

U.S. Army Garrison
Fort Monmouth, New Jersey

**Underground Storage Tank
Closure Report**

***Main Post – former Bldg.401
Frazer Ave.***

NJDEP UST Registration No. 90010-26

February 2007

UNDERGROUND STORAGE TANK REPORT

**MAIN POST –FORMER BUILDING 401
NJDEP UST REGISTRATION NO. 90010-26**

FEBRUARY 2007

PREPARED FOR:

**U.S. ARMY GARRISON, FORT MONMOUTH, NJ
DIRECTORATE OF PUBLIC WORKS
BUILDING 167
FORT MONMOUTH, NJ 07703**

PREPARED BY:

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EXECUTIVE SUMMARY

UST Closure

A single wall steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) guidelines on May 28, 1990. The UST was located on the north side of former Building 401 in the Main Post area of Fort Monmouth. UST No. 90010-26 was a 1,000-gallon No. 2 heating oil tank.

Site Assessment

This site assessment was performed by TVS personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*.

During the time of UST removal, no closure soil samples were collected. Soil sampling was not required at the time. However, in order to confirm that the tank did not leak, a subsurface investigation was conducted. On December 12, 2005, a Geoprobe was utilized to collect samples 401-A, 401-B, 401-C and 401-D-Duplicate from a total of three (3) locations along the tank centerline bottom. All samples were analyzed for total petroleum hydrocarbons (TPH). Groundwater was encountered at approximately 7.5 feet below surface grade in the borings and a sample of it was also collected.

Findings

The closure soil samples collected from the location associated with former UST No. 90010-26, contained TPH concentrations below the NJDEP health based criterion of 10,000 milligrams per kilogram (mg/kg) for total organic contaminants (N.J.A.C. 7:26E and revisions dated February 3, 1994). All samples contained TPH concentrations of Not Detected. A groundwater sample was analyzed for volatile organics and semi volatile organics. This sample did not contain compounds that exceed the NJDEP Class II Ground Water Quality Criteria.

Conclusions and Recommendations

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants are not present in the location of the former UST. Based on the closure groundwater sample there is no volatile organic or semi volatile organic contamination in the location of the former UST.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-26 at former Building 401.

1.0 UNDERGROUND STORAGE TANK CLOSURE SOIL SAMPLING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 90010-26, was closed at former Building 401 of the Main Post at the U.S. Army Garrison, Fort Monmouth, New Jersey. Refer to site location map on Figure 1. This report presents the results of soil and groundwater sampling analysis to confirm that the tank did not leak. The UST was a 1,000-gallon, single-wall steel tank containing No. 2 heating oil for residential use.

The closure of the UST was conducted on May 28, 1990.

This UST Closure Report has been prepared by TVS to assist the U.S. Army Garrison DPW in complying with the NJDEP - Underground Storage Tanks regulations. The applicable NJDEP regulations at the date of closure were the *Closure of Underground Storage Tank Systems* (N.J.A.C. 7:14B-9 et seq. December, 1987 and revisions dated April 20, 2003).

This report was prepared using information required by the *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) (*Technical Requirements*). Section 1 of this UST Closure Report provides a summary of the UST site. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in Section 3 of this report.

1.2 SITE DESCRIPTION

Former Building 401, Frazer Ave., was located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-26 was located on the north side of Building 401. Historical maps were used to determine the exact location of the former building and tank. A historical site location map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the 400 Area. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

Monmouth County lies within the New Jersey Section of the Atlantic Coastal Plain physiographic province. The Main Post, Charles Wood and the Evans areas are located in what may be referred to as the Outer Coastal Plain subprovince, or the Outer Lowlands.

In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, sand and gravel. These formations typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapeczka, 1989). These sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

The formations record several major transgressive/regressive cycles and contain units which are generally thicker to the southeast and reflect a deeper water environment. Over 20 regional geologic units are present within the sediments of the Coastal Plain. Regressive, upward coarsening deposits are usually aquifers (e.g., Englishtown and Kirkwood Formations, and the Cohansey Sand) while the transgressive deposits act as confining units (e.g., the Merchantville, Marshalltown, and Navesink Formations). The individual thicknesses for these units vary greatly (i.e., from several feet to several hundred feet). The Coastal Plain deposits thicken to the southeast from the Fall Line to greater than 6,500 feet in Cape May County (Brown and Zapeczka, 1990).

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Main Post area. The Red Bank sand conformably overlies the Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey, medium- to coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

The Tinton sand conformably overlies the Red Bank Sand and ranges from a clayey medium to very coarse grained feldspathic quartz and glauconite sand to a glauconitic coarse sand. The color varies from dark yellowish orange or light brown to moderate brown and from light olive to grayish olive. Glauconite may constitute 60 to 80 percent of the sand fraction in the upper part of the unit (Minard, 1969). The upper part of the Tinton is often highly oxidized and iron oxide encrusted (Minard).

Hydrogeology

The water table aquifer in the Main Post area is identified as part of the "composite confining units", or minor aquifers. The minor aquifers include the Navesink formation, Red Bank Sand, Tinton Sand, Hornerstown Sand, Vincentown Formation, Manasquan Formation, Shark River Formation, Piney Point Formation, and the basal clay of the Kirkwood Formation.

Based on records of wells drilled in the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank

and Tinton Sands may produce 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

Due to the proximity of the Atlantic Ocean to Fort Monmouth, shallow groundwater may be tidally influenced and may flow toward creeks and brooks as the tide goes out, and away from creeks and brooks as the tide comes in. However, an abundance of clay lenses and sand deposits were noted in borings installed throughout Fort Monmouth. Therefore the direction of shallow groundwater should be determined on a case by case basis.

Shallow groundwater is locally influenced within the Main Post area by the following factors:

- tidal influence (based on proximity to the Atlantic Ocean, rivers and tributaries)
- topography
- nature of the fill material within the Main Post area
- presence of clay and silt lenses in the natural overburden deposits
- local groundwater recharge areas (e.g., streams, lakes)

Due to the fluvial nature of the overburden deposits (e.g., sand and clay lenses), shallow groundwater flow direction is best determined on a case-by-case basis. This is consistent with lithologies observed in borings installed within the Main Post area, which primarily consisted of fine-to-medium grained sands, with occasional lenses or laminations of gravel silt and/or clay.

Former Building 401 was located approximately 450 feet south of Parkers Creek, the nearest water body, which flows into the Shrewsbury River. Based on the Main Post topography, the groundwater flow in the area of the Building 401 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

Work site health and safety hazards were minimized during all site investigation activities. All areas which posed a vapor hazard were monitored by a qualified individual utilizing a calibrated photo-ionizer detector : Thermo Instruments Organic Vapor Monitor (OVM) – Model #580-B. The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA. All work areas were properly vented to insure that there were no contaminants present in the breathing zone above permissible exposure limits (PEL's).

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by Fort Monmouth Environmental Testing Laboratory, a NJDEP-certified testing laboratory. All sampling was performed by a NJDEP Certified Subsurface Evaluator according to the methods described in the NJDEP Field Sampling Procedures Manual (1992). Sampling frequency and parameters analyzed complied with the NJDEP document *Technical Requirements for Site Remediation*, 7:26E-3.9 (December 17, 2002 and revisions dated February 3, 2003) which was the applicable regulation at the date of the investigation. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Site Assessment Activities.

- Ft. Monmouth Directorate of Public Works-Environmental Division
Contact Person: Joseph Fallon
Phone Number: (732) 532-0986
- Subsurface Evaluator: Frank Accorsi
Employer: TECOM-Vinnell Services, Inc. (TVS)
Phone Number: (732) 532-5241
NJDEP License No.: 0010042
(TVS)NJDEP License No.: US252302
- Analytical Laboratory: Fort Monmouth Environmental Testing Laboratory
Contact Person: Dan Wright
Phone Number: (732) 532-4359
NJDEP Laboratory Certification No.: 13461

2.2 FIELD SCREENING/MONITORING

Field screening of the soils was performed by a NJDEP certified Subsurface Evaluator using an OVM and visual observations to identify potentially contaminated material. During the field investigation no potentially contaminated material was found.

2.3 SOIL SAMPLING

On December 12, 2005, closure soil samples 401-A, 401-B, 401-C and 401-D (Duplicate C) were collected from a total of three (3) locations along the tank centerline bottom of the former UST. Groundwater was encountered at approximately seven and one half feet (7.5) below ground surface in the borings. All soil samples were analyzed for TPH. A soil sample site location map is provided on Figure 3.

The site assessment was performed by TVS personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* and the NJDEP *Field Sampling Procedures Manual*. A summary of sampling activities including parameters analyzed is provided on Table 1. The closure soil samples were collected into laboratory prepared glassware using properly decontaminated stainless steel trowels. After collection, the samples were immediately placed on ice in a cooler and delivered to Fort Monmouth Environmental Testing Laboratory for analysis.

2.4 GROUNDWATER SAMPLING

On December 12, 2005, sample 401-Groundwater was collected from soil borehole 401-B to assess the groundwater quality in the location of the former tank. A temporary piezometer was installed in the borehole for sample collection. The sample was analyzed for volatile organic analysis (VOA) and semi-volatile organic analysis (SVOA).

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

Closure soil samples were collected from a total of three locations on December 12, 2005 to evaluate soil conditions in the location of the former UST. All samples were analyzed for TPH. The closure soil sample results were compared to the NJDEP health based criterion of 10,000 mg/kg for total organic contaminants (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided on Table 2. The analytical data package, including associated quality control data, is provided in Appendix B.

Closure soil samples collected on December 12, 2005 from UST 90010-26 contained concentrations of TPH below the NJDEP soil cleanup criteria. All soil samples were Not Detected above the method detection limits.

3.2 GROUNDWATER SAMPLING RESULTS

One groundwater sample was collected via temporary piezometer installed in soil borehole 401-B. Bis(2-Ethylhexyl)phthalate was detected in sample 401-Groundwater at 3.94 ug/L. This is below the NJDEP Class II Ground Water Quality Criteria of 30 ug/L. This compound is a common laboratory contaminant.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-26 were Not Detected. The analytical results for the groundwater sample are below the NJDEP Class II Ground Water Quality Criteria.

Based on the closure soil sampling results, soils with TPH concentrations exceeding the NJDEP health based criterion for total organic contaminants of 10,000 mg/kg are not present at the location of former UST No. 90010-26.

No Further Action is proposed in regard to the closure and site assessment of UST No. 90010-26 at former Building 401.

FIGURES

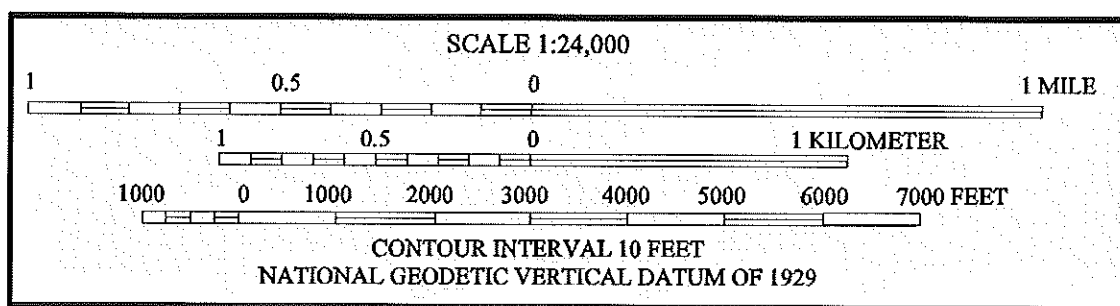
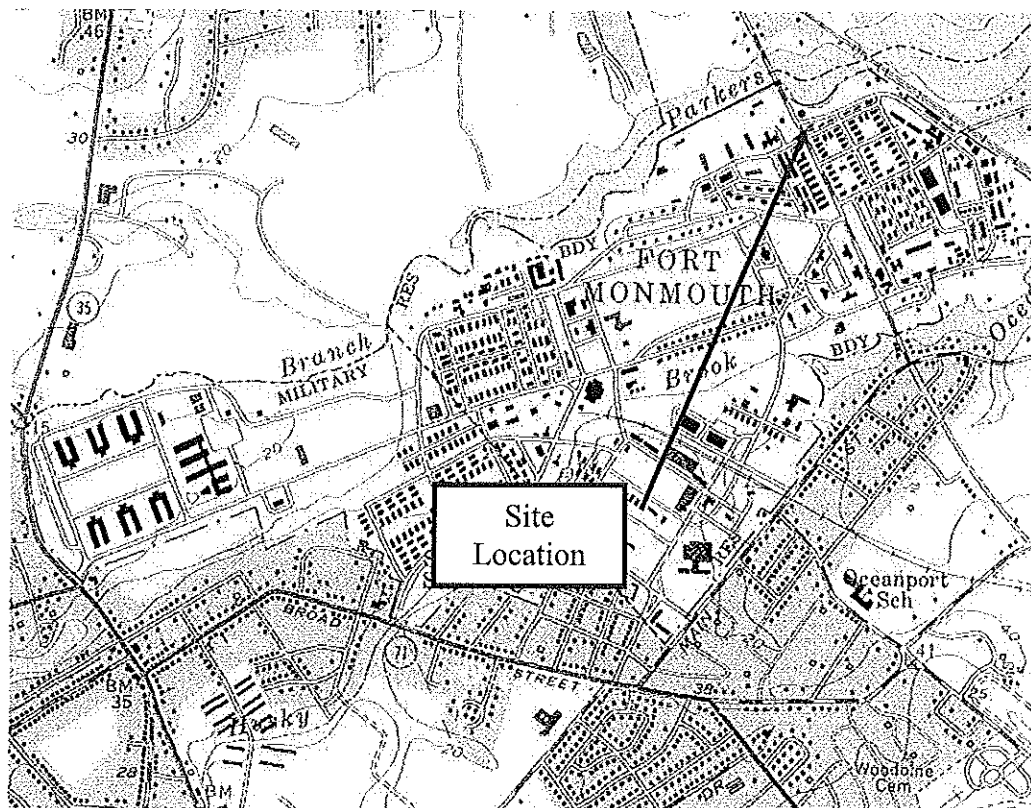
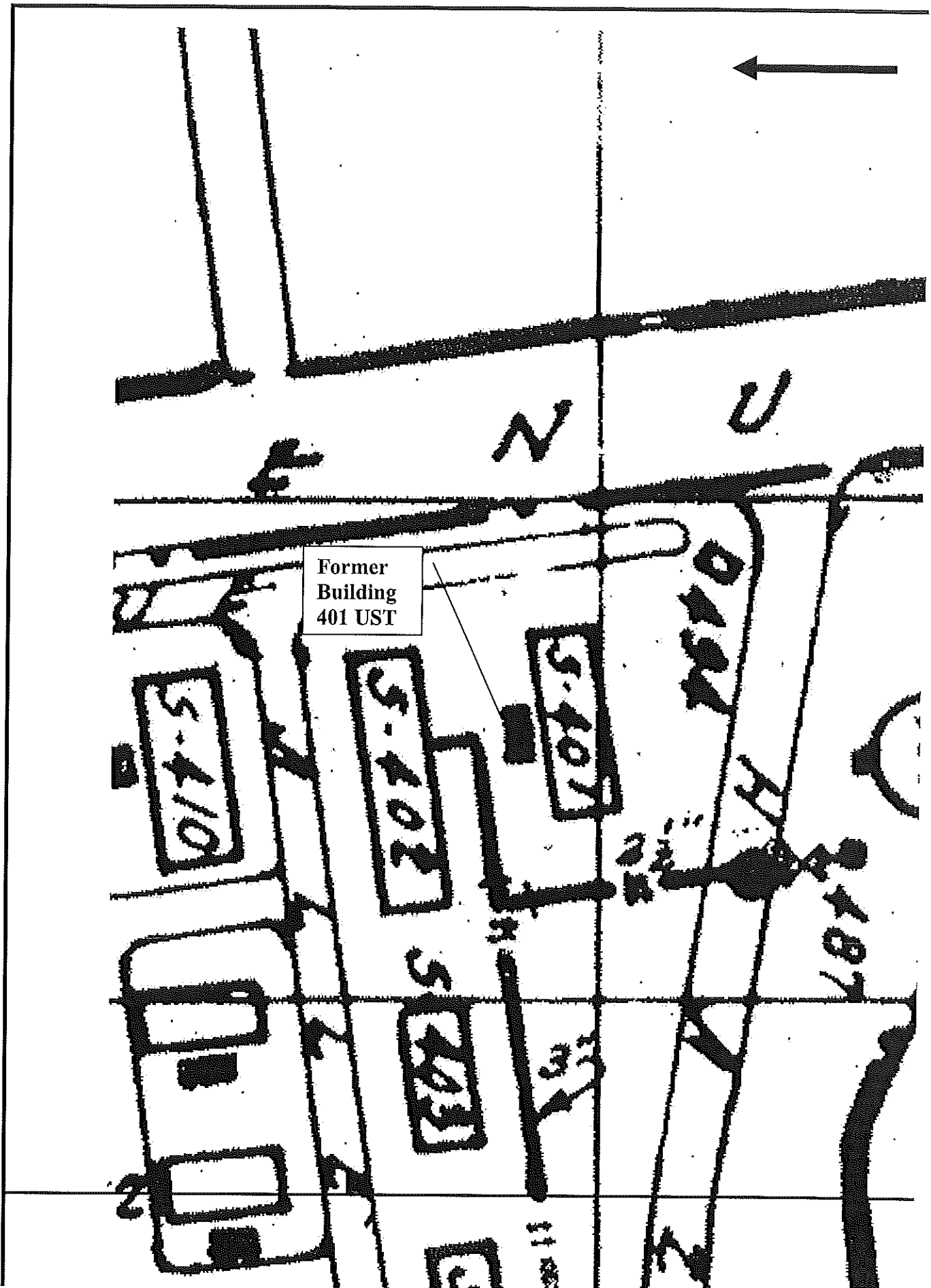


FIGURE 1

SITE LOCATION MAP
 (FORMER) BUILDING 401
 UST NO. 90010-26
 FT. MONMOUTH, NJ

SOURCE: USGS 7½-MINUTE SERIES (TOPOGRAPHIC)
 LONG BRANCH QUADRANGLE, NEW JERSEY, 1981.

FIGURE 2 – SITE LOCATION MAP



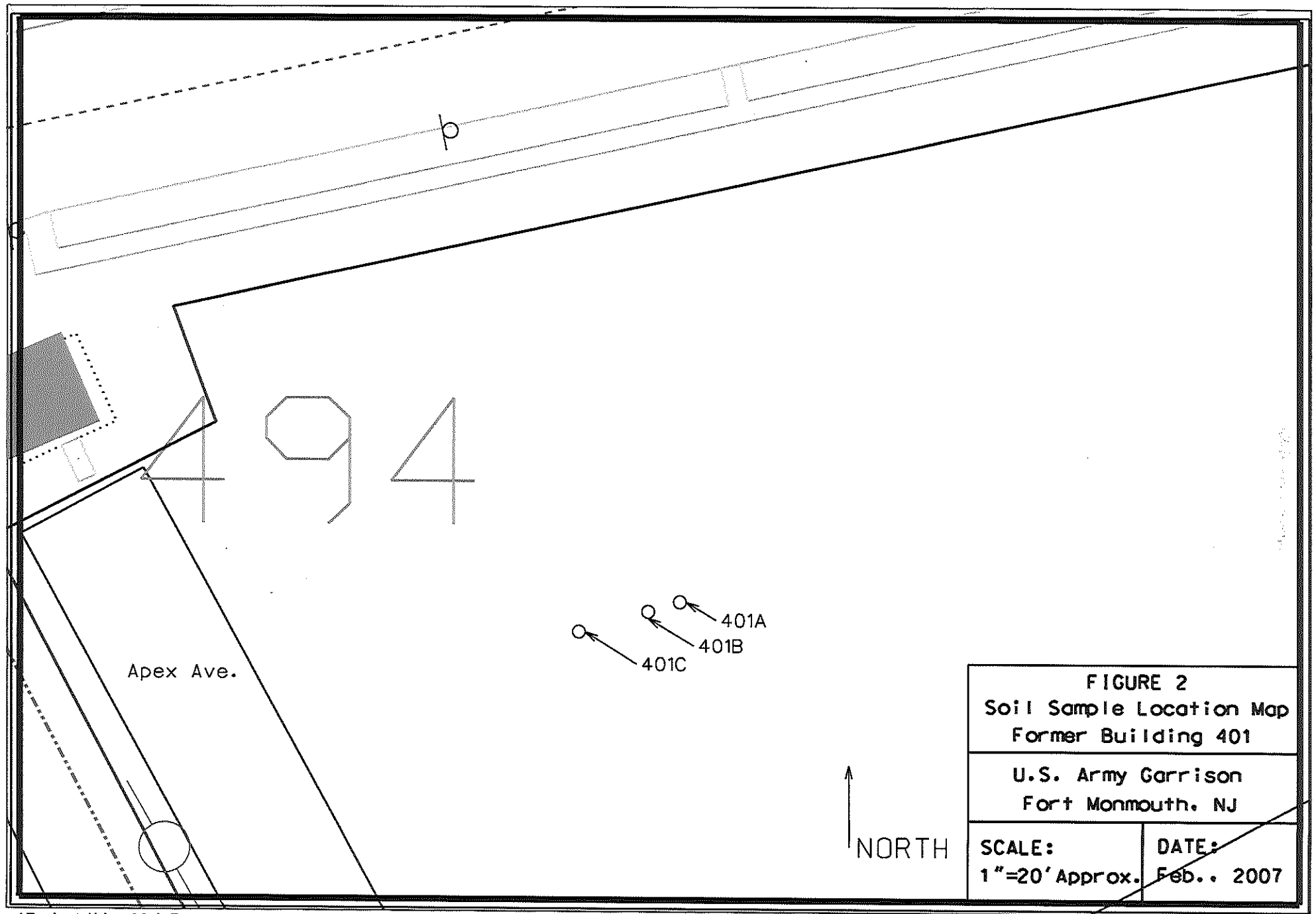


FIGURE 2 Soil Sample Location Map Former Building 401	
U.S. Army Garrison Fort Monmouth, NJ	
SCALE: 1"=20' Approx.	DATE: Feb., 2007

TABLES

TABLE 1

SUMMARY OF LABORATORY ANALYSIS

**FT. MONMOUTH, BUILDING 401, UST No. 90010-26
12 December 2005**

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE DATE	SAMPLE MATRIX	ANALYTICAL PARAMETER	ANALYTICAL METHOD
401-A	5063701	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-B	5063702	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-C	5063703	12-Dec-05	SOIL	TPH	OQA-QAM-25
401-D (dupl. C)	5063704	12-Dec-05	SOIL	TPH	OQA-QAM-25
TRIP BLANK	5063705	12-Dec-05	METHANOL	VOA	SW-846, 8260
401- Groundwater	5063706	12-Dec-05	AQUEOUS	VOA, SVOA	SW-846, 8260 SW-846, 8270
TRIP BLANK	5063707	12-Dec-05	AQUEOUS	VOA	SW-846, 8260

ABBREVIATIONS:

TPH = Total Petroleum Hydrocarbons, Method NJDEP OQA-QAM-25

VOA = Volatile Organic Analysis, EPA SW-846 Method 8260

SVOA = Semi-Volatile Organic Analysis, EPA SW-846, Method 8270

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS-SOIL

FT. MONMOUTH, BUILDING 401, UST No. 90010-26
12 December 2005

TOTAL PETROLEUM HYDROCARBONS

SAMPLE ID	LABORATORY SAMPLE ID	SAMPLE LOCATION	SAMPLE DEPTH (in feet)	MATRIX	TPH RESULT S mg/kg
401-A	5063701	WEST END UST	7.0 - 7.5	Soil	ND
401-B	5063702	CENTER	7.0 - 7.5	Soil	ND
401-C	5063703	EAST END UST	7.0 - 7.5	Soil	ND
401-D (dupl. C)	5063704	DUPLICATE (EAST END)	7.0 - 7.5	Soil	ND
Trip Blank	5063705	---	---	Methanol	--

ABBREVIATIONS:

mg/kg = Milligrams Per Kilogram = parts per million

ND = Compound Not Detected

NA = Compound Not Analyzed

* = Further Analyzed for Volatiles

Notes:

Gray shading indicates exceedance of NJDEP

health based criterion of 10,000 ppm total organic contaminants

TABLE 3

SUMMARY OF LABORATORY ANALYTICAL RESULTS- GROUNDWATER

FT. MONMOUTH, BUILDING 401, UST No. 90010-26

12 December 2005

VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	LAB SAMPLE ID	Bis(2- Ethylhexyl)phthalate
	UNITS	ug/L
401- Groundwater	5063706	3.94
Trip Blank	5063705	ND
Trip Blank	5063707	ND
NJDEP Criteria	Ground Water Quality Crireria	30

ABBREVIATIONS:

ug/L = Micrograms Per Liter = parts per billion

ND = Compound Not Detected

NA = Compound Not Analyzed

Notes:

Gray shading indicates exceedance of NJDEP
Class II Ground Water Quality Criteria

APPENDIX A

CERTIFICATIONS

Site Remediation Program
UST Site Remedial Investigation Report

A. Facility Name: (former) Building 401

Facility Street Address: Frazer Ave.

Municipality: Oceanport

County: Ft. Monmouth

Block: NA

Lot(s): NA

Telephone Number: 732-532-6223

B. Owner (RP)'s Name: U.S. Army Garrison - Directorate of Public Works

Street Address: 173 Riverside Ave.

City: Ft. Monmouth

State: NJ

Zip: 07703

Telephone Number: 732-532-6223

C. (Check as appropriate)

☐ Site Investigation
Report (SIR) \$500 Fee

☐ Remedial Investigation
Report (RIR) \$1000 Fee

D. (Complete all that apply)

Assigned Case Manager: Greg Zalaskus

UST Registration Number: 90010-26 (7 digits)

• Incident Report Number: _____ (10 or 12 digits)

• Tank Closure Number C(N)9 ____ - ____ C 9- ____ C9 ____ - ____ (7 characters)

E. Certification by the Subsurface Evaluator:

The attached report conforms to the specific reporting requirements of N.J.A.C. 7:26E Yes No

Name: Frank Accorsi

Signature: _____ UST Cert. No.: 0010042

Firm: Tecom-Vinnell Services, Inc.

