dichlorobenzene	A	100.0	100.7	1.215467	1.223493		0.7	20
1,3-Dichlorobenzene	A	100.0	98.12	1.279547	1.255508		-1.9	20
1,4-Dichlorobenzene	A	100.0	99.46	1.290668	1.283762		-0.5	20
Dichlorodifluoromethane	A	100.0	98.48	0.2154771	0.2122045		-1.5	20
1,1-Dichloroethane	A	100.0	97.24	0.5146908	0.5004974	0.1	-2.8	20
1,2-Dichloroethane	A	100.0	92.62	0.4268645	0.3953552		-7.4	20
1,1-Dichloroethene	A	100.0	91.13	0.1784148	0.1625944		-8.9	20
cis-1,2-Dichloroethene	A	100.0	97.44	0.2592518	0.2526214		-2.6	20
trans-1,2-Dichloroethene	A	100.0	94.84	0.232185	0.2201966		-5.2	20
1,2-Dichloropropane	A	100.0	96.31	0.2939017	0.2830659		-3.7	20
cis-1,3-Dichloropropene	A	100.0	102.7	0.4066317	0.4175693		2.7	20
trans-1,3-Dichloropropene	A	100.0	91.62	0.9175214	0.8406251		-8.4	20
Methylene chloride	A	100.0	89.39	0.2230016	0.1993456		-10.6	20
1,1,2,2-Tetrachloroethane	A	100.0	99.82	0.8224907	0.8209889	0.3	-0.2	20
Tetrachloroethene	A	100.0	102.6	0.493688	0.5064671		2.6	20
1,1,2-Trichloroethane	A	100.0	102.5	0.4306705	0.4414345		2.5	20
1,1,1-Trichloroethane	A	100.0	103.5	0.3333697	0.3449148		3.5	20
Trichloroethene	A	100.0	97.35	0.2466624	0.2401354		-2.6	20

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1202ICV2.D	Calibration Date:	12/02/11 12:56
Sequence:	1L33901	Injection Date:	12/02/11
Lab Sample ID:	1L33901-ICV2	Injection Time:	17:51

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Trichlorofluoromethane	A	100.0	102.2	0.3060266	0.3126162		2.2	20
Vinyl chloride	A	100.0	112.4	0.2182628	0.2453467		12.4	20
Bromofluorobenzene	A	30.00	31.18	0.851342	0.8847088		3.9	20
Dibromofluoromethane	A	30.00	30.52	0.2790991	0.2839505		1.7	20
1,2-Dichloroethane-d4	A	30.00	30.32	6.133619E-02	0.0619875		1.1	20
Toluene-d8	A	30.00	31.28	2.160706	2.252598		4.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1221CCV1.D	Calibration Date:	12/02/11 12:56
Sequence:	1L35602	Injection Date:	12/21/11
Lab Sample ID:	1L35602-CCV1	Injection Time:	07:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Bromodichloromethane	A	100.0	101.1	0.3426849	0.3465672		1.1	20
Bromoform	L	100.0	95.76	0.3072015	0.3787958	0.1	-4.2	20
Bromomethane	A	100.0	85.72	0.1436709	0.1231586		-14.3	20
Carbon tetrachloride	A	100.0	105.0	0.2677191	0.2811323		5.0	20
Chlorobenzene	A	100.0	100.8	1.498019	1.50928	0.3	0.8	20
Chloroethane	A	100.0	101.6	0.1468443	0.1492324		1.6	20
Chloroform	A	100.0	91.39	0.4807474	0.4393512		-8.6	20
2-Chloroethyl vinyl ether	A	199.5	140.1	0.1847264	0.1294036		-29.9	20 *
Chloromethane	A	100.0	77.11	0.3101603	0.2391741	0.1	-22.9	20 *
Dibromochloromethane	A	100.0	114.7	0.5357338	0.6142765		14.7	20
1,2-Dibromoethane (EDB)	A	100.0	102.4	0.5584427	0.5719598		2.4	20
1,2-Dichlorobenzene	A	100.0	99.51	1.215467	1.209502		-0.5	20
1,3-Dichlorobenzene	A	100.0	98.32	1.279547	1.258104		-1.7	20
1,4-Dichlorobenzene	A	100.0	99.70	1.290668	1.286803		-0.3	20
Dichlorodifluoromethane	A	100.0	87.05	0.2154771	0.1875784		-12.9	20
1,1-Dichloroethane	A	100.0	98.11	0.5146908	0.5049597	0.1	-1.9	20
1,2-Dichloroethane	A	100.0	93.35	0.4268645	0.398465		-6.7	20
1,1-Dichloroethene	A	100.0	101.4	0.1784148	0.1808772		1.4	20
cis-1,2-Dichloroethene	A	100.0	98.90	0.2592518	0.2563952		-1.1	20
trans-1,2-Dichloroethene	A	100.0	100.8	0.232185	0.2339668		0.8	20
1,2-Dichloropropane	A	100.0	99.52	0.2939017	0.292496		-0.5	20
cis-1,3-Dichloropropene	A	100.0	105.1	0.4066317	0.4273478		5.1	20
trans-1,3-Dichloropropene	A	100.0	103.7	0.9175214	0.9515875		3.7	20
Methylene chloride	A	100.0	94.80	0.2230016	0.2113974		-5.2	20
1,1,2,2-Tetrachloroethane	A	100.0	99.74	0.8224907	0.8203944	0.3	-0.3	20
Tetrachloroethene	A	100.0	103.0	0.493688	0.5082625		3.0	20
1,1,2-Trichloroethane	A	100.0	103.0	0.4306705	0.4434307		3.0	20
1,1,1-Trichloroethane	A	100.0	100.7	0.3333697	0.3357643		0.7	20
Trichloroethene	A	100.0	98.58	0.2466624	0.2431671		-1.4	20

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1221CCV1.D	Calibration Date:	12/02/11 12:56
Sequence:	1L35602	Injection Date:	12/21/11
Lab Sample ID:	1L35602-CCV1	Injection Time:	07:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	100.1	0.3060266	0.3064604		0.1	20
Vinyl chloride	A	100.0	89.18	0.2182628	0.1946497		-10.8	20
Bromofluorobenzene	A	30.00	31.81	0.851342	0.902697		6.0	20
Dibromofluoromethane	A	30.00	30.33	0.2790991	0.2821457		1.1	20
1,2-Dichloroethane-d4	A	30.00	30.74	6.133619E-02	6.284255E-02		2.5	20
Toluene-d8	A	30.00	31.58	2.160706	2.274346		5.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1222CCV1.D	Calibration Date:	12/02/11 12:56
Sequence:	1L35701	Injection Date:	12/22/11
Lab Sample ID:	1L35701-CCV1	Injection Time:	07:02

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Bromodichloromethane	A	100.0	103.4	0.3426849	0.3544501		3.4	20	
Bromoform	L	100.0	94.60	0.3072015	0.3740478	0.1	-5.4	20	
Bromomethane	A	100.0	90.96	0.1436709	0.1306896		-9.0	20	
Carbon tetrachloride	A	100.0	107.2	0.2677191	0.2869458		7.2	20	
Chlorobenzene	A	100.0	100.1	1.498019	1.499442	0.3	0.09	20	
Chloroethane	A	100.0	105.4	0.1468443	0.1548332		5.4	20	
Chloroform	A	100.0	92.82	0.4807474	0.4462556		-7.2	20	
2-Chloroethyl vinyl ether	A	199.5	151.8	0.1847264	0.1401804		-24.1	20	*
Chloromethane	A	100.0	81.20	0.3101603	0.2518491	0.1	-18.8	20	
Dibromochloromethane	A	100.0	113.5	0.5357338	0.6080197		13.5	20	
1,2-Dibromoethane (EDB)	A	100.0	103.0	0.5584427	0.5751339		3.0	20	
1,2-Dichlorobenzene	A	100.0	100.3	1.215467	1.218713		0.3	20	
1,3-Dichlorobenzene	A	100.0	98.37	1.279547	1.258704		-1.6	20	
1,4-Dichlorobenzene	A	100.0	99.29	1.290668	1.281457		-0.7	20	
Dichlorodifluoromethane	A	100.0	91.60	0.2154771	0.1973786		-8.4	20	
1,1-Dichloroethane	A	100.0	101.0	0.5146908	0.5198405	0.1	1.0	20	
1,2-Dichloroethane	A	100.0	95.63	0.4268645	0.4082311		-4.4	20	
1,1-Dichloroethene	A	100.0	105.0	0.1784148	0.1872516		5.0	20	
cis-1,2-Dichloroethene	A	100.0	100.6	0.2592518	0.2608602		0.6	20	
trans-1,2-Dichloroethene	A	100.0	100.8	0.232185	0.234067		0.8	20	
1,2-Dichloropropane	A	100.0	102.4	0.2939017	0.3009269		2.4	20	
cis-1,3-Dichloropropene	A	100.0	105.7	0.4066317	0.4299863		5.7	20	
trans-1,3-Dichloropropene	A	100.0	104.8	0.9175214	0.9614467		4.8	20	
Methylene chloride	A	100.0	97.49	0.2230016	0.2173999		-2.5	20	
1,1,2,2-Tetrachloroethane	A	100.0	103.4	0.8224907	0.8503333	0.3	3.4	20	
Tetrachloroethene	A	100.0	103.9	0.493688	0.5128866		3.9	20	
1,1,2-Trichloroethane	A	100.0	104.8	0.4306705	0.4514485		4.8	20	
1,1,1-Trichloroethane	A	100.0	103.0	0.3333697	0.3432047		3.0	20	
Trichloroethene	A	100.0	102.5	0.2466624	0.2528318		2.5	20	

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA6	Calibration:	1339001
Lab File ID:	1222CCV1.D	Calibration Date:	12/02/11 12:56
Sequence:	1L35701	Injection Date:	12/22/11
Lab Sample ID:	1L35701-CCV1	Injection Time:	07:02

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Trichlorofluoromethane	A	100.0	101.5	0.3060266	0.3105415		1.5	20
Vinyl chloride	A	100.0	91.50	0.2182628	0.1997153		-8.5	20
Bromofluorobenzene	A	30.00	31.41	0.851342	0.8913556		4.7	20
Dibromofluoromethane	A	30.00	30.22	0.2790991	0.2811983		0.8	20
1,2-Dichloroethane-d4	A	30.00	30.56	6.133619E-02	6.247835E-02		1.9	20
Toluene-d8	A	30.00	30.86	2.160706	2.223037		2.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L21008-BLK1 File ID: 1221BLK1.D

Sampled: Prepared: Analyzed: 12/21/11 09:25

Solids: Preparation: 5030B Dilution:

Batch: 1L21008 Sequence: 1L35602 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	Y, U
74-87-3	Chloromethane		0.500	1.00	2.00	Y, U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.96	103	75 - 120	
Dibromofluoromethane	30.00	30.53	102	85 - 115	
1,2-Dichloroethane-d4	30.00	30.57	102	70 - 120	
Toluene-d8	30.00	30.34	101	85 - 120	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L21008-BS1 File ID: 1221LCS1.D

Sampled: Prepared: Analyzed: 12/21/11 08:04

Solids: Preparation: 5030B Dilution:

Batch: 1L21008 Sequence: 1L35602 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	48.3	0.250	0.500	1.00	
75-25-2	Bromoform	45.2	0.250	0.500	1.00	
74-83-9	Bromomethane	42.7	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	52.8	0.250	0.500	1.00	
108-90-7	Chlorobenzene	50.0	0.250	0.500	1.00	
75-00-3	Chloroethane	56.7	0.500	1.00	2.00	
67-66-3	Chloroform	46.4	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	61.7	1.25	2.50	5.00	Y
74-87-3	Chloromethane	41.2	0.500	1.00	2.00	Y
124-48-1	Dibromochloromethane	52.6	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	49.7	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	49.5	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	49.5	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	50.0	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	44.5	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	50.1	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	46.7	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	49.0	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	51.0	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	49.7	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	50.3	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	54.0	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	46.9	0.250	0.500	1.00	
75-09-2	Methylene chloride	48.6	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	48.3	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	51.9	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	51.9	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	51.3	0.250	0.500	1.00	
79-01-6	Trichloroethene	50.4	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	51.5	0.500	1.00	2.00	
75-01-4	Vinyl chloride	57.7	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.80	103	75 - 120	
Dibromofluoromethane	30.00	29.91	99.7	85 - 115	
1,2-Dichloroethane-d4	30.00	29.90	99.7	70 - 120	
Toluene-d8	30.00	30.64	102	85 - 120	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L21008-BSD1 File ID: 1221LCD1.D

Sampled: Prepared: Analyzed: 12/21/11 13:54

Solids: Preparation: 5030B Dilution:

Batch: 1L21008 Sequence: 1L35602 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	48.4	0.250	0.500	1.00	
75-25-2	Bromoform	44.8	0.250	0.500	1.00	
74-83-9	Bromomethane	42.6	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	51.4	0.250	0.500	1.00	
108-90-7	Chlorobenzene	49.1	0.250	0.500	1.00	
75-00-3	Chloroethane	56.2	0.500	1.00	2.00	
67-66-3	Chloroform	46.5	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	69.5	1.25	2.50	5.00	Y
74-87-3	Chloromethane	43.9	0.500	1.00	2.00	Y
124-48-1	Dibromochloromethane	51.6	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	50.1	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	50.4	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	48.9	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	50.5	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	45.7	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	49.7	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	47.6	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	48.0	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	51.4	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	49.5	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	51.5	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	54.0	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	46.5	0.250	0.500	1.00	
75-09-2	Methylene chloride	48.6	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	50.7	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	49.5	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	53.0	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	50.7	0.250	0.500	1.00	
79-01-6	Trichloroethene	50.2	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	50.1	0.500	1.00	2.00	
75-01-4	Vinyl chloride	54.9	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.95	103	75 - 120	
Dibromofluoromethane	30.00	30.42	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.74	102	70 - 120	
Toluene-d8	30.00	30.37	101	85 - 120	

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L22008-BLK1 File ID: 1222BLK1.D

Sampled: Prepared: Analyzed: 12/22/11 08:58

Solids: Preparation: 5030B Dilution:

Batch: 1L22008 Sequence: 1L35701 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane		0.250	0.500	1.00	U
75-25-2	Bromoform		0.250	0.500	1.00	U
74-83-9	Bromomethane		0.500	1.00	2.00	U
56-23-5	Carbon tetrachloride		0.250	0.500	1.00	U
108-90-7	Chlorobenzene		0.250	0.500	1.00	U
75-00-3	Chloroethane		0.500	1.00	2.00	U
67-66-3	Chloroform		0.250	0.500	1.00	U
110-75-8	2-Chloroethyl vinyl ether		1.25	2.50	5.00	Y, U
74-87-3	Chloromethane		0.500	1.00	2.00	U
124-48-1	Dibromochloromethane		0.250	0.500	1.00	U
106-93-4	1,2-Dibromoethane (EDB)		0.250	0.500	1.00	U
95-50-1	1,2-Dichlorobenzene		0.250	0.500	1.00	U
541-73-1	1,3-Dichlorobenzene		0.250	0.500	1.00	U
106-46-7	1,4-Dichlorobenzene		0.250	0.500	1.00	U
75-71-8	Dichlorodifluoromethane		0.500	1.00	2.00	U
75-34-3	1,1-Dichloroethane		0.250	0.500	1.00	U
107-06-2	1,2-Dichloroethane		0.250	0.500	1.00	U
75-35-4	1,1-Dichloroethene		0.250	0.500	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	0.500	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	0.500	1.00	U
78-87-5	1,2-Dichloropropane		0.250	0.500	1.00	U
10061-01-5	cis-1,3-Dichloropropene		0.250	0.500	1.00	U
10061-02-6	trans-1,3-Dichloropropene		0.250	0.500	1.00	U
75-09-2	Methylene chloride		0.500	1.00	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane		0.250	0.500	1.00	U
127-18-4	Tetrachloroethene		0.250	0.500	1.00	U
79-00-5	1,1,2-Trichloroethane		0.250	0.500	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	0.500	1.00	U
79-01-6	Trichloroethene		0.250	0.500	1.00	U
75-69-4	Trichlorofluoromethane		0.500	1.00	2.00	U
75-01-4	Vinyl chloride		0.250	0.500	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.05	100	75 - 120	
Dibromofluoromethane	30.00	30.16	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.97	103	70 - 120	
Toluene-d8	30.00	30.07	100	85 - 120	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L22008-BS1 File ID: 1222LCS1.D

Sampled: Prepared: Analyzed: 12/22/11 07:37

Solids: Preparation: 5030B Dilution:

Batch: 1L22008 Sequence: 1L35701 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	49.5	0.250	0.500	1.00	
75-25-2	Bromoform	46.0	0.250	0.500	1.00	
74-83-9	Bromomethane	42.8	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	53.1	0.250	0.500	1.00	
108-90-7	Chlorobenzene	49.7	0.250	0.500	1.00	
75-00-3	Chloroethane	57.3	0.500	1.00	2.00	
67-66-3	Chloroform	46.8	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	69.9	1.25	2.50	5.00	Y
74-87-3	Chloromethane	41.2	0.500	1.00	2.00	
124-48-1	Dibromochloromethane	53.1	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	50.1	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	50.0	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	49.9	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	50.9	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	46.0	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	51.0	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	47.5	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	49.7	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	51.5	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	51.1	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	52.7	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	54.9	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	47.8	0.250	0.500	1.00	
75-09-2	Methylene chloride	49.4	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	50.7	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	51.3	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	52.3	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	52.0	0.250	0.500	1.00	
79-01-6	Trichloroethene	51.2	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	51.8	0.500	1.00	2.00	
75-01-4	Vinyl chloride	57.9	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.85	103	75 - 120	
Dibromofluoromethane	30.00	30.26	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.21	101	70 - 120	
Toluene-d8	30.00	30.43	101	85 - 120	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L22008-BSD1 File ID: 1222LCD1.D

Sampled: Prepared: Analyzed: 12/22/11 12:33

Solids: Preparation: 5030B Dilution:

Batch: 1L22008 Sequence: 1L35701 Calibration: 1339001 Instrument: MS-VOA6

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
75-27-4	Bromodichloromethane	47.9	0.250	0.500	1.00	
75-25-2	Bromoform	42.3	0.250	0.500	1.00	
74-83-9	Bromomethane	45.1	0.500	1.00	2.00	
56-23-5	Carbon tetrachloride	51.4	0.250	0.500	1.00	
108-90-7	Chlorobenzene	48.0	0.250	0.500	1.00	
75-00-3	Chloroethane	56.9	0.500	1.00	2.00	
67-66-3	Chloroform	45.6	0.250	0.500	1.00	
110-75-8	2-Chloroethyl vinyl ether	62.7	1.25	2.50	5.00	Y
74-87-3	Chloromethane	45.0	0.500	1.00	2.00	
124-48-1	Dibromochloromethane	49.5	0.250	0.500	1.00	
106-93-4	1,2-Dibromoethane (EDB)	48.0	0.250	0.500	1.00	
95-50-1	1,2-Dichlorobenzene	49.7	0.250	0.500	1.00	
541-73-1	1,3-Dichlorobenzene	48.2	0.250	0.500	1.00	
106-46-7	1,4-Dichlorobenzene	49.2	0.250	0.500	1.00	
75-71-8	Dichlorodifluoromethane	46.0	0.500	1.00	2.00	
75-34-3	1,1-Dichloroethane	49.9	0.250	0.500	1.00	
107-06-2	1,2-Dichloroethane	46.8	0.250	0.500	1.00	
75-35-4	1,1-Dichloroethene	48.3	0.250	0.500	1.00	
156-59-2	cis-1,2-Dichloroethene	50.8	0.250	0.500	1.00	
156-60-5	trans-1,2-Dichloroethene	49.0	0.250	0.500	1.00	
78-87-5	1,2-Dichloropropane	50.9	0.250	0.500	1.00	
10061-01-5	cis-1,3-Dichloropropene	53.0	0.250	0.500	1.00	
10061-02-6	trans-1,3-Dichloropropene	45.4	0.250	0.500	1.00	
75-09-2	Methylene chloride	48.6	0.500	1.00	2.00	
79-34-5	1,1,2,2-Tetrachloroethane	47.3	0.250	0.500	1.00	
127-18-4	Tetrachloroethene	49.4	0.250	0.500	1.00	
79-00-5	1,1,2-Trichloroethane	51.2	0.250	0.500	1.00	
71-55-6	1,1,1-Trichloroethane	50.5	0.250	0.500	1.00	
79-01-6	Trichloroethene	49.7	0.250	0.500	1.00	
75-69-4	Trichlorofluoromethane	52.6	0.500	1.00	2.00	
75-01-4	Vinyl chloride	57.5	0.250	0.500	1.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.64	102	75 - 120	
Dibromofluoromethane	30.00	30.23	101	85 - 115	
1,2-Dichloroethane-d4	30.00	29.42	98.1	70 - 120	
Toluene-d8	30.00	30.41	101	85 - 120	

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PZ-1-20111219	12/19/11 08:30	12/20/11 08:20	12/22/11 00:00	N/A	14.00	12/22/11 10:45	3.14	14.00	
PZ-2-20111219	12/19/11 09:30	12/20/11 08:20	12/22/11 00:00	N/A	14.00	12/22/11 11:12	3.11	14.00	
Trip Blank 0581	12/19/11 00:00	12/20/11 08:20	12/21/11 00:00	N/A	14.00	12/21/11 10:19	2.47	14.00	

Data for SW8270D (PAH) Forms

ANALYSIS DATA SHEET

PZ-1-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-01	File ID:	1214801.D
Sampled:	12/19/11 08:30	Prepared:	12/21/11 09:40	Analyzed:	12/29/11 00:24
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 1L20010 Sequence: 1L36307 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0467	0.0935	0.187	U
208-96-8	Acenaphthylene		0.0467	0.0935	0.187	U
120-12-7	Anthracene		0.0467	0.0935	0.187	U
56-55-3	Benzo(a)anthracene		0.0467	0.0935	0.187	U
50-32-8	Benzo(a)pyrene		0.0467	0.0935	0.187	U
205-99-2	Benzo(b)fluoranthene		0.0467	0.0935	0.187	U
191-24-2	Benzo(g,h,i)perylene		0.0467	0.0935	0.187	U
207-08-9	Benzo(k)fluoranthene		0.0467	0.0935	0.187	U
218-01-9	Chrysene		0.0467	0.0935	0.187	U
53-70-3	Dibenz(a,h)anthracene		0.0467	0.0935	0.187	U
206-44-0	Fluoranthene		0.0467	0.0935	0.187	U
86-73-7	Fluorene		0.0467	0.0935	0.187	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0467	0.0935	0.187	U
90-12-0	1-Methylnaphthalene		0.0467	0.0935	0.187	U
91-57-6	2-Methylnaphthalene		0.0467	0.0935	0.187	U
91-20-3	Naphthalene		0.0467	0.0935	0.187	U
85-01-8	Phenanthrene		0.0935	0.187	0.374	U
129-00-0	Pyrene		0.0467	0.0935	0.187	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.73	29.65	63.4	34 - 167	
Terphenyl-d14	46.73	35.23	75.4	34 - 167	

ANALYSIS DATA SHEET

PZ-2-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-02	File ID:	1214802.D
Sampled:	12/19/11 09:30	Prepared:	12/21/11 09:40	Analyzed:	12/29/11 00:51
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 1L20010 Sequence: 1L36307 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0485	0.0971	0.194	U
208-96-8	Acenaphthylene		0.0485	0.0971	0.194	U
120-12-7	Anthracene		0.0485	0.0971	0.194	U
56-55-3	Benzo(a)anthracene	0.103	0.0485	0.0971	0.194	I
50-32-8	Benzo(a)pyrene	0.0778	0.0485	0.0971	0.194	I
205-99-2	Benzo(b)fluoranthene	0.112	0.0485	0.0971	0.194	I
191-24-2	Benzo(g,h,i)perylene	0.145	0.0485	0.0971	0.194	I
207-08-9	Benzo(k)fluoranthene	0.101	0.0485	0.0971	0.194	I
218-01-9	Chrysene	0.0987	0.0485	0.0971	0.194	I
53-70-3	Dibenz(a,h)anthracene	0.134	0.0485	0.0971	0.194	I
206-44-0	Fluoranthene	0.0975	0.0485	0.0971	0.194	I
86-73-7	Fluorene		0.0485	0.0971	0.194	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.115	0.0485	0.0971	0.194	I
90-12-0	1-Methylnaphthalene		0.0485	0.0971	0.194	U
91-57-6	2-Methylnaphthalene		0.0485	0.0971	0.194	U
91-20-3	Naphthalene		0.0485	0.0971	0.194	U
85-01-8	Phenanthrene		0.0971	0.194	0.388	U
129-00-0	Pyrene	0.0958	0.0485	0.0971	0.194	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	48.54	26.12	53.8	34 - 167	
Terphenyl-d14	48.54	35.68	73.5	34 - 167	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L36307	Instrument:	MS-BNA4
		Calibration:	1238006

