**U.S. Army Garrison**
Fort Monmouth, New Jersey

# Underground Storage Tank Closure Report

***Main Post – former Bldg.416***
***Apex Ave.***

**NJDEP UST Registration No. 90010-32**

**February 2007**

# UNDERGROUND STORAGE TANK REPORT

**MAIN POST –FORMER BUILDING 416**
**NJDEP UST REGISTRATION NO. 90010-32**

**MARCH 2007**

**PREPARED FOR:**

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

**PROJECT NO. 06-34880**

**PREPARED BY:**

**TECOM-VINNELL SERVICES, INC.**
**P.O. BOX 60**
**FT. MONMOUTH, NJ 07703**

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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. The UST was located on the east side of former Building 416 in the Main Post area of Fort Monmouth. UST No. 90010-32 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, this subsurface investigation was conducted. On December 13, 2005, a Geoprobe was utilized to collect samples 416-A, 416-B, 416-C and 416-D (Duplicate-A) 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 seven (7) 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. 90010-32, 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.

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. A groundwater sample was analyzed for volatile organic analysis and semi-volatile organic analysis. This sample did not contain compounds that exceed the NJDEP Class II Ground Water Quality Criteria.

**No Further Action** is proposed in regard to the closure and site assessment of UST No. 90010-32 at former Building 416.

# 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. 90010-32, was closed at former Building 416 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 date of the closure of the UST is unknown.

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 416, Apex Ave., was located in the eastern portion (400 Area) of the Main Post of Fort Monmouth, as shown on Figure 1. UST No. 90010-32 was located on the east side of Building 416. Historical maps were used to determine the exact location of the former building and tank. A historical site 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 (Zapecza, 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 Zapecza, 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 416 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 416 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) 532-6223

- 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 of which none were found.

## 2.3 SOIL SAMPLING

On December 13, 2005, closure soil samples 416-A, 416-B, 416-C and 416-D (Duplicate A) were collected from a total of three (3) locations along the tank centerline bottom of the former UST. Groundwater was encountered at approximately seven (7) below surface grade in the borings. All samples were analyzed for TPH. A soil sample 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 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 13, 2005, sample 416-Groundwater was collected from soil borehole 416-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 collected into laboratory prepared glassware using properly decontaminated disposable bailer. 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 13, 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 13, 2005 from UST 90010-32 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 416-B. There were no compounds detected above the method detection limits for either the volatile organic analysis or the semi-volatile organic analysis.

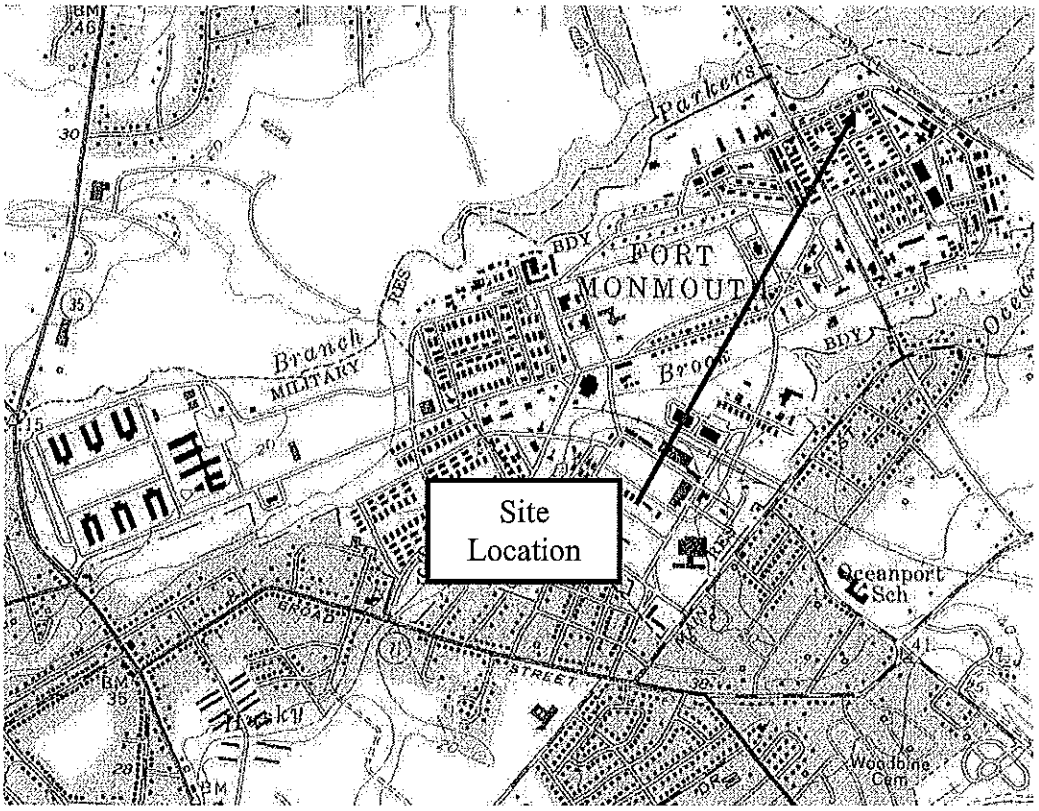
## 3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all soil samples collected from the UST closure assessment at UST No. 90010-32 were Not Detected.

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. 90010-32.

**No Further Action** is proposed in regard to the closure and site assessment of UST No. 90010-32 at former Building 416.

# FIGURES




SCALE 1:24,000

1 0.5 0 1 MILE

1 0.5 0 1 KILOMETER

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

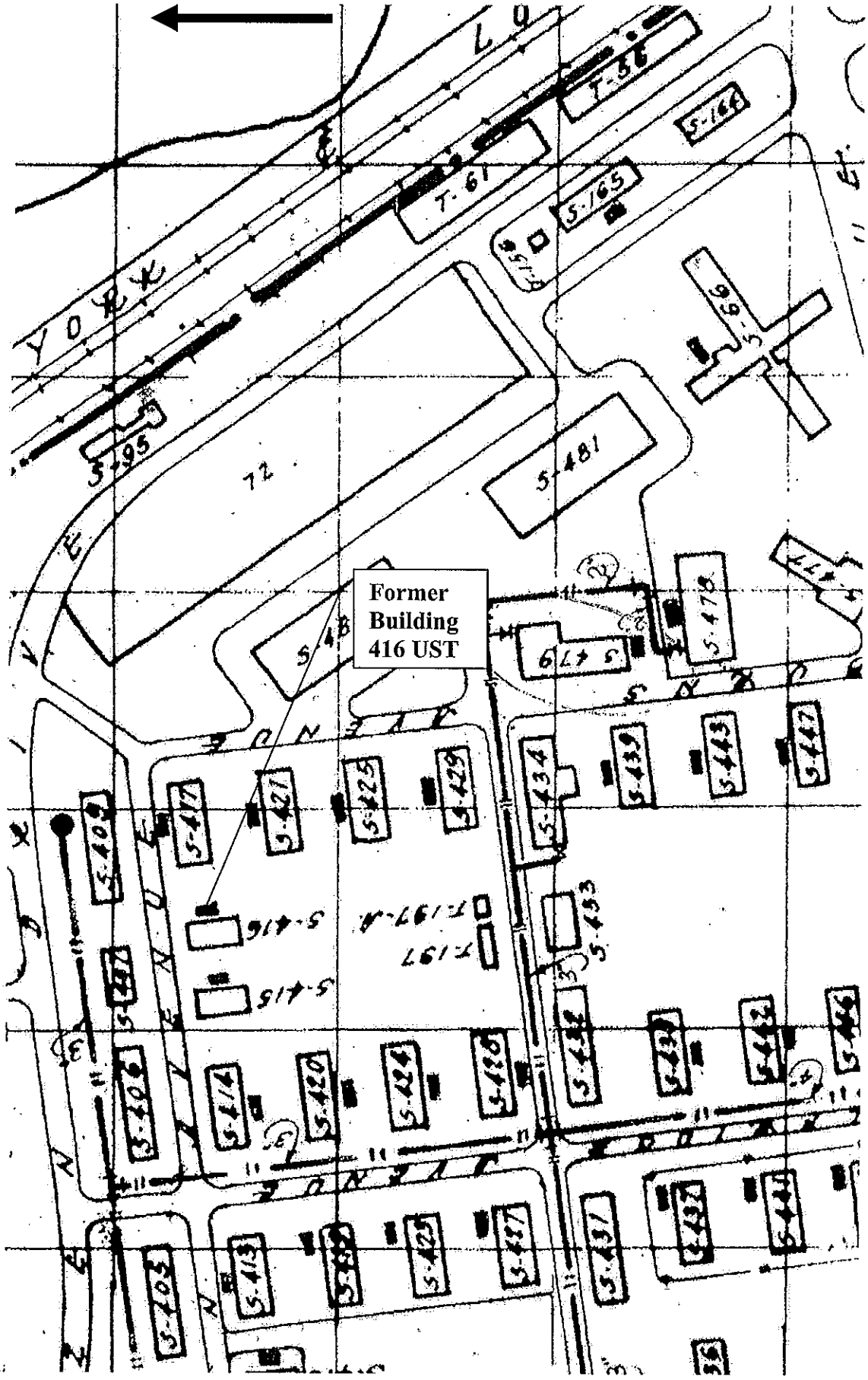
N

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

**FIGURE 1**

**SITE LOCATION MAP**
(FORMER)BUILDING 416
UST NO. 90010-32
FT. MONMOUTH, NJ

**FIGURE 2-SITE LOCATION MAP**



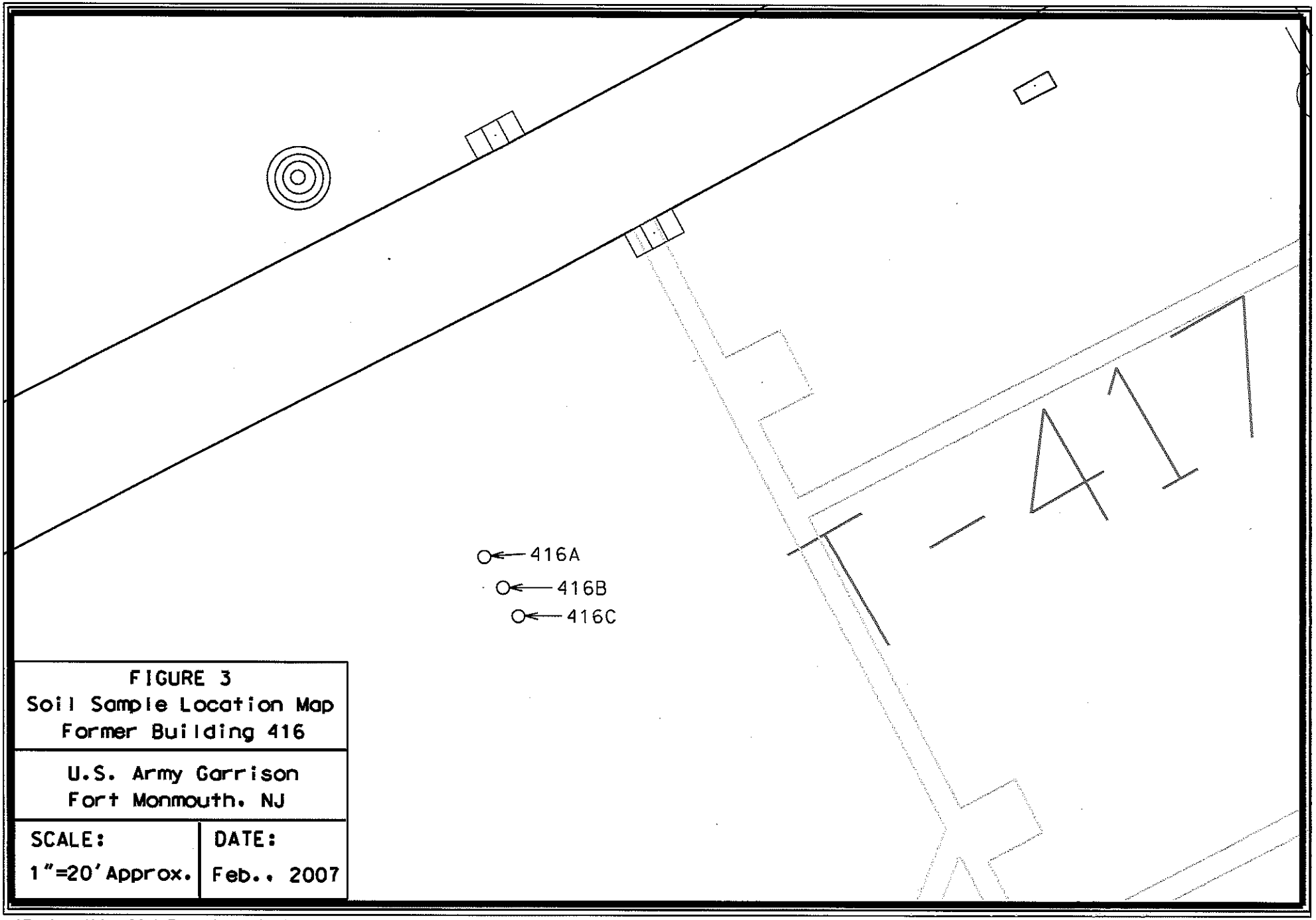



FIGURE 3
Soil Sample Location Map
Former Building 416

U.S. Army Garrison
Fort Monmouth, NJ

| SCALE: | DATE: |
|---|---|
| 1"=20' Approx. | Feb., 2007 |

...\Projects\bim_MainPost.dgn 2/20/2007 1:03:45 PM

# TABLES

# TABLE 1

## SUMMARY OF LABORATORY ANALYSIS

**FT. MONMOUTH, BUILDING 416, UST No. 90010-32**
**13 December 2005**

| SAMPLE ID | LABORATORY SAMPLE ID | SAMPLE DATE | SAMPLE MATRIX | ANALYTICAL PARAMETER | ANALYTICAL METHOD |
|---|---|---|---|---|---|
| **416-A** | 5063901 | 13-Dec-05 | SOIL | TPH | OQA-QAM-25 |
| **416-B** | 5063902 | 13-Dec-05 | SOIL | TPH | OQA-QAM-25 |
| **416-C** | 5063903 | 13-Dec-05 | SOIL | TPH | OQA-QAM-25 |
| **416-D (dupl. A)** | 5063904 | 13-Dec-05 | SOIL | TPH | OQA-QAM-25 |
| **TRIP BLANK** | 5063905 | 13-Dec-05 | METHANOL | VOA | SW-846, 8260 |
| **416-Groundwater** | 5063906 | 13-Dec-05 | AQUEOUS | VOA, SVOA | SW-846, 8260<br>SW-846, 8270 |
| **TRIP BLANK** | 5063907 | 13-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 416, UST No. 90010-32**
**13 December 2005**

### TOTAL PETROLEUM HYDROCARBONS

| SAMPLE ID | LABORATORY SAMPLE ID | SAMPLE LOCATION | SAMPLE DEPTH | MATRIX | TPH RESULT S |
|---|---|---|---|---|---|
| | | | (in feet) | | mg/kg |
| 416-A | 5063901 | NORTH END UST | 6.5 – 7.0 | Soil | ND |
| 416-B | 5063902 | CENTER | 6.5 – 7.0 | Soil | ND |
| 416-C | 5063903 | SOUTH END UST | 6.5 – 7.0 | Soil | ND |
| 416-D (dupl. A) | 5063904 | DUPLICATE (NORTH END) | 6.5 – 7.0 | Soil | ND |
| Trip Blank | 5063905 | --- | --- | 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

# SUMMARY OF LABORATORY ANALYTICAL RESULTS-GROUNDWATER

**FT. MONMOUTH, BUILDING 416, UST No. 90010-32**

**13 December 2005**

## VOLATILE ORGANIC COMPOUNDS, SEMI-VOLATILE ORGANIC COMPOUNDS

| SAMPLE ID | LAB SAMPLE ID | Benzene | Toluene | Ethyl-benzene | Total Xylenes | SVOA |
|---|---|---|---|---|---|---|
| | UNITS | ug/L | ug/L | ug/L | ug/L | ug/L |
| **416-Groundwater** | 5063106 | ND | ND | ND | ND | ND |
| **Trip Blank** | 5063105 | ND | ND | ND | ND | ND |
| **Trip Blank** | 5063107 | ND | ND | ND | ND | ND |
| **NJDEP Criteria** | Ground Water Quality Crireria | 1 | 1,000 | 700 | 40 | -- |

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 416

Facility Street Address: Apex Avenue

Municipality: Oceanport County: Fort 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 Avenue City: Fort 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: 90010-32 (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: Fort Monmouth

State: NJ Zip: 07703 Telephone Number: (732) 532-2577

(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

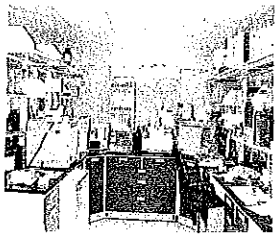
# FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