Firm's UST Cert. Number: US252302

Firm Address: P.O. Box 60

City: Ft. Monmouth

State: NJ

Zip: 07703

Telephone Number: 732-532-6223

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 5 8: 10A-2 1 et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7: 14B-1.7(b)] as follows:

1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

Name (Print or Type): _____ Title: _____

Signature: _____

Company Name: _____ Date: _____

APPENDIX B

SOIL AND GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS

PHONE: (732) 532-4359 FAX: (732) 532-6263

WET-CHEM - METALS - ORGANICS - FIELD SAMPLING

CERTIFICATIONS: NJDEP #13461, NYSDOH #11699



ANALYTICAL DATA REPORT Fort Monmouth Environmental Laboratory ENVIRONMENTAL DIVISION Fort Monmouth, New Jersey PROJECT: BLDG. 401

Bldg. 401

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
401-A, West End	5063701	Soil	12-Dec-05 09:30	12/13/05
401-B, Center	5063702	Soil	12-Dec-05 10:40	12/13/05
401-C, East End	5063703	Soil	12-Dec-05 13:15	12/13/05
401-D, (Duplicate)	5063704	Soil	12-Dec-05 13:15	12/13/05
Trip Blank	5063705	Methanol	12-Dec-05	12/13/05
401-GW	5063706	Aqueous	12-Dec-05 14:00	12/13/05
Trip Blank	5063707	Aqueous	12-Dec-05	12/13/05

ANALYSIS: FORT MONMOUTH ENVIRONMENTAL LAB VOA+15, BN+15, TPHC

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS


12-30-05
Daniel Wright/Date
Laboratory Director

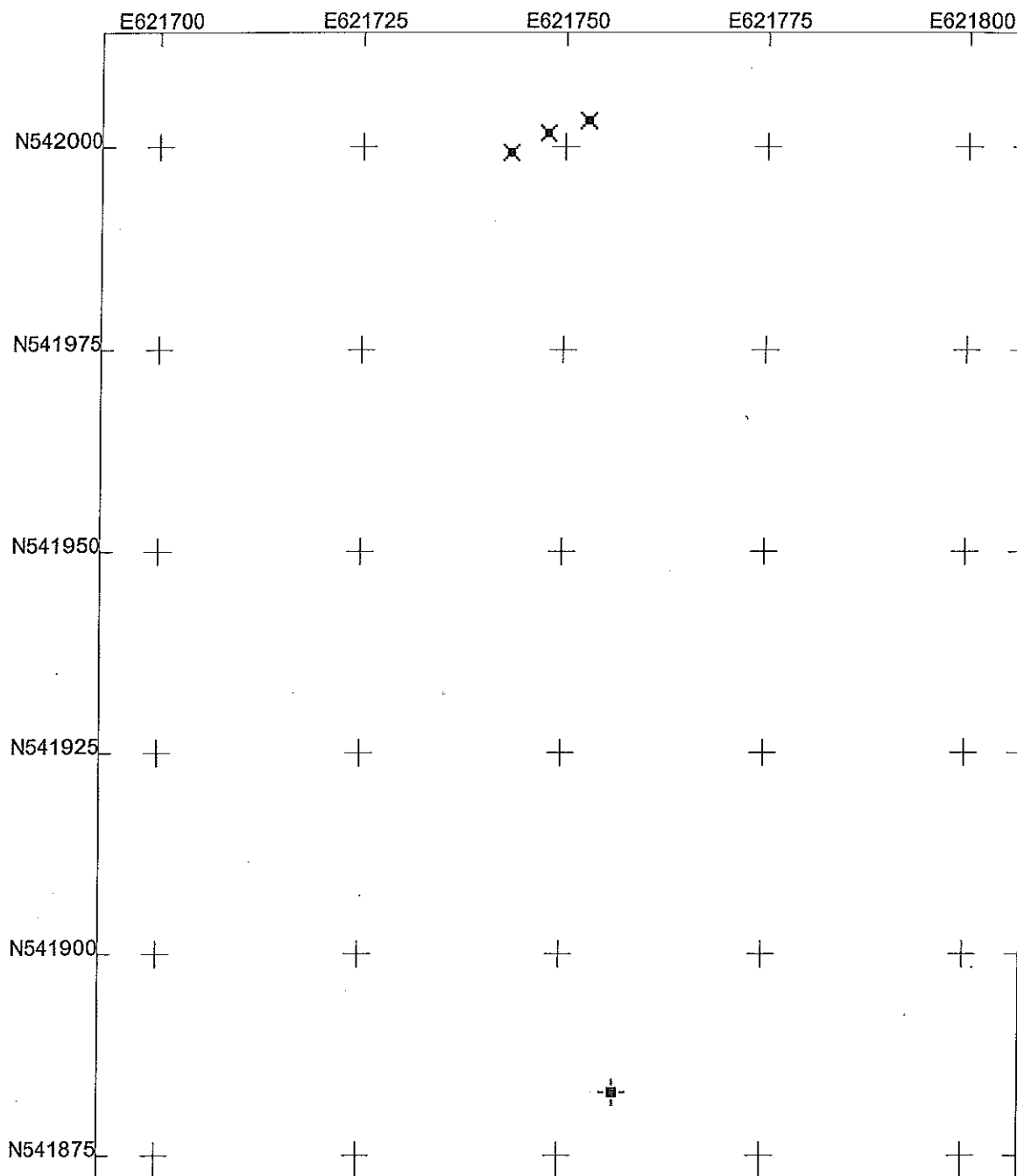
The enclosed report relates only to the items tested. The report may not be reproduced, except in full, without written approval of the U.S. Army Fort Monmouth Directorate of Public Works.

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CHAIN OF CUSTODY

000001



U.S. Army - Ft. Monmouth (former) Bldg. 401 UST Soil Sample GPS Map

US State Plane 1983
New Jersey 2900
NAD 1983 (Conus)



Scale 1:250
0 0.006
Miles

BLDG401.cor
12/20/2005
GPS Pathfinder
 **Trimble**

000003

U.S. ARMY - FT. MONMOUTH, NJ

(former)BLDG. 401 UST

SOIL SAMPLE GPS POSITIONS & COORDINATES

US STATE PLANE 1983, NJ (NY EAST) 2900, NAD 1983 (CONUS)

(IN US SURVEY FEET)

SAMPLE POINTS

<u>POSITION/DESCRIPTION</u>	<u>Y COORDINATE (NORTHING)</u>	<u>X COORDINATE (EASTING)</u>
401A WEST END UST	541999.38	621743.021
401B CENTER UST	542001.791	621747.731
401C EAST END UST	542003.303	621752.712

REFERENCE POINT

<u>POSITION/DESCRIPTION</u>	<u>Y COORDINATE (NORTHING)</u>	<u>X COORDINATE (EASTING)</u>
BLDG410 NW CORNER	541882.789	621756.737

METHOD SUMMARY

Methodology Summary

EPA Method 624

Gas Chromatographic Determination of Volatiles in Water

Surrogates and internal standards are added to a 5-ml aliquot of sample. The sample is then purged and desorbed into a GC/MS system. The organic compounds are separated by the gas chromatograph and detected using the mass spectrometer. Volatiles are identified and quantitated.

EPA SW-846 Method 8260

Gas Chromatographic Determination of Volatiles in Methanol

A 10-gram volume of soil is combined with 25-ml of Methanol and surrogates in the field. Internal standards are added and the sample is placed on a purge and trap concentrator. The sample is purged and desorbed into a GC/MS system. Volatiles are identified and quantitated. The final concentration is calculated using soil weight, percent moisture and concentration.

EPA Method 625

Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to a measured volume of sample, usually 1 liter, at a specified pH. The sample is serially extracted with Methylene Chloride using a separatory funnel. The extract is concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

NJDEP Method OQA-QAM-025 10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g) of soil is added to a 125-ml acid cleaned and solvent rinsed capped Erlenmeyer flask. 15g anhydrous Sodium Sulfate is added to dry the sample. Surrogate standard spiking solution is then added to the flask.

Twenty-five ml of Methylene Chloride is added to the flask and it is secured on an orbital shaker table. The agitation rate is set to 400 rpm and the sample is shaken for 30 minutes. The flask is removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25-ml of Methylene Chloride is added to the flask and shaken for an additional 30 minutes. The flask is again removed and allowed to settle. The extracts are combined in the vial then transferred to a 1-ml auto-sampler vial.

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for Petroleum Hydrocarbons covering a range of C8-C42, including Pristane and Phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak. The final concentration of Total Petroleum Hydrocarbons is calculated using percent moisture, sample weight and concentration.

LABORATORY CHRONICLE

000008

Laboratory Chronicle

Lab ID: 50637

Site: UST
Bldg. 401

	Date	Hold Time
Date Sampled	12/12/05	NA
Receipt/Refrigeration	12/13/05	NA
Extractions		
1. BN	12/15/05	7 days
2. TPHC	12/15/05	14 days
Analyses		
1. VOA	12/14,15/05	14 days
2. BN	12/19/05	40 days
3. TPHC	12/16/05	40 days

000009

CONFORMANCE/ NON- CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms labeled/Compounds identified
(Field samples and method blanks) yes
2. Retention times for chromatograms provided yes
3. GC/MS Tune Specifications
 - a. BFB Meet Criteria yes
 - b. DFTPP Meet Criteria yes
4. GC/MS Tuning Frequency -- Performed every 24 hours for 600 series and 12 hours for 8000 series yes
5. GC/MS Calibration -- Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series yes
6. GC/MS Calibration requirements
 - a. Calibration Check Compounds Meet Criteria yes
 - b. System Performance Check Compounds Meet Criteria yes
7. Blank Contamination -- If yes, List compounds and concentrations in each blank: NO
 - a. VOA Fraction _____
 - b. B/N Fraction _____
 - c. Acid Fraction NA
8. Surrogate Recoveries Meet Criteria NO

If not met, list those compounds and their recoveries, which fall outside the acceptable range:

 - a. VOA Fraction _____
 - b. B/N Fraction Terphenyl low in mt + reanal. of 4016W
 - c. Acid Fraction NA

If not met, were the calculations checked and the results qualified as "estimated"?

yes
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria NO

(If not met, list those compounds and their recoveries, which fall outside the acceptable range)

 - a. VOA Fraction 1,1,1,2,2,2-TCF + Naph ms/MSD low
 - b. B/N Fraction Benzidine MSD low RPD high
 - c. Acid Fraction NA

000011

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT (cont.)

Indicate
Yes, No, N/A

10. Internal Standard Area/Retention Time Shift Meet Criteria
(If not met, list those compounds, which fall outside the acceptable range)

yes

- a. VOA Fraction _____
b. B/N Fraction _____
c. Acid Fraction NA

11. Extraction Holding Time Met

yes

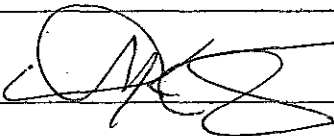
If not met, list the number of days exceeded for each sample: _____

12. Analysis Holding Time Met

yes

If not met, list the number of days exceeded for each sample: _____

Additional Comments:

Laboratory Manager: 

Date: 12-30-05

TPHC CONFORMANCE/NON-CONFORMANCE SUMMARY REPORT

Indicate
Yes, No, N/A

- | | | |
|----|---|------------|
| 1. | Method Detection Limits Provided | <u>yes</u> |
| 2. | Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank

_____ | <u>NO</u> |
| 3. | Matrix Spike Results Summary Meet Criteria
(If not met, list the sample and corresponding recovery which falls outside the acceptable range)

_____ | <u>yes</u> |
| 4. | Duplicate Results Summary Meet Criteria

_____ | <u>yes</u> |
| 5. | IR Spectra submitted for standards, blanks and samples | <u>NA</u> |
| 6. | Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted | <u>yes</u> |
| 7. | Analysis holding time met
(If not met, list number of days exceeded for each sample)

_____ | <u>yes</u> |

Additional comments: _____

Laboratory Manager: _____

Date: 12-30-05

000013

VOLATILE ORGANICS

000014

**US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461**

Definition of Qualifiers

- U:** The compound was analyzed for but not detected.
- B:** Indicates that the compound was found in the associated method blank as well as in the sample.
- J:** Indicates an estimated value. This flag is used:
- (1)** When the mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.
 - (2)** When estimating the concentration of a tentatively identified compound (TIC), where a 1:1 response is assumed.
- D:** This flag is used to identify all compounds (target or TIC) that required a dilution.
- E:** Indicates the compound's concentration exceeds the calibration range of the instrument for that specific analysis.
- N:** This flag is only used for TICs. It indicates the presumptive evidence of a compound. For a generic characterization of a TIC, such as unknown hydrocarbon, the flag is not used.

Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File VB021036.D
 Operator Skelton
 Date Acquired 14 Dec 2005 2:32 pm

Sample Name MB 14Dec2005
 Field ID MB 14Dec2005
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time
 R.L. = Reporting Limit

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

MB 14Dec2005

Lab Name: FMETL NJDEP#: 13461
Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880
Matrix: (soil/water) WATER Lab Sample ID: MB 14Dec2005
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021036.D
Level: (low/med) LOW Date Received: 12/12/2005
% Moisture: not dec. _____ Date Analyzed: 12/14/2005
GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File VB021058.D
 Operator Skelton
 Date Acquired 15 Dec 2005 5:17 am

Sample Name 5063707
 Field ID Trip Blank
 Sample Multiplier 1

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethane			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values

*Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time
 R.L. = Reporting Limit

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

Trip Blank

Lab Name: FMETL NJDEP#: 13461
Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880
Matrix: (soil/water) WATER Lab Sample ID: 5063707
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021058.D
Level: (low/med) LOW Date Received: 12/12/2005
% Moisture: not dec. Date Analyzed: 12/15/2005
GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File **VB021057.D**
 Operator **Skelton**
 Date Acquired **15 Dec 2005 4:36 am**

Sample Name **5063706**
 Field ID **401-GW**
 Sample Multiplier **1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	RL	Qualifier
107028	Acrolein			not detected	10	1.57 ug/L	10.00 ug/L	
107131	Acrylonitrile			not detected	50	2.47 ug/L	10.00 ug/L	
75650	tert-Butyl alcohol			not detected	100	8.54 ug/L	20.00 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.30 ug/L	2.00 ug/L	
108203	Di-isopropyl ether			not detected	20000	0.37 ug/L	2.00 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	0.46 ug/L	2.00 ug/L	
74-87-3	Chloromethane			not detected	30	0.30 ug/L	2.00 ug/L	
75-01-4	Vinyl Chloride			not detected	5	0.20 ug/L	2.00 ug/L	
74-83-9	Bromomethane			not detected	10	0.25 ug/L	2.00 ug/L	
75-00-3	Chloroethane			not detected	100	0.27 ug/L	2.00 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.26 ug/L	2.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.27 ug/L	2.00 ug/L	
67-64-1	Acetone			not detected	700	2.00 ug/L	2.00 ug/L	
75-15-0	Carbon Disulfide			not detected	800	0.16 ug/L	2.00 ug/L	
75-09-2	Methylene Chloride			not detected	3	0.55 ug/L	2.00 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.25 ug/L	2.00 ug/L	
75-34-3	1,1-Dichloroethane			not detected	50	0.32 ug/L	2.00 ug/L	
108-05-4	Vinyl Acetate			not detected	7000	0.20 ug/L	2.00 ug/L	
78-93-3	2-Butanone			not detected	300	0.90 ug/L	2.00 ug/L	
156-59-2	cis-1,2-Dichloroethene			not detected	70	0.28 ug/L	2.00 ug/L	
67-66-3	Chloroform			not detected	6	0.38 ug/L	2.00 ug/L	
71-55-6	1,1,1-Trichloroethane			not detected	30	0.27 ug/L	2.00 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.20 ug/L	2.00 ug/L	
71-43-2	Benzene			not detected	1	0.20 ug/L	2.00 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.22 ug/L	2.00 ug/L	
79-01-6	Trichloroethene			not detected	1	0.28 ug/L	2.00 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.33 ug/L	2.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.25 ug/L	2.00 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	100	0.25 ug/L	2.00 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.18 ug/L	2.00 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.38 ug/L	2.00 ug/L	
108-88-3	Toluene			not detected	1000	0.25 ug/L	2.00 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.14 ug/L	2.00 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.25 ug/L	2.00 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.26 ug/L	2.00 ug/L	
591-78-6	2-Hexanone			not detected	100	0.29 ug/L	2.00 ug/L	
124-48-1	Dibromochloromethane			not detected	10	0.24 ug/L	2.00 ug/L	
108-90-7	Chlorobenzene			not detected	50	0.30 ug/L	2.00 ug/L	
100-41-4	Bihylbenzene			not detected	700	0.28 ug/L	2.00 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	0.63 ug/L	4.00 ug/L	
95-47-6	o-Xylene			not detected	nle	0.24 ug/L	2.00 ug/L	
100-42-5	Styrene			not detected	100	0.34 ug/L	2.00 ug/L	
75-25-2	Bromoform			not detected	4	0.24 ug/L	2.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	1	0.24 ug/L	2.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.24 ug/L	2.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.25 ug/L	2.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.27 ug/L	2.00 ug/L	

*Results between MDL and RL are estimated values
 *Higher of PQL's and Interim Criteria as per N.J.A.C. 7:9-6.9 (c).

Qualifiers

B = Compound found in related blank
 E = Value above linear range
 D = Value from dilution
 PQL = Practical Quantitation Limit

MDL = Method Detection Limit
 NLE = No Limit Established
 R.T. = Retention Time
 R.L. = Reporting Limit

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID:

401-GW

Lab Name: FMETL NJDEP#: 13461
Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880
Matrix: (soil/water) WATER Lab Sample ID: 5063706
Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021057.D
Level: (low/med) LOW Date Received: 12/12/2005
% Moisture: not dec. _____ Date Analyzed: 12/15/2005
GC Column: RTX502 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
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**VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)**

Lab Name: FMETL NJDEP#: 13461
 Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880
 Lab File ID: VB021029.D BFB Injection Date: 12/14/2005
 Instrument ID: GCMS#2 BFB Injection Time: 8:57
 GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	20.0
75	30.0 - 66.0% of mass 95	53.1
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	72.3
175	4.0 - 9.0% of mass 174	5.2 (7.2)1
176	93.0 - 101.0% of mass 174	70.2 (97.1)1
177	5.0 - 9.0% of mass 176	4.7 (6.7)2

1-Value is % mass 174

2-Value is % mass 176

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

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD010	VSTD010	VB021030.D	12/14/2005	9:38
02	VSTD005	VSTD005	VB021031.D	12/14/2005	10:19
03	VSTD002	VSTD002	VB021032.D	12/14/2005	11:00
04	VSTD020	VSTD020	VB021033.D	12/14/2005	12:18
05	VSTD050	VSTD050	VB021034.D	12/14/2005	12:59
06	MB 14DEC2005	MB 14DEC2005	VB021036.D	12/14/2005	14:32
07	401-GW	5063706	VB021057.D	12/15/2005	4:36
08	TRIP BLANK	5063707	VB021058.D	12/15/2005	5:17

BFB

Data File : C:\HPCHEM\1\DATA\051214\VB021029.D

Vial: 1

Acq On : 14 Dec 2005 8:57 am

Operator: Skelton

Sample : BFB Tune

Inst : GC/MS Ins

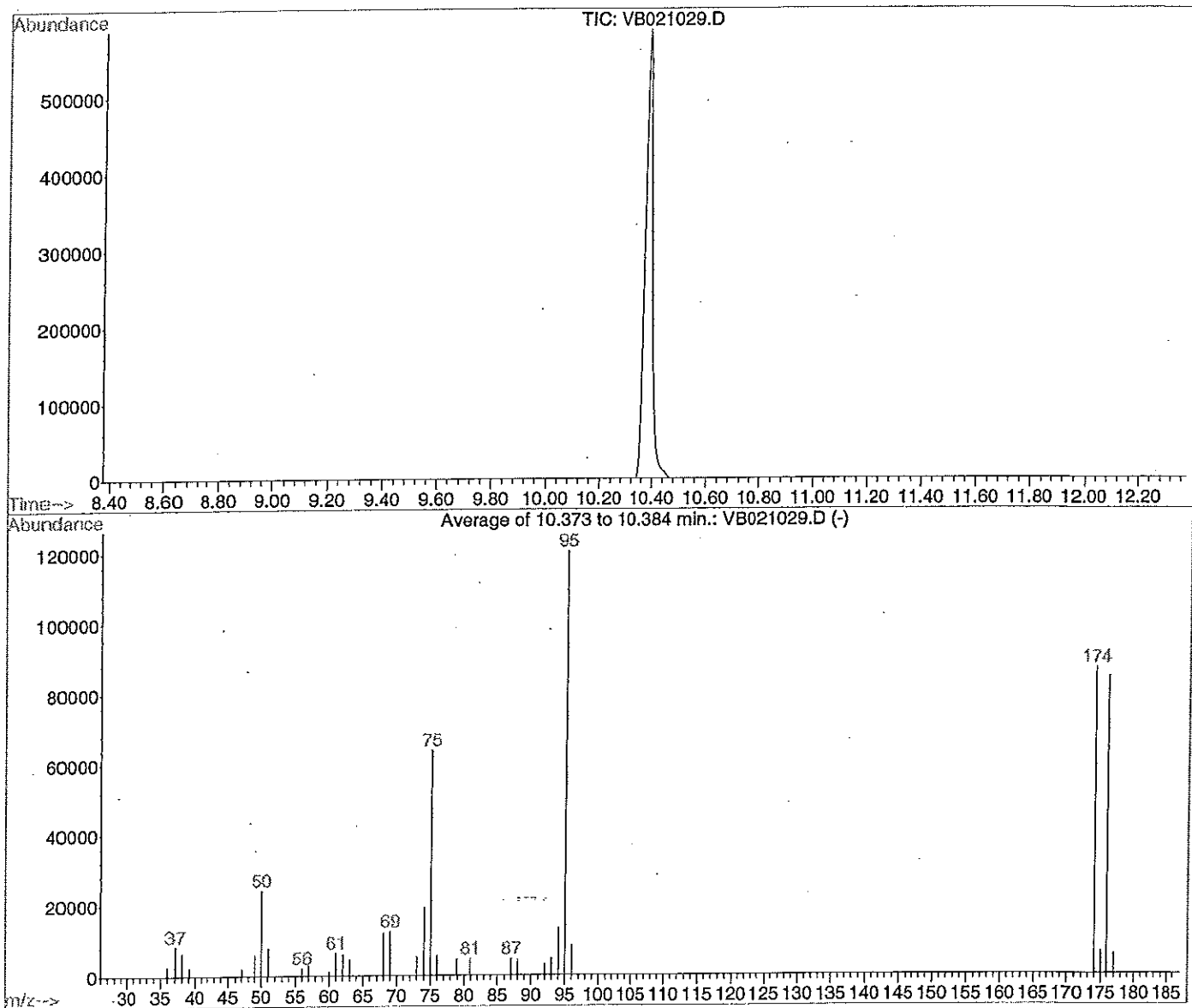
Misc : BFB Tune

Multiplr: 1.00

MS Integration Params: TBA.P

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)

Title : Volatile Organics by GC/MS Method 624/8260/TCLP



AutoFind: Scans 164, 165, 166; Background Corrected with Scan 156

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	20.0	24128	PASS
75	95	30	60	53.1	63976	PASS
95	95	100	100	100.0	120416	PASS
96	95	5	9	6.9	8288	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	72.3	87013	PASS
175	174	5	9	7.2	6295	PASS
176	174	95	101	97.1	84525	PASS
177	176	5	9	6.7	5671	PASS

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP
 Last Update : Wed Dec 14 13:36:34 2005
 Response via : Initial Calibration

Calibration Files

50 =VB021034.D 20 =VB021033.D 10 =VB020988.D
 5 =VB021031.D 2 =VB021032.D

Compound			50	20	10	5	2	Avg	%RSD
-----ISTD-----									
1) I	Bromochloromethane		0.139	0.119	0.107	0.101	0.090	0.111	16.92
2) tm	Acrolein		1.126	1.055	0.967	1.011	0.890	1.010	8.84
3) tm	Acrylonitrile		0.170	0.151	0.135	0.136	0.119	0.142	13.45
4) tm	tert-Butyl alcohol		6.086	5.394	4.905	4.565	4.180	5.026	14.76
5) tm	Methyl-tert-Butyl eth		2.027	1.843	1.479	1.467	1.219	1.607	20.14
6) tm	Di-isopropyl ether		2.651	3.197	3.133	3.371	3.315	3.133	9.11
7) Tm	Dichlorodifluorometha		2.790	3.015	2.893	3.088	3.005	2.958	3.95
8) TPm	Chloromethane		2.840	3.226	2.959	3.242	3.239	3.101	6.10
9) TCm	Vinyl Chloride		1.694	1.898	1.654	1.838	1.757	1.768	5.69
10) Tm	Bromomethane		1.197	2.088	1.938	2.107	2.076	1.881	20.65
11) Tm	Chloroethane		4.604	5.175	4.697	5.222	5.187	4.977	6.03
12) Tm	Trichlorofluoromethan		3.462	3.617	3.089	3.239	3.105	3.302	6.99
13) MC	1,1-Dichloroethene		0.880	0.734	0.651	0.966	1.143	0.875	22.18
14) Tm	Acetone		7.176	7.708	6.543	7.180	6.831	7.088	6.17
15) Tm	Carbon Disulfide		2.652	2.699	2.695	2.657	2.681	2.677	0.81
16) Tm	Methylene Chloride		3.401	3.507	3.044	3.139	2.995	3.217	7.00
17) Tm	trans-1,2-Dichloroeth		4.545	4.631	4.094	4.275	4.169	4.343	5.41
18) TPm	1,1-Dichloroethane		1.903	1.661	1.475	1.421	1.280	1.548	15.55
19) Tm	Vinyl Acetate		1.108	0.893	0.781	0.871	0.734	0.878	16.44
20) Tm	2-Butanone		3.628	3.621	3.165	3.188	2.999	3.320	8.65
21) Tm	cis-1,2-Dichloroethen		4.589	4.681	4.507	4.407	4.390	4.515	2.72
22) TCm	Chloroform		3.652	3.739	3.312	3.243	3.075	3.404	8.26
23) Tm	1,1,1-Trichloroethane		2.423	2.721	2.769	2.593	2.590	2.619	5.16
24) Tm	Carbon Tetrachloride		3.176	3.139	2.901	3.039	3.006	3.052	3.58
25) S	1,2-Dichloroethane-d4		-----ISTD-----						
26) I	1,4-Difluorobenzene		1.432	1.511	1.424	1.418	1.359	1.429	3.80
27) TM	Benzene		0.503	0.515	0.525	0.511	0.513	0.513	1.53
28) Tm	1,2-Dichloroethane		0.354	0.374	0.335	0.345	0.329	0.348	5.09
29) TM	Trichloroethene		0.352	0.366	0.330	0.340	0.329	0.343	4.57
30) TCm	1,2-Dichloropropane		0.426	0.431	0.435	0.402	0.390	0.417	4.75
31) Tm	Bromodichloromethane		0.240	0.214	0.179	0.168	0.152	0.191	18.85
32) Tm	2-Chloroethyl vinyl e		0.564	0.572	0.494	0.467	0.419	0.503	12.89
33) Tm	cis-1,3-Dichloroprope		0.109	0.097	0.085	0.083	0.073	0.089	15.46
34) Tm	4-Methyl-2-Pentanone		1.262	1.295	1.138	1.157	1.075	1.185	7.67
35) S	Toluene-d8		1.590	1.657	1.501	1.539	1.371	1.532	7.00
36) TCM	Toluene		-----ISTD-----						
37) I	Chlorobenzene-d5		2.065	1.938	1.705	1.549	1.304	1.712	17.74
38) Tm	trans-1,3-Dichloropro		1.236	1.234	1.166	1.171	1.129	1.187	3.93
39) Tm	1,1,2-Trichloroethane		1.407	1.496	1.372	1.415	1.368	1.412	3.64
40) Tm	Tetrachloroethene		0.682	0.573	0.514	0.508	0.456	0.547	15.80
41) Tm	2-Hexanone		1.226	1.179	1.129	1.026	0.952	1.103	10.18
42) Tm	Dibromochloromethane		3.687	3.812	3.603	3.720	3.712	3.707	2.03
43) TMP	Chlorobenzene		6.400	6.587	6.074	6.112	5.763	6.187	5.13
44) TCm	Ethylbenzene		2.309	2.331	2.038	2.058	1.792	2.106	10.55
45) Tm	m+p-Xylenes		4.942	4.948	4.318	4.014	3.383	4.321	15.32
46) Tm	o-Xylene		3.637	3.525	2.877	2.781	2.335	3.031	17.93
47) Tm	Styrene		0.923	0.848	0.765	0.728	0.664	0.786	12.92
48) TPm	Bromoform		1.817	1.826	1.617	1.532	1.459	1.650	10.06
49) S	Bromofluorobenzene		1.455	1.509	1.376	1.388	1.311	1.408	5.42
50) TPm	1,1,2,2-Tetrachloroet		2.471	2.571	2.319	2.187	2.089	2.327	8.50
51) Tm	1,3-Dichlorobenzene		2.610	2.757	2.534	2.338	2.179	2.484	9.16
52) Tm	1,4-Dichlorobenzene		2.302	2.454	2.311	2.104	2.009	2.236	7.95
53) Tm	1,2-Dichlorobenzene		0.601	0.753	0.803	0.696	0.808	0.732	11.81
54) Tm	Naphthalene								

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

MB 14Dec2005

Lab Name: FMETL NJDEP#: 13461Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880Lab File ID: VB021036.DLab Sample ID: MB 14Dec2005Date Analyzed: 12/14/2005Time Analyzed: 14:32GC Column: RTX502 ID: 0.25 (mm)Heated Purge: (Y/N) NInstrument ID: GCMS#2

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

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	401-GW	5063706	VB021057.D	4:36
02	TRIP BLANK	5063707	VB021058.D	5:17

COMMENTS:

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB 14DEC2005	80	90	88	0
02	401-GW	84	93	88	0
03	TRIP BLANK	85	93	87	0

QC LIMITS

SMC1	DCE	=	1,2-Dichloroethane-d4	(70-120)
SMC2	TOL	=	Toluene-d8	(70-120)
SMC3	BFB	=	Bromofluorobenzene	(70-120)

Column to be used to flag recovery values
 * Values outside of contract required QC limits
 D System Monitoring Compound diluted out

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP
 Last Update : Wed Dec 14 13:36:34 2005
 Response via : Initial Calibration