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1L36307-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 12/28/11 13:54		
2-Fluorobiphenyl	5.000	96.9	80 - 120	7.249	7.249	0.0000	+/-0.500	
Terphenyl-d14	5.000	107	80 - 120	11.916	11.916	0.0000	+/-0.500	
LCS (1L20010-BS2) ug/L				Lab File ID: L20010L1.D		Analyzed: 12/28/11 21:39		
2-Fluorobiphenyl	50.00	61.2	34 - 167	7.258	7.249	0.0090	+/-0.500	
Terphenyl-d14	50.00	89.8	34 - 167	11.925	11.916	0.0090	+/-0.500	
LCS Dup (1L20010-BSD2) ug/L				Lab File ID: L20010L2.D		Analyzed: 12/28/11 22:06		
2-Fluorobiphenyl	50.00	65.7	34 - 167	7.258	7.249	0.0090	+/-0.500	
Terphenyl-d14	50.00	87.7	34 - 167	11.925	11.916	0.0090	+/-0.500	
Blank (1L20010-BLK2) ug/L				Lab File ID: L20010B1.D		Analyzed: 12/28/11 22:33		
2-Fluorobiphenyl	50.00	61.9	34 - 167	7.258	7.249	0.0090	+/-0.500	
Terphenyl-d14	50.00	91.0	34 - 167	11.925	11.916	0.0090	+/-0.500	
PZ-1-20111219 (1112148-01) ug/L				Lab File ID: 1214801.D		Analyzed: 12/29/11 00:24		
2-Fluorobiphenyl	46.73	63.4	34 - 167	7.258	7.249	0.0090	+/-0.500	
Terphenyl-d14	46.73	75.4	34 - 167	11.925	11.916	0.0090	+/-0.500	
PZ-2-20111219 (1112148-02) ug/L				Lab File ID: 1214802.D		Analyzed: 12/29/11 00:51		
2-Fluorobiphenyl	48.54	53.8	34 - 167	7.258	7.249	0.0090	+/-0.500	
Terphenyl-d14	48.54	73.5	34 - 167	11.925	11.916	0.0090	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L20010	Laboratory ID:	1L20010-BS2
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.6800	68.0	41 - 132
Acenaphthylene	1.000	0.6032	60.3	43 - 140
Anthracene	1.000	0.6843	68.4	50 - 139
Benzo(a)anthracene	1.000	0.8438	84.4	58 - 141
Benzo(a)pyrene	1.000	0.6660	66.6	31 - 142
Benzo(b)fluoranthene	1.000	0.7206	72.1	42 - 156
Benzo(g,h,i)perylene	1.000	0.8067	80.7	12 - 171
Benzo(k)fluoranthene	1.000	0.7154	71.5	49 - 165
Chrysene	1.000	0.7903	79.0	51 - 155
Dibenz(a,h)anthracene	1.000	0.7453	74.5	28 - 153
Fluoranthene	1.000	0.8251	82.5	47 - 158
Fluorene	1.000	0.7201	72.0	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.7537	75.4	20 - 167
1-Methylnaphthalene	1.000	0.6502	65.0	35 - 131
2-Methylnaphthalene	1.000	0.6720	67.2	36 - 121
Naphthalene	1.000	0.6006	60.1	39 - 125
Phenanthrene	1.000	0.7748	77.5	46 - 144
Pyrene	1.000	0.8166	81.7	39 - 158

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.000	0.7150	71.5	5.01	30	41 - 132
Acenaphthylene	1.000	0.6448	64.5	6.67	30	43 - 140
Anthracene	1.000	0.6973	69.7	1.89	30	50 - 139
Benzo(a)anthracene	1.000	0.7929	79.3	6.22	30	58 - 141
Benzo(a)pyrene	1.000	0.6889	68.9	3.38	30	31 - 142
Benzo(b)fluoranthene	1.000	0.7576	75.8	5.01	30	42 - 156
Benzo(g,h,i)perylene	1.000	0.8631	86.3	6.75	30	12 - 171
Benzo(k)fluoranthene	1.000	0.7586	75.9	5.87	30	49 - 165
Chrysene	1.000	0.7856	78.6	0.589	30	51 - 155

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L20010	Laboratory ID:	1L20010-BSD2
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenz(a,h)anthracene	1.000	0.7569	75.7	1.54	30	28 - 153
Fluoranthene	1.000	0.8047	80.5	2.50	30	47 - 158
Fluorene	1.000	0.7620	76.2	5.65	30	40 - 140
Indeno(1,2,3-cd)pyrene	1.000	0.7637	76.4	1.32	30	20 - 167
1-Methylnaphthalene	1.000	0.6770	67.7	4.05	30	35 - 131
2-Methylnaphthalene	1.000	0.7126	71.3	5.88	30	36 - 121
Naphthalene	1.000	0.6666	66.7	10.4	30	39 - 125
Phenanthrene	1.000	0.7892	78.9	1.83	30	46 - 144
Pyrene	1.000	0.7984	79.8	2.25	30	39 - 158

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 1L20010 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PZ-1-20111219	1112148-01	12/21/11 09:40	1,070.00	1.00
PZ-2-20111219	1112148-02	12/21/11 09:40	1,030.00	1.00
Blank	1L20010-BLK2	12/21/11 09:40	1,000.00	1.00
LCS	1L20010-BS2	12/21/11 09:40	1,000.00	1.00
LCS Dup	1L20010-BSD2	12/21/11 09:40	1,000.00	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	08/24/11
Instrument ID:	MS-BNA4	Injection Time:	14:16
Sequence:	1H23712	Lab Sample ID:	1H23712-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	46.6	PASS
68	Less than 2% of 69	1.46	PASS
69	Less than 200% of 198	49.8	PASS
70	Less than 2% of 69	0.379	PASS
127	40 - 60% of 198	57.3	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.71	PASS
275	10 - 30% of 198	25	PASS
365	1 - 200% of 198	3.37	PASS
441	0.001 - 100% of 443	79.7	PASS
442	40 - 200% of 198	97.7	PASS
443	17 - 23% of 442	19.5	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	12/28/11
Instrument ID:	MS-BNA4	Injection Time:	13:36
Sequence:	1L36307	Lab Sample ID:	1L36307-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	38.7	PASS
68	Less than 2% of 69	1.91	PASS
69	Less than 200% of 198	45.9	PASS
70	Less than 2% of 69	0.522	PASS
127	40 - 60% of 198	52.4	PASS
197	Less than 1% of 198	0.717	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.13	PASS
275	10 - 30% of 198	23.4	PASS
365	1 - 200% of 198	2.46	PASS
441	0.001 - 100% of 443	80.7	PASS
442	40 - 200% of 198	76.9	PASS
443	17 - 23% of 442	20.1	PASS

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1H23712	Instrument:	MS-BNA4
Calibration:	1238006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1H23712-TUN1	SEQ-TUN1.D	08/24/11 14:16
Cal Standard	1H23712-CAL1	SEQ-CAL1.D	08/24/11 14:35
Cal Standard	1H23712-CAL2	SEQ-CAL2.D	08/24/11 15:05
Cal Standard	1H23712-CAL3	SEQ-CAL3.D	08/24/11 15:35
Cal Standard	1H23712-CAL4	SEQ-CAL4.D	08/24/11 16:05
Cal Standard	1H23712-CAL5	SEQ-CAL5.D	08/24/11 16:35
Cal Standard	1H23712-CAL6	SEQ-CAL6.D	08/24/11 17:05
Cal Standard	1H23712-CAL7	SEQ-CAL7.D	08/24/11 17:34
Cal Standard	1H23712-CAL9	SEQ-CAL9.D	08/24/11 18:33
Initial Cal Check	1H23712-ICV1	SEQ-ICV1.D	08/24/11 19:02

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L36307	Instrument:	MS-BNA4
Calibration:	1238006		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1L36307-TUN1	SEQ-TUN1.D	12/28/11 13:36
Calibration Check	1L36307-CCV1	SEQ-CCV1.D	12/28/11 13:54
LCS	1L20010-BS2	L20010L1.D	12/28/11 21:39
LCS Dup	1L20010-BSD2	L20010L2.D	12/28/11 22:06
Blank	1L20010-BLK2	L20010B1.D	12/28/11 22:33
PZ-1-20111219	1112148-01	1214801.D	12/29/11 00:24
PZ-2-20111219	1112148-02	1214802.D	12/29/11 00:51

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	1L36307	Instrument:	MS-BNA4
		Calibration:	1238006

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1L36307-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 12/28/11 13:54			
Phenanthrene-d10	100847	9.861	105583	10.012	96	50 - 200	-0.1510	+/-0.50	
Perylene-d12	49551	16.21	58058	16.483	85	50 - 200	-0.2730	+/-0.50	
LCS (1L20010-BS2)			Lab File ID: L20010L1.D			Analyzed: 12/28/11 21:39			
Phenanthrene-d10	114450	9.861	100847	9.861	113	50 - 200	0.0000	+/-0.50	
Perylene-d12	58383	16.22	49551	16.21	118	50 - 200	0.0100	+/-0.50	
LCS Dup (1L20010-BSD2)			Lab File ID: L20010L2.D			Analyzed: 12/28/11 22:06			
Phenanthrene-d10	107720	9.861	100847	9.861	107	50 - 200	0.0000	+/-0.50	
Perylene-d12	52553	16.22	49551	16.21	106	50 - 200	0.0100	+/-0.50	
Blank (1L20010-BLK2)			Lab File ID: L20010B1.D			Analyzed: 12/28/11 22:33			
Phenanthrene-d10	122977	9.861	100847	9.861	122	50 - 200	0.0000	+/-0.50	
Perylene-d12	51420	16.22	49551	16.21	104	50 - 200	0.0100	+/-0.50	
PZ-1-20111219 (1112148-01)			Lab File ID: 1214801.D			Analyzed: 12/29/11 00:24			
Phenanthrene-d10	114003	9.861	100847	9.861	113	50 - 200	0.0000	+/-0.50	
Perylene-d12	52427	16.22	49551	16.21	106	50 - 200	0.0100	+/-0.50	
PZ-2-20111219 (1112148-02)			Lab File ID: 1214802.D			Analyzed: 12/29/11 00:51			
Phenanthrene-d10	113182	9.861	100847	9.861	112	50 - 200	0.0000	+/-0.50	
Perylene-d12	55838	16.211	49551	16.21	113	50 - 200	0.0010	+/-0.50	

INITIAL CALIBRATION DATA

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.9250935	0.2	0.9137168	0.5	0.9364989	1	0.8390082	5	0.9269314	10	0.8393586
Acenaphthylene	0.1	1.310504	0.2	1.352461	0.5	1.271225	1	1.290937	5	1.386269	10	1.244926
Anthracene	0.1	1.06615	0.2	1.134831	0.5	1.101345	1	1.102299	5	1.188356	10	1.148519
Benzo(a)anthracene	0.1	0.5409415	0.2	0.6742062	0.5	0.5788873	1	0.7281002	5	0.6593813	10	0.7987934
Benzo(a)pyrene	0.1	1.378905	0.2	1.002256	0.5	1.016483	1	1.019308	5	1.075559	10	1.127809
Benzo(b)fluoranthene	0.1	1.122247	0.2	1.081127	0.5	1.238364	1	1.347532	5	1.400773	10	1.437569
Benzo(g,h,i)perylene	0.1	0.6978619	0.2	0.7632258	0.5	0.8646701	1	0.7961693	5	0.8182613	10	0.795468
Benzo(k)fluoranthene	0.1	1.344346	0.2	1.226983	0.5	1.325082	1	1.236505	5	1.347683	10	1.446366
Chrysene	0.1	0.5955121	0.2	0.6734888	0.5	0.5942531	1	0.7589479	5	0.660282	10	0.8081928
Dibenz(a,h)anthracene	0.1	0.6888766	0.2	0.7301866	0.5	0.6212773	1	0.7604637	5	0.8511152	10	0.8183589
Fluoranthene	0.1	0.9437932	0.2	1.144311	0.5	0.9607296	1	1.154921	5	1.122071	10	1.164182
Fluorene	0.1	0.7208357	0.2	0.7935516	0.5	0.8908906	1	0.8564163	5	0.9304082	10	0.8408686
2-Fluorobiphenyl	0.1	0.9588967	0.2	1.008414	0.5	0.9847565	1	0.9339003	5	0.9920094	10	0.8838859
Indeno(1,2,3-cd)pyrene	0.1	0.7780389	0.2	0.7517426	0.5	0.7584511	1	0.7398291	5	0.7760122	10	0.8214657
1-Methylnaphthalene	0.1	0.9628524	0.2	0.8826634	0.5	0.9399633	1	0.8267998	5	0.8932794	10	0.7948718
2-Methylnaphthalene	0.1	0.9978244	0.2	0.8913748	0.5	0.9675566	1	0.8669293	5	0.9100694	10	0.7917116
Naphthalene	0.1	1.747878	0.2	1.602784	0.5	1.531261	1	1.442401	5	1.532498	10	1.3281
Phenanthrene	0.1	1.100493	0.2	1.227222	0.5	1.113348	1	1.180057	5	1.188825	10	1.148797
Pyrene	0.1	1.188956	0.2	1.014922	0.5	0.9682087	1	1.142021	5	1.1344	10	1.157542
Terphenyl-d14	0.1	0.5796893	0.2	0.6757435	0.5	0.5439169	1	0.6142371	5	0.613267	10	0.6844251
2,4,6-Tribromophenol	0.2	~~0.144293~~	0.4	~~0.1036649~~	1	0.1499083	2	0.1575348	10	0.1820851	20	0.1756278

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	20	0.8784872	50	0.8458228								
Acenaphthylene	20	1.297533	50	1.20877								
Anthracene	20	1.205372	50	1.177482								
Benzo(a)anthracene	20	0.7839756	50	0.8122166								
Benzo(a)pyrene	20	1.205292	50	1.177397								
Benzo(b)fluoranthene	20	1.575784	50	1.477207								
Benzo(g,h,i)perylene	20	0.9098913	50	0.885178								
Benzo(k)fluoranthene	20	1.46597	50	1.416125								
Chrysene	20	0.7485348	50	0.7758677								
Dibenz(a,h)anthracene	20	0.9273779	50	0.9395602								
Fluoranthene	20	1.131794	50	1.144791								
Fluorene	20	0.885353	50	0.8574573								
2-Fluorobiphenyl	20	0.9326552	50	0.8648192								
Indeno(1,2,3-cd)pyrene	20	0.9101472	50	0.9226895								
1-Methylnaphthalene	20	0.8391113	50	0.7766753								
2-Methylnaphthalene	20	0.8795573	50	0.8287812								
Naphthalene	20	1.40468	50	1.318393								
Phenanthrene	20	1.192468	50	1.157994								
Pyrene	20	1.154247	50	1.138918								
Terphenyl-d14	20	0.6894383	50	0.6732402								
2,4,6-Tribromophenol	40	0.1903821	100	0.183212								

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	1238006	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	8/24/11 14:35 8/24/11 18:33

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8881147	4.765862	8.240375	8.005672E-02			15	
Acenaphthylene	1.295328	4.367363	8.027625	8.607367E-02			15	
Anthracene	1.140544	4.254591	10.10862	0.0700752			15	
Benzo(a)anthracene	0.6970627	14.59061	13.80988	0.0529908			15	
Benzo(a)pyrene	1.125376	11.34597	16.38237	4.577814E-02			15	
Benzo(b)fluoranthene	1.335075	13.04297	15.80187	8.137397E-02			15	
Benzo(g,h,i)perylene	0.8163407	8.478144	18.8055	4.843521E-02			15	
Benzo(k)fluoranthene	1.351132	6.606248	15.85263	0.0761119			15	
Chrysene	0.7018849	11.75411	13.87237	4.522786E-02			15	
Dibenz(a,h)anthracene	0.792152	14.22527	18.3905	4.438511E-02			15	
Fluoranthene	1.095824	8.181104	11.52912	1.610412E-02			15	
Fluorene	0.8469727	7.646974	8.87125	4.967807E-02			15	
2-Fluorobiphenyl	0.9449172	5.432361	7.39325	5.511184E-02			15	
Indeno(1,2,3-cd)pyrene	0.807297	8.877407	18.33625	0.0475878			15	
1-Methylnaphthalene	0.8645271	7.716576	7.057125	4.664672E-02			15	
2-Methylnaphthalene	0.8917256	7.590679	6.94225	9.738335E-02			15	
Naphthalene	1.488499	9.765898	6.111375	7.795345E-02			15	
Phenanthrene	1.163651	3.638206	10.04475	7.061639E-02			15	
Pyrene	1.112402	6.963902	11.839	6.221472E-02			15	
Terphenyl-d14	0.6342447	8.591082	12.10513	2.846396E-02			15	
2,4,6-Tribromophenol	0.173125	9.199082	9.170834	8.799438E-02			15	

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	1238006
Lab File ID:	SEQ-ICV1.D	Calibration Date:	08/24/11 14:16
Sequence:	1H23712	Injection Date:	08/24/11
Lab Sample ID:	1H23712-ICV1	Injection Time:	19:02

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.510	0.8881147	0.9786847		10.2	20
Acenaphthylene	A	5.000	5.578	1.295328	1.445077		11.6	20
Anthracene	A	5.000	5.626	1.140544	1.283382		12.5	20
Benzo(a)anthracene	A	5.000	5.418	0.6970627	0.7552943		8.4	20
Benzo(a)pyrene	A	5.000	5.079	1.125376	1.143152		1.6	20
Benzo(b)fluoranthene	A	5.000	5.229	1.335075	1.39628		4.6	20
Benzo(g,h,i)perylene	A	5.000	5.076	0.8163407	0.8286846		1.5	20
Benzo(k)fluoranthene	A	5.000	5.414	1.351132	1.462908		8.3	20
Chrysene	A	5.000	5.424	0.7018849	0.7614294		8.5	20
Dibenz(a,h)anthracene	A	5.000	5.548	0.792152	0.8789424		11.0	20
Fluoranthene	A	5.000	5.359	1.095824	1.174563		7.2	20
Fluorene	A	5.000	5.736	0.8469727	0.9715661		14.7	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.009	0.807297	0.808753		0.2	20
1-Methylnaphthalene	A	5.000	4.971	0.8645271	0.8594861		-0.6	20
2-Methylnaphthalene	A	5.000	5.068	0.8917256	0.9037654		1.4	20
Naphthalene	A	5.000	5.687	1.488499	1.69304		13.7	20
Phenanthrene	A	5.000	5.574	1.163651	1.297238		11.5	20
Pyrene	A	5.000	5.539	1.112402	1.232241		10.8	20
2-Fluorobiphenyl	A	5.000	5.058	0.9449172	0.9558622		1.2	20
Terphenyl-d14	A	5.000	5.406	0.6342447	0.6857866		8.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	1238006
Lab File ID:	SEQ-CCV1.D	Calibration Date:	08/24/11 14:16
Sequence:	1L36307	Injection Date:	12/28/11
Lab Sample ID:	1L36307-CCV1	Injection Time:	13:54

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.554	0.8881147	0.8089066		-8.9	20
Acenaphthylene	A	5.000	4.591	1.295328	1.189485		-8.2	20
Anthracene	A	5.000	4.377	1.140544	0.9985027		-12.5	20
Benzo(a)anthracene	A	5.000	4.700	0.6970627	0.6553056		-6.0	20
Benzo(a)pyrene	A	5.000	4.316	1.125376	0.9715324		-13.7	20
Benzo(b)fluoranthene	A	5.000	4.237	1.335075	1.131287		-15.3	20
Benzo(g,h,i)perylene	A	5.000	5.102	0.8163407	0.8330488		2.0	20
Benzo(k)fluoranthene	A	5.000	4.578	1.351132	1.23698		-8.4	20
Chrysene	A	5.000	4.719	0.7018849	0.6624748		-5.6	20
Dibenz(a,h)anthracene	A	5.000	4.827	0.792152	0.7647595		-3.5	20
Fluoranthene	A	5.000	4.651	1.095824	1.0194		-7.0	20
Fluorene	A	5.000	4.754	0.8469727	0.8052297		-4.9	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.785	0.807297	0.7725374		-4.3	20
1-Methylnaphthalene	A	5.000	4.567	0.8645271	0.7896358		-8.7	20
2-Methylnaphthalene	A	5.000	4.507	0.8917256	0.8038177		-9.9	20
Naphthalene	A	5.000	4.319	1.488499	1.285908		-13.6	20
Phenanthrene	A	5.000	4.503	1.163651	1.047972		-9.9	20
Pyrene	A	5.000	4.638	1.112402	1.031999		-7.2	20
2-Fluorobiphenyl	A	5.000	4.843	0.9449172	0.9153192		-3.1	20
Terphenyl-d14	A	5.000	5.339	0.6342447	0.6773092		6.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L20010-BLK2 File ID: L20010B1.D

Sampled: Prepared: Analyzed: 12/28/11 22:33

Solids: Preparation: EXT_3510 Dilution:

Batch: 1L20010 Sequence: 1L36307 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene		0.0500	0.100	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.100	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	30.93	61.9	34 - 167	
Terphenyl-d14	50.00	45.48	91.0	34 - 167	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L20010-BS2 File ID: L20010L1.D

Sampled: Prepared: Analyzed: 12/28/11 21:39

Solids: Preparation: EXT_3510 Dilution:

Batch: 1L20010 Sequence: 1L36307 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.6800	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.6032	0.0500	0.100	0.200	
120-12-7	Anthracene	0.6843	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.8438	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.6660	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.7206	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.8067	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.7154	0.0500	0.100	0.200	
218-01-9	Chrysene	0.7903	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7453	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.8251	0.0500	0.100	0.200	
86-73-7	Fluorene	0.7201	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7537	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.6502	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.6720	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.6006	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.7748	0.100	0.200	0.400	
129-00-0	Pyrene	0.8166	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	30.58	61.2	34 - 167	
Terphenyl-d14	50.00	44.91	89.8	34 - 167	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 1L20010-BSD2 File ID: L20010L2.D

Sampled: Prepared: Analyzed: 12/28/11 22:06

Solids: Preparation: EXT_3510 Dilution:

Batch: 1L20010 Sequence: 1L36307 Calibration: 1238006 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.7150	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.6448	0.0500	0.100	0.200	
120-12-7	Anthracene	0.6973	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.7929	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.6889	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.7576	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.8631	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.7586	0.0500	0.100	0.200	
218-01-9	Chrysene	0.7856	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7569	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.8047	0.0500	0.100	0.200	
86-73-7	Fluorene	0.7620	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7637	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.6770	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.7126	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.6666	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.7892	0.100	0.200	0.400	
129-00-0	Pyrene	0.7984	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	32.83	65.7	34 - 167	
Terphenyl-d14	50.00	43.86	87.7	34 - 167	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PZ-1-20111219	12/19/11 08:30	12/20/11 08:20	12/21/11 09:40	2.09	7.00	12/29/11 00:24	7.61	40.00	
PZ-2-20111219	12/19/11 09:30	12/20/11 08:20	12/21/11 09:40	2.05	7.00	12/29/11 00:51	7.63	40.00	

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00201	Instrument:	GL-GCFID2
Calibration:	2002003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2A00201-CAL1	003F0301.D	12/28/11 17:03
Cal Standard	2A00201-CAL2	004F0401.D	12/28/11 17:36
Cal Standard	2A00201-CAL3	005F0501.D	12/28/11 18:09
Cal Standard	2A00201-CAL4	006F0601.D	12/28/11 18:41
Cal Standard	2A00201-CAL5	007F0701.D	12/28/11 19:14
Cal Standard	2A00201-CAL6	008F0801.D	12/28/11 19:47
Initial Cal Check	2A00201-ICV1	009F0901.D	12/28/11 20:19

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00606	Instrument:	GL-GCFID2
Calibration:	2002003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2A00606-CCV1	002F0201.D	01/03/12 15:21
Calibration Check	2A00606-CCV2	009F0901.D	01/03/12 19:11
Blank	1L23002-BLK1	010F1001.D	01/03/12 19:44
LCS	1L23002-BS1	011F1101.D	01/03/12 20:18
LCS Dup	1L23002-BSD1	012F1201.D	01/03/12 20:50
PZ-1-20111219	1112148-01	013F1301.D	01/03/12 21:23
PZ-2-20111219	1112148-02	014F1401.D	01/03/12 21:56
Calibration Check	2A00606-CCV3	015F1501.D	01/03/12 22:29

ANALYSIS DATA SHEET

PZ-1-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-01	File ID:	013F1301.D
Sampled:	12/19/11 08:30	Prepared:	12/23/11 11:00	Analyzed:	01/03/12 21:23
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 1L23002 Sequence: 2A00606 Calibration: 2002003 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.170	0.340	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03289	65.8	50 - 150	
o-Terphenyl	0.05000	0.01473	29.5	82 - 142	*

ANALYSIS DATA SHEET

PZ-2-20111219

Laboratory:	Empirical Laboratories, LLC			SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1112148-02	File ID:	014F1401.D
Sampled:	12/19/11 09:30	Prepared:	12/23/11 11:00	Analyzed:	01/03/12 21:56
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 1L23002 Sequence: 2A00606 Calibration: 2002003 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.170	0.340	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03652	73.0	50 - 150	
o-Terphenyl	0.05000	0.02769	55.4	82 - 142	*

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	1L23002	Laboratory ID:	1L23002-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.967	92.7	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	2.808	87.7	5.53	30	55 - 118

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 1L23002 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
PZ-1-20111219	1112148-01	12/23/11 11:00	1,000.00	2.00
PZ-2-20111219	1112148-02	12/23/11 11:00	1,000.00	2.00
Blank	1L23002-BLK1	12/23/11 11:00	1,000.00	2.00
LCS	1L23002-BS1	12/23/11 11:00	1,000.00	2.00
LCS Dup	1L23002-BSD1	12/23/11 11:00	1,000.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00201	Instrument:	GL-GCFID2
Calibration:	2002003		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
11L0176	FLPRO CAL6 85ppm	2A00201-CAL1	003F0301.D	12/28/11 17:03
11L0175	FLPRO CAL5 850ppm	2A00201-CAL2	004F0401.D	12/28/11 17:36
11L0174	FLPRO CAL4 2550ppm	2A00201-CAL3	005F0501.D	12/28/11 18:09
11L0173	FLPRO CAL3 4250ppm	2A00201-CAL4	006F0601.D	12/28/11 18:41
11L0172	FLPRO CAL2 5950ppm	2A00201-CAL5	007F0701.D	12/28/11 19:14
11L0171	FLPRO CAL1 8500ppm	2A00201-CAL6	008F0801.D	12/28/11 19:47

INITIAL CALIBRATION DATA

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2002003	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	12/28/11 17:03 12/28/11 19:47

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	85	591.6706	850	773.0388	2550	630.1898	4250	678.4522	5950	735.6583	8500	759.9536
2-Fluorobiphenyl	5	~~435~~	10	722.4	15	893.9333	25	902.08	35	1015.143	50	1057.58
o-Terphenyl	5	1058.2	10	1044.6	15	1170	25	1155.36	35	1222.543	50	1271.28