**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. 416

**Bldg. 416**

| Field Sample Location | Laboratory Sample ID# | Matrix | Date and Time of Collection | Date Received |
|---|---|---|---|---|
| 416-A, North End | 5063901 | Soil | 13-Dec-05 10:05 | 12/13/05 |
| 416-B, Center | 5063902 | Soil | 13-Dec-05 11:00 | 12/13/05 |
| 416-C, South End | 5063903 | Soil | 13-Dec-05 11:45 | 12/13/05 |
| 416-D, (Duplicate) | 5063904 | Soil | 13-Dec-05 10:05 | 12/13/05 |
| Trip Blank | 5063905 | Methanol | 13-Dec-05 | 12/13/05 |
| 416-Groundwater | 5063906 | Aqueous | 13-Dec-05 11:55 | 12/13/05 |
| Trip Blank | 5063907 | Aqueous | 13-Dec-05 | 12/13/05 |

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

12-30-05
Daniel Wright/Date
Laboratory Director

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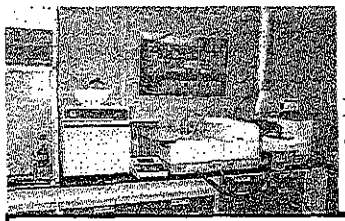
# CHAIN OF CUSTODY



# Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

## Chain of Custody Record

Customer: JOHN McCARTHY | Project No: 06-34880 | Location: (FORMER) BLDG. 416 UST

Phone: X

( )DERA ( )OMA (X)Other: _____

Samplers Name / Company: FRANK ACCORSI / TVS

| LIMS/Work Order # | Sample Location | Date | Time | Sample Type | # bottles | TPH | VO+10 | BN+15 | | | | DDTH(ET) | VOA # | Remarks / Preservation Method |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Analysis Parameters | | | | | | | | Comments: |
| 506039 01 | 416-A, NORTH END | 12-13-05 | 1005 | SOIL | 2 | X | * | | | | | | 4369 | ICE |
| 02 | 416-B, CENTER | | 1100 | | | X | * | | | | | | 4370 | |
| 03 | 416-C, SOUTH END | | 1145 | | | X | * | | | | | | 4371 | |
| 04 | 416-D, DUPLICATE | | 1005 | | | X | * | | | | | | 4372 | |
| 05 | TRIP BLANK | | — | MeOH | 1 | | X | | | | | | 4373 | |
| 06 | 416 - GROUNDWATER | | 1155 | AQ | 3 | | X | X | | | | | — | |
| 07 | TRIP BLANK | | — | AQ. | 1 | | X | | | | | | — | |

| Relinquished by (signature): | Date/Time: | Received by (signature): | Relinquished by (signature): | Date/Time: | Received by (signature): |
|---|---|---|---|---|---|
| Frank Accorsi | 12-13-05 1317 | J. Allyn | | | |
| Relinquished by (signature): | Date/Time: | Received by (signature): | Relinquished by (signature): | Date/Time: | Received by (signature): |
| | | | | | |

Report Type: (_)Full, (X)Reduced, ( )Standard, (_)Screen / non-certified, (_)EDD

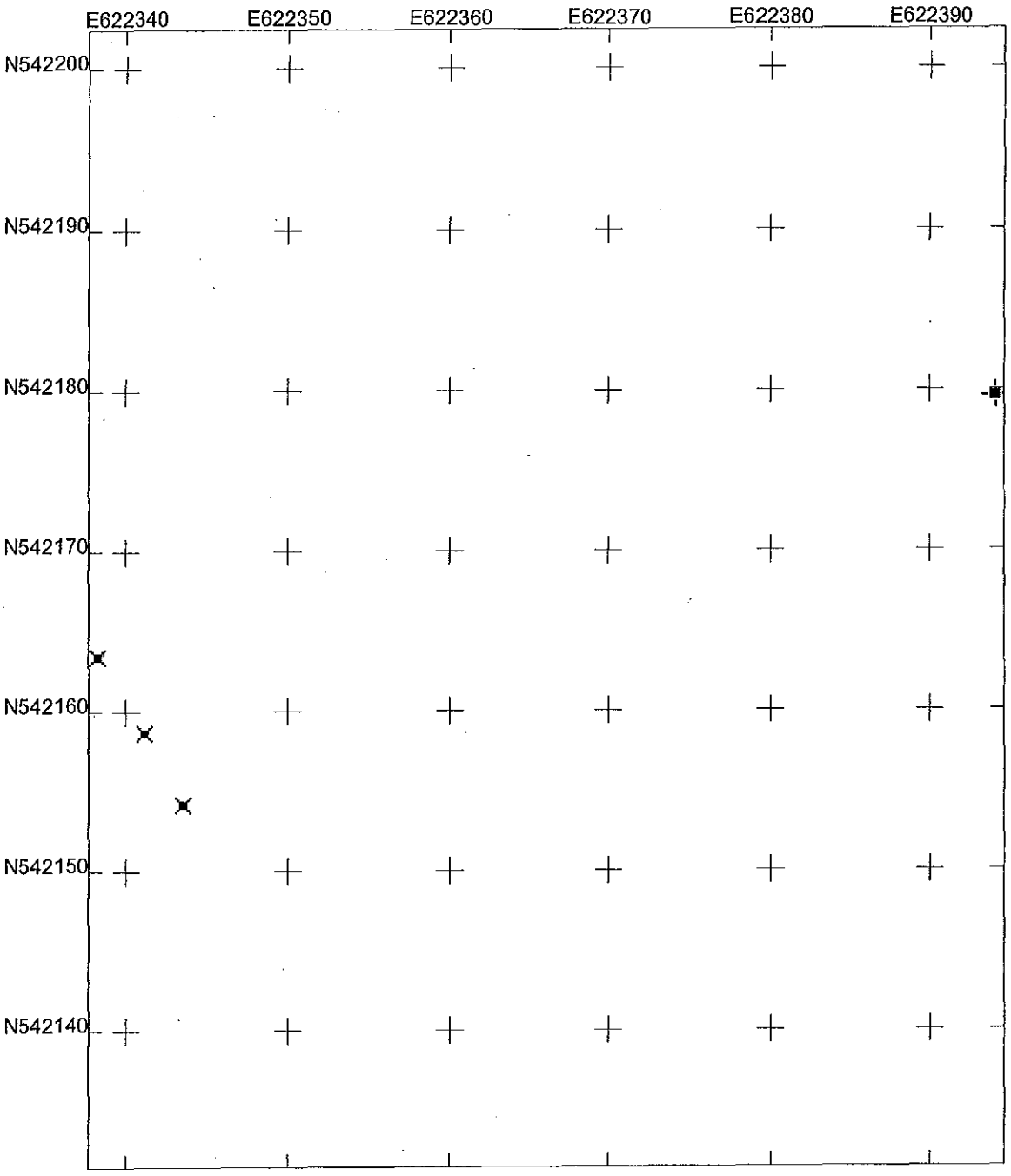
Turnaround time: (X)Standard 3 wks, ( )Rush ___ Days, (_)ASAP Verbal ___ Hrs.

Remarks: * VO+10 ON 25% > 4000 PPM TPH, ON HIGHEST, MIN. ONE

print legibly



COC.XLS9/16/2005




# U.S. Army - Ft. Monmouth (former)Bldg. 416 UST Soil Sample GPS Map

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

N

Scale 1:125

0 0.003

Miles

BLDG416.cor
12/20/2005
GPS Pathfinder
Trimble

**U.S. ARMY - FT. MONMOUTH, NJ**

**(former)BLDG. 416 UST**
**SOIL SAMPLE GPS POSITIONS & COORDINATES**

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

(IN US SURVEY FEET)

**SAMPLE POINTS**

| POSITION/DESCRIPTION | Y COORDINATE (NORTHING) | X COORDINATE (EASTING) |
|---|---|---|
| 416A NORTH END UST | 542163.482 | 622338.195 |
| 416B CENTER UST | 542158.69 | 622341.107 |
| 416C SOUTH END UST | 542154.214 | 622343.493 |

**REFERENCE POINT**

| POSITION/DESCRIPTION | Y COORDINATE (NORTHING) | X COORDINATE (EASTING) |
|---|---|---|
| BLDG417 SW CORNER | 542179.639 | 622394.126 |

# 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 as 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

# Laboratory Chronicle

**Lab ID:** 50639

**Site:** UST
Bldg. 416

| | Date | Hold Time |
|---|---|---|
| **Date Sampled** | 12/13/05 | 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 |

# 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 N/A
8. Surrogate Recoveries Meet Criteria — yes

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction N/A

   If not met, were the calculations checked and the results qualified as "estimated"? _____
9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — no
   a. VOA Fraction 1,1,1-TCE MS/MSD low Naphthalene MS/MSD low, RPD high
   b. B/N Fraction Benzidine MSD low RPD high
   c. Acid Fraction N/A

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

Indicate
Yes, No, N/A

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

    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 | Yes |
| 2. | Method Blank Contamination – If yes, list the sample and the corresponding concentrations in each blank | NO |
| 3. | Matrix Spike Results Summary Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range) | Yes |
| 4. | Duplicate Results Summary Meet Criteria | Yes |
| 5. | IR Spectra submitted for standards, blanks and samples | NA |
| 6. | Chromatograms submitted for standards, blanks and samples if GC fingerprinting was conducted | Yes |
| 7. | Analysis holding time met (If not met, list number of days exceeded for each sample) | Yes |

Additional comments: _____

Laboratory Manager: _____ Date: 12-30-05

# VOLATILE ORGANICS

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 | Sample Name | MB 14Dec2005 |
| Operator | Skelton | Field ID | MB 14Dec2005 |
| Date Acquired | 14 Dec 2005 2:32 pm | 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



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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB 14Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 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:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

| CAS NO. | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|

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

| | | | |
|---|---|---|---|
| Data File | **VB021060.D** | Sample Name | **5063907** |
| Operator | **Skelton** | Field ID | **Trip Blank** |
| Date Acquired | **15 Dec 2005 6:38 am** | 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



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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063907

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021060.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 |
|---|---|---|---|---|

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

| | | | |
|---|---|---|---|
| Data File | **VB021059.D** | Sample Name | **5063906** |
| Operator | **Skelton** | Field ID | **416-GW** |
| Date Acquired | **15 Dec 2005 5:57 am** | 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: **416-GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Matrix: (soil/water) WATER Lab Sample ID: 5063906

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB021059.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 |
|---|---|---|---|---|

5A

# VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
## BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 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 |

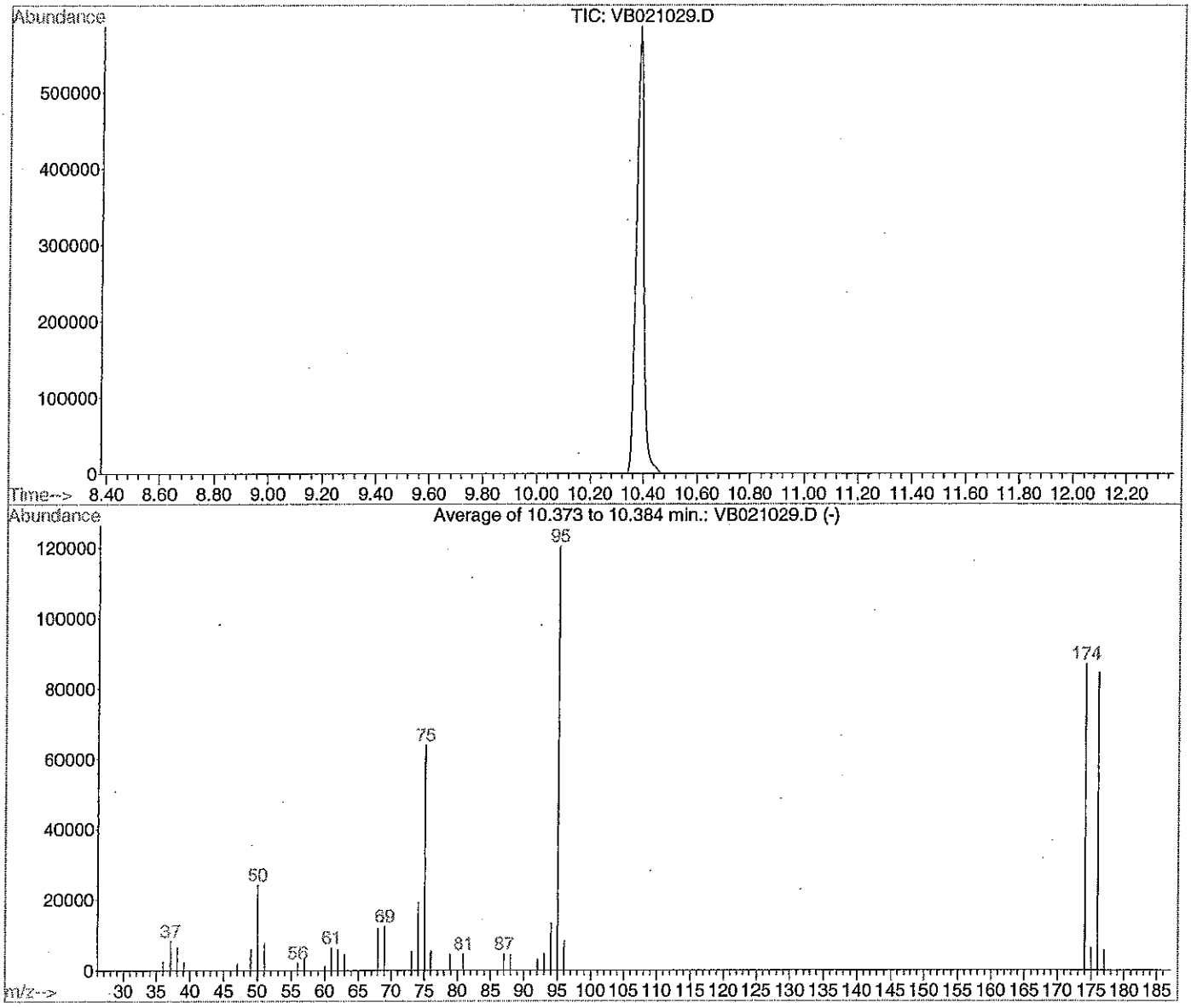
1-Value is % mass 174 2-Value is % mass 176

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 | 416-GW | 5063906 | VB021059.D | 12/15/2005 | 5:57 |
| 08 | TRIP BLANK | 5063907 | VB021060.D | 12/15/2005 | 6:38 |

Data File : C:\HPCHEM\1\DATA\051214\VB021029.D
Acq On : 14 Dec 2005 8:57 am
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: TBA.P
Method : C:\HPCHEM\1\METHODS\M2VO214.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

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




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 |

Response Factor Report GC/MS Ins

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

(#) = Out of Range

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

**MB 14Dec2005**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

Lab File ID: VB021036.D Lab Sample ID: MB 14Dec2005

Date Analyzed: 12/14/2005 Time Analyzed: 14:32

GC Column: RTX502. ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument 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 | 416-GW | 5063906 | VB021059.D | 5:57 |
| 02 | TRIP BLANK | 5063907 | VB021060.D | 6:38 |

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 SDG No.: 06-34880

| | FIELD ID: | SMC1 DCE # | SMC2 TOL # | SMC3 BFB # | TOT OUT |
|---|---|---|---|---|---|
| 01 | MB 14DEC2005 | 80 | 90 | 88 | 0 |
| 02 | 416-GW | 84 | 93 | 88 | 0 |
| 03 | TRIP BLANK | 84 | 94 | 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 | QC Limits % 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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 50639 Location: Bldg41 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 | 416-GW | 337223 | 16.42 | 2338971 | 19.62 | 629492 | 25.65 |
| 03 | TRIP BLANK | 334130 | 16.42 | 2335618 | 19.62 | 632503 | 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

Quantitation Report (QT Reviewed)

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** | | | | | | Qvalue |
| 44) Ethylbenzene | 25.72 | 91 | 10013 | 0.07 | ug/L | 98 |