Non-Spiked Sample: VB021043.D

Spike Sample	Spike Duplicate Sample
File ID : VB021044.D	VB021045.D
Sample : 5063507 MS	5063507 MSD
Acq Time: 14 Dec 2005 7:47 pm	14 Dec 2005 8:28 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	% Rec
Acrolein	0.0	50	49	48	99	97	2	20	59-137
Acrylonitrile	0.0	50	50	49	100	98	2	20	68-127
tert-Butyl alcohol	0.0	100	80	84	80	84	5	20	17-167
Methyl-tert-Butyl et	0.0	10	9	9	93	94	0	20	74-116
Di-isopropyl ether	0.0	10	10	10	100	100	0	20	77-117
Dichlorodifluorometh	0.0	10	9	9	89	86	3	20	50-131
Chloromethane	0.0	10	9	9	95	93	2	20	65-123
Vinyl Chloride	0.0	10	10	10	97	95	2	20	63-125
Bromomethane	0.0	10	10	10	104	101	3	20	72-118
Chloroethane	0.0	10	11	11	109	108	2	20	64-127
Trichlorofluorometha	0.0	10	10	10	102	99	3	20	60-122
1,1-Dichloroethene	0.0	10	10	10	100	99	1	20	68-116
Acetone	0.0	10	8	8	78	76	3	20	2-148
Carbon Disulfide	0.0	10	10	10	100	98	3	20	69-117
Methylene Chloride	0.0	10	10	10	100	98	2	20	79-110
trans-1,2-Dichloroet	0.0	10	10	10	102	101	1	20	73-113
1,1-Dichloroethane	0.4	10	10	10	98	97	1	20	77-112
Vinyl Acetate	0.0	10	9	9	89	90	0	20	52-127
2-Butanone	0.0	10	8	8	83	85	2	20	12-162
cis-1,2-Dichloroethe	1.0	10	10	10	91	90	1	20	74-114
Chloroform	0.0	10	10	10	102	101	1	20	79-110
1,1,1-Trichloroethan	3.4	10	10	10	67#	65#	2	20	73-114
Carbon Tetrachloride	0.6	10	10	9	90	89	1	20	69-115
Benzene	0.0	10	10	10	103	100	3	20	78-112
1,2-Dichloroethane	0.0	10	10	10	101	98	2	20	78-115
Trichloroethene	20.2	10	30	30	100	101	1	20	74-114
1,2-Dichloropropane	0.0	10	10	10	101	99	1	20	77-113
Bromodichloromethane	0.0	10	10	10	98	96	2	20	77-113
2-Chloroethyl vinyl	0.0	10	9	9	94	92	1	20	67-117
cis-1,3-Dichloroprop	0.0	10	10	10	101	99	2	20	75-116
4-Methyl-2-Pentanone	0.0	10	8	9	84	85	1	20	33-146
Toluene	0.0	10	11	10	107	104	3	20	80-113
trans-1,3-Dichloropr	0.0	10	10	10	100	97	3	20	75-117
1,1,2-Trichloroethan	0.0	10	10	10	102	100	1	20	78-116
Tetrachloroethene	0.0	10	10	10	105	100	4	20	73-115
2-Hexanone	0.0	10	8	8	79	78	2	20	30-147
Dibromochloromethane	0.0	10	10	10	100	97	3	20	77-115
Chlorobenzene	0.0	10	10	10	103	100	3	20	78-112
Ethylbenzene	0.0	10	10	10	104	101	2	20	77-113
m+p-Xylenes	0.0	20	21	21	106	103	3	20	76-115
o-Xylene	0.0	10	11	10	107	103	3	20	74-118
Styrene	0.0	10	11	10	106	102	4	20	77-116
Bromoform	0.0	10	10	9	95	92	3	20	72-116
1,1,2,2-Tetrachloroe	0.0	10	10	9	96	94	2	20	73-120
1,3-Dichlorobenzene	0.0	10	10	10	100	98	2	20	75-114
1,4-Dichlorobenzene	0.0	10	10	10	100	99	2	20	75-116
1,2-Dichlorobenzene	0.0	10	10	10	96	96	0	20	76-115
Naphthalene	0.0	10	5	7	46#	69#	41#	20	70-120

- Fails Limit Check

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461
 Project: UST Case No.: 50637 Location: Bldg40 SDG No.: 06-34880
 Lab File ID (Standard): VB021030.D Date Analyzed: 12/14/2005
 Instrument ID: GCMS#2 Time Analyzed: 9:38
 GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1BCM AREA #	RT #	IS2DFB AREA #	RT #	IS3CBZ AREA #	RT #
12 HOUR STD	356960	16.43	2522771	19.63	672686	25.66
UPPER LIMIT	713920	16.93	5045542	20.13	1345372	26.16
LOWER LIMIT	178480	15.93	1261386	19.13	336343	25.16
FIELD ID:						
01 MB 14DEC2005	365911	16.42	2574457	19.62	695585	25.65
02 401-GW	336628	16.42	2338550	19.62	631417	25.65
03 TRIP BLANK	333787	16.42	2345746	19.62	635353	25.65

IS1 BCM = Bromochloromethane
 IS2 DFB = 1,4-Difluorobenzene
 IS3 CBZ = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

Data File : C:\HPCHEM\1\DATA\051214\VB021036.D

Vial: 1

Acq On : 14 Dec 2005 2:32 pm

Operator: Skelton

Sample : MB 14Dec2005

Inst : GC/MS Ins

Misc : MB 14Dec2005

Multiplr: 1.00

MS Integration Params: TBA.P

Quant Time: Dec 14 15:22 2005

Quant Results File: M2VO214.RES

Quant Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)

Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Last Update : Wed Dec 14 13:36:34 2005

Response via : Initial Calibration

DataAcq Meth : M2VO214

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.42	128	365911	30.00	ug/L	-0.01
26) 1,4-Difluorobenzene	19.62	114	2574457	30.00	ug/L	-0.01
37) Chlorobenzene-d5	25.65	119	695585	30.00	ug/L	-0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.47	65	893476	24.00	ug/L	-0.01
Spiked Amount	30.000	Range 70 - 120	Recovery	=	80.00%	
35) Toluene-d8	22.57	98	2745894	27.00	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	90.00%	
49) Bromofluorobenzene	28.00	95	1008779	26.37	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	87.90%	
Target Compounds						
44) Ethylbenzene	25.72	91	10013	0.07	ug/L	Qvalue 98

C
S
L
R
DS
WC
S
L
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D

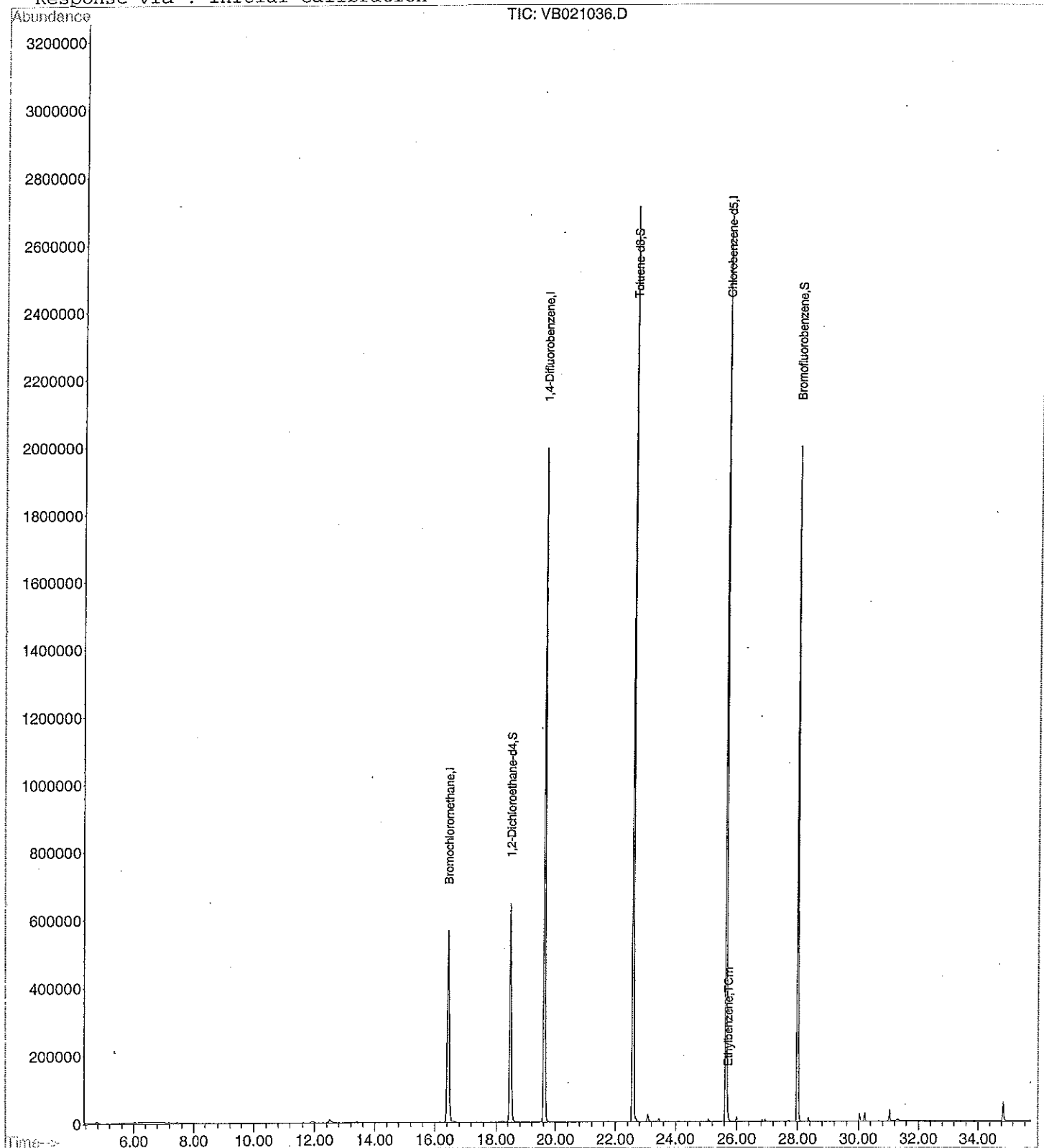
Quantitation Report

Data File : C:\HPCHEM\1\DATA\051214\VB021036.D
 Acq On : 14 Dec 2005 2:32 pm
 Sample : MB 14Dec2005
 Misc : MB 14Dec2005
 MS Integration Params: TBA.P
 Quant Time: Dec 14 15:22 2005

Vial: 1
 Operator: Skelton
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Results File: M2VO214.RES

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP
 Last Update : Wed Dec 14 13:36:34 2005
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\051214\VB021058.D

Vial: 23

Acq On : 15 Dec 2005 5:17 am

Operator: Skelton

Sample : 5063707

Inst : GC/MS Ins

Misc : Trip Blank

Multiplr: 1.00

MS Integration Params: TBA.P

Quant Time: Dec 15 5:52 2005

Quant Results File: M2VO214.RES

Quant Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)

Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Last Update : Wed Dec 14 13:36:34 2005

Response via : Initial Calibration

DataAcq Meth : M2VO214

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.42	128	333787	30.00	ug/L	-0.01
26) 1,4-Difluorobenzene	19.62	114	2345746	30.00	ug/L	-0.01
37) Chlorobenzene-d5	25.65	119	635353	30.00	ug/L	-0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.47	65	861125	25.36	ug/L	-0.01
Spiked Amount	30.000	Range 70 - 120	Recovery	=	84.53%	
35) Toluene-d8	22.57	98	2594435	27.99	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	93.30%	
49) Bromofluorobenzene	27.99	95	914638	26.17	ug/L	-0.01
Spiked Amount	30.000	Range 70 - 120	Recovery	=	87.23%	

Target Compounds

Qvalue

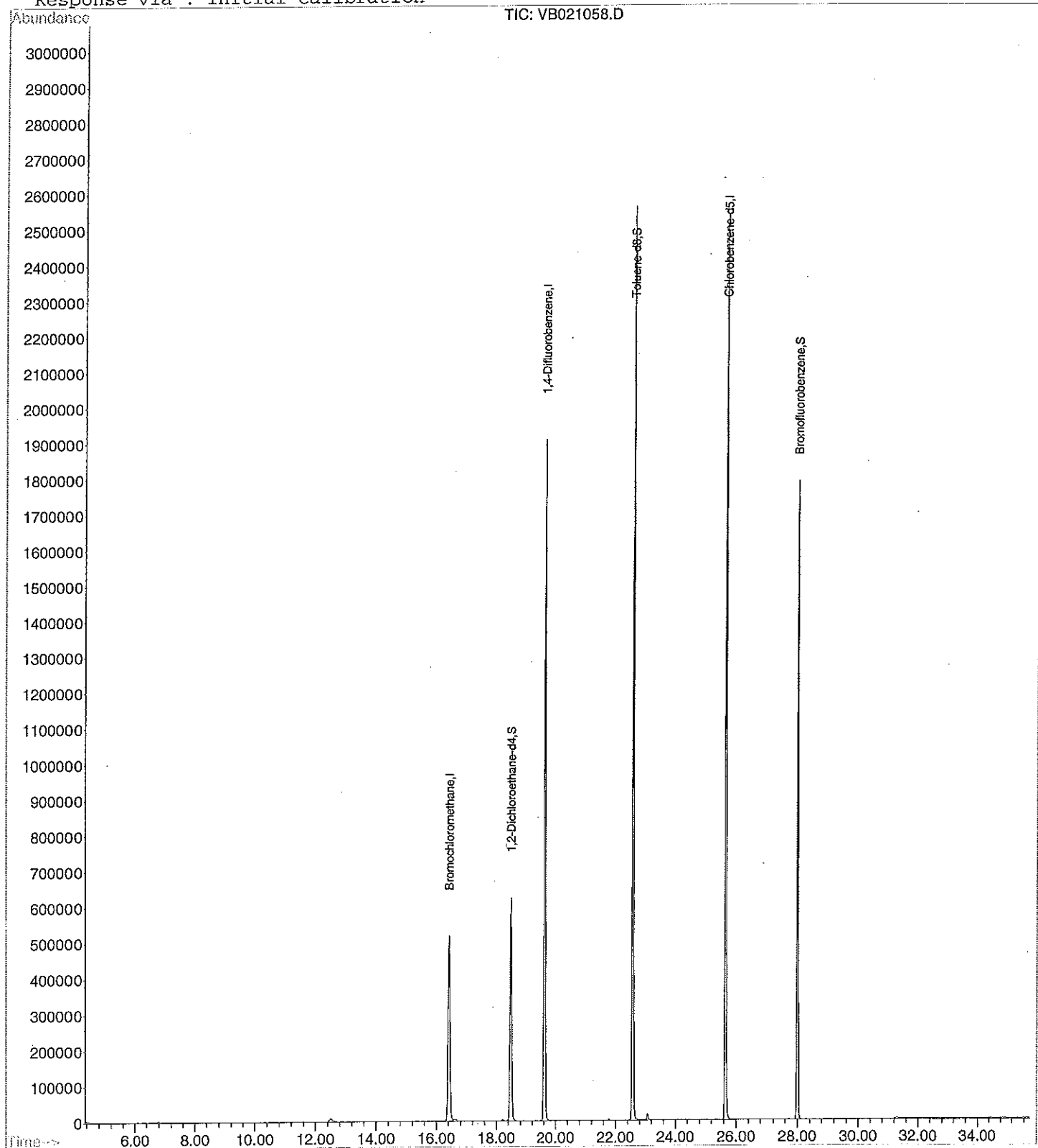
Quantitation Report

Data File : C:\HPCHEM\1\DATA\051214\VB021058.D
 Acq On : 15 Dec 2005 5:17 am
 Sample : 5063707
 Misc : Trip Blank
 MS Integration Params: TBA.P
 Quant Time: Dec 15 5:52 2005

Vial: 23
 Operator: Skelton
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Results File: M2VO214.RES

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
 Title : Volatile Organics by GC/MS Method 624/8260/TCLP
 Last Update : Wed Dec 14 13:36:34 2005
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\051214\VB021057.D

Acq On : 15 Dec 2005 4:36 am

Sample : 5063706

Misc : 401-GW

MS Integration Params: TBA.P

Quant Time: Dec 15 5:12 2005

Vial: 22

Operator: Skelton

Inst : GC/MS Ins

Multiplr: 1.00

Quant Results File: M2VO214.RES

Quant Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Dec 14 13:36:34 2005
Response via : Initial Calibration
DataAcq Meth : M2VO214

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.42	128	336628	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.62	114	2338550	30.00	ug/L	0.00
37) Chlorobenzene-d5	25.65	119	631417	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.47	65	863303	25.21	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	84.03%	
35) Toluene-d8	22.57	98	2574455	27.86	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	92.87%	
49) Bromofluorobenzene	28.00	95	916579	26.39	ug/L	0.00
Spiked Amount	30.000	Range 70 - 120	Recovery	=	87.97%	

Target Compounds

Qvalue

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051214\VB021057.D

Vial: 22

Acq On : 15 Dec 2005 4:36 am

Operator: Skelton

Sample : 5063706

Inst : GC/MS Ins

Misc : 401-GW

Multiplr: 1.00

MS Integration Params: TBA.P

Quant Time: Dec 15 5:12 2005

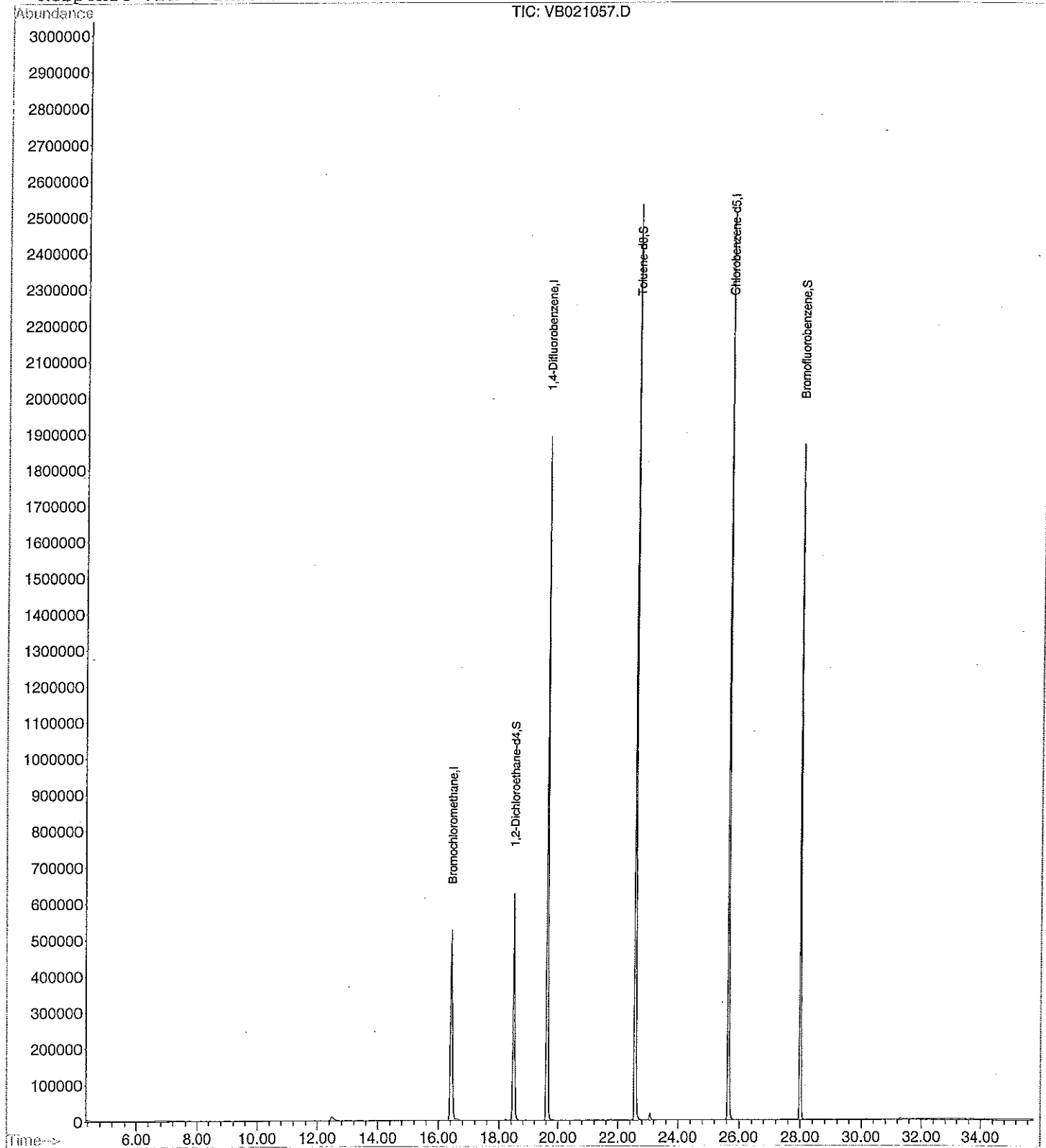
Quant Results File: M2VO214.RES

Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)

Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Last Update : Wed Dec 14 13:36:34 2005

Response via : Initial Calibration



SEMI-VOLATILE ORGANICS

000035

Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **BNA11411.D**
Operator **BPatel**
Date Acquired **19-Dec-05**

Sample Name **MB-121505-01**
Misc Info **MB-121505-01**
Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13	10.00 ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.60	10.00 ug/L	
62-53-3	Aniline			not detected	NLE	2.38	10.00 ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.71	10.00 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00 ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.66	10.00 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00 ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00 ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.76	10.00 ug/L	
67-72-1	Hexachloroethane			not detected	10	0.96	10.00 ug/L	
98-95-3	Nitrobenzene			not detected	10	0.86	10.00 ug/L	
78-59-1	Isophorone			not detected	100	0.76	10.00 ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00 ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00 ug/L	
91-20-3	Naphthalene			not detected	NLE	0.76	10.00 ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.37	10.00 ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00 ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00 ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.92	10.00 ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.72	10.00 ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00 ug/L	
131-11-3	Dimethylphthalate			not detected	7000	0.78	10.00 ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00 ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.71	10.00 ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00 ug/L	
83-32-9	Acenaphthene			not detected	400	0.73	10.00 ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00 ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00 ug/L	
84-66-2	Diethylphthalate			not detected	5000	0.96	10.00 ug/L	
86-73-7	Fluorene			not detected	300	0.71	10.00 ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00 ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00 ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.62	10.00 ug/L	
103-33-3	Azobenzene			not detected	NLE	0.72	10.00 ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00 ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.95	10.00 ug/L	
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00 ug/L	
120-12-7	Anthracene			not detected	2000	0.76	10.00 ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	0.92	10.00 ug/L	
206-44-0	Fluoranthene			not detected	300	0.82	10.00 ug/L	

Semi-Volatile Analysis Report

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Data File Name **BNA11411.D**
 Operator **BPatel**
 Date Acquired **19-Dec-05**

Sample Name **MB-121505-01**
 Misc Info **MB-121505-01**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
92-87-5	Benzidine			not detected	50	0.98	10.00 ug/L	
129-00-0	Pyrene			not detected	200	0.79	10.00 ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00 ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	0.82	10.00 ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.31	10.00 ug/L	
218-01-9	Chrysene			not detected	20	0.77	10.00 ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.28	10.00 ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.02	10.00 ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	0.98	10.00 ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	0.92	10.00 ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	0.71	10.00 ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.76	10.00 ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.76	10.00 ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	10.00 ug/L	

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range

D= Value from dilution

B= Compound in Related Blank

RL= Reporting Limit. The values between the MDL and RL are considered estimated.

MDL= Method Detection Limit

NLE= No Limit Established

R.T.=Retention Time

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MB-121505-01

Lab Name: FMETL Lab Code 13461
Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: MB-121505-01
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11411.D
Level: (low/med) LOW Date Received: 12/12/2005
% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **BNA11413.D**
Operator **BPatel**
Date Acquired **19-Dec-05**

Sample Name **5063706**
Misc Info **401-GW**
Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13	10.00	ug/L
62-75-9	N-nitroso-dimethylamine			not detected	20	0.60	10.00	ug/L
62-53-3	Aniline			not detected	NLE	2.38	10.00	ug/L
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.71	10.00	ug/L
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L
100-51-6	Benzyl alcohol			not detected	NLE	0.66	10.00	ug/L
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.76	10.00	ug/L
67-72-1	Hexachloroethane			not detected	10	0.96	10.00	ug/L
98-95-3	Nitrobenzene			not detected	10	0.86	10.00	ug/L
78-59-1	Isophorone			not detected	100	0.76	10.00	ug/L
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L
91-20-3	Naphthalene			not detected	NLE	0.76	10.00	ug/L
106-47-8	4-Chloroaniline			not detected	NLE	1.37	10.00	ug/L
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.92	10.00	ug/L
91-58-7	2-Chloronaphthalene			not detected	NLE	0.72	10.00	ug/L
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L
131-11-3	Dimethylphthalate			not detected	7000	0.78	10.00	ug/L
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.71	10.00	ug/L
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L
84-66-2	Diethylphthalate			not detected	5000	0.96	10.00	ug/L
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.62	10.00	ug/L
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L
118-74-1	Hexachlorobenzene			not detected	10	0.95	10.00	ug/L
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L
84-74-2	Di-n-butylphthalate			not detected	900	0.92	10.00	ug/L
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L

Semi-Volatile Analysis Report

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Data File Name **BNA11413.D**
 Operator **BPatel**
 Date Acquired **19-Dec-05**

Sample Name **5063706**
 Misc Info **401-GW**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
92-87-5	Benzidine			not detected	50	0.98	10.00	ug/L
129-00-0	Pyrene			not detected	200	0.79	10.00	ug/L
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00	ug/L
56-55-3	Benzo[a]anthracene			not detected	10	0.82	10.00	ug/L
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.31	10.00	ug/L
218-01-9	Chrysene			not detected	20	0.77	10.00	ug/L
117-81-7	bis(2-Ethylhexyl)phthalate	27.70	122488	3.94 ug/L	30	1.28	10.00	ug/L
117-84-0	Di-n-octylphthalate			not detected	100	1.02	10.00	ug/L
205-99-2	Benzo[b]fluoranthene			not detected	10	0.98	10.00	ug/L
207-08-9	Benzo[k]fluoranthene			not detected	2	0.92	10.00	ug/L
50-32-8	Benzo[a]pyrene			not detected	20	0.71	10.00	ug/L
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.76	10.00	ug/L
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.76	10.00	ug/L
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	10.00	ug/L

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range

D= Value from dilution

B= Compound in Related Blank

RL= Reporting Limit. The values between the MDL and RL are considered estimated.

MDL= Method Detection Limit

NLE= No Limit Established

R.T.=Retention Time

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Semi-Volatile Analysis Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Data File Name **BNA11416.D**
 Operator **BPatel**
 Date Acquired **19-Dec-05**

Sample Name **5063706 RE**
 Misc Info **401-GW Re**
 Sample Multiplier **1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
110-86-1	Pyridine			not detected	NLE	1.13	10.00	ug/L
62-75-9	N-nitroso-dimethylamine			not detected	20	0.60	10.00	ug/L
62-53-3	Aniline			not detected	NLE	2.38	10.00	ug/L
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.71	10.00	ug/L
541-73-1	1,3-Dichlorobenzene			not detected	600	1.02	10.00	ug/L
106-46-7	1,4-Dichlorobenzene			not detected	75	0.99	10.00	ug/L
100-51-6	Benzyl alcohol			not detected	NLE	0.66	10.00	ug/L
95-50-1	1,2-Dichlorobenzene			not detected	600	0.96	10.00	ug/L
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.88	10.00	ug/L
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.76	10.00	ug/L
67-72-1	Hexachloroethane			not detected	10	0.96	10.00	ug/L
98-95-3	Nitrobenzene			not detected	10	0.86	10.00	ug/L
78-59-1	Isophorone			not detected	100	0.76	10.00	ug/L
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.79	10.00	ug/L
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.89	10.00	ug/L
91-20-3	Naphthalene			not detected	NLE	0.76	10.00	ug/L
106-47-8	4-Chloroaniline			not detected	NLE	1.37	10.00	ug/L
87-68-3	Hexachlorobutadiene			not detected	1	0.99	10.00	ug/L
91-57-6	2-Methylnaphthalene			not detected	NLE	1.01	10.00	ug/L
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.92	10.00	ug/L
91-58-7	2-Chloronaphthalene			not detected	NLE	0.72	10.00	ug/L
88-74-4	2-Nitroaniline			not detected	NLE	0.77	10.00	ug/L
131-11-3	Dimethylphthalate			not detected	7000	0.78	10.00	ug/L
208-96-8	Acenaphthylene			not detected	NLE	0.67	10.00	ug/L
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.71	10.00	ug/L
99-09-2	3-Nitroaniline			not detected	NLE	1.18	10.00	ug/L
83-32-9	Acenaphthene			not detected	400	0.73	10.00	ug/L
132-64-9	Dibenzofuran			not detected	NLE	0.69	10.00	ug/L
121-14-2	2,4-Dinitrotoluene			not detected	10	0.81	10.00	ug/L
84-66-2	Diethylphthalate			not detected	5000	0.96	10.00	ug/L
86-73-7	Fluorene			not detected	300	0.71	10.00	ug/L
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.73	10.00	ug/L
100-01-6	4-Nitroaniline			not detected	NLE	1.11	10.00	ug/L
86-30-6	n-Nitrosodiphenylamine			not detected	20	0.62	10.00	ug/L
103-33-3	Azobenzene			not detected	NLE	0.72	10.00	ug/L
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.92	10.00	ug/L
118-74-1	Hexachlorobenzene			not detected	10	0.95	10.00	ug/L
85-01-8	Phenanthrene			not detected	NLE	0.81	10.00	ug/L
120-12-7	Anthracene			not detected	2000	0.76	10.00	ug/L
84-74-2	Di-n-butylphthalate			not detected	900	0.92	10.00	ug/L
206-44-0	Fluoranthene			not detected	300	0.82	10.00	ug/L

Semi-Volatile Analysis Report

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Data File Name BNA11416.D
 Operator BPatel
 Date Acquired 19-Dec-05

Sample Name 5063706 RE
 Misc Info 401-GW Re
 Sample Multiplier 1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	RL	Qualifiers
92-87-5	Benzidine			not detected	50	0.98	10.00	ug/L
129-00-0	Pyrene			not detected	200	0.79	10.00	ug/L
85-68-7	Butylbenzylphthalate			not detected	100	0.86	10.00	ug/L
56-55-3	Benzo[a]anthracene			not detected	10	0.82	10.00	ug/L
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.31	10.00	ug/L
218-01-9	Chrysene			not detected	20	0.77	10.00	ug/L
117-81-7	bis(2-Ethylhexyl)phthalate	27.69	140047	4.23 ug/L	30	1.28	10.00	ug/L
117-84-0	Di-n-octylphthalate			not detected	100	1.02	10.00	ug/L
205-99-2	Benzo[b]fluoranthene			not detected	10	0.98	10.00	ug/L
207-08-9	Benzo[k]fluoranthene			not detected	2	0.92	10.00	ug/L
50-32-8	Benzo[a]pyrene			not detected	20	0.71	10.00	ug/L
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.76	10.00	ug/L
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.76	10.00	ug/L
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.80	10.00	ug/L

* Higher of PQL's and Ground Water Criteria as per NJAC 7:9-6 2-Sept-97

Qualifiers

E= Value Exceeds Linear Range

D= Value from dilution

B= Compound in Related Blank

RL= Reporting Limit. The values between the MDL and RL are considered estimated.