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148		
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60		
Calibration:	2002003	Instrument:	GL-GCFID2		
Matrix:	Water	Calibration Dates:	12/28/11 17:03	12/28/11 19:47	

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	694.8272	10.59809	4.073	1.001875E-02			20	
2-Fluorobiphenyl	918.2272	14.20069	8.8722	0.1022075			20	
o-Terphenyl	1153.664	7.73895	11.0345	7.892077E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2002003
Lab File ID:	009F0901.D	Calibration Date:	01/02/12 23:08
Sequence:	2A00201	Injection Date:	12/28/11
Lab Sample ID:	2A00201-ICV1	Injection Time:	20:19

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4646	694.8272	806.985		16.1	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2002003
Lab File ID:	002F0201.D	Calibration Date:	01/02/12 23:08
Sequence:	2A00606	Injection Date:	01/03/12
Lab Sample ID:	2A00606-CCV1	Injection Time:	15:21

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4969	694.8272	812.316		16.9	25
2-Fluorobiphenyl	A	25.00	20.38	918.2272	748.52		-18.5	25
o-Terphenyl	A	25.00	18.33	1153.664	845.88		-26.7	25 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2002003
Lab File ID:	009F0901.D	Calibration Date:	01/02/12 23:08
Sequence:	2A00606	Injection Date:	01/03/12
Lab Sample ID:	2A00606-CCV2	Injection Time:	19:11

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	5110	694.8272	835.456		20.2	25
2-Fluorobiphenyl	A	25.00	20.95	918.2272	769.52		-16.2	25
o-Terphenyl	A	25.00	20.93	1153.664	965.96		-16.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2002003
Lab File ID:	015F1501.D	Calibration Date:	01/02/12 23:08
Sequence:	2A00606	Injection Date:	01/03/12
Lab Sample ID:	2A00606-CCV3	Injection Time:	22:29

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	5090	694.8272	832.1184		19.8	25
2-Fluorobiphenyl	A	25.00	19.31	918.2272	709.32		-22.8	25
o-Terphenyl	A	25.00	23.08	1153.664	1065.24		-7.7	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2A00606	Instrument:	GL-GCFID2
		Calibration:	2002003

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2A00606-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 01/03/12 15:21		
2-Fluorobiphenyl	25.00	81.5	75 - 125	8.823	8.823	0.0000	+/-0.050	
o-Terphenyl	25.00	73.3	75 - 125	10.973	10.973	0.0000	+/-0.050	*
Calibration Check (2A00606-CCV2) mg/L				Lab File ID: 009F0901.D		Analyzed: 01/03/12 19:11		
2-Fluorobiphenyl	25.00	83.8	75 - 125	8.82	8.823	-0.0030	+/-0.050	
o-Terphenyl	25.00	83.7	75 - 125	10.966	10.973	-0.0070	+/-0.050	
Blank (1L23002-BLK1) mg/L				Lab File ID: 010F1001.D		Analyzed: 01/03/12 19:44		
2-Fluorobiphenyl	0.05000	112	50 - 150	8.83	8.823	0.0070	+/-0.050	
o-Terphenyl	0.05000	85.5	82 - 142	11.03	10.973	0.0570	+/-0.050	*
LCS (1L23002-BS1) mg/L				Lab File ID: 011F1101.D		Analyzed: 01/03/12 20:18		
2-Fluorobiphenyl	0.05000	52.9	50 - 150	8.836	8.823	0.0130	+/-0.050	
o-Terphenyl	0.05000	43.8	82 - 142	11.036	10.973	0.0630	+/-0.050	*
LCS Dup (1L23002-BSD1) mg/L				Lab File ID: 012F1201.D		Analyzed: 01/03/12 20:50		
2-Fluorobiphenyl	0.05000	60.8	50 - 150	8.833	8.823	0.0100	+/-0.050	
o-Terphenyl	0.05000	49.2	82 - 142	11.03	10.973	0.0570	+/-0.050	*
PZ-1-20111219 (1112148-01) mg/L				Lab File ID: 013F1301.D		Analyzed: 01/03/12 21:23		
2-Fluorobiphenyl	0.05000	65.8	50 - 150	8.83	8.823	0.0070	+/-0.050	
o-Terphenyl	0.05000	29.5	82 - 142	10.973	10.973	0.0000	+/-0.050	*
PZ-2-20111219 (1112148-02) mg/L				Lab File ID: 014F1401.D		Analyzed: 01/03/12 21:56		
2-Fluorobiphenyl	0.05000	73.0	50 - 150	8.826	8.823	0.0030	+/-0.050	
o-Terphenyl	0.05000	55.4	82 - 142	10.966	10.973	-0.0070	+/-0.050	*
Calibration Check (2A00606-CCV3) mg/L				Lab File ID: 015F1501.D		Analyzed: 01/03/12 22:29		
2-Fluorobiphenyl	25.00	77.2	75 - 125	8.82	8.823	-0.0030	+/-0.050	
o-Terphenyl	25.00	92.3	75 - 125	10.96	10.973	-0.0130	+/-0.050	

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1112148

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PZ-1-20111219	12/19/11 08:30	12/20/11 08:20	12/23/11 11:00	4.15	7.00	01/03/12 21:23	11.43	40.00	
PZ-2-20111219	12/19/11 09:30	12/20/11 08:20	12/23/11 11:00	4.10	7.00	01/03/12 21:56	11.46	40.00	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC		SDG:	1112148	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	1L23002-BLK1	File ID:	010F1001.D
Sampled:		Prepared:		Analyzed:	01/03/12 19:44
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 1L23002 Sequence: 2A00606 Calibration: 2002003 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.170	0.340	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.05615	112	50 - 150	
o-Terphenyl	0.05000	0.04274	85.5	82 - 142	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC		SDG:	1112148	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	1L23002-BS1	File ID:	011F1101.D
Sampled:		Prepared:		Analyzed:	01/03/12 20:18
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 1L23002 Sequence: 2A00606 Calibration: 2002003 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.967	0.170	0.340	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.02647	52.9	50 - 150	
o-Terphenyl	0.05000	0.02190	43.8	82 - 142	

ANALYSIS DATA SHEET

LCS Dup

Laboratory:	Empirical Laboratories, LLC	SDG:	1112148
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	1L23002-BSD1	File ID:	012F1201.D
Sampled:		Prepared:		Analyzed:	01/03/12 20:50
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	1L23002	Sequence:	2A00606	Calibration:	2002003	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.808	0.170	0.340	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03039	60.8	50 - 150	
o-Terphenyl	0.05000	0.02462	49.2	82 - 142	

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1207070

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

SUBMITTAL BY:
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Fax (866)417-0548

LABORATORY CONTACT PERSON:
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Original Report Date: July 25, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 103

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision

This is an original submittal of the final report package.

Analytical Information

All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:

The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
Samples 1207070-02 and -03 were analyzed at a 5x only due to the samples foaming on the instrument during screening.

The matrix spike duplicate 2G17017-MSD1 was analyzed 12 hours 18 minutes after the associate tune standard.

No additional anomalies or deviations are noted.

SW8270D PAH:
The following blanks have reported results:
2G19916-BLK2 for Benzo(g,h,i)perylene and Dibenz(a,h)anthracene

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The following surrogates exceeded criteria:
o-Terphenyl with a negative bias in 1207070-01, -04, and -05

The following continuing calibration verifications exceeded criteria:
2G20105-CCV2 with a positive bias for 2-Fluorobiphenyl
2G20511-CCV1 with a positive bias for 2-Fluorobiphenyl and o-Terphenyl
2G20511-CCV2 with a positive bias for 2-Fluorobiphenyl and o-Terphenyl

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

Data Qualifiers

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK: LIMS assigns a unique identifier to the Method Blank by naming it as the letters BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, Ms. Marcia K. McGinnity or an approved technical designee is authorized to sign this Statement of Data Authenticity.

Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

WORK ORDER

Printed: 7/19/2012 8:57:35AM

1207070

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Report To:
Tetra Tech NUS, Inc. (T010)
Tobrena Sedlmyer
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
661 Andersen Drive
Pittsburgh, PA 15220-2745
Phone :(412) 921-8182
Fax: (412) 921-4040

Due to Client: 07/27/2012 16:00 *This is the projected due date to the client, at the time of receipt, and is for report delivery via upload, and/or email, and/or shipment to meet TAT as setup by project*

Received By: Benjamin C. Wright
Date Received: 07/13/2012 08:30
Logged In By: Benjamin C. Wright
Date Logged In: 07/13/2012 13:36

Samples Received at: **2.3°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirme	No		

Method	Test Code	Due	TAT	Expires	Comments
1207070-01 MPT-289-MW01-120712 [Water] Sampled 07/12/2012 10:00 Eastern 'Client Sample'					
SW8270D	SMS_PAH_8270D_LOW	07/24/2012 14:00	10	07/19/2012 09:00	
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/26/2012 09:00	see versions
FLPRO	SGC_FLPRO_3510C	07/24/2012 14:00	10	07/19/2012 09:00	
1207070-02 MPT-289-MW02-120712 [Water] Sampled 07/12/2012 10:45 Eastern 'Client Sample'					
FLPRO	SGC_FLPRO_3510C	07/24/2012 14:00	10	07/19/2012 09:45	
SW8270D	SMS_PAH_8270D_LOW	07/24/2012 14:00	10	07/19/2012 09:45	
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/26/2012 09:45	see versions
1207070-03 MPT-289-MW03D-120712 [Water] Sampled 07/12/2012 11:20 Eastern 'Client Sample'					
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/26/2012 10:20	see versions
SW8270D	SMS_PAH_8270D_LOW	07/24/2012 14:00	10	07/19/2012 10:20	
FLPRO	SGC_FLPRO_3510C	07/24/2012 14:00	10	07/19/2012 10:20	
1207070-04 MPT-289-MW04-120712 [Water] Sampled 07/12/2012 12:50 Eastern 'Client Sample'					
FLPRO	SGC_FLPRO_3510C	07/24/2012 14:00	10	07/19/2012 11:50	
SW8270D	SMS_PAH_8270D_LOW	07/24/2012 14:00	10	07/19/2012 11:50	
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/26/2012 11:50	see versions

WORK ORDER

Printed: 7/19/2012 8:57:35AM

1207070

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Project Manager: Brian Richard
Project Number: TET_CTOJM60

Method	Test Code	Due	TAT	Expires	Comments
1207070-05 MPT-289-MW05-120712 [Water] Sampled 07/12/2012 13:40 Eastern 'Client Sample'					**MS/MSD.**
FLPRO	SGC_FLPRO_3510C	07/24/2012 14:00	10	07/19/2012 12:40	MS/MSD.
SW8270D	SMS_PAH_8270D_LOW	07/24/2012 14:00	10	07/19/2012 12:40	MS/MSD.
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/26/2012 12:40	MS/MSD.
1207070-06 Trip Blank [Water] Sampled 07/12/2012 00:01 Eastern 'Client Sample'					
SW8260B	VOC_8260B_REG	07/24/2012 14:00	10	07/25/2012 23:01	

Reviewed By

Date

1207070

TETRA TECH NUS, INC.

CHAIN OF CUSTODY

NUMBER № 2537

PAGE 1 OF 1

PROJECT NO: 112G03574	FACILITY: Site 289 / MPT	PROJECT MANAGER: Dave Siefken	PHONE NUMBER: 904-334-7268	LABORATORY NAME AND CONTACT: Empirical Laboratory / Brian Richards
SAMPLERS (SIGNATURE): K. Wilt		FIELD OPERATIONS LEADER: Kevin Weichert	PHONE NUMBER: 904-636-6125	ADDRESS: 621 Mainstream Dr., Suite 270
		CARRIER/WAYBILL NUMBER: Fed Ex		CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G)

PRESERVATIVE USED: HNO3 - HCL

TYPE OF ANALYSIS

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TRPH-FL Pro	PAH - 8310	VOC - BTEX + MTBE 8260					COMMENTS
7/12	1000	MPT-289-MW01-120712				GW	G	7	2	2	3	-01				Cool to 4°C
7/12	1045	MPT-289-MW02-120712				GW	G	7	2	2	3	-02				
7/12	1120	MPT-289-MW03D-120712				GW	G	7	2	2	3	-03				
7/12	1250	MPT-289-MW04-120712				GW	G	7	2	2	3	-04				
7/12	1340	MPT-289-MW05-120712				GW	G	21	6	6	9	-05				-MS/MSD
"	0001	TRIP BLANK										-06				

1. RELINQUISHED BY: K. Wilt	DATE: 7-12-12	TIME	1. RECEIVED BY	DATE / TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE / TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE: 7/13/12 TIME: 0830

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 07/13/12 @ 0830

1. Tracking # 5255 (last 4 digits, FedEx) WO# 1207070

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 2.5 *Degrees Celsius + correction factor - 0.2* = 2.3

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) JD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #

I certify that I unloaded the cooler and answered questions 7-14 (intial)

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial)

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial)

I certify that I attached a label with the unique LIMS number to each container (intial)

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#

Additional Details:

Cooler Received/Opened On_ 07/13/12 @ 0830

WO# 1207070

1. Tracking # 5255B (last 4 digits, FedEx)

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 6.4 *Degrees Celsius + correction factor* - 0.2 = 12

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2-FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA *

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 2

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#_____

Additional Details:

*"MPT-289-MW02-120712" HAD 1 LITER (HCL) BROKEN IN SHIPMENT.

Cooler Received/Opened On_ 07/13/12 @ 0830

1. Tracking #_5358_(last 4 digits, FedEx) WO# 1207070

Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 0.5 *Degrees Celsius + correction factor - 0.2* = 0.3

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) TD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 3

I certify that I unloaded the cooler and answered questions 7-14 (intial) BC

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) BC

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) BC

I certify that I attached a label with the unique LIMS number to each container (intial) BC

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...#_____

Additional Details:

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)

PROJECT NAME: NAS Mayport CTO JM60

SDG #: 1207070

QC LEVEL: Level IV

Report Due: 7/27/2012

Client Sample Count: 6

Sample Type	Sampled	Received	Lab ID	Client ID	Report Matrix	FLPRO	SW8260B	SW8270D
Client Sample	7/12/2012	7/13/2012	1207070-01	MPT-289-MW01-120712	Water	X	X	X
Client Sample	7/12/2012	7/13/2012	1207070-02	MPT-289-MW02-120712	Water	X	X	X
Client Sample	7/12/2012	7/13/2012	1207070-03	MPT-289-MW03D-120712	Water	X	X	X
Client Sample	7/12/2012	7/13/2012	1207070-04	MPT-289-MW04-120712	Water	X	X	X
Client Sample	7/12/2012	7/13/2012	1207070-05	MPT-289-MW05-120712	Water	MS/MSD.	MS/MSD.	MS/MSD.
Client Sample	7/12/2012	7/13/2012	1207070-06	Trip Blank	Water		X	

Data for SW8260B Forms

ANALYSIS DATA SHEET

MPT-289-MW01-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-01	File ID:	0707001.D
Sampled:	07/12/12 10:00	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 15:57
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.09	97.0	75 - 120	
Dibromofluoromethane	30.00	32.55	108	85 - 115	
1,2-Dichloroethane-d4	30.00	30.36	101	70 - 120	
Toluene-d8	30.00	29.42	98.1	85 - 120	

ANALYSIS DATA SHEET

MPT-289-MW02-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-02	File ID:	0707002D.D
Sampled:	07/12/12 10:45	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 16:26
Solids:		Preparation:	5030B	Dilution:	5

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.25	2.50	5.00	U
100-41-4	Ethylbenzene		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		1.25	2.50	5.00	U
108-88-3	Toluene		1.25	2.50	5.00	U
1330-20-7	Xylenes (total)		3.75	7.50	15.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	27.61	92.0	75 - 120	
Dibromofluoromethane	30.00	33.28	111	85 - 115	
1,2-Dichloroethane-d4	30.00	29.09	97.0	70 - 120	
Toluene-d8	30.00	27.91	93.0	85 - 120	

ANALYSIS DATA SHEET

MPT-289-MW03D-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-03	File ID:	0707003D.D
Sampled:	07/12/12 11:20	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 16:54
Solids:		Preparation:	5030B	Dilution:	5

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		1.25	2.50	5.00	U
100-41-4	Ethylbenzene		1.25	2.50	5.00	U
1634-04-4	Methyl t-Butyl Ether		1.25	2.50	5.00	U
108-88-3	Toluene		1.25	2.50	5.00	U
1330-20-7	Xylenes (total)		3.75	7.50	15.0	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.49	98.3	75 - 120	
Dibromofluoromethane	30.00	32.01	107	85 - 115	
1,2-Dichloroethane-d4	30.00	28.80	96.0	70 - 120	
Toluene-d8	30.00	29.21	97.4	85 - 120	

ANALYSIS DATA SHEET

MPT-289-MW04-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-04	File ID:	0707004.D
Sampled:	07/12/12 12:50	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 17:23
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.33	97.8	75 - 120	
Dibromofluoromethane	30.00	31.99	107	85 - 115	
1,2-Dichloroethane-d4	30.00	28.86	96.2	70 - 120	
Toluene-d8	30.00	29.43	98.1	85 - 120	

ANALYSIS DATA SHEET

MPT-289-MW05-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-05	File ID:	0707005.D
Sampled:	07/12/12 13:40	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 17:52
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.45	98.2	75 - 120	
Dibromofluoromethane	30.00	32.88	110	85 - 115	
1,2-Dichloroethane-d4	30.00	30.00	100	70 - 120	
Toluene-d8	30.00	29.49	98.3	85 - 120	

ANALYSIS DATA SHEET

Trip Blank

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-06	File ID:	0707006.D
Sampled:	07/12/12 00:01	Prepared:	07/17/12 00:00	Analyzed:	07/17/12 13:05
Solids:		Preparation:	5030B	Dilution:	1

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.12	93.7	75 - 120	
Dibromofluoromethane	30.00	32.69	109	85 - 115	
1,2-Dichloroethane-d4	30.00	30.32	101	70 - 120	
Toluene-d8	30.00	28.51	95.0	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20006	Instrument:	MS-VOA3
		Calibration:	2191002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2G20006-CCV1) ug/L				Lab File ID: SEQCCV1.D		Analyzed: 07/17/12 09:52		
Bromofluorobenzene	30.00	98.8	80 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	80 - 120	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.8	80 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	93.9	80 - 120	9.477	9.477	0.0000	+/-1.000	
LCS (2G17017-BS1) ug/L				Lab File ID: 0717LCS1.D		Analyzed: 07/17/12 10:42		
Bromofluorobenzene	30.00	98.1	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.238	7.232	0.0060	+/-1.000	
Toluene-d8	30.00	95.1	85 - 120	9.477	9.477	0.0000	+/-1.000	
Blank (2G17017-BLK1) ug/L				Lab File ID: 0717BLK1.D		Analyzed: 07/17/12 12:08		
Bromofluorobenzene	30.00	96.5	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	96.1	70 - 120	7.238	7.232	0.0060	+/-1.000	
Toluene-d8	30.00	94.8	85 - 120	9.477	9.477	0.0000	+/-1.000	
Trip Blank (1207070-06) ug/L				Lab File ID: 0707006.D		Analyzed: 07/17/12 13:05		
Bromofluorobenzene	30.00	93.7	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	109	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	95.0	85 - 120	9.477	9.477	0.0000	+/-1.000	
MPT-289-MW01-120712 (1207070-01) ug/L				Lab File ID: 0707001.D		Analyzed: 07/17/12 15:57		
Bromofluorobenzene	30.00	97.0	75 - 120	12.117	12.111	0.0060	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	98.1	85 - 120	9.477	9.477	0.0000	+/-1.000	
MPT-289-MW02-120712 (1207070-02) ug/L				Lab File ID: 0707002D.D		Analyzed: 07/17/12 16:26		
Bromofluorobenzene	30.00	92.0	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	111	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.0	70 - 120	7.238	7.232	0.0060	+/-1.000	
Toluene-d8	30.00	93.0	85 - 120	9.477	9.477	0.0000	+/-1.000	
MPT-289-MW03D-120712 (1207070-03) ug/L				Lab File ID: 0707003D.D		Analyzed: 07/17/12 16:54		
Bromofluorobenzene	30.00	98.3	75 - 120	12.117	12.111	0.0060	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	6.733	6.727	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	96.0	70 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	97.4	85 - 120	9.476	9.477	-0.0010	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20006	Instrument:	MS-VOA3
		Calibration:	2191002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
MPT-289-MW04-120712 (1207070-04) ug/L				Lab File ID: 0707004.D		Analyzed: 07/17/12 17:23		
Bromofluorobenzene	30.00	97.8	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	96.2	70 - 120	7.238	7.232	0.0060	+/-1.000	
Toluene-d8	30.00	98.1	85 - 120	9.477	9.477	0.0000	+/-1.000	
MPT-289-MW05-120712 (1207070-05) ug/L				Lab File ID: 0707005.D		Analyzed: 07/17/12 17:52		
Bromofluorobenzene	30.00	98.2	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	110	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	100	70 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	98.3	85 - 120	9.477	9.477	0.0000	+/-1.000	
Matrix Spike (2G17017-MS1) ug/L				Lab File ID: 0707005M.D		Analyzed: 07/17/12 21:12		
Bromofluorobenzene	30.00	98.8	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	111	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.9	70 - 120	7.238	7.232	0.0060	+/-1.000	
Toluene-d8	30.00	91.8	85 - 120	9.477	9.477	0.0000	+/-1.000	
Matrix Spike Dup (2G17017-MSD1) ug/L				Lab File ID: 0707005S.D		Analyzed: 07/17/12 21:40		
Bromofluorobenzene	30.00	96.4	75 - 120	12.111	12.111	0.0000	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	6.727	6.727	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.2	70 - 120	7.232	7.232	0.0000	+/-1.000	
Toluene-d8	30.00	92.3	85 - 120	9.477	9.477	0.0000	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2G17017	Laboratory ID:	2G17017-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	54.0	108	80 - 120
Ethylbenzene	50.00	50.3	101	75 - 125
Methyl t-Butyl Ether	50.00	57.0	114	65 - 125
Toluene	50.00	48.2	96.4	75 - 120
Xylenes (total)	150.0	149	99.0	75 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8260B

MPT-289-MW05-120712

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Water

Batch: 2G17017

% Solids:

Source Sample Name: **1207070-05**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Benzene	50.00	ND	56.2	112		80 - 120
Ethylbenzene	50.00	ND	49.5	99.1		75 - 125
Methyl t-Butyl Ether	50.00	ND	55.9	112		65 - 125
Toluene	50.00	ND	48.1	96.1		75 - 120
Xylenes (total)	150.0	ND	148	98.7		75 - 130

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Benzene	50.00	53.7	107	4.59		30	80 - 120
Ethylbenzene	50.00	47.9	95.9	3.28		30	75 - 125
Methyl t-Butyl Ether	50.00	53.4	107	4.50		30	65 - 125
Toluene	50.00	46.1	92.2	4.14		30	75 - 120
Xylenes (total)	150.0	143	95.3	3.50		30	75 - 130

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2G17017 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-MW01-120712	1207070-01	07/17/12 00:00	5.00	5.00
MPT-289-MW02-120712	1207070-02	07/17/12 00:00	5.00	5.00
MPT-289-MW03D-120712	1207070-03	07/17/12 00:00	5.00	5.00
MPT-289-MW04-120712	1207070-04	07/17/12 00:00	5.00	5.00
MPT-289-MW05-120712	1207070-05	07/17/12 00:00	5.00	5.00
Trip Blank	1207070-06	07/17/12 00:00	5.00	5.00
Blank	2G17017-BLK1	07/17/12 00:00	5.00	5.00
LCS	2G17017-BS1	07/17/12 00:00	5.00	5.00
MPT-289-MW05-120712	2G17017-MS1	07/17/12 00:00	5.00	5.00
MPT-289-MW05-120712	2G17017-MSD1	07/17/12 00:00	5.00	5.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQTUN1.D	Injection Date:	07/05/12
Instrument ID:	MS-VOA3	Injection Time:	07:07
Sequence:	2G18803	Lab Sample ID:	2G18803-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	16	PASS
75	30 - 60% of 95	45.5	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.84	PASS
173	Less than 2% of 174	0.636	PASS
174	50 - 200% of 95	99.8	PASS
175	5 - 9% of 174	7.48	PASS
176	95 - 101% of 174	95.8	PASS
177	5 - 9% of 176	6.21	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQTUN1.D	Injection Date:	07/17/12
Instrument ID:	MS-VOA3	Injection Time:	09:23
Sequence:	2G20006	Lab Sample ID:	2G20006-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	17.8	PASS
75	30 - 60% of 95	45.7	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	5.78	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	90.3	PASS
175	5 - 9% of 174	7.73	PASS
176	95 - 101% of 174	100	PASS
177	5 - 9% of 176	6.94	PASS

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G18803	Instrument:	MS-VOA3
Calibration:	2191002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2G18803-TUN1	SEQTUN1.D	07/05/12 07:07
Cal Standard	2G18803-CAL1	SEQCAL1.D	07/05/12 08:34
Cal Standard	2G18803-CAL2	SEQCAL2.D	07/05/12 09:03
Cal Standard	2G18803-CAL3	SEQCAL3.D	07/05/12 09:32
Cal Standard	2G18803-CAL4	SEQCAL4.D	07/05/12 10:00
Cal Standard	2G18803-CAL5	SEQCAL5.D	07/05/12 10:29
Cal Standard	2G18803-CAL6	SEQCAL6.D	07/05/12 10:57
Cal Standard	2G18803-CAL7	SEQCAL7.D	07/05/12 11:26
Cal Standard	2G18803-CAL8	SEQCAL8.D	07/05/12 11:55
Cal Standard	2G18803-CAL9	SEQCAL9.D	07/05/12 12:23
Initial Cal Check	2G18803-ICV2	SEQICV2.D	07/05/12 13:49