(#) = qualifier out of range (m) = manual integration



000029

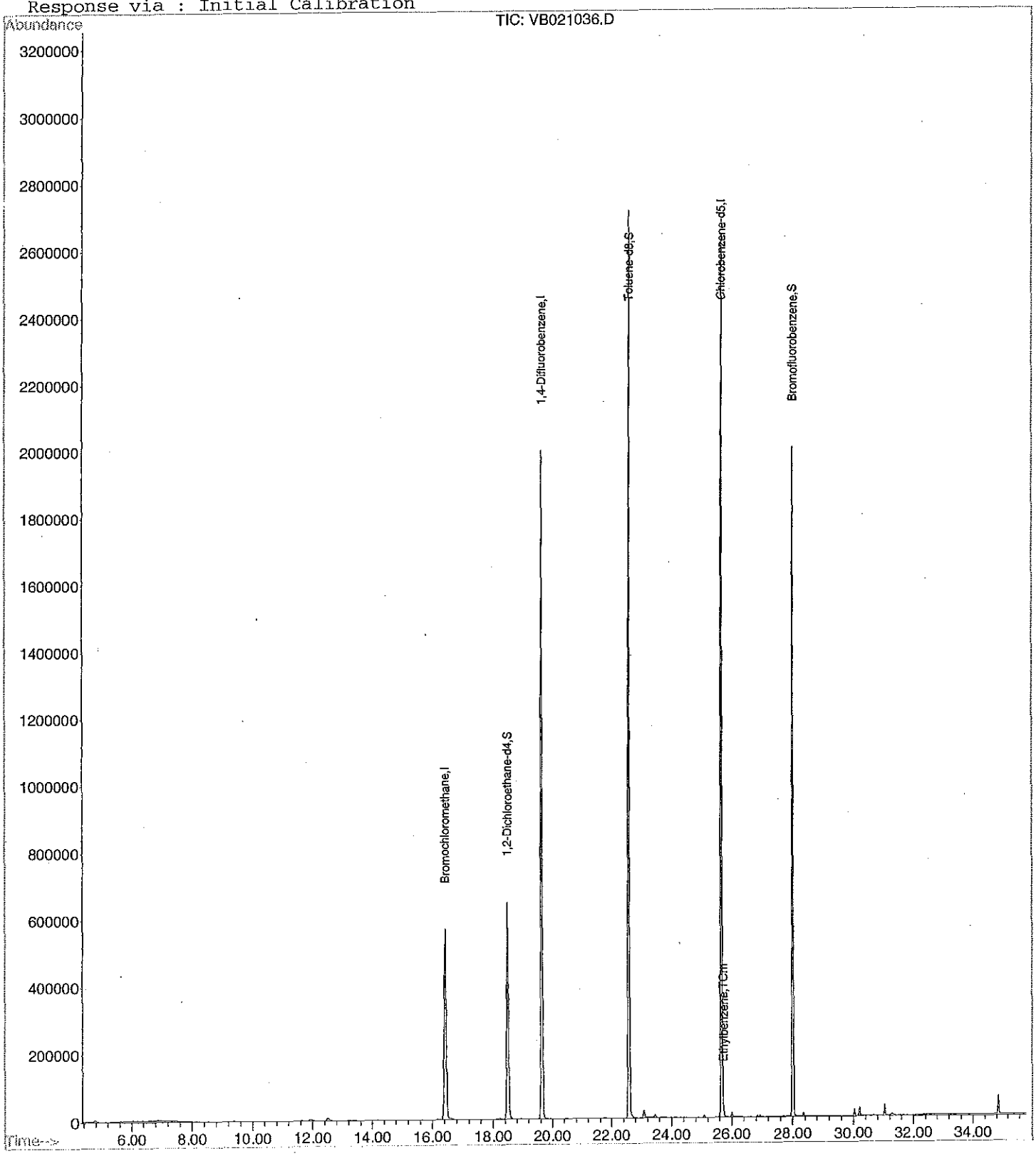
Quantitation Report

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






000030

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051214\VB021060.D Vial: 25
Acq On : 15 Dec 2005 6:38 am Operator: Skelton
Sample : 5063907 Inst : GC/MS Ins
Misc : Trip Blank Multiplr: 1.00
MS Integration Params: TBA.P
Quant Time: Dec 15 7:14 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 | 334130 | 30.00 | ug/L | 0.00 |
| 26) 1,4-Difluorobenzene | 19.62 | 114 | 2335618 | 30.00 | ug/L | 0.00 |
| 37) Chlorobenzene-d5 | 25.65 | 119 | 632503 | 30.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 25) 1,2-Dichloroethane-d4 | 18.47 | 65 | 857146 | 25.21 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 84.03% | | | |
| 35) Toluene-d8 | 22.57 | 98 | 2595659 | 28.13 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 93.77% | | | |
| 49) Bromofluorobenzene | 27.99 | 95 | 912146 | 26.22 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 87.40% | | | |

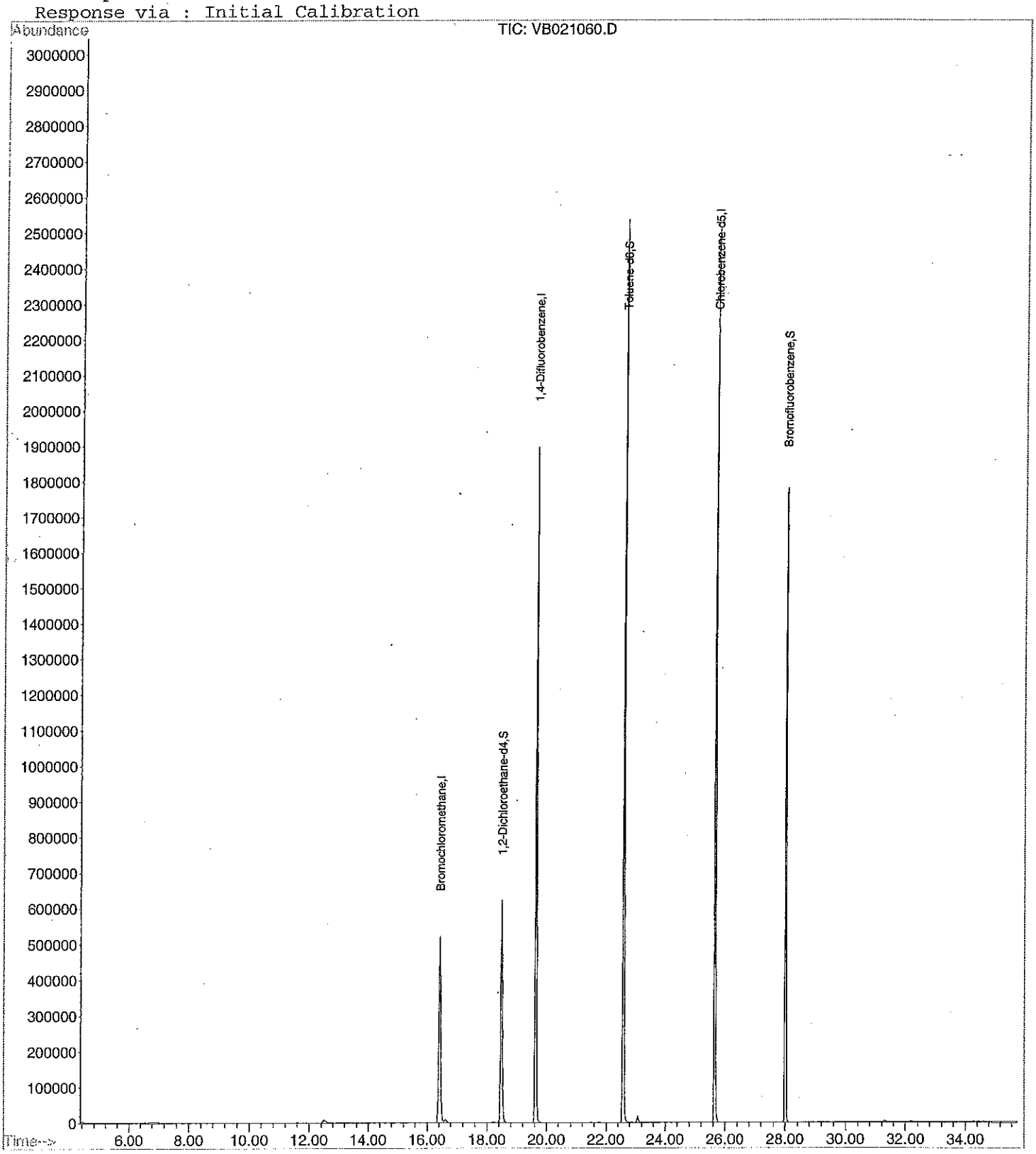
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051214\VB021060.D Vial: 25
Acq On : 15 Dec 2005 6:38 am Operator: Skelton
Sample : 5063907 Inst : GC/MS Ins
Misc : Trip Blank Multiplr: 1.00
MS Integration Params: TBA.P
Quant Time: Dec 15 7:14 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






000032

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051214\VB021059.D Vial: 24
Acq On : 15 Dec 2005 5:57 am Operator: Skelton
Sample : 5063906 Inst : GC/MS Ins
Misc : 416-GW Multiplr: 1.00
MS Integration Params: TBA.P
Quant Time: Dec 15 6:33 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 | 337223 | 30.00 | ug/L | 0.00 |
| 26) 1,4-Difluorobenzene | 19.62 | 114 | 2338971 | 30.00 | ug/L | 0.00 |
| 37) Chlorobenzene-d5 | 25.65 | 119 | 629492 | 30.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 25) 1,2-Dichloroethane-d4 | 18.47 | 65 | 864574 | 25.20 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 84.00% | | | |
| 35) Toluene-d8 | 22.57 | 98 | 2584883 | 27.97 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 93.23% | | | |
| 49) Bromofluorobenzene | 28.00 | 95 | 913301 | 26.38 | ug/L | 0.00 |
| Spiked Amount 30.000 | Range 70 - 120 | | Recovery = 87.93% | | | |

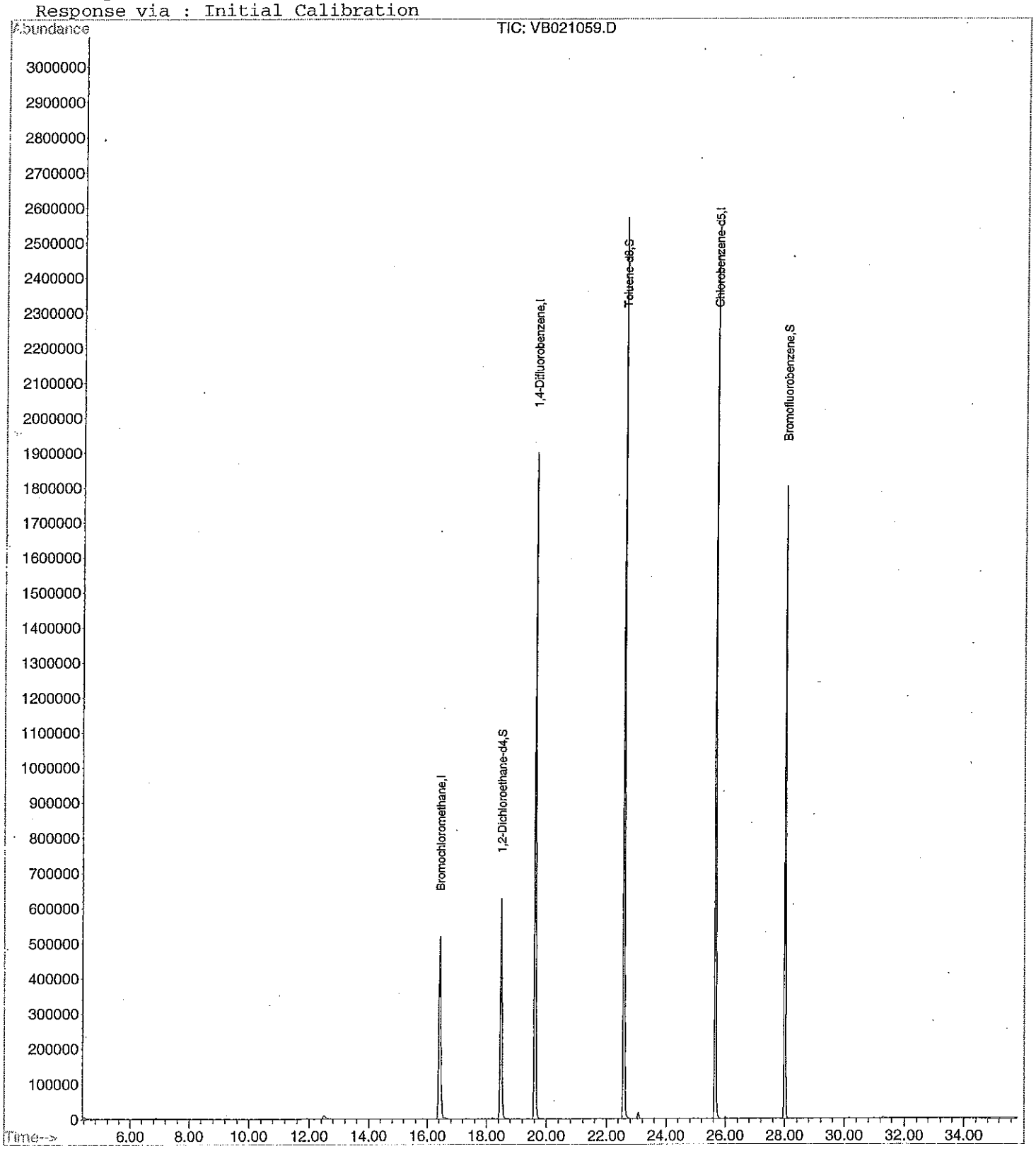
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051214\VB021059.D Vial: 24
Acq On : 15 Dec 2005 5:57 am Operator: Skelton
Sample : 5063906 Inst : GC/MS Ins
Misc : 416-GW Multiplr: 1.00
MS Integration Params: TBA.P
Quant Time: Dec 15 6:33 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






000034

# SEMI-VOLATILE ORGANICS

# Semi-Volatile Analysis Report

## U.S. Army, Fort Monmouth Environmental Laboratory

## NJDEP Certification #13461

| | | | |
|---|---|---|---|
| Data File Name | **BNA11411.D** | Sample Name | **MB-121505-01** |
| Operator | **BPatel** | Misc Info | **MB-121505-01** |
| Date Acquired | **19-Dec-05** | 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
## Page 2

| | | | |
|---|---|---|---|
| Data File Name | **BNA11411.D** | Sample Name | **MB-121505-01** |
| Operator | **BPatel** | Misc Info | **MB-121505-01** |
| Date Acquired | **19-Dec-05** | 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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**MB-121505-01**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: BI.416 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: 12/13/2005

% 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 |
|---|---|---|---|---|

# Semi-Volatile Analysis Report

## U.S. Army, Fort Monmouth Environmental Laboratory

## NJDEP Certification #13461

| | | | |
|---|---|---|---|
| Data File Name | **BNA11414.D** | Sample Name | **5063906** |
| Operator | **BPatel** | Misc Info | **416-Ground Water** |
| Date Acquired | **19-Dec-05** | Sample Multiplier | **1.428571** |

| CAS# | Name | R.T. | Response | Result | Regulatory Level (ug/L)* | MDL | RL | | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| 110-86-1 | Pyridine | | | not detected | NLE | 1.61 | 14.29 | ug/L | |
| 62-75-9 | N-nitroso-dimethylamine | | | not detected | 20 | 0.86 | 14.29 | ug/L | |
| 62-53-3 | Aniline | | | not detected | NLE | 3.40 | 14.29 | ug/L | |
| 111-44-4 | bis(2-Chloroethyl)ether | | | not detected | 10 | 1.01 | 14.29 | ug/L | |
| 541-73-1 | 1,3-Dichlorobenzene | | | not detected | 600 | 1.46 | 14.29 | ug/L | |
| 106-46-7 | 1,4-Dichlorobenzene | | | not detected | 75 | 1.41 | 14.29 | ug/L | |
| 100-51-6 | Benzyl alcohol | | | not detected | NLE | 0.94 | 14.29 | ug/L | |
| 95-50-1 | 1,2-Dichlorobenzene | | | not detected | 600 | 1.37 | 14.29 | ug/L | |
| 39638-32-9 | bis(2-chloroisopropyl)ether | | | not detected | 300 | 1.26 | 14.29 | ug/L | |
| 621-64-7 | n-Nitroso-di-n-propylamine | | | not detected | 20 | 1.09 | 14.29 | ug/L | |
| 67-72-1 | Hexachloroethane | | | not detected | 10 | 1.37 | 14.29 | ug/L | |
| 98-95-3 | Nitrobenzene | | | not detected | 10 | 1.23 | 14.29 | ug/L | |
| 78-59-1 | Isophorone | | | not detected | 100 | 1.09 | 14.29 | ug/L | |
| 111-91-1 | bis(2-Chloroethoxy)methane | | | not detected | NLE | 1.13 | 14.29 | ug/L | |
| 120-82-1 | 1,2,4-Trichlorobenzene | | | not detected | 9 | 1.27 | 14.29 | ug/L | |
| 91-20-3 | Naphthalene | | | not detected | NLE | 1.09 | 14.29 | ug/L | |
| 106-47-8 | 4-Chloroaniline | | | not detected | NLE | 1.96 | 14.29 | ug/L | |
| 87-68-3 | Hexachlorobutadiene | | | not detected | 1 | 1.41 | 14.29 | ug/L | |
| 91-57-6 | 2-Methylnaphthalene | | | not detected | NLE | 1.44 | 14.29 | ug/L | |
| 77-47-4 | Hexachlorocyclopentadiene | | | not detected | 50 | 1.31 | 14.29 | ug/L | |
| 91-58-7 | 2-Chloronaphthalene | | | not detected | NLE | 1.03 | 14.29 | ug/L | |
| 88-74-4 | 2-Nitroaniline | | | not detected | NLE | 1.10 | 14.29 | ug/L | |
| 131-11-3 | Dimethylphthalate | | | not detected | 7000 | 1.11 | 14.29 | ug/L | |
| 208-96-8 | Acenaphthylene | | | not detected | NLE | 0.96 | 14.29 | ug/L | |
| 606-20-2 | 2,6-Dinitrotoluene | | | not detected | NLE | 1.01 | 14.29 | ug/L | |
| 99-09-2 | 3-Nitroaniline | | | not detected | NLE | 1.69 | 14.29 | ug/L | |
| 83-32-9 | Acenaphthene | | | not detected | 400 | 1.04 | 14.29 | ug/L | |
| 132-64-9 | Dibenzofuran | | | not detected | NLE | 0.99 | 14.29 | ug/L | |
| 121-14-2 | 2,4-Dinitrotoluene | | | not detected | 10 | 1.16 | 14.29 | ug/L | |
| 84-66-2 | Diethylphthalate | | | not detected | 5000 | 1.37 | 14.29 | ug/L | |
| 86-73-7 | Fluorene | | | not detected | 300 | 1.01 | 14.29 | ug/L | |
| 7005-72-3 | 4-Chlorophenyl-phenylether | | | not detected | NLE | 1.04 | 14.29 | ug/L | |
| 100-01-6 | 4-Nitroaniline | | | not detected | NLE | 1.59 | 14.29 | ug/L | |
| 86-30-6 | n-Nitrosodiphenylamine | | | not detected | 20 | 0.89 | 14.29 | ug/L | |
| 103-33-3 | Azobenzene | | | not detected | NLE | 1.03 | 14.29 | ug/L | |
| 101-55-3 | 4-Bromophenyl-phenylether | | | not detected | NLE | 1.31 | 14.29 | ug/L | |
| 118-74-1 | Hexachlorobenzene | | | not detected | 10 | 1.36 | 14.29 | ug/L | |
| 85-01-8 | Phenanthrene | | | not detected | NLE | 1.16 | 14.29 | ug/L | |
| 120-12-7 | Anthracene | | | not detected | 2000 | 1.09 | 14.29 | ug/L | |
| 84-74-2 | Di-n-butylphthalate | | | not detected | 900 | 1.31 | 14.29 | ug/L | |
| 206-44-0 | Fluoranthene | | | not detected | 300 | 1.17 | 14.29 | ug/L | |