MDL= Method Detection Limit

NLE= No Limit Established

R.T.=Retention Time

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1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

401-GW

Lab Name: FMETL Lab Code 13461
Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 5063706
Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA11413.D
Level: (low/med) LOW Date Received: 12/12/2005
% Moisture: decanted: (Y/N) N Date Extracted: 12/15/2005
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 12/19/2005
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH:

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461
 Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
 Lab File ID: BNA11332.D DFTPP Injection Date: 11/3/2005
 Instrument ID: GC_BNA_2 DFTPP Injection Time: 9:33

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	46.2
68	Less than 2.0% of mass 69	0.9 (1.8)1
69	Mass 69 Relative abundance	51.6
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	25.0 - 75.0% of mass 198	51.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 0.75% of mass 198	2.1
441	Present, but less than mass 443	10.9
442	40.0 - 110.0% of mass 198	64.7
443	15.0 - 24.0% of mass 442	13.9 (21.6)2

1-Value is % mass 69

2-Value is % mass 442

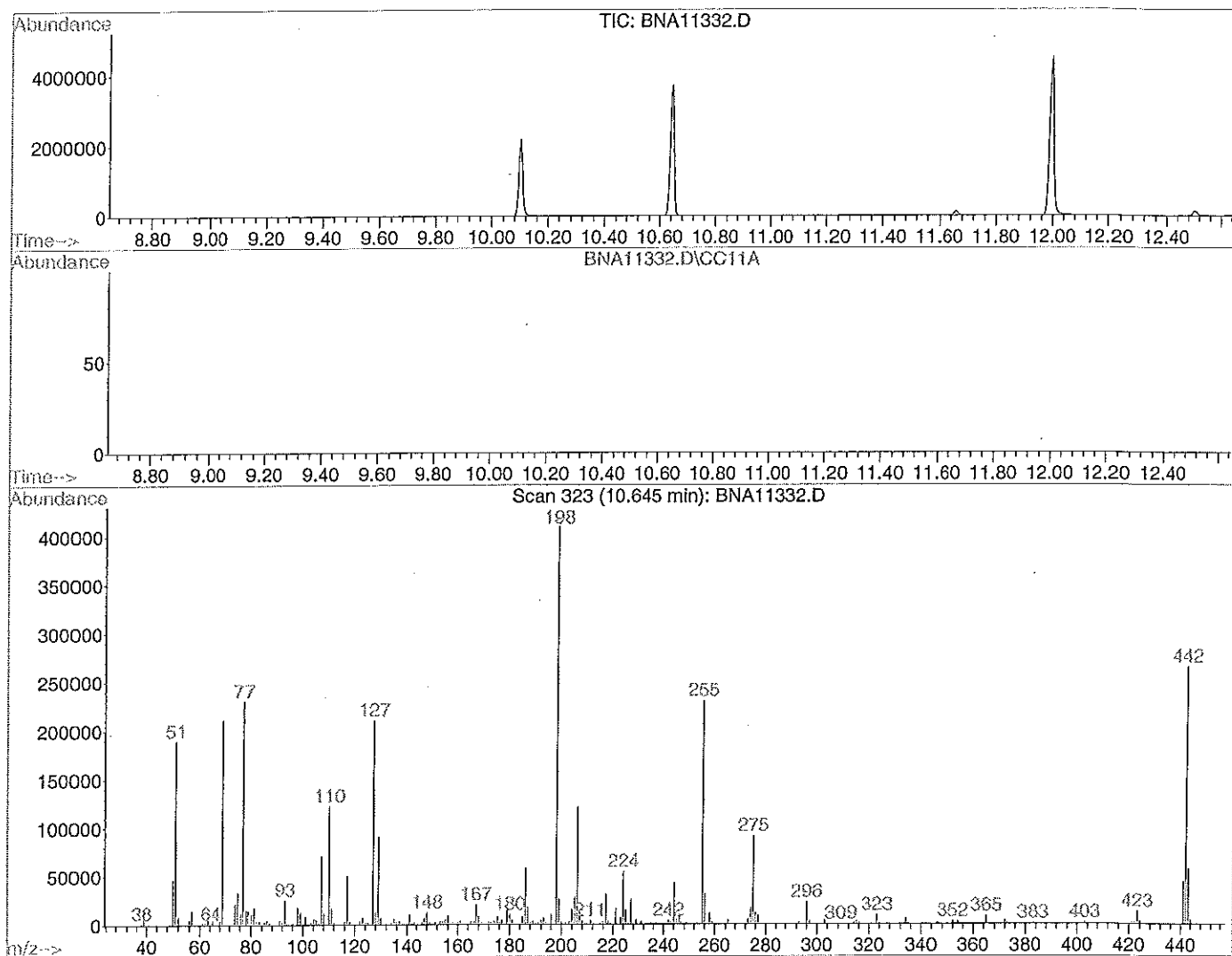
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	SSTD120	BNA11333.D	11/3/2005	9:57
02	SSTD010	SSTD010	BNA11334.D	11/3/2005	10:40
03	SSTD050	SSTD050	BNA11335.D	11/3/2005	11:24
04	SSTD020	SSTD020	BNA11336.D	11/3/2005	12:08
05	SSTD080	SSTD080	BNA11337.D	11/3/2005	12:51

Data File : C:\HPCHEM\1\DATA\051103\BNA11332.D
 Acq On : 3 Nov 2005 9:33 am
 Sample : DFTPP Tune
 Misc : SV080105.01
 MS Integration Params: ODD.P
 Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration

Vial: 99
 Operator: BPatel
 Inst : GC/MS Ins
 Multiplr: 1.00

GC Integration Params: rteint2.p



Spectrum Information: Scan 323

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.2	189312	PASS
68	69	0.00	2	1.8	3845	PASS
69	198	0.00	100	51.6	211392	PASS
70	69	0.00	2	0.7	1460	PASS
127	198	40	60	51.4	210752	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	409984	PASS
199	198	5	9	6.5	26680	PASS
275	198	10	30	22.3	91280	PASS
365	198	1	100	2.1	8485	PASS
441	443	1	99	77.9	44552	PASS
442	198	40	100	64.7	265088	PASS
443	442	17	23	21.6	57184	PASS

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration

Calibration Files
 120 =BNA11333.D 80 =BNA11337.D 50 =BNA11335.D
 20 =BNA11336.D 10 =BNA11334.D

Compound	120	80	50	20	10	Avg	%RSD
-----ISTD-----							
1) I 1,4-Dichlorobenzene-d							
2) T Pyridine	1.621	1.540	1.525	1.532	1.462	1.536	3.69
3) T N-nitroso-dimethylami	0.882	0.832	0.827	0.831	0.748	0.824	5.85
4) S 2-Fluorophenol	1.316	1.256	1.283	1.229	1.189	1.255	3.88
5) T Aniline	2.399	2.297	2.313	2.310	2.223	2.308	2.70
6) S Phenol-d6	1.800	1.730	1.751	1.730	1.667	1.736	2.76
7) TCM Phenol	2.014	1.926	1.946	1.973	1.886	1.949	2.48
8) T bis(2-Chloroethyl)eth	1.410	1.377	1.399	1.388	1.340	1.383	1.93
9) TM 2-Chlorophenol	1.339	1.297	1.302	1.307	1.266	1.302	1.98
10) T 1,3-Dichlorobenzene	1.520	1.489	1.511	1.525	1.462	1.501	1.75
11) TCM 1,4-Dichlorobenzene	1.572	1.558	1.566	1.560	1.519	1.555	1.34
12) T Benzyl alcohol	1.025	0.988	1.010	0.991	0.921	0.987	4.06
13) T 1,2-Dichlorobenzene	1.436	1.413	1.426	1.448	1.367	1.418	2.21
14) T 2-Methylphenol	1.352	1.322	1.358	1.363	1.315	1.342	1.61
15) T bis(2-chloroisopropyl	1.710	1.681	1.728	1.744	1.624	1.697	2.79
16) T 4-Methylphenol	1.435	1.390	1.416	1.432	1.338	1.402	2.87
17) TPM n-Nitroso-di-n-propyl	0.246	0.240	0.244	0.248	0.243	0.244	1.27
18) T Hexachloroethane	0.649	0.636	0.653	0.645	0.615	0.639	2.36
-----ISTD-----							
19) I Naphthalene-d8							
20) S Nitrobenzene-d5	0.585	0.587	0.591	0.582	0.571	0.583	1.31
21) T Nitrobenzene	0.559	0.561	0.562	0.560	0.554	0.559	0.56
22) T Isophorone	0.937	0.933	0.950	0.945	0.946	0.942	0.75
23) TC 2-Nitrophenol	0.197	0.197	0.197	0.193	0.184	0.194	2.89
24) T 2,4-Dimethylphenol	0.471	0.476	0.476	0.470	0.473	0.473	0.62
25) T bis(2-Chloroethoxy)me	0.495	0.498	0.494	0.502	0.494	0.497	0.71
26) TC 2,4-Dichlorophenol	0.329	0.327	0.326	0.316	0.312	0.322	2.28
27) T Benzoic Acid	0.317	0.284	0.222	0.146	0.092	0.212	44.17
28) TM 1,2,4-Trichlorobenzen	0.359	0.355	0.356	0.355	0.355	0.356	0.57
29) T Naphthalene	1.058	1.079	1.089	1.084	1.088	1.080	1.16
30) T 4-Chloroaniline	0.444	0.442	0.457	0.450	0.455	0.449	1.44
31) TC Hexachlorobutadiene	0.218	0.219	0.218	0.215	0.215	0.217	0.83
32) TCM 4-Chloro-3-methylphen	0.419	0.421	0.429	0.419	0.399	0.417	2.62
33) T 2-Methylnaphthalene	0.698	0.702	0.707	0.702	0.692	0.700	0.76
-----ISTD-----							
34) I Acenaphthene-d10							
35) TP Hexachlorocyclopentad	0.397	0.377	0.367	0.318	0.281	0.348	13.56
36) TC 2,4,6-Trichlorophenol	0.404	0.396	0.399	0.389	0.376	0.393	2.73
37) T 2,4,5-Trichlorophenol	0.434	0.427	0.427	0.405	0.402	0.419	3.42
38) S 2-Fluorobiphenyl	1.307	1.308	1.308	1.292	1.300	1.303	0.54
39) T 2-Chloronaphthalene	1.133	1.135	1.145	1.129	1.148	1.138	0.71
40) T 2-Nitroaniline	0.378	0.378	0.380	0.369	0.362	0.373	1.98
41) T Dimethylphthalate	1.340	1.356	1.372	1.367	1.353	1.358	0.92
42) T Acenaphthylene	1.802	1.827	1.829	1.816	1.821	1.819	0.59
43) T 2,6-Dinitrotoluene	0.315	0.314	0.314	0.306	0.291	0.308	3.32
44) T 3-Nitroaniline	0.309	0.308	0.316	0.311	0.307	0.310	1.20
45) TCM Acenaphthene	1.114	1.124	1.105	1.101	1.109	1.110	0.79
46) TP 2,4-Dinitrophenol	0.203	0.195	0.181	0.140	0.089	0.162	29.31
47) T Dibenzofuran	1.614	1.634	1.634	1.618	1.623	1.625	0.57
48) TMP 4-Nitrophenol	0.416	0.408	0.410	0.385	0.356	0.395	6.27
49) TM 2,4-Dinitrotoluene	0.457	0.457	0.461	0.436	0.419	0.446	3.99
50) T Diethylphthalate	1.397	1.428	1.446	1.431	1.408	1.422	1.35
51) T Fluorene	1.361	1.376	1.377	1.343	1.344	1.360	1.21
52) T 4-Chlorophenyl-phenyl	0.659	0.653	0.643	0.651	0.648	0.651	0.87
53) T 4-Nitroaniline	0.314	0.309	0.320	0.310	0.306	0.312	1.68
-----ISTD-----							
54) I Phenanthrene-d10							

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration

Calibration Files

120 =BNA11333.D 80 =BNA11337.D 50 =BNA11335.D
 20 =BNA11336.D 10 =BNA11334.D

	Compound	120	80	50	20	10	Avg	%RSD
55) T	4,6-Dinitro-2-methylp	0.172	0.162	0.154	0.132	0.105	0.145	18.54
56) TC	n-Nitrosodiphenylamin	0.566	0.559	0.562	0.554	0.556	0.559	0.88
57) T	Azobenzene	0.999	0.995	1.018	1.041	1.023	1.015	1.88
58) S	2,4,6-Tribromophenol	0.102	0.099	0.098	0.096	0.090	0.097	4.74
59) T	4-Bromophenyl-phenyle	0.228	0.224	0.218	0.216	0.208	0.219	3.39
60) T	Hexachlorobenzene	0.242	0.239	0.230	0.230	0.224	0.233	3.17
61) TCM	Pentachlorophenol	0.139	0.128	0.115	0.095	0.069	0.109	25.56
62) T	Phenanthrene	1.189	1.179	1.183	1.198	1.201	1.190	0.79
63) T	Anthracene	1.150	1.135	1.153	1.167	1.151	1.151	1.00
64) T	Di-n-butylphthalate	1.277	1.285	1.325	1.363	1.361	1.322	3.07
65) TC	Fluoranthene	1.236	1.234	1.237	1.240	1.228	1.235	0.36
66) I	Chrysene-d12	-----ISTD-----						
67) T	Benzidine	0.471	0.473	0.501	0.583	0.691	0.544	17.27
68) TM	Pyrene	1.214	1.225	1.246	1.253	1.259	1.239	1.54
69) S	p-Terphenyl-d14	0.860	0.844	0.838	0.830	0.836	0.841	1.34
70) T	Butylbenzylphthalate	0.596	0.597	0.608	0.611	0.608	0.604	1.17
71) T	Benzo[a]anthracene	1.291	1.252	1.226	1.195	1.201	1.233	3.19
72) T	3,3'-Dichlorobenzidin	0.484	0.436	0.427	0.435	0.470	0.450	5.57
73) T	Chrysene	1.065	1.072	1.051	1.056	1.057	1.060	0.79
74) T	bis(2-Ethylhexyl)phth	0.757	0.756	0.770	0.769	0.771	0.765	1.00
75) I	Perylene-d12	-----ISTD-----						
76) TC	Di-n-octylphthalate	2.119	2.089	2.119	2.064	2.028	2.084	1.87
77) T	Benzo[b]fluoranthene	1.794	1.751	1.681	1.624	1.623	1.695	4.51
78) T	Benzo[k]fluoranthene	1.790	1.725	1.710	1.648	1.607	1.696	4.17
79) TC	Benzo[a]pyrene	1.607	1.564	1.524	1.474	1.445	1.523	4.31
80) T	Indeno[1,2,3-cd]pyren	1.748	1.714	1.663	1.580	1.520	1.645	5.73
81) T	Dibenz[a,h]anthracene	1.465	1.410	1.348	1.275	1.235	1.347	6.99
82) T	Benzo[g,h,i]perylene	1.391	1.389	1.355	1.292	1.243	1.334	4.84

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461
 Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
 Lab File ID: BNA11409.D DFTPP Injection Date: 12/19/2005
 Instrument ID: GC_BNA_2 DFTPP Injection Time: 9:38

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.0
68	Less than 2.0% of mass 69	0.9 (1.6)1
69	Mass 69 Relative abundance	53.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	25.0 - 75.0% of mass 198	54.2
197	Less than 1.0% of mass 198	0.5
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.5
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 0.75% of mass 198	2.8
441	Present, but less than mass 443	8.4
442	40.0 - 110.0% of mass 198	59.3
443	15.0 - 24.0% of mass 442	11.8 (19.9)2

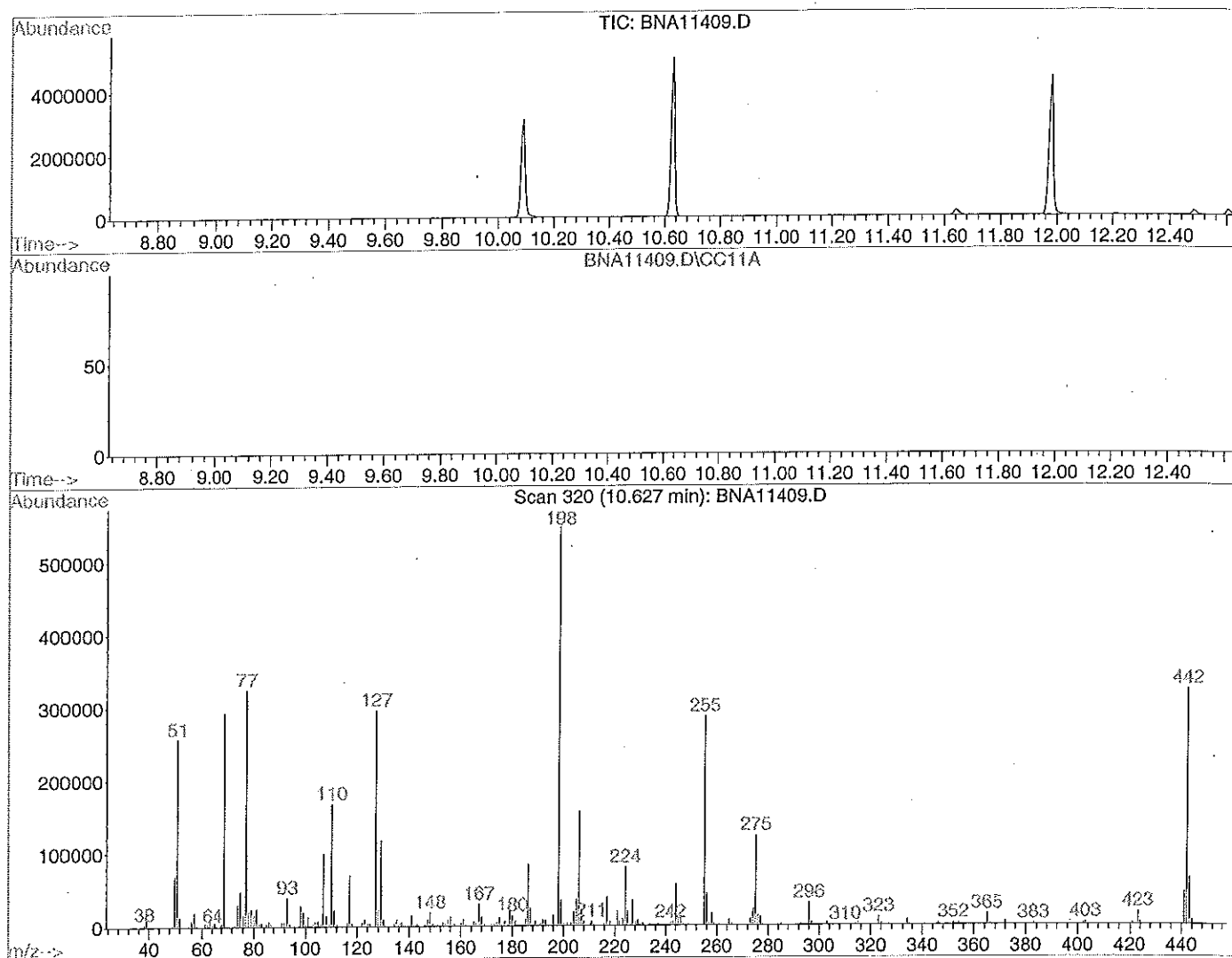
1-Value is % mass 69

2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	SSTD050	BNA11410.D	12/19/2005	10:03
02	MB-121505-01	MB-121505-01	BNA11411.D	12/19/2005	10:50
03	401-GW	5063706	BNA11413.D	12/19/2005	12:23
04	401-GW RE	5063706 RE	BNA11416.D	12/19/2005	14:47

Data File : C:\HPCHEM\1\DATA\051219\BNA11409.D Vial: 99
 Acq On : 19 Dec 2005 9:38 am Operator: BPatel
 Sample : DF'PP Tune Inst : GC/MS Ins
 Misc : SV080105.01 Multiplr: 1.00
 MS Integration Params: ODD.P GC Integration Params: rteint2.p
 Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration



Spectrum Information: Scan 320

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.0	257088	PASS
68	69	0.00	2	1.6	4645	PASS
69	198	0.00	100	53.7	293440	PASS
70	69	0.00	2	0.5	1346	PASS
127	198	40	60	54.2	296000	PASS
197	198	0.00	1	0.5	2649	PASS
198	198	100	100	100.0	546432	PASS
199	198	5	9	6.5	35656	PASS
275	198	10	30	22.5	122952	PASS
365	198	1	100	2.8	15195	PASS
441	443	1	99	71.2	45992	PASS
442	198	40	100	59.3	324288	PASS
443	442	17	23	19.9	64632	PASS

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11410.D
 Acq On : 19 Dec 2005 10:03 am
 Sample : Sstd050
 Misc : SV121905.01
 MS Integration Params: ODD.P

Vial: 100
 Operator: BPatel
 Inst : GC/MS Ins
 Multiplr: 1.00
 GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	109	-0.02
2 T	Pyridine	1.536	1.449	5.7	104	0.01
3 T	N-nitroso-dimethylamine	0.824	0.776	5.8	102	0.01
4 S	2-Fluorophenol	1.255	1.249	0.5	106	0.02
5 T	Aniline	2.308	2.131	7.7	101	-0.01
6 S	Phenol-d6	1.736	1.638	5.6	102	0.00
7 TCM	Phenol	1.949	1.838	5.7	103	0.00
8 T	bis(2-Chloroethyl)ether	1.383	1.332	3.7	104	-0.01
9 TM	2-Chlorophenol	1.302	1.257	3.5	105	0.00
10 T	1,3-Dichlorobenzene	1.501	1.465	2.4	106	-0.02
11 TCM	1,4-Dichlorobenzene	1.555	1.520	2.3	106	-0.02
12 T	Benzyl alcohol	0.987	0.948	4.0	102	-0.01
13 T	1,2-Dichlorobenzene	1.418	1.371	3.3	105	-0.02
14 T	2-Methylphenol	1.342	1.276	4.9	103	0.00
15 T	bis(2-chloroisopropyl)ether	1.697	1.619	4.6	102	-0.02
16 T	4-Methylphenol	1.402	1.316	6.1	101	0.00
17 TPM	n-Nitroso-di-n-propylamine	0.244	0.222	9.0	99	-0.02
18 T	Hexachloroethane	0.639	0.638	0.2	107	-0.02
19 I	Naphthalene-d8	1.000	1.000	0.0	106	-0.02
20 S	Nitrobenzene-d5	0.583	0.565	3.1	101	-0.02
21 T	Nitrobenzene	0.559	0.546	2.3	103	-0.02
22 T	Isophorone	0.942	0.894	5.1	100	-0.02
23 TC	2-Nitrophenol	0.194	0.185	4.6	100	-0.02
24 T	2,4-Dimethylphenol	0.473	0.466	1.5	104	-0.02
25 T	bis(2-Chloroethoxy)methane	0.497	0.481	3.2	103	-0.02
26 TC	2,4-Dichlorophenol	0.322	0.318	1.2	104	0.00
27 T	Benzoic Acid	0.212	0.249	-17.5	118	-0.01
28 TM	1,2,4-Trichlorobenzene	0.356	0.362	-1.7	108	-0.02
29 T	Naphthalene	1.080	1.047	3.1	102	-0.03
30 T	4-Chloroaniline	0.449	0.404	10.0	94	-0.02
31 TC	Hexachlorobutadiene	0.217	0.231	-6.5	113	-0.02
32 TCM	4-Chloro-3-methylphenol	0.417	0.404	3.1	100	0.00
33 T	2-Methylnaphthalene	0.700	0.677	3.3	101	-0.02
34 I	Acenaphthene-d10	1.000	1.000	0.0	105	-0.02
35 TP	Hexachlorocyclopentadiene	0.348	0.343	1.4	99	-0.02
36 TC	2,4,6-Trichlorophenol	0.393	0.391	0.5	103	-0.02
37 T	2,4,5-Trichlorophenol	0.419	0.415	1.0	102	0.00
38 S	2-Fluorobiphenyl	1.303	1.278	1.9	103	-0.02
39 T	2-Chloronaphthalene	1.138	1.113	2.2	103	-0.02
40 T	2-Nitroaniline	0.373	0.352	5.6	98	-0.02
41 T	Dimethylphthalate	1.358	1.317	3.0	101	-0.02
42 T	Acenaphthylene	1.819	1.723	5.3	99	-0.02
43 T	2,6-Dinitrotoluene	0.308	0.298	3.2	100	-0.02
44 T	3-Nitroaniline	0.310	0.268	13.5	89	-0.01
45 TCM	Acenaphthene	1.110	1.056	4.9	101	-0.02
46 TP	2,4-Dinitrophenol	0.162	0.143	11.7	83	-0.02
47 T	Dibenzofuran	1.625	1.537	5.4	99	-0.02
48 TMP	4-Nitrophenol	0.395	0.331	16.2	85	0.01
49 TM	2,4-Dinitrotoluene	0.446	0.408	8.5	93	-0.02
50 T	Diethylphthalate	1.422	1.363	4.1	99	-0.02
51 T	Fluorene	1.360	1.276	6.2	98	-0.02
52 T	4-Chlorophenyl-phenylether	0.651	0.625	4.0	102	-0.02

(#) = Out of Range

BNA11410.D M262593.M

Tue Dec 20 09:38:41 2005

000050

Page 1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11410.D Vial: 100
 Acq On : 19 Dec 2005 10:03 am Operator: BPatel
 Sample : Sstd050 Inst : GC/MS Ins
 Misc : SV121905.01 Multiplr: 1.00
 MS Integration Params: ODD.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
53 T	4-Nitroaniline	0.312	0.235	24.7	78	-0.02
54 I	Phenanthrene-d10	1.000	1.000	0.0	99	-0.02
55 T	4,6-Dinitro-2-methylphenol	0.145	0.133	8.3	85	-0.02
56 TC	n-Nitrosodiphenylamine	0.559	0.539	3.6	95	-0.02
57 T	Azobenzene	1.015	0.990	2.5	96	-0.02
58 S	2,4,6-Tribromophenol	0.097	0.099	-2.1	100	-0.02
59 T	4-Bromophenyl-phenylether	0.219	0.218	0.5	99	-0.02
60 T	Hexachlorobenzene	0.233	0.229	1.7	99	-0.02
61 TCM	Pentachlorophenol	0.109	0.122	-11.9	105	-0.01
62 T	Phenanthrene	1.190	1.123	5.6	94	-0.02
63 T	Anthracene	1.151	1.090	5.3	94	-0.02
64 T	Di-n-butylphthalate	1.322	1.233	6.7	92	-0.02
65 TC	Fluoranthene	1.235	1.074	13.0	86	-0.02
66 I	Chrysene-d12	1.000	1.000	0.0	78	-0.03
67 T	Benzidine	0.544	0.573	-5.3	89	-0.02
68 TM	Pyrene	1.239	1.357	-9.5	85	-0.02
69 S	p-Terphenyl-d14	0.841	0.924	-9.9	86	-0.02
70 T	Butylbenzylphthalate	0.604	0.632	-4.6	81	-0.02
71 T	Benzo[a]anthracene	1.233	1.200	2.7	76	-0.02
72 T	3,3'-Dichlorobenzidine	0.450	0.567	-26.0#	103	-0.02
73 T	Chrysene	1.060	1.009	4.8	75	-0.02
74 T	bis(2-Ethylhexyl)phthalate	0.765	0.775	-1.3	78	-0.02
75 I	Perylene-d12	1.000	1.000	0.0	68	-0.03
76 TC	Di-n-octylphthalate	2.084	2.260	-8.4	72	-0.02
77 T	Benzo[b]fluoranthene	1.695	1.668	1.6	67	-0.03
78 T	Benzo[k]fluoranthene	1.696	1.650	2.7	65	-0.03
79 TC	Benzo[a]pyrene	1.523	1.457	4.3	65	-0.03
80 T	Indeno[1,2,3-cd]pyrene	1.645	1.372	16.6	56	-0.04
81 T	Dibenz[a,h]anthracene	1.347	1.137	15.6	57	-0.05
82 T	Benzo[g,h,i]perylene	1.334	1.129	15.4	57	-0.05