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20006	Instrument:	MS-VOA3
Calibration:	2191002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2G20006-TUN1	SEQTUN1.D	07/17/12 09:23
Calibration Check	2G20006-CCV1	SEQCCV1.D	07/17/12 09:52
LCS	2G17017-BS1	0717LCS1.D	07/17/12 10:42
Blank	2G17017-BLK1	0717BLK1.D	07/17/12 12:08
Trip Blank	1207070-06	0707006.D	07/17/12 13:05
MPT-289-MW01-120712	1207070-01	0707001.D	07/17/12 15:57
MPT-289-MW02-120712	1207070-02	0707002D.D	07/17/12 16:26
MPT-289-MW03D-120712	1207070-03	0707003D.D	07/17/12 16:54
MPT-289-MW04-120712	1207070-04	0707004.D	07/17/12 17:23
MPT-289-MW05-120712	1207070-05	0707005.D	07/17/12 17:52
MPT-289-MW05-120712	2G17017-MS1	0707005M.D	07/17/12 21:12
MPT-289-MW05-120712	2G17017-MSD1	0707005S.D	07/17/12 21:40

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20006	Instrument:	MS-VOA3
		Calibration:	2191002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2G20006-CCV1)			Lab File ID: SEQCCV1.D			Analyzed: 07/17/12 09:52			
Fluorobenzene	314514	7.767	330232	7.767	95	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	139117	10.912	132381	10.912	105	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	174258	13.321	171372	13.322	102	50 - 200	-0.0010	+/-0.50	
LCS (2G17017-BS1)			Lab File ID: 0717LCS1.D			Analyzed: 07/17/12 10:42			
Fluorobenzene	316458	7.767	314514	7.767	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	139489	10.912	139117	10.912	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	172318	13.321	174258	13.321	99	50 - 200	0.0000	+/-0.50	
Blank (2G17017-BLK1)			Lab File ID: 0717BLK1.D			Analyzed: 07/17/12 12:08			
Fluorobenzene	298654	7.767	314514	7.767	95	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	126894	10.912	139117	10.912	91	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	149197	13.321	174258	13.321	86	50 - 200	0.0000	+/-0.50	
Trip Blank (1207070-06)			Lab File ID: 0707006.D			Analyzed: 07/17/12 13:05			
Fluorobenzene	287729	7.767	314514	7.767	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	128567	10.912	139117	10.912	92	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	143353	13.322	174258	13.321	82	50 - 200	0.0010	+/-0.50	
MPT-289-MW01-120712 (1207070-01)			Lab File ID: 0707001.D			Analyzed: 07/17/12 15:57			
Fluorobenzene	273617	7.767	314514	7.767	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	117903	10.912	139117	10.912	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	138384	13.322	174258	13.321	79	50 - 200	0.0010	+/-0.50	
MPT-289-MW02-120712 (1207070-02)			Lab File ID: 0707002D.D			Analyzed: 07/17/12 16:26			
Fluorobenzene	263723	7.767	314514	7.767	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	117268	10.912	139117	10.912	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	129821	13.321	174258	13.321	74	50 - 200	0.0000	+/-0.50	
MPT-289-MW03D-120712 (1207070-03)			Lab File ID: 0707003D.D			Analyzed: 07/17/12 16:54			
Fluorobenzene	264359	7.767	314514	7.767	84	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	111172	10.912	139117	10.912	80	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	128601	13.321	174258	13.321	74	50 - 200	0.0000	+/-0.50	
MPT-289-MW04-120712 (1207070-04)			Lab File ID: 0707004.D			Analyzed: 07/17/12 17:23			
Fluorobenzene	269123	7.767	314514	7.767	86	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	114388	10.912	139117	10.912	82	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	129856	13.322	174258	13.321	75	50 - 200	0.0010	+/-0.50	
MPT-289-MW05-120712 (1207070-05)			Lab File ID: 0707005.D			Analyzed: 07/17/12 17:52			
Fluorobenzene	270513	7.767	314514	7.767	86	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	116964	10.912	139117	10.912	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	136684	13.321	174258	13.321	78	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20006	Instrument:	MS-VOA3
		Calibration:	2191002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (2G17017-MS1)			Lab File ID: 0707005M.D			Analyzed: 07/17/12 21:12			
Fluorobenzene	262166	7.767	314514	7.767	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	119785	10.912	139117	10.912	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	141312	13.322	174258	13.321	81	50 - 200	0.0010	+/-0.50	
Matrix Spike Dup (2G17017-MSD1)			Lab File ID: 0707005S.D			Analyzed: 07/17/12 21:40			
Fluorobenzene	280107	7.767	314514	7.767	89	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	125648	10.912	139117	10.912	90	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	149808	13.321	174258	13.321	86	50 - 200	0.0000	+/-0.50	

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2191002

Instrument: MS-VOA3

Matrix: Water

Calibration Dates: 7/5/12 8:34 7/5/12 12:23

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	1		2		4	6.097316E-02	10	5.260969E-02	20	5.255886E-02	100	5.380874E-02
Acrolein	2.508	0.033542	5.015	2.791999E-02	10.03	2.435327E-02	25.08	2.809176E-02	50.15	2.481918E-02	250.8	2.989722E-02
Acrylonitrile	2.498	4.988655E-02	4.997	6.822731E-02	9.994	6.647098E-02	24.98	7.423668E-02	49.97	6.695657E-02	249.8	7.782108E-02
Benzene	0.5	0.8997871	1	0.9814676	2	0.9349836	5	0.9797687	10	0.9560996	50	1.012742
Bromobenzene	0.5	0.6196325	1	0.7874808	2	0.7552951	5	0.7454432	10	0.7145867	50	0.7708215
Bromochloromethane	0.5	0.1230007	1	0.1552901	2	0.1564638	5	0.1551724	10	0.1567596	50	0.161186
Tert-Amyl Methyl Ether	0.5	0.5838255	1	0.6608657	2	0.6422568	5	0.6949622	10	0.6642328	50	0.7112109
Bromodichloromethane	0.5	0.2980913	1	0.3500947	2	0.33753	5	0.3623927	10	0.3520236	50	0.3807416
Bromoform	0.5	0.4585859	1	0.5546909	2	0.5429071	5	0.5537607	10	0.5752307	50	0.6135929
Bromomethane	0.5	~~0.4505589~~	1	0.3075259	2	0.2356918	5	0.206249	10	0.1845315	50	0.1584937
Bromofluorobenzene	30	0.9634457	35	0.939782	40	0.9251008	50	0.9377048	60	0.9403974	70	0.9404971
n-Butylbenzene	0.5	1.383757	1	1.510104	2	1.533243	5	1.550897	10	1.48957	50	1.596092
2-Butanone	1		2	9.172327E-02	4	7.811607E-02	10	9.149802E-02	20	9.099316E-02	100	9.253895E-02
sec-Butylbenzene	0.5	1.965546	1	2.063271	2	2.16017	5	2.165331	10	2.135506	50	2.233114
tert-Butylbenzene	0.5	1.61846	1	1.811337	2	1.777861	5	1.908717	10	1.779306	50	1.942483
Carbon disulfide	0.5	0.4893412	1	0.6145746	2	0.6340097	5	0.643219	10	0.6397078	50	0.6547538
Carbon tetrachloride	0.5	0.3049352	1	0.3267105	2	0.3440165	5	0.3517089	10	0.3409635	50	0.3746896
Chlorobenzene	0.5	1.775403	1	2.079179	2	1.992934	5	1.978851	10	1.951372	50	2.039041
Chloroethane	0.5	0.1153963	1	0.1449819	2	0.135151	5	0.1495163	10	0.1405999	50	0.1464178
Chloroform	0.5	0.4670984	1	0.4689245	2	0.4777775	5	0.4806765	10	0.4543904	50	0.4640465
2-Chloroethyl vinyl ether	0.9975	0.1172102	1.995	0.1355376	3.99	0.1391127	9.975	0.146464	19.95	0.1454924	99.75	0.1628907
Chloromethane	0.5	0.2165344	1	0.1924184	2	0.1814369	5	0.183415	10	0.1819021	50	0.1868036
1-Chlorohexane	0.5	1.015406	1	0.9335635	2	0.892297	5	0.8685279	10	0.8220462	50	0.8658595
2-Chlorotoluene	0.5	1.449504	1	1.569338	2	1.665341	5	1.735301	10	1.642059	50	1.719376
4-Chlorotoluene	0.5	1.691471	1	1.931868	2	1.972512	5	1.989894	10	1.840045	50	1.963878
Cyclohexane	0.5	0.2771793	1	0.3082895	2	0.2785028	5	0.3035079	10	0.2959465	50	0.3123881
Dibromochloromethane	0.5	0.7187867	1	0.8426147	2	0.7791276	5	0.7914468	10	0.7943876	50	0.8436018
1,2-Dibromo-3-chloropropane	0.5	0.1181163	1	0.1732045	2	0.1815057	5	0.1680876	10	0.1598948	50	0.1765298
1,2-Dibromoethane (EDB)	0.5	0.5707166	1	0.6531783	2	0.6318427	5	0.6699192	10	0.6622388	50	0.7054671
Dibromomethane	0.5	0.1296545	1	0.1628303	2	0.1553518	5	0.1670751	10	0.1652278	50	0.1700181
1,2-Dichlorobenzene	0.5	1.169313	1	1.273916	2	1.267464	5	1.324379	10	1.274119	50	1.350077

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2191002

Instrument: MS-VOA3

Matrix: Water

Calibration Dates: 7/5/12 8:34 7/5/12 12:23

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	0.5	1.194159	1	1.35377	2	1.364136	5	1.407725	10	1.312047	50	1.373715
1,4-Dichlorobenzene	0.5	1.311129	1	1.356956	2	1.400214	5	1.378399	10	1.374846	50	1.427513
Dichlorodifluoromethane	0.5	0.1195787	1	0.15634	2	0.1487263	5	0.1550201	10	0.1799745	50	0.1830251
1,1-Dichloroethane	0.5	0.3672911	1	0.4138523	2	0.4171287	5	0.4089749	10	0.4139022	50	0.424876
1,2-Dichloroethane	0.5	0.2693848	1	0.3500947	2	0.31214	5	0.33455	10	0.3208645	50	0.3375178
1,1-Dichloroethene	0.5	0.2182454	1	0.2335555	2	0.2188269	5	0.2331205	10	0.2246547	50	0.2335517
cis-1,2-Dichloroethene	0.5	0.2344047	1	0.2819465	2	0.2791514	5	0.2892248	10	0.2741912	50	0.2926785
trans-1,2-Dichloroethene	0.5	0.2226179	1	0.2761243	2	0.2702093	5	0.2647529	10	0.2629627	50	0.272896
1,2-Dichloroethene (total)	1	0.2285113	2	0.2790354	4	0.2746804	10	0.2769889	20	0.268577	100	0.2827873
1,2-Dichloropropane	0.5	0.1912499	1	0.213321	2	0.2196609	5	0.2311589	10	0.2290619	50	0.241492
1,3-Dichloropropane	0.5	0.8539186	1	0.9705267	2	0.976174	5	0.9998599	10	0.9568755	50	1.02466
2,2-Dichloropropane	0.5	0.2817419	1	0.33196	2	0.3284026	5	0.3448911	10	0.322633	50	0.3475296
1,1-Dichloropropene	0.5	0.2849738	1	0.3100075	2	0.3217771	5	0.3426248	10	0.3325141	50	0.3511455
cis-1,3-Dichloropropene	0.5	0.3034144	1	0.3646024	2	0.366534	5	0.3989005	10	0.3773159	50	0.4112745
trans-1,3-Dichloropropene	0.5	~~0.5975513~~	1	0.9530178	2	0.8980613	5	0.9451889	10	0.9610029	50	1.042116
Diisopropyl Ether	0.5	0.6258396	1	0.7131699	2	0.6809442	5	0.70995	10	0.690021	50	0.7470329
Ethylbenzene	0.5	2.676282	1	2.988182	2	3.101688	5	3.042999	10	3.048011	50	3.156418
Ethyl tert-Butyl Ether	0.5	0.5855365	1	0.6332819	2	0.6573148	5	0.6900107	10	0.6557178	50	0.7100985
Ethyl Methacrylate	0.5	~~0.4772744~~	1	0.5721998	2	0.5965508	5	0.6434474	10	0.6898024	50	0.7773219
Hexachlorobutadiene	0.5	0.3092429	1	0.3394734	2	0.3009248	5	0.316919	10	0.2922644	50	0.3130767
2-Hexanone	1	0.2781704	2	0.286951	4	0.3177448	10	0.314137	20	0.3076476	100	0.3459487
Iodomethane	0.5		1	0.1620667	2	0.1865334	5	0.2724849	10	0.2870198	50	0.3761592
Isopropylbenzene	0.5	2.281429	1	2.578912	2	2.705124	5	2.726084	10	2.72472	50	2.926596
p-Isopropyltoluene	0.5	1.70485	1	1.950426	2	1.961977	5	2.037888	10	1.963529	50	2.069596
Methylene chloride	0.5	0.2901067	1	0.2910138	2	0.2555684	5	0.2662003	10	0.2599497	50	0.2579241
Methyl Acetate	0.5		1	0.1277063	2	0.1280622	5	0.1263966	10	0.130017	50	0.1355085
Methylcyclohexane	0.5	0.2547464	1	0.3154479	2	0.2725259	5	0.2960997	10	0.2881895	50	0.3007553
Naphthalene	0.5	1.745751	1	1.973107	2	2.093515	5	2.098118	10	2.189346	50	2.406961
Methyl Methacrylate	0.5	0.154939	1	0.150136	2	0.1574831	5	0.1722741	10	0.1655365	50	0.1881198
4-Methyl-2-pentanone	1	0.1709082	2	0.18044	4	0.1625102	10	0.1869192	20	0.1820939	100	0.1993385
Methyl t-Butyl Ether	0.5	0.5182378	1	0.5898541	2	0.567801	5	0.6060637	10	0.5776889	50	0.625382

INITIAL CALIBRATION DATA

SW8260B

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Calibration: 2191002

Instrument: MS-VOA3

Matrix: Water

Calibration Dates: 7/5/12 8:34 7/5/12 12:23

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	0.5	2.328305	1	2.44717	2	2.525419	5	2.597457	10	2.525246	50	2.695536
Styrene	0.5	1.645542	1	2.047809	2	2.116573	5	2.229563	10	2.191285	50	2.332175
1,1,2,2-Tetrachloroethane	0.5	0.5955506	1	0.6270229	2	0.6132228	5	0.6275908	10	0.5923854	50	0.6179505
1,1,1,2-Tetrachloroethane	0.5	0.6756595	1	0.7168912	2	0.7093673	5	0.7139456	10	0.7407785	50	0.7603552
tert-Butyl alcohol	2.5		5		10	7.209289E-03	25	1.174648E-02	50	0.0112959	250	1.396423E-02
Tetrachloroethene	0.5	0.777248	1	0.8097855	2	0.7823039	5	0.8146039	10	0.829542	50	0.8261186
Toluene	0.5	1.344131	1	1.66845	2	1.627545	5	1.657454	10	1.705292	50	1.728974
1,2,3-Trichlorobenzene	0.5	0.6853801	1	0.7098762	2	0.7412184	5	0.7632295	10	0.7314558	50	0.8014235
1,2,4-Trichlorobenzene	0.5	0.7813257	1	0.7852314	2	0.7929573	5	0.8553947	10	0.7867046	50	0.8561611
1,1,2-Trichloroethane	0.5	0.3464552	1	0.4168085	2	0.4330317	5	0.4389094	10	0.4607538	50	0.4888882
1,1,1-Trichloroethane	0.5	0.3157715	1	0.3859822	2	0.3807116	5	0.4049375	10	0.3885351	50	0.4051739
Tetrahydrofuran	0.5		1		2	7.088825E-03	5	2.323396E-02	10	2.585368E-02	50	2.662907E-02
Trichloroethene	0.5	0.2207168	1	0.2339373	2	0.271414	5	0.2592301	10	0.2602772	50	0.2697682
Trichlorofluoromethane	0.5	0.3317406	1	0.3570622	2	0.3572675	5	0.3880453	10	0.3588262	50	0.3717525
1,2,3-Trichloropropane	0.5	0.203177	1	0.2572832	2	0.2683361	5	0.2699472	10	0.2656024	50	0.2722116
1,3,5-Trimethylbenzene	0.5	1.587498	1	1.793342	2	1.87817	5	1.940541	10	1.857582	50	1.960811
1,2,4-Trimethylbenzene	0.5	1.720522	1	1.874133	2	1.963655	5	2.069308	10	1.996996	50	2.124006
1,1,2-Trichloro-1,2,2-trifluoroethan	0.5	0.1821247	1	0.1865962	2	0.2294833	5	0.2240935	10	0.2217447	50	0.2292945
Vinyl chloride	0.5	0.2041773	1	0.2087396	2	0.2023327	5	0.2099055	10	0.2092997	50	0.2083585
m,p-Xylene	1	2.017155	2	2.307159	4	2.409143	10	2.449764	20	2.414664	100	2.469933
o-Xylene	0.5	2.153006	1	2.367103	2	2.465845	5	2.537327	10	2.478758	50	2.560011
Vinyl acetate	0.996		1.992	0.3443135	3.984	0.3380017	9.96	0.3747087	19.92	0.367628	99.62	0.4328692
Xylenes (total)	1.5	2.062439	3	2.32714	6	2.428044	15	2.478952	30	2.436029	150	2.499959
Dibromofluoromethane	30	0.2669546	35	0.2721183	40	0.2636556	50	0.2734676	60	0.2744267	70	0.2754492
1,2-Dichloroethane-d4	30	6.802426E-02	35	6.706284E-02	40	6.472144E-02	50	6.806599E-02	60	6.982115E-02	70	7.258017E-02
Toluene-d8	30	2.3984	35	2.405164	40	2.327036	50	2.361245	60	2.457903	70	2.409101
tert-Amyl alcohol	2.5		5		10	7.718943E-03	25	7.343456E-03	50	7.974124E-03	250	1.115755E-02
tert-Amyl ethyl ether	0.5	0.4266052	1	0.5000398	2	0.5062718	5	0.5269539	10	0.5120582	50	0.5500866

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Acetone	200	0.0550463	300	5.730917E-02	400	5.483517E-02						
Acrolein	501.5	3.004269E-02	752.2	3.087259E-02	1003	2.979664E-02						
Acrylonitrile	499.7	7.775348E-02	749.6	8.117448E-02	999.4	7.967348E-02						
Benzene	100	1.044219	150	1.025187	200	1.01452						
Bromobenzene	100	0.7951421	150	0.7881604	200	0.7936905						
Bromochloromethane	100	0.1650367	150	0.1652381	200	0.1630862						
Tert-Amyl Methyl Ether	100	0.7335788	150	0.7374402	200	0.7115715						
Bromodichloromethane	100	0.3857434	150	0.3899113	200	0.3792529						
Bromoform	100	0.636932	150	0.6479078	200	0.6705346						
Bromomethane	100	0.1657026	150	0.1697328	200	0.1693972						
Bromofluorobenzene	30	0.9866748	30	0.9523019	30	0.997774						
n-Butylbenzene	100	1.669768	150	1.663926	200	1.691393						
2-Butanone	200	9.554147E-02	300	9.560914E-02	400	9.352546E-02						
sec-Butylbenzene	100	2.3395	150	2.369041	200	2.3556						
tert-Butylbenzene	100	1.996593	150	1.982968	200	2.015821						
Carbon disulfide	100	0.6703197	150	0.6788079	200	0.6828993						
Carbon tetrachloride	100	0.3901657	150	0.3886424	200	0.3830942						
Chlorobenzene	100	2.072337	150	2.069151	200	2.078503						
Chloroethane	100	0.1478679	150	0.1466351	200	0.1418467						
Chloroform	100	0.4741657	150	0.4745245	200	0.4656946						
2-Chloroethyl vinyl ether	199.5	0.1629167	299.2	0.1649353	399	0.1618786						
Chloromethane	100	0.1887491	150	0.1900848	200	0.1871205						
1-Chlorohexane	100	0.8948172	150	0.8797685	200	0.9023351						
2-Chlorotoluene	100	1.768712	150	1.762135	200	1.751483						
4-Chlorotoluene	100	2.062762	150	2.037231	200	2.02245						
Cyclohexane	100	0.3244228	150	0.326138	200	0.3130759						
Dibromochloromethane	100	0.8715027	150	0.8691926	200	0.8914755						
1,2-Dibromo-3-chloropropane	100	0.1851779	150	0.1926909	200	0.1969557						
1,2-Dibromoethane (EDB)	100	0.7208353	150	0.7152801	200	0.7428478						
Dibromomethane	100	0.1735643	150	0.1730899	200	0.1691305						
1,2-Dichlorobenzene	100	1.417154	150	1.415971	200	1.421504						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
1,3-Dichlorobenzene	100	1.426695	150	1.437904	200	1.464247						
1,4-Dichlorobenzene	100	1.461218	150	1.47954	200	1.467388						
Dichlorodifluoromethane	100	0.1853533	150	0.1844271	200	0.1749408						
1,1-Dichloroethane	100	0.421749	150	0.4264903	200	0.4257476						
1,2-Dichloroethane	100	0.340765	150	0.3410749	200	0.3306162						
1,1-Dichloroethene	100	0.238347	150	0.2469868	200	0.2353466						
cis-1,2-Dichloroethene	100	0.2982403	150	0.2997049	200	0.2926592						
trans-1,2-Dichloroethene	100	0.2699993	150	0.2766258	200	0.2707575						
1,2-Dichloroethene (total)	200	0.2841198	300	0.2881654	400	0.2817084						
1,2-Dichloropropane	100	0.242733	150	0.2440598	200	0.2392987						
1,3-Dichloropropane	100	1.054769	150	1.04961	200	1.090751						
2,2-Dichloropropane	100	0.3545971	150	0.3507757	200	0.3407844						
1,1-Dichloropropene	100	0.360582	150	0.3619184	200	0.3486715						
cis-1,3-Dichloropropene	100	0.4291101	150	0.4332755	200	0.4165241						
trans-1,3-Dichloropropene	100	1.060786	150	1.080189	200	1.087389						
Diisopropyl Ether	100	0.7608787	150	0.7600923	200	0.7335371						
Ethylbenzene	100	3.288075	150	3.231462	200	3.316611						
Ethyl tert-Butyl Ether	100	0.7292028	150	0.7263524	200	0.7118948						
Ethyl Methacrylate	100	0.7997711	150	0.8009079	200	0.8326419						
Hexachlorobutadiene	100	0.3177176	150	0.3351962	200	0.3340919						
2-Hexanone	200	0.3464047	300	0.3543635	400	0.35053						
Iodomethane	100	0.3929701	150	0.4012377	200	0.3901842						
Isopropylbenzene	100	2.948007	150	2.948741	200	3.103709						
p-Isopropyltoluene	100	2.133653	150	2.153076	200	2.160777						
Methylene chloride	100	0.2602625	150	0.2652351	200	0.2633626						
Methyl Acetate	100	0.1387788	150	0.1458985	200	0.1450434						
Methylcyclohexane	100	0.3135132	150	0.3141239	200	0.3048694						
Naphthalene	100	2.472269	150	2.586821	200	2.500995						
Methyl Methacrylate	100	0.1902435	150	0.1943808	200	0.1865854						
4-Methyl-2-pentanone	200	0.201194	300	0.1999539	400	0.1986103						
Methyl t-Butyl Ether	100	0.6400418	150	0.6511389	200	0.6427689						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
n-Propylbenzene	100	2.779212	150	2.796089	200	2.786496						
Styrene	100	2.376681	150	2.378147	200	2.473935						
1,1,2,2-Tetrachloroethane	100	0.6330492	150	0.6550853	200	0.6479384						
1,1,1,2-Tetrachloroethane	100	0.7957872	150	0.7998701	200	0.8156841						
tert-Butyl alcohol	500	1.482158E-02	750	1.610571E-02	1000	1.648194E-02						
Tetrachloroethene	100	0.8533732	150	0.842106	200	0.8859472						
Toluene	100	1.753409	150	1.778821	200	1.781238						
1,2,3-Trichlorobenzene	100	0.831717	150	0.8591491	200	0.8565898						
1,2,4-Trichlorobenzene	100	0.888686	150	0.9152012	200	0.8947492						
1,1,2-Trichloroethane	100	0.4892832	150	0.4934181	200	0.5114914						
1,1,1-Trichloroethane	100	0.4257107	150	0.4185307	200	0.4102269						
Tetrahydrofuran	100	0.027547	150	2.873499E-02	200	2.917935E-02						
Trichloroethene	100	0.2739501	150	0.2785609	200	0.2742214						
Trichlorofluoromethane	100	0.3716633	150	0.3745498	200	0.3580413						
1,2,3-Trichloropropane	100	0.2737372	150	0.2800003	200	0.2945496						
1,3,5-Trimethylbenzene	100	2.079163	150	2.05443	200	2.057093						
1,2,4-Trimethylbenzene	100	2.178102	150	2.181464	200	2.16427						
1,1,2-Trichloro-1,2,2-trifluoroethan	100	0.2328917	150	0.2353991	200	0.2261193						
Vinyl chloride	100	0.2194266	150	0.2141468	200	0.2009531						
m,p-Xylene	200	2.508283	300	2.560028	400	2.629325						
o-Xylene	100	2.676962	150	2.648225	200	2.699799						
Vinyl acetate	199.2	0.4452615	298.9	0.4618263	398.5	0.4485254						
Xylenes (total)	300	2.564509	450	2.589427	600	2.652816						
Dibromofluoromethane	30	0.2731292	30	0.2672099	30	0.2666657						
1,2-Dichloroethane-d4	30	7.050498E-02	30	6.868608E-02	30	6.911064E-02						
Toluene-d8	30	2.427932	30	2.402194	30	2.478445						
tert-Amyl alcohol	500	1.237003E-02	750	0.0137866	1000	1.376705E-02						
tert-Amyl ethyl ether	100	0.5732951	150	0.5847186	200	0.5716873						