# Semi-Volatile Analysis Report
## Page 2

| | | | |
|---|---|---|---|
| Data File Name | **BNA11414.D** | Sample Name | **5063906** |
| Operator | **BPatel** | Misc Info | **416-Ground Water** |
| Date Acquired | **19-Dec-05** | Sample Multiplier | **1.428571** |

| CAS# | Name | R.T. | Response | Result | Regulatory Level (ug/L)* | MDL | RL | | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|
| 92-87-5 | Benzidine | | | not detected | 50 | 1.40 | 14.29 | ug/L | |
| 129-00-0 | Pyrene | | | not detected | 200 | 1.13 | 14.29 | ug/L | |
| 85-68-7 | Butylbenzylphthalate | | | not detected | 100 | 1.23 | 14.29 | ug/L | |
| 56-55-3 | Benzo[a]anthracene | | | not detected | 10 | 1.17 | 14.29 | ug/L | |
| 91-94-1 | 3,3'-Dichlorobenzidine | | | not detected | 60 | 1.87 | 14.29 | ug/L | |
| 218-01-9 | Chrysene | | | not detected | 20 | 1.10 | 14.29 | ug/L | |
| 117-81-7 | bis(2-Ethylhexyl)phthalate | | | not detected | 30 | 1.83 | 14.29 | ug/L | |
| 117-84-0 | Di-n-octylphthalate | | | not detected | 100 | 1.46 | 14.29 | ug/L | |
| 205-99-2 | Benzo[b]fluoranthene | | | not detected | 10 | 1.40 | 14.29 | ug/L | |
| 207-08-9 | Benzo[k]fluoranthene | | | not detected | 2 | 1.31 | 14.29 | ug/L | |
| 50-32-8 | Benzo[a]pyrene | | | not detected | 20 | 1.01 | 14.29 | ug/L | |
| 193-39-5 | Indeno[1,2,3-cd]pyrene | | | not detected | 20 | 1.09 | 14.29 | ug/L | |
| 53-70-3 | Dibenz[a,h]anthracene | | | not detected | 20 | 1.09 | 14.29 | ug/L | |
| 191-24-2 | Benzo[g,h,i]perylene | | | not detected | NLE | 1.14 | 14.29 | 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
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time
RL= Reporting Limit. The values between the MDL and RL are considered estimated.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**416-Gr. Water**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 5063906

Sample wt/vol: 700 (g/ml) ML Lab File ID: BNA11414.D

Level: (low/med) LOW Date Received: 12/13/2005

% 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: _____

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

| CAS NUMBER | COMPOUND NAME | RT | EST. CONC. | Q |
|---|---|---|---|---|

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 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 |

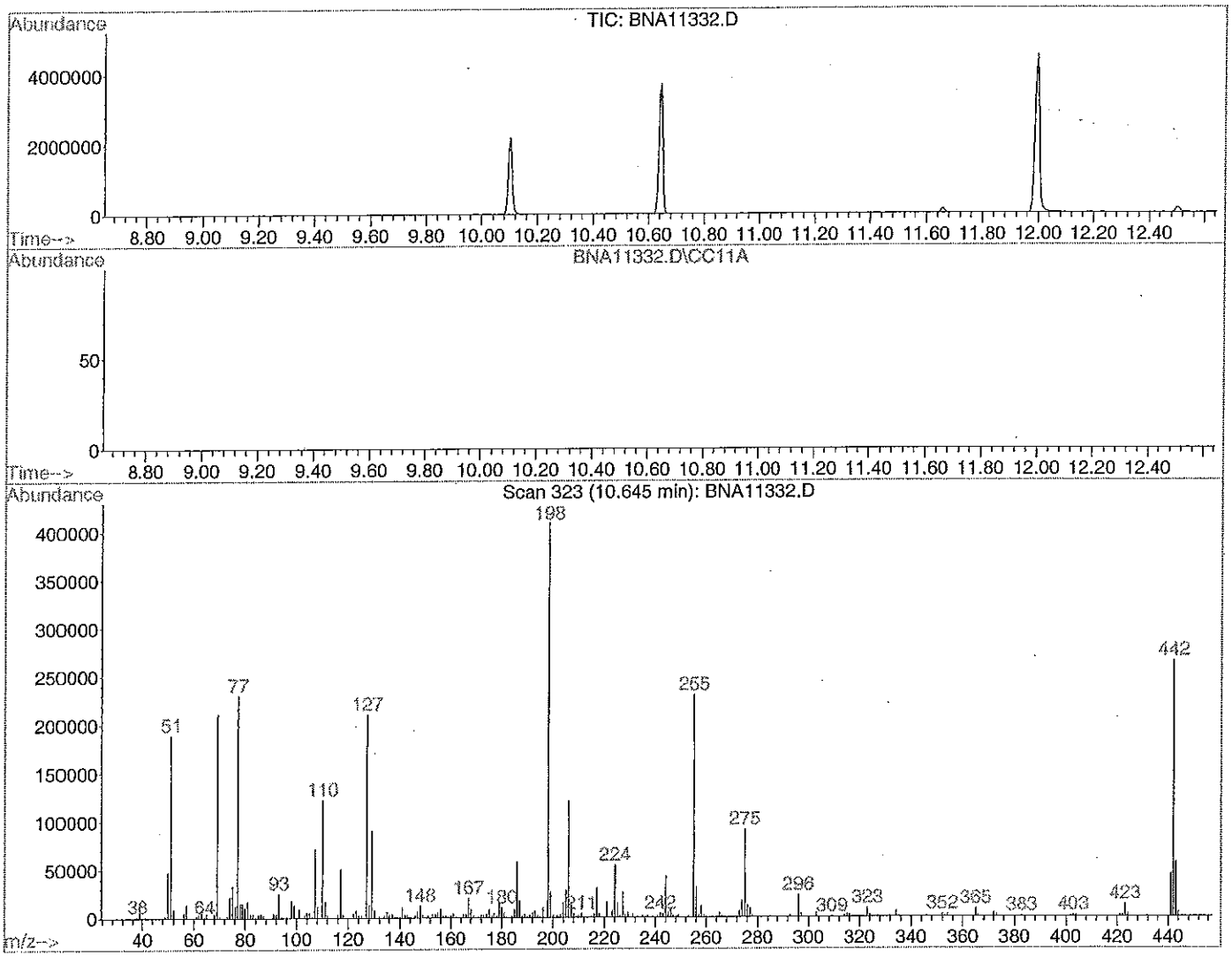
1-Value is % mass 69 2-Value is % mass 442

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 |

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 |
|---|---|---|---|---|---|---|---|---|---|
| 1) | I | 1,4-Dichlorobenzene-d | ----------ISTD---------- | | | | | | |
| 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 |
| 19) | I | Naphthalene-d8 | ----------ISTD---------- | | | | | | |
| 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 |
| 34) | I | Acenaphthene-d10 | ----------ISTD---------- | | | | | | |
| 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 |
| 54) | I | Phenanthrene-d10 | ----------ISTD---------- | | | | | | |

(#) = Out of Range

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 |

(#) = Out of Range

5B

# SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
# DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 SDG No.:

Lab File ID: BNA11409.D DFTPP Injection Date: 12/19/2005

Instrument ID: GC_BNA_2 DFTPP Injection Time: 9:38

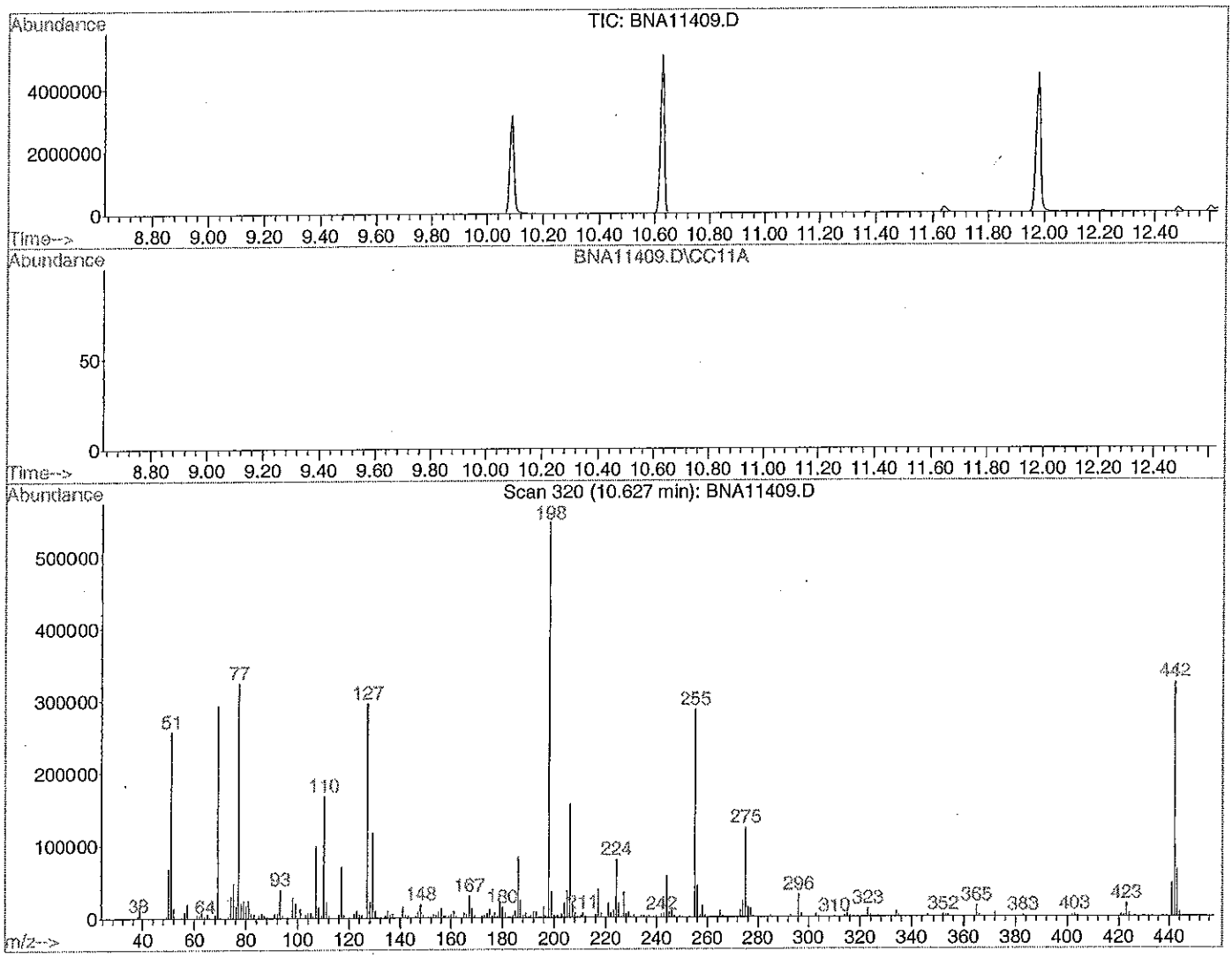
| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 51 | 30.0 - 80.0% of mass 198 | 47.0 |
| 68 | Less than 2.0% of mass 69 | 0.9 ( 1.6)1 |
| 69 | Mass 69 Relative abundance | 53.7 |
| 70 | Less than 2.0% of mass 69 | 0.2 ( 0.5)1 |
| 127 | 25.0 - 75.0% of mass 198 | 54.2 |
| 197 | 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 | 416-GR. WATER | 5063906 | BNA11414.D | 12/19/2005 | 13:11 |

Data File : C:\HPCHEM\1\DATA\051219\BNA11409.D Vial: 99
Acq On : 19 Dec 2005 9:38 am Operator: BPatel
Sample : DFTPP 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  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) |
|---|---|---|---|---|---|---|---|
| 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



000048

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 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0

4B

EPA SAMPLE NO.

SEMIVOLATILE METHOD BLANK SUMMARY

**MB-121505-01**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 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 | 416-GR. WATER | 5063906 | BNA11414.D | 12/19/2005 |

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 SDG No.: _____

| | EPA SAMPLE NO. | S1 NBZ # | S2 2FP # | S3 TPL # | TOT OUT |
|---|---|---|---|---|---|
| 01 | MB-121505-01 | 63 | 55 | 86 | 0 |
| 02 | 416-GR. WATE | 66 | 61 | 59 | 0 |

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 | MS Sample ID: | 4404GW1MS |
| MSD Lab ID: | 5060603MSD | MSD Sample ID: | 4404GW1MSD |
| Matrix: | Aqueous | Sample File ID: | BNA11366.D |
| Date Extracted: | 11/21/05 | MS File ID: | BNA11367.D |
| Date Analyzed: | 11/25/05 | 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 | MS Sample ID: | 5060603MS |
| MSD Lab ID: | 5060603MSD | MSD Sample ID: | 5060603MSD |
| Matrix: | Aqueous | Sample File ID: | BNA11366.D |
| Date Extracted: | 11/21/05 | MS File ID: | BNA11367.D |
| Date Analyzed: | 11/25/05 | 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 | | | |



**Qualifiers :**

| | |
|---|---|
| ** | % Recovery is Outside QC Limits |
| ^ | % RPD is Outside QC Limits |

**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 |
|---|---|---|---|---|---|
| 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 | |



**Qualifiers :**

** **% Recovery is Outside QC Limits**

**Note:** **D = Detected.**

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: Bl.416 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 | 416-GR. WATER | 672604 | 10.37 | 2468526 | 13.30 | 1477420 | 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

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 50639 Location: BI.416 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 | 416-GR. WAT | 2622681 | 21.10 | 1977253 | 27.51 | 1402331 | 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

Quantitation Report (QT Reviewed)