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-121505-01

Lab Name: FMETL Lab Code 13461
Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
Lab File ID: BNA11411.D Lab Sample ID: MB-121505-01
Instrument ID: GC/MS Ins Date Extracted: 12/15/2005
Matrix: (soil/water) WATER Date Analyzed: 12/19/2005
Level: (low/med) LOW Time Analyzed: 10:50

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	401-GW	5063706	BNA11413.D	12/19/2005
02	401-GW RE	5063706 RE	BNA11416.D	12/19/2005

COMMENTS:

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461
Project: UST Case No.: 50637 Location: Bl.401 SDG No.: _____

	EPA SAMPLE NO.	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	MB-121505-01	63	55	86	0
02	401-GW	56	53	45 *	1
03	401-GW RE	57	53	45 *	1

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(40-110)
S2	2FP	=	2-Fluorobiphenyl	(50-110)
S3	TPL	=	p-Terphenyl-d14	(50-135)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

Semi-Volatile MS/MSD Recovery Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

MS Lab ID: 5060603MS
MSD Lab ID: 5060603MSD
Matrix: Aqueous
Date Extracted: 11/21/05
Date Analyzed: 11/25/05

MS Sample ID: 4404GW1MS
MSD Sample ID: 4404GW1MSD
Sample File ID: BNA11366.D
MS File ID: BNA11367.D
MSD File ID: BNA11368.D

Compound Name	MS % Rec.	MSD % Rec.	% RPD	RPD Limits	Lower Control Limits	Upper Control Limits	Qualifier		
Pyridine	30.4	24.1	23.1	30.0	5	58			
N-nitroso-dimethylamine	44.5	46.5	4.4	30.0	25	110			
Aniline	46.7	35.3	27.7	30.0	4	90			
Phenol	30.1	31.0	3.0	30.0	10	115			
bis(2-Chloroethyl)ether	80.8	83.6	3.3	30.0	35	110			
2-Chlorophenol	77.4	80.4	3.8	30.0	35	105			
1,3-Dichlorobenzene	77.0	79.3	3.0	30.0	30	100			
1,4-Dichlorobenzene	76.2	78.7	3.2	30.0	30	100			
Benzyl alcohol	62.2	64.2	3.1	30.0	30	110			
1,2-Dichlorobenzene	77.1	80.4	4.2	30.0	35	100			
2-Methylphenol	64.0	64.5	0.7	30.0	40	110			
bis(2-chloroisopropyl)ether	80.8	88.6	9.2	30.0	25	130			
4-Methylphenol	57.5	59.2	2.8	30.0	30	110			
n-Nitroso-di-n-propylamine	77.3	78.7	1.8	30.0	35	130			
Hexachloroethane	75.1	77.5	3.2	30.0	30	95			
Nitrobenzene	76.1	82.5	8.0	30.0	45	110			
Isophorone	79.2	81.8	3.2	30.0	50	110			
2-Nitrophenol	78.2	83.5	6.6	30.0	40	115			
2,4-Dimethylphenol	76.4	75.9	0.7	30.0	30	110			
bis(2-Chloroethoxy)methane	74.8	78.7	5.0	30.0	45	105			
2,4-Dichlorophenol	76.9	81.0	5.2	30.0	50	105			
Benzoic Acid	30.6	26.1	15.7	30.0	0	125			
1,2,4-Trichlorobenzene	74.1	80.8	8.6	30.0	35	105			
Naphthalene	74.3	81.5	9.3	30.0	40	100			
4-Chloroaniline	56.6	46.8	19.0	30.0	15	110			
Hexachlorobutadiene	77.2	83.1	7.4	30.0	25	105			
4-Chloro-3-methylphenol	74.5	78.6	5.4	30.0	45	110			
2-Methylnaphthalene	76.9	81.9	6.3	30.0	45	105			
Hexachlorocyclopentadiene	48.6	49.7	2.1	30.0	5	67			
2,4,6-Trichlorophenol	83.7	88.9	6.0	30.0	50	115			
2,4,5-Trichlorophenol	81.4	90.6	10.7	30.0	50	110			
2-Chloronaphthalene	80.4	87.4	8.3	30.0	50	105			
2-Nitroaniline	84.2	89.6	6.3	30.0	50	115			
Dimethylphthalate	85.8	90.3	5.1	30.0	25	125			
Acenaphthylene	76.3	80.4	5.2	30.0	50	105			
2,6-Dinitrotoluene	81.7	84.9	3.8	30.0	50	115			
3-Nitroaniline	67.7	68.4	1.1	30.0	20	125			
Acenaphthene	77.6	82.0	5.6	30.0	45	110			

Semi-Volatile MS/MSD Recovery Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

MS Lab ID: 5060603MS
MSD Lab ID: 5060603MSD
Matrix: Aqueous
Date Extracted: 11/21/05
Date Analyzed: 11/25/05

MS Sample ID: 5060603MS
MSD Sample ID: 5060603MSD
Sample File ID: BNA11366.D
MS File ID: BNA11367.D
MSD File ID: BNA11368.D

Compound Name	MS % Rec.	MSD % Rec.	% RPD	RPD Limits	Lower Control Limits	Upper Control Limits	Qualifier		
2,4-Dinitrophenol	71.0	73.5	3.4	30.0	15	140			
Dibenzofuran	81.3	85.6	5.2	30.0	55	105			
4-Nitrophenol	31.4	33.7	6.9	30.0	0	125			
2,4-Dinitrotoluene	79.6	83.6	4.9	30.0	50	120			
Diethylphthalate	83.7	87.6	4.6	30.0	40	120			
Fluorene	78.8	83.0	5.3	30.0	50	110			
4-Chlorophenyl-phenylether	79.7	83.9	5.1	30.0	50	110			
4-Nitroaniline	70.5	72.6	2.9	30.0	35	120			
4,6-Dinitro-2-methylphenol	69.3	76.1	9.4	30.0	40	130			
n-Nitrosodiphenylamine	71.9	76.9	6.8	30.0	50	110			
Azobenzene	73.4	78.8	7.0	30.0	58	102			
4-Bromophenyl-phenylether	73.9	81.0	9.2	30.0	50	115			
Hexachlorobenzene	70.6	74.5	5.4	30.0	50	110			
Pentachlorophenol	85.4	89.3	4.5	30.0	40	115			
Phenanthrene	72.2	77.8	7.4	30.0	50	115			
Anthracene	73.6	79.0	7.1	30.0	55	110			
Di-n-butylphthalate	79.8	85.6	7.0	30.0	55	115			
Fluoranthene	72.8	78.4	7.4	30.0	55	115			
Benzidine	11.8	3.0	120.1	30.0	5	100	**		^
Pyrene	86.4	93.0	7.4	30.0	50	130			
Butylbenzylphthalate	87.1	93.8	7.4	30.0	45	115			
Benzo[a]anthracene	80.2	86.8	8.0	30.0	55	110			
3,3'-Dichlorobenzidine	63.9	63.9	0.0	30.0	20	110			
Chrysene	86.8	93.5	7.5	30.0	55	110			
bis(2-Ethylhexyl)phthalate	86.6	91.7	5.7	30.0	40	125			
Di-n-octylphthalate	65.9	69.5	5.2	30.0	35	135			
Benzo[b]fluoranthene	60.7	65.1	7.1	30.0	45	120			
Benzo[k]fluoranthene	59.9	63.6	5.9	30.0	45	125			
Benzo[a]pyrene	59.1	64.1	8.1	30.0	55	110			
Indeno[1,2,3-cd]pyrene	55.1	59.1	7.1	30.0	45	125			
Dibenz[a,h]anthracene	53.0	56.2	5.9	30.0	40	125			
Benzo[g,h,i]perylene	55.5	59.1	6.3	30.0	40	125			

Page 2 of 2

Qualifiers :

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% Recovery is Outside QC Limits
% RPD is Outside QC Limits

000055

Semi-Volatile LCS Recovery Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Lab ID: LCS-121505-01

Sample ID: LCS-121505-01

Matrix: Aqueous

Lab File ID: BNA11412.D

Initial Vol.: 1000 mL

Date Extracted: 12/15/2005

Extract Vol.: 1 mL

Date Analyzed: 12/19/2005

Injection Vol.: 1 uL

CAS No.	Compound Name	Calculated % Recoveries	Lower Control Limits	Upper Control Limits	Qualifiers
110-86-1	Pyridine	48.6	5	58	
62-75-9	N-nitroso-dimethylamine	38.2	25	110	
62-53-3	Aniline	49.7	4	90	
108-95-2	Phenol	13.7	10	115	
111-44-4	bis(2-Chloroethyl)ether	90.9	35	110	
95-57-8	2-Chlorophenol	66.3	35	105	
541-73-1	1,3-Dichlorobenzene	85.7	30	100	
106-46-7	1,4-Dichlorobenzene	85.0	30	100	
100-51-6	Benzyl alcohol	61.8	30	110	
95-50-1	1,2-Dichlorobenzene	87.7	35	100	
95-48-7	2-Methylphenol	49.1	40	110	
39638-32-9	bis(2-chloroisopropyl)ether	96.0	25	130	
106-44-5	4-Methylphenol	39.1	30	110	
621-64-7	n-Nitroso-di-n-propylamine	90.1	35	130	
67-72-1	Hexachloroethane	84.8	30	95	
98-95-3	Nitrobenzene	88.1	45	110	
78-59-1	Isophorone	89.1	50	110	
88-75-5	2-Nitrophenol	78.3	40	115	
105-67-9	2,4-Dimethylphenol	69.7	30	110	
111-91-1	bis(2-Chloroethoxy)methane	85.7	45	105	
120-83-2	2,4-Dichlorophenol	78.4	50	105	
65-85-0	Benzoic Acid	0.0	0	125	
120-82-1	1,2,4-Trichlorobenzene	85.1	35	105	
91-20-3	Naphthalene	85.1	40	100	
106-47-8	4-Chloroaniline	63.1	15	110	
87-68-3	Hexachlorobutadiene	90.0	25	105	
59-50-7	4-Chloro-3-methylphenol	68.1	45	110	
91-57-6	2-Methylnaphthalene	87.2	45	105	
77-47-4	Hexachlorocyclopentadiene	50.8	5	67	
88-06-2	2,4,6-Trichlorophenol	90.7	50	115	
95-95-4	2,4,5-Trichlorophenol	87.4	50	110	
91-58-7	2-Chloronaphthalene	92.6	50	105	
88-74-4	2-Nitroaniline	90.0	50	115	
131-11-3	Dimethylphthalate	97.5	25	125	
208-96-8	Acenaphthylene	86.5	50	105	
606-20-2	2,6-Dinitrotoluene	90.2	50	115	
99-09-2	3-Nitroaniline	74.1	20	125	
83-32-9	Acenaphthene	88.4	45	110	

Semi-Volatile LCS Recovery Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification #13461

Lab ID: LCS-121505-01

Sample ID: LCS-121505-01

Matrix: Aqueous

Initial Vol.: 1000 mL

Lab File ID: BNA11412.D

Extract Vol.: 1 mL

Date Extracted: 12/15/2005

Injection Vol.: 1 uL

Date Analyzed: 12/19/2005

CAS No.	Compound Name	Calculated % Recoveries	Lower Control Limits	Upper Control Limits	Qualifiers
51-28-5	2,4-Dinitrophenol	0.0	15	140	**
132-64-9	Dibenzofuran	90.6	55	105	
100-02-7	4-Nitrophenol	20.4	0	125	
121-14-2	2,4-Dinitrotoluene	81.8	50	120	
84-66-2	Diethylphthalate	94.6	40	120	
86-73-7	Fluorene	88.9	50	110	
7005-72-3	4-Chlorophenyl-phenylether	92.8	50	110	
100-01-6	4-Nitroaniline	77.7	35	120	
534-52-1	4,6-Dinitro-2-methylphenol	53.2	40	130	
86-30-6	n-Nitrosodiphenylamine	82.4	50	110	
103-33-3	Azobenzene	84.3	58	102	
101-55-3	4-Bromophenyl-phenylether	86.0	50	115	
118-74-1	Hexachlorobenzene	79.0	50	110	
87-86-5	Pentachlorophenol	73.8	40	115	
85-01-8	Phenanthrene	81.8	50	115	
120-12-7	Anthracene	82.6	55	110	
84-74-2	Di-n-butylphthalate	86.6	55	115	
206-44-0	Fluoranthene	78.0	55	115	
92-87-5	Benzidine	29.5	5	100	
129-00-0	Pyrene	106.5	50	130	
85-68-7	Butylbenzylphthalate	104.2	45	115	
56-55-3	Benzo[a]anthracene	88.1	55	110	
91-94-1	3,3'-Dichlorobenzidine	73.2	20	110	
218-01-9	Chrysene	92.2	55	110	
117-81-7	bis(2-Ethylhexyl)phthalate	97.7	40	125	
117-84-0	Di-n-octylphthalate	78.6	35	135	
205-99-2	Benzo[b]fluoranthene	68.3	45	120	
207-08-9	Benzo[k]fluoranthene	66.7	45	125	
50-32-8	Benzo[a]pyrene	64.6	55	110	
193-39-5	Indeno[1,2,3-cd]pyrene	54.9	45	125	
53-70-3	Dibenz[a,h]anthracene	54.1	40	125	
191-24-2	Benzo[g,h,i]perylene	57.3	40	125	

Page 2 of 2

Qualifiers :

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% Recovery is Outside QC Limits

Note:

D = Detected.

000057

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461
 Project: UST Case No.: 50637 Location: BL401 SDG No.:
 Lab File ID (Standard): BNA11410.D Date Analyzed: 12/19/2005
 Instrument ID: GC_BNA_2 Time Analyzed: 10:03

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	596830	10.38	2032109	13.30	1280812	17.52
	UPPER LIMIT	1193660	10.88	4064218	13.80	2561624	18.02
	LOWER LIMIT	298415	9.88	1016055	12.80	640406	17.02
	EPA SAMPLE NO.						
01	MB-121505-01	647477	10.37	2433028	13.30	1470401	17.52
02	401-GW	594871	10.37	2185840	13.30	1315672	17.51
03	401-GW RE	602247	10.37	2250170	13.30	1365056	17.51

IS1 DCB = 1,4-Dichlorobenzene-d4
 IS2 NAP = Naphthalene-d8
 IS3 ANE = Acenaphthene-d10
 IS4 PNE = Phenanthrene-d10
 IS5 CYS = Chrysene-d12
 IS6 PRL = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461
 Project: UST Case No.: 50637 Location: Bl.401 SDG No.:
 Lab File ID (Standard): BNA11410.D Date Analyzed: 12/19/05
 Instrument ID: GC_BNA_2 Time Analyzed: 10:03

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2048440	21.10	1607976	27.52	840494	30.72
	UPPER LIMIT	4096880	20.60	3215952	27.02	1680988	30.22
	LOWER LIMIT	1024220	21.60	803988	28.02	420247	31.22
	EPA SAMPLE NO.						
01	MB-121505-01	2573389	21.10	1905596	27.51	1298738	30.72
02	401-GW	2321711	21.10	1627896	27.50	1174942	30.71
03	401-GW RE	2412245	21.10	1731530	27.51	1268490	30.71

IS1 DCB = 1,4-Dichlorobenzene-d4
 IS2 NAP = Naphthalene-d8
 IS3 ANE = Acenaphthene-d10
 IS4 PNE = Phenanthrene-d10
 IS5 CYS = Chrysene-d12
 IS6 PRL = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
 AREA LOWER LIMIT = - 50% of internal standard area
 RT UPPER LIMIT = +0.50 minutes of internal standard RT
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.

* Values outside of contract required QC limits

Data File : C:\HPCHEM\1\DATA\051219\BNA11411.D Vial: 1
 Acq On : 19 Dec 2005 10:50 am Operator: BPatel
 Sample : MB-121505-01 Inst : GC/MS Ins
 Misc : MB-121505-01 Multiplr: 1.00
 MS Integration Params: ODD.P GC Integration Params: rteint2.p
 Quant Time: Dec 19 11:36 2005 Quant Results File: M262593.RES

Quant Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration
 DataAcq Meth : M262593

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.37	152	647477	40.00	ug/L	-0.02
19) Naphthalene-d8	13.30	136	2433028	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.52	164	1470401	40.00	ug/L	-0.02
54) Phenanthrene-d10	21.10	188	2573389	40.00	ug/L	-0.03
66) Chrysene-d12	27.51	240	1905596	40.00	ug/L	-0.04
75) Perylene-d12	30.72	264	1298738	40.00	ug/L	-0.03

System Monitoring Compounds

4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount	100.000	Range	20 - 110	Recovery	=	0.00%#
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount	100.000	Range	10 - 115	Recovery	=	0.00%#
20) Nitrobenzene-d5	11.63	82	1124426	31.70	ug/L	-0.03
Spiked Amount	50.000	Range	40 - 110	Recovery	=	63.40%
38) 2-Fluorobiphenyl	15.92	172	1316551	27.49	ug/L	-0.02
Spiked Amount	50.000	Range	50 - 110	Recovery	=	54.98%
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount	100.000	Range	40 - 125	Recovery	=	0.00%#
69) p-Terphenyl-d14	25.03	244	1720749	42.93	ug/L	-0.02
Spiked Amount	50.000	Range	50 - 135	Recovery	=	85.86%

Target Compounds

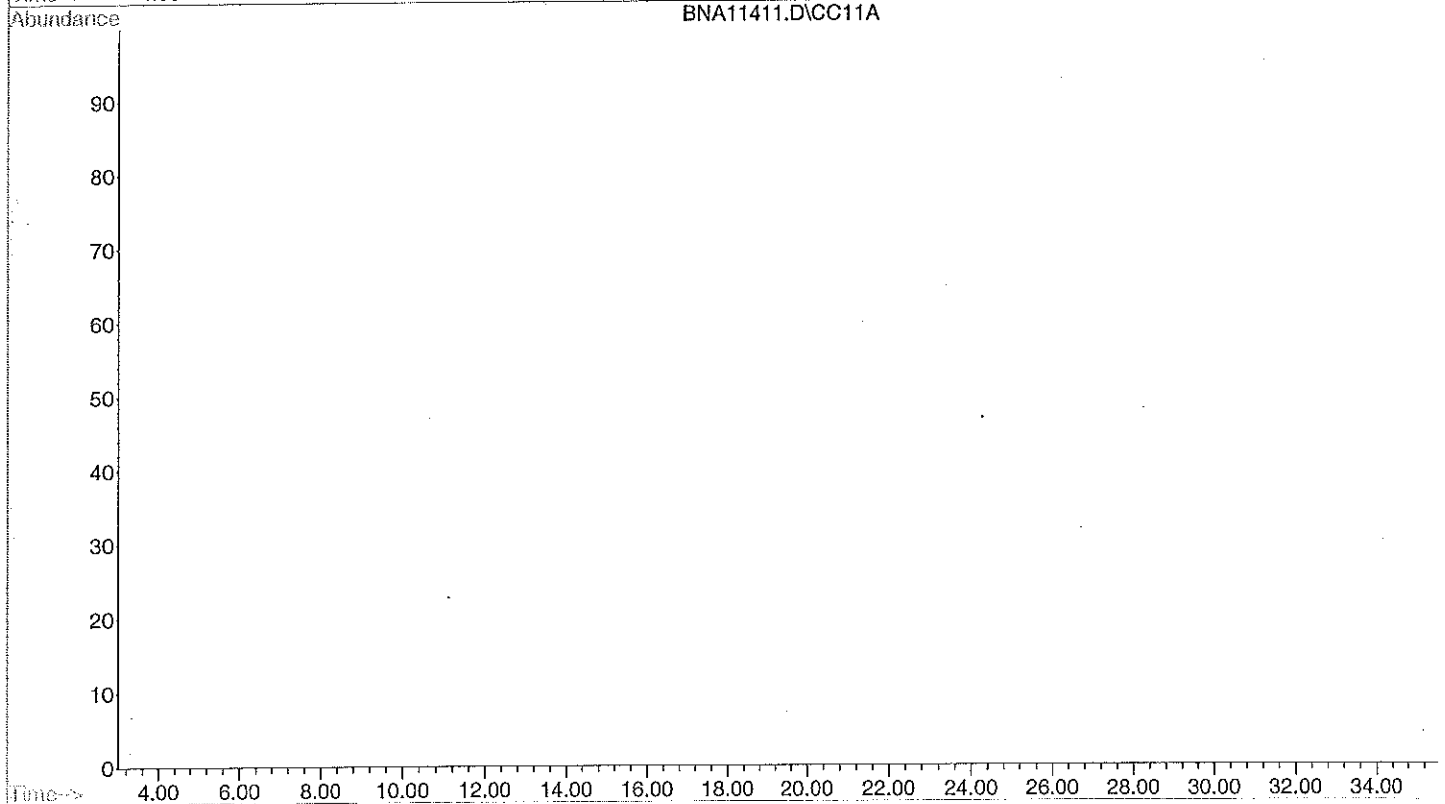
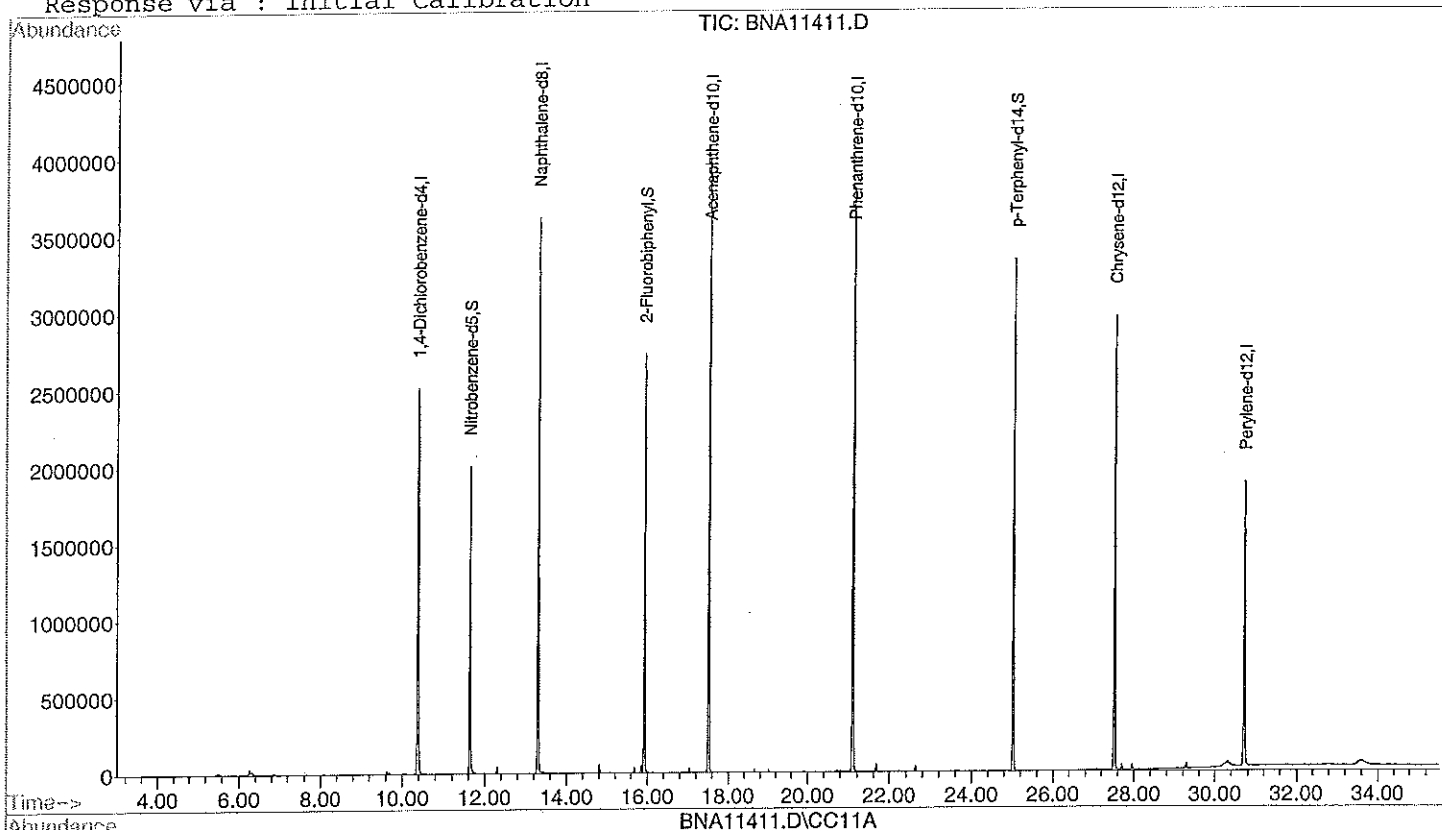
Qvalue

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11411.D
Acq On : 19 Dec 2005 10:50 am
Sample : MB-121505-01
Misc : MB-121505-01
MS Integration Params: ODD.P
Quant Time: Dec 19 11:36 2005

Vial: 1
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262593.RES

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
Title : BNA Calibration
Last Update : Thu Nov 03 13:40:19 2005
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\051219\BNA11413.D Vial: 3
 Acq On : 19 Dec 2005 12:23 pm Operator: BPatel
 Sample : 5063706 Inst : GC/MS Ins
 Misc : 401-GW Multiplr: 1.00
 MS Integration Params: ODD.P GC Integration Params: rteint2.p
 Quant Time: Dec 19 15:31 2005 Quant Results File: M262593.RES

Quant Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration
 DataAcq Meth : M262593

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.37	152	594871	40.00	ug/L	-0.02
19) Naphthalene-d8	13.30	136	2185840	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.51	164	1315672	40.00	ug/L	-0.03
54) Phenanthrene-d10	21.10	188	2321711	40.00	ug/L	-0.03
66) Chrysene-d12	27.50	240	1627896	40.00	ug/L	-0.04
75) Perylene-d12	30.71	264	1174942	40.00	ug/L	-0.03

System Monitoring Compounds

4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount	100.000	Range	20 - 110	Recovery	=	0.00%#
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount	100.000	Range	10 - 115	Recovery	=	0.00%#
20) Nitrobenzene-d5	11.63	82	896023	28.12	ug/L	-0.03
Spiked Amount	50.000	Range	40 - 110	Recovery	=	56.24%
38) 2-Fluorobiphenyl	15.92	172	1133020	26.44	ug/L	-0.03
Spiked Amount	50.000	Range	50 - 110	Recovery	=	52.88%
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount	100.000	Range	40 - 125	Recovery	=	0.00%#
69) p-Terphenyl-d14	25.02	244	767995	22.43	ug/L	-0.03
Spiked Amount	50.000	Range	50 - 135	Recovery	=	44.86%#