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	5.530587E-02	5.398057	3.487571	0.1390397			15	
Acrolein	2.881504E-02	10.0745	3.373667	0.1477669			15	
Acrylonitrile	7.135562E-02	13.75395	4.352667	0.1147383			15	
Benzene	0.9831972	4.739526	7.498778	2.758873E-02			15	
Bromobenzene	0.7522503	7.50436	12.275	1.290811E-02			15	
Bromochloromethane	0.1556926	8.294637	6.577	4.319156E-02			15	
Tert-Amyl Methyl Ether	0.6822161	7.25714	7.693333	2.383496E-02			15	
Bromodichloromethane	0.3595313	8.145608	8.495667	3.220023E-02			15	
Bromoform	0.5837936	11.25159	11.67833	1.045038E-02			SPCC (0.1)	
Bromomethane	0.1996656	25.30158	2.548	9.710967E-02		0.9998164	0.99	
Bromofluorobenzene	0.9537421	2.553675	12.111	2.345197E-02			15	
n-Butylbenzene	1.565417	6.406524	13.71167	8.489831E-03			15	
2-Butanone	9.119319E-02	6.106644	6.027	0.1194969			15	
sec-Butylbenzene	2.198564	6.309366	13.169	1.968385E-02			15	
tert-Butylbenzene	1.870394	7.078556	12.93333	2.432699E-02			15	
Carbon disulfide	0.6341814	9.256693	4.530333	4.583279E-02			15	
Carbon tetrachloride	0.3561029	8.406799	7.467	3.650027E-02			15	
Chlorobenzene	2.004086	4.899357	10.949	1.081874E-02			SPCC (0.3)	
Chloroethane	0.1409348	7.472428	2.681	0.1112945			15	
Chloroform	0.4696998	1.714332	6.551667	0.0460296			CCC (20)	
2-Chloroethyl vinyl ether	0.1484931	10.94308	8.856667	0.0175683			15	
Chloromethane	0.1898294	5.624589	1.955667	0.1350275			SPCC (0.1)	
1-Chlorohexane	0.8971801	5.990324	10.91556	3.264453E-02			15	
2-Chlorotoluene	1.673694	6.372551	12.49733	2.829615E-02			15	
4-Chlorotoluene	1.94579	5.942537	12.561	7.068191E-03			15	
Cyclohexane	0.3043834	5.821107	7.397333	3.324294E-02			15	
Dibromochloromethane	0.8224596	6.739725	10.176	1.888495E-02			15	
1,2-Dibromo-3-chloropropane	0.1724626	13.59875	14.32033	1.546671E-02			15	
1,2-Dibromoethane (EDB)	0.6747029	7.88749	10.39367	3.054429E-02			15	
Dibromomethane	0.1628825	8.38466	8.43	1.727897E-02			15	
1,2-Dichlorobenzene	1.323766	6.511746	13.67333	0.0156863			15	
1,3-Dichlorobenzene	1.370489	5.923277	13.26089	9.704937E-03			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.406356	4.042645	13.352	7.502474E-03			15	
Dichlorodifluoromethane	0.1652651	13.43092	1.750556	3.055209E-02			15	
1,1-Dichloroethane	0.4133347	4.432374	5.565667	3.207722E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3263342	7.4082	7.327	4.038871E-02			15	
1,1-Dichloroethene	0.2314039	4.029754	3.970333	5.159574E-02			CCC (20)	
cis-1,2-Dichloroethene	0.2824668	7.068855	6.294333	3.025872E-02			15	
trans-1,2-Dichloroethene	0.2652162	6.261999	5.176333	4.216125E-02			15	
1,2-Dichloroethene (total)	0.2738415	6.548824	6.294333	3.025872E-02			15	
1,2-Dichloropropane	0.228004	7.646053	8.317	5.459083E-02			CCC (20)	
1,3-Dichloropropane	0.9974605	6.98935	9.917555	4.488335E-02			15	
2,2-Dichloropropane	0.3337017	6.657253	6.402778	6.902203E-02			15	
1,1-Dichloropropene	0.3349127	7.607314	7.345111	4.381661E-02			15	
cis-1,3-Dichloropropene	0.3889946	10.5534	9.075	5.230454E-03			15	
trans-1,3-Dichloropropene	1.003469	7.202267	9.55	0.0205681			15	
Diisopropyl Ether	0.7134962	6.1192	5.947333	6.069321E-02			15	
Ethylbenzene	3.094414	6.262943	11.09633	2.319594E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6777122	7.144613	6.422889	2.021754E-02			15	
Ethyl Methacrylate	0.7140804	14.24797	9.738	0.0131431			15	
Hexachlorobutadiene	0.3176563	5.064805	15.688	1.776325E-02			15	
2-Hexanone	0.3224331	8.816012	9.855333	2.939583E-02			15	
Iodomethane	0.308582	31.24251	4.172	2.442068E-02	0.9995813		0.995	
Isopropylbenzene	2.77148	8.864887	12.001	0.0227546			15	
p-Isopropyltoluene	2.015086	7.099308	13.309	1.723665E-02			15	
Methylene chloride	0.2677359	4.995124	4.476	2.511219E-03			15	
Methyl Acetate	0.1346764	5.843418	4.33825	7.208094E-02			15	
Methylcyclohexane	0.2955857	7.002147	8.649	0.0189802			15	
Naphthalene	2.229654	12.57534	15.56	1.343556E-02			15	
Methyl Methacrylate	0.1732998	9.811308	8.454222	2.495149E-02			15	
4-Methyl-2-pentanone	0.1868854	7.524585	8.997334	3.535878E-02			15	
Methyl t-Butyl Ether	0.6021086	7.194313	5.172222	6.119894E-02			15	
n-Propylbenzene	2.608992	6.386131	12.413	1.671901E-02			15	
Styrene	2.199079	11.29941	11.57356	3.082598E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2191002	Instrument:	MS-VOA3
Matrix:	Water	Calibration Dates:	7/5/12 8:34 7/5/12 12:23

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.6233107	3.403575	11.92733	3.235038E-04			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.7475932	6.45183	10.99133	0.0130131			15	
tert-Butyl alcohol	0.0130893	24.94553	4.116143	0.1317209	0.9977957		0.995	
Tetrachloroethene	0.8245587	4.129476	10.292	1.535585E-02			15	
Toluene	1.671702	8.026237	9.549889	1.900884E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.7755599	8.29365	15.84667	5.89957E-03			15	
1,2,4-Trichlorobenzene	0.8396013	6.38838	15.406	1.995551E-02			15	
1,1,2-Trichloroethane	0.4532266	11.29848	9.706667	0.0316396			15	
1,1,1-Trichloroethane	0.3928422	8.294304	7.122	2.025274E-02			15	
Tetrahydrofuran	2.403813E-02	32.1672	6.769286	0.1429289	0.9993522		0.995	
Trichloroethene	0.2602307	7.673089	8.268667	3.522316E-02			15	
Trichlorofluoromethane	0.3632165	4.352297	3.182	9.266958E-02			15	
1,2,3-Trichloropropane	0.2649827	9.569599	12.05133	3.190078E-02			15	
1,3,5-Trimethylbenzene	1.91207	8.185425	12.59111	0.0191309			15	
1,2,4-Trimethylbenzene	2.030273	7.76534	12.96478	3.015613E-02			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2186386	9.105353	4.053334	0.1071518			15	
Vinyl chloride	0.2085933	2.772469	2.110556	0.1332124			CCC (20)	
m,p-Xylene	2.418384	7.305867	11.20989	1.977905E-02			15	
o-Xylene	2.509671	6.858845	11.60333	2.924163E-02			15	
Vinyl acetate	0.4016418	12.59635	5.644	9.927811E-03			15	
Xylenes (total)	2.448813	7.116848	11.60333	2.924163E-02			15	
Dibromofluoromethane	0.2703419	1.563723	6.727	1.389808E-02			15	
1,2-Dichloroethane-d4	6.873084E-02	3.216511	7.232667	2.868635E-02			15	
Toluene-d8	2.407491	1.899137	9.476889	2.013297E-02			15	
tert-Amyl alcohol	1.058825E-02	27.10739	6.929714	6.724782E-02	0.9971591		0.995	
tert-Amyl ethyl ether	0.5279685	9.340352	8.586778	2.642636E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA3	Calibration:	2191002
Lab File ID:	SEQICV2.D	Calibration Date:	07/05/12 08:34
Sequence:	2G18803	Injection Date:	07/05/12
Lab Sample ID:	2G18803-ICV2	Injection Time:	13:49

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	106.1	0.9831972	1.043388		6.1	20
Ethylbenzene	A	100.0	107.5	3.094414	3.327537		7.5	20
Methyl t-Butyl Ether	A	100.0	107.6	0.6021086	0.647549		7.5	20
Toluene	A	100.0	104.7	1.671702	1.74967		4.7	20
Xylenes (total)	A	300.0	319.3	2.448813	2.606805		6.5	20
Bromofluorobenzene	A	30.00	30.72	0.9537421	0.9766412		2.4	20
Dibromofluoromethane	A	30.00	29.37	0.2703419	0.2646938		-2.1	20
1,2-Dichloroethane-d4	A	30.00	30.37	6.873084E-02	6.958614E-02		1.2	20
Toluene-d8	A	30.00	30.33	2.407491	2.43436		1.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-VOA3	Calibration:	2191002
Lab File ID:	SEQCCV1.D	Calibration Date:	07/05/12 08:34
Sequence:	2G20006	Injection Date:	07/17/12
Lab Sample ID:	2G20006-CCV1	Injection Time:	09:52

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	112.1	0.9831972	1.102484		12.1	20
Ethylbenzene	A	100.0	105.9	3.094414	3.27739		5.9	20
Methyl t-Butyl Ether	A	100.0	117.2	0.6021086	0.7057565		17.2	20
Toluene	A	100.0	100.9	1.671702	1.687293		0.9	20
Xylenes (total)	A	300.0	317.2	2.448813	2.589595		5.7	20
Bromofluorobenzene	A	30.00	29.63	0.9537421	0.9418835		-1.2	20
Dibromofluoromethane	A	30.00	31.08	0.2703419	0.2800797		3.6	20
1,2-Dichloroethane-d4	A	30.00	29.63	6.873084E-02	6.787615E-02		-1.2	20
Toluene-d8	A	30.00	28.16	2.407491	2.259767		-6.1	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G17017-BLK1 File ID: 0717BLK1.D

Sampled: Prepared: Analyzed: 07/17/12 12:08

Solids: Preparation: 5030B Dilution:

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene		0.250	0.500	1.00	U
100-41-4	Ethylbenzene		0.250	0.500	1.00	U
1634-04-4	Methyl t-Butyl Ether		0.250	0.500	1.00	U
108-88-3	Toluene		0.250	0.500	1.00	U
1330-20-7	Xylenes (total)		0.750	1.50	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.95	96.5	75 - 120	I
Dibromofluoromethane	30.00	31.26	104	85 - 115	
1,2-Dichloroethane-d4	30.00	28.83	96.1	70 - 120	I
Toluene-d8	30.00	28.45	94.8	85 - 120	I

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC
SDG: 1207070
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Matrix:
Laboratory ID: 2G17017-BS1
File ID: 0717LCS1.D
Sampled:
Prepared:
Analyzed: 07/17/12 10:42
Solids:
Preparation: 5030B
Dilution:
Batch: 2G17017
Sequence: 2G20006
Calibration: 2191002
Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	54.0	0.250	0.500	1.00	
100-41-4	Ethylbenzene	50.3	0.250	0.500	1.00	
1634-04-4	Methyl t-Butyl Ether	57.0	0.250	0.500	1.00	
108-88-3	Toluene	48.2	0.250	0.500	1.00	
1330-20-7	Xylenes (total)	149	0.750	1.50	3.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.44	98.1	75 - 120	I
Dibromofluoromethane	30.00	31.67	106	85 - 115	
1,2-Dichloroethane-d4	30.00	30.43	101	70 - 120	
Toluene-d8	30.00	28.54	95.1	85 - 120	I

ANALYSIS DATA SHEET

Matrix Spike

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G17017-MS1 File ID: 0707005M.D

Sampled: Prepared: Analyzed: 07/17/12 21:12

Solids: Preparation: 5030B Dilution:

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	56.2	0.250	0.500	1.00	
100-41-4	Ethylbenzene	49.5	0.250	0.500	1.00	
1634-04-4	Methyl t-Butyl Ether	55.9	0.250	0.500	1.00	
108-88-3	Toluene	48.1	0.250	0.500	1.00	
1330-20-7	Xylenes (total)	148	0.750	1.50	3.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.65	98.8	75 - 120	I
Dibromofluoromethane	30.00	33.18	111	85 - 115	
1,2-Dichloroethane-d4	30.00	29.96	99.9	70 - 120	I
Toluene-d8	30.00	27.53	91.8	85 - 120	I

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G17017-MSD1 File ID: 0707005S.D

Sampled: Prepared: Analyzed: 07/17/12 21:40

Solids: Preparation: 5030B Dilution:

Batch: 2G17017 Sequence: 2G20006 Calibration: 2191002 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
71-43-2	Benzene	53.7	0.250	0.500	1.00	
100-41-4	Ethylbenzene	47.9	0.250	0.500	1.00	
1634-04-4	Methyl t-Butyl Ether	53.4	0.250	0.500	1.00	
108-88-3	Toluene	46.1	0.250	0.500	1.00	
1330-20-7	Xylenes (total)	143	0.750	1.50	3.00	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	28.91	96.4	75 - 120	I
Dibromofluoromethane	30.00	31.73	106	85 - 115	
1,2-Dichloroethane-d4	30.00	29.15	97.2	70 - 120	I
Toluene-d8	30.00	27.68	92.3	85 - 120	I

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-MW01-120712	07/12/12 10:00	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 15:57	5.29	14.00	
MPT-289-MW02-120712	07/12/12 10:45	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 16:26	5.28	14.00	
MPT-289-MW03D-120712	07/12/12 11:20	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 16:54	5.27	14.00	
MPT-289-MW04-120712	07/12/12 12:50	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 17:23	5.23	14.00	
MPT-289-MW05-120712	07/12/12 13:40	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 17:52	5.22	14.00	
Trip Blank	07/12/12 00:01	07/13/12 08:30	07/17/12 00:00	N/A	14.00	07/17/12 13:05	5.59	14.00	

Data for SW8270D (PAH) Forms

ANALYSIS DATA SHEET

MPT-289-MW01-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-01	File ID:	0707001.D
Sampled:	07/12/12 10:00	Prepared:	07/19/12 11:51	Analyzed:	07/23/12 16:59
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0926	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	36.15	78.1	34 - 167	
Terphenyl-d14	46.30	33.49	72.3	34 - 167	

ANALYSIS DATA SHEET

MPT-289-MW02-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-02	File ID:	0707002.D
Sampled:	07/12/12 10:45	Prepared:	07/19/12 11:51	Analyzed:	07/23/12 17:27
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.0706	0.0463	0.0926	0.185	I
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
90-12-0	1-Methylnaphthalene	0.814	0.0463	0.0926	0.185	
91-57-6	2-Methylnaphthalene	0.596	0.0463	0.0926	0.185	
91-20-3	Naphthalene	0.192	0.0463	0.0926	0.185	
85-01-8	Phenanthrene	0.148	0.0926	0.185	0.370	I
129-00-0	Pyrene		0.0463	0.0926	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	33.48	72.3	34 - 167	
Terphenyl-d14	46.30	27.98	60.4	34 - 167	

ANALYSIS DATA SHEET

MPT-289-MW03D-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-03	File ID:	0707003.D
Sampled:	07/12/12 11:20	Prepared:	07/19/12 11:51	Analyzed:	07/23/12 17:55
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.435	0.0463	0.0926	0.185	
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene	0.100	0.0463	0.0926	0.185	I
50-32-8	Benzo(a)pyrene	0.0719	0.0463	0.0926	0.185	I
205-99-2	Benzo(b)fluoranthene	0.100	0.0463	0.0926	0.185	I
191-24-2	Benzo(g,h,i)perylene	0.0895	0.0463	0.0926	0.185	IV
207-08-9	Benzo(k)fluoranthene	0.0936	0.0463	0.0926	0.185	I
218-01-9	Chrysene	0.104	0.0463	0.0926	0.185	I
53-70-3	Dibenz(a,h)anthracene	0.0890	0.0463	0.0926	0.185	IV
206-44-0	Fluoranthene	0.145	0.0463	0.0926	0.185	I
86-73-7	Fluorene	0.695	0.0463	0.0926	0.185	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0851	0.0463	0.0926	0.185	I
90-12-0	1-Methylnaphthalene	4.58	0.0463	0.0926	0.185	
91-57-6	2-Methylnaphthalene	3.32	0.0463	0.0926	0.185	
91-20-3	Naphthalene	0.518	0.0463	0.0926	0.185	
85-01-8	Phenanthrene	0.736	0.0926	0.185	0.370	
129-00-0	Pyrene	0.157	0.0463	0.0926	0.185	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	24.35	52.6	34 - 167	
Terphenyl-d14	46.30	17.71	38.3	34 - 167	

ANALYSIS DATA SHEET

MPT-289-MW04-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-04	File ID:	0707004.D
Sampled:	07/12/12 12:50	Prepared:	07/19/12 11:51	Analyzed:	07/23/12 18:22
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene	0.0801	0.0463	0.0926	0.185	I
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene	0.115	0.0926	0.185	0.370	I
129-00-0	Pyrene	0.0723	0.0463	0.0926	0.185	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	29.84	64.5	34 - 167	
Terphenyl-d14	46.30	24.67	53.3	34 - 167	

ANALYSIS DATA SHEET

MPT-289-MW05-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-05	File ID:	0707005.D
Sampled:	07/12/12 13:40	Prepared:	07/19/12 11:51	Analyzed:	07/23/12 18:50
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0463	0.0926	0.185	U
208-96-8	Acenaphthylene		0.0463	0.0926	0.185	U
120-12-7	Anthracene		0.0463	0.0926	0.185	U
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
50-32-8	Benzo(a)pyrene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
191-24-2	Benzo(g,h,i)perylene		0.0463	0.0926	0.185	U
207-08-9	Benzo(k)fluoranthene		0.0463	0.0926	0.185	U
218-01-9	Chrysene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
206-44-0	Fluoranthene		0.0463	0.0926	0.185	U
86-73-7	Fluorene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U
90-12-0	1-Methylnaphthalene		0.0463	0.0926	0.185	U
91-57-6	2-Methylnaphthalene		0.0463	0.0926	0.185	U
91-20-3	Naphthalene		0.0463	0.0926	0.185	U
85-01-8	Phenanthrene		0.0926	0.185	0.370	U
129-00-0	Pyrene		0.0463	0.0926	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	31.11	67.2	34 - 167	
Terphenyl-d14	46.30	24.96	53.9	34 - 167	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20611	Instrument:	MS-BNA4
		Calibration:	2121002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2G20611-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 07/23/12 15:01		
2-Fluorobiphenyl	5.000	98.3	80 - 120	8.737	8.737	0.0000	+/-0.500	
Terphenyl-d14	5.000	90.5	80 - 120	13.282	13.282	0.0000	+/-0.500	
LCS (2G19916-BS2) ug/L				Lab File ID: G19916L1.D		Analyzed: 07/23/12 15:34		
2-Fluorobiphenyl	50.00	92.4	34 - 167	8.739	8.737	0.0020	+/-0.500	
Terphenyl-d14	50.00	75.7	34 - 167	13.285	13.282	0.0030	+/-0.500	
Blank (2G19916-BLK2) ug/L				Lab File ID: G19916B1.D		Analyzed: 07/23/12 16:02		
2-Fluorobiphenyl	50.00	78.9	34 - 167	8.74	8.737	0.0030	+/-0.500	
Terphenyl-d14	50.00	85.6	34 - 167	13.289	13.282	0.0070	+/-0.500	
MPT-289-MW01-120712 (1207070-01) ug/L				Lab File ID: 0707001.D		Analyzed: 07/23/12 16:59		
2-Fluorobiphenyl	46.30	78.1	34 - 167	8.739	8.737	0.0020	+/-0.500	
Terphenyl-d14	46.30	72.3	34 - 167	13.288	13.282	0.0060	+/-0.500	
MPT-289-MW02-120712 (1207070-02) ug/L				Lab File ID: 0707002.D		Analyzed: 07/23/12 17:27		
2-Fluorobiphenyl	46.30	72.3	34 - 167	8.737	8.737	0.0000	+/-0.500	
Terphenyl-d14	46.30	60.4	34 - 167	13.291	13.282	0.0090	+/-0.500	
MPT-289-MW03D-120712 (1207070-03) ug/L				Lab File ID: 0707003.D		Analyzed: 07/23/12 17:55		
2-Fluorobiphenyl	46.30	52.6	34 - 167	8.739	8.737	0.0020	+/-0.500	
Terphenyl-d14	46.30	38.3	34 - 167	13.287	13.282	0.0050	+/-0.500	
MPT-289-MW04-120712 (1207070-04) ug/L				Lab File ID: 0707004.D		Analyzed: 07/23/12 18:22		
2-Fluorobiphenyl	46.30	64.5	34 - 167	8.737	8.737	0.0000	+/-0.500	
Terphenyl-d14	46.30	53.3	34 - 167	13.288	13.282	0.0060	+/-0.500	
MPT-289-MW05-120712 (1207070-05) ug/L				Lab File ID: 0707005.D		Analyzed: 07/23/12 18:50		
2-Fluorobiphenyl	46.30	67.2	34 - 167	8.737	8.737	0.0000	+/-0.500	
Terphenyl-d14	46.30	53.9	34 - 167	13.286	13.282	0.0040	+/-0.500	
Matrix Spike (2G19916-MS2) ug/L				Lab File ID: 0707005M.D		Analyzed: 07/23/12 19:17		
2-Fluorobiphenyl	46.30	61.6	34 - 167	8.738	8.737	0.0010	+/-0.500	
Terphenyl-d14	46.30	77.4	34 - 167	13.29	13.282	0.0080	+/-0.500	
Matrix Spike Dup (2G19916-MSD2) ug/L				Lab File ID: 0707005S.D		Analyzed: 07/23/12 19:44		
2-Fluorobiphenyl	46.30	78.3	34 - 167	8.738	8.737	0.0010	+/-0.500	
Terphenyl-d14	46.30	90.3	34 - 167	13.289	13.282	0.0070	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2G19916	Laboratory ID:	2G19916-BS2
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	0.9800	0.8147	83.1	41 - 132
Acenaphthylene	0.9800	0.8420	85.9	43 - 140
Anthracene	0.9800	0.6337	64.7	50 - 139
Benzo(a)anthracene	0.9800	0.6073	62.0	58 - 141
Benzo(a)pyrene	0.9800	0.6628	67.6	31 - 142
Benzo(b)fluoranthene	0.9800	0.7303	74.5	42 - 156
Benzo(g,h,i)perylene	0.9800	0.8106	82.7	12 - 171
Benzo(k)fluoranthene	0.9800	0.7310	74.6	49 - 165
Chrysene	0.9800	0.6414	65.5	51 - 155
Dibenz(a,h)anthracene	0.9800	0.7575	77.3	28 - 153
Fluoranthene	0.9800	0.7603	77.6	47 - 158
Fluorene	0.9800	0.7833	79.9	40 - 140
Indeno(1,2,3-cd)pyrene	0.9800	0.7462	76.1	20 - 167
1-Methylnaphthalene	1.000	0.9020	90.2	35 - 131
2-Methylnaphthalene	0.9800	0.8387	85.6	36 - 121
Naphthalene	0.9800	0.8718	89.0	39 - 125
Phenanthrene	0.9800	0.8513	86.9	46 - 144
Pyrene	0.9800	0.7262	74.1	39 - 158

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-MW05-120712

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Water

Batch: 2G19916

% Solids:

Source Sample Name: **1207070-05**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Acenaphthene	0.9074	ND	0.5248	57.8		41 - 132
Acenaphthylene	0.9074	ND	0.5541	61.1		43 - 140
Anthracene	0.9074	ND	0.5740	63.3		50 - 139
Benzo(a)anthracene	0.9074	ND	0.6523	71.9		58 - 141
Benzo(a)pyrene	0.9074	ND	0.5942	65.5		31 - 142
Benzo(b)fluoranthene	0.9074	ND	0.6177	68.1		42 - 156
Benzo(g,h,i)perylene	0.9074	ND	0.5728	63.1		12 - 171
Benzo(k)fluoranthene	0.9074	ND	0.6582	72.5		49 - 165
Chrysene	0.9074	ND	0.6621	73.0		51 - 155
Dibenz(a,h)anthracene	0.9074	ND	0.5290	58.3		28 - 153
Fluoranthene	0.9074	ND	0.6818	75.1		47 - 158
Fluorene	0.9074	ND	0.5721	63.0		40 - 140
Indeno(1,2,3-cd)pyrene	0.9074	ND	0.5533	61.0		20 - 167
1-Methylnaphthalene	0.9259	ND	0.5583	60.3		35 - 131
2-Methylnaphthalene	0.9074	ND	0.5243	57.8		36 - 121
Naphthalene	0.9074	ND	0.5125	56.5		39 - 125
Phenanthrene	0.9074	ND	0.6370	70.2		46 - 144
Pyrene	0.9074	ND	0.6782	74.7		39 - 158

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270D

MPT-289-MW05-120712

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Water

Batch: 2G19916

% Solids:

Source Sample Name: **1207070-05**

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	0.9074	0.6812	75.1	25.9		30	41 - 132
Acenaphthylene	0.9074	0.6948	76.6	22.5		30	43 - 140
Anthracene	0.9074	0.6846	75.4	17.6		30	50 - 139
Benzo(a)anthracene	0.9074	0.7039	77.6	7.61		30	58 - 141
Benzo(a)pyrene	0.9074	0.6775	74.7	13.1		30	31 - 142
Benzo(b)fluoranthene	0.9074	0.7648	84.3	21.3		30	42 - 156
Benzo(g,h,i)perylene	0.9074	0.5911	65.1	3.15		30	12 - 171
Benzo(k)fluoranthene	0.9074	0.7393	81.5	11.6		30	49 - 165
Chrysene	0.9074	0.7416	81.7	11.3		30	51 - 155
Dibenz(a,h)anthracene	0.9074	0.5290	58.3	0.00523		30	28 - 153
Fluoranthene	0.9074	0.7822	86.2	13.7		30	47 - 158
Fluorene	0.9074	0.7183	79.2	22.7		30	40 - 140
Indeno(1,2,3-cd)pyrene	0.9074	0.5528	60.9	0.0971		30	20 - 167
1-Methylnaphthalene	0.9259	0.7199	77.8	25.3		30	35 - 131
2-Methylnaphthalene	0.9074	0.6382	70.3	19.6		30	36 - 121
Naphthalene	0.9074	0.6418	70.7	22.4		30	39 - 125
Phenanthrene	0.9074	0.7847	86.5	20.8		30	46 - 144
Pyrene	0.9074	0.7893	87.0	15.2		30	39 - 158

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2G19916 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-MW01-120712	1207070-01	07/19/12 11:51	1,080.00	1.00
MPT-289-MW02-120712	1207070-02	07/19/12 11:51	1,080.00	1.00
MPT-289-MW03D-120712	1207070-03	07/19/12 11:51	1,080.00	1.00
MPT-289-MW04-120712	1207070-04	07/19/12 11:51	1,080.00	1.00
MPT-289-MW05-120712	1207070-05	07/19/12 11:51	1,080.00	1.00
Blank	2G19916-BLK2	07/19/12 11:51	1,000.00	1.00
LCS	2G19916-BS2	07/19/12 11:51	1,000.00	1.00
MPT-289-MW05-120712	2G19916-MS2	07/19/12 11:51	1,080.00	1.00
MPT-289-MW05-120712	2G19916-MSD2	07/19/12 11:51	1,080.00	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	04/26/12
Instrument ID:	MS-BNA4	Injection Time:	16:33
Sequence:	2D11810	Lab Sample ID:	2D11810-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	59.2	PASS
68	Less than 2% of 69	1.54	PASS
69	Less than 200% of 198	50.5	PASS
70	Less than 2% of 69	0.359	PASS
127	40 - 60% of 198	54.4	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.87	PASS
275	10 - 30% of 198	22.9	PASS
365	1 - 200% of 198	2.8	PASS
441	0.001 - 100% of 443	84.4	PASS
442	40 - 200% of 198	77.5	PASS
443	17 - 23% of 442	19.5	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	07/23/12
Instrument ID:	MS-BNA4	Injection Time:	14:42
Sequence:	2G20611	Lab Sample ID:	2G20611-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	58	PASS
68	Less than 2% of 69	1.74	PASS
69	Less than 200% of 198	49.7	PASS
70	Less than 2% of 69	0.539	PASS
127	40 - 60% of 198	52.6	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.21	PASS
275	10 - 30% of 198	24.6	PASS
365	1 - 200% of 198	2.95	PASS
441	0.001 - 100% of 443	81.8	PASS
442	40 - 200% of 198	88.7	PASS
443	17 - 23% of 442	19.9	PASS

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2D11810	Instrument:	MS-BNA4
Calibration:	2121002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2D11810-TUN1	SEQ-TUN1.D	04/26/12 16:33
Cal Standard	2D11810-CAL1	SEQCAL1A.D	04/26/12 16:50
Cal Standard	2D11810-CAL2	SEQCAL2B.D	04/26/12 18:15
Cal Standard	2D11810-CAL3	SEQCAL3B.D	04/26/12 19:12
Cal Standard	2D11810-CAL4	SEQCAL4A.D	04/26/12 19:41
Cal Standard	2D11810-CAL5	SEQCAL5B.D	04/26/12 21:06
Cal Standard	2D11810-CAL6	SEQCAL6B.D	04/26/12 22:03
Cal Standard	2D11810-CAL7	SEQCAL7A.D	04/26/12 22:31
Initial Cal Check	2D11810-ICV1	SEQICV1B.D	04/26/12 23:56

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20611	Instrument:	MS-BNA4
Calibration:	2121002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2G20611-TUN1	SEQ-TUN1.D	07/23/12 14:42
Calibration Check	2G20611-CCV1	SEQ-CCV1.D	07/23/12 15:01
LCS	2G19916-BS2	G19916L1.D	07/23/12 15:34
Blank	2G19916-BLK2	G19916B1.D	07/23/12 16:02
MPT-289-MW01-120712	1207070-01	0707001.D	07/23/12 16:59
MPT-289-MW02-120712	1207070-02	0707002.D	07/23/12 17:27
MPT-289-MW03D-120712	1207070-03	0707003.D	07/23/12 17:55
MPT-289-MW04-120712	1207070-04	0707004.D	07/23/12 18:22
MPT-289-MW05-120712	1207070-05	0707005.D	07/23/12 18:50
MPT-289-MW05-120712	2G19916-MS2	0707005M.D	07/23/12 19:17
MPT-289-MW05-120712	2G19916-MSD2	0707005S.D	07/23/12 19:44

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory: Empirical Laboratories, LLC
SDG: 1207070
Client: Tetra Tech NUS, Inc. (T010)
Project: NAS Mayport CTO JM60
Sequence: 2G20611
Instrument: MS-BNA4
Calibration: 2121002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2G20611-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 07/23/12 15:01			
Phenanthrene-d10	473380	11.318	406220	12.157	117	50 - 200	-0.8390	+/-0.50	
Perylene-d12	359638	16.763	330193	18.029	109	50 - 200	-1.2660	+/-0.50	
LCS (2G19916-BS2)			Lab File ID: G19916L1.D			Analyzed: 07/23/12 15:34			
Phenanthrene-d10	298068	11.318	473380	11.318	63	50 - 200	0.0000	+/-0.50	
Perylene-d12	210468	16.763	359638	16.763	59	50 - 200	0.0000	+/-0.50	
Blank (2G19916-BLK2)			Lab File ID: G19916B1.D			Analyzed: 07/23/12 16:02			
Phenanthrene-d10	378551	11.316	473380	11.318	80	50 - 200	-0.0020	+/-0.50	
Perylene-d12	259943	16.762	359638	16.763	72	50 - 200	-0.0010	+/-0.50	
MPT-289-MW01-120712 (1207070-01)			Lab File ID: 0707001.D			Analyzed: 07/23/12 16:59			
Phenanthrene-d10	407706	11.317	473380	11.318	86	50 - 200	-0.0010	+/-0.50	
Perylene-d12	277847	16.761	359638	16.763	77	50 - 200	-0.0020	+/-0.50	
MPT-289-MW02-120712 (1207070-02)			Lab File ID: 0707002.D			Analyzed: 07/23/12 17:27			
Phenanthrene-d10	309595	11.319	473380	11.318	65	50 - 200	0.0010	+/-0.50	
Perylene-d12	206186	16.766	359638	16.763	57	50 - 200	0.0030	+/-0.50	
MPT-289-MW03D-120712 (1207070-03)			Lab File ID: 0707003.D			Analyzed: 07/23/12 17:55			
Phenanthrene-d10	402834	11.319	473380	11.318	85	50 - 200	0.0010	+/-0.50	
Perylene-d12	299853	16.764	359638	16.763	83	50 - 200	0.0010	+/-0.50	
MPT-289-MW04-120712 (1207070-04)			Lab File ID: 0707004.D			Analyzed: 07/23/12 18:22			
Phenanthrene-d10	465058	11.316	473380	11.318	98	50 - 200	-0.0020	+/-0.50	
Perylene-d12	329912	16.762	359638	16.763	92	50 - 200	-0.0010	+/-0.50	
MPT-289-MW05-120712 (1207070-05)			Lab File ID: 0707005.D			Analyzed: 07/23/12 18:50			
Phenanthrene-d10	391777	11.315	473380	11.318	83	50 - 200	-0.0030	+/-0.50	
Perylene-d12	219177	16.762	359638	16.763	61	50 - 200	-0.0010	+/-0.50	
Matrix Spike (2G19916-MS2)			Lab File ID: 0707005M.D			Analyzed: 07/23/12 19:17			
Phenanthrene-d10	458791	11.317	473380	11.318	97	50 - 200	-0.0010	+/-0.50	
Perylene-d12	371013	16.762	359638	16.763	103	50 - 200	-0.0010	+/-0.50	
Matrix Spike Dup (2G19916-MSD2)			Lab File ID: 0707005S.D			Analyzed: 07/23/12 19:44			
Phenanthrene-d10	431579	11.315	473380	11.318	91	50 - 200	-0.0030	+/-0.50	
Perylene-d12	299264	16.763	359638	16.763	83	50 - 200	0.0000	+/-0.50	

INITIAL CALIBRATION DATA

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.8284338	0.5	0.8463376	1	0.7905859	5	0.7564354	20	0.7465952	40	0.7432093
Acenaphthylene	0.1	1.117244	0.5	1.222258	1	1.159843	5	1.17607	20	1.150843	40	1.15544
Anthracene	0.1	1.165379	0.5	1.24075	1	1.141283	5	1.151845	20	1.16271	40	1.140043
Benzo(a)anthracene	0.1	1.104547	0.5	1.15697	1	1.061402	5	1.078799	20	1.144076	40	1.141713
Benzo(a)pyrene	0.1	1.070555	0.5	1.214415	1	1.09201	5	1.142776	20	1.226464	40	1.232295
Benzo(b)fluoranthene	0.1	1.232431	0.5	1.358225	1	1.2171	5	1.191393	20	1.334496	40	1.341474
Benzo(g,h,i)perylene	0.1	0.9135112	0.5	1.069186	1	0.988096	5	0.9698328	20	0.9479826	40	0.9322904
Benzo(k)fluoranthene	0.1	1.276765	0.5	1.386285	1	1.291781	5	1.296367	20	1.372717	40	1.375273
Chrysene	0.1	1.125487	0.5	1.174129	1	1.065539	5	1.054981	20	1.077452	40	1.060916
Dibenz(a,h)anthracene	0.1	0.8080503	0.5	0.9522786	1	0.8989957	5	0.9322378	20	0.9867066	40	0.9951196
Fluoranthene	0.1	1.257669	0.5	1.332496	1	1.203956	5	1.202304	20	1.229389	40	1.212099
Fluorene	0.1	0.8624504	0.5	0.8633091	1	0.8162709	5	0.7900172	20	0.7863636	40	0.7716514
2-Fluorobiphenyl	0.1	0.8977937	0.5	0.9453296	1	0.9099752	5	0.86855	20	0.8460796	40	0.8542619
2-Fluorophenol	0.2		1		2		10		40		80	
Indeno(1,2,3-cd)pyrene	0.1	1.063307	0.5	1.212778	1	1.108405	5	1.153628	20	1.172686	40	1.178447
1-Methylnaphthalene	0.1	0.7880686	0.5	0.7956794	1	0.7450297	5	0.71151	20	0.6934976	40	0.7145846
2-Methylnaphthalene	0.1	0.7974492	0.5	0.8269049	1	0.781062	5	0.7527172	20	0.7445876	40	0.7547983
Naphthalene	0.1	1.349012	0.5	1.366405	1	1.309674	5	1.224434	20	1.182117	40	1.219288
Nitrobenzene-d5	0.1		0.5		1		5		20		40	
Phenanthrene	0.1	1.298319	0.5	1.273839	1	1.170058	5	1.125213	20	1.113786	40	1.098145
Phenol-d6	0.2		1		2		10		40		80	
Pyrene	0.1	1.349959	0.5	1.348972	1	1.234977	5	1.23447	20	1.256688	40	1.230656
Terphenyl-d14	0.1	0.7344378	0.5	0.8059511	1	0.7422243	5	0.7577963	20	0.7812106	40	0.7659497
2,4,6-Tribromophenol	0.2	9.972853E-02	1	0.1111695	2	0.1076801	10	0.115628	40	0.1238635	80	0.126312
Acenaphthene-d10	4		4		4		4		4		4	
Chrysene-d12	4		4		4		4		4		4	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	60	0.7049531										
Acenaphthylene	60	1.083517										
Anthracene	60	1.082868										
Benzo(a)anthracene	60	1.115142										
Benzo(a)pyrene	60	1.225554										
Benzo(b)fluoranthene	60	1.34925										
Benzo(g,h,i)perylene	60	0.9630144										
Benzo(k)fluoranthene	60	1.335859										
Chrysene	60	1.02861										
Dibenz(a,h)anthracene	60	1.011765										
Fluoranthene	60	1.172669										
Fluorene	60	0.7312367										
2-Fluorobiphenyl	60	0.8024945										
2-Fluorophenol	120											
Indeno(1,2,3-cd)pyrene	60	1.208177										
1-Methylnaphthalene	60	0.6723843										
2-Methylnaphthalene	60	0.7111022										
Naphthalene	60	1.111071										
Nitrobenzene-d5	60											
Phenanthrene	60	1.058688										
Phenol-d6	120											
Pyrene	60	1.197426										
Terphenyl-d14	60	0.7456228										
2,4,6-Tribromophenol	120	0.1254947										
Acenaphthene-d10	4											
Chrysene-d12	4											

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.7737929	6.514387	10.402	6.955727E-02			15	
Acenaphthylene	1.152174	3.797749	10.17171	5.332417E-02			15	
Anthracene	1.154983	4.052537	12.24186	0.0687624			15	
Benzo(a)anthracene	1.114664	3.19548	15.63329	5.793542E-02			15	
Benzo(a)pyrene	1.17201	5.912681	17.94071	8.222687E-02			15	
Benzo(b)fluoranthene	1.289196	5.588296	17.40443	8.023178E-02			15	
Benzo(g,h,i)perylene	0.9691305	5.211731	20.17429	0.104301			15	
Benzo(k)fluoranthene	1.333578	3.410689	17.44514	9.791606E-02			15	
Chrysene	1.083873	4.562206	15.70114	7.754657E-02			15	
Dibenz(a,h)anthracene	0.9407362	7.474966	19.77771	8.168964E-02			15	
Fluoranthene	1.230083	4.240375	13.64543	5.102833E-02			15	
Fluorene	0.8030428	5.999208	11.01857	6.557638E-02			15	
2-Fluorobiphenyl	0.8749264	5.371903	9.531143	5.659179E-02			15	
2-Fluorophenol							15	
Indeno(1,2,3-cd)pyrene	1.156775	4.680303	19.74843	8.750661E-02			15	
1-Methylnaphthalene	0.7315363	6.393879	9.175143	4.814779E-02			15	
2-Methylnaphthalene	0.7669459	4.963053	9.037286	4.132068E-02			15	
Naphthalene	1.251714	7.465959	8.157857	6.890469E-02			15	
Nitrobenzene-d5							15	
Phenanthrene	1.162578	7.819243	12.18786	5.997756E-02			15	
Phenol-d6							15	
Pyrene	1.264735	4.778785	13.92914	4.611641E-02			15	
Terphenyl-d14	0.7618847	3.282615	14.142	3.734299E-02			15	
2,4,6-Tribromophenol	0.1156966	8.751595	11.34329	6.730684E-02			15	
Acenaphthene-d10							15	
Chrysene-d12							15	

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	2121002
Lab File ID:	SEQICV1B.D	Calibration Date:	04/26/12 00:00
Sequence:	2D11810	Injection Date:	04/26/12
Lab Sample ID:	2D11810-ICV1	Injection Time:	23:56

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.281	0.7737929	0.8173424		5.6	20
Acenaphthylene	A	5.000	5.511	1.152174	1.269907		10.2	20
Anthracene	A	5.000	5.352	1.154983	1.236255		7.0	20
Benzo(a)anthracene	A	5.000	5.376	1.114664	1.198489		7.5	20
Benzo(a)pyrene	A	5.000	5.309	1.17201	1.244442		6.2	20
Benzo(b)fluoranthene	A	5.000	5.299	1.289196	1.366261		6.0	20
Benzo(g,h,i)perylene	A	5.000	5.438	0.9691305	1.054102		8.8	20
Benzo(k)fluoranthene	A	5.000	5.381	1.333578	1.435206		7.6	20
Chrysene	A	5.000	5.573	1.083873	1.208081		11.5	20
Dibenz(a,h)anthracene	A	5.000	5.508	0.9407362	1.036267		10.2	20
Fluoranthene	A	5.000	5.233	1.230083	1.287506		4.7	20
Fluorene	A	5.000	5.327	0.8030428	0.855574		6.5	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.473	1.156775	1.2661		9.5	20
1-Methylnaphthalene	A	5.000	5.192	0.7315363	0.7596704		3.8	20
2-Methylnaphthalene	A	5.000	5.240	0.7669459	0.8037404		4.8	20
Naphthalene	A	5.000	5.952	1.251714	1.489929		19.0	20
Phenanthrene	A	5.000	5.333	1.162578	1.239933		6.7	20
Pyrene	A	5.000	5.284	1.264735	1.336503		5.7	20
2-Fluorobiphenyl	A	5.000	5.117	0.8749264	0.8954328		2.3	20
Terphenyl-d14	A	5.000	5.600	0.7618847	0.8532785		12.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	2121002
Lab File ID:	SEQ-CCV1.D	Calibration Date:	04/26/12 00:00
Sequence:	2G20611	Injection Date:	07/23/12
Lab Sample ID:	2G20611-CCV1	Injection Time:	15:01

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.882	0.7737929	0.7554557		-2.4	20
Acenaphthylene	A	5.000	5.134	1.152174	1.183127		2.7	20
Anthracene	A	5.000	4.603	1.154983	1.063254		-7.9	20
Benzo(a)anthracene	A	5.000	4.367	1.114664	0.9735908		-12.7	20
Benzo(a)pyrene	A	5.000	4.688	1.17201	1.098861		-6.2	20
Benzo(b)fluoranthene	A	5.000	4.848	1.289196	1.250095		-3.0	20
Benzo(g,h,i)perylene	A	5.000	4.987	0.9691305	0.9666209		-0.3	20
Benzo(k)fluoranthene	A	5.000	4.684	1.333578	1.249432		-6.3	20
Chrysene	A	5.000	4.286	1.083873	0.9290515		-14.3	20
Dibenz(a,h)anthracene	A	5.000	4.844	0.9407362	0.9114899		-3.1	20
Fluoranthene	A	5.000	4.706	1.230083	1.157867		-5.9	20
Fluorene	A	5.000	4.758	0.8030428	0.7642385		-4.8	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.823	1.156775	1.115929		-3.5	20
1-Methylnaphthalene	A	5.000	4.920	0.7315363	0.7198597		-1.6	20
2-Methylnaphthalene	A	5.000	4.968	0.7669459	0.7620111		-0.6	20
Naphthalene	A	5.000	4.881	1.251714	1.221926		-2.4	20
Phenanthrene	A	5.000	4.623	1.162578	1.074999		-7.5	20
Pyrene	A	5.000	4.662	1.264735	1.179147		-6.8	20
2-Fluorobiphenyl	A	5.000	4.915	0.8749264	0.860109		-1.7	20
Terphenyl-d14	A	5.000	4.523	0.7618847	0.6891512		-9.5	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G19916-BLK2 File ID: G19916B1.D

Sampled: Prepared: Analyzed: 07/23/12 16:02

Solids: Preparation: EXT_3510 Dilution:

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene		0.0500	0.100	0.200	U
208-96-8	Acenaphthylene		0.0500	0.100	0.200	U
120-12-7	Anthracene		0.0500	0.100	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
50-32-8	Benzo(a)pyrene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
191-24-2	Benzo(g,h,i)perylene	0.0515	0.0500	0.100	0.200	I
207-08-9	Benzo(k)fluoranthene		0.0500	0.100	0.200	U
218-01-9	Chrysene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene	0.0533	0.0500	0.100	0.200	I
206-44-0	Fluoranthene		0.0500	0.100	0.200	U
86-73-7	Fluorene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.100	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.100	0.200	U
91-20-3	Naphthalene		0.0500	0.100	0.200	U
85-01-8	Phenanthrene		0.100	0.200	0.400	U
129-00-0	Pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	39.46	78.9	34 - 167	
Terphenyl-d14	50.00	42.78	85.6	34 - 167	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G19916-BS2 File ID: G19916L1.D

Sampled: Prepared: Analyzed: 07/23/12 15:34

Solids: Preparation: EXT_3510 Dilution:

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.8147	0.0500	0.100	0.200	
208-96-8	Acenaphthylene	0.8420	0.0500	0.100	0.200	
120-12-7	Anthracene	0.6337	0.0500	0.100	0.200	
56-55-3	Benzo(a)anthracene	0.6073	0.0500	0.100	0.200	
50-32-8	Benzo(a)pyrene	0.6628	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.7303	0.0500	0.100	0.200	
191-24-2	Benzo(g,h,i)perylene	0.8106	0.0500	0.100	0.200	
207-08-9	Benzo(k)fluoranthene	0.7310	0.0500	0.100	0.200	
218-01-9	Chrysene	0.6414	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7575	0.0500	0.100	0.200	
206-44-0	Fluoranthene	0.7603	0.0500	0.100	0.200	
86-73-7	Fluorene	0.7833	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7462	0.0500	0.100	0.200	
90-12-0	1-Methylnaphthalene	0.9020	0.0500	0.100	0.200	
91-57-6	2-Methylnaphthalene	0.8387	0.0500	0.100	0.200	
91-20-3	Naphthalene	0.8718	0.0500	0.100	0.200	
85-01-8	Phenanthrene	0.8513	0.100	0.200	0.400	
129-00-0	Pyrene	0.7262	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	46.20	92.4	34 - 167	
Terphenyl-d14	50.00	37.87	75.7	34 - 167	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G19916-MS2 File ID: 0707005M.D

Sampled: Prepared: Analyzed: 07/23/12 19:17

Solids: Preparation: EXT_3510 Dilution:

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.5248	0.0463	0.0926	0.185	
208-96-8	Acenaphthylene	0.5541	0.0463	0.0926	0.185	
120-12-7	Anthracene	0.5740	0.0463	0.0926	0.185	
56-55-3	Benzo(a)anthracene	0.6523	0.0463	0.0926	0.185	
50-32-8	Benzo(a)pyrene	0.5942	0.0463	0.0926	0.185	
205-99-2	Benzo(b)fluoranthene	0.6177	0.0463	0.0926	0.185	
191-24-2	Benzo(g,h,i)perylene	0.5728	0.0463	0.0926	0.185	
207-08-9	Benzo(k)fluoranthene	0.6582	0.0463	0.0926	0.185	
218-01-9	Chrysene	0.6621	0.0463	0.0926	0.185	
53-70-3	Dibenz(a,h)anthracene	0.5290	0.0463	0.0926	0.185	
206-44-0	Fluoranthene	0.6818	0.0463	0.0926	0.185	
86-73-7	Fluorene	0.5721	0.0463	0.0926	0.185	
193-39-5	Indeno(1,2,3-cd)pyrene	0.5533	0.0463	0.0926	0.185	
90-12-0	1-Methylnaphthalene	0.5583	0.0463	0.0926	0.185	
91-57-6	2-Methylnaphthalene	0.5243	0.0463	0.0926	0.185	
91-20-3	Naphthalene	0.5125	0.0463	0.0926	0.185	
85-01-8	Phenanthrene	0.6370	0.0926	0.185	0.370	
129-00-0	Pyrene	0.6782	0.0463	0.0926	0.185	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	28.50	61.6	34 - 167	
Terphenyl-d14	46.30	35.81	77.4	34 - 167	

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2G19916-MSD2 File ID: 0707005S.D

Sampled: Prepared: Analyzed: 07/23/12 19:44

Solids: Preparation: EXT_3510 Dilution:

Batch: 2G19916 Sequence: 2G20611 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
83-32-9	Acenaphthene	0.6812	0.0463	0.0926	0.185	
208-96-8	Acenaphthylene	0.6948	0.0463	0.0926	0.185	
120-12-7	Anthracene	0.6846	0.0463	0.0926	0.185	
56-55-3	Benzo(a)anthracene	0.7039	0.0463	0.0926	0.185	
50-32-8	Benzo(a)pyrene	0.6775	0.0463	0.0926	0.185	
205-99-2	Benzo(b)fluoranthene	0.7648	0.0463	0.0926	0.185	
191-24-2	Benzo(g,h,i)perylene	0.5911	0.0463	0.0926	0.185	
207-08-9	Benzo(k)fluoranthene	0.7393	0.0463	0.0926	0.185	
218-01-9	Chrysene	0.7416	0.0463	0.0926	0.185	
53-70-3	Dibenz(a,h)anthracene	0.5290	0.0463	0.0926	0.185	
206-44-0	Fluoranthene	0.7822	0.0463	0.0926	0.185	
86-73-7	Fluorene	0.7183	0.0463	0.0926	0.185	
193-39-5	Indeno(1,2,3-cd)pyrene	0.5528	0.0463	0.0926	0.185	
90-12-0	1-Methylnaphthalene	0.7199	0.0463	0.0926	0.185	
91-57-6	2-Methylnaphthalene	0.6382	0.0463	0.0926	0.185	
91-20-3	Naphthalene	0.6418	0.0463	0.0926	0.185	
85-01-8	Phenanthrene	0.7847	0.0926	0.185	0.370	
129-00-0	Pyrene	0.7893	0.0463	0.0926	0.185	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	36.25	78.3	34 - 167	
Terphenyl-d14	46.30	41.83	90.3	34 - 167	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-MW01-120712	07/12/12 10:00	07/13/12 08:30	07/19/12 11:51	7.12	7.00	07/23/12 16:59	4.21	40.00	
MPT-289-MW02-120712	07/12/12 10:45	07/13/12 08:30	07/19/12 11:51	7.09	7.00	07/23/12 17:27	4.23	40.00	
MPT-289-MW03D-120712	07/12/12 11:20	07/13/12 08:30	07/19/12 11:51	7.06	7.00	07/23/12 17:55	4.25	40.00	
MPT-289-MW04-120712	07/12/12 12:50	07/13/12 08:30	07/19/12 11:51	7.00	7.00	07/23/12 18:22	4.27	40.00	
MPT-289-MW05-120712	07/12/12 13:40	07/13/12 08:30	07/19/12 11:51	6.97	7.00	07/23/12 18:50	4.29	40.00	