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

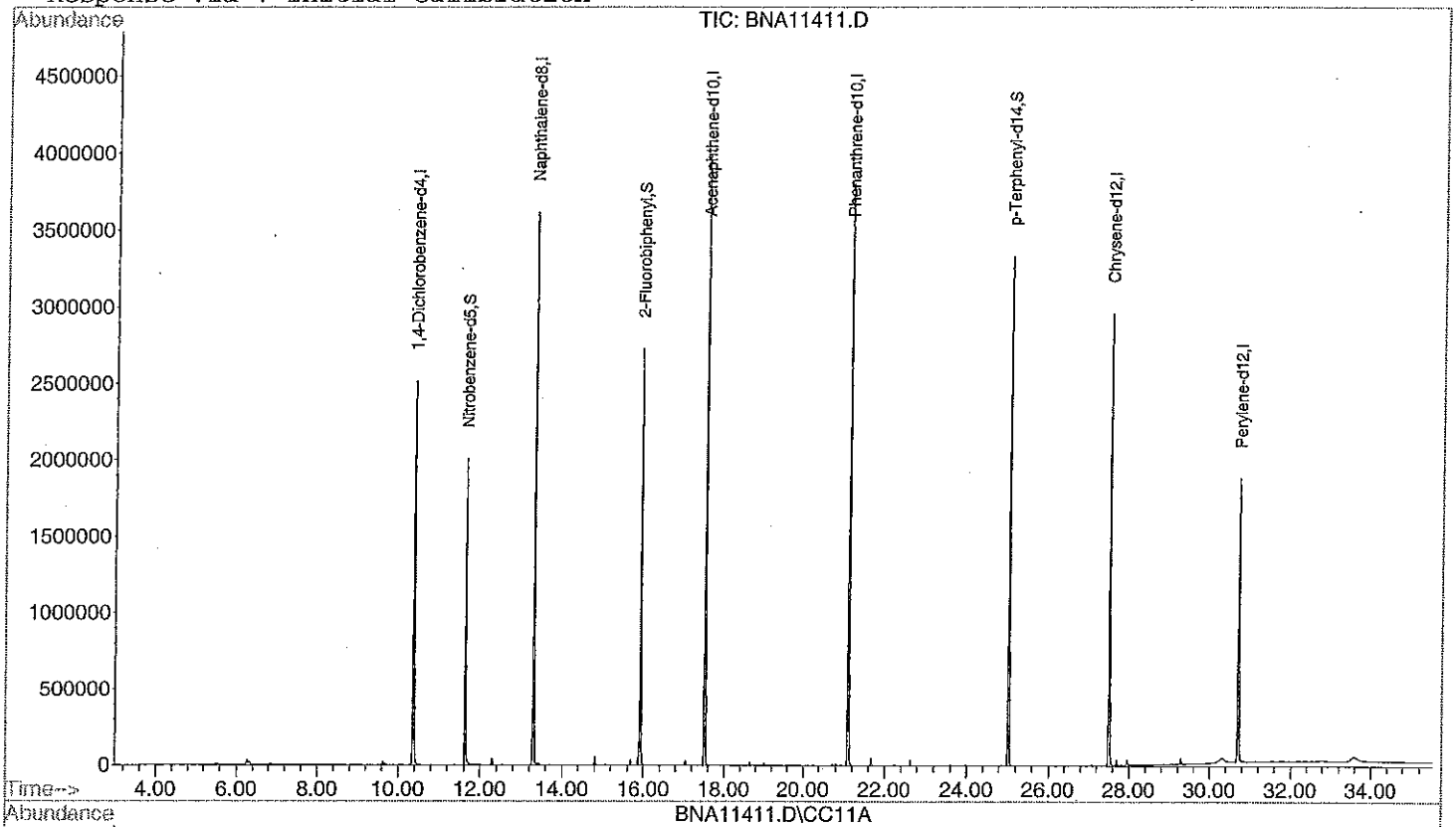
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) 1,4-Dichlorobenzene-d4 | 10.37 | 152 | 647477 | 40.00 | ug/L | -0.02 |
| 19) Naphthalene-d8 | 13.30 | 136 | 2433028 | 40.00 | ug/L | -0.03 |
| 34) Acenaphthene-d10 | 17.52 | 164 | 1470401 | 40.00 | 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% | | |

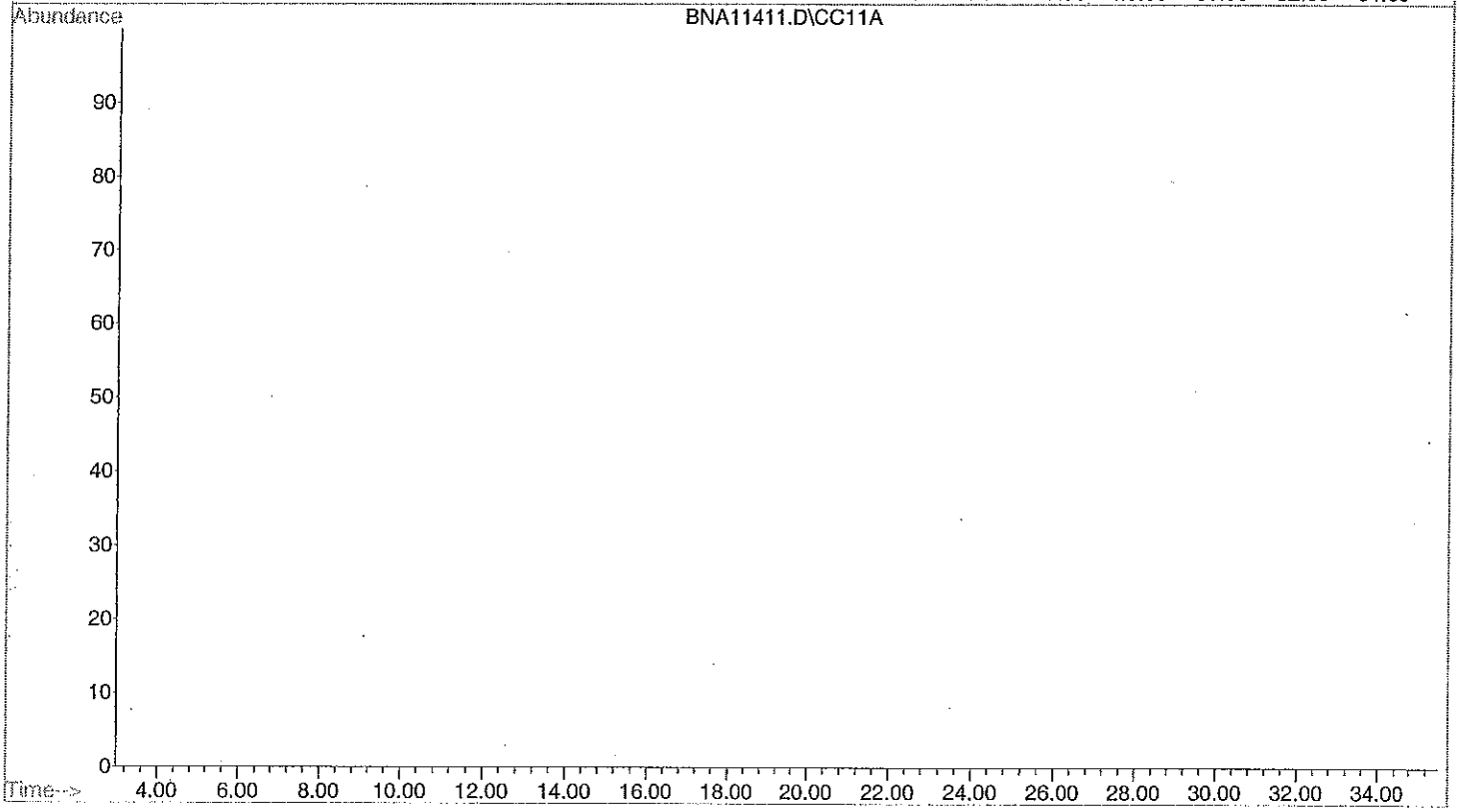
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

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

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






000059

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051219\BNA11414.D Vial: 4
Acq On : 19 Dec 2005 1:11 pm Operator: BPatel
Sample : 5063906 Inst : GC/MS Ins
Misc : 416-Ground Water 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 | 672604 | 40.00 | ug/L | -0.02 |
| 19) Naphthalene-d8 | 13.30 | 136 | 2468526 | 40.00 | ug/L | -0.02 |
| 34) Acenaphthene-d10 | 17.51 | 164 | 1477420 | 40.00 | ug/L | -0.02 |
| 54) Phenanthrene-d10 | 21.10 | 188 | 2622681 | 40.00 | ug/L | -0.02 |
| 66) Chrysene-d12 | 27.51 | 240 | 1977253 | 40.00 | ug/L | -0.04 |
| 75) Perylene-d12 | 30.71 | 264 | 1402331 | 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 | 1185134 | 32.93 | ug/L | -0.02 |
| Spiked Amount 50.000 | Range 40 - 110 | | Recovery = 65.86% | | | |
| 38) 2-Fluorobiphenyl | 15.92 | 172 | 1471355 | 30.58 | ug/L | -0.02 |
| Spiked Amount 50.000 | Range 50 - 110 | | Recovery = 61.16% | | | |
| 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 | 1233674 | 29.66 | ug/L | -0.02 |
| Spiked Amount 50.000 | Range 50 - 135 | | Recovery = 59.32% | | | |

Target Compounds Qvalue

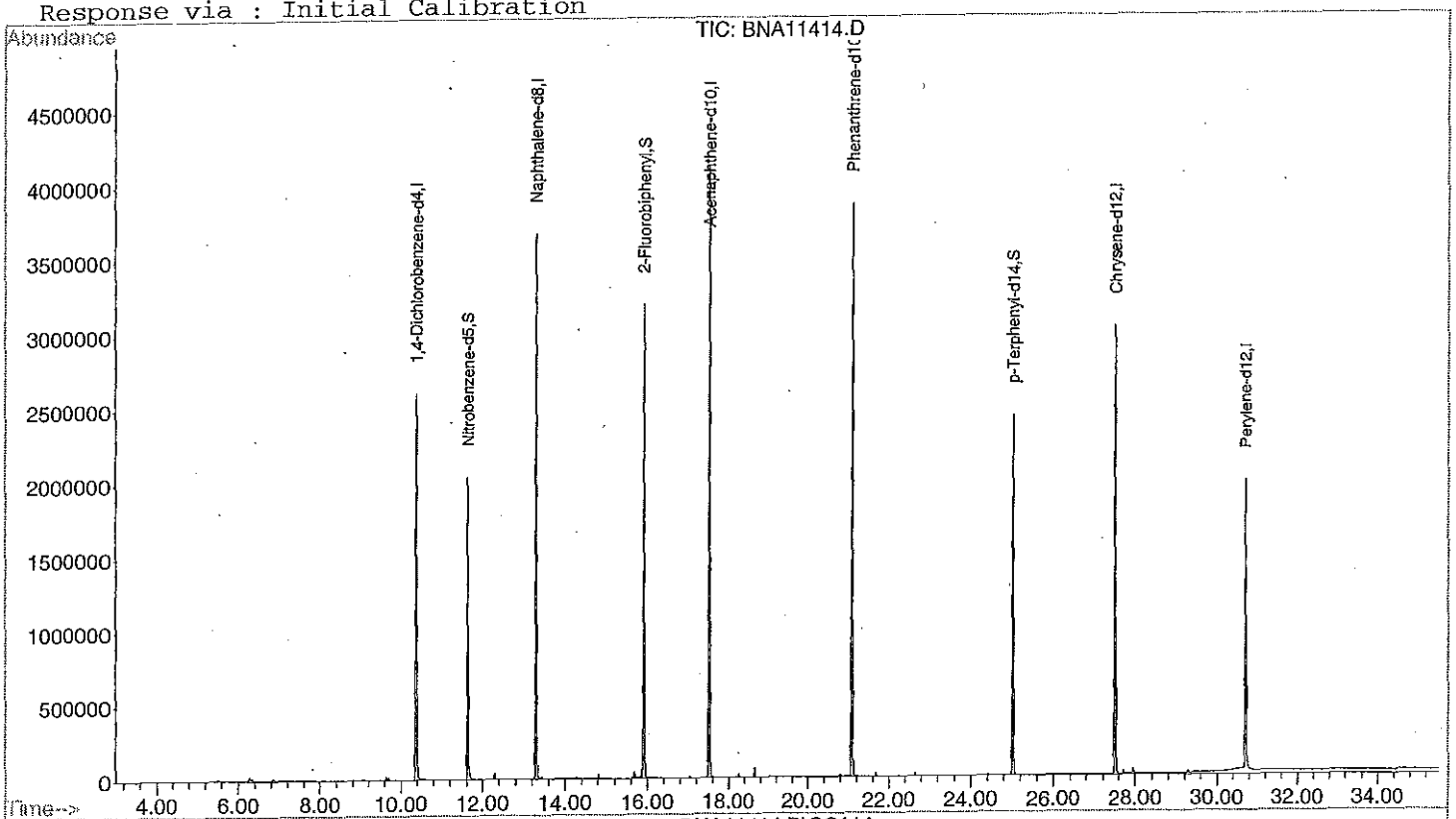
(#) = qualifier out of range (m) = manual integration

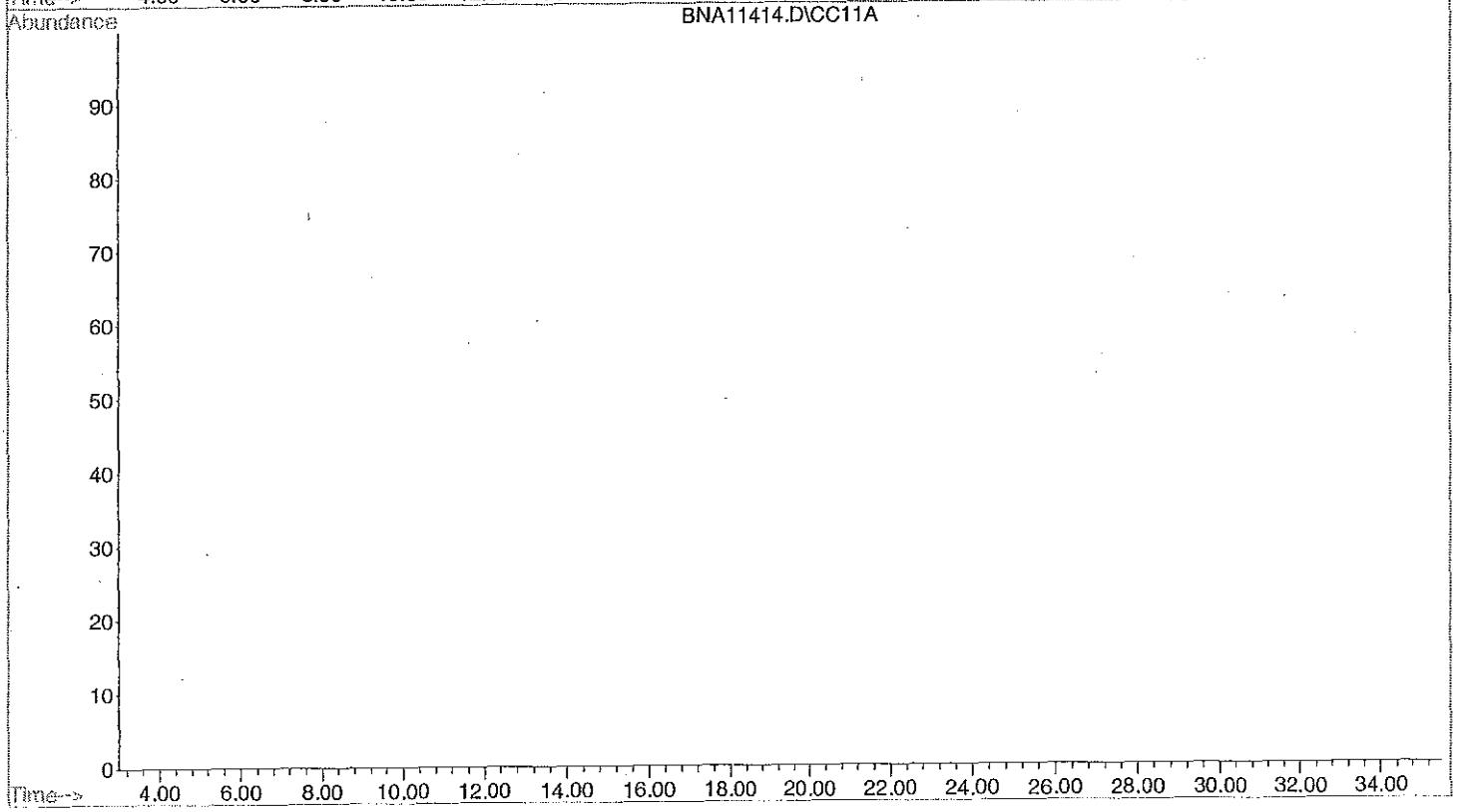
Quantitation Report

Data File : C:\HPCHEM\1\DATA\051219\BNA11414.D
Acq On : 19 Dec 2005 1:11 pm
Sample : 5063906
Misc : 416-Ground Water
MS Integration Params: ODD.P
Quant Time: Dec 19 15:31 2005

Vial: 4
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






000061

# TPHC

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

| | | | |
|---|---|---|---|
| **Client :** | U.S. Army | **Project # :** | 50639 |
| | DPW. SELFM-PW-EV | **Location :** | Bldg.416 |
| | Bldg. 173 | **UST Reg. # :** | |
| | Ft. Monmouth, NJ 07703 | | |
| **Analysis :** | OQA-QAM-025 | **Date Received :** | 13-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 |

| Lab ID | Field ID | Dilution Factor | Weight (g) | % Solid | MDL (mg/kg) | RL | TPHC Result (mg/kg) |
|---|---|---|---|---|---|---|---|
| 5063901 | 416-A | 1.00 | 15.78 | 78.90 | 77 | 402 | ND |
| 5063902 | 416-B | 1.00 | 15.50 | 83.14 | 75 | 388 | ND |
| 5063903 | 416-C | 1.00 | 15.17 | 84.80 | 75 | 389 | ND |
| 5063904 | 416-D | 1.00 | 15.33 | 82.40 | 76 | 396 | ND |
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| | | | | | | | |
| 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

Response Factor Report GC/MS Ins

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 |

(#) = Out of Range

Evaluate Continuing Calibration Report

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

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 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
T018160.D TPHC003.M Tue Dec 20 08:22:05 2005

Quantitation Report (QT Reviewed)

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 | |

(f)=RT Delta > 1/2 Window (m)=manual int.