Target Compounds

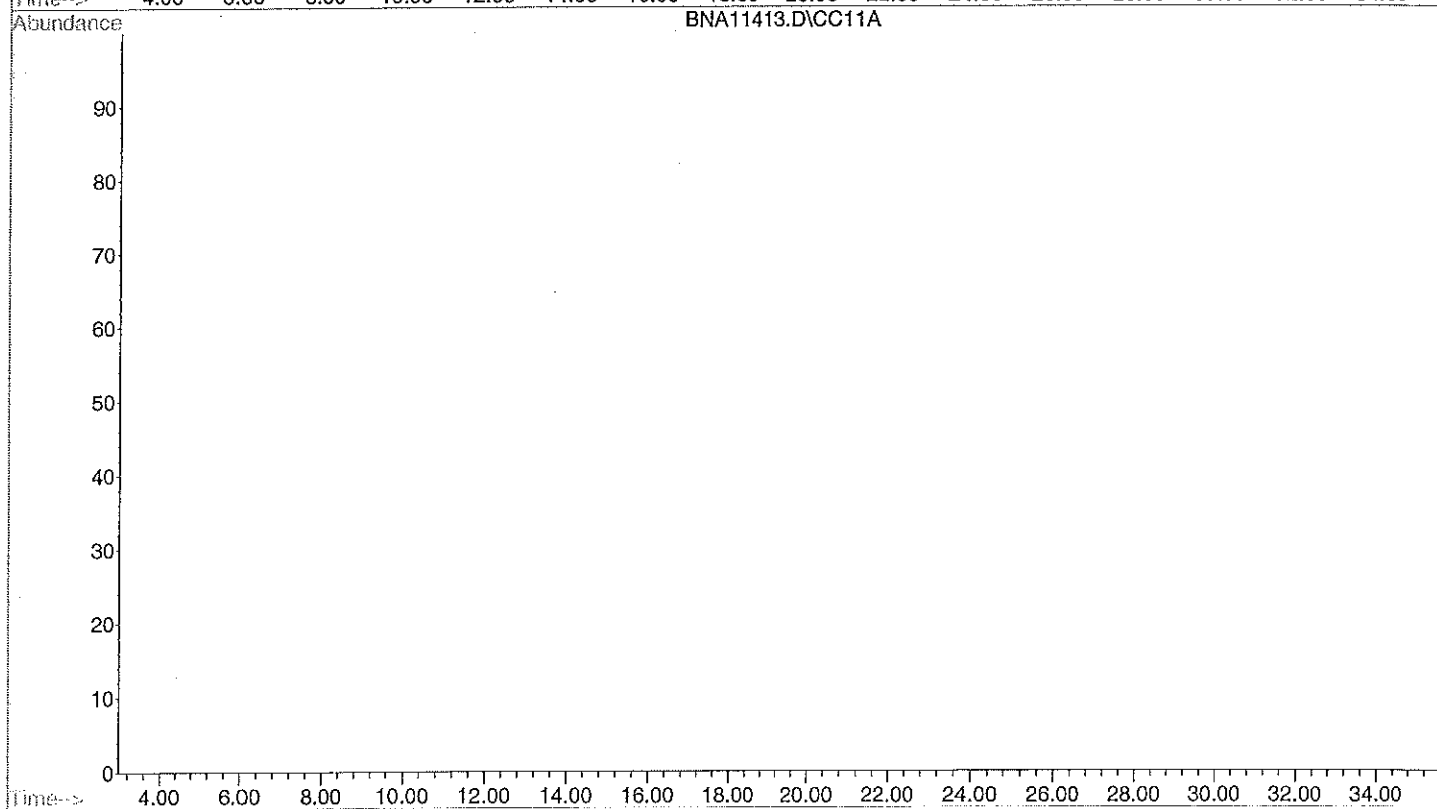
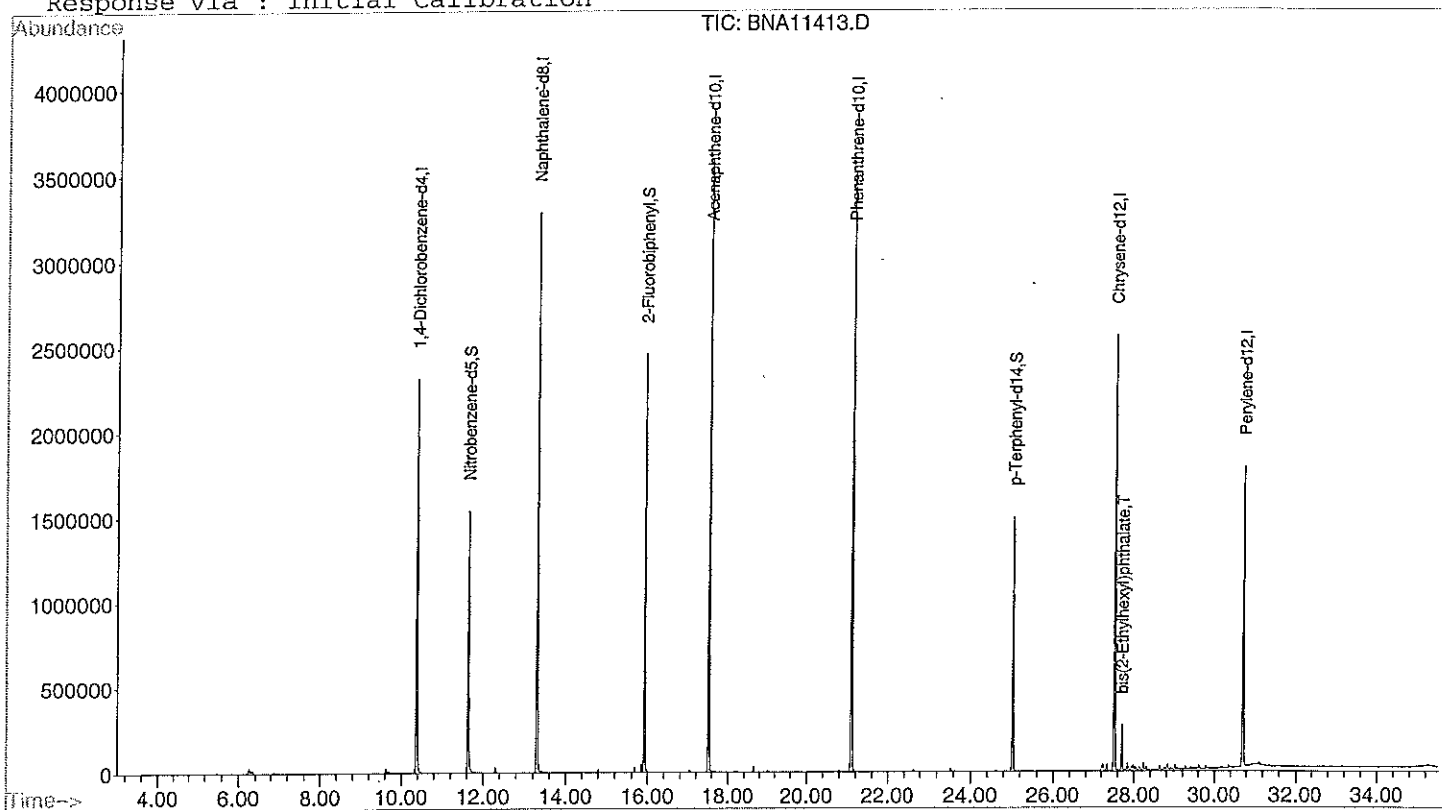
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
74) bis(2-Ethylhexyl)phthalate	27.70	149	122488	3.94	ug/L	96

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11413.D
Acq On : 19 Dec 2005 12:23 pm
Sample : 5063706
Misc : 401-GW
MS Integration Params: ODD.P
Quant Time: Dec 19 15:31 2005

Vial: 3
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262593.RES

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
Title : BNA Calibration
Last Update : Thu Nov 03 13:40:19 2005
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\051219\BNA11416.D Vial: 3
 Acq On : 19 Dec 2005 2:47 pm Operator: BPatel
 Sample : 5063706 RE Inst : GC/MS Ins
 Misc : 401-GW Re Multiplr: 1.00
 MS Integration Params: ODD.P GC Integration Params: rteint2.p
 Quant Time: Dec 19 15:35 2005 Quant Results File: M262593.RES

Quant Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration
 DataAcq Meth : M262593

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.37	152	602247	40.00	ug/L	-0.02
19) Naphthalene-d8	13.30	136	2250170	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.51	164	1365056	40.00	ug/L	-0.02
54) Phenanthrene-d10	21.10	188	2412245	40.00	ug/L	-0.02
66) Chrysene-d12	27.51	240	1731530	40.00	ug/L	-0.04
75) Perylene-d12	30.71	264	1268490	40.00	ug/L	-0.03

System Monitoring Compounds

4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount	100.000	Range 20 - 110	Recovery	=	0.00%#	
6) Phenol-d6	0.00	99	0	0.00	ug/L	
Spiked Amount	100.000	Range 10 - 115	Recovery	=	0:00%#	
20) Nitrobenzene-d5	11.63	82	926827	28.25	ug/L	-0.03
Spiked Amount	50.000	Range 40 - 110	Recovery	=	56.50%	
38) 2-Fluorobiphenyl	15.92	172	1172412	26.37	ug/L	-0.02
Spiked Amount	50.000	Range 50 - 110	Recovery	=	52.74%	
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount	100.000	Range 40 - 125	Recovery	=	0.00%#	
69) p-Terphenyl-d14	25.02	244	811385	22.28	ug/L	-0.02
Spiked Amount	50.000	Range 50 - 135	Recovery	=	44.56%#	

Target Compounds

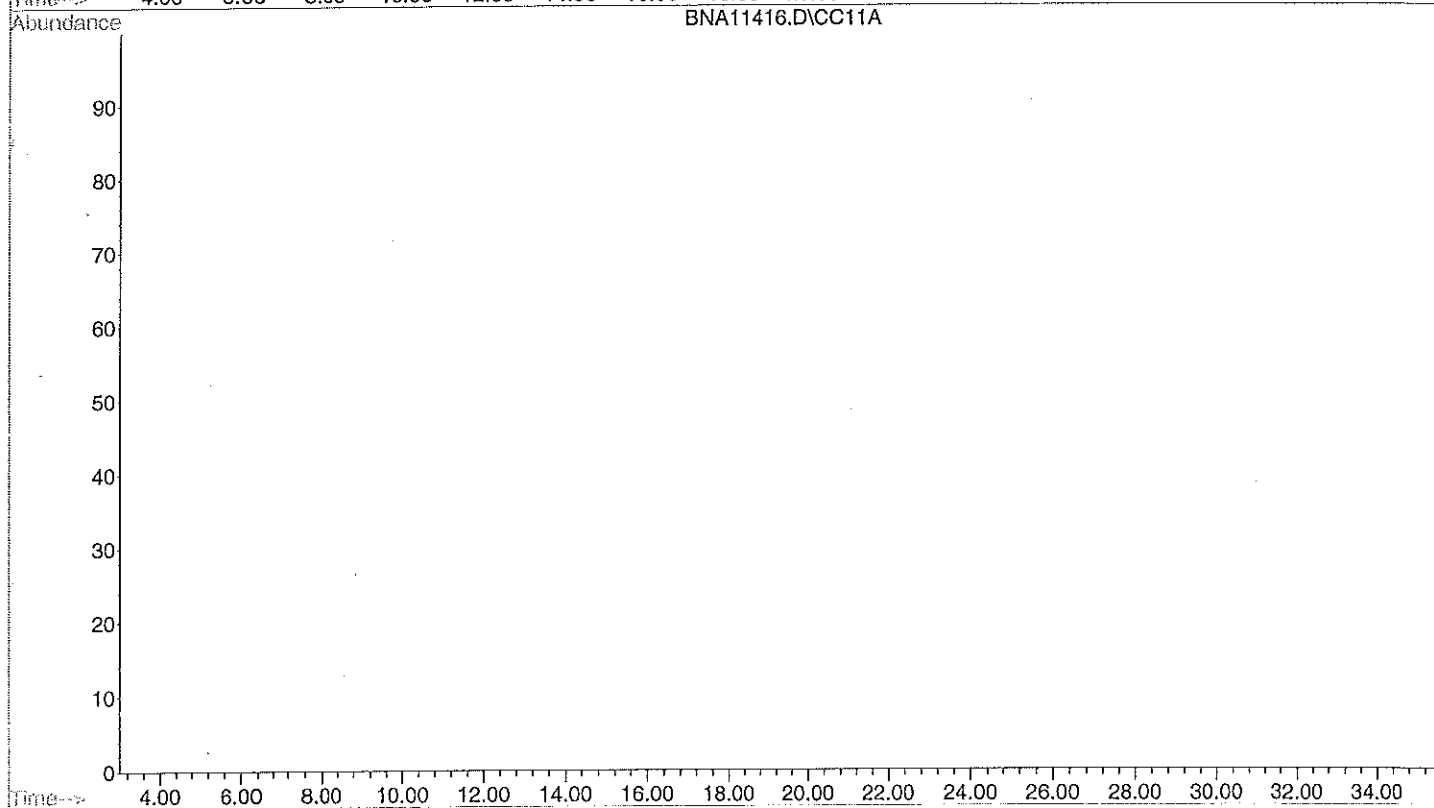
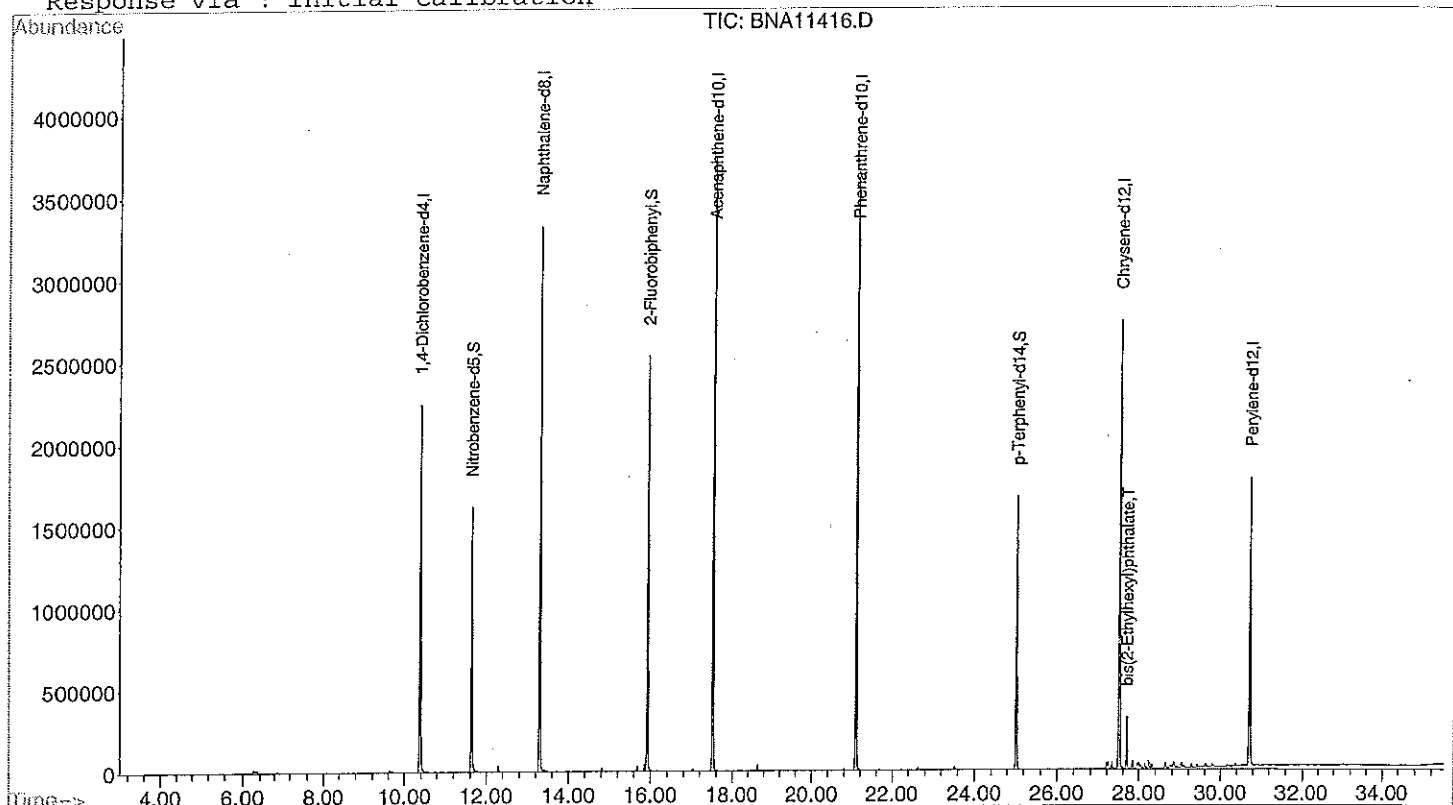
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
74) bis(2-Ethylhexyl)phthalate	27.69	149	140047	4.23	ug/L	96

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11416.D
 Acq On : 19 Dec 2005 2:47 pm
 Sample : 5063706 RE
 Misc : 401-GW Re
 MS Integration Params: ODD.P
 Quant Time: Dec 19 15:35 2005

Vial: 3
 Operator: BPatel
 Inst : GC/MS Ins
 Multiplr: 1.00
 GC Integration Params: rteint2.p
 Quant Results File: M262593.RES

Method : C:\HPCHEM\1\METHODS\M262593.M (RTE Integrator)
 Title : BNA Calibration
 Last Update : Thu Nov 03 13:40:19 2005
 Response via : Initial Calibration



TPHC

Report of Analysis
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client : U.S. Army
 DPW, SELFM-PW-EV
 Bldg. 173
 Ft. Monmouth, NJ 07703

Project # : 50637
Location : Bldg.401
UST Reg. # :

Analysis : OQA-QAM-025
Matrix : Soil
Inst. ID. : GC TPHC INST. #1
Column Type : RTX-5, 0.32mm ID, 30M
Injection Volume : 1uL

Date Received : 12-Dec-05
Date Extracted : 15-Dec-05
Extraction Method : Shake
Analysis Complete : 16-Dec-05
Analyst : B.Patel

Lab ID	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	RL	TPHC Result (mg/kg)
5063701	401-A	1.00	15.14	81.90	78	403	ND
5063702	401-B	1.00	15.31	93.30	67	350	ND
5063703	401-C	1.00	15.08	79.25	81	418	ND
5063704	401-D	1.00	15.09	80.28	79	413	ND
METHOD BLANK	MB-121505-01	1.00	15.00	100.00	64	333	ND

ND = Not Detected

MDL = Method Detection Limit

RL = Reporting Limits

Note : The TPHC result between the MDL and RL are considered an estimated value

000067

Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005

Calibration Files

5 =T018084.D 10 =T018086.D 20 =T018087.D
 50 =T018085.D 100 =T018083.D

Compound		5	10	20	50	100	Avg	%RSD
1) T	C8	2.837	2.664	2.724	2.668	2.626	2.704 E4	3.04
2) T	C10	2.862	2.806	2.878	2.839	2.794	2.836 E4	1.26
3) T	C12	2.861	2.790	2.853	2.839	2.805	2.829 E4	1.09
4) T	C14	2.865	2.809	2.889	2.875	2.845	2.857 E4	1.08
5) T	C16	2.927	2.880	2.956	2.945	2.915	2.925 E4	1.00
6) T	C18	2.795	2.759	2.843	2.847	2.828	2.814 E4	1.31
7) T	C20	2.897	2.846	2.928	2.922	2.892	2.897 E4	1.12
8) T	C22	2.992	2.936	3.009	3.003	2.970	2.982 E4	1.00
9) T	C24	3.026	2.980	3.055	3.044	3.006	3.022 E4	1.00
10) T	C26	3.216	3.070	3.115	3.098	3.050	3.110 E4	2.08
11) T	C28	3.078	3.037	3.095	3.106	3.066	3.076 E4	0.88
12) T	C30	3.118	3.072	3.150	3.175	3.135	3.130 E4	1.23
13) T	C32	3.094	3.044	3.113	3.144	3.116	3.102 E4	1.20
14) T	C34	3.248	3.097	3.149	3.147	3.107	3.150 E4	1.90
15) T	C36	3.976	3.287	3.224	3.183	3.150	3.364 E4	10.28
16) T	C38	3.069	3.060	3.095	3.119	3.056	3.080 E4	0.87
17) T	C40	2.977	2.957	3.041	3.094	2.970	3.008 E4	1.93
18) T	C42	2.826	2.803	2.869	2.901	2.755	2.831 E4	2.01
19) T	Pristane	2.969	2.903	2.962	2.931	2.883	2.930 E4	1.26
20) T	Phytane	3.126	2.988	3.046	3.008	2.956	3.025 E4	2.16
21) T	TPHC (Manual Integrat	4.144	3.652	3.499	3.390	3.275	3.592 E4	9.42
22) H	TPHC (Total)	3.259	3.047	3.076	3.045	2.981	3.082 E4	3.42
23) S	Chlorobenzene (SURR.)	1.947	2.014	2.104	2.103	2.064	2.046 E4	3.26
24) S	O-Terphenyl (SURR.)	3.327	3.260	3.347	3.333	3.289	3.311 E4	1.08

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051215\T018160.D
Acq On : 15 Dec 2005 1:58 pm
Sample : Tstd050
Misc : TP121505.01
IntFile : EVENTSBP.E

Vial: 1
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
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 T	C8	27.037	25.927 E3	4.1	97	-0.01
2 T	C10	28.359	27.152 E3	4.3	96	0.00
3 T	C12	28.295	27.028 E3	4.5	95	0.00
4 T	C14	28.566	27.211 E3	4.7	95	0.00
5 T	C16	29.246	27.815 E3	4.9	94	0.00
6 T	C18	28.143	26.917 E3	4.4	95	0.00
7 T	C20	28.970	27.624 E3	4.6	95	0.00
8 T	C22	29.821	28.366 E3	4.9	94	0.00
9 T	C24	30.220	28.634 E3	5.2	94	0.00
10 T	C26	31.097	29.048 E3	6.6	94	0.00
11 T	C28	30.765	29.083 E3	5.5	94	0.00
12 T	C30	31.300	29.544 E3	5.6	93	0.00
13 T	C32	31.022	29.277 E3	5.6	93	0.00
14 T	C34	31.496	28.985 E3	8.0	92	0.00
15 T	C36	33.639	29.069 E3	13.6	91	0.00
16 T	C38	30.799	27.638 E3	10.3	89	0.00
17 T	C40	30.077	25.877 E3	14.0	84	-0.02
18 T	C42	28.308	22.319 E3	21.2	77	-0.03
19 T	Pristane	29.297	28.072 E3	4.2	96	0.00
20 T	Phytane	30.249	28.794 E3	4.8	96	0.00
21 T	TPHC (Manual Integration)	35.921	31.618 E3	12.0	93	0.00
22 H	TPHC (Total)	30.816	28.083 E3	8.9	92	0.00
23 S	Chlorobenzene (SURR.)	20.465	20.043 E3	2.1	95	-0.01
24 S	O-Terphenyl (SURR.)	33.111	32.112 E3	3.0	96	0.00

Data File : C:\HPCHEM\1\DATA\051215\T018160.D Vial: 1
 Acq On : 15 Dec 2005 1:58 pm Operator: BPatel
 Sample : Tstd050 Inst : GC/MS Ins
 Misc : TP121505.01 Multiplr: 1.00
 IntFile : EVENTSBP.E
 Quant Time: Dec 15 14:48 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005
 Response via : Initial Calibration
 DataAcq Meth : TPHC003.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.71	1002161	48.353 mg/L
Spiked Amount 10.000		Recovery =	483.53%
24) S O-Terphenyl (SURR.)	13.00	1605578	48.611 mg/L
Spiked Amount 10.000		Recovery =	486.11%
Target Compounds			
1) T C8	4.75	1296345	47.946 mg/L
2) T C10	7.73	1357621	47.873 mg/L
3) T C12	9.36	1351415	47.762 mg/L
4) T C14	10.54	1360532	47.628 mg/L
5) T C16	11.54	1390755	47.554 mg/L
6) T C18	12.00	1345864	47.823 mg/L
7) T C20	12.44	1381178	47.676 mg/L
8) T C22	13.25	1418315	47.560 mg/L
9) T C24	14.00	1431717	47.377 mg/L
10) T C26	14.69	1452413	46.705 mg/L
11) T C28	15.32	1454151	47.267 mg/L
12) T C30	15.95	1477222	47.196 mg/L
13) T C32	16.67	1463832	47.187 mg/L
14) T C34	17.58	1449266	46.014 mg/L
15) T C36	18.80	1453427	43.206 mg/L
16) T C38	20.48	1381889	44.868 mg/L
17) T C40	22.87	1293865	43.019 mg/L
18) T C42	26.29	1115946	39.421 mg/L
19) T Pristane	12.03	1403600	47.909 mg/L
20) T Phytane	12.49	1439712	47.595 mg/L
21) T TPHC (Manual Integration)	13.00	31618200	880.215 mg/L m
22) H TPHC (Total)	12.00	28083438	911.332 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018160.D

Vial: 1

Acq On : 15 Dec 2005 1:58 pm

Operator: BPatel

Sample : Tstd050

Inst : GC/MS Ins

Misc : TP121505.01

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 15 14:48 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

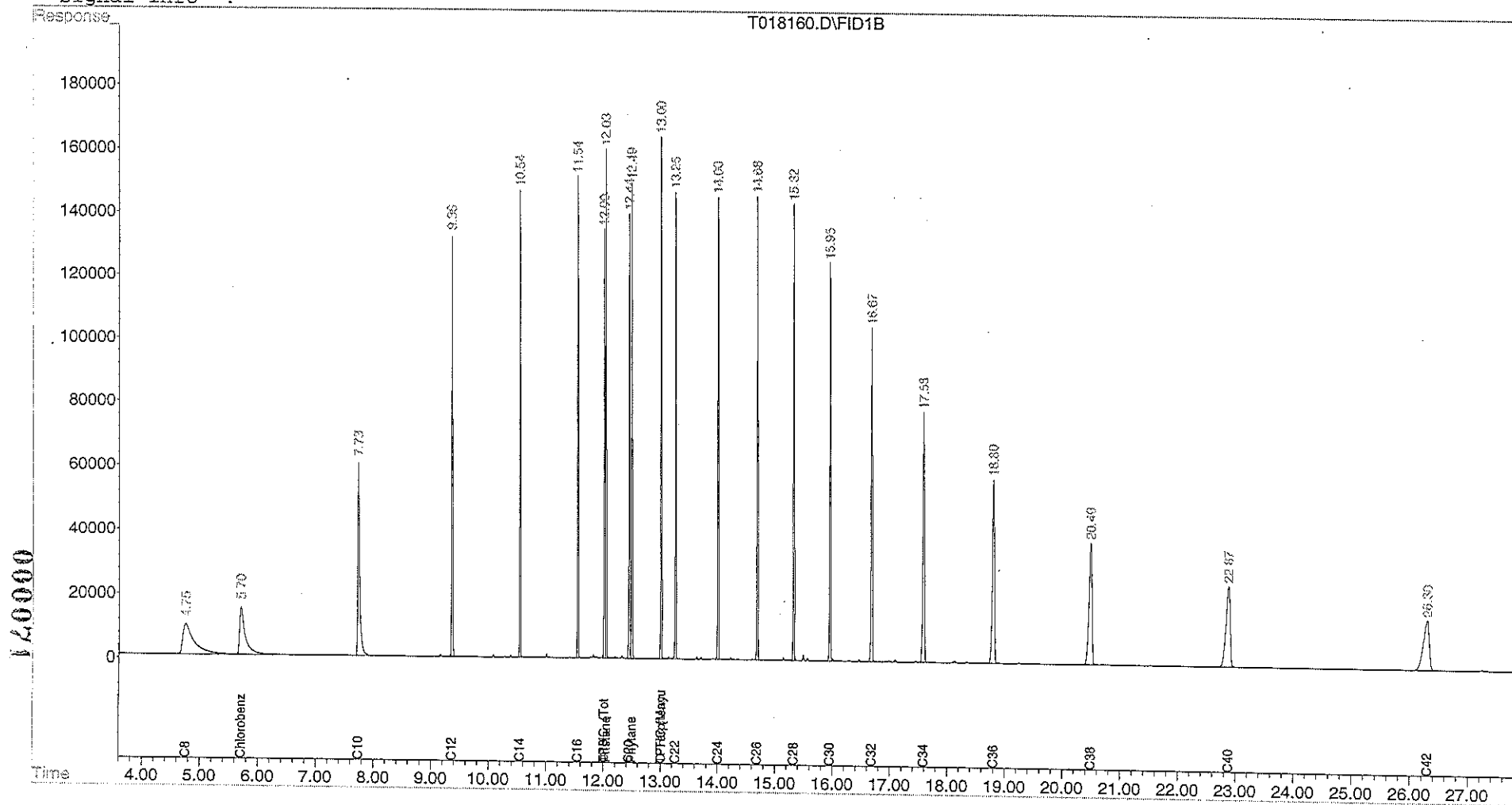
Response via : Multiple Level Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051215\T018171.D
Acq On : 15 Dec 2005 8:42 pm
Sample : Tstd050
Misc : TP121505.01
IntFile : EVENTSBP.E