Data for FLPRO Forms

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2F16501	Instrument:	GL-GCFID2
Calibration:	2165001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	2F16501-CAL6	002F0201.D	06/12/12 17:27
Cal Standard	2F16501-CAL5	003F0301.D	06/12/12 18:00
Cal Standard	2F16501-CAL4	004F0401.D	06/12/12 18:34
Cal Standard	2F16501-CAL3	005F0501.D	06/12/12 19:07
Cal Standard	2F16501-CAL2	006F0601.D	06/12/12 19:40
Cal Standard	2F16501-CAL1	007F0701.D	06/12/12 20:13
Initial Cal Check	2F16501-ICV1	008F0801.D	06/12/12 20:46

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20105	Instrument:	GL-GCFID2
Calibration:	2165001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2G20105-CCV1	041F4101.D	07/18/12 13:04
Blank	2G17004-BLK1	042F4201.D	07/18/12 13:38
LCS	2G17004-BS1	043F4301.D	07/18/12 14:12
Calibration Check	2G20105-CCV2	050F5001.D	07/18/12 18:43

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20511	Instrument:	GL-GCFID2
Calibration:	2165001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	2G20511-CCV1	039F3901.D	07/20/12 08:05
MPT-289-MW01-120712	1207070-01	043F4301.D	07/20/12 10:18
MPT-289-MW02-120712	1207070-02	044F4401.D	07/20/12 10:52
MPT-289-MW03D-120712	1207070-03	045F4501.D	07/20/12 11:25
MPT-289-MW04-120712	1207070-04	046F4601.D	07/20/12 11:59
MPT-289-MW05-120712	1207070-05	047F4701.D	07/20/12 12:32
MPT-289-MW05-120712	2G17004-MS1	048F4801.D	07/20/12 13:06
MPT-289-MW05-120712	2G17004-MSD1	049F4901.D	07/20/12 13:39
Calibration Check	2G20511-CCV2	050F5001.D	07/20/12 14:13

ANALYSIS DATA SHEET

MPT-289-MW01-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-01	File ID:	043F4301.D
Sampled:	07/12/12 10:00	Prepared:	07/17/12 14:00	Analyzed:	07/20/12 10:18
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.157	0.315	0.630	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.06242	135	50 - 150	X
o-Terphenyl	0.04630	0.06758	146	82 - 142	*X

ANALYSIS DATA SHEET

MPT-289-MW02-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-02	File ID:	044F4401.D
Sampled:	07/12/12 10:45	Prepared:	07/17/12 14:00	Analyzed:	07/20/12 10:52
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.08	0.157	0.315	0.630	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.04531	97.9	50 - 150	X
o-Terphenyl	0.04630	0.04967	107	82 - 142	X

ANALYSIS DATA SHEET

MPT-289-MW03D-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-03	File ID:	045F4501.D
Sampled:	07/12/12 11:20	Prepared:	07/17/12 14:00	Analyzed:	07/20/12 11:25
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	1.04	0.157	0.315	0.630	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.05660	122	50 - 150	X
o-Terphenyl	0.04630	0.05908	128	82 - 142	X

ANALYSIS DATA SHEET

MPT-289-MW04-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-04	File ID:	046F4601.D
Sampled:	07/12/12 12:50	Prepared:	07/17/12 14:00	Analyzed:	07/20/12 11:59
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.157	0.315	0.630	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03078	66.5	50 - 150	X
o-Terphenyl	0.04630	0.03406	73.6	82 - 142	*X

ANALYSIS DATA SHEET

MPT-289-MW05-120712

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1207070-05	File ID:	047F4701.D
Sampled:	07/12/12 13:40	Prepared:	07/17/12 14:00	Analyzed:	07/20/12 12:32
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.157	0.315	0.630	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.03105	67.1	50 - 150	X
o-Terphenyl	0.04630	0.03668	79.2	82 - 142	*X

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2G17004	Laboratory ID:	2G17004-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.439	76.2	55 - 118

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

FLPRO

MPT-289-MW05-120712

Laboratory: Empirical Laboratories, LLC

SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Matrix: Water

Batch: 2G17004

% Solids:

Source Sample Name: **1207070-05**

ANALYTE	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC.	Q	QC LIMITS REC.
Petroleum Range Organics	2.963	ND	2.320	78.3		55 - 118

ANALYTE	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	2.963	2.255	76.1	2.83		30	55 - 118

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2G17004 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-MW01-120712	1207070-01	07/17/12 14:00	1,080.00	2.00
MPT-289-MW02-120712	1207070-02	07/17/12 14:00	1,080.00	2.00
MPT-289-MW03D-120712	1207070-03	07/17/12 14:00	1,080.00	2.00
MPT-289-MW04-120712	1207070-04	07/17/12 14:00	1,080.00	2.00
MPT-289-MW05-120712	1207070-05	07/17/12 14:00	1,080.00	2.00
Blank	2G17004-BLK1	07/17/12 14:00	1,000.00	2.00
LCS	2G17004-BS1	07/17/12 14:00	1,000.00	2.00
MPT-289-MW05-120712	2G17004-MS1	07/17/12 14:00	1,080.00	2.00
MPT-289-MW05-120712	2G17004-MSD1	07/17/12 14:00	1,080.00	2.00

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2F16501	Instrument:	GL-GCFID2
Calibration:	2165001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
12B0856	FLPRO CAL1 85ppm	2F16501-CAL6	002F0201.D	06/12/12 17:27
12B0855	FLPRO CAL2 850ppm	2F16501-CAL5	003F0301.D	06/12/12 18:00
12B0854	FLPRO CAL3 2550ppm	2F16501-CAL4	004F0401.D	06/12/12 18:34
12B0841	FLPRO CAL4 4250ppm	2F16501-CAL3	005F0501.D	06/12/12 19:07
12B0840	FLPRO CAL5 5950ppm	2F16501-CAL2	006F0601.D	06/12/12 19:40
12B0839	FLPRO CAL6 8500ppm	2F16501-CAL1	007F0701.D	06/12/12 20:13

INITIAL CALIBRATION DATA

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2165001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	6/12/12 17:27 6/12/12 20:13

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	8500	968.0024	5950	1039.52	4250	1079.635	2550	1006.953	850	1100.666	85	956.1059
2-Fluorobiphenyl	50	998.6	35	1059.771	25	1066.84	15	1020	10	1069.1	5	1098.4
o-Terphenyl	50	1292.7	35	1356.057	25	1298.76	15	1269.267	10	1289.9	5	1316.4

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2165001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Dates:	6/12/12 17:27 6/12/12 20:13

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1025.147	5.728226	4.057	2.420417E-02			20	
2-Fluorobiphenyl	1052.119	3.453586	9.042	2.550534E-02			20	
o-Terphenyl	1303.847	2.281352	11.18483	7.838658E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2165001
Lab File ID:	008F0801.D	Calibration Date:	06/12/12 08:05
Sequence:	2F16501	Injection Date:	06/12/12
Lab Sample ID:	2F16501-ICV1	Injection Time:	20:46

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	3735	1025.147	957.2283		-6.6	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2165001
Lab File ID:	041F4101.D	Calibration Date:	06/12/12 08:05
Sequence:	2G20105	Injection Date:	07/18/12
Lab Sample ID:	2G20105-CCV1	Injection Time:	13:04

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3747	1025.147	903.7889		-11.8	25
2-Fluorobiphenyl	A	25.00	31.18	1052.119	1312.04		24.7	25
o-Terphenyl	A	25.00	29.09	1303.847	1517.4		16.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2165001
Lab File ID:	050F5001.D	Calibration Date:	06/12/12 08:05
Sequence:	2G20105	Injection Date:	07/18/12
Lab Sample ID:	2G20105-CCV2	Injection Time:	18:43

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3897	1025.147	939.9118		-8.3	25
2-Fluorobiphenyl	A	25.00	31.68	1052.119	1333.28		26.7	25 *
o-Terphenyl	A	25.00	29.75	1303.847	1551.44		19.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2165001
Lab File ID:	039F3901.D	Calibration Date:	06/12/12 08:05
Sequence:	2G20511	Injection Date:	07/20/12
Lab Sample ID:	2G20511-CCV1	Injection Time:	08:05

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4078	1025.147	983.6781		-4.0	25
2-Fluorobiphenyl	A	25.00	33.13	1052.119	1394.2		32.5	25 *
o-Terphenyl	A	25.00	31.74	1303.847	1655.52		27.0	25 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	GL-GCFID2	Calibration:	2165001
Lab File ID:	050F5001.D	Calibration Date:	06/12/12 08:05
Sequence:	2G20511	Injection Date:	07/20/12
Lab Sample ID:	2G20511-CCV2	Injection Time:	14:13

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4202	1025.147	1013.713		-1.1	25
2-Fluorobiphenyl	A	25.00	34.87	1052.119	1467.68		39.5	25 *
o-Terphenyl	A	25.00	33.12	1303.847	1727.64		32.5	25 *

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20105	Instrument:	GL-GCFID2
		Calibration:	2165001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2G20105-CCV1) mg/L				Lab File ID: 041F4101.D		Analyzed: 07/18/12 13:04		
2-Fluorobiphenyl	25.00	125	75 - 125	8.973	8.973	0.0000	+/-0.050	
o-Terphenyl	25.00	116	75 - 125	11.196	11.196	0.0000	+/-0.050	
Blank (2G17004-BLK1) mg/L				Lab File ID: 042F4201.D		Analyzed: 07/18/12 13:38		
2-Fluorobiphenyl	0.05000	124	50 - 150	8.98	8.973	0.0070	+/-0.050	
o-Terphenyl	0.05000	116	82 - 142	11.21	11.196	0.0140	+/-0.050	
LCS (2G17004-BS1) mg/L				Lab File ID: 043F4301.D		Analyzed: 07/18/12 14:12		
2-Fluorobiphenyl	0.05000	101	50 - 150	8.98	8.973	0.0070	+/-0.050	
o-Terphenyl	0.05000	106	82 - 142	11.203	11.196	0.0070	+/-0.050	
Calibration Check (2G20105-CCV2) mg/L				Lab File ID: 050F5001.D		Analyzed: 07/18/12 18:43		
2-Fluorobiphenyl	25.00	127	75 - 125	8.966	8.973	-0.0070	+/-0.050	*
o-Terphenyl	25.00	119	75 - 125	11.153	11.196	-0.0430	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2G20511	Instrument:	GL-GCFID2
		Calibration:	2165001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2G20511-CCV1) mg/L				Lab File ID: 039F3901.D		Analyzed: 07/20/12 08:05		
2-Fluorobiphenyl	25.00	133	75 - 125	8.973	8.973	0.0000	+/-0.050	*
o-Terphenyl	25.00	127	75 - 125	11.16	11.16	0.0000	+/-0.050	*
MPT-289-MW01-120712 (1207070-01) mg/L				Lab File ID: 043F4301.D		Analyzed: 07/20/12 10:18		
2-Fluorobiphenyl	0.04630	135	50 - 150	8.983	8.973	0.0100	+/-0.050	
o-Terphenyl	0.04630	146	82 - 142	11.18	11.16	0.0200	+/-0.050	*
MPT-289-MW02-120712 (1207070-02) mg/L				Lab File ID: 044F4401.D		Analyzed: 07/20/12 10:52		
2-Fluorobiphenyl	0.04630	97.9	50 - 150	8.973	8.973	0.0000	+/-0.050	
o-Terphenyl	0.04630	107	82 - 142	11.153	11.16	-0.0070	+/-0.050	
MPT-289-MW03D-120712 (1207070-03) mg/L				Lab File ID: 045F4501.D		Analyzed: 07/20/12 11:25		
2-Fluorobiphenyl	0.04630	122	50 - 150	8.973	8.973	0.0000	+/-0.050	
o-Terphenyl	0.04630	128	82 - 142	11.166	11.16	0.0060	+/-0.050	
MPT-289-MW04-120712 (1207070-04) mg/L				Lab File ID: 046F4601.D		Analyzed: 07/20/12 11:59		
2-Fluorobiphenyl	0.04630	66.5	50 - 150	8.986	8.973	0.0130	+/-0.050	
o-Terphenyl	0.04630	73.6	82 - 142	11.19	11.16	0.0300	+/-0.050	*
MPT-289-MW05-120712 (1207070-05) mg/L				Lab File ID: 047F4701.D		Analyzed: 07/20/12 12:32		
2-Fluorobiphenyl	0.04630	67.1	50 - 150	8.986	8.973	0.0130	+/-0.050	
o-Terphenyl	0.04630	79.2	82 - 142	11.193	11.16	0.0330	+/-0.050	*
Matrix Spike (2G17004-MS1) mg/L				Lab File ID: 048F4801.D		Analyzed: 07/20/12 13:06		
2-Fluorobiphenyl	0.04630	98.3	50 - 150	8.98	8.973	0.0070	+/-0.050	
o-Terphenyl	0.04630	107	82 - 142	11.176	11.16	0.0160	+/-0.050	
Matrix Spike Dup (2G17004-MSD1) mg/L				Lab File ID: 049F4901.D		Analyzed: 07/20/12 13:39		
2-Fluorobiphenyl	0.04630	97.7	50 - 150	8.983	8.973	0.0100	+/-0.050	
o-Terphenyl	0.04630	104	82 - 142	11.193	11.16	0.0330	+/-0.050	
Calibration Check (2G20511-CCV2) mg/L				Lab File ID: 050F5001.D		Analyzed: 07/20/12 14:13		
2-Fluorobiphenyl	25.00	139	75 - 125	8.98	8.973	0.0070	+/-0.050	*
o-Terphenyl	25.00	132	75 - 125	11.193	11.16	0.0330	+/-0.050	*

HOLDING TIME SUMMARY
FLPRO

Laboratory: Empirical Laboratories, LLC SDG: 1207070

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-MW01-120712	07/12/12 10:00	07/13/12 08:30	07/17/12 14:00	5.21	7.00	07/20/12 10:18	2.85	40.00	
MPT-289-MW02-120712	07/12/12 10:45	07/13/12 08:30	07/17/12 14:00	5.18	7.00	07/20/12 10:52	2.87	40.00	
MPT-289-MW03D-120712	07/12/12 11:20	07/13/12 08:30	07/17/12 14:00	5.15	7.00	07/20/12 11:25	2.89	40.00	
MPT-289-MW04-120712	07/12/12 12:50	07/13/12 08:30	07/17/12 14:00	5.09	7.00	07/20/12 11:59	2.92	40.00	
MPT-289-MW05-120712	07/12/12 13:40	07/13/12 08:30	07/17/12 14:00	5.06	7.00	07/20/12 12:32	2.94	40.00	

ANALYSIS DATA SHEET

Blank

Laboratory:	Empirical Laboratories, LLC			SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:		Laboratory ID:	2G17004-BLK1	File ID:	042F4201.D
Sampled:		Prepared:		Analyzed:	07/18/12 13:38
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 2G17004 Sequence: 2G20105 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics		0.170	0.340	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.06207	124	50 - 150	X
o-Terphenyl	0.05000	0.05823	116	82 - 142	

ANALYSIS DATA SHEET

LCS

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2G17004-BS1	File ID:	043F4301.D
Sampled:		Prepared:		Analyzed:	07/18/12 14:12
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	2G17004	Sequence:	2G20105	Calibration:	2165001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.439	0.170	0.340	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.05033	101	50 - 150	X
o-Terphenyl	0.05000	0.05321	106	82 - 142	

ANALYSIS DATA SHEET

Matrix Spike

Laboratory:	Empirical Laboratories, LLC	SDG:	1207070
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60

Matrix:		Laboratory ID:	2G17004-MS1	File ID:	048F4801.D
Sampled:		Prepared:		Analyzed:	07/20/12 13:06
Solids:		Preparation:	EXT_3510	Dilution:	

Batch:	2G17004	Sequence:	2G20511	Calibration:	2165001	Instrument:	GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.320	0.157	0.315	0.630	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.04552	98.3	50 - 150	X
o-Terphenyl	0.04630	0.04964	107	82 - 142	X

ANALYSIS DATA SHEET

Matrix Spike Dup

Laboratory:	Empirical Laboratories, LLC		SDG:	1207070	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	NAS Mayport CTO JM60	
Matrix:		Laboratory ID:	2G17004-MSD1	File ID:	049F4901.D
Sampled:		Prepared:		Analyzed:	07/20/12 13:39
Solids:		Preparation:	EXT_3510	Dilution:	

Batch: 2G17004 Sequence: 2G20511 Calibration: 2165001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	DL	LOD	LOQ	Q
	Petroleum Range Organics	2.255	0.157	0.315	0.630	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.04525	97.7	50 - 150	X
o-Terphenyl	0.04630	0.04837	104	82 - 142	X

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1208123

PROJECT NAME: NAS MAYPORT CTO JM60
PROJECT LOCATION: MAYPORT, FL

SUBMITTAL TO:
Vanessa Good
Tetra Tech NUS, Inc.
Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220

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Original Report Date: August 31, 2012
Report Revision #: N/A
Revision Date: N/A
Total # of Pages: 31

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

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Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. Sample prep and dilution information is provided within the final results report and at the beginning of each form set. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8270D PAH:
No anomalies or deviations are noted.

Data Qualifiers

As applicable and where required, the following general qualifiers are associated with the sample results. Additional qualifiers will be specified within the reporting sections of the data package or within the body of the Case Narrative.

Analytical Report Terms and Qualifiers

DL: The detection limit (DL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero. The DL is supported by the method detection limit (MDL) which is determined from analysis of a sample containing the analyte in a given matrix.

LOD: The Limit of Detection is an estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte- and matrix-specific and may be laboratory-dependent. This definition is further clarified in the DoD QSM 4.2 revisions as the smallest amount or concentration of a substance that must be present in a sample in order to be detected at a high level of confidence (99%). At the LOD, the false negative rate (Type II error) is 1%.

LOQ: The Limit of Quantitation is the minimum level, concentration, or quantity of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. This term is further clarified within the DoD QSM 4.2 as the lowest concentration that produces a quantitative result within specified limits of precision and bias.

*****: Exceeding quality control criteria are associated with the reported result.

B: The presence of a "B" to the right of an analytical value indicates that this compound was also detected in the method blank and the data should be interpreted with caution. One should consider the possibility that the correct sample result might be less than the reported result and, perhaps, zero. **For Florida DEP reports this qualifier is "V".**

D: When a sample (or sample extract) is rerun diluted because one of the compound concentrations exceeded the highest concentration range for the standard curve, all of the values obtained in the dilution run will be flagged with a "D".

E: The concentration for any compound found which exceeds the highest concentration level on the standard curve for that compound will be flagged with an "E". Usually the sample will be rerun at a dilution to quantitate the flagged compound. **For Florida DEP reports this qualifier is "L".**

H1: The result was analyzed outside of the EPA recommended holding time.

H2: The result was extracted outside of the EPA recommended holding time.

H3: The sample for this analyte was received outside of the EPA recommended holding time.

J: The presence of a "J" to the right of an analytical result indicates that the reported result is estimated. The mass spectral data pass the identification criteria showing that the compound is present, but the calculated result is less than the LOQ. One should feel confident that the result is greater than zero and less than the LOQ. **For Florida DEP reports this qualifier is "I".**

M: Indicates that the sample matrix interfered with the quantitation of the analyte. In dual column analysis the result is reported from the column with the lower concentration. In inorganics, it indicates that the parameters DL/LOD/LOQ have been raised.

N: The MS/MSD accuracy and/or precision are outside criteria. The predigested spike recovery is not within control limits for the associated parameter.

P: The associated numerical value is an estimated quantity. There is greater than a 40% difference between the two GC columns for the detected concentrations. The higher of the two values is reported unless matrix interference is obvious or for HPLC analysis where the primary column is reported.

Q: The relative percent difference (RPD) and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.

S: The associated internal standard exceeded criteria.

U: The presence of a "U" indicates that the analyte was analyzed for but was not detected or the concentration of the analyte quantitated below the DL.

X: The parameter shows a potential positive bias on a reported concentration due to an ICV or CCV exceeding the upper control limit on the high side.

Y: The parameter shows a potential negative bias on a reported concentration due to an ICV or CCV exceeding the lower control limit on the low side.

Z: The parameter shows lack of confirmation/detection, which may be due to a negative bias in the ICV or CCV which exceeds the lower control limit.

LIMS Definitions / Naming Conventions:

The following are general naming conventions that are used throughout the laboratory; however, on a method by method basis, there are additional QAQC items that are named in a consistent format.

BLK appended to the Batch ID. A Method Blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The Method Blank is used to assess for possible contamination during preparation and/or analysis steps. Method Blanks within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally.

BS: LIMS assigns a unique identifier to the Blank Spike by naming it as the letters BS appended to the Batch ID. The Blank Spike or Lab Control Sample is a controlled analyte-free matrix, which is spiked with known and verified concentrations of target analytes. Spiking concentrations can be referenced in the method SOP. The BS is used to evaluate the viability of analytes taken through the entire prep (when applicable) and analytical process. Blank Spikes within a Batch or Analytical sequence will be appended with a numerical value beginning with 1 that will increase incrementally. A duplicate Blank Spike will be designated as a BSD.

MS: The LIMS assigns each Client sample with a unique identifier. The Matrix Spike is designated with a MS at the end of the sample's unique identifier. The Matrix Spike sample is used to assess the effect of the sample matrix on the precision and accuracy of the results generated using the selected method. A duplicate Matrix Spike will be designated as a MSD.

IDs: The LIMS assigns each Client sample with a unique identifier. The letter "RE" may potentially be appended to the end of the LIMS Sample ID. And "**RE"** implies that the sample was either re-prepped, re-analyzed straight, or re-analyzed at a dilution. Subsequent re-analysis for the sample will be appended with a numerical value beginning with 1 that will increase incrementally. Eg: RE1, RE2, RE3, etc.

Statement of Data Authenticity:
I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.

_____
Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

ORGANIC CALCULATIONS

GC/MS Volatiles

$$\text{Final Concentration} = \frac{\text{On-column(ug/L or ug/Kg) * Expected Vol/Weight (mL or g) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

Note - Expected Vol/Weight value is found in "Final Vol" column of Preparation Batch Summary.

GC/MS Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/uL) * Final Vol (ml) * Dilution *(1000uL/mL)}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

GC or LC Extractables

$$\text{Final Concentration} = \frac{\text{On-column(ng/mL) * Final Vol (mL) * Dilution}}{\text{Initial Vol/Weight (mL or g) * (Percent Solids/100) (if applicable)}}$$

= ng/mL or ng/g

= ug/L or ug/kg

Sample Receipt Information

1208123

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2547 | PAGE 1 OF 1

PROJECT NO: 112G03576	FACILITY: NASTA MAYPORT	PROJECT MANAGER D. SIEFKEN	PHONE NUMBER 904-636-6125	LABORATORY NAME AND CONTACT: EMPIRICAL LABORATORIES - B. RICHARD
SAMPLERS (SIGNATURE) K. WILT		FIELD OPERATIONS LEADER K. WEICHERT	PHONE NUMBER 904-636-6125	ADDRESS 621 MAINSTREAM DR. SUITE 270
		CARRIER/WAYBILL NUMBER		CITY, STATE NASHVILLE, TN

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS / SELECT SVOC/PAHS 8270 *								COMMENTS
CONTAINER TYPE PLASTIC (P) or GLASS (G)									G								
PRESERVATIVE USED									-								
8/16	1200	MPT-289-P202-081612				GW	G	2	2					01			-COOL TO 4°C
																	*

1. RELINQUISHED BY K. WILT	DATE 8-16-12	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY Jack Lewis	DATE 8-17-12	TIME 825

COMMENTS * ONLY BENZO(A)ANTHRACENE, BENZO(B)FLUORANTHENE, DIBENZO(A,H)ANTHRACENE, INDENO(1,2,3-CD)PYRENE

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Cooler Received/Opened On_ 08/17/12 0825

1. Tracking # 5013 (last 4 digits, FedEx) WO# 1208123

Courier: ____FED EX

2. Temperature of rep. sample or temp blank when opened: 3.4 *Degrees Celsius + correction factor* -0.2 = 3.2

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 FRONT & BACK

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA JD 8-17-12

I certify that I opened the cooler and answered questions 1-6 (intial) JD

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA * JD 8-17-12

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # ___

I certify that I unloaded the cooler and answered questions 7-14 (intial) JD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES... NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) JD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) JD

I certify that I attached a label with the unique LIMS number to each container (intial) JD

21. Were there Non-Conformance issues at login? YES...NO Was a NCR generated? YES...NO...# ___

Additional Details:

* COC says the project is "Mayport". This does not offer enough information. Container labels say project is Cecil Field Ocala Crash Site.