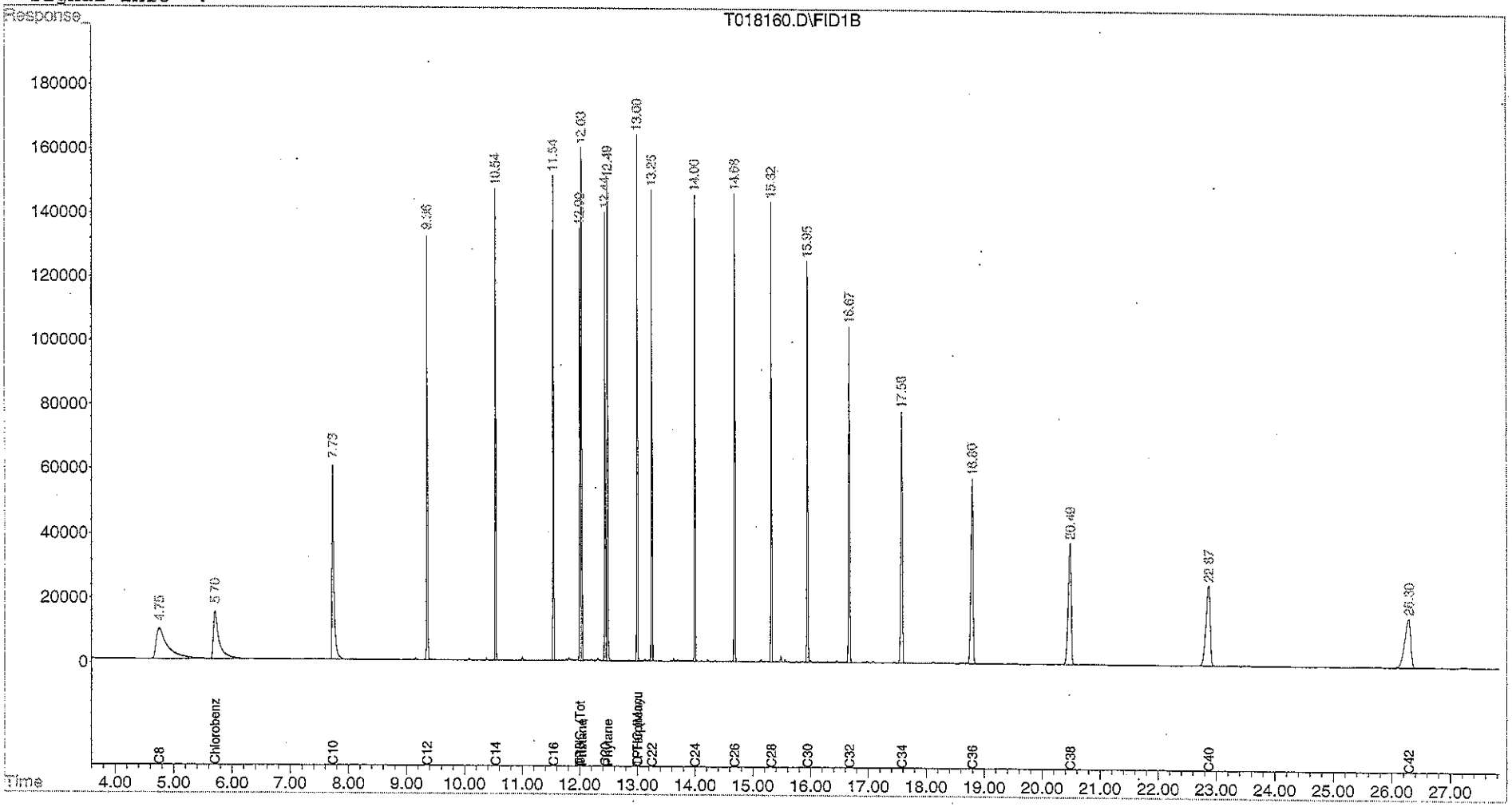
Quantitation Report (QT Reviewed)

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

Vial: 1
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 :




290000

# Evaluate Continuing Calibration Report

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

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 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0

Quantitation Report (QT Reviewed)

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 | |

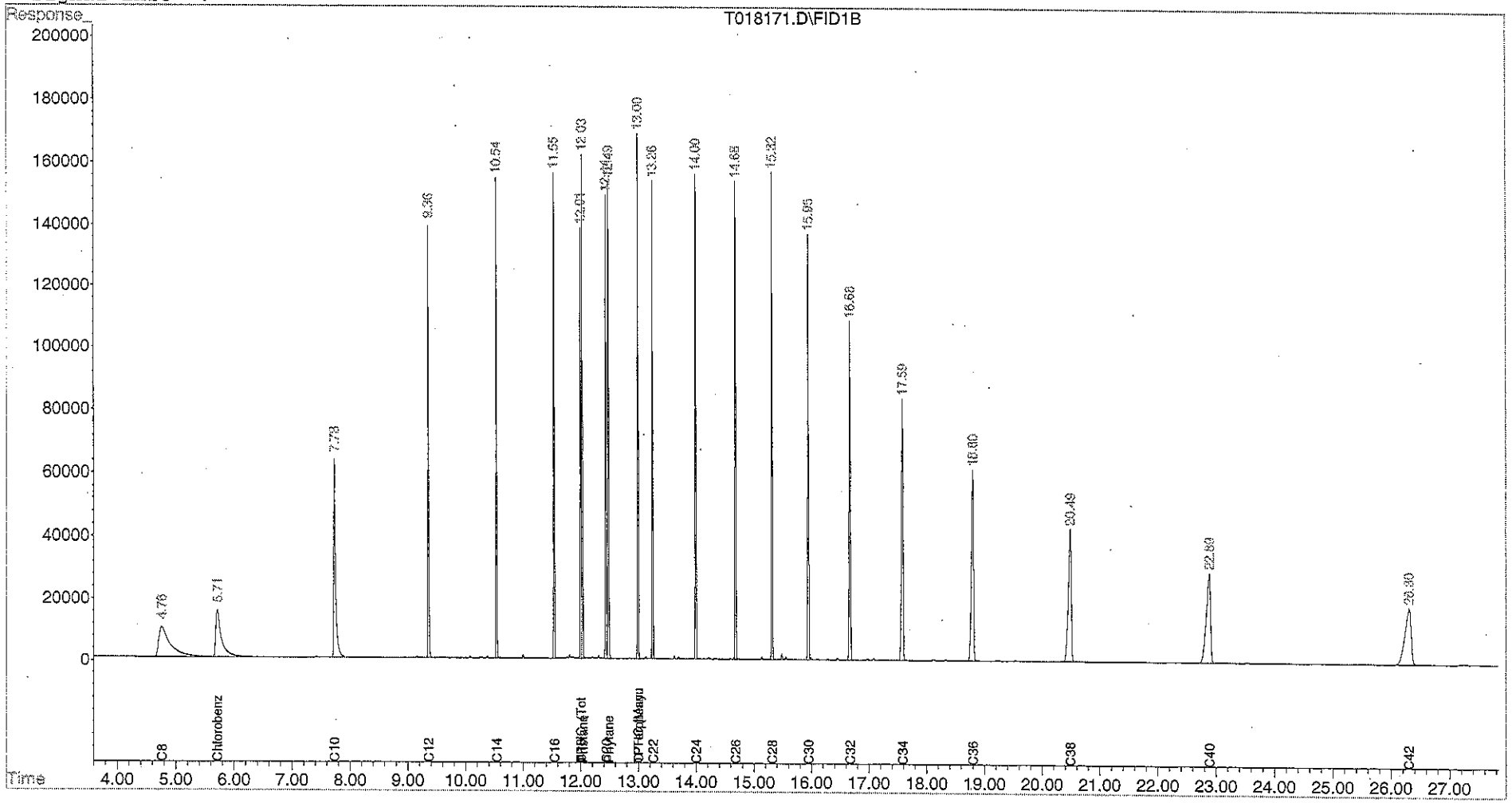
(f)=RT Delta > 1/2 Window (m)=manual int

Quantitation Report (QT Reviewed)

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 :




040000

# Evaluate Continuing Calibration Report

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

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 |

(#) = Out of Range  SPCC's out = 0  CCC's out = 0

Quantitation Report (QT Reviewed)

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 |

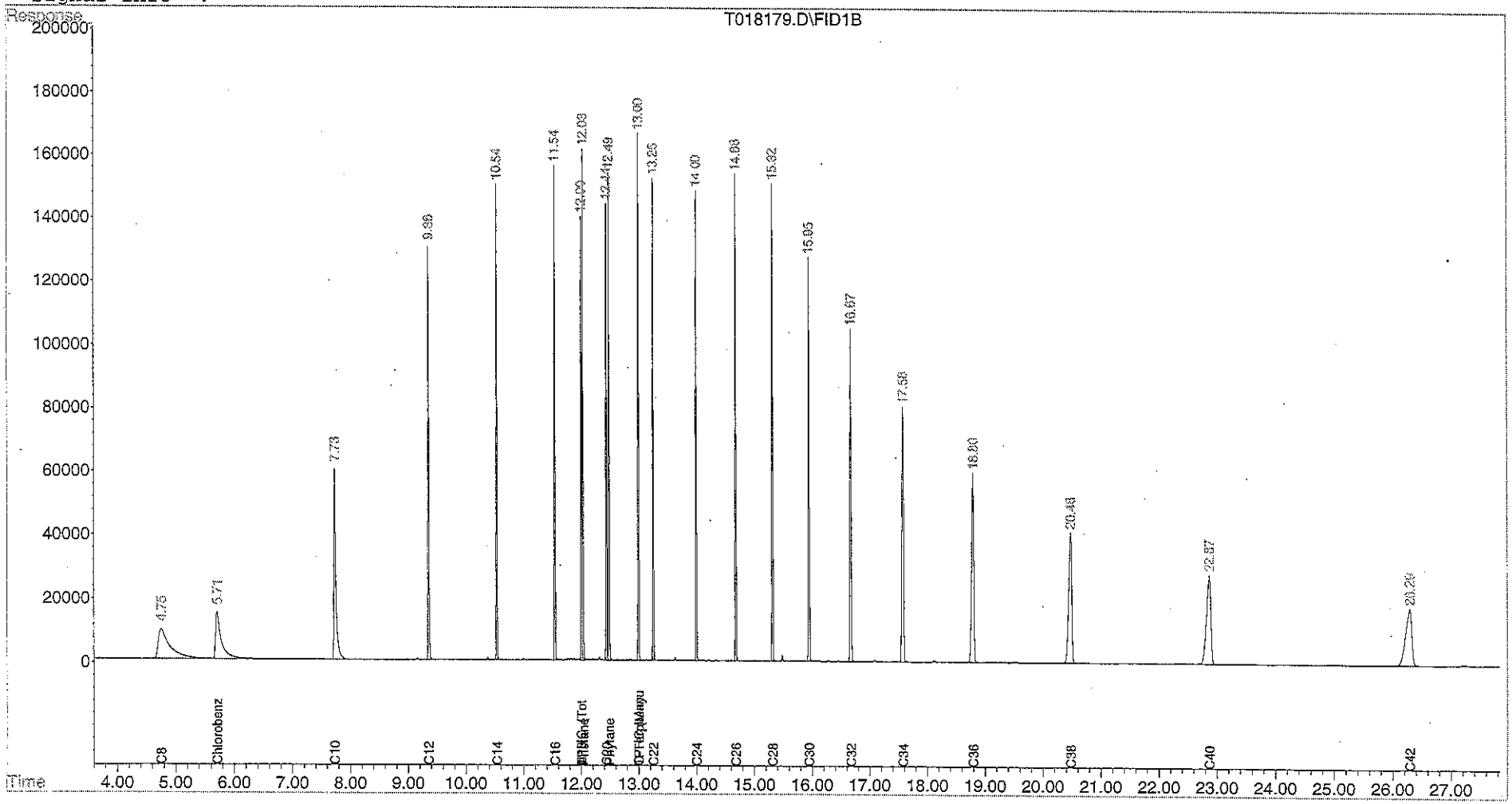
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

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 :




000073

# Evaluate Continuing Calibration Report

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

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 |

Quantitation Report (QT Reviewed)

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 | |

(f)=RT Delta > 1/2 Window (m)=manual int.



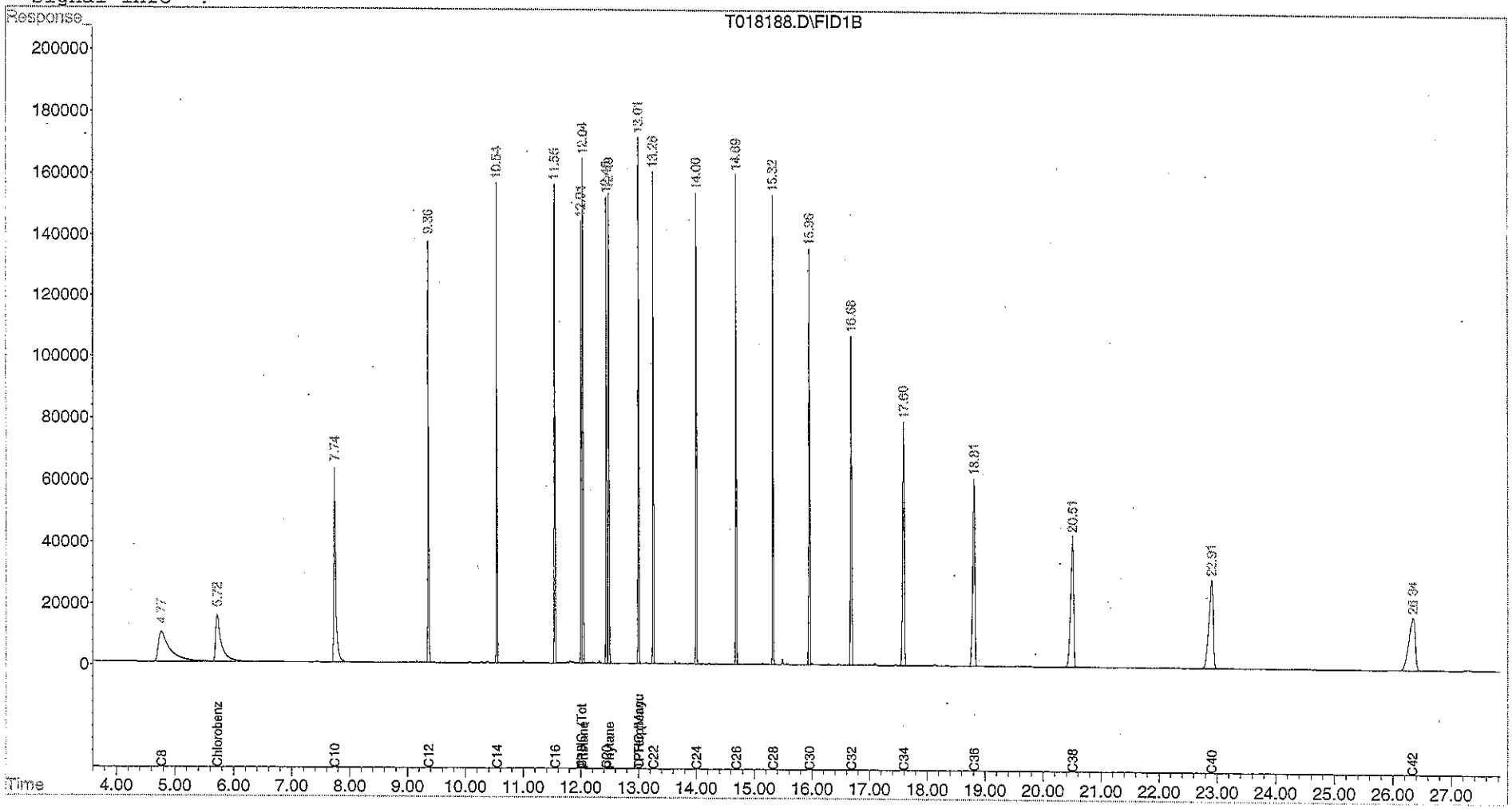
000075

Quantitation Report (QT Reviewed)

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 : Multiple Level Calibration
DataAcq Meth : TPHC003.M

Volume Inj. :
Signal Phase :
Signal Info :




920000

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

| | | | |
|---|---|---|---|
| **Client :** | U.S. Army | **Project # :** | 50639 |
| | DPW. SELFM-PW-EV | **Location :** | Bldg.416 |
| | Bldg. 173 | **UST Reg. # :** | |
| | Ft. Monmouth, NJ 07703 | | |
| **Analysis:** | OQA-QAM-025 | **Date Received :** | 13-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 |

| Lab ID | Surrogate Added (ppm) | Chlorobenzene Recovered (ppm) | Chlorobenzene % Recovery | O-Terphenyl Recovered (ppm) | O-Terphenyl % Recovery |
|---|---|---|---|---|---|
| 5063901 | 10 | 6.45 | 64.5 | 7.34 | 73.4 |
| 5063902 | 10 | 6.28 | 62.8 | 7.18 | 71.8 |
| 5063903 | 10 | 5.88 | 58.8 | 7.63 | 76.3 |
| 5063904 | 10 | 6.14 | 61.4 | 7.60 | 76.0 |
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| | | | | | |
| 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 |

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

| | | | |
|---|---|---|---|
| **Client :** | U.S. Army | **Project # :** | 50639 |
| | DPW. SELFM-PW-EV | **Location :** | Bldg.416 |
| | Bldg. 173 | **UST Reg. # :** | |
| | Ft. Monmouth, NJ 07703 | | |
| **Analysis:** | OQA-QAM-025 | **Date Received :** | 13-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 |

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

| | | | |
|---|---|---|---|
| **Client :** | U.S. Army | **Project # :** | 50639 |
| | DPW. SELFM-PW-EV | **Location :** | Bldg.416 |
| | Bldg. 173 | **UST Reg. # :** | |
| | Ft. Monmouth, NJ 07703 | | |
| **Analysis:** | OQA-QAM-025 | **Date Received :** | 13-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 |

**NC = Not Calculated due to values are over the calibration range.**

Quantitation Report (QT Reviewed)

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 | |

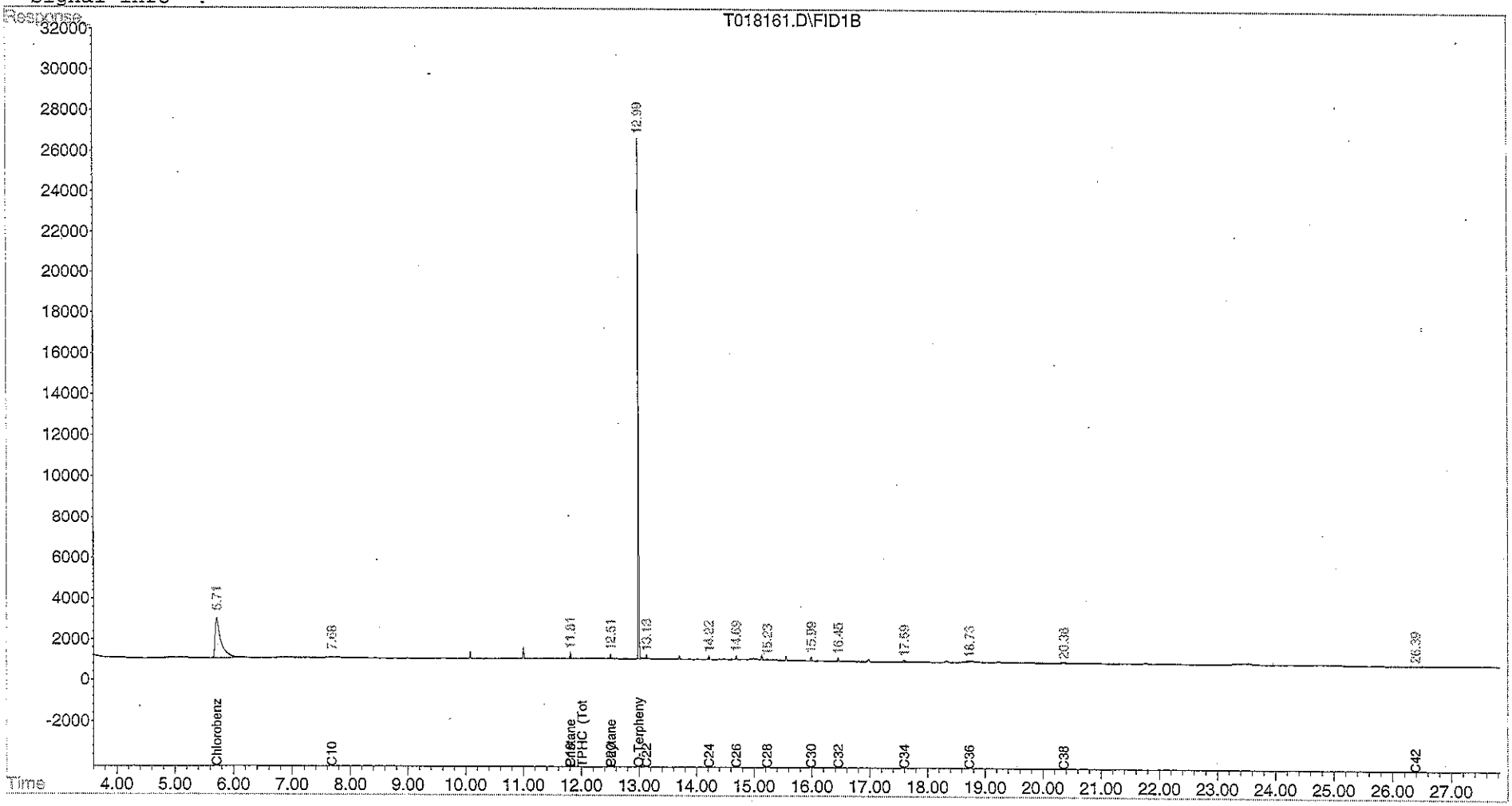
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

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 :




T80084

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051215\T018169.D Vial: 10
Acq On : 15 Dec 2005 7:29 pm Operator: BPatel
Sample : 5063901s 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.) | 5.71 | 134274 | 6.449 mg/L |
| Spiked Amount 10.000 | Recovery | = | 64.49% |
| 24) S O-Terphenyl (SURR.) | 12.99 | 247232 | 7.337 mg/L |
| Spiked Amount 10.000 | Recovery | = | 73.37% |
| **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 | 1381 | 0.047 mg/L |
| 6) T C18 | 11.81 | 1381 | 0.049 mg/L |
| 7) T C20 | 12.51 | 1067 | 0.037 mg/L |
| 8) T C22 | 13.13 | 1116 | 0.037 mg/L |
| 9) T C24 | 14.22 | 1099 | 0.036 mg/L |
| 10) T C26 | 14.69 | 1288 | 0.041 mg/L |
| 11) T C28 | 15.23 | 398 | 0.013 mg/L |
| 12) T C30 | 15.99 | 1638 | 0.052 mg/L |
| 13) T C32 | 16.46 | 1690 | 0.054 mg/L |
| 14) T C34 | 17.59 | 1316 | 0.042 mg/L |
| 15) T C36 | 19.24f | 1170 | 0.035 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 | 1381 | 0.047 mg/L |
| 20) T Phytane | 12.51 | 1067 | 0.035 mg/L |
| 21) T TPHC (Manual Integration) | 0.00 | 0 | N.D. mg/L d |
| 22) H TPHC (Total) | 12.00 | 22762 | 0.739 mg/L |

(f)=RT Delta > 1/2 Window (m)=manual int

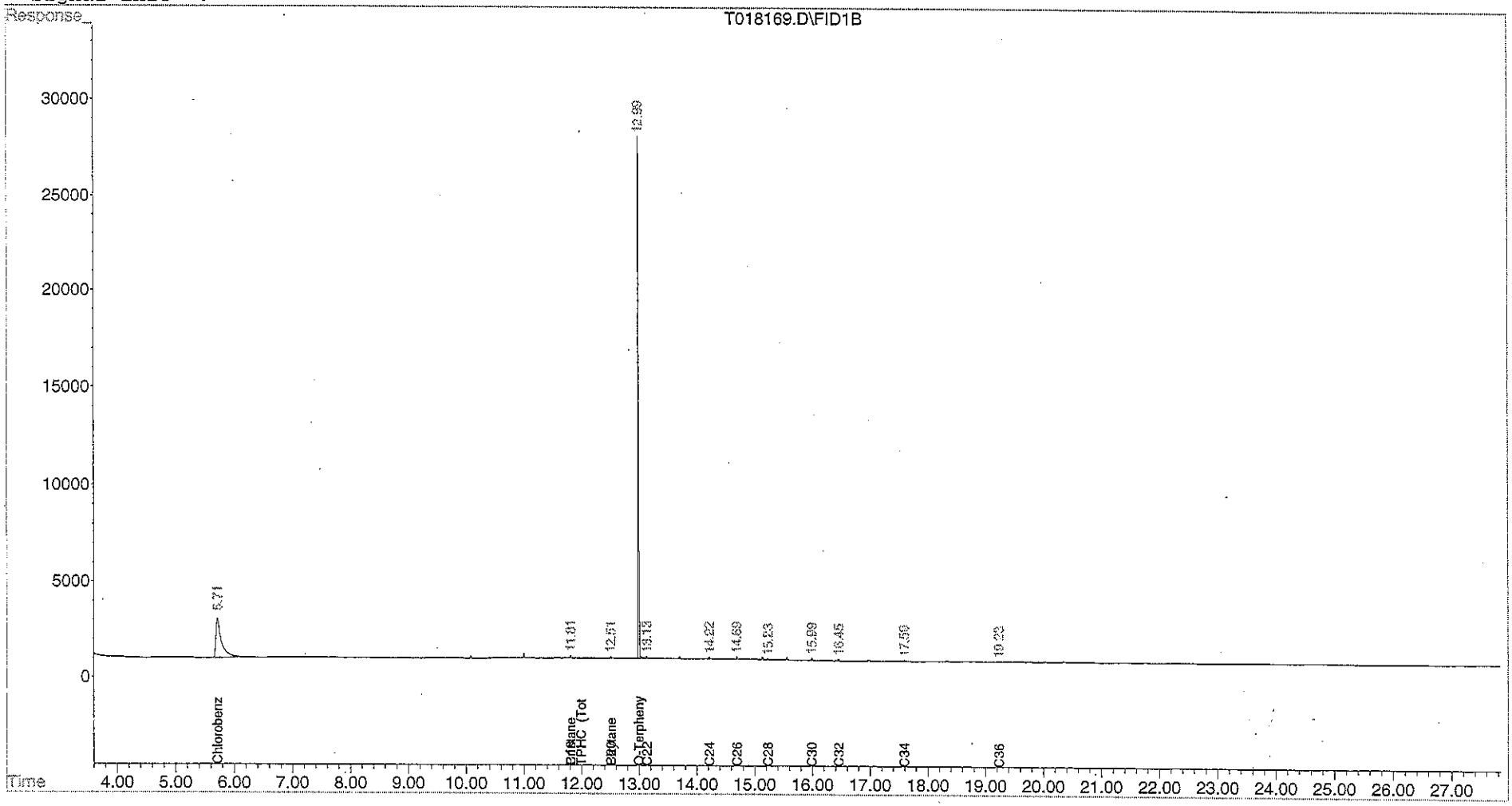
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051215\T018169.D
Acq On : 15 Dec 2005 7:29 pm
Sample : 5063901s
Misc :
IntFile : EVENTSBP.E
Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Vial: 10
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 :




000083

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051215\T018170.D Vial: 11
Acq On : 15 Dec 2005 8:06 pm Operator: BPatel
Sample : 5063902s 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 | 130708 | 6.277 mg/L |
| Spiked Amount 10.000 | Recovery | = | 62.77% |
| 24) S O-Terphenyl (SURR.) | 12.99 | 242224 | 7.184 mg/L |
| Spiked Amount 10.000 | Recovery | = | 71.84% |
| Target Compounds | | | |
| 1) T C8 | 0.00 | 0 | N.D. mg/L |
| 2) T C10 | 7.71 | 310 | 0.011 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 | 2123 | 0.073 mg/L |
| 6) T C18 | 11.81 | 2123 | 0.075 mg/L |
| 7) T C20 | 12.51 | 1567 | 0.054 mg/L |
| 8) T C22 | 13.13 | 1608 | 0.054 mg/L |
| 9) T C24 | 14.22 | 1483 | 0.049 mg/L |
| 10) T C26 | 14.69 | 1756 | 0.056 mg/L |
| 11) T C28 | 15.23 | 453 | 0.015 mg/L |
| 12) T C30 | 15.99 | 2311 | 0.074 mg/L |
| 13) T C32 | 16.46 | 2190 | 0.071 mg/L |
| 14) T C34 | 17.59 | 1824 | 0.058 mg/L |
| 15) T C36 | 19.24f | 1405 | 0.042 mg/L |
| 16) T C38 | 20.36 | 1107 | 0.036 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 | 2123 | 0.072 mg/L |
| 20) T Phytane | 12.51 | 1567 | 0.052 mg/L |
| 21) T TPHC (Manual Integration) | 0.00 | 0 | N.D. mg/L d |
| 22) H TPHC (Total) | 12.00 | 33684 | 1.093 mg/L |

(f)=RT Delta > 1/2 Window (m)=manual int.

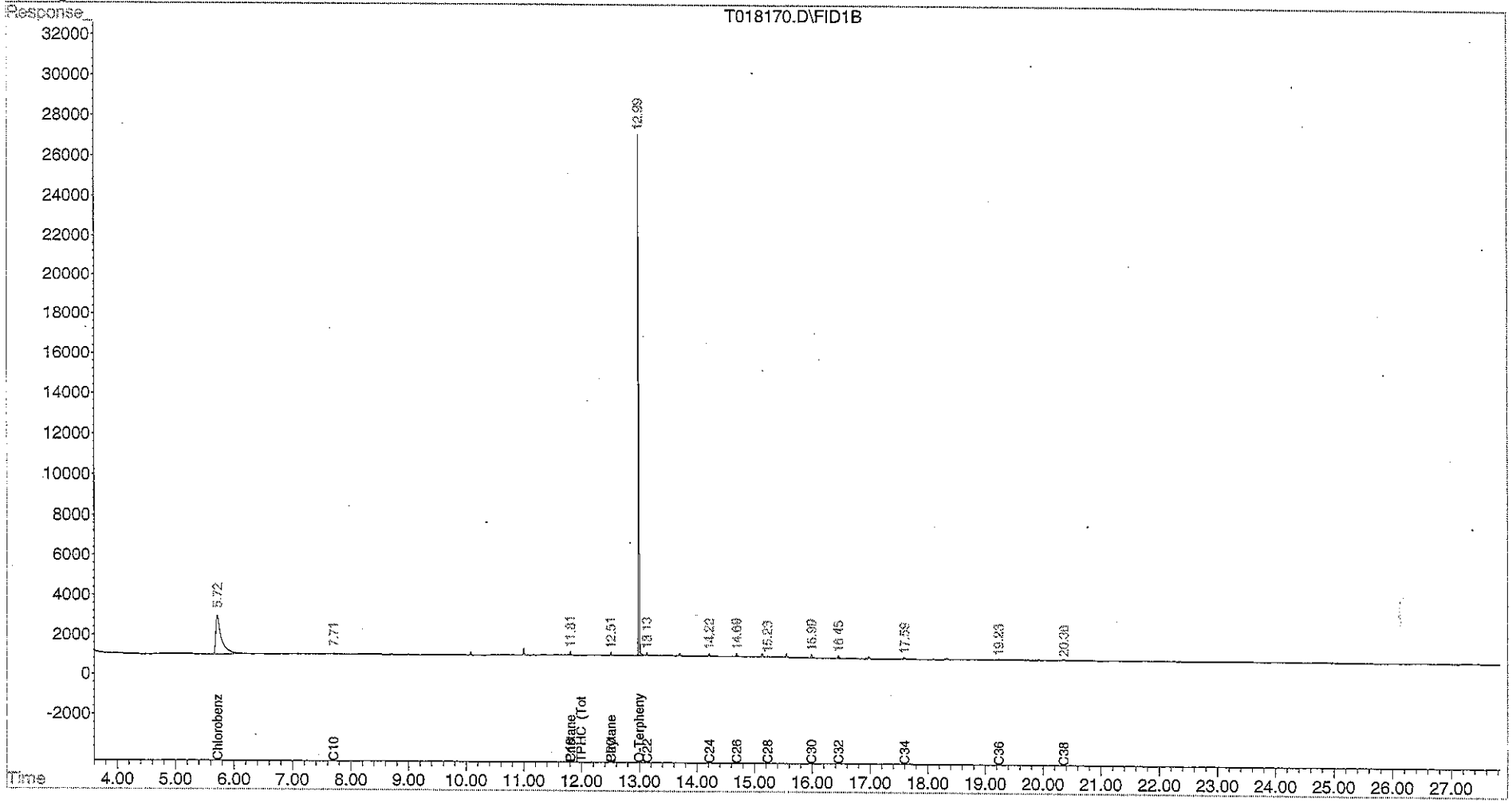
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051215\T018170.D
Acq On : 15 Dec 2005 8:06 pm
Sample : 5063902s
Misc :
IntFile : EVENTSBP.E
Quant Time: Dec 16 9:22 2005 Quant Results File: TPHC003.RES

Vial: 11
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 :




000085

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018183.D Vial: 5
Acq On : 16 Dec 2005 10:25 am Operator: BPatel
Sample : 5063903s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : EVENTSBP.E
Quant Time: Dec 16 15:41 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 | 122420 | 5.877 | mg/L | |
| Spiked Amount 10.000 | Recovery = | | 58.77% | | |
| 24) S O-Terphenyl (SURR.) | 13.00 | 257004 | 7.634 | mg/L | |
| Spiked Amount 10.000 | Recovery = | | 76.34% | | |
| **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 | 0.00 | 0 | N.D. | mg/L | |
| 6) T C18 | 0.00 | 0 | N.D. | mg/L | |
| 7) T C20 | 0.00 | 0 | N.D. | mg/L | |
| 8) T C22 | 13.13 | 366 | 0.012 | 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 | 386 | 0.013 | 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 | 0.00 | 0 | N.D. | 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 | 2172 | 0.070 | mg/L | |

(f)=RT Delta > 1/2 Window (m)=manual int



000086

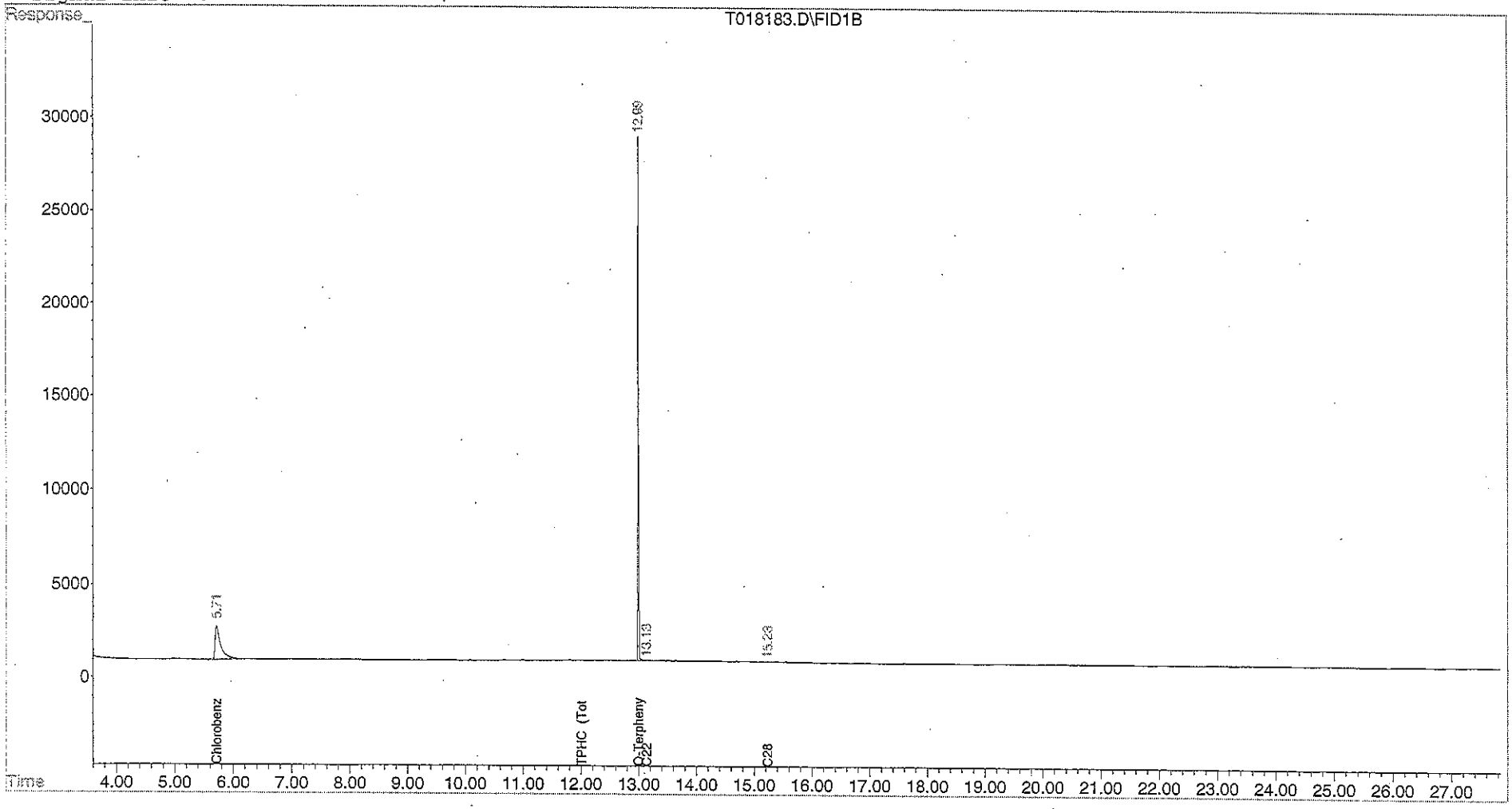
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018183.D
Acq On : 16 Dec 2005 10:25 am
Sample : 5063903s
Misc :
IntFile : EVENTSBP.E
Quant Time: Dec 16 15:41 2005 Quant Results File: TPHC003.RES

Vial: 5
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 :




4800087

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018187.D Vial: 5
Acq On : 16 Dec 2005 12:53 pm Operator: BPatel
Sample : 5063903s Inst : GC/MS Ins
Misc : TP121605.01 Multiplr: 1.00
IntFile : EVENTSBP.E
Quant Time: Dec 16 15:42 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 | 122842 | 5.898 | mg/L | |
| Spiked Amount 10.000 | Recovery | = | 58.98% | | |
| 24) S O-Terphenyl (SURR.) | 13.00 | 261460 | 7.769 | mg/L | |
| Spiked Amount 10.000 | Recovery | = | 77.69% | | |
| **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 | 0.00 | 0 | N.D. | mg/L | |
| 6) T C18 | 0.00 | 0 | N.D. | mg/L | |
| 7) T C20 | 0.00 | 0 | N.D. | mg/L | |
| 8) T C22 | 13.14 | 232 | 0.008 | 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 | 0.00 | 0 | N.D. | 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 | 1534 | 0.050 | mg/L | |

(f)=RT Delta > 1/2 Window (m)=manual int.

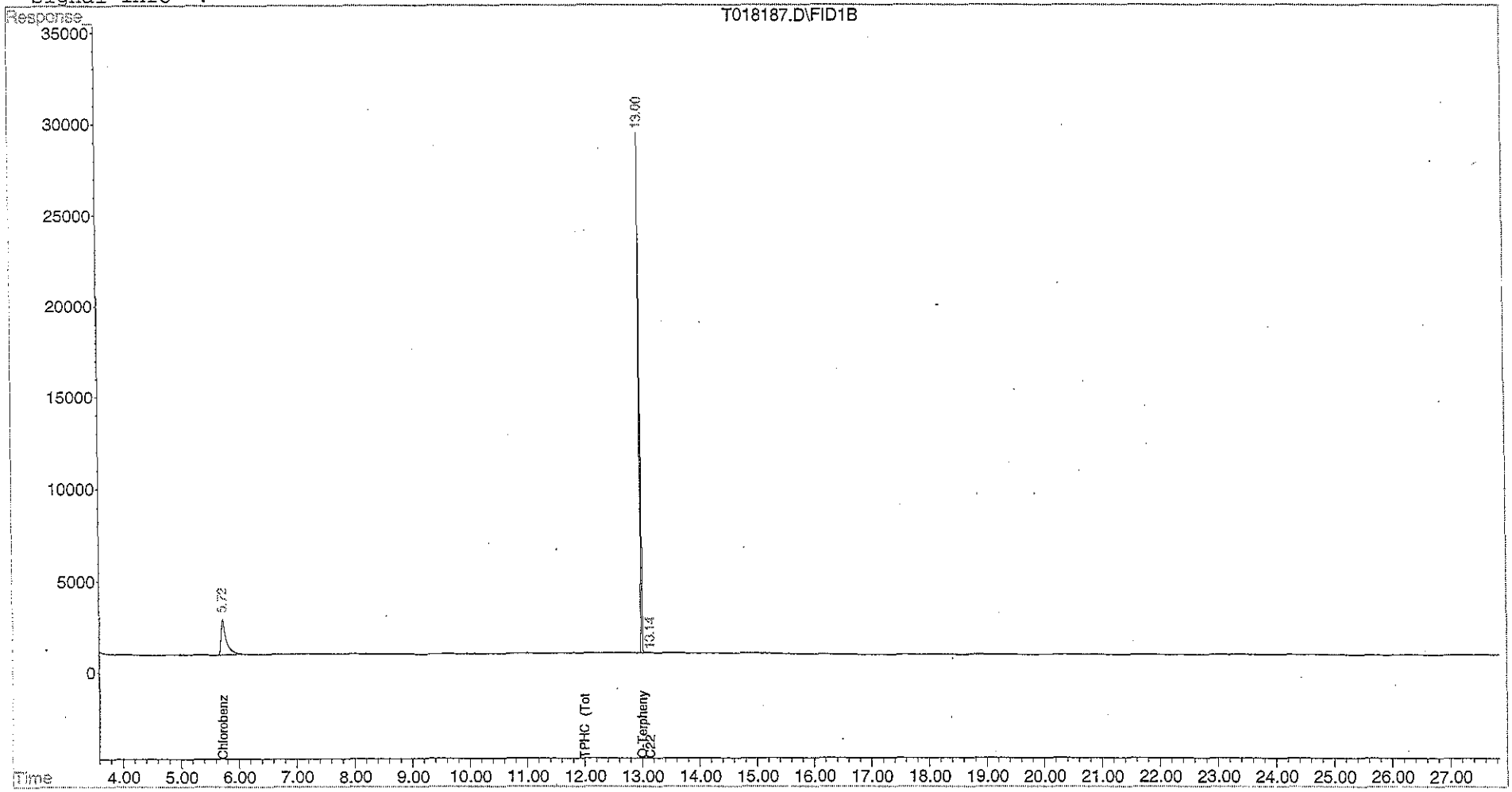
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018187.D
Acq On : 16 Dec 2005 12:53 pm
Sample : 5063903s
Misc : TP121605.01
IntFile : EVENTSBP.E
Quant Time: Dec 16 15:42 2005 Quant Results File: TPHC003.RES

Vial: 5
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 :




680000

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018184.D Vial: 6
Acq On : 16 Dec 2005 11:02 am Operator: BPatel
Sample : 5063904s Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : EVENTSBP.E
Quant Time: Dec 16 11:33 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 | 127773 | 6.136 mg/L m |
| Spiked Amount 10.000 | Recovery | = | 61.36% |
| 24) S O-Terphenyl (SURR.) | 13.00 | 255784 | 7.597 mg/L |
| Spiked Amount 10.000 | Recovery | = | 75.97% |
| 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 | 983 | 0.034 mg/L |
| 6) T C18 | 11.81 | 983 | 0.035 mg/L |
| 7) T C20 | 12.51 | 737 | 0.025 mg/L |
| 8) T C22 | 13.13 | 692 | 0.023 mg/L |
| 9) T C24 | 14.22 | 785 | 0.026 mg/L |
| 10) T C26 | 14.69 | 1029 | 0.033 mg/L |
| 11) T C28 | 15.14 | 986 | 0.032 mg/L |
| 12) T C30 | 15.99 | 1252 | 0.040 mg/L |
| 13) T C32 | 16.46 | 1213 | 0.039 mg/L |
| 14) T C34 | 17.60 | 849 | 0.027 mg/L |
| 15) T C36 | 18.34f | 878 | 0.026 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 | 983 | 0.034 mg/L |
| 20) T Phytane | 12.51 | 737 | 0.024 mg/L |
| 21) T TPHC (Manual Integration) | 0.00 | 0 | N.D. mg/L d |
| 22) H TPHC (Total) | 12.00 | 11289 | 0.366 mg/L |

(f)=RT Delta > 1/2 Window (m)=manual int.

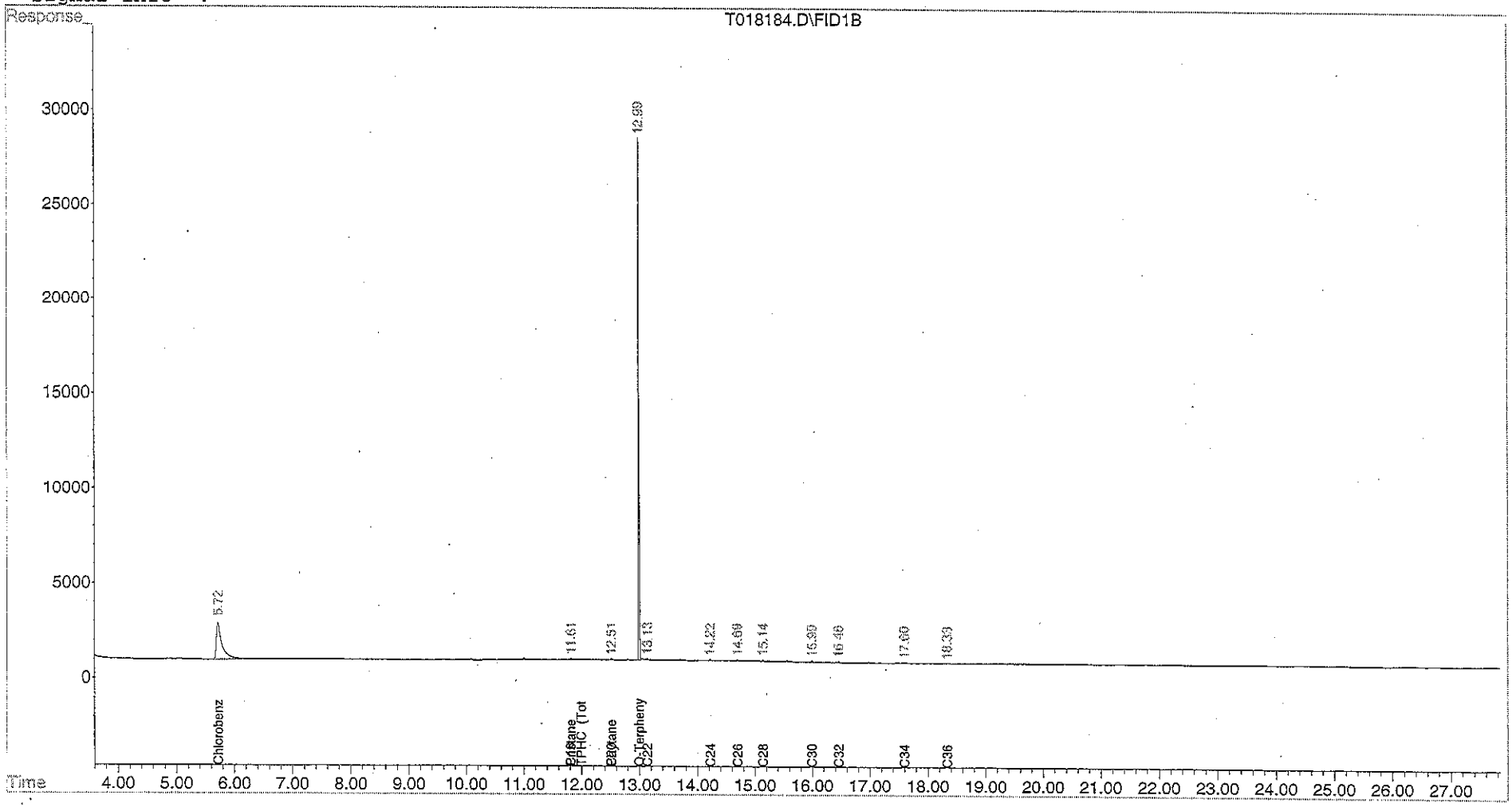
Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\051216\T018184.D
Acq On : 16 Dec 2005 11:02 am
Sample : 5063904s
Misc :
IntFile : EVENTSBP.E
Quant Time: Dec 16 11:33 2005 Quant Results File: TPHC003.RES

Vial: 6
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 :




T60000

## 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. | ✓ |

Laboratory Manager or Environmental Consultant's Signature _____

Date: 12/30/05

Laboratory Certification # 13461

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

# 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.

Daniel K. Wright
Laboratory Manager