Vial: 12
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
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 T	C8	27.037	26.503 E3	2.0	99	0.00
2 T	C10	28.359	28.269 E3	0.3	100	0.00
3 T	C12	28.295	28.380 E3	-0.3	100	0.00
4 T	C14	28.566	28.682 E3	-0.4	100	0.00
5 T	C16	29.246	29.420 E3	-0.6	100	0.00
6 T	C18	28.143	28.417 E3	-1.0	100	0.00
7 T	C20	28.970	29.234 E3	-0.9	100	0.00
8 T	C22	29.821	30.108 E3	-1.0	100	0.00
9 T	C24	30.220	30.537 E3	-1.0	100	0.00
10 T	C26	31.097	30.970 E3	0.4	100	0.00
11 T	C28	30.765	30.992 E3	-0.7	100	0.00
12 T	C30	31.300	31.406 E3	-0.3	99	0.00
13 T	C32	31.022	31.051 E3	-0.1	99	0.00
14 T	C34	31.496	30.972 E3	1.7	98	0.00
15 T	C36	33.639	31.407 E3	6.6	99	0.00
16 T	C38	30.799	30.479 E3	1.0	98	0.00
17 T	C40	30.077	29.631 E3	1.5	96	0.00
18 T	C42	28.308	27.163 E3	4.0	94	-0.02
19 T	Pristane	29.297	29.604 E3	-1.0	101	0.00
20 T	Phytane	30.249	30.343 E3	-0.3	101	0.00
21 T	TPHC (Manual Integration)	35.921	33.210 E3	7.5	98	0.00
22 H	TPHC (Total)	30.816	30.023 E3	2.6	99	0.00
23 S	Chlorobenzene (SURR.)	20.465	20.739 E3	-1.3	99	0.00
24 S	O-Terphenyl (SURR.)	33.111	33.708 E3	-1.8	101	0.00

Data File : C:\HPCHEM\1\DATA\051215\T018171.D

Vial: 12

Acq On : 15 Dec 2005 8:42 pm

Operator: BPatel

Sample : Tstd050

Inst : GC/MS Ins

Misc : TP121505.01

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 9:23 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.71	1036968	50.034 mg/L
Spiked Amount 10.000		Recovery =	500.34%
24) S O-Terphenyl (SURR.)	13.00	1685407	51.037 mg/L
Spiked Amount 10.000		Recovery =	510.37%
Target Compounds			
1) T C8	4.76	1325166	49.012 mg/L
2) T C10	7.74	1413438	49.841 mg/L
3) T C12	9.36	1419025	50.151 mg/L
4) T C14	10.54	1434111	50.204 mg/L
5) T C16	11.55	1471013	50.298 mg/L
6) T C18	12.01	1420858	50.487 mg/L
7) T C20	12.44	1461701	50.455 mg/L
8) T C22	13.26	1505395	50.480 mg/L
9) T C24	14.00	1526867	50.526 mg/L
10) T C26	14.69	1548522	49.796 mg/L
11) T C28	15.32	1549588	50.369 mg/L
12) T C30	15.95	1570296	50.169 mg/L
13) T C32	16.68	1552546	50.046 mg/L
14) T C34	17.59	1548583	49.168 mg/L
15) T C36	18.80	1570374	46.683 mg/L
16) T C38	20.49	1523940	49.481 mg/L
17) T C40	22.89	1481571	49.260 mg/L
18) T C42	26.31	1358149	47.977 mg/L
19) T Pristane	12.04	1480179	50.523 mg/L
20) T Phytane	12.49	1517148	50.155 mg/L
21) T TPHC (Manual Integration)	13.00	33209878	924.525 mg/L m
22) H TPHC (Total)	12.00	30022894	974.269 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018171.D

Vial: 12

Acq On : 15 Dec 2005 8:42 pm

Operator: BPatel

Sample : Tstd050

Inst : GC/MS Ins

Misc : TP121505.01

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 9:23 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

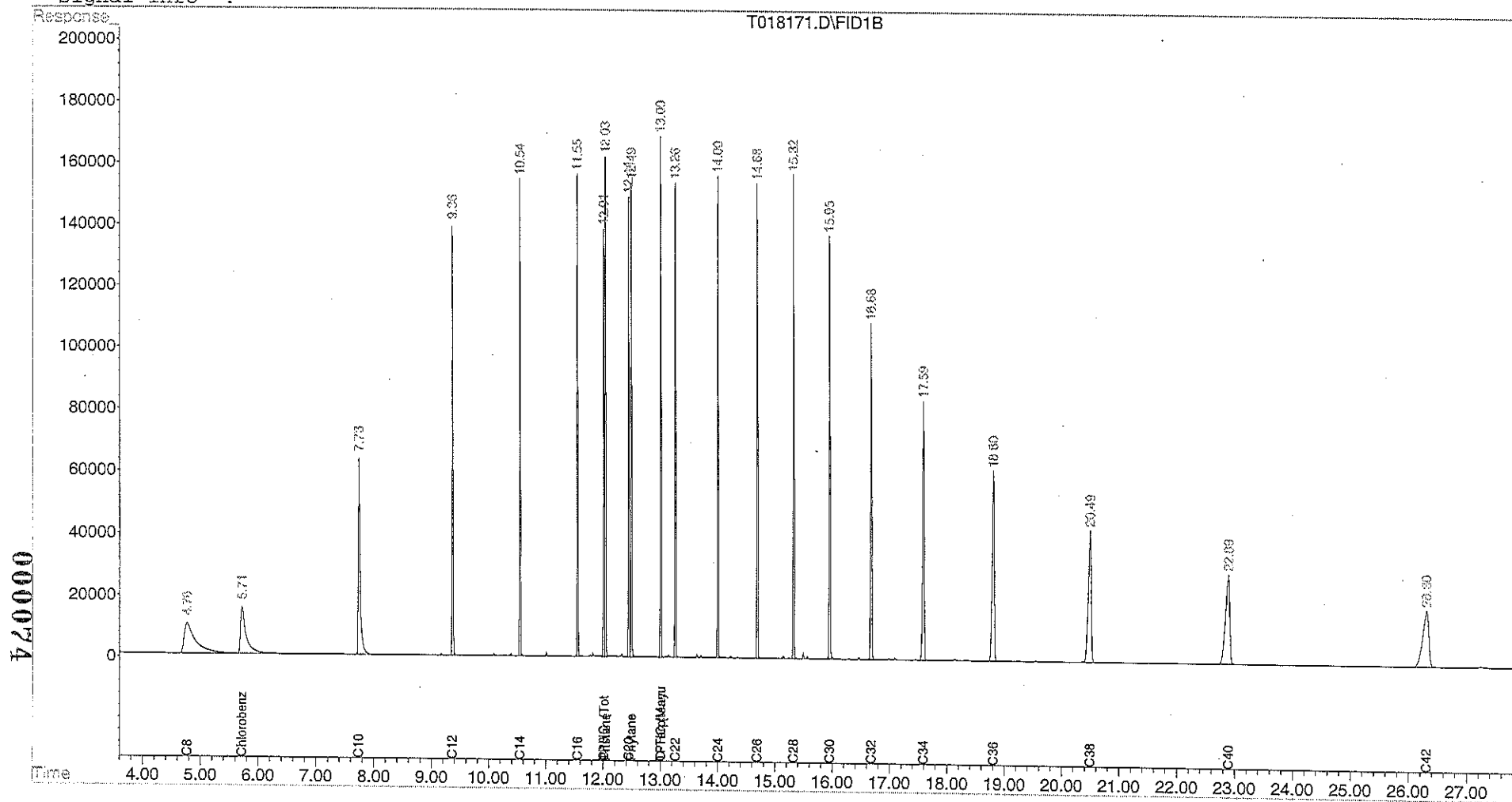
Response via : Multiple Level Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051216\T018179.D
Acq On : 16 Dec 2005 7:57 am
Sample : Tstd050
Misc : TP121605.01
IntFile : EVENTSBP.E

Vial: 1
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
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 T	C8	27.037	25.765 E3	4.7	97	0.00
2 T	C10	28.359	27.246 E3	3.9	96	0.00
3 T	C12	28.295	27.315 E3	3.5	96	0.00
4 T	C14	28.566	27.654 E3	3.2	96	0.00
5 T	C16	29.246	28.322 E3	3.2	96	0.00
6 T	C18	28.143	27.399 E3	2.6	96	0.00
7 T	C20	28.970	28.156 E3	2.8	96	0.00
8 T	C22	29.821	28.993 E3	2.8	97	0.00
9 T	C24	30.220	29.462 E3	2.5	97	0.00
10 T	C26	31.097	29.821 E3	4.1	96	0.00
11 T	C28	30.765	29.892 E3	2.8	96	0.00
12 T	C30	31.300	30.325 E3	3.1	96	0.00
13 T	C32	31.022	29.985 E3	3.3	95	0.00
14 T	C34	31.496	29.829 E3	5.3	95	0.00
15 T	C36	33.639	30.281 E3	10.0	95	0.00
16 T	C38	30.799	29.349 E3	4.7	94	0.00
17 T	C40	30.077	28.626 E3	4.8	93	-0.02
18 T	C42	28.308	26.275 E3	7.2	91	-0.03
19 T	Pristane	29.297	28.449 E3	2.9	97	0.00
20 T	Phytane	30.249	29.118 E3	3.7	97	0.00
21 T	TPHC (Manual Integration)	35.921	32.369 E3	9.9	95	0.00
22 H	TPHC (Total)	30.816	28.870 E3	6.3	95	0.00
23 S	Chlorobenzene (SURR.)	20.465	19.986 E3	2.3	95	0.00
24 S	O-Terphenyl (SURR.)	33.111	32.373 E3	2.2	97	0.00

Data File : C:\HPCHEM\1\DATA\051216\T018179.D Vial: 1
 Acq On : 16 Dec 2005 7:57 am Operator: BPatel
 Sample : Tstd050 Inst : GC/MS Ins
 Misc : TP121605.01 Multiplr: 1.00
 IntFile : EVENTSBP.E
 Quant Time: Dec 16 8:26 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005
 Response via : Initial Calibration
 DataAcq Meth : TPHC003.M

Volume Inj. :
 Signal Phase :
 Signal Info :

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.71	999303	48.215 mg/L
Spiked Amount 10.000	Recovery	=	482.15%
24) S O-Terphenyl (SURR.)	13.00	1618664	49.009 mg/L
Spiked Amount 10.000	Recovery	=	490.09%
Target Compounds			
1) T C8	4.76	1288249	47.647 mg/L
2) T C10	7.73	1362307	48.038 mg/L
3) T C12	9.36	1365757	48.269 mg/L
4) T C14	10.54	1382680	48.403 mg/L
5) T C16	11.54	1416086	48.420 mg/L
6) T C18	12.01	1369967	48.679 mg/L
7) T C20	12.44	1407814	48.595 mg/L
8) T C22	13.26	1449662	48.611 mg/L
9) T C24	14.00	1473081	48.746 mg/L
10) T C26	14.68	1491031	47.947 mg/L
11) T C28	15.32	1494582	48.581 mg/L
12) T C30	15.95	1516243	48.443 mg/L
13) T C32	16.67	1499259	48.329 mg/L
14) T C34	17.58	1491443	47.354 mg/L
15) T C36	18.80	1514048	45.008 mg/L
16) T C38	20.48	1467431	47.646 mg/L
17) T C40	22.87	1431296	47.588 mg/L
18) T C42	26.29	1313740	46.409 mg/L
19) T Pristane	12.03	1422431	48.552 mg/L
20) T Phytane	12.49	1455877	48.130 mg/L
21) T TPHC (Manual Integration)	13.00	32369165	901.121 mg/L m
22) H TPHC (Total)	12.00	28870252	936.865 mg/L

Data File : C:\HPCHEM\1\DATA\051216\T018179.D

Vial: 1

Acq On : 16 Dec 2005 7:57 am

Operator: BPatel

Sample : Tstd050

Inst : GC/MS Ins

Misc : TP121605.01

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 8:26 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

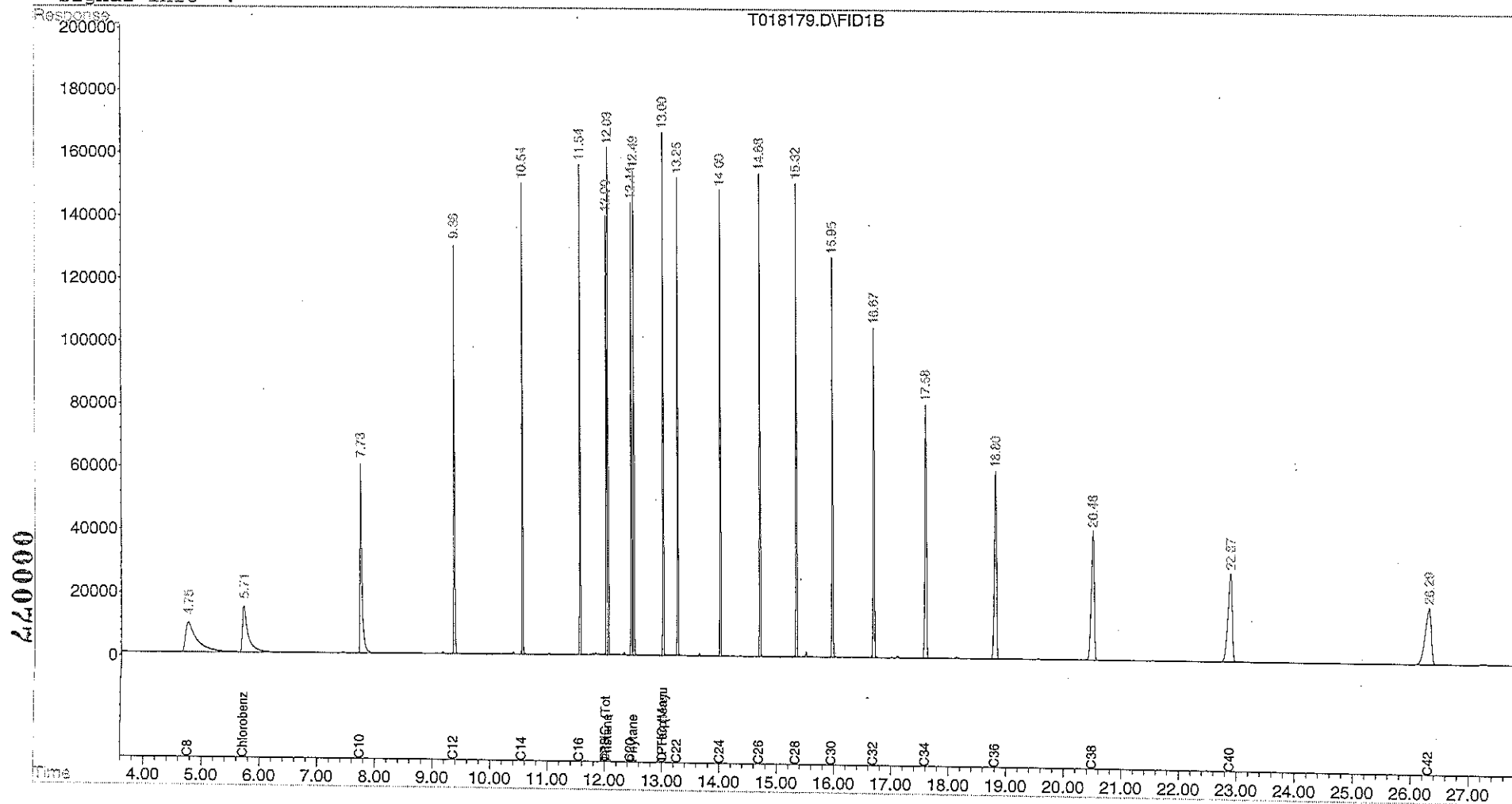
Response via : Multiple Level Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\051216\T018188.D
 Acq On : 16 Dec 2005 1:31 pm
 Sample : Tstd050
 Misc : TP121605.01
 IntFile : EVENTSBP.E

Vial: 9
 Operator: BPatel
 Inst : GC/MS Ins
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005
 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 T	C8	27.037	26.692 E3	1.3	100	0.00
2 T	C10	28.359	28.376 E3	-0.1	100	0.00
3 T	C12	28.295	28.467 E3	-0.6	100	0.00
4 T	C14	28.566	28.694 E3	-0.4	100	0.00
5 T	C16	29.246	29.444 E3	-0.7	100	0.00
6 T	C18	28.143	28.455 E3	-1.1	100	0.00
7 T	C20	28.970	29.245 E3	-0.9	100	0.00
8 T	C22	29.821	30.093 E3	-0.9	100	0.00
9 T	C24	30.220	30.539 E3	-1.1	100	0.00
10 T	C26	31.097	30.935 E3	0.5	100	0.00
11 T	C28	30.765	30.932 E3	-0.5	100	0.00
12 T	C30	31.300	31.340 E3	-0.1	99	0.00
13 T	C32	31.022	31.020 E3	0.0	99	0.00
14 T	C34	31.496	30.865 E3	2.0	98	0.00
15 T	C36	33.639	31.350 E3	6.8	98	0.01
16 T	C38	30.799	30.498 E3	1.0	98	0.02
17 T	C40	30.077	29.672 E3	1.3	96	0.02
18 T	C42	28.308	27.253 E3	3.7	94	0.01
19 T	Pristane	29.297	29.519 E3	-0.8	101	0.00
20 T	Phytane	30.249	30.235 E3	0.0	101	0.00
21 T	TPHC (Manual Integration)	35.921	33.448 E3	6.9	99	0.00
22 H	TPHC (Total)	30.816	29.987 E3	2.7	98	0.00
23 S	Chlorobenzene (SURR.)	20.465	20.903 E3	-2.1	99	0.00
24 S	O-Terphenyl (SURR.)	33.111	33.603 E3	-1.5	101	0.00

Data File : C:\HPCHEM\1\DATA\051216\T018188.D

Vial: 9

Acq On : 16 Dec 2005 1:31 pm

Operator: BPatel

Sample : Tstd050

Inst : GC/MS Ins

Misc : TP121605.01

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 15:43 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :

Compound	R.T.	Response	Conc Units

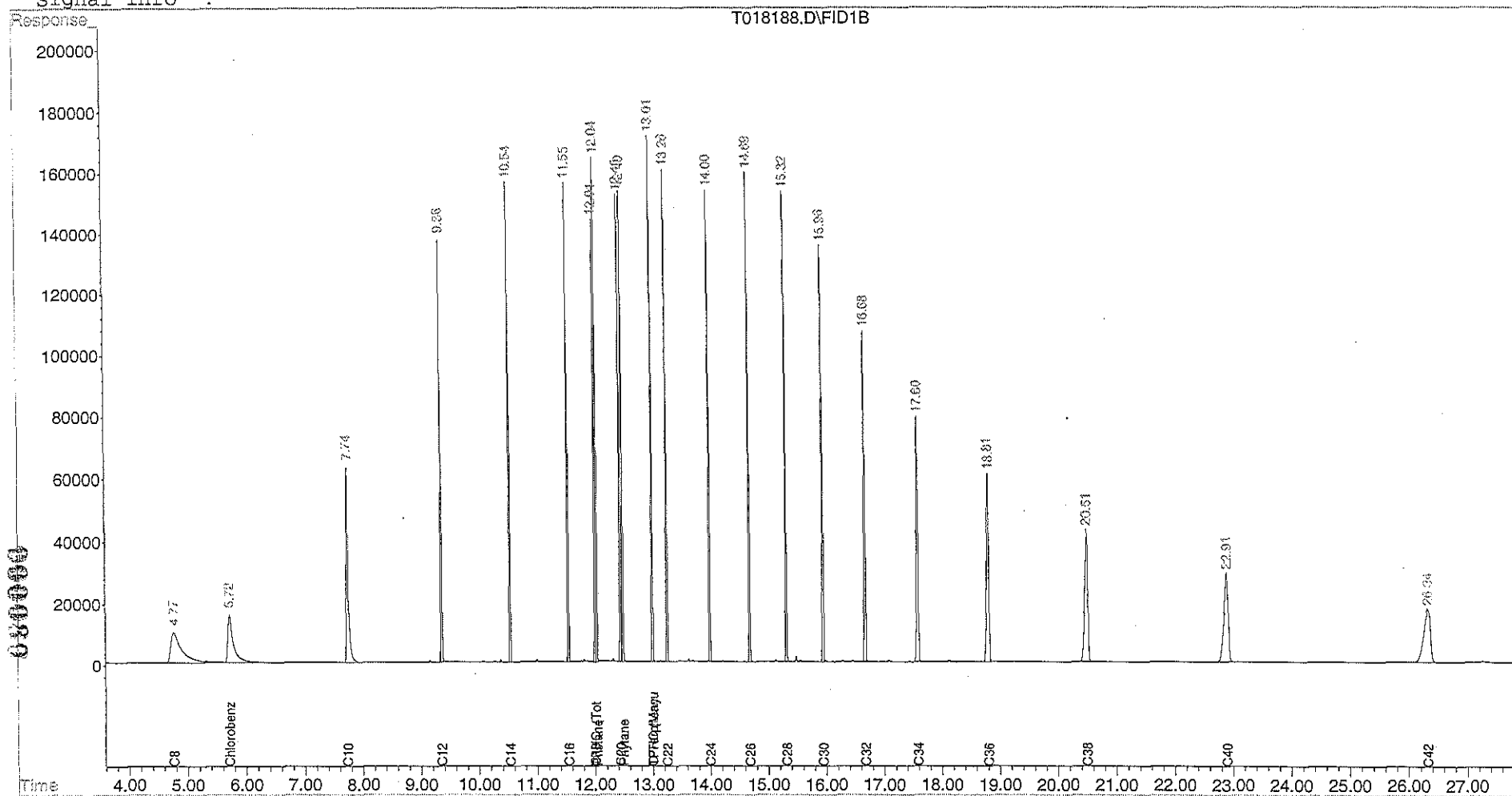
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	1045167	50.430 mg/L
Spiked Amount 10.000		Recovery =	504.30%
24) S O-Terphenyl (SURR.)	13.01	1680154	50.877 mg/L
Spiked Amount 10.000		Recovery =	508.77%
Target Compounds			
1) T C8	4.77	1334590	49.361 mg/L
2) T C10	7.74	1418809	50.030 mg/L
3) T C12	9.36	1423349	50.304 mg/L
4) T C14	10.55	1434711	50.225 mg/L
5) T C16	11.55	1472220	50.339 mg/L
6) T C18	12.01	1422754	50.555 mg/L
7) T C20	12.45	1462225	50.473 mg/L
8) T C22	13.26	1504674	50.456 mg/L
9) T C24	14.01	1526928	50.528 mg/L
10) T C26	14.69	1546772	49.739 mg/L
11) T C28	15.33	1546581	50.271 mg/L
12) T C30	15.96	1566995	50.064 mg/L
13) T C32	16.68	1550995	49.996 mg/L
14) T C34	17.60	1543270	48.999 mg/L
15) T C36	18.82	1567501	46.597 mg/L
16) T C38	20.51	1524885	49.511 mg/L
17) T C40	22.91	1483616	49.328 mg/L
18) T C42	26.34	1362630	48.136 mg/L
19) T Pristane	12.04	1475930	50.378 mg/L
20) T Phytane	12.49	1511728	49.976 mg/L
21) T TPHC (Manual Integration)	13.01	33447939	931.152 mg/L m
22) H TPHC (Total)	12.00	29986762	973.096 mg/L

Data File : C:\HPCHEM\1\DATA\051216\T018188.D
Acq On : 16 Dec 2005 1:31 pm
Sample : Tstd050
Misc : TP121605.01
IntFile : EVENTSBP.E
Quant Time: Dec 16 15:43 2005 Quant Results File: TPHC003.RES

Vial: 9
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
Response via : Multiple Level Calibration
DataAcq Meth : TPHC003.M

Volume Inj. :
Signal Phase :
Signal Info :



Surrogate Recovery Report
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client : U.S. Army
 DPW. SELFM-PW-EV
 Bldg. 173
 Ft. Monmouth, NJ 07703

Project # : 50637
Location : Bldg.401
UST Reg. # :

Analysis: OQA-QAM-025
Matrix: Soil
Inst. ID. GC TPHC INST. #1
Column Type : RTX-5, 0.32mm ID, 30M
Injection Volume : 1uL

Date Received : 12-Dec-05
Date Extracted : 15-Dec-05
Extraction Method : Shake
Analysis Complete : 16-Dec-05
Analyst : B.Patel

Lab ID	Surrogate Added (ppm)	Chlorobenzene Recovered (ppm)	Chlorobenzene % Recovery	O-Terphenyl Recovered (ppm)	O-Terphenyl % Recovery
5063701	10	7.02	70.2	7.74	77.4
5063702	10	6.87	68.7	8.05	80.5
5063703	10	6.28	62.8	7.26	72.6
5063704	10	6.08	60.8	7.39	73.9
METHOD BLANK	10	6.62	66.2	6.99	69.9

SURROGATE STANDARDS		Lower Control Limits	Upper Control Limits
Chlorobenzene	QC Limits	60	130
O-Terphenyl	QC Limits	62	133

000081

Matrix Spike/ Duplicate Recovery Report
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army DPW, SELFM-PW-EV Bldg. 173 Ft. Monmouth, NJ 07703	Project # :	50637
		Location :	Bldg.401
		UST Reg. # :	
Analysis:	OQA-QAM-025	Date Received :	12-Dec-05
Matrix:	Soil	Date Extracted :	15-Dec-05
Inst. ID.	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	16-Dec-05
Injection Volume :	1uL	Analyst :	B.Patel

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
5063701MS	1000	0.14	848.87	84.87	55 - 129
5063701MSD	1000	0.14	799.93	79.98	55 - 129

RPD	5.94	20.00
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NC = Not Calculated due to values are over the calibration range.

000082

Quality Control Check Standard Summary
U.S.Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client :	U.S. Army	Project # :	50637
	DPW. SELFM-PW-EV	Location :	Bldg.401
	Bldg. 173	UST Reg. # :	
	Ft. Monmouth, NJ 07703		
Analysis:	OQA-QAM-025	Date Received :	12-Dec-05
Matrix:	Soil	Date Extracted :	15-Dec-05
Inst. ID.	GC TPHC INST. #1	Extraction Method :	Shake
Column Type :	RTX-5, 0.32mm ID, 30M	Analysis Complete :	16-Dec-05
Injection Volume :	1uL	Analyst :	B.Patel

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
LCS-121505-01	15-Dec-05	1000	750.54	75.05	55 - 129

000083

Data File : C:\HPCHEM\1\DATA\051215\T018161.D

Vial: 2

Acq On : 15 Dec 2005 2:35 pm

Operator: BPatel

Sample : MB-121505-01

Inst : GC/MS Ins

Misc : Soil

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 15 15:08 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

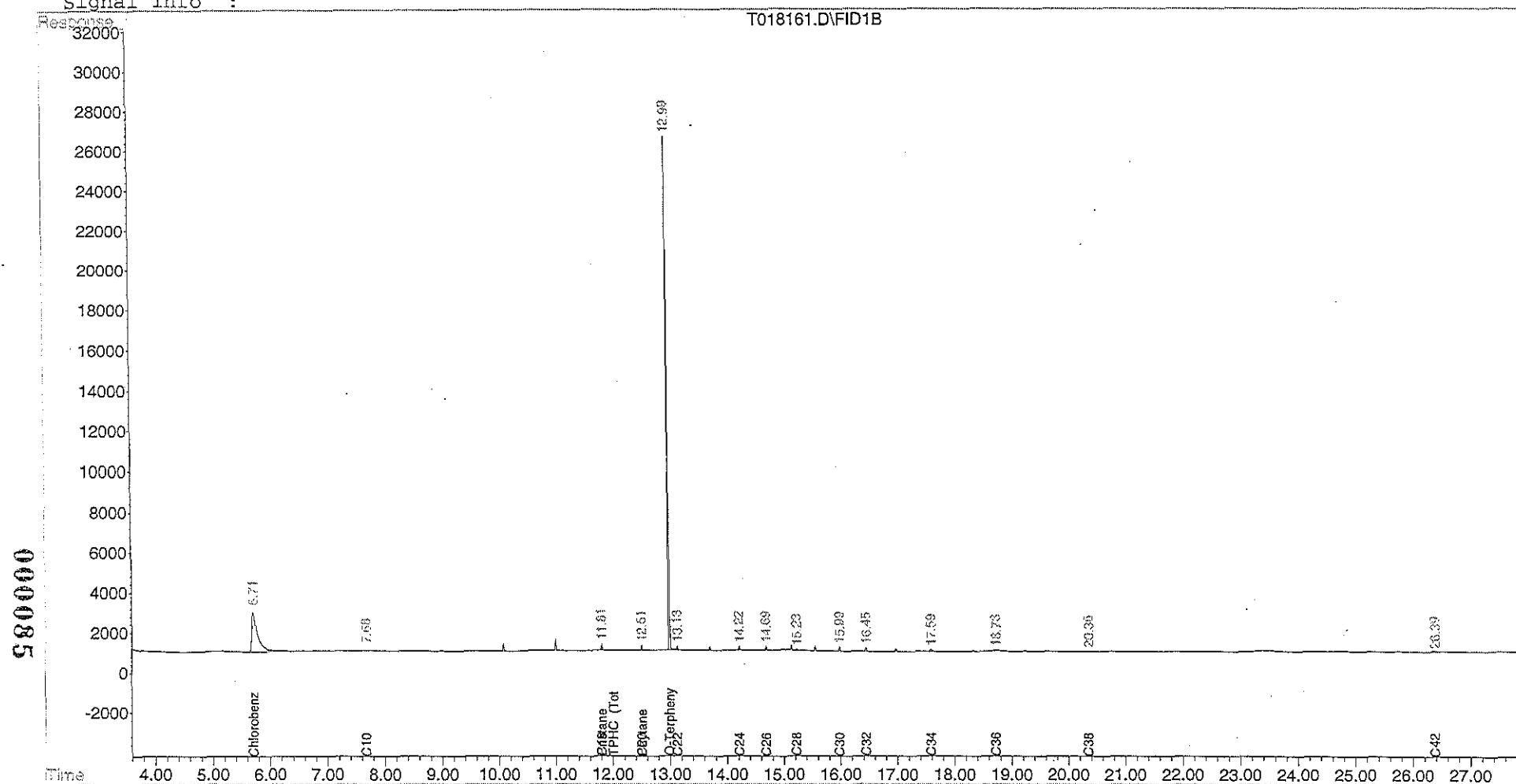
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	137771	6.618 mg/L
Spiked Amount 10.000	Recovery	=	66.18%
24) S O-Terphenyl (SURR.)	12.99	235723	6.987 mg/L
Spiked Amount 10.000	Recovery	=	69.87%
Target Compounds			
1) T C8	0.00	0	N.D. mg/L
2) T C10	7.68	747	0.026 mg/L
3) T C12	0.00	0	N.D. mg/L
4) T C14	0.00	0	N.D. mg/L
5) T C16	11.81f	3043	0.104 mg/L
6) T C18	11.81	3043	0.108 mg/L
7) T C20	12.51	2350	0.081 mg/L
8) T C22	13.13	2084	0.070 mg/L
9) T C24	14.22	1923	0.064 mg/L
10) T C26	14.69	2215	0.071 mg/L
11) T C28	15.23	595	0.019 mg/L
12) T C30	15.99	2658	0.085 mg/L
13) T C32	16.46	2634	0.085 mg/L
14) T C34	17.59	2570	0.082 mg/L
15) T C36	18.73	2158	0.064 mg/L
16) T C38	20.36	1956	0.064 mg/L
17) T C40	0.00	0	N.D. mg/L
18) T C42	26.39	6324	0.223 mg/L
19) T Pristane	11.81	3043	0.104 mg/L
20) T Phytane	12.51	2350	0.078 mg/L
21) T TPHC (Manual Integration)	0.00	0	N.D. mg/L d
22) H TPHC (Total)	12.00	74470	2.417 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018161.D Vial: 2
 Acq On : 15 Dec 2005 2:35 pm Operator: BPatel
 Sample : MB-121505-01 Inst : GC/MS Ins
 Misc : Soil Multiplr: 1.00
 IntFile : EVENTSBP.E
 Quant Time: Dec 15 15:08 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005
 Response via : Multiple Level Calibration
 DataAcq Meth : TPHC003.M

Volume Inj. :
 Signal Phase :
 Signal Info :



Data File : C:\HPCHEM\1\DATA\051215\T018163.D

Vial: 4

Acq On : 15 Dec 2005 3:48 pm

Operator: BPatel

Sample : 5063701s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 9:20 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	146180	7.024 mg/L
Spiked Amount 10.000	Recovery	=	70.24%
24) S O-Terphenyl (SURR.)	12.99	260395	7.737 mg/L
Spiked Amount 10.000	Recovery	=	77.37%
Target Compounds			
1) T C8	0.00	0	N.D. mg/L
2) T C10	0.00	0	N.D. mg/L
3) T C12	0.00	0	N.D. mg/L
4) T C14	0.00	0	N.D. mg/L
5) T C16	11.81f	428	0.015 mg/L
6) T C18	11.81	428	0.015 mg/L
7) T C20	0.00	0	N.D. mg/L
8) T C22	13.05	787	0.026 mg/L
9) T C24	0.00	0	N.D. mg/L
10) T C26	0.00	0	N.D. mg/L
11) T C28	0.00	0	N.D. mg/L
12) T C30	0.00	0	N.D. mg/L
13) T C32	0.00	0	N.D. mg/L
14) T C34	0.00	0	N.D. mg/L
15) T C36	0.00	0	N.D. mg/L
16) T C38	0.00	0	N.D. mg/L
17) T C40	0.00	0	N.D. mg/L
18) T C42	0.00	0	N.D. mg/L
19) T Pristane	11.81	428	0.015 mg/L
20) T Phytane	0.00	0	N.D. mg/L
21) T TPHC (Manual Integration)	0.00	0	N.D. mg/L d
22) H TPHC (Total)	12.00	4272	0.139 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018163.D

Vial: 4

Acq On : 15 Dec 2005 3:48 pm

Operator: BPatel

Sample : 5063701s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 9:20 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

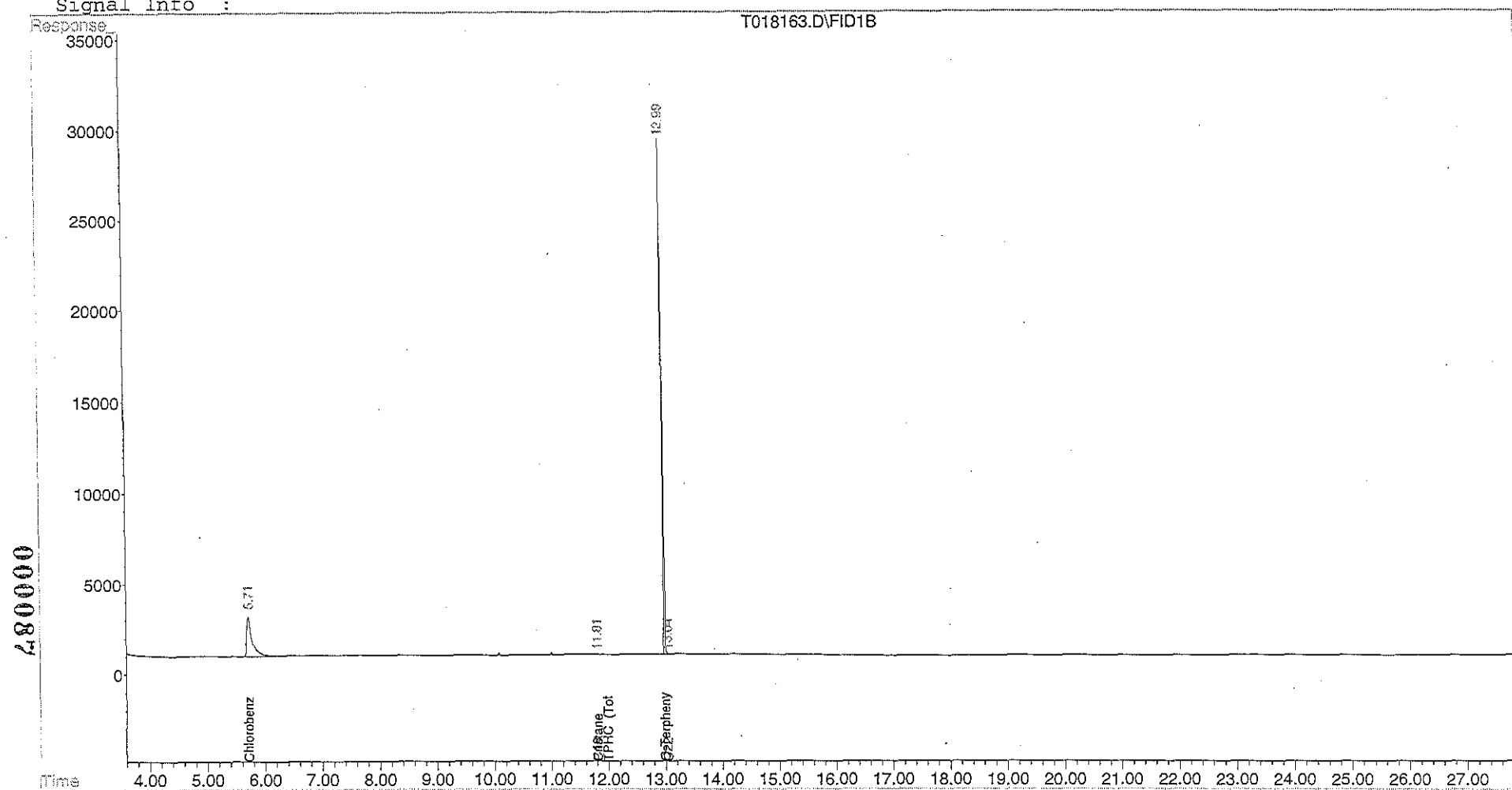
Response via : Multiple Level Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :



Data File : C:\HPCHEM\1\DATA\051215\T018166.D
 Acq On : 15 Dec 2005 5:38 pm
 Sample : 5063702s
 Misc :
 IntFile : EVENTSBP.E
 Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Vial: 7
 Operator: BPatel
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
 Title : GC TPH Method
 Last Update : Tue Oct 25 07:55:20 2005
 Response via : Initial Calibration
 DataAcq Meth : TPHC003.M

Volume Inj. :
 Signal Phase :
 Signal Info :

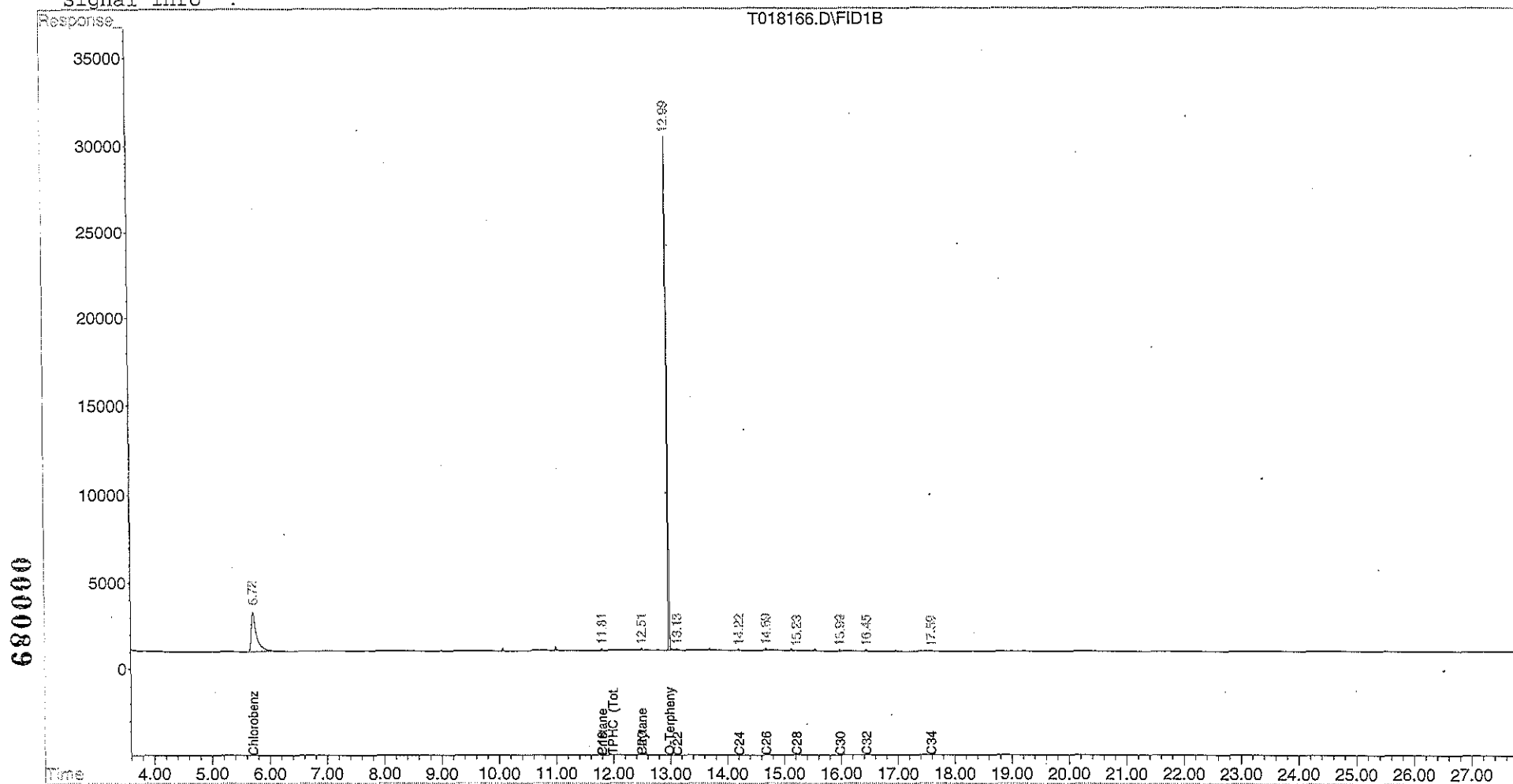
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	142988	6.870 mg/L
Spiked Amount 10.000	Recovery	=	68.70%
24) S O-Terphenyl (SURR.)	12.99	270586	8.046 mg/L
Spiked Amount 10.000	Recovery	=	80.46%
Target Compounds			
1) T C8	0.00	0	N.D. mg/L
2) T C10	0.00	0	N.D. mg/L
3) T C12	0.00	0	N.D. mg/L
4) T C14	0.00	0	N.D. mg/L
5) T C16	11.81f	1324	0.045 mg/L
6) T C18	11.81	1324	0.047 mg/L
7) T C20	12.51	1147	0.040 mg/L
8) T C22	13.13	1215	0.041 mg/L
9) T C24	14.22	1014	0.034 mg/L
10) T C26	14.69	1207	0.039 mg/L
11) T C28	15.23	470	0.015 mg/L
12) T C30	15.99	1451	0.046 mg/L
13) T C32	16.46	1339	0.043 mg/L
14) T C34	17.59	1220	0.039 mg/L
15) T C36	0.00	0	N.D. mg/L
16) T C38	0.00	0	N.D. mg/L
17) T C40	0.00	0	N.D. mg/L
18) T C42	0.00	0	N.D. mg/L
19) T Pristane	11.81	1324	0.045 mg/L
20) T Phytane	12.51	1147	0.038 mg/L
21) T TPHC (Manual Integration)	0.00	0	N.D. mg/L d
22) H TPHC (Total)	12.00	22785	0.739 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018166.D
Acq On : 15 Dec 2005 5:38 pm
Sample : 5063702s
Misc :
IntFile : EVENTSBP.E
Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Vial: 7
Operator: BPatel
Inst : GC/MS Ins
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
Response via : Multiple Level Calibration
DataAcq Meth : TPHC003.M

Volume Inj. :
Signal Phase :
Signal Info :



Data File : C:\HPCHEM\1\DATA\051215\T018167.D

Vial: 8

Acq On : 15 Dec 2005 6:14 pm

Operator: BPatel

Sample : 5063703s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	130786	6.281 mg/L
Spiked Amount 10.000		Recovery =	62.81%
24) S O-Terphenyl (SURR.)	12.99	244803	7.263 mg/L
Spiked Amount 10.000		Recovery =	72.63%
Target Compounds			
1) T C8	0.00	0	N.D. mg/L
2) T C10	0.00	0	N.D. mg/L
3) T C12	0.00	0	N.D. mg/L
4) T C14	0.00	0	N.D. mg/L
5) T C16	11.81f	2811	0.096 mg/L
6) T C18	11.81	2811	0.100 mg/L
7) T C20	12.51	2499	0.086 mg/L
8) T C22	13.13	2562	0.086 mg/L
9) T C24	14.22	2483	0.082 mg/L
10) T C26	14.69	2863	0.092 mg/L
11) T C28	15.23	570	0.019 mg/L
12) T C30	15.99	3617	0.116 mg/L
13) T C32	16.46	3550	0.114 mg/L
14) T C34	17.59	3167	0.101 mg/L
15) T C36	19.24f	2342	0.070 mg/L
16) T C38	20.36	2126	0.069 mg/L
17) T C40	0.00	0	N.D. mg/L
18) T C42	0.00	0	N.D. mg/L
19) T Pristane	11.81	2811	0.096 mg/L
20) T Phytane	12.51	2499	0.083 mg/L
21) T TPHC (Manual Integration)	0.00	0	N.D. mg/L d
22) H TPHC (Total)	12.00	52866	1.716 mg/L

Data File : C:\HPCHEM\1\DATA\051215\T018167.D

Vial: 8

Acq On : 15 Dec 2005 6:14 pm

Operator: BPatel

Sample : 5063703s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : EVENTSBBP.E

Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

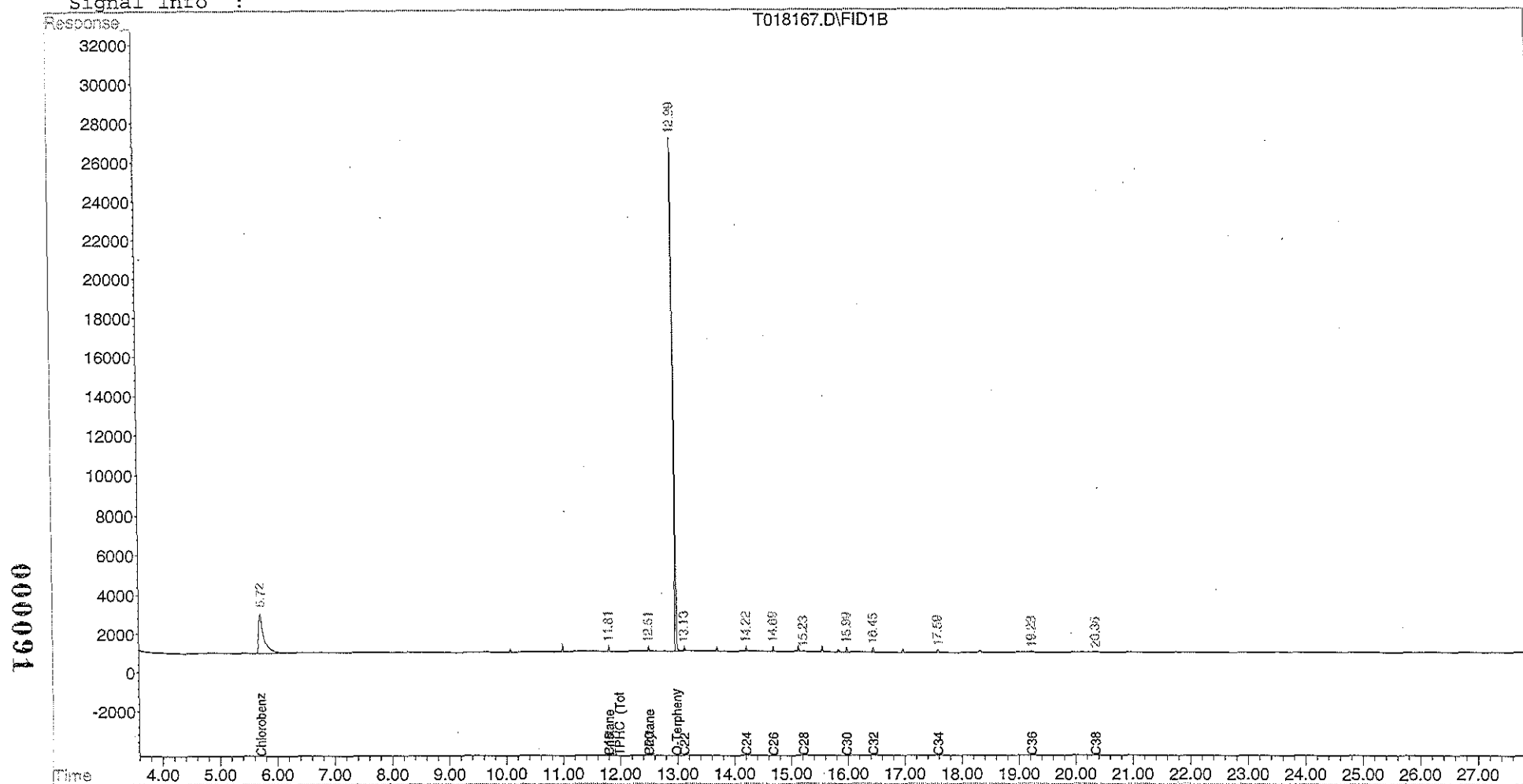
Response via : Multiple Level Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

Signal Info :



Data File : C:\HPCHEM\1\DATA\051216\T018182.D

Vial: 4

Acq On : 16 Dec 2005 9:47 am

Operator: BPatel

Sample : 5063704s

Inst : GC/MS Ins

Misc :

Multiplr: 1.00

IntFile : EVENTSBP.E

Quant Time: Dec 16 10:21 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)

Title : GC TPH Method

Last Update : Tue Oct 25 07:55:20 2005

Response via : Initial Calibration

DataAcq Meth : TPHC003.M

Volume Inj. :

Signal Phase :

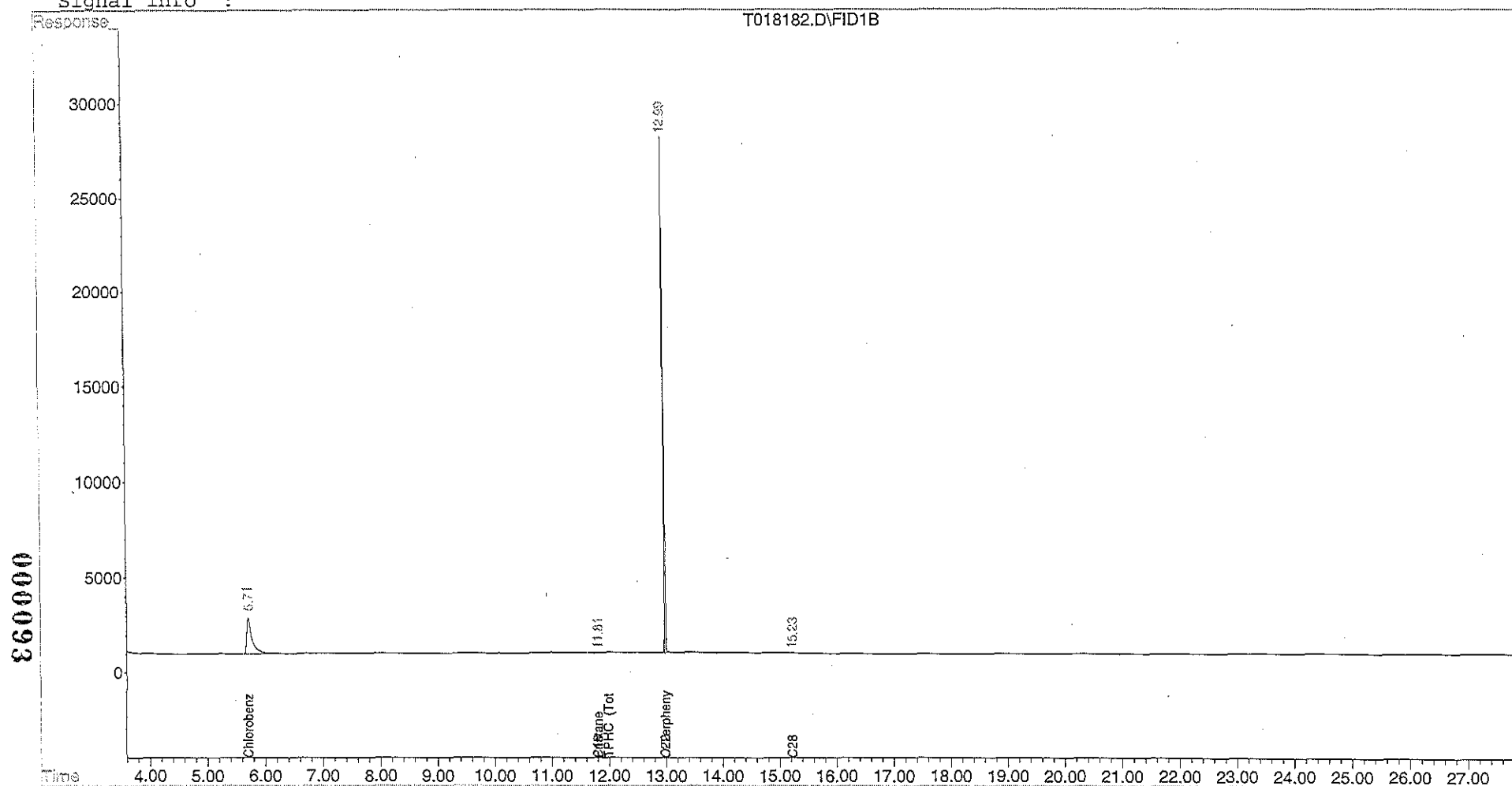
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
23) S Chlorobenzene (SURR.)	5.72	126637	6.081 mg/L
Spiked Amount 10.000		Recovery =	60.81%
24) S O-Terphenyl (SURR.)	12.99	249080	7.393 mg/L
Spiked Amount 10.000		Recovery =	73.93%
Target Compounds			
1) T C8	0.00	0	N.D. mg/L
2) T C10	0.00	0	N.D. mg/L
3) T C12	0.00	0	N.D. mg/L
4) T C14	0.00	0	N.D. mg/L
5) T C16	11.81f	592	0.020 mg/L
6) T C18	11.81	592	0.021 mg/L
7) T C20	0.00	0	N.D. mg/L
8) T C22	12.99f	249080	8.352 mg/L
9) T C24	0.00	0	N.D. mg/L
10) T C26	0.00	0	N.D. mg/L
11) T C28	15.23	656	0.021 mg/L
12) T C30	0.00	0	N.D. mg/L
13) T C32	0.00	0	N.D. mg/L
14) T C34	0.00	0	N.D. mg/L
15) T C36	0.00	0	N.D. mg/L
16) T C38	0.00	0	N.D. mg/L
17) T C40	0.00	0	N.D. mg/L
18) T C42	0.00	0	N.D. mg/L
19) T Pristane	11.81	592	0.020 mg/L
20) T Phytane	0.00	0	N.D. mg/L
21) T TPHC (Manual Integration)	0.00	0	N.D. mg/L d
22) H TPHC (Total)	12.00	3055	0.099 mg/L

Data File : C:\HPCHEM\1\DATA\051216\T018182.D Vial: 4
Acq On : 16 Dec 2005 9:47 am Operator: BPatel
Sample : 5063704s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : EVENTSBP.E
Quant Time: Dec 16 10:21 2005 Quant Results File: TPHC003.RES

Quant Method : C:\HPCHEM\1\METHODS\TPHC003.M (Chemstation Integrator)
Title : GC TPH Method
Last Update : Tue Oct 25 07:55:20 2005
Response via : Multiple Level Calibration
DataAcq Meth : TPHC003.M

Volume Inj. :
Signal Phase :
Signal Info :



LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

THIS FORM MUST BE COMPLETED BY THE LABORATORY OR ENVIRONMENTAL CONSULTANT
AND ACCOMPANY ALL DATA SUBMISSIONS

The following Laboratory Deliverables Checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements for Site Remediation, effective June 7, 1993, provides further details. The document shall be bound and paginated, contain a table of contents, and all pages shall be legible. Incomplete data packages will be returned or held without review until the data package is completed.

It is recommended that the analytical results summary sheets listing all targeted and non-targeted compounds with the method detection limits, practical quantitation limits, and the laboratory and/or sample numbers be included in one section of the data package and in the main body of the report.

1. Cover Page, Title Page listing Lab Certification #, facility name and address, & date of report submitted.
2. Table of Contents submitted.
3. Summary Sheets listing analytical results for all targeted and non-targeted compounds submitted.
4. Document paginated and legible.
5. Chain of Custody submitted.
6. Samples submitted to lab within 48 hours of sample collection.
7. Methodology Summary submitted.
8. Laboratory Chronicle and Holding Time Check submitted.
9. Results submitted on a dry weight basis.
10. Method Detection Limits submitted.
11. Lab certified by NJDEP for parameters of appropriate category of parameters or a member of the USEPA CLP.

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Laboratory Manager or Environmental Consultant's Signature

Date: 12/20/05

Laboratory Certification # 13461

*Refer to NJAC 7:26E – Appendix A, Section IV – Reduced Data Deliverables – Non-USEPA/CLP Methods for further guidance.

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Laboratory Authentication Statement

I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information contained in this report and to the best of my knowledge, I believe that the submitted information is true, accurate, complete and meets the above referenced standards where applicable. I am aware that there are significant penalties for purposefully submitting falsified information, including the possibility of a fine and imprisonment.

A handwritten signature in black ink, appearing to read 'Daniel K. Wright', is written over a horizontal line.

Daniel K. Wright
Laboratory Manager