WORK ORDER

Printed: 8/17/2012 6:24:20PM

1208123

Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)
Project: Mayport CTOJM32 SWMUs 6 & 7
Project Manager: Brian Richard
Project Number: TET_CTOJM32

Report To:
Tetra Tech NUS, Inc. (T010)
Tobrena Skeen
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone: (412) 921-8182
Fax: (412) 921-4040

Invoice To:
Tetra Tech NUS, Inc. (T010)
Accounts Payable
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220
Phone :(412) 921-8182
Fax: (412) 921-4040

Due to Client: 09/10/2012 16:00 *This is the projected due date to the client, at the time of receipt, and is for report delivery via upload, and/or email, and/or shipment to meet TAT as setup by project*

Received By: Jack Deville
Date Received: 08/17/2012 08:25
Logged In By: Jack Deville
Date Logged In: 08/17/2012 11:25

Samples Received at: **3.2°C**

Custody Seals	Yes	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirme	No		

Method	Test Code	Due	TAT	Expires	Comments
1208123-01 MPT-289-PZ02-081612 [Water] Sampled 08/16/2012 12:00 Central 'Client Sample'					
SW8270C	ZZ_SMS_PAH_8270C_3510_LOW	09/05/2012 14:00	15	08/23/2012 12:00	Naphth, 1&2 MN, Benzo a anth

Reviewed By

Date

Sample Delivery Group Assignment Form

CLIENT: Tetra Tech NUS, Inc. (T010)
PROJECT NAME: NAS Mayport CTO JM60
SDG #: 1208123

QC LEVEL: Level IV
Report Due: 8/31/2012
Client Sample Count: 1

Sample Type	Sampled	Received	Lab ID	Client ID	Report Matrix	SW8270D
Client Sample	8/16/2012	8/17/2012	1208123-01	MPT-289-PZ02-081612	Water	X

Data for SW8270D (PAH) Forms

ANALYSIS DATA SHEET

MPT-289-PZ02-081612

Laboratory:	Empirical Laboratories, LLC			SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)			Project:	NAS Mayport CTO JM60
Matrix:	Water	Laboratory ID:	1208123-01	File ID:	0812301.D
Sampled:	08/16/12 12:00	Prepared:	08/21/12 11:11	Analyzed:	08/29/12 15:59
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 2H21916 Sequence: 2H24304 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		0.0463	0.0926	0.185	U
205-99-2	Benzo(b)fluoranthene		0.0463	0.0926	0.185	U
53-70-3	Dibenz(a,h)anthracene		0.0463	0.0926	0.185	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0463	0.0926	0.185	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	29.52	63.8	34 - 167	
Terphenyl-d14	46.30	36.37	78.6	34 - 167	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2H24304	Instrument:	MS-BNA4
		Calibration:	2121002

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (2H24304-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 08/29/12 12:45		
2-Fluorobiphenyl	5.000	95.9	80 - 120	8.513	8.513	0.0000	+/-0.500	
Terphenyl-d14	5.000	109	80 - 120	13.05	13.05	0.0000	+/-0.500	
Blank (2H21916-BLK1) ug/L				Lab File ID: H21916B1.D		Analyzed: 08/29/12 13:13		
2-Fluorobiphenyl	50.00	63.9	34 - 167	8.517	8.513	0.0040	+/-0.500	
Terphenyl-d14	50.00	78.3	34 - 167	13.058	13.05	0.0080	+/-0.500	
LCS (2H21916-BS1) ug/L				Lab File ID: H21916L1.D		Analyzed: 08/29/12 13:41		
2-Fluorobiphenyl	50.00	76.5	34 - 167	8.517	8.513	0.0040	+/-0.500	
Terphenyl-d14	50.00	95.8	34 - 167	13.058	13.05	0.0080	+/-0.500	
LCS Dup (2H21916-BSD1) ug/L				Lab File ID: H21916L2.D		Analyzed: 08/29/12 14:09		
2-Fluorobiphenyl	50.00	72.3	34 - 167	8.519	8.513	0.0060	+/-0.500	
Terphenyl-d14	50.00	81.3	34 - 167	13.057	13.05	0.0070	+/-0.500	
MPT-289-PZ02-081612 (1208123-01) ug/L				Lab File ID: 0812301.D		Analyzed: 08/29/12 15:59		
2-Fluorobiphenyl	46.30	63.8	34 - 167	8.516	8.513	0.0030	+/-0.500	
Terphenyl-d14	46.30	78.6	34 - 167	13.054	13.05	0.0040	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Matrix:	Water		
Batch:	2H21916	Laboratory ID:	2H21916-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzo(a)anthracene	0.9800	0.8315	84.8	58 - 141
Benzo(b)fluoranthene	0.9800	0.8659	88.4	42 - 156
Dibenz(a,h)anthracene	0.9800	0.6774	69.1	28 - 153
Indeno(1,2,3-cd)pyrene	0.9800	0.7262	74.1	20 - 167

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS	
					RPD	REC.
Benzo(a)anthracene	0.9800	0.7301	74.5	13.0	30	58 - 141
Benzo(b)fluoranthene	0.9800	0.7240	73.9	17.8	30	42 - 156
Dibenz(a,h)anthracene	0.9800	0.7439	75.9	9.35	30	28 - 153
Indeno(1,2,3-cd)pyrene	0.9800	0.7422	75.7	2.18	30	20 - 167

PREPARATION BATCH SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC SDG: 1208123

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Batch: 2H21916 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
MPT-289-PZ02-081612	1208123-01	08/21/12 11:11	1,080.00	1.00
Blank	2H21916-BLK1	08/21/12 11:11	1,000.00	1.00
LCS	2H21916-BS1	08/21/12 11:11	1,000.00	1.00
LCS Dup	2H21916-BSD1	08/21/12 11:11	1,000.00	1.00

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	04/26/12
Instrument ID:	MS-BNA4	Injection Time:	16:33
Sequence:	2D11810	Lab Sample ID:	2D11810-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	59.2	PASS
68	Less than 2% of 69	1.54	PASS
69	Less than 200% of 198	50.5	PASS
70	Less than 2% of 69	0.359	PASS
127	40 - 60% of 198	54.4	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.87	PASS
275	10 - 30% of 198	22.9	PASS
365	1 - 200% of 198	2.8	PASS
441	0.001 - 100% of 443	84.4	PASS
442	40 - 200% of 198	77.5	PASS
443	17 - 23% of 442	19.5	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Lab File ID:	SEQ-TUN1.D	Injection Date:	08/29/12
Instrument ID:	MS-BNA4	Injection Time:	12:27
Sequence:	2H24304	Lab Sample ID:	2H24304-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	59.1	PASS
68	Less than 2% of 69	1.72	PASS
69	Less than 200% of 198	52.1	PASS
70	Less than 2% of 69	0.547	PASS
127	40 - 60% of 198	54.7	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.92	PASS
275	10 - 30% of 198	24.4	PASS
365	1 - 200% of 198	2.89	PASS
441	0.001 - 100% of 443	87.4	PASS
442	40 - 200% of 198	78.3	PASS
443	17 - 23% of 442	19.9	PASS

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2D11810	Instrument:	MS-BNA4
Calibration:	2121002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2D11810-TUN1	SEQ-TUN1.D	04/26/12 16:33
Cal Standard	2D11810-CAL1	SEQCAL1A.D	04/26/12 16:50
Cal Standard	2D11810-CAL2	SEQCAL2B.D	04/26/12 18:15
Cal Standard	2D11810-CAL3	SEQCAL3B.D	04/26/12 19:12
Cal Standard	2D11810-CAL4	SEQCAL4A.D	04/26/12 19:41
Cal Standard	2D11810-CAL5	SEQCAL5B.D	04/26/12 21:06
Cal Standard	2D11810-CAL6	SEQCAL6B.D	04/26/12 22:03
Cal Standard	2D11810-CAL7	SEQCAL7A.D	04/26/12 22:31
Initial Cal Check	2D11810-ICV1	SEQICV1B.D	04/26/12 23:56

ANALYSIS SEQUENCE SUMMARY

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2H24304	Instrument:	MS-BNA4
Calibration:	2121002		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	2H24304-TUN1	SEQ-TUN1.D	08/29/12 12:27
Calibration Check	2H24304-CCV1	SEQ-CCV1.D	08/29/12 12:45
Blank	2H21916-BLK1	H21916B1.D	08/29/12 13:13
LCS	2H21916-BS1	H21916L1.D	08/29/12 13:41
LCS Dup	2H21916-BSD1	H21916L2.D	08/29/12 14:09
MPT-289-PZ02-081612	1208123-01	0812301.D	08/29/12 15:59

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Sequence:	2H24304	Instrument:	MS-BNA4
		Calibration:	2121002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (2H24304-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 08/29/12 12:45			
Phenanthrene-d10	481071	11.085	406220	12.157	118	50 - 200	-1.0720	+/-0.50	
Perylene-d12	368813	16.411	330193	18.029	112	50 - 200	-1.6180	+/-0.50	
Blank (2H21916-BLK1)			Lab File ID: H21916B1.D			Analyzed: 08/29/12 13:13			
Phenanthrene-d10	456567	11.082	481071	11.085	95	50 - 200	-0.0030	+/-0.50	
Perylene-d12	339557	16.411	368813	16.411	92	50 - 200	0.0000	+/-0.50	
LCS (2H21916-BS1)			Lab File ID: H21916L1.D			Analyzed: 08/29/12 13:41			
Phenanthrene-d10	369133	11.083	481071	11.085	77	50 - 200	-0.0020	+/-0.50	
Perylene-d12	278808	16.409	368813	16.411	76	50 - 200	-0.0020	+/-0.50	
LCS Dup (2H21916-BSD1)			Lab File ID: H21916L2.D			Analyzed: 08/29/12 14:09			
Phenanthrene-d10	441563	11.081	481071	11.085	92	50 - 200	-0.0040	+/-0.50	
Perylene-d12	334388	16.412	368813	16.411	91	50 - 200	0.0010	+/-0.50	
MPT-289-PZ02-081612 (1208123-01)			Lab File ID: 0812301.D			Analyzed: 08/29/12 15:59			
Phenanthrene-d10	403363	11.081	481071	11.085	84	50 - 200	-0.0040	+/-0.50	
Perylene-d12	268492	16.407	368813	16.411	73	50 - 200	-0.0040	+/-0.50	

INITIAL CALIBRATION DATA

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	0.1	0.8284338	0.5	0.8463376	1	0.7905859	5	0.7564354	20	0.7465952	40	0.7432093
Acenaphthylene	0.1	1.117244	0.5	1.222258	1	1.159843	5	1.17607	20	1.150843	40	1.15544
Anthracene	0.1	1.165379	0.5	1.24075	1	1.141283	5	1.151845	20	1.16271	40	1.140043
Benzo(a)anthracene	0.1	1.104547	0.5	1.15697	1	1.061402	5	1.078799	20	1.144076	40	1.141713
Benzo(a)pyrene	0.1	1.070555	0.5	1.214415	1	1.09201	5	1.142776	20	1.226464	40	1.232295
Benzo(b)fluoranthene	0.1	1.232431	0.5	1.358225	1	1.2171	5	1.191393	20	1.334496	40	1.341474
Benzo(g,h,i)perylene	0.1	0.9135112	0.5	1.069186	1	0.988096	5	0.9698328	20	0.9479826	40	0.9322904
Benzo(k)fluoranthene	0.1	1.276765	0.5	1.386285	1	1.291781	5	1.296367	20	1.372717	40	1.375273
Chrysene	0.1	1.125487	0.5	1.174129	1	1.065539	5	1.054981	20	1.077452	40	1.060916
Dibenz(a,h)anthracene	0.1	0.8080503	0.5	0.9522786	1	0.8989957	5	0.9322378	20	0.9867066	40	0.9951196
Fluoranthene	0.1	1.257669	0.5	1.332496	1	1.203956	5	1.202304	20	1.229389	40	1.212099
Fluorene	0.1	0.8624504	0.5	0.8633091	1	0.8162709	5	0.7900172	20	0.7863636	40	0.7716514
2-Fluorobiphenyl	0.1	0.8977937	0.5	0.9453296	1	0.9099752	5	0.86855	20	0.8460796	40	0.8542619
2-Fluorophenol	0.2		1		2		10		40		80	
Indeno(1,2,3-cd)pyrene	0.1	1.063307	0.5	1.212778	1	1.108405	5	1.153628	20	1.172686	40	1.178447
1-Methylnaphthalene	0.1	0.7880686	0.5	0.7956794	1	0.7450297	5	0.71151	20	0.6934976	40	0.7145846
2-Methylnaphthalene	0.1	0.7974492	0.5	0.8269049	1	0.781062	5	0.7527172	20	0.7445876	40	0.7547983
Naphthalene	0.1	1.349012	0.5	1.366405	1	1.309674	5	1.224434	20	1.182117	40	1.219288
Nitrobenzene-d5	0.1		0.5		1		5		20		40	
Phenanthrene	0.1	1.298319	0.5	1.273839	1	1.170058	5	1.125213	20	1.113786	40	1.098145
Phenol-d6	0.2		1		2		10		40		80	
Pyrene	0.1	1.349959	0.5	1.348972	1	1.234977	5	1.23447	20	1.256688	40	1.230656
Terphenyl-d14	0.1	0.7344378	0.5	0.8059511	1	0.7422243	5	0.7577963	20	0.7812106	40	0.7659497
2,4,6-Tribromophenol	0.2	9.972853E-02	1	0.1111695	2	0.1076801	10	0.115628	40	0.1238635	80	0.126312
Acenaphthene-d10	4		4		4		4		4		4	
Chrysene-d12	4		4		4		4		4		4	

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Acenaphthene	60	0.7049531										
Acenaphthylene	60	1.083517										
Anthracene	60	1.082868										
Benzo(a)anthracene	60	1.115142										
Benzo(a)pyrene	60	1.225554										
Benzo(b)fluoranthene	60	1.34925										
Benzo(g,h,i)perylene	60	0.9630144										
Benzo(k)fluoranthene	60	1.335859										
Chrysene	60	1.02861										
Dibenz(a,h)anthracene	60	1.011765										
Fluoranthene	60	1.172669										
Fluorene	60	0.7312367										
2-Fluorobiphenyl	60	0.8024945										
2-Fluorophenol	120											
Indeno(1,2,3-cd)pyrene	60	1.208177										
1-Methylnaphthalene	60	0.6723843										
2-Methylnaphthalene	60	0.7111022										
Naphthalene	60	1.111071										
Nitrobenzene-d5	60											
Phenanthrene	60	1.058688										
Phenol-d6	120											
Pyrene	60	1.197426										
Terphenyl-d14	60	0.7456228										
2,4,6-Tribromophenol	120	0.1254947										
Acenaphthene-d10	4											
Chrysene-d12	4											

INITIAL CALIBRATION DATA (Continued)

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Calibration:	2121002	Instrument:	MS-BNA4
Matrix:	Water	Calibration Dates:	4/26/12 16:50 4/26/12 22:31

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.7737929	6.514387	10.402	6.955727E-02			15	
Acenaphthylene	1.152174	3.797749	10.17171	5.332417E-02			15	
Anthracene	1.154983	4.052537	12.24186	0.0687624			15	
Benzo(a)anthracene	1.114664	3.19548	15.63329	5.793542E-02			15	
Benzo(a)pyrene	1.17201	5.912681	17.94071	8.222687E-02			15	
Benzo(b)fluoranthene	1.289196	5.588296	17.40443	8.023178E-02			15	
Benzo(g,h,i)perylene	0.9691305	5.211731	20.17429	0.104301			15	
Benzo(k)fluoranthene	1.333578	3.410689	17.44514	9.791606E-02			15	
Chrysene	1.083873	4.562206	15.70114	7.754657E-02			15	
Dibenz(a,h)anthracene	0.9407362	7.474966	19.77771	8.168964E-02			15	
Fluoranthene	1.230083	4.240375	13.64543	5.102833E-02			15	
Fluorene	0.8030428	5.999208	11.01857	6.557638E-02			15	
2-Fluorobiphenyl	0.8749264	5.371903	9.531143	5.659179E-02			15	
2-Fluorophenol							15	
Indeno(1,2,3-cd)pyrene	1.156775	4.680303	19.74843	8.750661E-02			15	
1-Methylnaphthalene	0.7315363	6.393879	9.175143	4.814779E-02			15	
2-Methylnaphthalene	0.7669459	4.963053	9.037286	4.132068E-02			15	
Naphthalene	1.251714	7.465959	8.157857	6.890469E-02			15	
Nitrobenzene-d5							15	
Phenanthrene	1.162578	7.819243	12.18786	5.997756E-02			15	
Phenol-d6							15	
Pyrene	1.264735	4.778785	13.92914	4.611641E-02			15	
Terphenyl-d14	0.7618847	3.282615	14.142	3.734299E-02			15	
2,4,6-Tribromophenol	0.1156966	8.751595	11.34329	6.730684E-02			15	
Acenaphthene-d10							15	
Chrysene-d12							15	

INITIAL CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	2121002
Lab File ID:	SEQICV1B.D	Calibration Date:	04/26/12 00:00
Sequence:	2D11810	Injection Date:	04/26/12
Lab Sample ID:	2D11810-ICV1	Injection Time:	23:56

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzo(a)anthracene	A	5.000	5.376	1.114664	1.198489		7.5	20
Benzo(b)fluoranthene	A	5.000	5.299	1.289196	1.366261		6.0	20
Dibenz(a,h)anthracene	A	5.000	5.508	0.9407362	1.036267		10.2	20
Indeno(1,2,3-cd)pyrene	A	5.000	5.473	1.156775	1.2661		9.5	20
2-Fluorobiphenyl	A	5.000	5.117	0.8749264	0.8954328		2.3	20
Terphenyl-d14	A	5.000	5.600	0.7618847	0.8532785		12.0	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

SW8270D

Laboratory:	Empirical Laboratories, LLC	SDG:	1208123
Client:	Tetra Tech NUS, Inc. (T010)	Project:	NAS Mayport CTO JM60
Instrument ID:	MS-BNA4	Calibration:	2121002
Lab File ID:	SEQ-CCV1.D	Calibration Date:	04/26/12 00:00
Sequence:	2H24304	Injection Date:	08/29/12
Lab Sample ID:	2H24304-CCV1	Injection Time:	12:45

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzo(a)anthracene	A	5.000	5.370	1.114664	1.197175		7.4	20
Benzo(b)fluoranthene	A	5.000	4.747	1.289196	1.223992		-5.1	20
Dibenz(a,h)anthracene	A	5.000	4.882	0.9407362	0.9184448		-2.4	20
Indeno(1,2,3-cd)pyrene	A	5.000	4.744	1.156775	1.097469		-5.1	20
2-Fluorobiphenyl	A	5.000	4.796	0.8749264	0.8391759		-4.1	20
Terphenyl-d14	A	5.000	5.446	0.7618847	0.8298684		8.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: 1208123

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2H21916-BLK1 File ID: H21916B1.D

Sampled: Prepared: Analyzed: 08/29/12 13:13

Solids: Preparation: EXT_3510 Dilution:

Batch: 2H21916 Sequence: 2H24304 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene		0.0500	0.100	0.200	U
205-99-2	Benzo(b)fluoranthene		0.0500	0.100	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.100	0.200	U
193-39-5	Indeno(1,2,3-cd)pyrene		0.0500	0.100	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	31.97	63.9	34 - 167	
Terphenyl-d14	50.00	39.17	78.3	34 - 167	

ANALYSIS DATA SHEET

LCS

Laboratory: Empirical Laboratories, LLC SDG: 1208123

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2H21916-BS1 File ID: H21916L1.D

Sampled: Prepared: Analyzed: 08/29/12 13:41

Solids: Preparation: EXT_3510 Dilution:

Batch: 2H21916 Sequence: 2H24304 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene	0.8315	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.8659	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.6774	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7262	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	38.23	76.5	34 - 167	
Terphenyl-d14	50.00	47.92	95.8	34 - 167	

ANALYSIS DATA SHEET

LCS Dup

Laboratory: Empirical Laboratories, LLC SDG: 1208123

Client: Tetra Tech NUS, Inc. (T010) Project: NAS Mayport CTO JM60

Matrix: Laboratory ID: 2H21916-BSD1 File ID: H21916L2.D

Sampled: Prepared: Analyzed: 08/29/12 14:09

Solids: Preparation: EXT_3510 Dilution:

Batch: 2H21916 Sequence: 2H24304 Calibration: 2121002 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	DL	LOD	LOQ	Q
56-55-3	Benzo(a)anthracene	0.7301	0.0500	0.100	0.200	
205-99-2	Benzo(b)fluoranthene	0.7240	0.0500	0.100	0.200	
53-70-3	Dibenz(a,h)anthracene	0.7439	0.0500	0.100	0.200	
193-39-5	Indeno(1,2,3-cd)pyrene	0.7422	0.0500	0.100	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	36.14	72.3	34 - 167	
Terphenyl-d14	50.00	40.66	81.3	34 - 167	

HOLDING TIME SUMMARY

SW8270D

Laboratory: Empirical Laboratories, LLC

SDG: 1208123

Client: Tetra Tech NUS, Inc. (T010)

Project: NAS Mayport CTO JM60

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
MPT-289-PZ02-081612	08/16/12 12:00	08/17/12 08:25	08/21/12 11:11	4.97	7.00	08/29/12 15:59	8.20	40.00	

Empirical Laboratories, LLC

621 Mainstream Drive, Suite 270
Nashville, TN 37228
615.345.1115 Phone
866.417.0548 Fax

13 November 2012

Tobrena Sedlmyer
Tetra Tech, Inc. (T010)
Foster Plaza 7, 661 Anderson Drive
Pittsburgh, PA 15220

RE: NAS Mayport CTO JM60 (Laboratory WorkOrder # 1211019)

Enclosed are the results of analyses for samples received by the laboratory on 11/02/2012 10:06. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
DATA SUBJECT TO CHANGE

Preliminary Analytical Results for DoD QSM4.1 Report

Client Sample ID: MPT-289-GW-MW02S-20121101 **Sample Collection Date/Time: 11/01/2012 14:00**

Lab Sample ID: 1211019-01 **Sample Received Date/Time: 11/02/2012 10:06**

Sample Matrix: Water

Analyte	Result	DL	LOD	LOQ	Units	Dilution	Analyzed	Method	Batch	Notes
DRAFT: Polynuclear Aromatic Compounds by Low-Level GC/MS										
Acenaphthene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Acenaphthylene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Anthracene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Benzo(a)anthracene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Benzo(a)pyrene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Benzo(b)fluoranthene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Benzo(g,h,i)perylene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Benzo(k)fluoranthene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Chrysene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Dibenz(a,h)anthracene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	U
Fluoranthene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Fluorene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Indeno(1,2,3-cd)pyrene	ND	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
1-Methylnaphthalene	**1.83**	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q
2-Methylnaphthalene	**0.206**	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q
Naphthalene	**0.237**	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q
Phenanthrene	ND	0.0980	0.196	0.392	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, U
Pyrene	**0.0711**	0.0490	0.0980	0.196	ug/L	1	11/09/12 15:52	SW8270D	2K07006	Q, J
Surrogate: 2-Fluorobiphenyl				*83.5 %*	*34-167*		*11/09/12 15:52*	*SW8270D*	*2K07006*	
Surrogate: Terphenyl-d14				*92.8 %*	*34-167*		*11/09/12 15:52*	*SW8270D*	*2K07006*	

Preliminary Analytical Results for DoD QSM4.1 Report

Client Sample ID: MPT-289-GW-MW03D-20121101 **Sample Collection Date/Time: 11/01/2012 14:10**

Lab Sample ID: 1211019-02 **Sample Received Date/Time: 11/02/2012 10:06**

Sample Matrix: Water

Analyte	Result	DL	LOD	LOQ	Units	Dilution	Analyzed	Method	Batch	Notes
DRAFT: Polynuclear Aromatic Compounds by Low-Level GC/MS										
Acenaphthene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Acenaphthylene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Anthracene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Benzo(a)anthracene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Benzo(a)pyrene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Benzo(b)fluoranthene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Benzo(g,h,i)perylene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Benzo(k)fluoranthene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Chrysene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Dibenz(a,h)anthracene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	U
Fluoranthene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Fluorene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Indeno(1,2,3-cd)pyrene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
1-Methylnaphthalene	**0.522**	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q
2-Methylnaphthalene	**0.357**	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q
Naphthalene	ND	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Phenanthrene	ND	0.0926	0.185	0.370	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, U
Pyrene	**0.0697**	0.0463	0.0926	0.185	ug/L	1	11/09/12 16:20	SW8270D	2K07006	Q, J
Surrogate: 2-Fluorobiphenyl				*60.0 %*	*34-167*		*11/09/12 16:20*	*SW8270D*	*2K07006*	
Surrogate: Terphenyl-d14				*73.9 %*	*34-167*		*11/09/12 16:20*	*SW8270D*	*2K07006*	

Notes and Definitions

U	Analyte included in the analysis, but not detected
Q	The RPD and/or percent recovery exceeded limits in the associated Blank Spike and/or Blank Spike Duplicate.
J	Detected but below the Reporting Limit/Limit of Quantitation; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
MDL	Method Detection Limit
RL	Reporting Limit

~~121189~~ 121019 11/2/12

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER № 2558 | PAGE 2 OF 2

PROJECT NO: 112603576	FACILITY: NAVSTA Mayport Site 289	PROJECT MANAGER Dave Siefken	PHONE NUMBER 904 636 6125	LABORATORY NAME AND CONTACT: Empirical / Brian Richard
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER Jeff Krone	PHONE NUMBER 904 699 7473	ADDRESS 621 Mainstream Drive Suite 270
		CARRIER/WAYBILL NUMBER FEDEX Airbill 8660 1730 0010		CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G
PRESERVATIVE USED: –

DATE YEAR 2012	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS PAHs (8270C)							COMMENTS
11/01	1400	MPT-289-GW-MW02S-20121101				GW	G	2	X	–	~~07~~		01			Cool to 4°C
11/01	1410	MPT-289-GW-MW03D-20121101				GW	G	2	X	–	~~08~~		02			

11/2/12

1. RELINQUISHED BY	DATE 11/1/12	TIME 1600	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE 11/02/12	TIME 0815

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

Cooler Received/Opened On: 11/02/12 @ 0815 Workorder# 121109

1. Tracking # 0001 (last 4 digits, FedEx)

   Courier: ___FED-EX

2. Temperature of rep. sample or temp blank when opened: 2.4 °C + correction factor (+ 0.2) = 2.6 °C

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

   If yes, how many and where: 2-FRONT

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) _____

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

   Were these signed and dated correctly? YES...NO...NA

8. Packing material used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13. a. Were VOA vials received? YES...NO...NA

    b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) _____

15. a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

    b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) _____

I certify that I attached a label with the unique LIMS number to each container (Initial) _____

I certify that I have performed a second check of the LIMS information against the COC to confirm accuracy (initial) _____

21. Were there Non-Conformance Issues at login? YES NO Was a NCR generated? YES NO...#_____

Additional Details: