United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 876B
Main Post-West Area

NJDEP UST Registration No. 0081533-139

January 2002

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 876B

MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0081533-139

JANUARY 2002

PREPARED FOR:

UNITED STATES ARMY, FORT MONMOUTH, NEW JERSEY
DIRECTORATE OF PUBLIC WORKS
BUILDING 167
FORT MONMOUTH, NJ 07703

PREPARED BY:

VERSAR, INC.
BRISTOL, PA

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

UST Closure

On June 1, 1998, an underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) underground storage tank procedures at the Main Post-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-139 (Fort Monmouth ID No. 876B) was located south of Building 876B. UST No. 0081533-139 was a steel, 550-gallon No. 2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual.* The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation.* Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes or punctures. Holes were noted in the UST. Groundwater was encountered at 6 feet below ground surface (bgs). Potentially contaminated soils were observed surrounding the tank. NJDEP case number 98-06-02-1047-31 was assigned to the site. Twenty four (24) cubic yards of contaminated soil was removed from the site on June 1 and 2, 1998. Samples were collected from along the piping June 15, 1998. The piping was in good condition and no TPH was detected in those samples. Samples were collected from the excavation and from two small test trenches on June 2 and 15, 1998 and January 12, 13, and 19, 1999. TPH was detected in four samples, 876B-A and 876B-B at concentrations of 5282.22 mg/kg and 5942.18 mg/kg, respectively, and at 876-2 and 876-5 at concentrations of 13,599.71 mg/kg and 7255.44 mg/kg, respectively. Based on TPH results, samples 876-2 and 876-5 were analyzed for VOCs and SVOCs.

Groundwater samples were collected using the Geoprobe sampling method on April 24, 2000 and May 22, 2000. Both samples were analyzed for VOCs and SVOCs. There were no compounds detected in the first round and only one compound, phenanthrene, detected in the second round. Phenanthrene was detected at 1.25 ug/L, barely above the method detection limit of 1.23 ug/L.

Site Restoration

Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with crushed stone, sand, and native backfill and restored to its original condition.

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with TPH concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, exist at one location adjacent to the building. That location does not contain VOCs or SVOCs that exceed soil cleanup criteria. The location of the building prevents further soil removal. Two subsequent rounds of groundwater samples contained no compounds above the NJDEP Groundwater Quality Criteria. Therefore, no further action is proposed in regard to the closure and site assessment of UST No. 0081533-139 at Building 876B.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0081533-139, was closed at Building 876B at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 1, 1998. Refer to site location map on Figure 1. This report presents the results of the Department of Public Works (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel, 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0081533-139 complied with all applicable Federal, State and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP-approved Decommissioning/Closure Plan were posted onsite for inspection. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 0081533-139 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST).

Based on inspecting the UST, field screening of subsurface soils and groundwater, and reviewing analytical results of collected soil samples, the DPW has concluded that a historical discharge is associated with the UST but not associated piping.

This UST Closure and Site Investigation Report has been prepared by Versar, Inc., to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEP-BUST regulations. The applicable NJDEP-BUST regulations at the date of closure were the *Interim Closure Requirements for Underground Storage Tank Systems* (N.J.A.C. 7:14B-1 et seq. October 1990 and revisions dated November 1, 1991).

This report was prepared using information collected at the time of closure. Section 1 of this UST Closure and Site Investigation Report provides a summary of the UST decommissioning activities. Section 2 of this report describes the site investigation activities. Conclusions and recommendations, including the results of the soil sampling investigation, are presented in the final section of this report.

1.2 SITE DESCRIPTION

Building 876B is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-139 was located south of Building 876B and appurtenant copper piping ran approximately six (6) feet from the excavation to Building 876B. An abandoned remote fill pipe ran approximately 95 feet west to the UST excavation. A 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 area surrounding Building 876B. 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, 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 (i.e., streams, lakes)

Due to the fluvial nature of the overburden deposits (i.e., 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.

Building 876B located approximately 600 feet southeast of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 876B is anticipated to be to the northwest.

1.3 HEALTH AND SAFETY

Before, during, and after all decommissioning activities, hazards at the work site which may have posed a threat to the Health and Safety of all personnel who were involved with, or were affected by, the decommissioning of the UST system were minimized. All areas, which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- All underground obstructions (utilities, etc.) were identified by the contractor performing the closure prior to excavation activities.
- All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- All excavated soils were visually examined and screened with an OVA for evidence of contamination. Potentially contaminated soils were identified and logged during closure activities.
- Surface materials (i.e., asphalt, concrete, etc.) were excavated and staged separately from all soil and recycled in accordance with all applicable regulations and laws.
- A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 70 gallons of liquid from the UST and its associated piping were transported by Casie Protank to Casie Ecology Oil Salvage, Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Vineland, New Jersey. Refer to Appendix C for the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. Holes were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. Evidence of contamination was observed. Soil screening was also performed along the piping associated with the UST closure. No contamination was noted anywhere along the piping length. Groundwater was not encountered.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

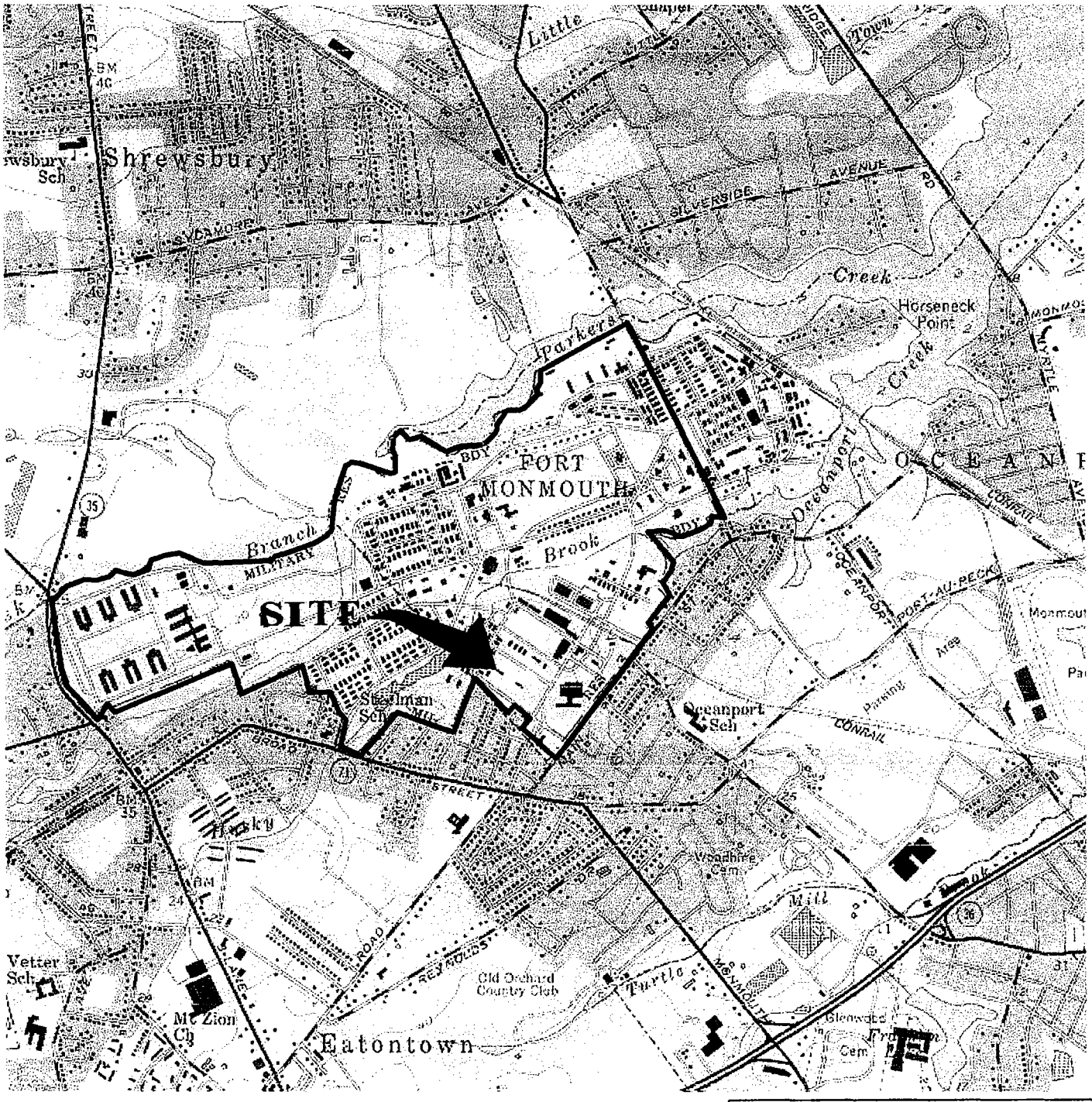
The tank was transported to Mazza and Sons, Inc., Metal Recyclers. See Appendix D for a copy of the UST disposal certificate and Appendix F for photographs of the UST. The transportation of the UST was in compliance with all applicable regulations and laws.

The UST was labeled prior to transport with the following information:

- Site of origin
- Contact person
- NJDEP UST Facility ID number
- Former contents

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPH analysis results from the post-excavation soil samples, 24 cubic yards of soils exhibited signs of contamination and were removed from the site.



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 876
Main-Post West
Fort Monmouth Army Base
Monmouth County, NJ

VERSAR
Engineers, Managers, Scientists, & Planners
Bristol, PA

Scale; 1" = 2000'	Date: Jan. 2002

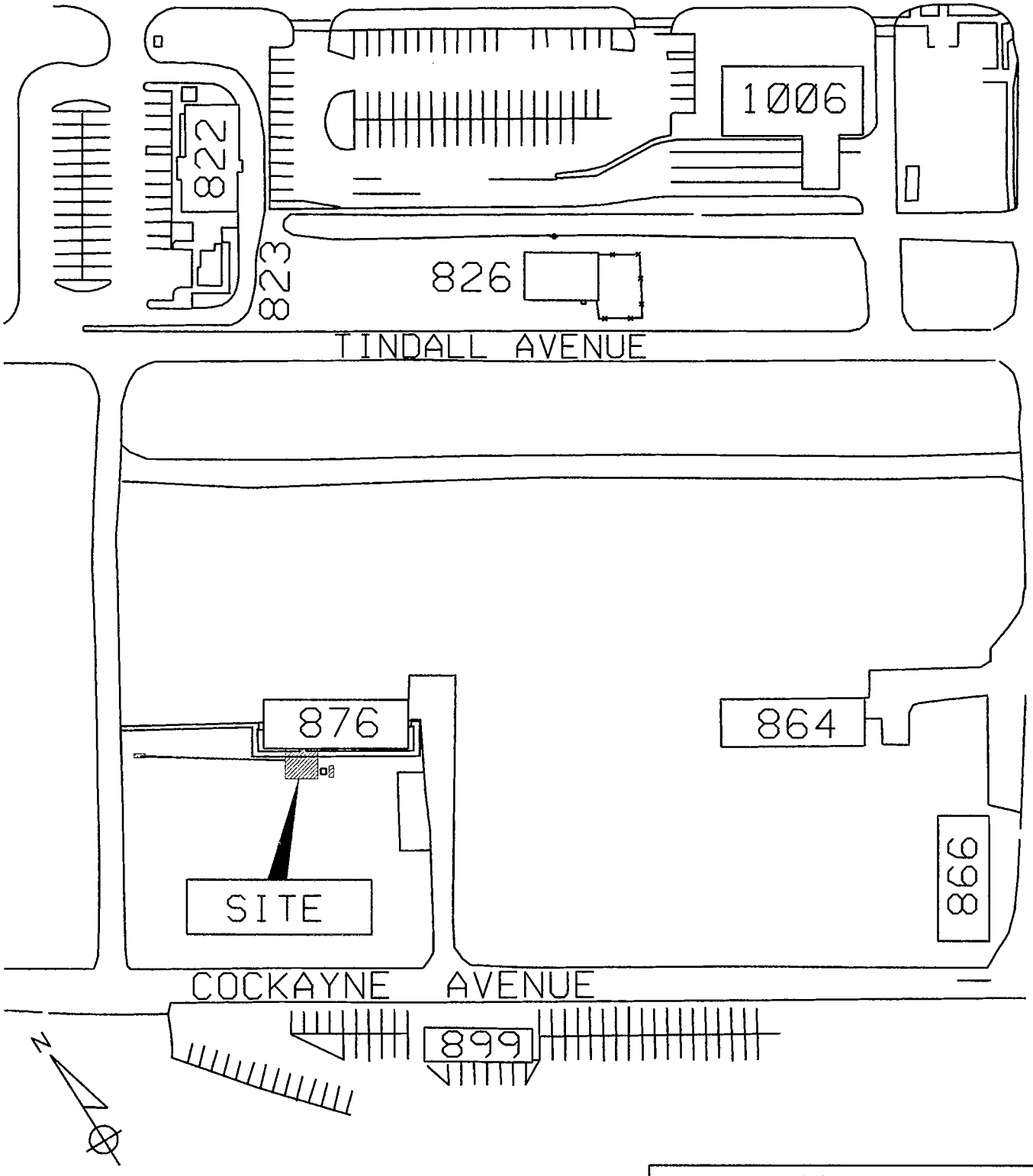
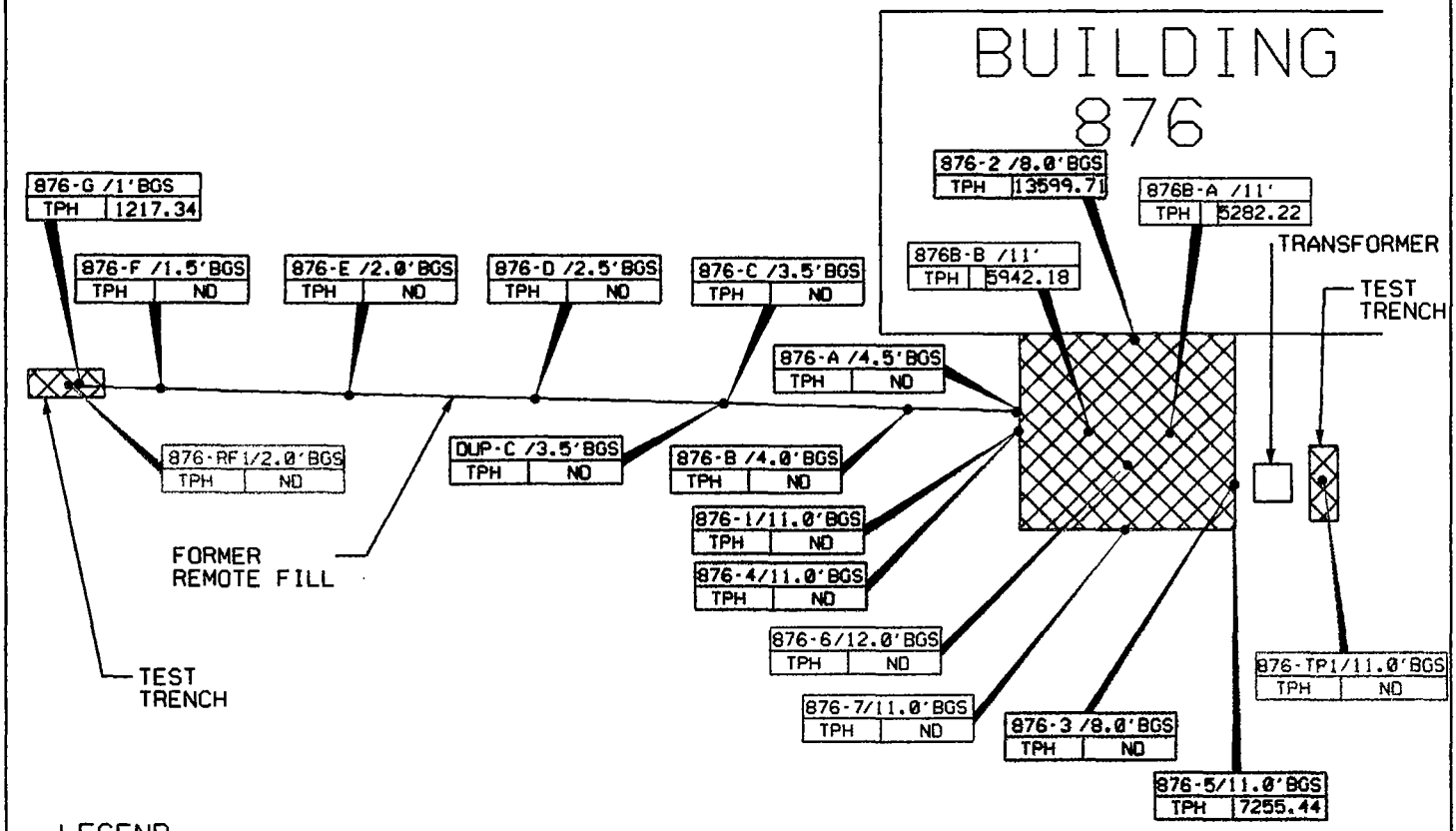


FIGURE 2
SITE MAP
BUILDING 876
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=100' | DATE: JUNE 1998

876 FIG2



LEGEND

- SOIL SAMPLE LOCATION (JUNE 2, 1998)
- SOIL SAMPLE LOCATION (JUNE 15, 1998)
- SOIL SAMPLE LOCATION (JANUARY 12, 1999)
- SOIL SAMPLE LOCATION (JANUARY 13, 1999)
- SOIL SAMPLE LOCATION (JANUARY 19, 1999)
- LIMIT OF EXCAVATION (JANUARY 19, 1999)

NOTES:

1. ALL RESULTS IN MG/KG.
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS - BELOW GROUND SURFACE

FIGURE 3
SOIL SAMPLING LOCATION MAP
876B
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=20' | DATE: JUNE 1998

8/6 F104

APPENDIX A

NJDEP UST REPORT CERTIFICATION FORM

(12/97) **New Jersey Department of Environmental Protection**

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New Jersey
Facility Street Address : Directorate of Public Works Building 173
Municipality: Oceanport County: Monmouth

Block: _____ Lot(s): _____ Telephone Number : 732-532-6224

B. Owner (RP)'s Name: _____

Street Address: _____ City : _____

State: _____ Zip: _____ Telephone Number : _____

C. (Check as appropriate)

- ☐ Site Investigation Report (SIR) $500 Fee
- ☐ Remedial Investigation Report (RIR) $1000 Fee

D. (Complete all that apply)

- Assigned Case Manager: Ian Curtis, Federal Case Manager
- UST Registration Number : 0081533-139
- Incident Report Number : 98-06-02-1047-31
- Tank Closure Number: _____

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: Dinker Desai Signature: _____ UST Cert. No.: _____

Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: N/A – U.S. Army

Firm Address: Directorate of Public Works Buildings 173 City: Fort Monmouth

State:NJ Zip:07703 Telephone Number : 732-532-6224

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 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): James Ott Title: Directorate of Public Works

Signature: James Ott

Company Name: U.S. Army Fort Monmouth Date: 5/10/02

APPENDIX B

WASTE MANIFEST

CASIE / PROTANK
ENVIRONMENTAL SERVICES

876-B

Please type or print in block letters. (Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS MANIFEST

1. Generator's US EPA ID No. NJ3210020597 Document No. 12322
2. Page 1 of 1

3. Generator's Name and Mailing Address U.S. Army Com. Elec.Command
Main Post Bldg 173/Attn:
Fort Monmouth NJ 07703

4. Generator's Phone (732) 532-6223

A. Non-hazardous Manifest Document Number NHZ020 16448

B. State Generator's ID c/o ~~Isaac Shirghio~~, Joe Fallon

5. Transporter 1 Company Name: Casie Ecology Oil Salvage, Inc.
6. US EPA ID Number: NJD045995693

C. State Trans. ID 169311

7. Transporter 2 Company Name
8. US EPA ID Number

D. Transporter's Phone (609) 696-4401

E. State Trans. ID

9. Designated Facility Name and Site Address
Casie Ecology Oil Salvage, Inc. T/A
3209 N. Mill Rd / Casie Protank
Vineland NJ 08360
10. US EPA ID Number: NJD045995693

F. Transporter's Phone ( )

G. State Facility's ID 0614D1HP05

H. Facility's Phone (609) 696-4401

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	L Waste No.
a. Combustible liquid, n.o.s.(Fuel Oil) NA1993, PGIII	001	TT	~~000001~~ X3370	G	ID72
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
L,T %oil/sed. %wtr.

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
a.24 Hr. Emergency Response #609 696-4401 K. Ambrosia NAERG# 127

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.

GENERATOR

Printed/Typed Name	Signature	Month Day Year
Charles Appleby SELFM-PW-EV		08/01/98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Bob Consiglio		08/01/98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month Day Year

1-GENERATOR COPY

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

APPENDIX C

UST DISPOSAL CERTIFICATE

B. 876-A (550)
B. 876-B (550)

MAZZA & SONS, INC.

Metal Recyclers
3230 Shafto Rd.
Tinton Falls, NJ
(908) 922-9292

NO. 0995

DATE. 12 June 98

Customer's Name Team Vinnell

Address

	Weight	Price		Weight	Price
Cast Iron			Lt. Copper		
Steel Iron	3960		Brass		
Lt. Iron			Alum Clean		
Copper #1			Lead		
Copper #2			Stainless		
			Battery		
			TOTAL AMOUNT:		$ 39.60

13940 LB
1250
1440

Two Tank OK GD
Could not make A LOAD
007 B.L. No
Ck# 1910

Weigher _____ Customer _____

THIS CHECK IS DELIVERED FOR PAYMENT ON THE FOLLOWING ACCOUNTS.

DATE		AMOUNT	
TOTAL OF INVOICES			
LESS ___ % DISCOUNT			
LESS FREIGHT			
LESS			
TOTAL DEDUCTIONS			
AMOUNT OF CHECK			

1910

MAZZA & SONS, INC.
RECYCLING DIVISION
P.O. BOX 246
OAKHURST, NJ 07755

55-7233/2212

DATE 6/11/98

PAY TO THE ORDER OF Team Vinnell $194.75

One Hundred Ninety Four + 75/100 DOLLARS

Sovereign Bank

MP

⑈001910⑈ ⑆221272332⑆000 109109928⑥⑈

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 876-B

Project # 3609
Date Rec. 06/02/98
Date Compl. 06/09/98
Released by:

7-6-98

Daniel K. Wright Date:
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL autosampler 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

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

Additional Comments: _____

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

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: C. Appleby - DPW
Phone #: 26224
( )DERA (X)OMA ( )Other:_____

Project No: 98-0001
Location: B. 876B

Samplers Name / Company : GARY DIMARTINIS - TUS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% Solids	Mineral					OVA	Remarks / Preservation Method
3409.01	876B-A	6-2-98	1049	Soil	1	X	X	X					30	EXC. FLOOR @ 11.0' *
02	876B-B	↓	1100	↓	↓	↓	↓	↓					30	↓ ↓

NOTE: OVA (#A5214) CALIBRATED w/ 95 ppm CH_4 & ZERO(0) AIR @ 1030 HRS. on 6-2-98 by G. DIMARTINIS

Comments: * = SAMPLES KEPT BELOW 4° C.

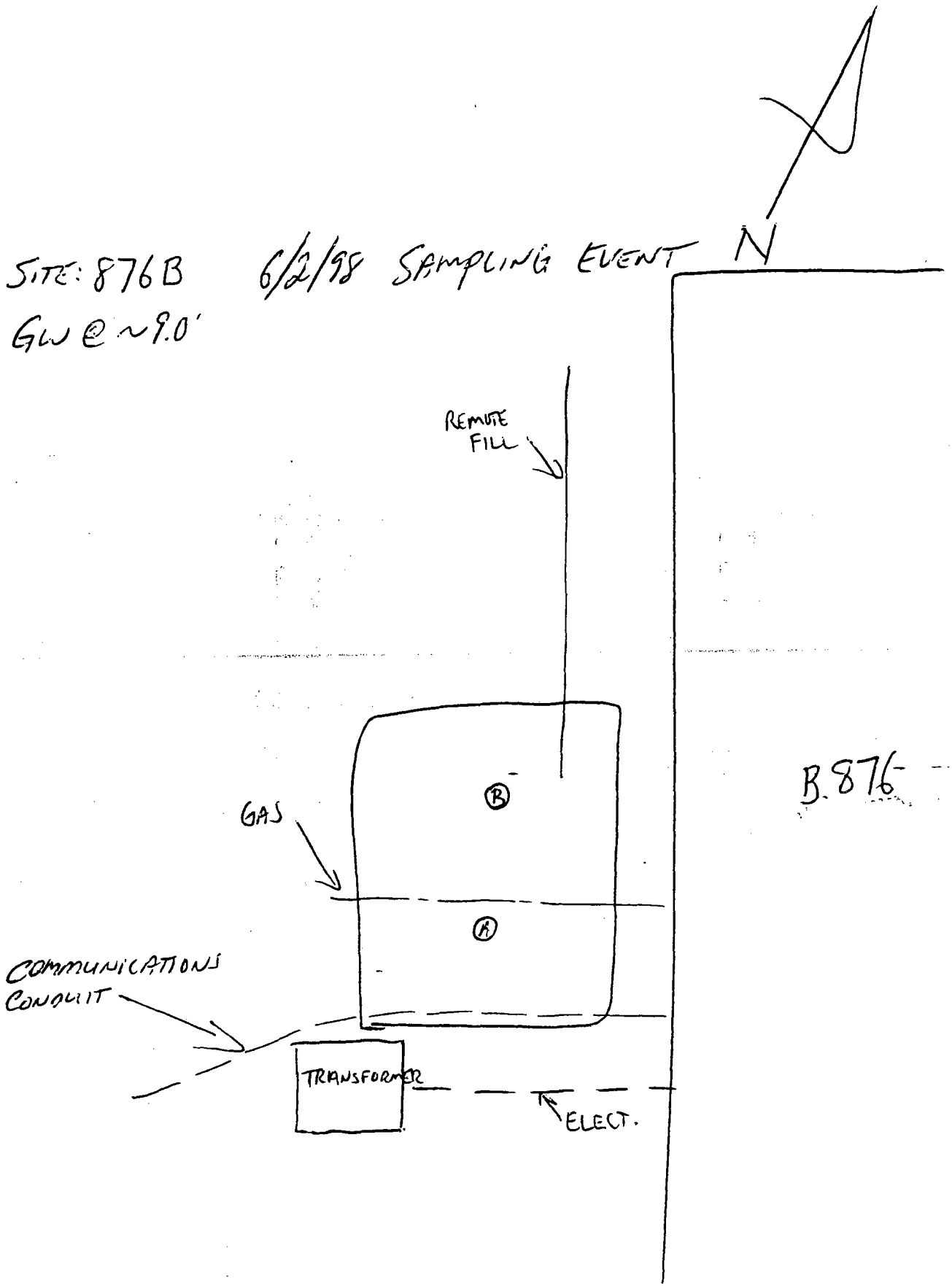
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	6-2-98/1418	[signature]			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
		[signature]			

Report Type: ( )Full, (X)Reduced, ( )Standard, ( )Screen / non-certified
Turnaround time: ( )Standard 4 wks, (X)Rush 2 Days, ( )ASAP Verbal ____ Hrs.

Remarks: DEDICATED SAMPLING TOOLS USED.

SITE: 876B 6/2/98 SAMPLING EVENT

NOTE: GW @ ~9.0'



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

Client :	U.S. Army	**Lab. ID # :**	3609
	DPW. SELFM-PW-EV	**Date Rec'd:**	02-Jun-98
	Bldg. 173	**Analysis Start:**	03-Jun-98
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	09-Jun-98
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B.876B

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3609.01	876B-A	**1.00**	10.26	91.47	250	**5282.22**
3609.02	876B-B	**1.00**	9.94	84.32	280	**5942.18**
METHOD BLANK	TBLK 107	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998

Calibration Files
100 =T05610.D 50 =T05611.D 20 =T05612.D
10 =T05613.D 5 =T05614.D

	Compound	100	50	20	10	5	Avg	%RSD
1)	tC C8	2.121	2.039	1.912	1.984	2.064	2,024 E4	3.93
2)	tC C10	2.305	2.184	2.138	2.205	2.215	2.209 E4	2.76
3)	TC C12	2.550	2.393	2.339	2.387	2.400	2.414 E4	3.30
4)	tC C14	2.654	2.496	2.459	2.503	2.528	2.528 E4	2.96
5)	tC C16	2.711	2.562	2.547	2.612	2.650	2.616 E4	2.56
6)	tC C18	3.131	3.028	2.996	3.016	2.986	3.031 E4	1.91
7)	tC C20	2.968	2.814	2.807	2.877	2.906	2.874 E4	2.34
8)	tC C22	2.923	2.778	2.769	2.841	2.861	2.834 E4	2.24
9)	tC C24	2.968	2.825	2.806	2.876	2.900	2.875 E4	2.25
10)	tC C26	2.957	2.820	2.782	2.852	2.874	2.857 E4	2.30
11)	tC C28	2.992	2.851	2.799	2.873	2.863	2.876 E4	2.47
12)	tC C30	3.101	2.957	2.881	2.950	2.903	2.958 E4	2.90
13)	tC C32	3.137	2.994	2,879	2.930	2.887	2.966 E4	3.58
14)	tC C34	3.267	3.114	2.979	3.014	2.946	3.064 E4	4.24
15)	tC C36	3.229	3.069	2.864	2.895	2.752	2.962 E4	6.33
16)	tC C38	3.100	2.923	2.657	2.575	2.270	2.705 E4	11.86
17)	tC C40	2.791	2.587	2.210	1.982	1.570	2.228 E4	21.76
18)	tC c42	2.484	2.257	1.798	1.475	1.060	1.815 E4	31.76
19)	TC Pristane	2.844	2.665	2.705	2.785	2.764	2.753 E4	2.54
20)	TC Phytane	2.979	2.828	2.827	2.892	2.933	2.892 E4	2.29
21)	sC o-terphenyl	3.572	3.380	3.368	3.461	3.500	3.456 E4	2.46
22)	tC TPHC - total	3.082	2.986	2.975	3.099	3.340	3.096 E4	4.74

(#) = Out of Range MEAN RSD % = 5.619

TPH41.M Fri Jun 12 08:15:45 1998

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Wed Jun 10 08:52:44 1998

Calibration Files
100 =T05573.D 50 =T05574.D 20 =T05575.D
10 =T05576.D 5 =T05572.D

	Compound	100	50	20	10	5	Avg	%RSD
1) tC	C8	1.856	1.905	1.830	1.877	1.768	1.847 E4	2.81
2) tC	C10	1.996	2.066	2.011	2.023	1.909	2.001 E4	2.87
3) TC	C12	2.192	2.254	2.189	2.198	2.081	2.183 E4	2.89
4) tC	C14	2.255	2.333	2.279	2.289	2.154	2.262 E4	2.94
5) tC	C16	2.285	2.384	2.338	2.366	2.204	2.315 E4	3.15
6) tC	C18	2.530	2.723	2.705	2.807	2.494	2.652 E4	5.05
7) tC	C20	2.506	2.616	2.573	2.601	2.423	2.544 E4	3.14
8) tC	C22	2.464	2.585	2.539	2.563	2.373	2.505 E4	3.47
9) tC	C24	2.487	2.614	2.584	2.606	2.360	2.530 E4	4.26
10) tC	C26	2.400	2.463	2.592	2.611	2.306	2.474 E4	5.21
11) tC	C28	2.292	2.084	2.558	2.565	2.270	2.354 E4	8.76
12) tC	C30	2.297	1.771	2.506	2.493	2.189	2.251 E4	13.33
13) tC	C32	2.211	1.610	2.330	2.187	2.004	2.068 E4	13.62
14) tC	C34	2.019	1.614	2.083	1.684	1.616	1.803 E4	12.71
15) tC	C36	1.676	1.553	1.751	1.038	1.053	1.414 E4	24.31
16) tC	C38	1.428	1.494	1.523	0.593	0.556	1.119 E4	44.56
17) tC	C40	1.229	1.360	1.267	0.295	0.219	0.874 E4	64.72
18) tC	c42	1.078	1.214	0.995	0.157	0.087	0.706 E4	76.43
19) TC	Pristane	2.493	2.551	2.483	2.513	2.361	2.480 E4	2.89
20) TC	Phytane	2.524	2.647	2.597	2.612	2.447	2.565 E4	3.12
21) sC	o-terphenyl	2.997	3.134	3.082	3.112	2.924	3.050 E4	2.87
22) tC	TPHC - total	2.433	2.589	2.681	2.612	3.310	2.725 E4	12.45

(#) = Out of Range MEAN %RSD = 14.34

TPH40.M Wed Jun 10 09:00:58 1998

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980611\T05735.D Vial: 3
Acq On : 16 Jun 98 5:22 am Operator: Deinhardt
Sample : 50 PPM STANDARD Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.240	20.946 E3	-3.5	106	0.00
2	tC	C10	22.094	23.420 E3	-6.0	110	0.00
3	TC	C12	24.139	25.766 E3	-6.7	111	0.00
4	tC	C14	25.279	26.757 E3	-5.8	111	0.00
5	tC	C16	26.162	27.387 E3	-4.7	111	0.00
6	tC	C18	30.314	30.858 E3	-1.8	107	0.00
7	tC	C20	28.743	30.177 E3	-5.0	111	0.01
8	tC	C22	28.341	29.704 E3	-4.8	111	0.01
9	tC	C24	28.749	30.436 E3	-5.9	112	0.01
10	tC	C26	28.571	30.471 E3	-6.7	115	0.01
11	tC	C28	28.758	30.993 E3	-7.8	126	0.01
12	tC	C30	29.584	32.371 E3	-9.4	137	0.00
13	tC	C32	29.655	32.856 E3	-10.8	143	0.00
14	tC	C34	30.640	34.537 E3	-12.7	146	0.00
15	tC	C36	29.620	34.583 E3	-16.8	150	0.01
16	tC	C38	27.051	34.228 E3	-26.5#	155	0.02
17	tC	C40	22.281	32.807 E3	-47.2#	166	0.03
18	tC	c42	18.150	32.429 E3	-78.7#	187	0.04
19	TC	Pristane	27.526	28.900 E3	-5.0	111	0.00
20	TC	Phytane	28.919	30.224 E3	-4.5	110	0.00
21	sC	o-terphenyl	34.563	36.704 E3	-6.2	113	0.00
22	tC	TPHC - total	30.963	33.253 E3	-7.4	119	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 3

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980611\T05724.D Vial: 3
Acq On : 15 Jun 98 7:27 pm Operator: Deinhardt
Sample : 50 PPM STANDARD Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.240	19.422 E3	4.0	98	-0.02
2	tC	C10	22.094	21.903 E3	0.9	103	0.00
3	TC	C12	24.139	24.395 E3	-1.1	105	0.00
4	tC	C14	25.279	25.538 E3	-1.0	106	0.00
5	tC	C16	26.162	26.207 E3	-0.2	106	0.00
6	tC	C18	30.314	30.294 E3	0.1	105	0.01
7	tC	C20	28.743	28.872 E3	-0.4	106	0.01
8	tC	C22	28.341	28.470 E3	-0.5	106	0.01
9	tC	C24	28.749	29.146 E3	-1.4	107	0.01
10	tC	C26	28.571	29.165 E3	-2.1	110	0.01
11	tC	C28	28.758	29.553 E3	-2.8	120	0.01
12	tC	C30	29.584	30.822 E3	-4.2	130	0.00
13	tC	C32	29.655	31.307 E3	-5.6	136	0.00
14	tC	C34	30.640	32.819 E3	-7.1	139	0.00
15	tC	C36	29.620	32.857 E3	-10.9	142	0.01
16	tC	C38	27.051	-32.506 E3	-20.2	147	0.02
17	tC	C40	22.281	31.142 E3	-39.8#	158	0.03
18	tC	c42	18.150	30.694 E3	-69.1#	177	0.04
19	TC	Pristane	27.526	28.233 E3	-2.6	108	0.00
20	TC	Phytane	28.919	28.911 E3	0.0	106	0.00
21	sC	o-terphenyl	34.563	35.270 E3	-2.0	108	0.00
22	tC	TPHC - total	30.963	31.166 E3	-0.7	112	0.00

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

Surrogate Recovery Report

Lab. ID # : 3609

Location #: B. 876B

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3609.01		10.00	10.32	**103.17**
3609.02		10.00	10.36	**103.60**
METHOD BLANK	TBLK 107	10.00	10.81	**108.08**

Surrogate Added : **o-Terphenyl**

6/17/98

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

Matrix Spike Recovery Report

Lab. ID # : 3609

Location #: B. 876B

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3613.03MS	1000	146.93	975.91	82.90	75-125
3613.03MSD	1000	146.93	980.85	83.39	75-125

RPD	**0.59**	**20.00**

6/17/98

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

Blank Spike Recovery Report

Lab. ID # : 3609

Location #: B. 876B

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	3-Jun-98	1000	952.25	95.22	75-125

6/17/98

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05577.D Vial: 6
Acq On : 9 Jun 98 10:05 pm Operator: Deinhardt
Sample : 3609.01 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 10 10:24 1998 Quant Results File: TPH40.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Wed Jun 10 08:52:44 1998
Response via : Initial Calibration
DataAcq Meth : TPH39.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	314661	10.317 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery = 103.17%#	
Target Compounds			
2) tC C10	8.79	43282	2.163 mg/L
3) TC C12	10.30	242651	11.117 mg/L
4) tC C14	11.46	331749	14.665 mg/L
5) tC C16	12.46	427792	18.476 mg/L
6) tC C18	12.92	311725	11.755 mg/L
7) tC C20	13.36	301996	11.871 mg/L
8) tC C22	14.17	199422	7.962 mg/L
9) tC C24	14.92	90902	3.593 mg/L
10) tC C26	15.61	29121	1.177 mg/L
11) tC C28	16.24	5853	0.249 mg/L
12) tC C30	16.83	1233	0.055 mg/L
19) TC Pristane	12.95	169043	6.816 mg/L
20) TC Phytane	13.40	113482	4.424 mg/L
22) tC TPHC - total	12.46	27017216	991.453 mg/L m

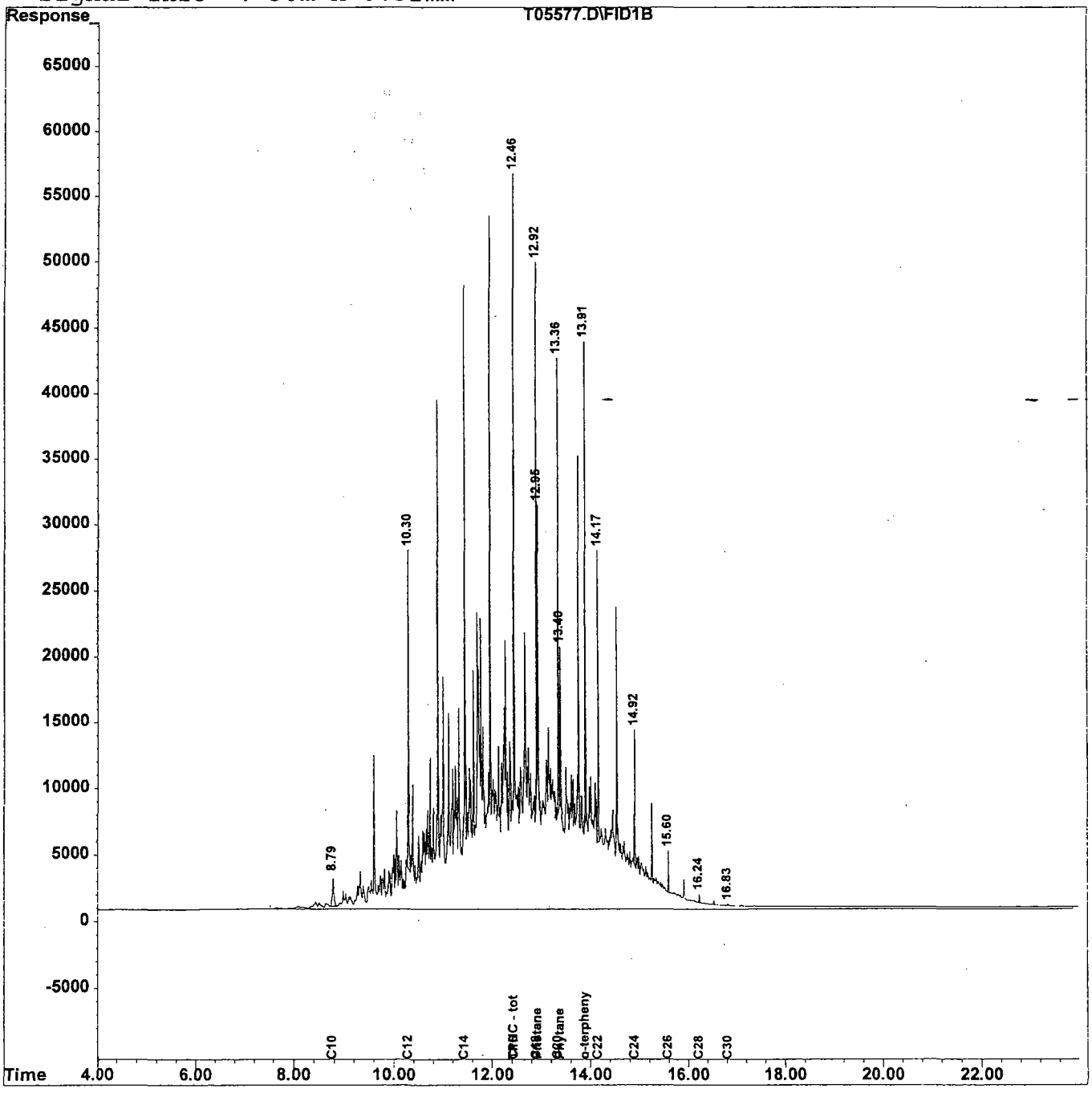
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05577.D Vial: 6
Acq On : 9 Jun 98 10:05 pm Operator: Deinhardt
Sample : 3609.01 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 10 10:24 1998 Quant Results File: TPH40.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Wed Jun 10 08:52:44 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH39.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05578.D Vial: 7
Acq On : 9 Jun 98 11:04 pm Operator: Deinhardt
Sample : 3609.02 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 10 10:27 1998 Quant Results File: TPH40.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Wed Jun 10 08:52:44 1998
Response via : Initial Calibration
DataAcq Meth : TPH39.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	315985	10.360 mg/L
Spiked Amount 10.000 Range 8 - 13		Recovery = 103.60%#	
Target Compounds			
2) tC C10	8.79	52503	2.624 mg/L
3) TC C12	10.30	259358	11.882 mg/L
4) tC C14	11.46	326392	14.428 mg/L
5) tC C16	12.46	430376	18.588 mg/L
6) tC C18	12.92	308702	11.641 mg/L
7) tC C20	13.36	303661	11.937 mg/L
8) tC C22	14.17	194339	7.759 mg/L
9) tC C24	14.92	88412	3.494 mg/L
10) tC C26	15.60	28711	1.160 mg/L
11) tC C28	16.24	6107	0.259 mg/L
12) tC C30	16.83	1362	0.060 mg/L
19) TC Pristane	12.95	172407	6.952 mg/L
20) TC Phytane	13.40	113952	4.442 mg/L
22) tC TPHC - total	12.46	27143205	996.076 mg/L m

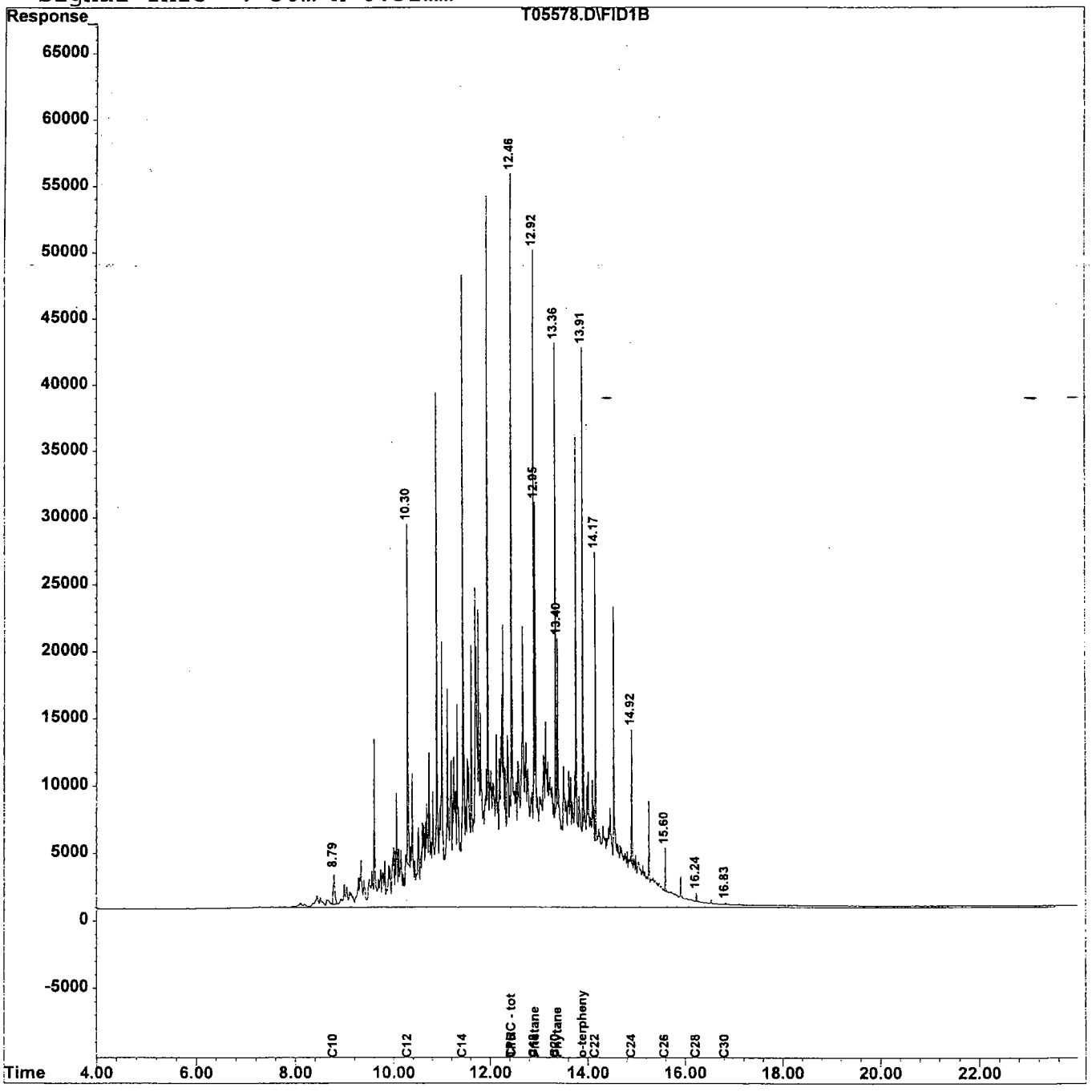
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05578.D Vial: 7
Acq On : 9 Jun 98 11:04 pm Operator: Deinhardt
Sample : 3609.02 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 10 10:27 1998 Quant Results File: TPH40.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Wed Jun 10 08:52:44 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH39.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



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 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 7/27/99

Laboratory Certification #13461

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

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
98-0001
Bldg. 876-B

Project # 3653
Date Rec. 06/16/98
Date Compl. 06/18/98
Released by:

7-6-98

Daniel K. Wright Date:
Laboratory Director

Table of Contents

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

Fifteen grams (15g)(wet weight) of a soil sample is added to a 125 mL acid cleaned, solvent rinsed, capped Erlenmeyer flask. 15g anhydrous sodium sulfate is added to dry sample. Surrogate standard spiking solution is then added to the flask.

Twenty five milliliters(25mL) Methylene Chloride is added to the flask and it is secured on a gyrotory shaker table. The agitation rate is set to 400rpm and the sample is shaken for 30 minutes. The flask is the removed from the table and the particulate matter is allowed to settle. The extract is transferred to a Teflon capped vial. A second 25mL 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 1mL autosampler 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 solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

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

Additional Comments:_____

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

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: C. Appleby
Phone #: 26229
( )DERA (X)OMA ( )Other:_____

Project No: 98-0001
Location: B. 876-B
0081533-139

Samplers Name / Company : Gary DiMartinis - TVS

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	TCL VOLATILES	OVA	Remarks / Preservation Method
31653. 01	876B-A	6-15-98	1058	SOIL	1	X	X	NO	Piping Run @ 4.5' *
02	B	↓	1111	↓	↓	↓	↓	NO	" 4.0'
03	C		1114					NO	" 3.5'
04	D		1117					NO	" 2.5'
05	E		1120					NO	" 2.0'
06	F		1125					NO	" 1.5'
07	G		1128					NO	" 1.0'
08	DUP	↓	—	↓	↓	↓	↓	—	FIELD DUPLICATE ↓

NOTE: OVA (#A5193) CALIBRATED W/95 ppm CH4 + ZERO(0) AIR @ 1045 HRS. ON 6-15-98 by G. DiMartinis.

Comments: *= SAMPLES KEPT BELOW 4°C.

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	6-16-98 0800	[signature]			
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
Turnaround time: (X)Standard 4 wks, (_)Rush ____ Days, (_)ASAP Verbal ____ Hrs.

Remarks: DEDICATED SAMPLING TOOLS USED.

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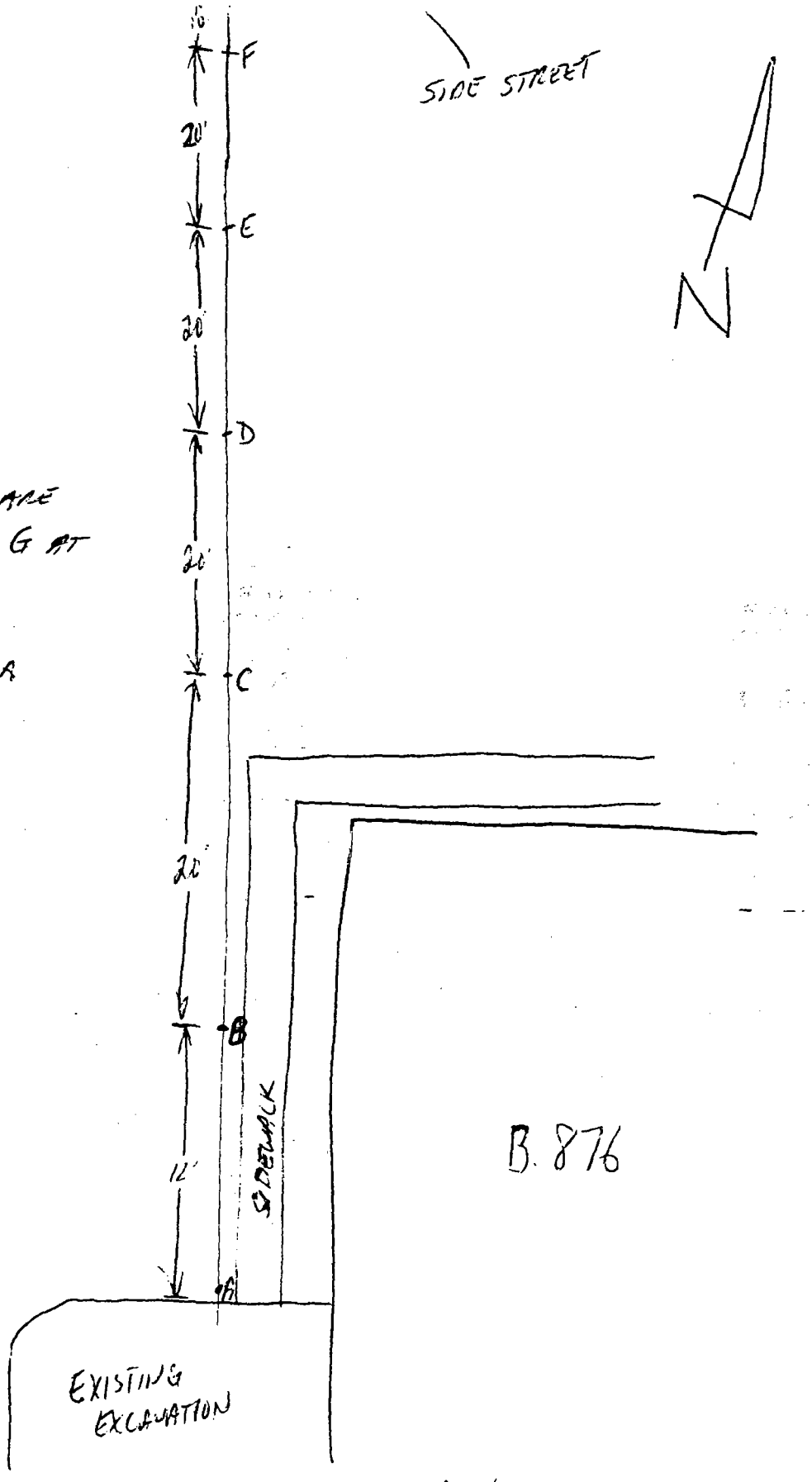


NOTE: SAMPLES B-F ARE AT COUPLINGS, G AT FILL END.

	DEPTH	TIME	OVA
A	4.5'	1058	ND
B	4.0'	1111	ND
C	3.5'	1114	ND
D	2.5'	1117	ND
E	2.0'	1120	ND
F	1.5'	1125	ND
G	1.0'	1128	ND

SITE: B.876-B REMOTE FILL 6/15/98

7 + DUP

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

Client :	U.S. Army	**Lab. ID # :**	3653
	DPW. SELFM-PW-EV	**Date Rec'd:**	16-Jun-98
	Bldg. 173	**Analysis Start:**	16-Jun-98
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	18-Jun-98
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	B. 876-B

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3653.01	876B-A	**1.00**	15.22	94.16	164	**ND**
3653.02	876B-B	**1.00**	15.03	92.19	170	**ND**
3653.03	876B-C	**1.00**	15.29	90.42	170	**ND**
3653.04	876B-D	**1.00**	15.19	93.77	165	**ND**
3653.05	876B-E	**1.00**	15.02	88.98	176	**ND**
3653.06	876B-F	**1.00**	15.27	83.87	183	**ND**
3653.07	876B-G	**1.00**	15.27	94.96	162	**1217.34**
3653.08	876B-DUP	**1.00**	15.09	93.24	167	**ND**
METHOD BLANK	TBLK 115	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel R. Wright
Laboratory Director

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998

Calibration Files
100 =T05610.D 50 =T05611.D 20 =T05612.D
10 =T05613.D 5 =T05614.D

	Compound	100	50	20	10	5	Avg	%RSD
1) tC	C8	2.121	2.039	1.912	1.984	2.064	2,024 E4	3.93
2) tC	C10	2.305	2.184	2.138	2.205	2.215	2.209 E4	2.76
3) TC	C12	2.550	2.393	2.339	2.387	2.400	2.414 E4	3.30
4) tC	C14	2.654	2.496	2.459	2.503	2.528	2.528 E4	2.96
5) tC	C16	2.711	2.562	2.547	2.612	2.650	2.616 E4	2.56
6) tC	C18	3.131	3.028	2.996	3.016	2.986	3.031 E4	1.91
7) tC	C20	2.968	2.814	2.807	2.877	2.906	2.874 E4	2.34
8) tC	C22	2.923	2.778	2.769	2.841	2.861	2.834 E4	2.24
9) tC	C24	2.968	2.825	2.806	2.876	2.900	2.875 E4	2.25
10) tC	C26	2.957	2.820	2.782	2.852	2.874	2.857 E4	2.30
11) tC	C28	2.992	2.851	2.799	2.873	2.863	2.876 E4	2.47
12) tC	C30	3.101	2.957	2.881	2.950	2.903	2.958 E4	2.90
13) tC	C32	3.137	2.994	2.879	2.930	2.887	2.966 E4	3.58
14) tC	C34	3.267	3.114	2.979	3.014	2.946	3.064 E4	4.24
15) tC	C36	3.229	3.069	2.864	2.895	2.752	2.962 E4	6.33
16) tC	C38	3.100	2.923	2.657	2.575	2.270	2.705 E4	11.86
17) tC	C40	2.791	2.587	2.210	1.982	1.570	2.228 E4	21.76
18) tC	c42	2.484	2.257	1.798	1.475	1.060	1.815 E4	31.76
19) TC	Pristane	2.844	2.665	2.705	2.785	2.764	2.753 E4	2.54
20) TC	Phytane	2.979	2.828	2.827	2.892	2.933	2.892 E4	2.29
21) sC	o-terphenyl	3.572	3.380	3.368	3.461	3.500	3.456 E4	2.46
22) tC	TPHC - total	3.082	2.986	2.975	3.099	3.340	3.096 E4	4.74

(#) = Out of Range MEAN RSD % = 5.619

TPH41.M Fri Jun 12 08:15:45 1998

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980617\T05777.D Vial: 2
Acq On : 18 Jun 98 8:39 am Operator: Deinhardt
Sample : 50 PPM STANDARD Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 18 13:53:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.240	19.326 E3	4.5	98	-0.02
2	tC	C10	22.094	21.128 E3	4.4	99	0.00
3	TC	C12	24.139	23.651 E3	2.0	102	0.00
4	tC	C14	25.279	24.838 E3	1.7	103	0.00
5	tC	C16	26.162	25.543 E3	2.4	103	0.00
6	tC	C18	30.314	29.452 E3	2.8	102	0.00
7	tC	C20	28.743	28.162 E3	2.0	104	0.00
8	tC	C22	28.341	27.746 E3	2.1	103	0.00
9	tC	C24	28.749	28.368 E3	1.3	104	0.01
10	tC	C26	28.571	28.342 E3	0.8	107	0.01
11	tC	C28	28.758	28.755 E3	0.0	117	0.01
12	tC	C30	29.584	29.865 E3	-0.9	126	0.00
13	tC	C32	29.655	30.274 E3	-2.1	132	0.00
14	tC	C34	30.640	31.609 E3	-3.2	134	0.00
15	tC	C36	29.620	31.569 E3	-6.6	137	0.00
16	tC	C38	27.051	31.141 E3	-15.1	141	0.01
17	tC	C40	22.281	29.803 E3	-33.8#	151	0.02
18	tC	c42	18.150	28.901 E3	-59.2#	167	0.03
19	TC	Pristane	27.526	27.388 E3	0.5	105	0.00
20	TC	Phytane	28.919	28.299 E3	2.1	103	0.00
21	sC	o-terphenyl	34.563	35.187 E3	-1.8	108	0.00
22	tC	TPHC - total	30.963	30.223 E3	2.4	108	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 2

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980617\T05755.D Vial: 2
Acq On : 17 Jun 98 7:54 am Operator: Deinhardt
Sample : 50 ppm standard Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 18 13:53:03 1998
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	tC	C8	20.240	19.790 E3	2.2	100	-0.02
2	tC	C10	22.094	21.986 E3	0.5	103	0.00
3	TC	C12	24.139	24.565 E3	-1.8	106	0.00
4	tC	C14	25.279	25.805 E3	-2.1	107	0.00
5	tC	C16	26.162	26.474 E3	-1.2	107	0.00
6	tC	C18	30.314	29.904 E3	1.4	104	0.00
7	tC	C20	28.743	29.165 E3	-1.5	107	0.00
8	tC	C22	28.341	28.716 E3	-1.3	107	0.00
9	tC	C24	28.749	29.360 E3	-2.1	108	0.00
10	tC	C26	28.571	29.379 E3	-2.8	111	0.00
11	tC	C28	28.758	29.745 E3	-3.4	121	0.00
12	tC	C30	29.584	30.981 E3	-4.7	131	0.00
13	tC	C32	29.655	31.385 E3	-5.8	136	0.00
14	tC	C34	30.640	32.790 E3	-7.0	139	0.00
15	tC	C36	29.620	32.720 E3	-10.5	142	0.00
16	tC	C38	27.051	32.372 E3	-19.7	147	0.00
17	tC	C40	22.281	30.923 E3	-38.8#	157	0.00
18	tC	c42	18.150	30.418 E3	-67.6#	175	0.02
19	TC	Pristane	27.526	27.999 E3	-1.7	107	0.00
20	TC	Phytane	28.919	29.226 E3	-1.1	107	0.00
21	sC	o-terphenyl	34.563	35.509 E3	-2.7	109	0.00
22	tC	TPHC - total	30.963	32.061 E3	-3.5	115	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 2

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

Surrogate Recovery Report

Lab. ID # : 3653

Location #: B. 876-B

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3653.01		10.00	10.29	**102.90**
3653.02		10.00	10.53	**105.29**
3653.03		10.00	9.69	**96.92**
3653.04		10.00	11.15	**111.46**
3653.05		10.00	9.71	**97.08**
3653.06		10.00	9.95	**99.49**
3653.07		10.00	9.95	**99.52**
3653.08		10.00	9.83	**98.27**
METHOD BLANK	TBLK 115	10.00	10.72	**107.16**

Surrogate Added : **o-Terphenyl**

6/18/98

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

Matrix Spike Recovery Report

Lab. ID # : 3653

Location #: B. 876-B

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3654.08MS	1000	0.00	929.92	92.99	75-125
3654.08MSD	1000	0.00	952.18	95.22	75-125
			RPD	**2.37**	**20.00**

6/22/98

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

Blank Spike Recovery Report

Lab. ID # : 3653

Location #: B. 876-B

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	16-Jun-98	1000	990.58	99.06	75-125

6/18/98

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05758.D Vial: 5
Acq On : 17 Jun 98 11:10 am Operator: Deinhardt
Sample : 3653.01 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:44 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	355642	10.290 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 102.90%#	
Target Compounds			

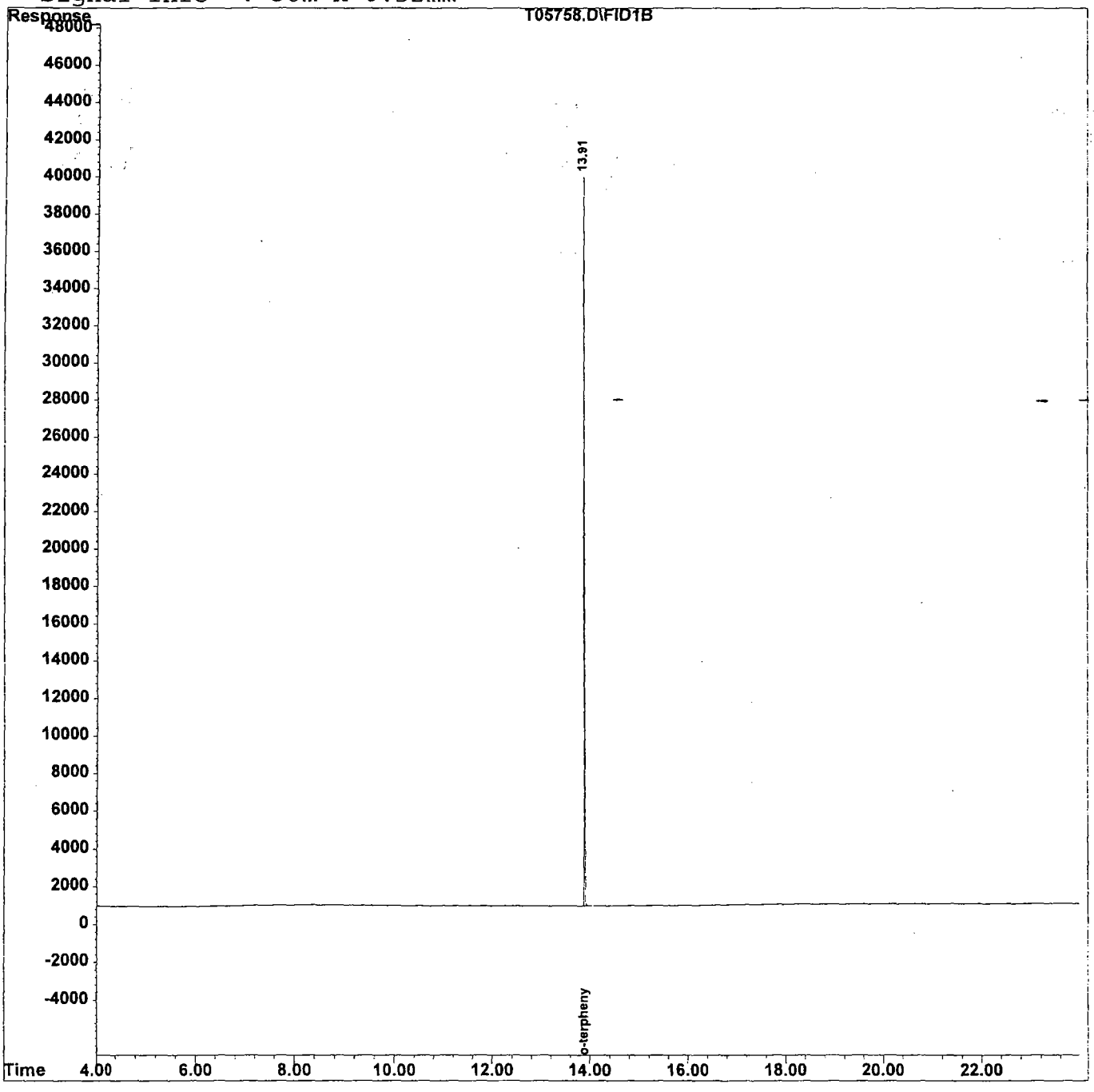
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05758.D Vial: 5
Acq On : 17 Jun 98 11:10 am Operator: Deinhardt
Sample : 3653.01 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:44 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05759.D Vial: 6
Acq On : 17 Jun 98 12:20 pm Operator: Deinhardt
Sample : 3653.02 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	363911	10.529 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 105.29%#	
Target Compounds			

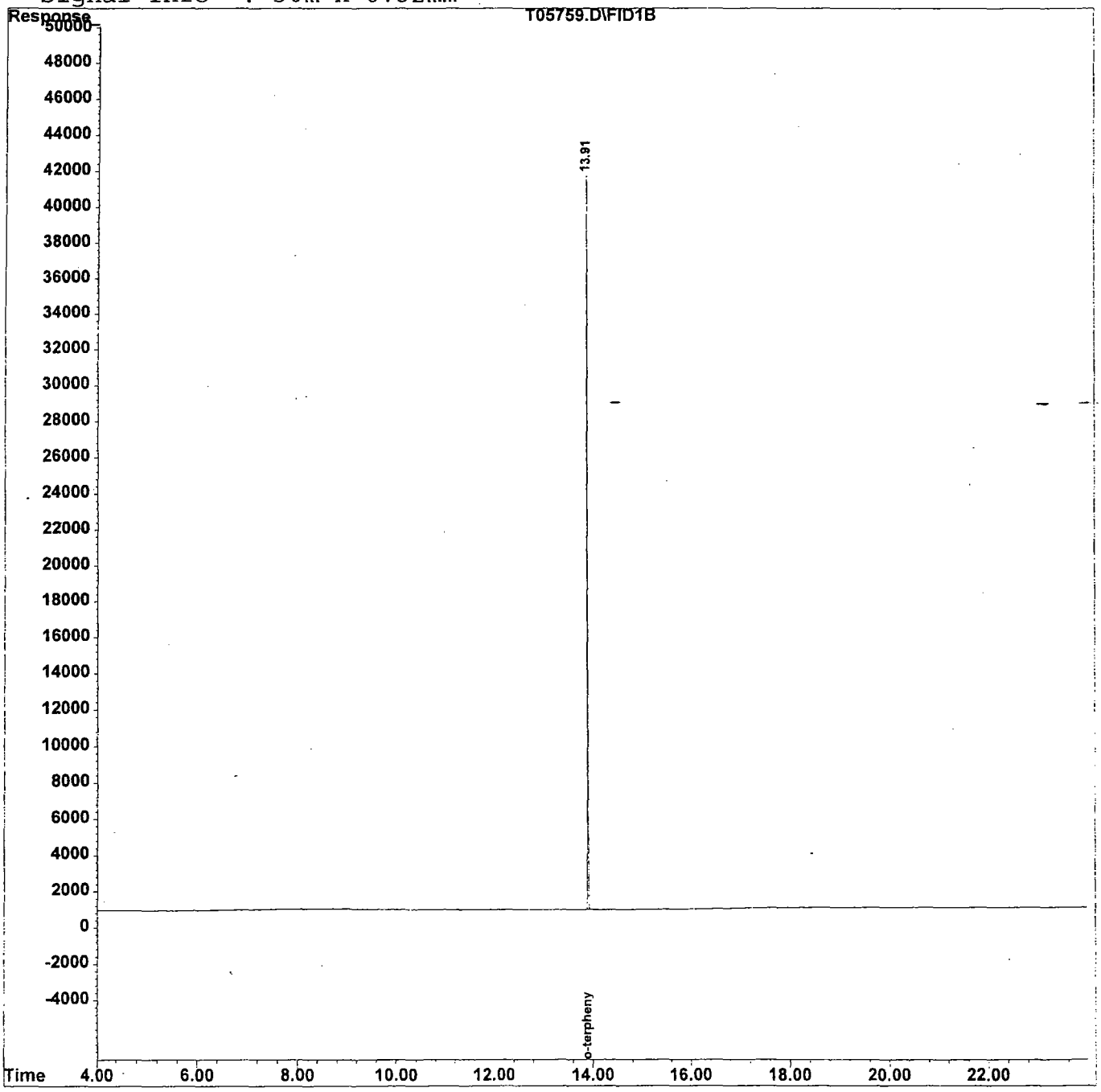
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05759.D Vial: 6
Acq On : 17 Jun 98 12:20 pm Operator: Deinhardt
Sample : 3653.02 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05760.D Vial: 7
Acq On : 17 Jun 98 1:46 pm Operator: Deinhardt
Sample : 3653.03 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	334994	9.692 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	96.92%#
Target Compounds			

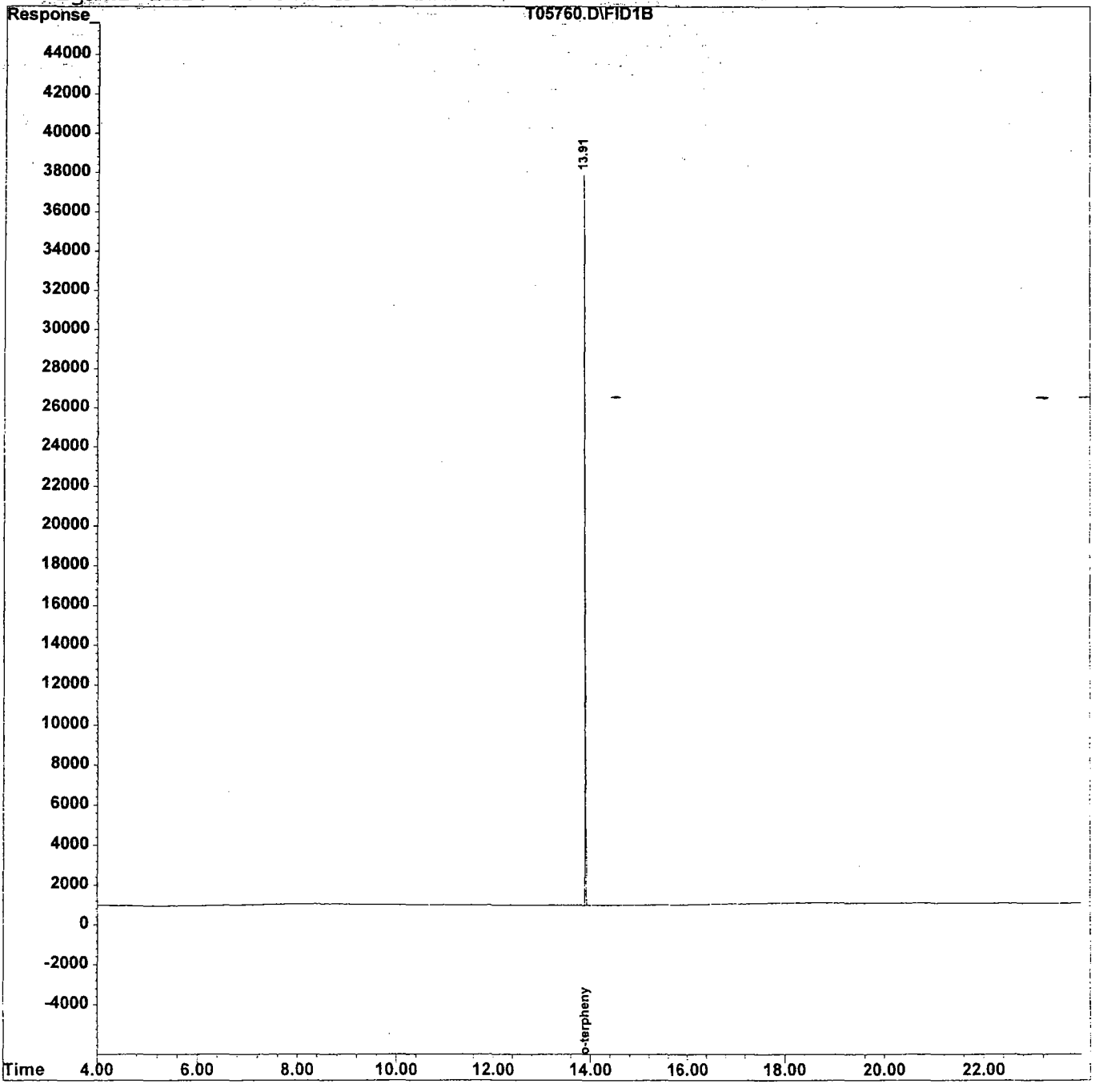
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05760.D Vial: 7
Acq On : 17 Jun 98 1:46 pm Operator: Deinhardt
Sample : 3653.03 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05761.D Vial: 8
Acq On : 17 Jun 98 3:43 pm Operator: Deinhardt
Sample : 3653.04 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	385227	11.146 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 111.46%#	
Target Compounds			

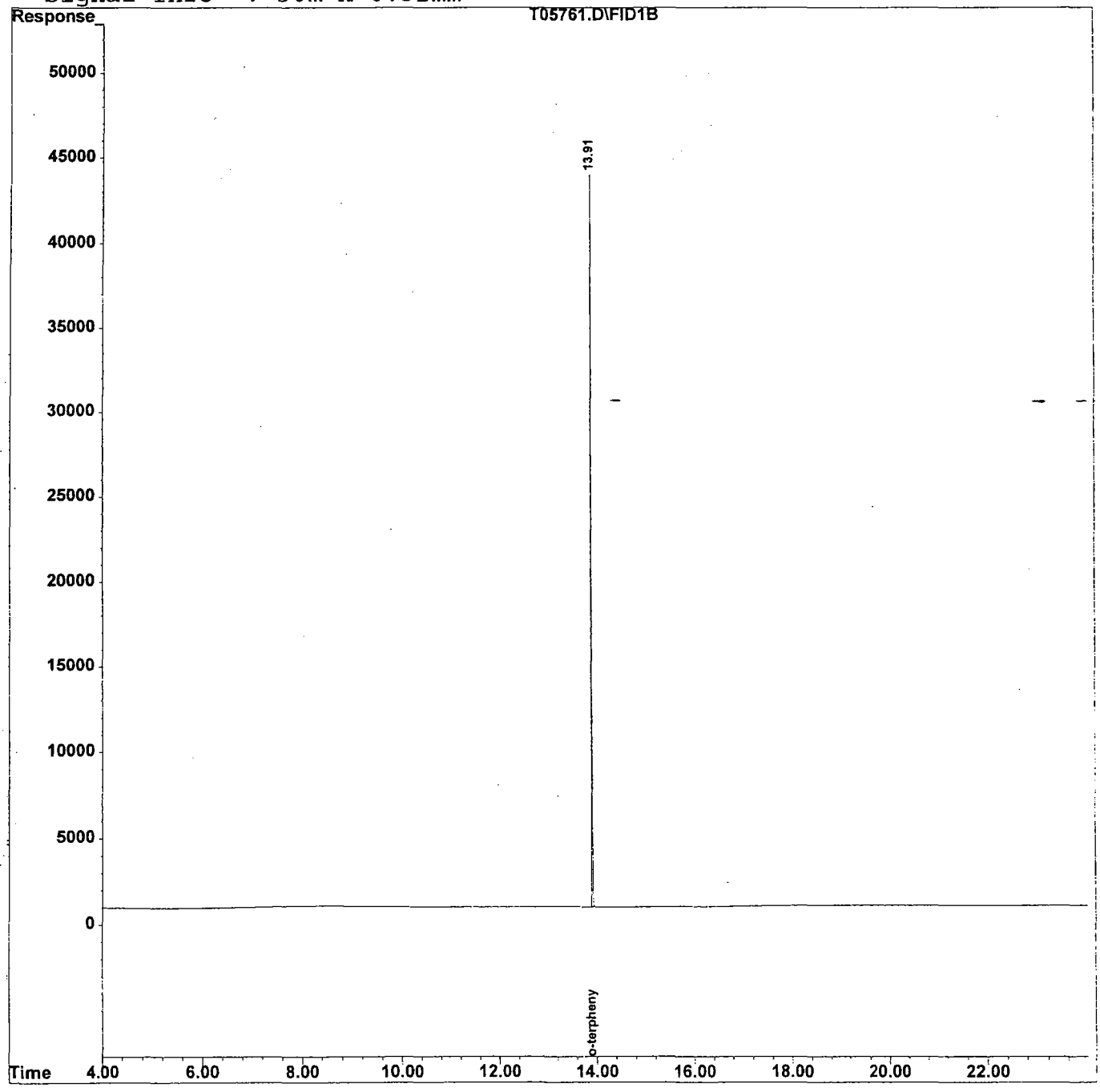
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05761.D Vial: 8
Acq On : 17 Jun 98 3:43 pm Operator: Deinhardt
Sample : 3653.04 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:45 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05762.D Vial: 9
Acq On : 17 Jun 98 5:41 pm Operator: Deinhardt
Sample : 3653.05 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:46 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

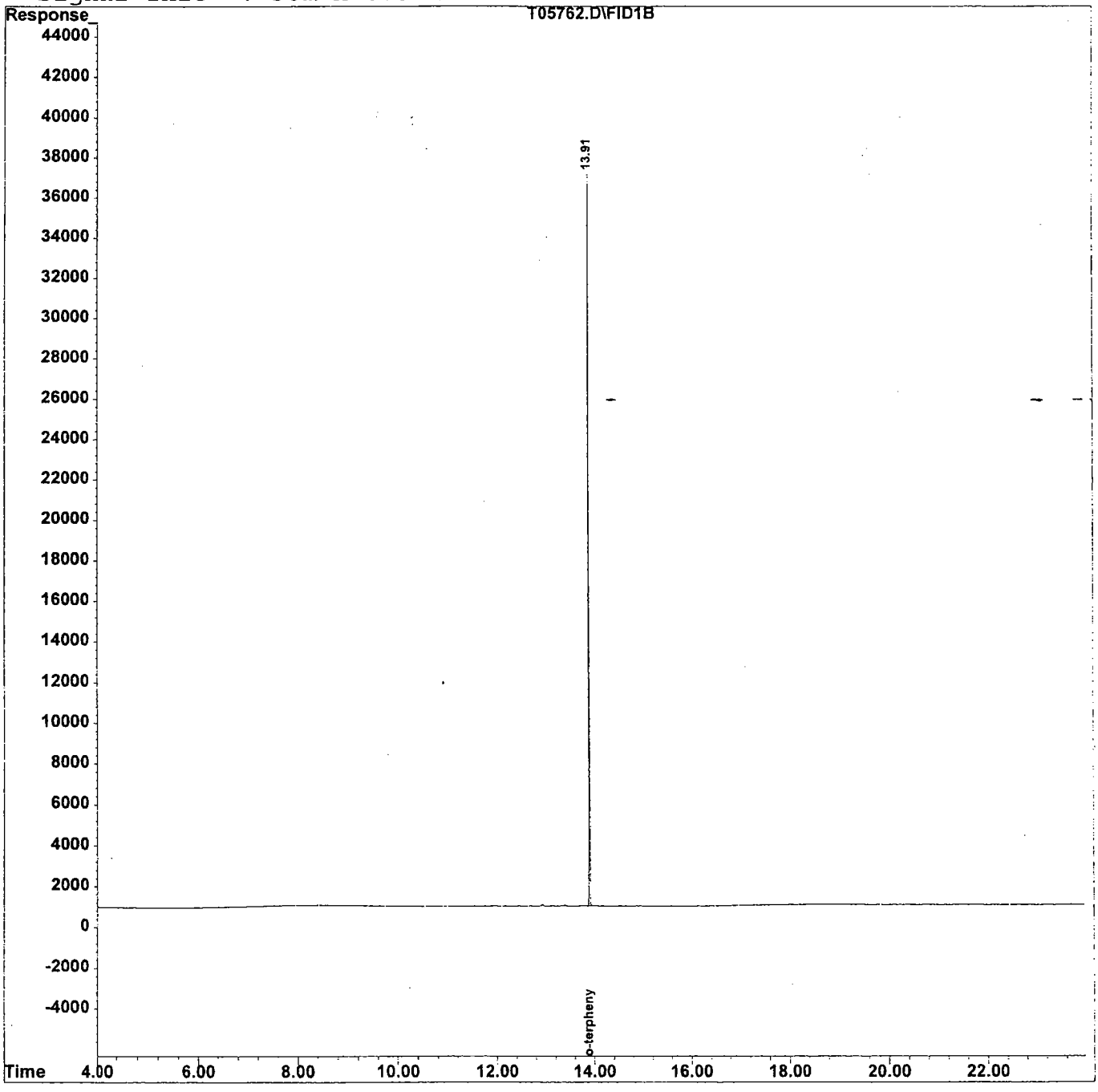
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	335526	9.708 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	97.08%#
Target Compounds			

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05762.D Vial: 9
Acq On : 17 Jun 98 5:41 pm Operator: Deinhardt
Sample : 3653.05 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 8:46 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05780.D Vial: 27
Acq On : 18 Jun 98 11:45 am Operator: Deinhardt
Sample : 3653.06 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 13:49 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	343852	9.949 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	99.49%#
Target Compounds			

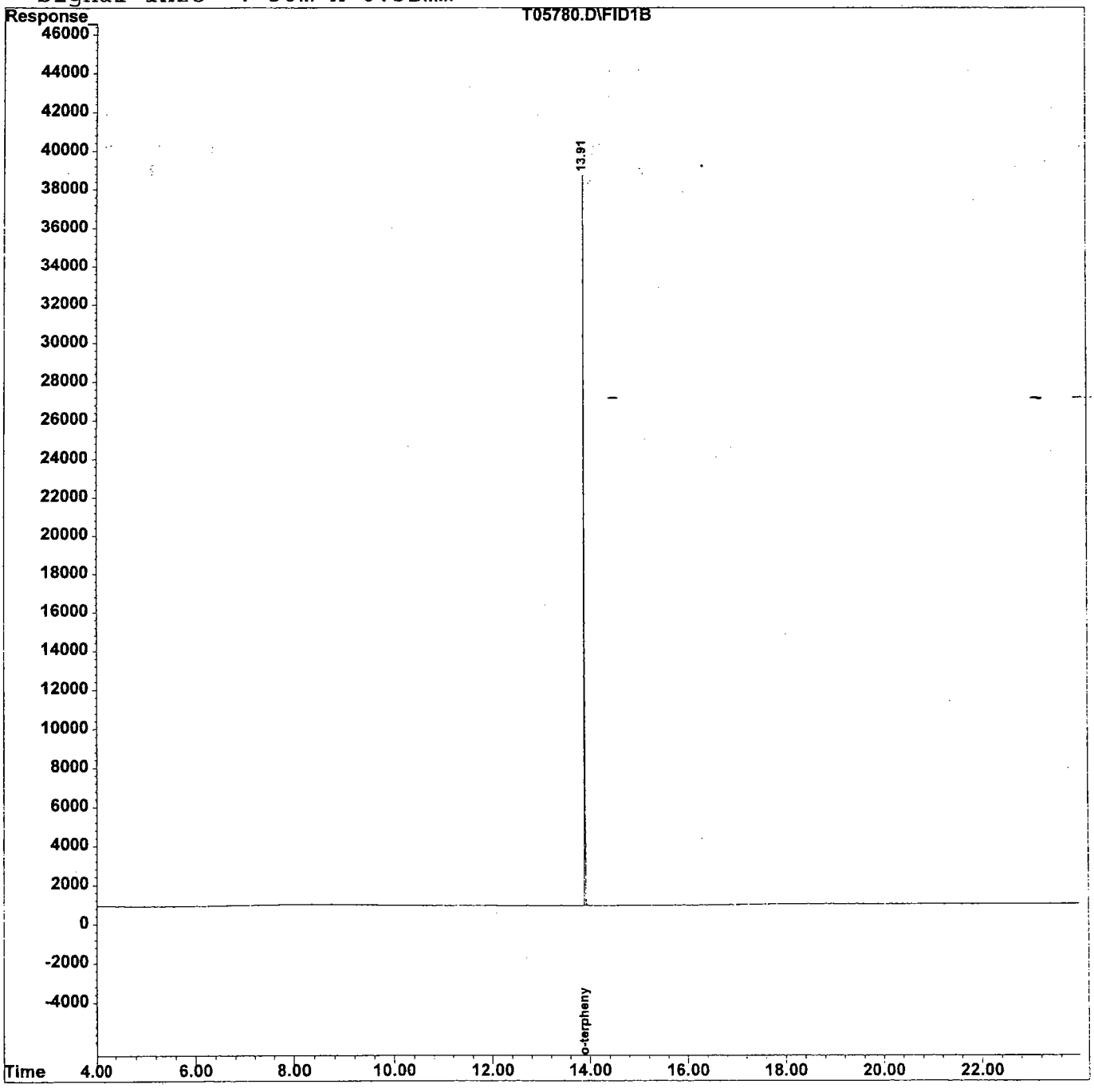
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05780.D Vial: 27
Acq On : 18 Jun 98 11:45 am Operator: Deinhardt
Sample : 3653.06 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 13:49 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

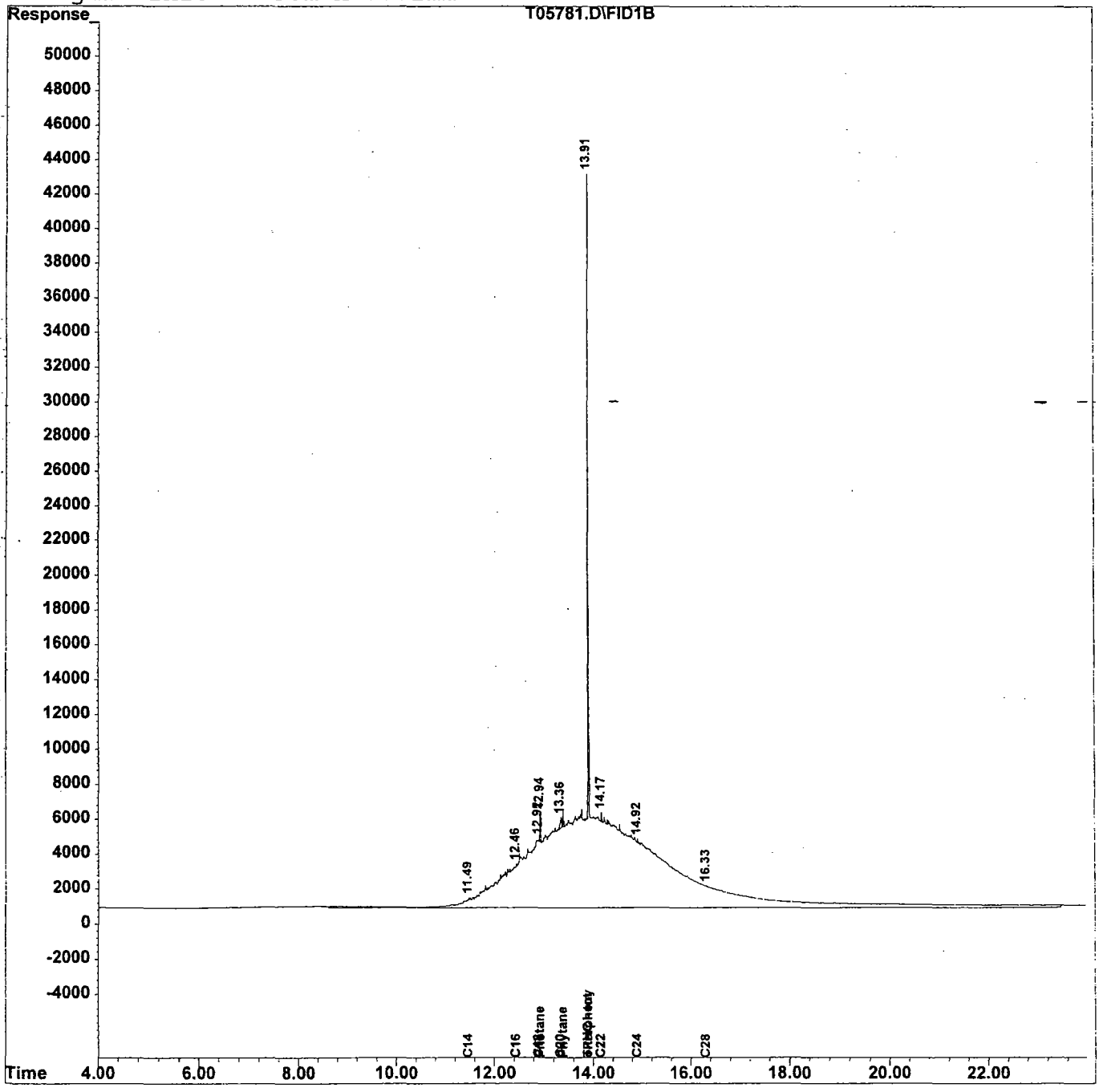


Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05781.D Vial: 28
Acq On : 18 Jun 98 1:04 pm Operator: Deinhardt
Sample : 3653.07 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 13:50 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980617\T05782.D Vial: 29
Acq On : 18 Jun 98 2:26 pm Operator: Deinhardt
Sample : 3653.08 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 15:00 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Initial Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	339644	9.827 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	98.27%#
Target Compounds			

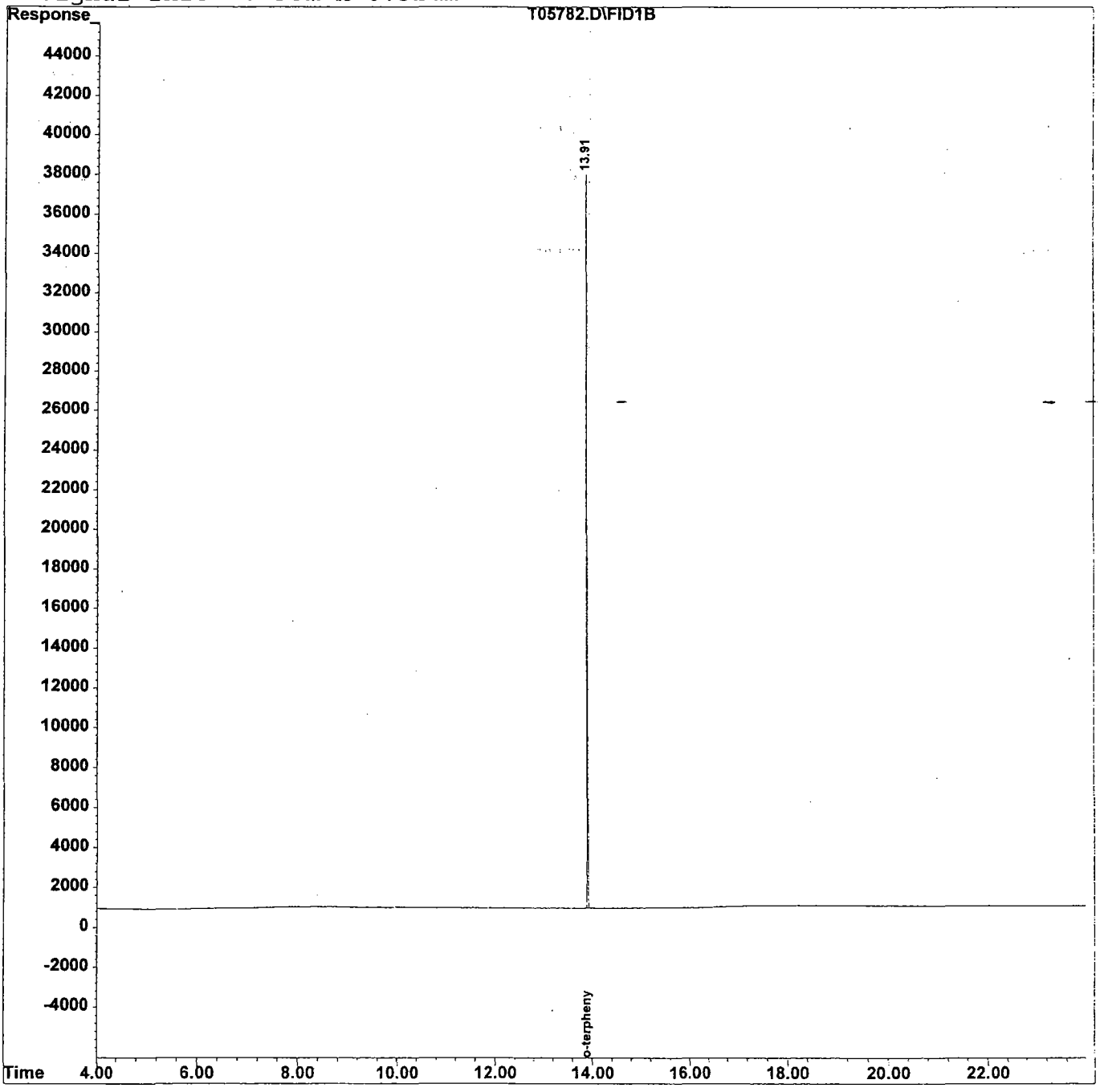
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980617\T05782.D Vial: 29
Acq On : 18 Jun 98 2:26 pm Operator: Deinhardt
Sample : 3653.08 Inst : GC/MS Ins
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: Jun 18 15:00 1998 Quant Results File: TPH41.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH41.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Thu Jun 11 14:59:41 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH41.M

Volume Inj. : 1 ul
Signal Phase : HP-5
Signal Info : 30m x 0.32mm



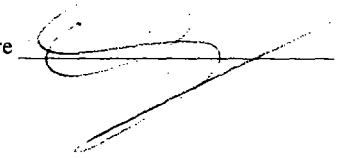
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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 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 7/6/95

Laboratory Certification #13461

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

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 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: UST Program

Bldg. 876B

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
876-1 (11')	4185.01	Soil	13-Jan-99 14:20	01/12/99
876-2 (8')	4185.02	Soil	13-Jan-99 14:25	01/12/99
876-3 (8')	4185.03	Soil	13-Jan-99 14:30	01/12/99
876-4 (11')	4185.04	Soil	13-Jan-99 14:35	01/12/99
876-5 (11')	4185.05	Soil	13-Jan-99 14:40	01/12/99

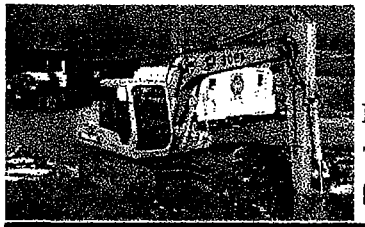
ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
VOA+15, TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26224
(X)OMA FM0097F147 UST Remediation

Project No: IJO 99-0078 UST (REM.)
Location: BUILDING 876B
UST # 0081533-139
ISRA CASE # 98-06-02-1047-31

Samplers Name / Company : Tim Walker (SMC/VERSAR)

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% SOLIDS		VO+10		VOC JAR #		H-NU READING	Remarks / Preservation Method
4185. 01	876-1 (11')	1-12-99	1420	SOIL	1	X	X				/		0	ICE
02	876-2 (8')	"	1425	"	2	X	X				645		22	
03	876-3 (8')	"	1430	"	2	X	X				646		18	
04	876-4 (11')	"	1435	"	1	X	X				/		0	
05	876-5 (11')	"	1440	"	2	X	X				647		20	

Comments:
RUSH
RUN VO+10 ON ALL TPHC ABOVE 1,000 PPM

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Tim Walker	1-13-99 955	J. Verfurd			
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
Turnaround time: (_)Standard 4 wks, (X)Rush 1 Days, (X)ASAP Verbal ___Hrs.

Remarks: H-NU CALIBRATION - ZERO GAS = 0.0 PPM
100 PPM ISOBUTYLENE; 58 PPM @ 9.8 SPAN
SMC H-NU #1 - S/N 701463

000002

print legibly

SMCcoc1/6/99

Change of Chain of Custody

Lab Project ID#: 4185.02,05 Site/Project Name: Bldg. 876B

Date Received: 1-13-99 Date of Change: 1-19-99

Requested by: print T. Walker Sign: _____

Turnaround Time: 2 DAYS

1. Were the correct containers and/or preservatives used for the tests indicated? (Yes) No
2. Was a sufficient amount of sample sent for the tests indicated? (Yes) No
3. Are samples Within Holding time for new analysis? (Yes) No
4. Was the change documented in the sample receipt log book? (Yes) No

Received by: print J. Vergara Sign: J. Vergara

Sample ID#	New Analysis		Sample ID#	New Analysis
4185.02	VOA's			
1 ea	1			

Comments: _____

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	:	Method Detection Limit
J	:	Compound identified below detection limit
B	:	Compound found in blank
D	:	Results are from a dilution of the sample
U	:	Compound searched for but not detected
E	:	Compound exceeds calibration limit
PQL	:	Practical Quantitation Limit
NLE	:	No limit established
RT	:	Retention time

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

Vblk143

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: Vblk143

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V05468.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 0 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	6200	U
67641	Acetone	6200	U
78933	2-Butanone	6200	U
591786	2-Hexanone	6200	U
75718	Dichlorodifluoromethane	6200	U
74-87-3	Chloromethane	6200	U
75-01-4	Vinyl Chloride	6200	U
74-83-9	Bromomethane	6200	U
75-00-3	Chloroethane	6200	U
75-69-4	Trichlorofluoromethane	6200	U
75-35-4	1,1-Dichloroethene	6200	U
75-09-2	Methylene Chloride	6200	U
156-60-5	trans-1,2-Dichloroethene	6200	U
75-35-3	1,1-Dichloroethane	6200	U
107131	Vinyl Acetate	6200	U
75150	Carbon Disulfide	6200	U
156592	cis-1,2-Dichloroethene	6200	U
67-66-3	Chloroform	6200	U
110-75-8	2-Chloroethyl vinyl ether	500	U
71556	1,1,1-Trichloroethane	6200	U
56-23-5	Carbon Tetrachloride	6200	U
71-43-2	Benzene	6200	U
107-06-2	1,2-Dichloroethane	6200	U
79-01-6	Trichloroethene	6200	U
78-87-5	1,2-Dichloropropane	6200	U
75-27-4	Bromodichloromethane	6200	U
10061-01-5	cis-1,3-Dichloropropene	6200	U
108-88-3	Toluene	6200	U
10061-02-6	trans-1,3-Dichloropropene	6200	U
79-00-5	1,1,2-Trichloroethane	6200	U
127-18-4	Tetrachloroethene	6200	U
126-48-1	Dibromochloromethane	6200	U
108-90-7	Chlorobenzene	6200	U
100-41-4	Ethylbenzene	6200	U
108383	m+p-Xylenes	6200	U
95476	o-Xylene	6200	U
100-42-5	Styrene	6200	U
75-25-2	Bromoform	6200	U
79-34-5	1,1,2,2-Tetrachloroethane	6200	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Vblk143**

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: Vblk143

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V05468.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 0 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

876-2

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: 4185.02

Sample wt/vol: 9.5 (g/ml) G Lab File ID: V05470.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 7.88 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	7100	U
67641	Acetone	7100	U
78933	2-Butanone	7100	U
591786	2-Hexanone	7100	U
75718	Dichlorodifluoromethane	7100	U
74-87-3	Chloromethane	7100	U
75-01-4	Vinyl Chloride	7100	U
74-83-9	Bromomethane	7100	U
75-00-3	Chloroethane	7100	U
75-69-4	Trichlorofluoromethane	7100	U
75-35-4	1,1-Dichloroethene	7100	U
75-09-2	Methylene Chloride	1900	J
156-60-5	trans-1,2-Dichloroethene	7100	U
75-35-3	1,1-Dichloroethane	7100	U
107131	Vinyl Acetate	7100	U
75150	Carbon Disulfide	7100	U
156592	cis-1,2-Dichloroethene	7100	U
67-66-3	Chloroform	7100	U
110-75-8	2-Chloroethyl vinyl ether	570	U
71556	1,1,1-Trichloroethane	7100	U
56-23-5	Carbon Tetrachloride	7100	U
71-43-2	Benzene	7100	U
107-06-2	1,2-Dichloroethane	7100	U
79-01-6	Trichloroethene	7100	U
78-87-5	1,2-Dichloropropane	7100	U
75-27-4	Bromodichloromethane	7100	U
10061-01-5	cis-1,3-Dichloropropene	7100	U
108-88-3	Toluene	7100	U
10061-02-6	trans-1,3-Dichloropropene	7100	U
79-00-5	1,1,2-Trichloroethane	7100	U
127-18-4	Tetrachloroethene	7100	U
126-48-1	Dibromochloromethane	7100	U
108-90-7	Chlorobenzene	7100	U
100-41-4	Ethylbenzene	2200	J
108383	m+p-Xylenes	7400	
95476	o-Xylene	5500	J
100-42-5	Styrene	7100	U
75-25-2	Bromoform	7100	U
79-34-5	1,1,2,2-Tetrachloroethane	7100	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 876-2

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: 4185.02

Sample wt/vol: 9.5 (g/ml) G Lab File ID: V05470.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 7.88 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 6

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1. 000111-65-9	Octane	24.47	2000	JN
2.	unknown	27.32	1900	J
3. 000111-84-2	Nonane	28.31	1800	JN
4.	unknown	30.41	1800	J
5.	unknown	31.52	2200	J
6. 000124-18-5	Decane	31.65	3400	JN

1A

FIELD ID

VOLATILE ORGANICS ANALYSIS DATA SHEET

876-5

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: 4185.05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V05471.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 6.51 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
107028	Acrolein	6700	U
67641	Acetone	6700	U
78933	2-Butanone	6700	U
591786	2-Hexanone	6700	U
75718	Dichlorodifluoromethane	6700	U
74-87-3	Chloromethane	6700	U
75-01-4	Vinyl Chloride	6700	U
74-83-9	Bromomethane	6700	U
75-00-3	Chloroethane	6700	U
75-69-4	Trichlorofluoromethane	6700	U
75-35-4	1,1-Dichloroethene	6700	U
75-09-2	Methylene Chloride	1700	J
156-60-5	trans-1,2-Dichloroethene	6700	U
75-35-3	1,1-Dichloroethane	6700	U
107131	Vinyl Acetate	6700	U
75150	Carbon Disulfide	6700	U
156592	cis-1,2-Dichloroethene	6700	U
67-66-3	Chloroform	6700	U
110-75-8	2-Chloroethyl vinyl ether	540	U
71556	1,1,1-Trichloroethane	6700	U
56-23-5	Carbon Tetrachloride	6700	U
71-43-2	Benzene	6700	U
107-06-2	1,2-Dichloroethane	6700	U
79-01-6	Trichloroethene	6700	U
78-87-5	1,2-Dichloropropane	6700	U
75-27-4	Bromodichloromethane	6700	U
10061-01-5	cis-1,3-Dichloropropene	6700	U
108-88-3	Toluene	6700	U
10061-02-6	trans-1,3-Dichloropropene	6700	U
79-00-5	1,1,2-Trichloroethane	6700	U
127-18-4	Tetrachloroethene	6700	U
126-48-1	Dibromochloromethane	6700	U
108-90-7	Chlorobenzene	6700	U
100-41-4	Ethylbenzene	6700	U
108383	m+p-Xylenes	6700	U
95476	o-Xylene	6700	U
100-42-5	Styrene	6700	U
75-25-2	Bromoform	6700	U
79-34-5	1,1,2,2-Tetrachloroethane	6700	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: 876-5

Lab Name: FMETL NJDEP# 13461

Project 980932 Case No.: 4185 Location 876B SAS No

Matrix: (soil/water) SOIL Lab Sample ID: 4185.05

Sample wt/vol: 10.0 (g/ml) G Lab File ID: V05471.D

Level: (low/med) MED Date Received: 1/13/99

% Moisture: not dec. 6.51 Date Analyzed: 1/19/99

GC Column: RTX502 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume: 25000 (uL) Soil Aliquot Volume: 50 (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Number TICs found: 1

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	31.51	2100	J

TPHC

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

Client :	U.S. Army	**Lab. ID # :**	4185
	DPW. SELFM-PW-EV	**Date Rec'd:**	13-Jan-99
	Bldg. 173	**Analysis Start:**	13-Jan-99
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	14-Jan-99
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Inst. ID.	GC TPHC INST. #1	**Injection Volume**	1 ul
Column Type	RTX 5	**Column ID**	0.32 um
Ext. Meth:	Shake	**Location #:**	Bldg. 876B

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
4185.01	876-1(11')	**1.00**	14.94	95.25	165	**ND**
4185.02	876-2(8')	**5.00**	15.90	92.12	160	**13599.71**
4185.03	876-3(8')	**1.00**	15.48	94.43	161	**ND**
4185.04	876-4(11')	**1.00**	14.99	94.59	166	**ND**
4185.05	876-5(11')	**5.00**	15.93	93.49	158	**7255.44**
METHOD BLANK	TBLK 207	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

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 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 ___/___/___

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

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 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: UST Program

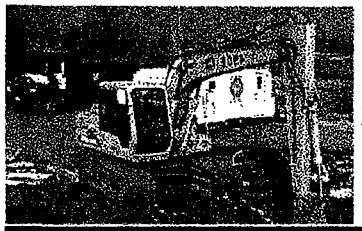
Bldg. 876B

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
876-RF-1 (2')	4193.01	Soil	19-Jan-99 09:30	01/19/99
876-TP1-1 (11')	4193.02	Soil	19-Jan-99 10:30	01/19/99

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

Daniel Wright/Date
Laboratory Director



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26224
(X)OMA FM0097F147 UST Remediation

Project No: IJO 99-0078 UST (REM.)
Location: BUILDING 876B
UST #0081533-139
ISRA CASE #98-06-02-1047-31

Samplers Name / Company : Tim Walker (SMC/VERSAR)

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% SOLIDS						H-NU READINGS	Remarks / Preservation Method
4193 01	876-RF1(2')	1-19-99	0930	SOIL	1	X	X						0	ICE
02	876-TP1(11')	"	1030	SOIL	1	X	X						0	ICE

Comments: RUSH

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Tim Walker	1-19-99 1130	J. Vaughan			
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
Turnaround time: (_)Standard 4 wks, (X)Rush ____ Days, (X)ASAP Verbal ____ Hrs.

Remarks: H-NU CALIBRATION - ZERO GAS = 0.0 PPM
100 PPM ISOBUTYLENE; 58 PPM @ 9.8 SPAN
SMC H-NU #1 : S/N 701463

print legibly

SMCcoc1/6/99

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

Client :	U.S. Army	**Lab. ID # :**	4193
	DPW. SELFM-PW-EV	**Date Rec'd:**	19-Jan-99
	Bldg. 173	**Analysis Start:**	19-Jan-99
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	20-Jan-99
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Inst. ID.	GC TPHC INST. #1	**Injection Volume**	1 ul
Column Type	RTX 5	**Column ID**	0.32 um
Ext. Meth:	Shake	**Location #:**	Bldg. 876B

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
4193.01	876-RF1(2')	**1.00**	15.04	95.15	164	**ND**
4193.02	876-TP1(11')	**1.00**	15.14	88.97	174	**ND**
METHOD BLANK	TBLK 208	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 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: UST Program

Bldg. 876B

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time Of Collection	Date Received
876-6 (12')	4190.01	Soil	13-Jan-99 13:15	01/13/99
876-7 (11')	4190.02	Soil	13-Jan-99 13:20	01/13/99
876-SP1	4190.03	Soil	13-Jan-99 14:00	01/13/99
876-SP2	4190.04	Soil	13-Jan-99 14:05	01/13/99

ANALYSIS:
FORT MONMOUTH ENVIRONMENTAL LAB
TPHC, %SOLIDS

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

Daniel Wright/Date
Laboratory Director

Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703
Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26224
(X)OMA FM0097F147 UST Remediation

Project No: IJO 99-0078 UST (REM.)
Location: BUILDING 876B
UST#: 0081533-139
ISRA CASE #98-06-02-1047-31

Samplers Name / Company : Tim Walker (SMC/VERSAR)

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	TPHC	% SOLIDS						H-Nu Reading	Remarks / Preservation Method
41990.01	876-6(12')	1-13-99	1315	Soil	1	X	X						0	ICE
02	876-7(11')	"	1320	"	1	X	X						0	ICE
03	876-SP1	"	1400	"	1	X	X						0	ICE
04	876-SP2	"	1405	"	1	X	X						0	ICE

Analysis Parameters

Comments: RUSH

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
[signature]	1-13-99 1435	[signature]			
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
Turnaround time: (_)Standard 4 wks, (X)Rush 1 Days, (X)ASAP Verbal ___ Hrs.

Remarks: H-Nu CALIBRATION - ZERO GAS = 0.0 PPM
100 PPM ISOBUTYLENE; 58 PPM @ 9.8 SPAN
SMC H-NU #1 : S/N 701463

print legibly

SMCcoc1/6/99

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

Client :	U.S. Army	**Lab. ID # :**	4190
	DPW. SELFM-PW-EV	**Date Rec'd:**	13-Jan-99
	Bldg. 173	**Analysis Start:**	13-Jan-99
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	14-Jan-99
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Inst. ID.	GC TPHC INST. #1	**Injection Volume**	1 ul
Column Type	RTX 5	**Column ID**	0.32 um
Ext. Meth:	Shake	**Location #:**	Bldg. 876B

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
4190.01	876-6(12')	**1.00**	15.20	81.17	190	**ND**
4190.02	876-7(11')	**1.00**	15.27	97.29	158	**ND**
4190.03	876-SP1	**1.00**	14.91	94.73	166	**207.23**
4190.04	876-SP2	**1.00**	15.03	96.17	163	**ND**
METHOD BLANK	TBLK 207	**1.00**	15.00	100.00	157	**ND**

ND = Not Detected

MDL = Method Detection Limit

Daniel K. Wright
Laboratory Director

APPENDIX E

GROUNDWATER ANALYTICAL DATA PACKAGE

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 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: UST Program

Bldg. 876

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
876.1- 11 – 15'	5428.01	Aqueous	22-May-00 10:40	05/22/00

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

6-8-00
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY

METHODOLOGY 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 Method 3510/8270
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 concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFORMANCE NON-CONFORMANCE SUMMARY

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

Indicate
Yes, No, N/A

1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks) — yes

2. Retention times for chromatograms provided — yes

3. GC/MS Tune Specifications

   a. BFB Meet Criteria — yes
   b. DFTPP Meet Criteria — yes

4. GC/MS Tuning Frequency - Performed every 24 hours for 600 series and 12 hours for 8000 series — yes

5. GC/MS Calibration - Initial Calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis for 600 series and 12 hours for 8000 series — yes

6. GC/MS Calibration Requirements

   a. Calibration Check Compounds Meet Criteria — yes
   b. System Performance Check Compounds Meet Criteria — yes

7. Blank Contamination - If yes, List compounds and concentrations in each blank: — NO

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

8. Surrogate Recoveries Meet Criteria — 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 NA

   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) — yes

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

GC/MS Analysis Conformance/Non-Conformance Summary (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 number of days exceeded for each sample: ___
    _____
    _____

12. Analysis Holding Time Met — Yes

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

Additional Comments:

_____
_____
_____

Laboratory Manager : _____ Date: 6-8-00

LABORATORY CHRONICLE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEP CERTIFICATION # 13461

Definition of Qualifiers

MDL	: Method Detection Limit
J	: Compound Identified Below Detection Limit
B	: Compound is in Both Sample and Blank
D	: Results are from a Dilution of the Sample
U	: Compound Searched for but not Detected
E	: Compound Exceeds Calibration Limit

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

Data File	VB006952.D	Sample Name	Vblk212
Operator	Skelton	Field ID	Vblk212
Date Acquired	24 May 2000 1:29 pm	Sample Multiplier	10

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	18.50 ug/L	
107131	Acrylonitrile			not detected	50	27.80 ug/L	
75650	tert-Butyl alcohol			not detected	nle	85.20 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	1.60 ug/L	
108203	Di-isopropyl ether			not detected	nle	2.50 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	16.80 ug/L	
74-87-3	Chloromethane			not detected	30	11.60 ug/L	
75-01-4	Vinyl Chloride			not detected	5	10.60 ug/L	
74-83-9	Bromomethane			not detected	10	11.00 ug/L	
75-00-3	Chloroethane			not detected	nle	10.10 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	5.00 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	2.40 ug/L	
67-64-1	Acetone			not detected	700	13.60 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	4.60 ug/L	
75-09-2	Methylene Chloride			not detected	2	2.40 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	1.60 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	1.20 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	7.80 ug/L	
78-93-3	2-Butanone			not detected	300	6.20 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	1.70 ug/L	
67-66-3	Chloroform			not detected	6	3.00 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	2.30 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	4.70 ug/L	
71-43-2	Benzene			not detected	1	2.30 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	1.80 ug/L	
79-01-6	Trichloroethene			not detected	1	2.30 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	4.00 ug/L	
75-27-4	Bromodichloromethane			not detected	1	5.50 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	6.50 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	6.90 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	5.90 ug/L	
108-88-3	Toluene			not detected	1000	3.70 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	8.70 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	4.80 ug/L	
127-18-4	Tetrachloroethene			not detected	1	3.20 ug/L	
591-78-6	2-Hexanone			not detected	nle	7.10 ug/L	
126-48-1	Dibromochloromethane			not detected	10	8.60 ug/L	
108-90-7	Chlorobenzene			not detected	4	3.90 ug/L	
100-41-4	Ethylbenzene			not detected	700	6.50 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	11.40 ug/L	
1330-20-7	o-Xylene			not detected	nle	6.20 ug/L	
100-42-5	Styrene			not detected	100	5.60 ug/L	
75-25-2	Bromoform			not detected	4	7.00 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	4.70 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	5.50 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	5.70 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	6.40 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

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

C:\Hpchem\Custrpt\Volatile\624fy99.crt

000012

6/5/00 9:28 A

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Vblk212

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Vblk212

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006952.D

Level: (low/med) LOW Date Received: 5/22/00

% Moisture: not dec. Date Analyzed: 5/24/00

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

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID. **876-1**

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 5428.01

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB006967.D

Level: (low/med) LOW Date Received: 5/22/00

% Moisture: not dec. Date Analyzed: 5/24/00

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 Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Lab File ID: VB006950.D BFB Injection Date: 5/24/00

Instrument ID: GCMS#2 BFB Injection Time: 12:12

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	21.6
75	30.0 - 66.0% of mass 95	53.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	74.7
175	4.0 - 9.0% of mass 174	5.3 (7.1)1
176	93.0 - 101.0% of mass 174	73.9 (98.9)1
177	5.0 - 9.0% of mass 176	4.9 (6.7)2

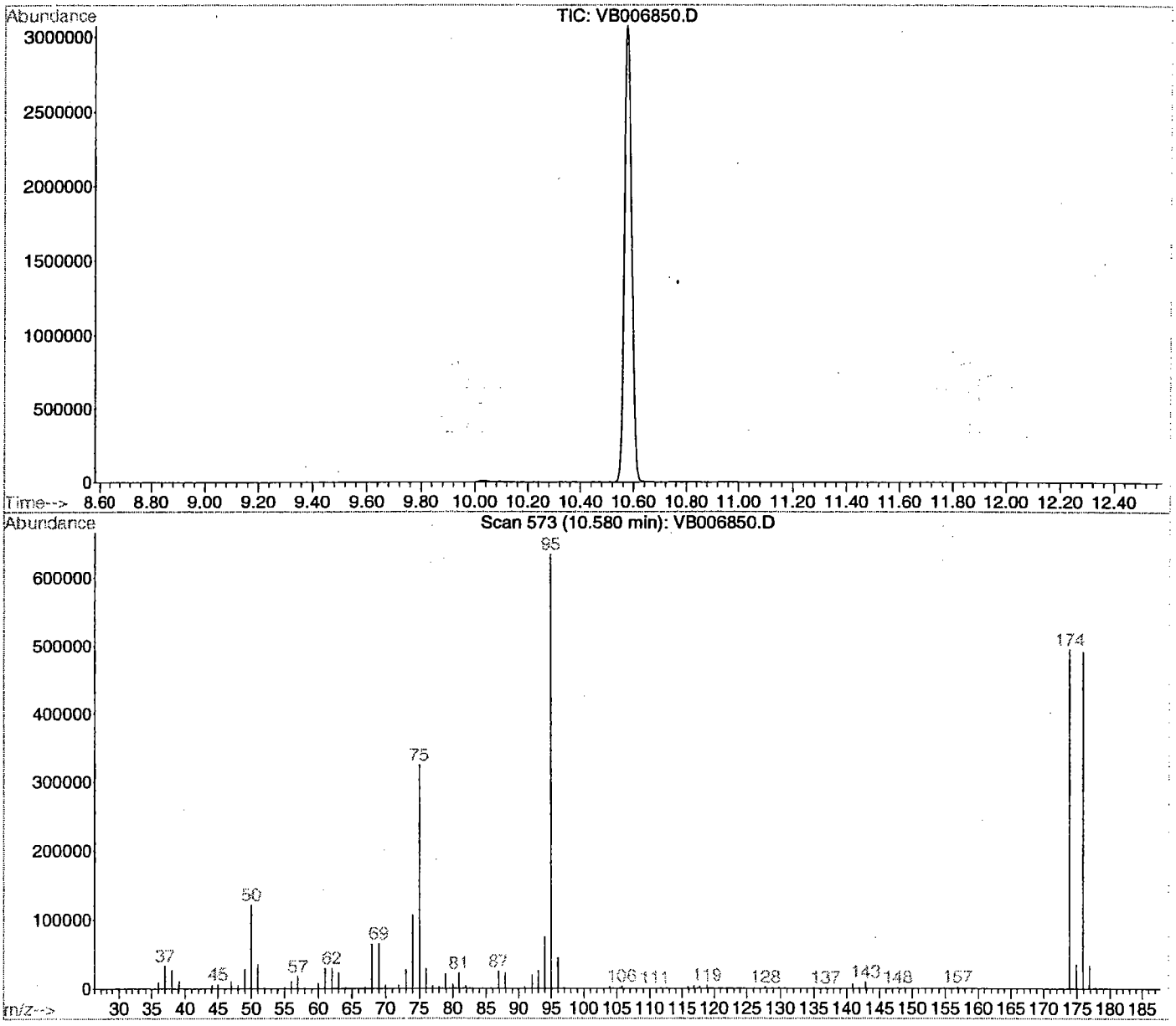
1-Value is % mass 174 2-Value is % mass 176

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VB006951.D	5/24/00	12:38
02	VBLK212	VBLK212	VB006952.D	5/24/00	13:29
03	876-1	5428.01	VB006967.D	5/24/00	23:54
04	5428.01MS	5428.01MS	VB006968.D	5/25/00	0:34
05	5428.01MSD	5428.01MSD	VB006969.D	5/25/00	1:14

BFB

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000515\VB006850.D Vial: 1
Acq On : 15 May 2000 11:06 am Operator: Skelton
Sample : BFB Tune Inst : GC VOA 2
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 573

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.1	121424	PASS
75	95	30	60	51.2	324736	PASS
95	95	100	100	100.0	634496	PASS
96	95	5	9	7.0	44200	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	78.0	495040	PASS
175	174	5	9	7.1	35088	PASS
176	174	95	101	99.3	491584	PASS
177	176	5	9	6.8	33448	PASS

000017

VB006850.D M262455.M Mon Jun 05 09:03:21 2000

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Lab File ID: VB006850.D BFB Injection Date: 5/15/00

Instrument ID: GCMS#2 BFB Injection Time: 11:06

GC Column: RTX502.2 ID: 0.25 (mm) Heated Purge: (Y/N) N

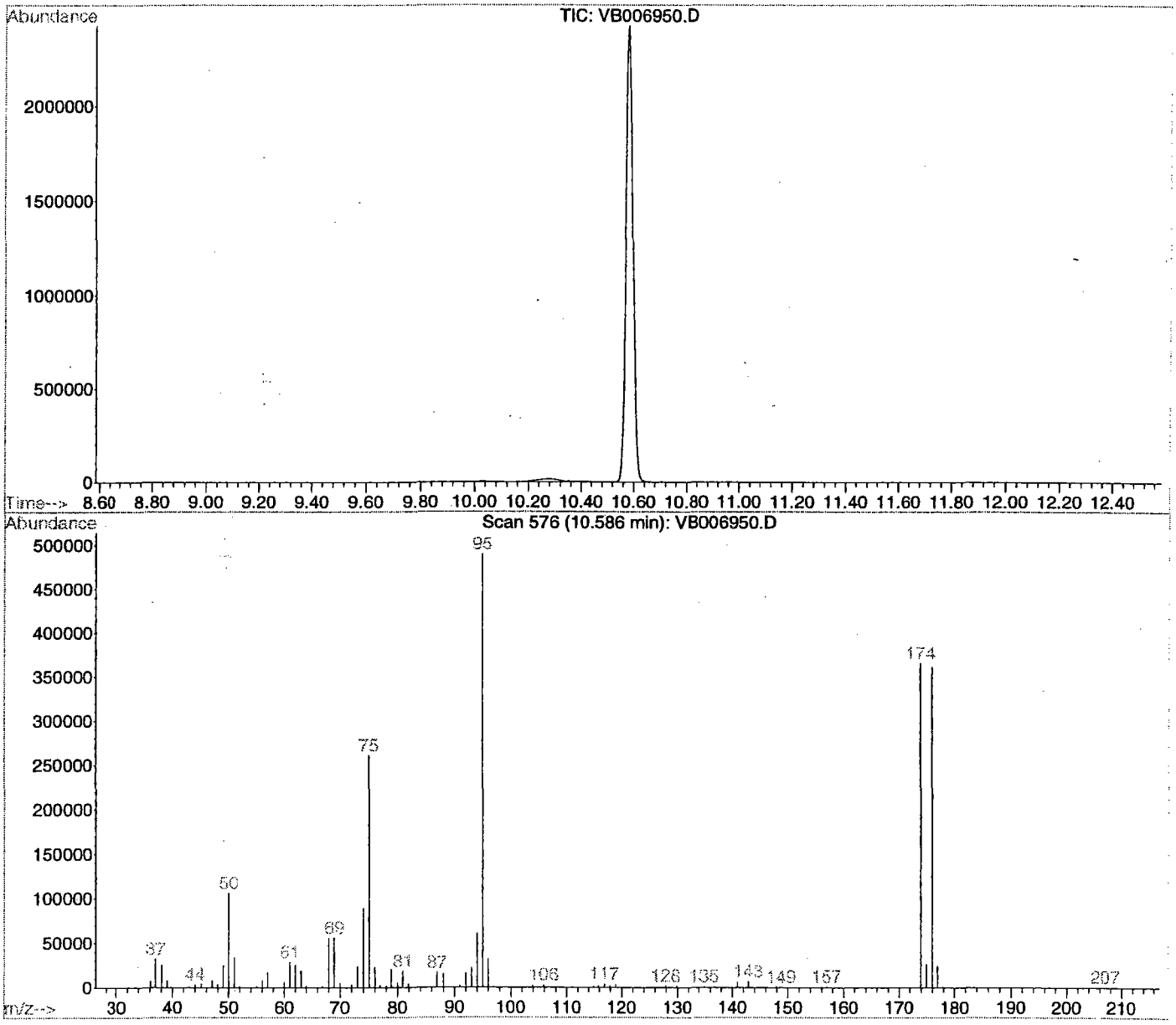
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	19.1
75	30.0 - 66.0% of mass 95	51.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	78.0
175	4.0 - 9.0% of mass 174	5.5 (7.1)1
176	93.0 - 101.0% of mass 174	77.5 (99.3)1
177	5.0 - 9.0% of mass 176	5.3 (6.8)2

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

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

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD100	VSTD100	VB006851.D	5/15/00	11:39
02	VSTD050	VSTD050	VB006852.D	5/15/00	12:18
03	VSTD020	VSTD020	VB006853.D	5/15/00	12:58
04	VSTD010	VSTD010	VB006854.D	5/15/00	13:37
05	VSTD005	VSTD005	VB006855.D	5/15/00	14:17

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000524\VB006950.D Vial: 1
Acq On : 24 May 2000 12:12 pm Operator: Skelton
Sample : BFB Tune Inst : GC VOA 2
Misc : BFB Tune Multiplr: 10.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 576

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.6	105704	PASS
75	95	30	60	53.3	261056	PASS
95	95	100	100	100.0	489920	PASS
96	95	5	9	6.5	31880	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	74.7	365824	PASS
175	174	5	9	7.1	26032	PASS
176	174	95	101	98.9	361856	PASS
177	176	5	9	6.7	24080	PASS

4A

VOLATILE METHOD BLANK SUMMARY

Lab ID.

Vblk212

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Lab File ID: VB006952.D Lab Sample ID: Vblk212

Date Analyzed: 5/24/00 Time Analyzed: 13:29

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:

	Lab ID.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	876-1	5428.01	VB006967.D	23:54
02	5428.01MS	5428.01MS	VB006968.D	0:34
03	5428.01MSD	5428.01MSD	VB006969.D	1:14

COMMENTS:

Response Factor Report GC VOA 2

Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed May 31 09:45:32 2000
Response via : Continuing Calibration

Calibration Files
50 =VB006852.D 5 =VB006855.D 10 =VB006854.D
20 =VB006853.D 100 =VB006851.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.357	0.382	0.319	0.289	0.353	0.340	10.61
3)	t	Acrylonitrile	0.806	0.937	0.760	0.672	0.781	0.791	12.13
4)	t	tert-Butyl alcohol	0.155	0.170	0.135	0.127	0.165	0.150	12.49
5)	t	Methyl-tert-Butyl eth	5.109	5.438	4.402	3.993	4.990	4.786	12.12
6)	t	Di-isopropyl ether	1.536	1.641	1.311	1.197	1.495	1.436	12.46
7)	T	Dichlorodifluorometha	2.726	3.153	2.750	2.326	2.389	2.669	12.42
8)	TP	Chloromethane	2.393	2.960	2.358	2.009	2.164	2.377	15.19
9)	TC	Vinyl Chloride	2.505	2.926	2.418	2.073	2.279	2.440	12.98
10)	T	Bromomethane	1.358	1.524	1.261	1.113	1.129	1.277	13.36
11)	T	Chloroethane	1.553	1.710	1.415	1.255	1.187	1.424	15.01
12)	T	Trichlorofluoromethan	3.812	4.097	3.452	3.036	3.504	3.580	11.17
13)	MC	1,1-Dichloroethene	3.139	3.298	2.709	2.445	2.979	2.914	11.70
14)	T	Acetone	0.657	0.856	0.639	0.553	0.653	0.672	16.62
15)	T	Carbon Disulfide	5.663	5.796	4.879	4.365	5.416	5.224	11.38
16)	T	Methylene Chloride	2.159	3.201	2.318	1.887	2.022	2.317	22.40
17)	T	trans-1,2-Dichloroeth	2.723	3.104	2.449	2.204	2.613	2.619	12.77
18)	TP	1,1-Dichloroethane	3.413	3.879	3.058	2.765	3.281	3.279	12.68
19)	T	Vinyl Acetate	3.986	4.131	3.505	3.289	4.030	3.788	9.74
20)	T	2-Butanone	0.888	0.988	0.799	0.706	0.879	0.852	12.37
21)	T	cis-1,2-Dichloroethen	2.739	3.106	2.479	2.216	2.631	2.634	12.47
22)	TC	Chloroform	3.527	5.039	3.647	3.051	3.340	3.721	20.71
23)	T	1,1,1-Trichloroethane	3.024	3.300	2.658	2.389	2.891	2.852	12.19
24)	T	Carbon Tetrachloride	2.600	2.776	2.266	2.037	2.511	2.438	11.91
25)	S	1,2-Dichloroethane-d4	2.249	2.474	2.421	2.305	2.182	2.326	5.18
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.232	1.406	1.114	1.025	1.154	1.186	12.11
28)	T	1,2-Dichloroethane	0.477	0.571	0.446	0.403	0.456	0.471	13.28
29)	TM	Trichloroethene	0.359	0.390	0.309	0.289	0.341	0.338	11.82
30)	TC	1,2-Dichloropropane	0.319	0.353	0.281	0.257	0.303	0.303	12.04
31)	T	Bromodichloromethane	0.414	0.437	0.347	0.328	0.408	0.387	12.09
32)	T	2-Chloroethyl vinyl e	0.125	0.149	0.113	0.104	0.121	0.122	13.78
33)	T	cis-1,3-Dichloroprope	0.507	0.501	0.414	0.398	0.489	0.461	11.16
34)	T	4-Methyl-2-Pentanone	0.110	0.109	0.090	0.086	0.112	0.102	12.22
35)	S	Toluene-d8	1.178	1.214	1.208	1.177	1.137	1.183	2.60
36)	TCM	Toluene	1.361	1.602	1.268	1.129	1.235	1.319	13.54
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.819	1.713	1.419	1.406	1.821	1.636	12.75
39)	T	1,1,2-Trichloroethane	1.077	1.185	0.954	0.886	1.072	1.035	11.28
40)	T	Tetrachloroethene	1.382	1.498	1.216	1.110	1.347	1.311	11.50
41)	T	2-Hexanone	0.758	0.670	0.575	0.565	0.778	0.669	14.85
42)	T	Dibromochloromethane	1.101	1.018	0.841	0.819	1.130	0.982	14.73
43)	TMP	Chlorobenzene	3.422	3.953	3.102	2.841	3.252	3.314	12.55
44)	TC	Ethylbenzene	5.800	6.573	5.205	4.824	5.314	5.543	12.14
45)	T	m+p-Xylenes	2.157	2.346	1.966	1.764	2.060	2.039	11.36
46)	T	o-Xylene	4.424	4.763	3.856	3.647	4.188	4.175	10.64
47)	T	Styrene	3.508	3.364	2.843	2.792	3.397	3.181	10.58
48)	TP	Bromoform	0.722	0.599	0.504	0.511	0.788	0.625	20.29
49)	S	Bromofluorobenzene	1.772	1.724	1.735	1.778	1.760	1.754	1.35
50)	TP	1,1,2,2-Tetrachloroet	1.452	1.593	1.272	1.189	1.436	1.388	11.47
51)	T	1,3-Dichlorobenzene	2.706	2.868	2.279	2.202	2.609	2.533	11.21
52)	T	1,4-Dichlorobenzene	2.759	2.979	2.401	2.269	2.672	2.616	10.85
53)	T	1,2-Dichlorobenzene	2.639	2.825	2.273	2.168	2.570	2.495	10.82

000021

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000524\VB006951.D Vial: 2
Acq On : 24 May 2000 12:38 pm Operator: Skelton
Sample : Vstd020 Inst : GC VOA 2
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed May 31 09:45:32 2000
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	75	0.01
2	t	Acrolein	0.340	0.329	3.2	85	0.05
3	t	Acrylonitrile	0.791	0.816	-3.2	91	0.03
4	t	tert-Butyl alcohol	0.150	0.142	5.3	84	0.33
5	t	Methyl-tert-Butyl ether	4.786	4.900	-2.4	92	0.02
6	t	Di-isopropyl ether	1.436	1.426	0.7	89	0.01
7	T	Dichlorodifluoromethane	2.669	1.443	45.9#	46	0.02
8	TP	Chloromethane	2.377	1.731	27.2#	65	0.00
9	TC	Vinyl Chloride	2.440	2.063	15.5	75	0.00
10	T	Bromomethane	1.277	1.057	17.2	71	-0.01
11	T	Chloroethane	1.424	1.435	-0.8	86	0.00
12	T	Trichlorofluoromethane	3.580	3.629	-1.4	90	-0.01
13	MC	1,1-Dichloroethene	2.914	2.904	0.3	89	0.00
14	T	Acetone	0.672	0.691	-2.8	94	0.10
15	T	Carbon Disulfide	5.224	4.605	11.8	79	0.01
16	T	Methylene Chloride	2.317	2.044	11.8	81	0.00
17	T	trans-1,2-Dichloroethene	2.619	2.633	-0.5	90	0.01
18	TP	1,1-Dichloroethane	3.279	3.314	-1.1	90	0.01
19	T	Vinyl Acetate	3.788	4.121	-8.8	94	0.02
20	T	2-Butanone	0.852	0.841	1.3	89	0.04
21	T	cis-1,2-Dichloroethene	2.634	2.683	-1.9	91	0.01
22	TC	Chloroform	3.721	3.631	2.4	89	0.00
23	T	1,1,1-Trichloroethane	2.852	2.949	-3.4	92	0.01
24	T	Carbon Tetrachloride	2.438	2.603	-6.8	96	0.02
25	S	1,2-Dichloroethane-d4	2.326	2.582	-11.0	84	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	79	0.00
27	TM	Benzene	1.186	1.156	2.5	89	0.00
28	T	1,2-Dichloroethane	0.471	0.491	-4.2	96	0.01
29	TM	Trichloroethene	0.338	0.326	3.6	89	0.00
30	TC	1,2-Dichloropropane	0.303	0.303	0.0	93	0.01
31	T	Bromodichloromethane	0.387	0.385	0.5	92	0.00
32	T	2-Chloroethyl vinyl ether	0.122	0.125	-2.5	95	0.02
33	T	cis-1,3-Dichloropropene	0.461	0.449	2.6	89	0.00
34	T	4-Methyl-2-Pentanone	0.102	0.101	1.0	92	0.00
35	S	Toluene-d8	1.183	1.231	-4.1	82	0.00
36	TCM	Toluene	1.319	1.334	-1.1	93	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	81	0.00
38	T	trans-1,3-Dichloropropene	1.636	1.530	6.5	89	0.00
39	T	1,1,2-Trichloroethane	1.035	0.976	5.7	90	0.01
40	T	Tetrachloroethene	1.311	1.224	6.6	90	0.00
41	T	2-Hexanone	0.669	0.629	6.0	91	0.01
42	T	Dibromochloromethane	0.982	0.929	5.4	92	0.00
43	TMP	Chlorobenzene	3.314	3.272	1.3	94	0.00
44	TC	Ethylbenzene	5.543	5.516	0.5	93	0.00
45	T	m+p-Xylenes	2.039	1.986	2.6	92	0.00
46	T	o-Xylene	4.175	4.145	0.7	93	0.00
47	T	Styrene	3.181	3.152	0.9	92	0.00
48	TP	Bromoform	0.625	0.566	9.4	90	0.01
49	S	Bromofluorobenzene	1.754	1.808	-3.1	83	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.388	1.357	2.2	93	0.00
51	T	1,3-Dichlorobenzene	2.533	2.417	4.6	89	0.00
52	T	1,4-Dichlorobenzene	2.616	2.488	4.9	89	0.00
53	T	1,2-Dichlorobenzene	2.495	2.388	4.3	90	0.00

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

000022

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

	Lab ID.	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	VBLK212	103	100	92	0
02	876-1	109	100	92	0
03	5428.01MS	105	103	92	0
04	5428.01MSD	104	101	99	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(80-115)
SMC3	BFB	=	Bromofluorobenzene	(80-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

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

Data File	**VB006968.D**	Sample Name	**5428.01MS**
Date Acquired	**25-May-00**	Field ID	**5428.01MS**

Compound Name	Amount Added ug/L	Result ul/L	Percent Recovered
Acrolein	200	185.98	93.0
Acrylonitrile	200	204.26	102.1
tert-Butyl alcohol	200	211.36	105.7
Methyl-tert-Butyl ether	20	20.12	100.6
Di-isopropyl ether	20	19.78	98.9
Dichlorodifluoromethane	20	12.84	64.2
Chloromethane	20	17.72	88.6
Vinyl Chloride	20	15.87	79.3
Bromomethane	20	15.76	78.8
Chloroethane	20	17.54	87.7
Trichlorofluoromethane	20	14.07	70.4
1,1-Dichloroethene	20	15.92	79.6
Acetone	20	20.22	101.1
Carbon Disulfide	20	15.48	77.4
Methylene Chloride	20	19.67	98.4
trans-1,2-Dichloroethene	20	17.31	86.5
1,1-Dichloroethane	20	19.04	95.2
Vinyl Acetate	20	20.07	100.3
2-Butanone	20	20.28	101.4
cis-1,2-Dichloroethene	20	18.82	94.1
Chloroform	20	19.28	96.4
1,1,1-Trichloroethane	20	16.58	82.9
Carbon Tetrachloride	20	15.46	77.3
Benzene	20	17.22	86.1
1,2-Dichloroethane	20	19.20	96.0
Trichloroethene	20	15.97	79.9
1,2-Dichloropropane	20	18.56	92.8
Bromodichloromethane	20	19.40	97.0
2-Chloroethyl vinyl ether	20	18.26	91.3
cis-1,3-Dichloropropene	20	17.97	89.9
4-Methyl-2-Pentanone	20	20.07	100.3
Toluene	20	16.73	83.6
trans-1,3-Dichloropropene	20	16.11	80.6
1,1,2-Trichloroethane	20	17.17	85.8
Tetrachloroethene	20	12.89	64.4
2-Hexanone	20	18.05	90.3
Dibromochloromethane	20	17.23	86.2
Chlorobenzene	20	14.90	74.5
Ethylbenzene	20	14.24	71.2
m+p-Xylenes	40	27.49	68.7
o-Xylene	20	14.76	73.8
Styrene	20	14.74	73.7
Bromoform	20	17.58	87.9
1,1,2,2-Tetrachloroethane	20	17.94	89.7
1,3-Dichlorobenzene	20	14.75	73.7
1,4-Dichlorobenzene	20	14.57	72.8
1,2-Dichlorobenzene	20	15.23	76.2

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

Data File	**VB006969.D**	Sample Name	**5428.01MSD**
Date Acquired	**25-May-00**	Field ID	**5428.01MSD**

Compound Name	Amount Added ug/L	Result ul/L	Percent Recovered
Acrolein	200	163.62	81.8
Acrylonitrile	200	173.70	86.8
tert-Butyl alcohol	200	184.14	92.1
Methyl-tert-Butyl ether	20	17.71	88.5
Di-isopropyl ether	20	17.94	89.7
Dichlorodifluoromethane	20	17.15	85.7
Chloromethane	20	17.06	85.3
Vinyl Chloride	20	17.80	89.0
Bromomethane	20	16.25	81.2
Chloroethane	20	17.38	86.9
Trichlorofluoromethane	20	18.35	91.8
1,1-Dichloroethene	20	18.54	92.7
Acetone	20	16.99	84.9
Carbon Disulfide	20	17.82	89.1
Methylene Chloride	20	18.37	91.8
trans-1,2-Dichloroethene	20	18.69	93.4
1,1-Dichloroethane	20	18.64	93.2
Vinyl Acetate	20	17.37	86.9
2-Butanone	20	17.60	88.0
cis-1,2-Dichloroethene	20	18.24	91.2
Chloroform	20	18.62	93.1
1,1,1-Trichloroethane	20	18.49	92.4
Carbon Tetrachloride	20	18.69	93.5
Benzene	20	17.40	87.0
1,2-Dichloroethane	20	17.39	86.9
Trichloroethene	20	17.76	88.8
1,2-Dichloropropane	20	17.43	87.1
Bromodichloromethane	20	18.02	90.1
2-Chloroethyl vinyl ether	20	17.54	87.7
cis-1,3-Dichloropropene	20	17.27	86.3
4-Methyl-2-Pentanone	20	17.19	85.9
Toluene	20	17.67	88.4
trans-1,3-Dichloropropene	20	16.82	84.1
1,1,2-Trichloroethane	20	16.99	84.9
Tetrachloroethene	20	17.19	85.9
2-Hexanone	20	16.80	84.0
Dibromochloromethane	20	17.20	86.0
Chlorobenzene	20	17.14	85.7
Ethylbenzene	20	17.22	86.1
m+p-Xylenes	40	34.10	85.2
o-Xylene	20	17.01	85.0
Styrene	20	16.84	84.2
Bromoform	20	17.08	85.4
1,1,2,2-Tetrachloroethane	20	16.96	84.8
1,3-Dichlorobenzene	20	17.26	86.3
1,4-Dichlorobenzene	20	17.26	86.3
1,2-Dichlorobenzene	20	17.45	87.3

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Project: 000004

NJDEP#: 13461 Case No.: 5428 Location: 876 SDG No.:

Lab File ID (Standard): VB006951.D Date Analyzed: 5/24/00

Instrument ID: GCMS#2 Time Analyzed: 12:38

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	250004	16.94	1599340	19.63	449653	27.47
	UPPER LIMIT	500008	17.44	3198680	20.13	899306	27.97
	LOWER LIMIT	125002	16.44	799670	19.13	224827	26.97
	Lab ID.						
01	VBLK212	239173	16.93	1580587	19.63	442003	27.47
02	876-1	212973	16.95	1439310	19.63	444632	27.47
03	5428.01MS	230059	16.95	1531349	19.63	490622	27.47
04	5428.01MSD	239846	16.95	1605126	19.63	466194	27.47

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\2000DATA\MAY2000\000524\VB006952.D Vial: 2
Acq On : 24 May 2000 1:29 pm Operator: Skelton
Sample : Vblk212 Inst : GC VOA 2
Misc : Vblk212 Multiplr: 10.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:11 2000 Quant Results File: M262455.RES

Quant Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu May 25 09:11:17 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000524\VB006951.D
DataAcq Meth : M262455

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.93	128	239173	30.00	ug/L	-0.01
26) 1,4-Difluorobenzene	19.63	114	1580587	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.47	119	442003	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.53	65	638052	31.00	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 103.33%			
35) Toluene-d8	23.64	98	1946019	30.01	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.03%			
49) Bromofluorobenzene	30.47	95	734468	27.57	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 91.90%			

Target Compounds Qvalue

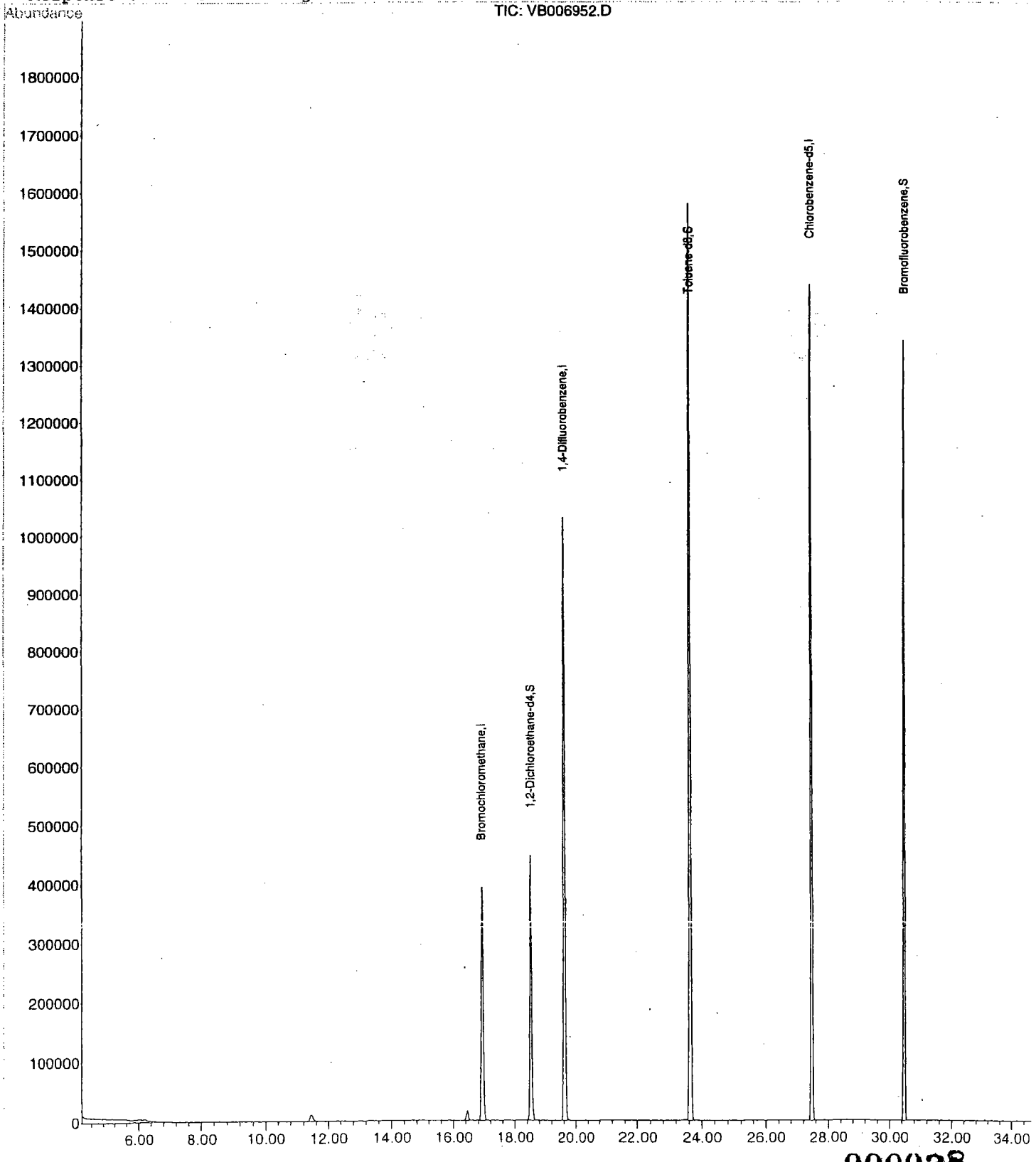
(#) = qualifier out of range (m) = manual integration
VB006952.D M262455.M Mon Jun 05 09:27:03 2000

000027

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000524\VB006952.D Vial: 2
Acq On : 24 May 2000 1:29 pm Operator: Skelton
Sample : Vblk212 Inst : GC VOA 2
Misc : Vblk212 Multiplr: 10.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:11 2000 Quant Results File: M262455.RES

Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed May 31 09:45:32 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000524\VB006951.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000524\VB006967.D Vial: 15
Acq On : 24 May 2000 11:54 pm Operator: Skelton
Sample : 5428.01 Inst : GC VOA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:14 2000 Quant Results File: M262455.RES

Quant Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Thu May 25 09:11:17 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000524\VB006951.D
DataAcq Meth : M262455

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.95	128	212973	30.00	ug/L	0.01
26) 1,4-Difluorobenzene	19.63	114	1439310	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.47	119	444632	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.53	65	600455	32.76	ug/L	0.00
Spiked Amount 30.000	Range 76 - 114		Recovery = 109.20%			
35) Toluene-d8	23.64	98	1779715	30.14	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.47%			
49) Bromofluorobenzene	30.47	95	742276	27.70	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 92.33%			

Target Compounds Qvalue

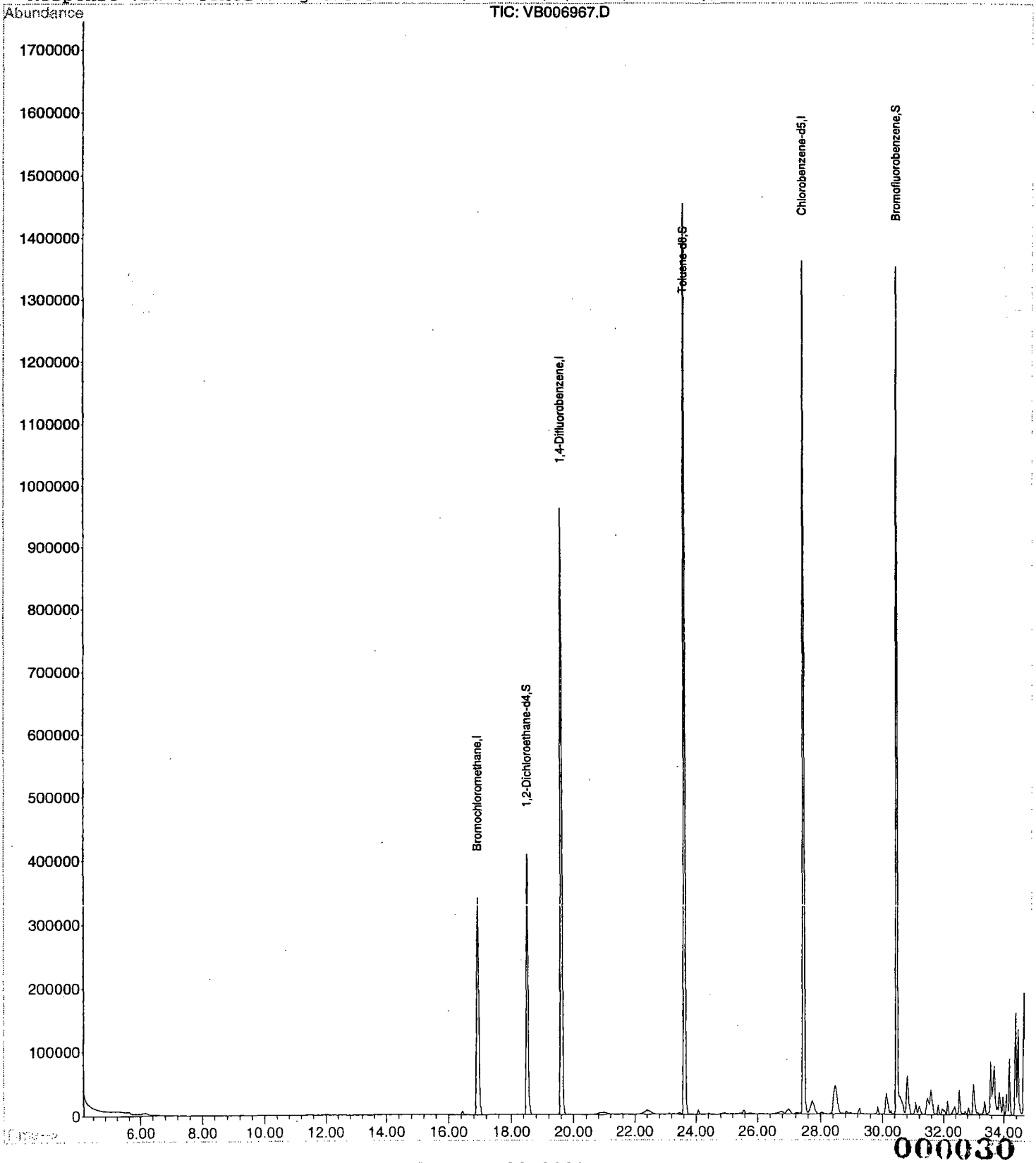
(#) = qualifier out of range (m) = manual integration
VB006967.D M262455.M Mon Jun 05 09:27:37 2000

000029

Quantitation Report

Data File : C:\HPCHEM\1\DATA\2000DATA\MAY2000\000524\VB006967.D Vial: 15
Acq On : 24 May 2000 11:54 pm Operator: Skelton
Sample : 5428.01 Inst : GC VOA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:14 2000 Quant Results File: M262455.RES

Method : C:\HPCHEM\1\METHODS\M262455.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed May 31 09:45:32 2000
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\000524\VB006951.D



BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BN04379.D**	Sample Name	**Sblk374**
Operator	**Bhaskar**	Misc Info	**Sblk374 A 000524**
Date Acquired	**26-May-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.79	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BN04379.D**	Sample Name	**Sblk374**
Operator	**Bhaskar**	Misc Info	**Sblk374 A 000524**
Date Acquired	**26-May-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	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
PQL= Practical Quantitation Limit

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field ID: **Sblk374**

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Matrix: (soil/water) WATER Lab Sample ID: Sblk374

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BN04379.D

Level: (low/med) LOW Date Received: 5/22/00

% Moisture: decanted: (Y/N) N Date Extracted: 5/24/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/26/00

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

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

Data File	**VB007053.D**	Sample Name	**Vblk215**
Operator	**Skelton**	Field ID	**Vblk215**
Date Acquired	**1 Jun 2000 1:33 pm**	Sample Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/l)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	70	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156-59-4	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C. 7:9-6 2-Sept-9

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

C:\Hpchem\Custrpt\Volatile\624fy99.crt

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab ID.

Vblk215

Lab Name: FMETL Project: 980211

NJDEP#: 13461 Case No.: 5446 Location: M-2 Rd SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Vblk215

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VB007053.D

Level: (low/med) LOW Date Received: 6/1/00

% Moisture: not dec. Date Analyzed: 6/1/00

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA04015.D**	Sample Name	**Sblk379**
Operator	**Bhaskar**	Misc Info	**Sblk379 A 000603**
Date Acquired	**5-Jun-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
108-95-2	Phenol			not detected	4000	0.82	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
95-57-8	2-Chlorophenol			not detected	40	2.00	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
95-48-7	2-Methylphenol			not detected	NLE	1.17	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
106-44-5	4-Methylphenol			not detected	NLE	0.35	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
88-75-5	2-Nitrophenol			not detected	NLE	1.92	ug/L	
105-67-9	2,4-Dimethylphenol			not detected	100	2.62	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-83-2	2,4-Dichlorophenol			not detected	20	1.33	ug/L	
65-85-0	Benzoic Acid			not detected	NLE	1.75	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
59-50-7	4-Chloro-3-methylphenol			not detected	NLE	1.39	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
88-06-2	2,4,6-Trichlorophenol			not detected	20	1.78	ug/L	
95-95-4	2,4,5-Trichlorophenol			not detected	700	1.28	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
51-28-5	2,4-Dinitrophenol			not detected	40	1.44	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
100-02-7	4-Nitrophenol			not detected	NLE	1.06	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA04015.D**	Sample Name	**Sblk379**
Operator	**Bhaskar**	Misc Info	**Sblk379 A 000603**
Date Acquired	**5-Jun-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
534-52-1	4,6-Dinitro-2-methylphenol			not detected	NLE	1.98	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
87-86-5	Pentachlorophenol			not detected	1	1.42	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	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
PQL= Practical Quantitation Limit
MDL= Method Detection Limit
NLE= No Limit Established
R.T.=Retention Time

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Field Id: **Sblk379**

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5440 Location: M2 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Sblk379

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA04015.D

Level: (low/med) LOW Date Received: 5/30/00

% Moisture: decanted: (Y/N) N Date Extracted: 6/3/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/5/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	6.95	7	J
2.	unknown	17.43	4	J
3. 022393-98-2	9-Hexadecenoic acid, 9-octadece	32.43	24	JN

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID: BN04377.D DFTPP Injection Date: 5/26/00

Instrument ID: SVoa#1 DFTPP Injection Time: 8:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	33.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	45.8
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	41.9
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	18.8
365	Greater than 0.75% of mass 198	2.0
441	Present, but less than mass 443	8.3
442	40.0 - 110.0% of mass 198	53.9
443	15.0 - 24.0% of mass 442	10.6 (19.6)2

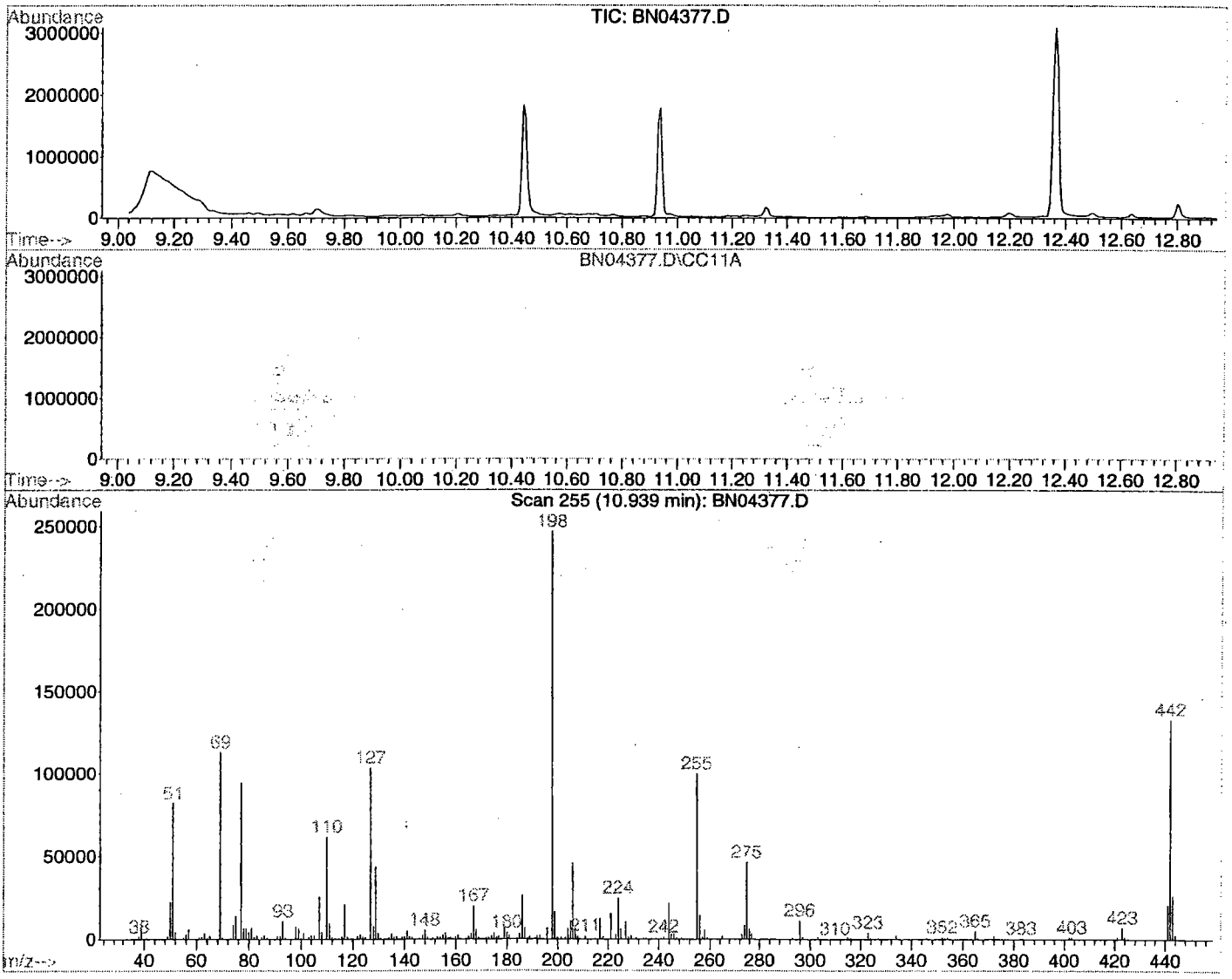
1-Value is % mass 69 2-Value is % mass 442

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	SSTD050	DAILY CAL	BN04378.D	5/26/00	8:30
02	SBLK374	SBLK374	BN04379.D	5/26/00	9:25
03	876-1	5428.01	BN04390.D	5/26/00	19:39

DFTPP

Data File : C:\HPCHEM\1\DATA\000526\BN04377.D Vial: 99
Acq On : 26 May 2000 8:00 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC/MS Ins
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 255

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.3	82152	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.8	113064	PASS
70	69	0.00	2	0.8	958	PASS
127	198	40	60	41.9	103568	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	247040	PASS
199	198	5	9	6.6	16332	PASS
275	198	10	30	18.8	46416	PASS
365	198	1	100	2.0	4939	PASS
441	443	1	99	78.5	20480	PASS
442	198	40	100	53.9	133184	PASS
443	442	17	23	19.6	26104	PASS

000044

BN04377.D M62541.M Tue May 30 14:09:12 2000 GC-BNA-1

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID: BN04352.D DFTPP Injection Date: 5/24/00

Instrument ID: SVoa#1 DFTPP Injection Time: 8:26

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	32.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	44.8
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	25.0 - 75.0% of mass 198	41.3
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	6.7
275	10.0 - 30.0% of mass 198	19.3
365	Greater than 0.75% of mass 198	2.1
441	Present, but less than mass 443	8.4
442	40.0 - 110.0% of mass 198	53.1
443	15.0 - 24.0% of mass 442	10.0 (18.8)2

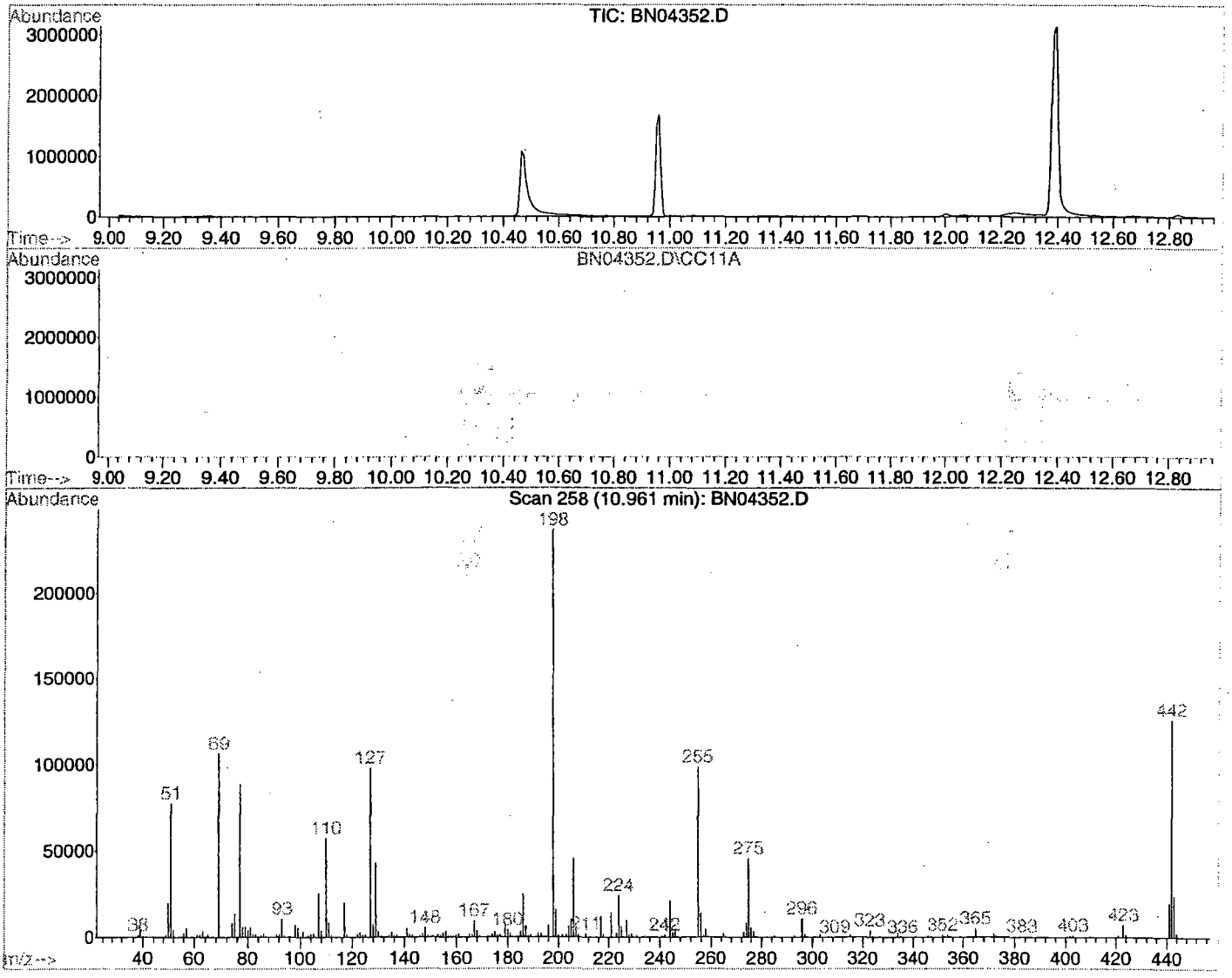
1-Value is % mass 69 2-Value is % mass 442

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	SSTD050	DAILY CAL	BN04353.D	5/24/00	9:57
02	5420.10MS	5420.10MS	BN04374.D	5/25/00	4:55
03	5420.10MSD	5420.10MSD	BN04375.D	5/25/00	5:48

DFTPP

Data File : C:\HPCHEM\1\DATA\000524\BN04352.D Vial: 99
Acq On : 24 May 2000 8:26 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC/MS Ins
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 258

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.7	77480	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.8	106240	PASS
70	69	0.00	2	0.4	455	PASS
127	198	40	60	41.3	97968	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	237120	PASS
199	198	5	9	6.7	15785	PASS
275	198	10	30	19.3	45760	PASS
365	198	1	100	2.1	5016	PASS
441	443	1	99	83.8	19840	PASS
442	198	40	100	53.1	125864	PASS
443	442	17	23	18.8	23672	PASS

000046

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID: BN04317.D DFTPP Injection Date: 5/12/00

Instrument ID: SVoa#1 DFTPP Injection Time: 11:51

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	33.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	44.2
70	Less than 2.0% of mass 69	0.3 (0.7)1
127	25.0 - 75.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	18.7
365	Greater than 0.75% of mass 198	1.9
441	Present, but less than mass 443	8.6
442	40.0 - 110.0% of mass 198	53.9
443	15.0 - 24.0% of mass 442	10.7 (19.9)2

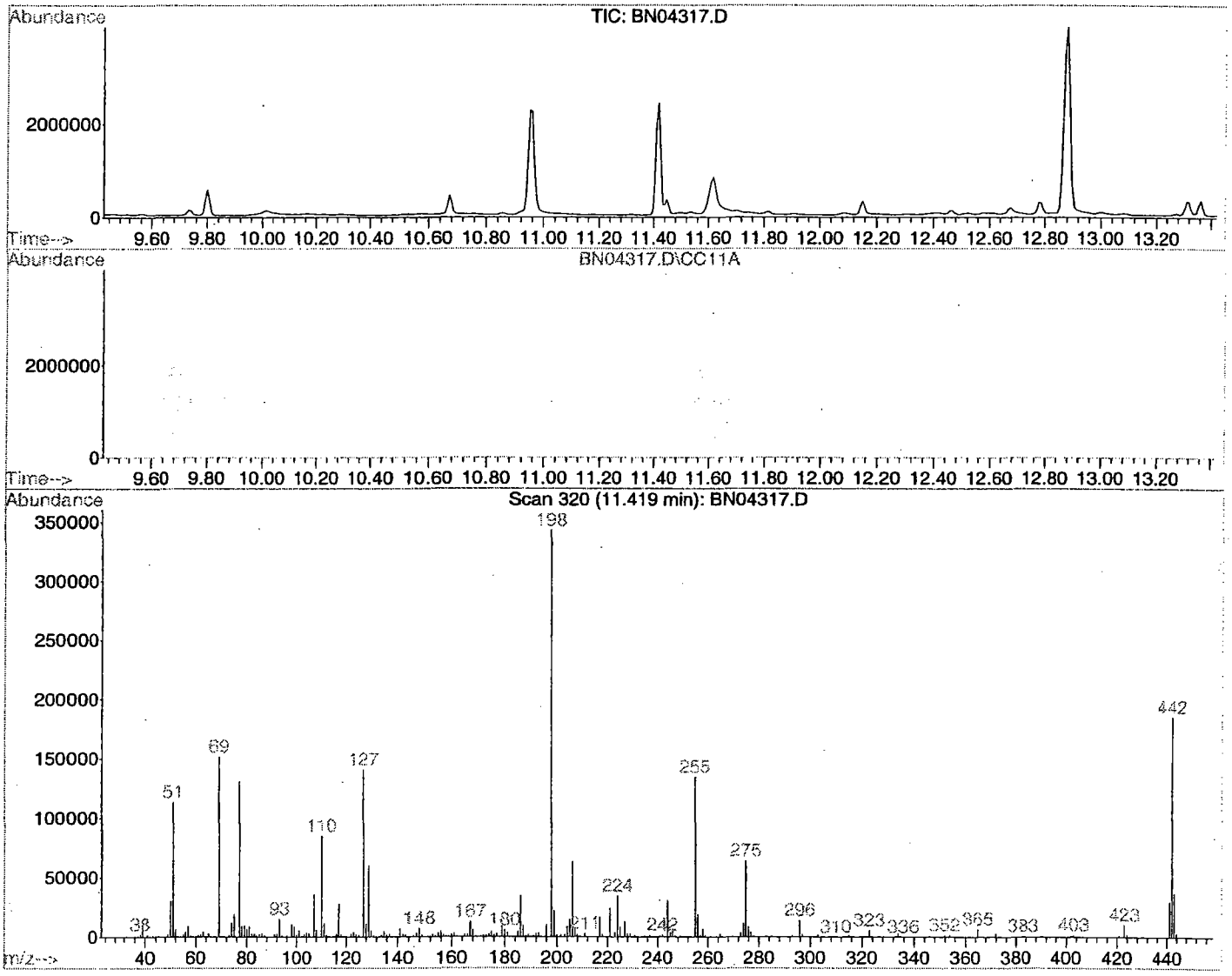
1-Value is % mass 69 2-Value is % mass 442

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

	Field ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	120 PPM CAL	BN04319.D	5/12/00	13:56
02	SSTD080	80 PPM CAL	BN04320.D	5/12/00	14:52
03	SSTD020	20 PPM CAL	BN04321.D	5/12/00	15:47
04	SSTD010	10 PPM CAL	BN04322.D	5/12/00	16:48
05	SSTD050	50 PPM CAL	BN04323.D	5/12/00	17:50

DFTPP

Data File : C:\HPCHEM\1\DATA\000512\BN04317.D Vial: 99
Acq On : 12 May 2000 11:51 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC/MS Ins
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M62541.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	33.1	113568	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.2	151552	PASS
70	69	0.00	2	0.7	998	PASS
127	198	40	60	41.0	140672	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	343168	PASS
199	198	5	9	6.4	21840	PASS
275	198	10	30	18.7	64136	PASS
365	198	1	100	1.9	6596	PASS
441	443	1	99	79.8	29408	PASS
442	198	40	100	53.9	184960	PASS
443	442	17	23	19.9	36864	PASS

000048

4B

Field ID: **Sblk374**

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: FMETL Lab Code 13461.

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID: BN04379.D Lab Sample ID: Sblk374

Instrument ID: GC/MS Ins Date Extracted: 5/24/00

Matrix: (soil/water) WATER Date Analyzed: 5/26/00

Level: (low/med) LOW Time Analyzed: 9:25

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

	Field ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	876-1	5428.01	BN04390.D	5/26/00

COMMENTS:

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration

Calibration Files
120 =BN04319.D 80 =BN04320.D 50 =BN04353.D
20 =BN04321.D 10 =BN04322.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------	ISTD	----------				
2)	T	Pyridine	1.748	1.726	1.730	1.767	1.771	1.748	1.17
3)	T	N-nitroso-dimethylami	1.059	1.050	1.054	1.066	1.068	1.059	0.74
4)	S	2-Fluorophenol	1.478	1.470	1.483	1.494	1.491	1.483	0.65
5)	T	Aniline	2.009	2.003	1.922	1.614	1.591	1.828	11.42
6)	S	Phenol-d5	1.781	1.800	1.833	1.823	1.833	1.814	1.25
7)	TCM	Phenol	1.752	1.773	1.803	1.828	1.824	1.796	1.82
8)	T	bis(2-Chloroethyl)eth	1.582	1.610	1.717	1.860	1.684	1.691	6.45
9)	TM	2-Chlorophenol	1.448	1.447	1.456	1.476	1.454	1.456	0.80
10)	T	1,3-Dichlorobenzene	1.456	1.462	1.489	1.498	1.518	1.485	1.72
11)	TCM	1,4-Dichlorobenzene	1.486	1.496	1.514	1.538	1.544	1.516	1.68
12)	T	Benzyl alcohol	0.888	0.885	0.902	0.872	0.863	0.882	1.68
13)	T	1,2-Dichlorobenzene	1.377	1.379	1.404	1.415	1.443	1.403	1.95
14)	T	2-Methylphenol	1.331	1.344	1.361	1.383	1.363	1.356	1.47
15)	T	bis(2-chloroisopropyl	2.234	2.262	2.289	2.338	2.348	2.294	2.13
16)	T	4-Methylphenol	1.312	1.318	1.341	1.335	1.340	1.329	1.01
17)	TM	n-Nitroso-di-n-propyl	0.296	0.294	0.295	0.300	0.298	0.297	0.83
18)	T	Hexachloroethane	0.627	0.635	0.645	0.641	0.644	0.638	1.19
19)	I	Naphthalene-d8	----------	ISTD	----------				
20)	S	Nitrobenzene-d5	0.422	0.427	0.433	0.438	0.441	0.432	1.82
21)	T	Nitrobenzene	0.408	0.417	0.423	0.433	0.429	0.422	2.31
22)	T	Isophorone	0.810	0.820	0.834	0.853	0.856	0.835	2.39
23)	TC	2-Nitrophenol	0.237	0.237	0.238	0.241	0.257	0.242	3.57
24)	T	2,4-Dimethylphenol	0.374	0.384	0.389	0.396	0.395	0.388	2.34
25)	T	bis(2-Chloroethoxy)me	0.505	0.517	0.526	0.538	0.550	0.527	3.32
26)	TC	2,4-Dichlorophenol	0.299	0.302	0.301	0.301	0.294	0.299	1.12
27)	T	Benzoic Acid	0.301	0.291	0.263	0.224		0.269	12.84
28)	TM	1,2,4-Trichlorobenzen	0.308	0.311	0.314	0.322	0.323	0.316	2.13
29)	T	Naphthalene	1.051	1.069	1.092	1.127	1.144	1.097	3.55
30)	T	4-Chloroaniline	0.351	0.357	0.362	0.356	0.334	0.352	3.05
31)	TC	Hexachlorobutadiene	0.157	0.160	0.163	0.164	0.168	0.163	2.45
32)	TCM	4-Chloro-3-methylphen	0.308	0.320	0.321	0.325	0.318	0.318	1.94
33)	T	2-Methylnaphthalene	0.630	0.648	0.656	0.670	0.675	0.656	2.75
34)	I	Acenaphthene-d10	----------	ISTD	----------				
35)	T	Hexachlorocyclopentad	0.280	0.262	0.248	0.192		0.245	15.38
36)	TC	2,4,6-Trichlorophenol	0.379	0.381	0.373	0.373	0.360	0.373	2.14
37)	T	2,4,5-Trichlorophenol	0.426	0.416	0.417	0.406	0.378	0.409	4.55
38)	S	2-Fluorobiphenyl	1.241	1.294	1.309	1.368	1.390	1.320	4.54
39)	T	2-Chloronaphthalene	1.109	1.124	1.139	1.164	1.180	1.143	2.52
40)	T	2-Nitroaniline	0.479	0.479	0.476	0.479	0.474	0.477	0.50
41)	T	Dimethylphthalate	1.357	1.379	1.379	1.437	1.452	1.401	2.92
42)	T	Acenaphthylene	1.759	1.782	1.791	1.872	1.894	1.820	3.28
43)	T	2,6-Dinitrotoluene	0.212	0.207	0.204	0.203	0.195	0.204	3.07
44)	T	3-Nitroaniline	0.297	0.273	0.234	0.260	0.314	0.276	11.35
45)	TCM	Acenaphthene	1.040	1.075	1.086	1.118	1.153	1.094	3.94
46)	T	2,4-Dinitrophenol	0.253	0.246	0.228	0.188		0.229	12.61
47)	T	Dibenzofuran	1.454	1.477	1.502	1.575	1.598	1.521	4.11
48)	TM	4-Nitrophenol	0.255	0.247	0.256	0.201	0.204	0.233	11.91
49)	TM	2,4-Dinitrotoluene	0.449	0.455	0.446	0.458	0.452	0.452	1.04
50)	T	Diethylphthalate	1.344	1.394	1.398	1.481	1.501	1.424	4.60
51)	T	Fluorene	0.944	1.121	1.205	1.276	1.308	1.171	12.45
52)	T	4-Chlorophenyl-phenyl	0.437	0.547	0.588	0.621	0.633	0.565	13.96
53)	T	4-Nitroaniline	0.229	0.238	0.245	0.269	0.247	0.246	6.04
54)	I	Phenanthrene-d10	----------	ISTD	----------				

000050

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration

Calibration Files
120 =BN04319.D 80 =BN04320.D 50 =BN04353.D
20 =BN04321.D 10 =BN04322.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.212	0.206	0.203	0.186	0.164	0.194	10.06
56)	TC	n-Nitrosodiphenylamin	0.528	0.523	0.551	0.599	0.610	0.562	7.14
57)	T	Azobenzene	0.944	0.972	1.045	1.084	1.095	1.028	6.55
58)	S	2,4,6-Tribromophenol	0.118	0.117	0.119	0.116	0.117	0.118	1.10
59)	T	4-Bromophenyl-phenyle	0.215	0.217	0.223	0.221	0.228	0.221	2.32
60)	T	Hexachlorobenzene	0.222	0.225	0.234	0.238	0.243	0.232	3.69
61)	TCM	Pentachlorophenol	0.158	0.154	0.152	0.139	0.129	0.146	8.40
62)	T	Phenanthrene	1.025	1.073	1.117	1.144	1.174	1.107	5.30
63)	T	Anthracene	1.092	1.135	1.185	1.204	1.233	1.170	4.81
64)	T	Di-n-butylphthalate	1.542	1.647	1.715	1.761	1.744	1.682	5.32
65)	TC	Fluoranthene	1.110	1.132	1.167	1.197	1.197	1.161	3.35
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.258	0.236	0.200	0.199	0.182	0.215	14.45
68)	TM	Pyrene	1.309	1.292	1.353	1.418	1.462	1.367	5.28
69)	S	p-Terphenyl-d14	0.834	0.864	0.906	0.942	0.971	0.903	6.18
70)	T	Butylbenzylphthalate	0.828	0.826	0.841	0.852	0.829	0.835	1.32
71)	T	Benzo[a]anthracene	1.036	1.154	1.231	1.280	1.311	1.202	9.18
72)	T	3,3'-Dichlorobenzidin	0.314	0.362	0.348	0.329	0.350	0.341	5.61
73)	T	Chrysene	1.061	1.095	1.145	1.193	1.215	1.142	5.65
74)	T	bis(2-Ethylhexyl)phth	1.015	1.129	1.204	1.220	1.202	1.154	7.39
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	2.036	2.209	2.267	2.253	2.154	2.184	4.30
77)	T	Benzo[b]fluoranthene	1.335	1.311	1.319	1.323	1.338	1.325	0.86
78)	T	Benzo[k]fluoranthene	1.197	1.266	1.291	1.360	1.365	1.296	5.39
79)	TC	Benzo[a]pyrene	1.192	1.204	1.216	1.231	1.231	1.215	1.43
80)	T	Indeno[1,2,3-cd]pyren	1.327	1.310	1.304	1.296	1.257	1.299	2.01
81)	T	Dibenz[a,h]anthracene	0.975	0.973	0.967	0.955	0.924	0.959	2.18
82)	T	Benzo[g,h,i]perylene	1.164	1.157	1.150	1.142	1.140	1.151	0.86

000051

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000526\BN04378.D Vial: 100
Acq On : 26 May 2000 8:30 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC/MS Ins
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	117	-0.03
2	T	Pyridine	1.748	1.730	1.0	117	-0.02
3	T	N-nitroso-dimethylamine	1.059	1.056	0.3	117	-0.03
4	S	2-Fluorophenol	1.483	1.495	-0.8	118	-0.03
5	T	Aniline	1.828	1.790	2.1	109	-0.04
6	S	Phenol-d5	1.814	1.776	2.1	113	-0.03
7	TCM	Phenol	1.796	1.752	2.4	114	-0.03
8	T	bis(2-Chloroethyl)ether	1.691	1.588	6.1	108	-0.03
9	TM	2-Chlorophenol	1.456	1.457	-0.1	117	-0.03
10	T	1,3-Dichlorobenzene	1.485	1.469	1.1	115	-0.03
11	TCM	1,4-Dichlorobenzene	1.516	1.487	1.9	115	-0.03
12	T	Benzyl alcohol	0.882	0.865	1.9	112	-0.03
13	T	1,2-Dichlorobenzene	1.403	1.369	2.4	114	-0.03
14	T	2-Methylphenol	1.356	1.290	4.9	111	-0.03
15	T	bis(2-chloroisopropyl)ether	2.294	2.044	10.9	104	0.03
16	T	4-Methylphenol	1.329	1.276	4.0	111	-0.04
17	TM	n-Nitroso-di-n-propylamine	0.297	0.274	7.7	109	-0.04
18	T	Hexachloroethane	0.638	0.625	2.0	113	-0.03
19	I	Naphthalene-d8	1.000	1.000	0.0	112	-0.04
20	S	Nitrobenzene-d5	0.432	0.409	5.3	106	-0.03
21	T	Nitrobenzene	0.422	0.400	5.2	106	-0.04
22	T	Isophorone	0.835	0.769	7.9	104	-0.04
23	TC	2-Nitrophenol	0.242	0.242	0.0	114	-0.04
24	T	2,4-Dimethylphenol	0.388	0.368	5.2	107	-0.05
25	T	bis(2-Chloroethoxy)methane	0.527	0.494	6.3	105	-0.04
26	TC	2,4-Dichlorophenol	0.299	0.305	-2.0	114	-0.04
27	T	Benzoic Acid	0.269	0.269	0.0	115	-0.06
28	TM	1,2,4-Trichlorobenzene	0.316	0.316	0.0	113	-0.04
29	T	Naphthalene	1.097	1.050	4.3	108	-0.04
30	T	4-Chloroaniline	0.352	0.316	10.2	98	-0.04
31	TC	Hexachlorobutadiene	0.163	0.160	1.8	110	-0.04
32	TCM	4-Chloro-3-methylphenol	0.318	0.302	5.0	106	-0.03
33	T	2-Methylnaphthalene	0.656	0.613	6.6	105	-0.03
34	I	Acenaphthene-d10	1.000	1.000	0.0	105	-0.03
35	T	Hexachlorocyclopentadiene	0.245	0.267	-9.0	113	-0.03
36	TC	2,4,6-Trichlorophenol	0.373	0.398	-6.7	112	-0.03
37	T	2,4,5-Trichlorophenol	0.409	0.440	-7.6	111	-0.03
38	S	2-Fluorobiphenyl	1.320	1.298	1.7	104	-0.03
39	T	2-Chloronaphthalene	1.143	1.142	0.1	105	-0.03
40	T	2-Nitroaniline	0.477	0.497	-4.2	109	-0.03
41	T	Dimethylphthalate	1.401	1.376	1.8	105	-0.03
42	T	Acenaphthylene	1.820	1.711	6.0	100	-0.03
43	T	2,6-Dinitrotoluene	0.204	0.234	-14.7	120	-0.04
44	T	3-Nitroaniline	0.276	0.237	14.1	106	-0.04
45	TCM	Acenaphthene	1.094	1.064	2.7	103	-0.04
46	T	2,4-Dinitrophenol	0.229	0.245	-7.0	113	-0.04
47	T	Dibenzofuran	1.521	1.503	1.2	105	-0.03
48	TM	4-Nitrophenol	0.233	0.238	-2.1	98	-0.03
49	TM	2,4-Dinitrotoluene	0.452	0.461	-2.0	108	-0.04
50	T	Diethylphthalate	1.424	1.358	4.6	102	-0.03
51	T	Fluorene	1.171	1.162	0.8	101	-0.04
52	T	4-Chlorophenyl-phenylether	0.565	0.575	-1.8	103	-0.03
53	T	4-Nitroaniline	0.246	0.248	-0.8	106	-0.04

000052

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000526\BN04378.D Vial: 100
Acq On : 26 May 2000 8:30 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC/MS Ins
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	107	-0.03
55	T	4,6-Dinitro-2-methylphenol	0.194	0.210	-8.2	111	-0.03
56	TC	n-Nitrosodiphenylamine	0.562	0.531	5.5	103	-0.03
57	T	Azobenzene	1.028	0.925	10.0	95	-0.03
58	S	2,4,6-Tribromophenol	0.118	0.127	-7.6	114	-0.03
59	T	4-Bromophenyl-phenylether	0.221	0.217	1.8	105	-0.03
60	T	Hexachlorobenzene	0.232	0.232	0.0	107	-0.04
61	TCM	Pentachlorophenol	0.146	0.163	-11.6	115	-0.03
62	T	Phenanthrene	1.107	1.054	4.8	101	-0.04
63	T	Anthracene	1.170	1.126	3.8	102	-0.03
64	T	Di-n-butylphthalate	1.682	1.559	7.3	98	-0.03
65	TC	Fluoranthene	1.161	1.116	3.9	103	-0.04
66	I	Chrysene-d12	1.000	1.000	0.0	100	-0.05
67	T	Benzidine	0.215	0.218	-1.4	109	-0.06
68	TM	Pyrene	1.367	1.417	-3.7	105	-0.05
69	S	p-Terphenyl-d14	0.903	0.916	-1.4	101	-0.06
70	T	Butylbenzylphthalate	0.835	0.866	-3.7	103	-0.04
71	T	Benzo[a]anthracene	1.202	1.158	3.7	94	-0.05
72	T	3,3'-Dichlorobenzidine	0.341	0.327	4.1	94	-0.05
73	T	Chrysene	1.142	1.138	0.4	99	-0.04
74	T	bis(2-Ethylhexyl)phthalate	1.154	1.189	-3.0	99	-0.04
75	I	Perylene-d12	1.000	1.000	0.0	109	-0.05
76	TC	Di-n-octylphthalate	2.184	2.067	5.4	99	-0.04
77	T	Benzo[b]fluoranthene	1.325	1.248	5.8	103	-0.05
78	T	Benzo[k]fluoranthene	1.296	1.225	5.5	103	-0.05
79	TC	Benzo[a]pyrene	1.215	1.175	3.3	105	-0.06
80	T	Indeno[1,2,3-cd]pyrene	1.299	1.270	2.2	106	-0.09
81	T	Dibenz[a,h]anthracene	0.959	0.931	2.9	105	-0.08
82	T	Benzo[g,h,i]perylene	1.151	1.149	0.2	109	-0.09

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000524\BN04353.D Vial: 100
Acq On : 24 May 2000 9:57 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC/MS Ins
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	129	0.00
2	T	Pyridine	1.748	1.734	0.8	129	0.00
3	T	N-nitroso-dimethylamine	1.059	1.043	1.5	127	0.00
4	S	2-Fluorophenol	1.483	1.502	-1.3	130	0.00
5	T	Aniline	1.828	1.995	-9.1	134	0.00
6	S	Phenol-d5	1.814	1.756	3.2	123	0.00
7	TCM	Phenol	1.796	1.727	3.8	123	0.00
8	T	bis(2-Chloroethyl)ether	1.691	1.572	7.0	118	0.00
9	TM	2-Chlorophenol	1.456	1.457	-0.1	129	0.00
10	T	1,3-Dichlorobenzene	1.485	1.475	0.7	128	0.00
11	TCM	1,4-Dichlorobenzene	1.516	1.481	2.3	126	0.00
12	T	Benzyl alcohol	0.882	0.860	2.5	123	0.00
13	T	1,2-Dichlorobenzene	1.403	1.388	1.1	127	0.00
14	T	2-Methylphenol	1.356	1.308	3.5	124	0.00
15	T	bis(2-chloroisopropyl)ether	2.294	2.019	12.0	114	0.00
16	T	4-Methylphenol	1.329	1.265	4.8	121	0.00
17	TM	n-Nitroso-di-n-propylamine	0.297	0.275	7.4	120	0.00
18	T	Hexachloroethane	0.638	0.627	1.7	125	0.00
19	I	Naphthalene-d8	1.000	1.000	0.0	125	0.00
20	S	Nitrobenzene-d5	0.432	0.406	6.0	117	0.00
21	T	Nitrobenzene	0.422	0.397	5.9	117	0.00
22	T	Isophorone	0.835	0.779	6.7	117	0.00
23	TC	2-Nitrophenol	0.242	0.243	-0.4	128	0.00
24	T	2,4-Dimethylphenol	0.388	0.368	5.2	118	0.00
25	T	bis(2-Chloroethoxy)methane	0.527	0.494	6.3	117	0.00
26	TC	2,4-Dichlorophenol	0.299	0.304	-1.7	126	0.00
27	T	Benzoic Acid	0.269	0.258	4.1	123	0.00
28	TM	1,2,4-Trichlorobenzene	0.316	0.319	-0.9	127	0.00
29	T	Naphthalene	1.097	1.059	3.5	121	0.00
30	T	4-Chloroaniline	0.352	0.422	-19.9	146	0.00
31	TC	Hexachlorobutadiene	0.163	0.158	3.1	121	0.00
32	TCM	4-Chloro-3-methylphenol	0.318	0.300	5.7	117	0.00
33	T	2-Methylnaphthalene	0.656	0.620	5.5	118	0.00
34	I	Acenaphthene-d10	1.000	1.000	0.0	116	0.00
35	T	Hexachlorocyclopentadiene	0.245	0.234	4.5	110	0.00
36	TC	2,4,6-Trichlorophenol	0.373	0.399	-7.0	124	0.00
37	T	2,4,5-Trichlorophenol	0.409	0.450	-10.0	125	0.00
38	S	2-Fluorobiphenyl	1.320	1.292	2.1	115	0.00
39	T	2-Chloronaphthalene	1.143	1.155	-1.0	118	0.00
40	T	2-Nitroaniline	0.477	0.528	-10.7	129	0.00
41	T	Dimethylphthalate	1.401	1.381	1.4	116	0.00
42	T	Acenaphthylene	1.820	1.705	6.3	111	0.00
43	T	2,6-Dinitrotoluene	0.204	0.252	-23.5	144	0.00
44	T	3-Nitroaniline	0.276	0.300	-8.7	149	0.00
45	TCM	Acenaphthene	1.094	1.067	2.5	114	0.00
46	T	2,4-Dinitrophenol	0.229	0.225	1.7	115	0.00
47	T	Dibenzofuran	1.521	1.501	1.3	116	0.00
48	TM	4-Nitrophenol	0.233	0.230	1.3	104	0.00
49	TM	2,4-Dinitrotoluene	0.452	0.468	-3.5	122	0.00
50	T	Diethylphthalate	1.424	1.356	4.8	113	0.00
51	T	Fluorene	1.171	1.166	0.4	112	0.00
52	T	4-Chlorophenyl-phenylether	0.565	0.570	-0.9	113	0.00
53	T	4-Nitroaniline	0.246	0.291	-18.3	138	0.00

(#) = Out of Range

000054

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000524\BN04353.D Vial: 100
Acq On : 24 May 2000 9:57 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC/MS Ins
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	I	Phenanthrene-d10	1.000	1.000	0.0	122	0.00
55	T	4,6-Dinitro-2-methylphenol	0.194	0.203	-4.6	122	0.00
56	TC	n-Nitrosodiphenylamine	0.562	0.558	0.7	123	0.00
57	T	Azobenzene	1.028	0.910	11.5	106	0.00
58	S	2,4,6-Tribromophenol	0.118	0.125	-5.9	127	0.00
59	T	4-Bromophenyl-phenylether	0.221	0.216	2.3	118	0.00
60	T	Hexachlorobenzene	0.232	0.230	0.9	120	0.00
61	TCM	Pentachlorophenol	0.146	0.153	-4.8	123	0.00
62	T	Phenanthrene	1.107	1.036	6.4	113	0.00
63	T	Anthracene	1.170	1.093	6.6	112	0.00
64	T	Di-n-butylphthalate	1.682	1.512	10.1	107	0.00
65	TC	Fluoranthene	1.161	1.094	5.8	114	0.00
66	I	Chrysene-d12	1.000	1.000	0.0	109	0.00
67	T	Benzidine	0.215	0.296	-37.7#	162	0.00
68	TM	Pyrene	1.367	1.447	-5.9	117	0.00
69	S	p-Terphenyl-d14	0.903	0.928	-2.8	112	0.00
70	T	Butylbenzylphthalate	0.835	0.887	-6.2	115	0.00
71	T	Benzo[a]anthracene	1.202	1.224	-1.8	108	0.00
72	T	3,3'-Dichlorobenzidine	0.341	0.281	17.6	88	0.00
73	T	Chrysene	1.142	1.151	-0.8	110	0.00
74	T	bis(2-Ethylhexyl)phthalate	1.154	1.199	-3.9	109	0.00
75	I	Perylene-d12	1.000	1.000	0.0	122	0.00
76	TC	Di-n-octylphthalate	2.184	2.042	6.5	110	0.00
77	T	Benzo[b]fluoranthene	1.325	1.271	4.1	118	0.00
78	T	Benzo[k]fluoranthene	1.296	1.213	6.4	115	0.00
79	TC	Benzo[a]pyrene	1.215	1.191	2.0	120	0.00
80	T	Indeno[1,2,3-cd]pyrene	1.299	1.267	2.5	119	0.00
81	T	Dibenz[a,h]anthracene	0.959	0.915	4.6	115	0.00
82	T	Benzo[g,h,i]perylene	1.151	1.145	0.5	122	0.00

000055

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No: _____

	Field ID:	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	5420.10MS	70	75	82	0
02	5420.10MSD	70	73	82	0
03	SBLK374	64	64	74	0
04	876-1	59	60	62	0

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(35-114)
S2	2FP	=	2-Fluorobiphenyl	(43-116)
S3	TPL	=	p-Terphenyl-d14	(33-141)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BN04374.D** Sample Name **5420.10MS**

Date Acquired **25-May-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		6.54 ug/L	32.72
62-75-9	N-nitroso-dimethylamine		9.26 ug/L	46.29
62-53-3	Aniline		9.41 ug/L	47.07
111-44-4	bis(2-Chloroethyl)ether		13.23 ug/L	66.17
541-73-1	1,3-Dichlorobenzene		13.52 ug/L	67.60
106-46-7	1,4-Dichlorobenzene		13.54 ug/L	67.70
100-51-6	Benzyl alcohol		12.72 ug/L	63.62
95-50-1	1,2-Dichlorobenzene		13.82 ug/L	69.11
39638-32-9	bis(2-chloroisopropyl)ether		16.95 ug/L	84.73
621-64-7	n-Nitroso-di-n-propylamine		12.96 ug/L	64.82
67-72-1	Hexachloroethane		12.92 ug/L	64.61
98-95-3	Nitrobenzene		14.17 ug/L	70.85
78-59-1	Isophorone		15.07 ug/L	75.35
111-91-1	bis(2-Chloroethoxy)methane		13.91 ug/L	69.55
120-82-1	1,2,4-Trichlorobenzene		14.13 ug/L	70.63
91-20-3	Naphthalene		13.95 ug/L	69.75
106-47-8	4-Chloroaniline		13.48 ug/L	67.42
87-68-3	Hexachlorobutadiene		13.28 ug/L	66.42
91-57-6	2-Methylnaphthalene		15.92 ug/L	79.58
77-47-4	Hexachlorocyclopentadiene		2.56 ug/L	12.79
91-58-7	2-Chloronaphthalene		15.34 ug/L	76.71
88-74-4	2-Nitroaniline		17.86 ug/L	89.28
131-11-3	Dimethylphthalate		16.06 ug/L	80.31
208-96-8	Acenaphthylene		15.08 ug/L	75.38
606-20-2	2,6-Dinitrotoluene		23.71 ug/L	118.56
99-09-2	3-Nitroaniline		19.41 ug/L	97.05
83-32-9	Acenaphthene		15.56 ug/L	77.82
132-64-9	Dibenzofuran		18.02 ug/L	90.08
121-14-2	2,4-Dinitrotoluene		16.61 ug/L	83.07
84-66-2	Diethylphthalate		16.42 ug/L	82.12
86-73-7	Fluorene		17.03 ug/L	85.14
7005-72-3	4-Chlorophenyl-phenylether		16.99 ug/L	84.95
100-01-6	4-Nitroaniline		22.78 ug/L	113.92
86-30-6	n-Nitrosodiphenylamine		17.41 ug/L	87.07
103-33-3	Azobenzene		15.97 ug/L	79.87
101-55-3	4-Bromophenyl-phenylether		16.32 ug/L	81.62
118-74-1	Hexachlorobenzene		16.88 ug/L	84.42
85-01-8	Phenanthrene		16.86 ug/L	84.29
120-12-7	Anthracene		16.24 ug/L	81.20
84-74-2	Di-n-butylphthalate		16.83 ug/L	84.14
206-44-0	Fluoranthene		16.85 ug/L	84.23
129-00-0	Pyrene		17.67 ug/L	88.37
85-68-7	Butylbenzylphthalate		17.74 ug/L	88.71
56-55-3	Benzo[a]anthracene		17.63 ug/L	88.13
218-01-9	Chrysene		16.63 ug/L	83.16
117-81-7	bis(2-Ethylhexyl)phthalate		18.33 ug/L	91.66
117-84-0	Di-n-octylphthalate		16.98 ug/L	84.90
205-99-2	Benzo[b]fluoranthene		15.96 ug/L	79.80
207-08-9	Benzo[k]fluoranthene		16.43 ug/L	82.17
50-32-8	Benzo[a]pyrene		15.29 ug/L	76.44
193-39-5	Indeno[1,2,3-cd]pyrene		16.00 ug/L	80.00
53-70-3	Dibenz[a,h]anthracene		17.85 ug/L	89.25
191-24-2	Benzo[g,h,i]perylene		15.88 ug/L	79.40

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BN04375.D** Sample Name **5420.10MSD**

Date Acquired **25-May-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		5.96 ug/L	29.79
62-75-9	N-nitroso-dimethylamine		8.84 ug/L	44.22
62-53-3	Aniline		9.75 ug/L	48.73
111-44-4	bis(2-Chloroethyl)ether		12.83 ug/L	64.15
541-73-1	1,3-Dichlorobenzene		12.97 ug/L	64.87
106-46-7	1,4-Dichlorobenzene		13.19 ug/L	65.94
100-51-6	Benzyl alcohol		12.69 ug/L	63.43
95-50-1	1,2-Dichlorobenzene		13.38 ug/L	66.89
39638-32-9	bis(2-chloroisopropyl)ether		16.18 ug/L	80.90
621-64-7	n-Nitroso-di-n-propylamine		12.37 ug/L	61.84
67-72-1	Hexachloroethane		12.33 ug/L	61.65
98-95-3	Nitrobenzene		13.95 ug/L	69.74
78-59-1	Isophorone		14.50 ug/L	72.51
111-91-1	bis(2-Chloroethoxy)methane		13.28 ug/L	66.42
120-82-1	1,2,4-Trichlorobenzene		13.89 ug/L	69.43
91-20-3	Naphthalene		13.43 ug/L	67.17
106-47-8	4-Chloroaniline		14.71 ug/L	73.56
87-68-3	Hexachlorobutadiene		13.08 ug/L	65.39
91-57-6	2-Methylnaphthalene		15.73 ug/L	78.63
77-47-4	Hexachlorocyclopentadiene		2.66 ug/L	13.32
91-58-7	2-Chloronaphthalene		14.69 ug/L	73.46
88-74-4	2-Nitroaniline		17.09 ug/L	85.47
131-11-3	Dimethylphthalate		15.01 ug/L	75.04
208-96-8	Acenaphthylene		14.18 ug/L	70.89
606-20-2	2,6-Dinitrotoluene		22.52 ug/L	112.62
99-09-2	3-Nitroaniline		19.18 ug/L	95.89
83-32-9	Acenaphthene		14.84 ug/L	74.20
132-64-9	Dibenzofuran		16.95 ug/L	84.75
121-14-2	2,4-Dinitrotoluene		15.77 ug/L	78.85
84-66-2	Diethylphthalate		15.04 ug/L	75.20
86-73-7	Fluorene		15.88 ug/L	79.41
7005-72-3	4-Chlorophenyl-phenylether		15.92 ug/L	79.62
100-01-6	4-Nitroaniline		21.48 ug/L	107.41
86-30-6	n-Nitrosodiphenylamine		16.72 ug/L	83.58
103-33-3	Azobenzene		15.06 ug/L	75.30
101-55-3	4-Bromophenyl-phenylether		15.31 ug/L	76.53
118-74-1	Hexachlorobenzene		16.09 ug/L	80.47
85-01-8	Phenanthrene		15.94 ug/L	79.71
120-12-7	Anthracene		14.97 ug/L	74.85
84-74-2	Di-n-butylphthalate		15.82 ug/L	79.09
206-44-0	Fluoranthene		15.99 ug/L	79.95
129-00-0	Pyrene		16.94 ug/L	84.72
85-68-7	Butylbenzylphthalate		17.39 ug/L	86.94
56-55-3	Benzo[a]anthracene		16.91 ug/L	84.54
218-01-9	Chrysene		16.11 ug/L	80.57
117-81-7	bis(2-Ethylhexyl)phthalate		17.42 ug/L	87.11
117-84-0	Di-n-octylphthalate		16.49 ug/L	82.47
205-99-2	Benzo[b]fluoranthene		15.61 ug/L	78.03
207-08-9	Benzo[k]fluoranthene		16.16 ug/L	80.80
50-32-8	Benzo[a]pyrene		14.79 ug/L	73.93
193-39-5	Indeno[1,2,3-cd]pyrene		15.39 ug/L	76.96
53-70-3	Dibenz[a,h]anthracene		17.23 ug/L	86.13
191-24-2	Benzo[g,h,i]perylene		15.36 ug/L	76.78

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID (Standard): BN04353.D Date Analyzed: 5/24/00

Instrument ID: SVoa#1 Time Analyzed: 9:57

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	786914	9.82	2677312	13.71	1322940	18.99
	UPPER LIMIT	1573828	10.32	5354624	14.21	2645880	19.49
	LOWER LIMIT	393457	9.32	1338656	13.21	661470	18.49
	Field ID:						
01	5420.10MS	765161	9.82	2619166	13.70	1311173	18.98
02	5420.10MSD	787282	9.82	2665859	13.70	1363691	18.98

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: 000004 Case No.: 5428 Location: Bl.876 SDG No:

Lab File ID (Standard): BN04353.D Date Analyzed: 05/24/00

Instrument ID: SVoa#1 Time Analyzed: 09:57

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2028592	22.83	1592286	30.04	1587803	33.47
	UPPER LIMIT	4057184	22.33	3184572	29.54	3175606	32.97
	LOWER LIMIT	1014296	23.33	796143	30.54	793902	33.97
	EPA SAMPLE NO.						
01	5420.10MS	1952552	22.82	1643406	30.02	1548299	33.47
02	5420.10MSD	2006525	22.83	1672322	30.02	1579317	33.46

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: 000004 Case No.: 5428 Location: BI.876 SDG No:

Lab File ID (Standard): BN04378.D Date Analyzed: 5/26/00

Instrument ID: SVoa#1 Time Analyzed: 8:30

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	713796	9.79	2408793	13.67	1194365	18.95
	UPPER LIMIT	1427592	10.29	4817586	14.17	2388730	19.45
	LOWER LIMIT	356898	9.29	1204397	13.17	597183	18.45
	Field ID:						
01	SBLK374	843403	9.79	2808961	13.67	1445449	18.95
02	876-1	840520	9.80	2857422	13.66	1480699	18.95

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: 000004 Case No.: 5428 Location: Bl.876 SDG No: _____

Lab File ID (Standard): BN04378.D Date Analyzed: 05/26/00

Instrument ID: SVoa#1 Time Analyzed: 08:30

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1787885	22.80	1462060	29.99	1415064	33.42
	UPPER LIMIT	3575770	22.30	2924120	29.49	2830128	32.92
	LOWER LIMIT	893943	23.30	731030	30.49	707532	33.92
	EPA SAMPLE NO.						
01	SBLK374	2147510	22.79	1777931	29.98	1639213	33.41
02	876-1	2152326	22.79	1795659	29.97	1658144	33.41

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\000526\BN04379.D Vial: 1
Acq On : 26 May 2000 9:25 am Operator: Bhaskar
Sample : Sblk374 Inst : GC/MS Ins
Misc : Sblk374 A 000524 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 30 13:19 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.79	152	843403	40.00	ug/L	-0.03
19) Naphthalene-d8	13.67	136	2808961	40.00	ug/L	-0.04
34) Acenaphthene-d10	18.95	164	1445449	40.00	ug/L	-0.04
54) Phenanthrene-d10	22.79	188	2147510	40.00	ug/L	-0.04
66) Chrysene-d12	29.98	240	1777931	40.00	ug/L	-0.06
75) Perylene-d12	33.41	264	1639213	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	6.83	112	1388372	44.39	ug/L	-0.01
Spiked Amount 100.000	Range 21 - 100		Recovery = 44.39%			
6) Phenol-d5	8.91	99	1092246	28.56	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 28.56%			
20) Nitrobenzene-d5	11.32	82	976160	32.17	ug/L	-0.04
Spiked Amount 50.000	Range 35 - 114		Recovery = 64.34%			
38) 2-Fluorobiphenyl	17.10	172	1527199	32.01	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery = 64.02%			
58) 2,4,6-Tribromophenol	21.05	330	432486	68.46	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 123		Recovery = 68.46%			
69) p-Terphenyl-d14	26.95	244	1479161	36.84	ug/L	-0.06
Spiked Amount 50.000	Range 33 - 141		Recovery = 73.68%			
Target Compounds						Qvalue

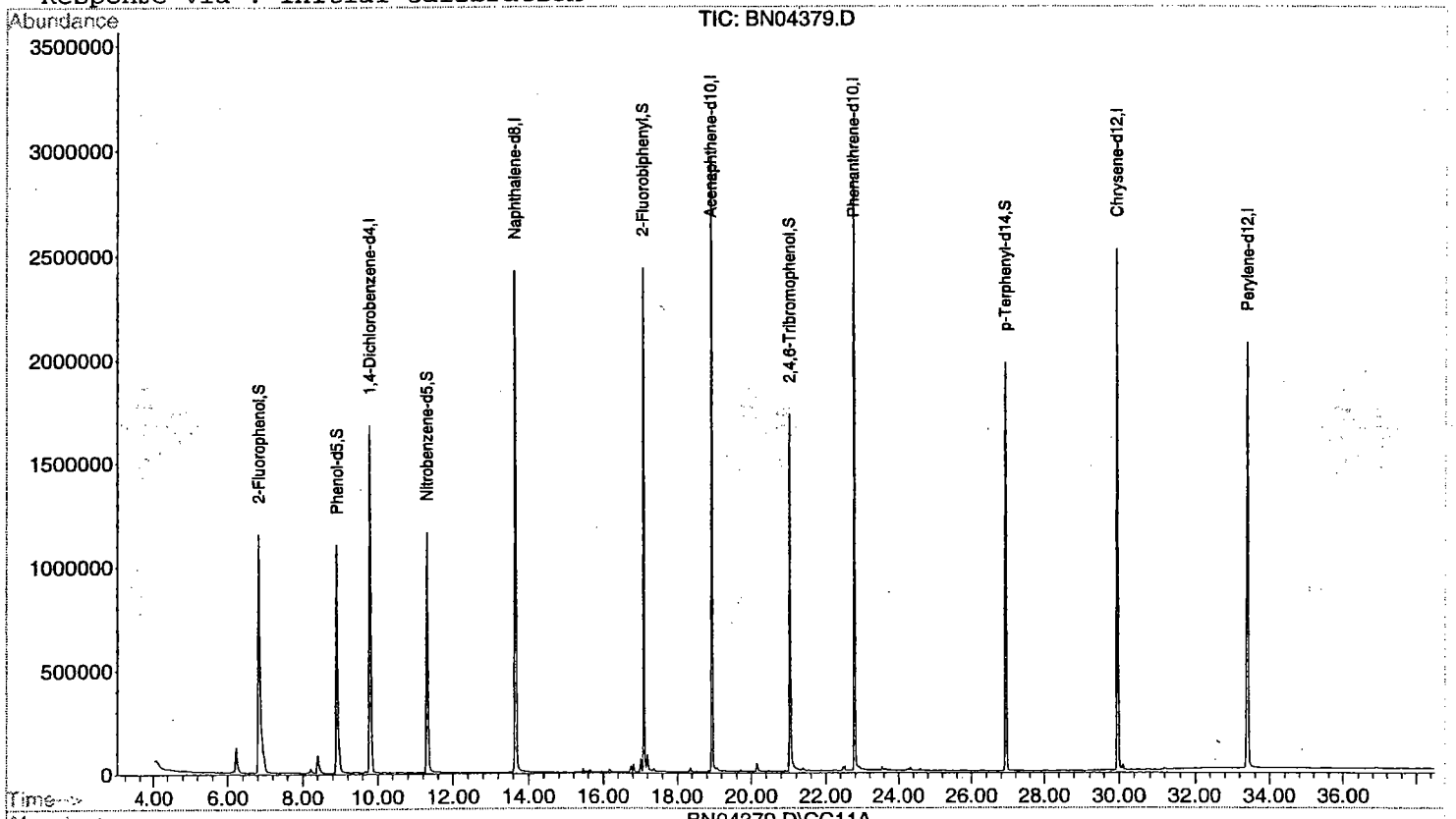
000063

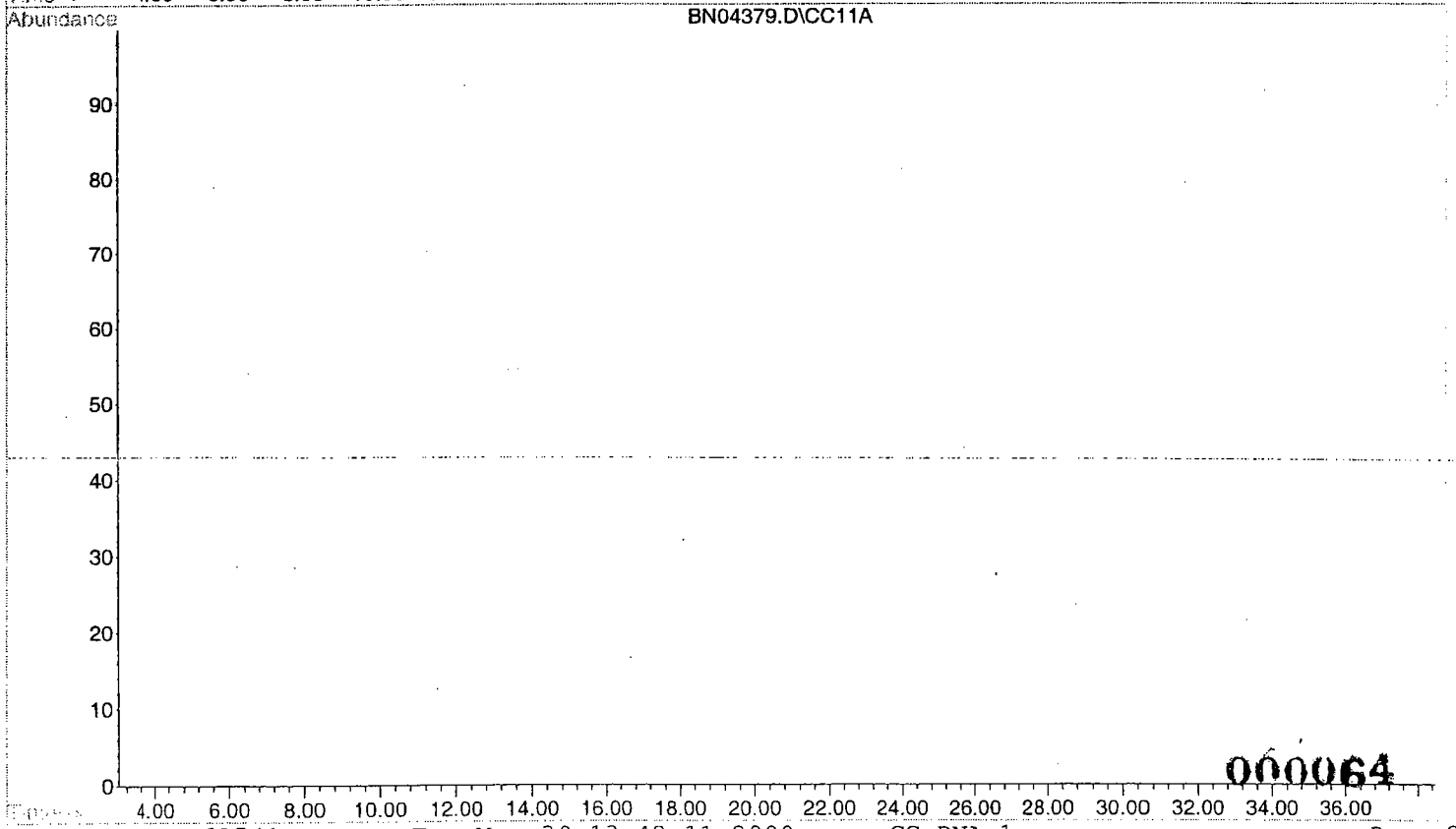
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000526\BN04379.D Vial: 1
Acq On : 26 May 2000 9:25 am Operator: Bhaskar
Sample : Sblk374 Inst : GC/MS Ins
Misc : Sblk374 A 000524 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 30 13:19 2000 Quant Results File: M62541.RES

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration





000064

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000526\BN04390.D Vial: 12
Acq On : 26 May 2000 7:39 pm Operator: Bhaskar
Sample : 5428.01 Inst : GC/MS Ins
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 30 13:31 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.80	152	840520	40.00	ug/L	-0.03
19) Naphthalene-d8	13.66	136	2857422	40.00	ug/L	-0.05
34) Acenaphthene-d10	18.95	164	1480699	40.00	ug/L	-0.03
54) Phenanthrene-d10	22.79	188	2152326	40.00	ug/L	-0.04
66) Chrysene-d12	29.97	240	1795659	40.00	ug/L	-0.06
75) Perylene-d12	33.41	264	1658144	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.31	82	903637	29.28	ug/L	-0.05
Spiked Amount 50.000	Range 35 - 114		Recovery =	58.56%		
38) 2-Fluorobiphenyl	17.10	172	1469669	30.07	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery =	60.14%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	26.94	244	1266747	31.23	ug/L	-0.06
Spiked Amount 50.000	Range 33 - 141		Recovery =	62.46%		
Target Compounds						Qvalue
62) Phenanthrene	22.84	178	74229	1.25	ug/L	98

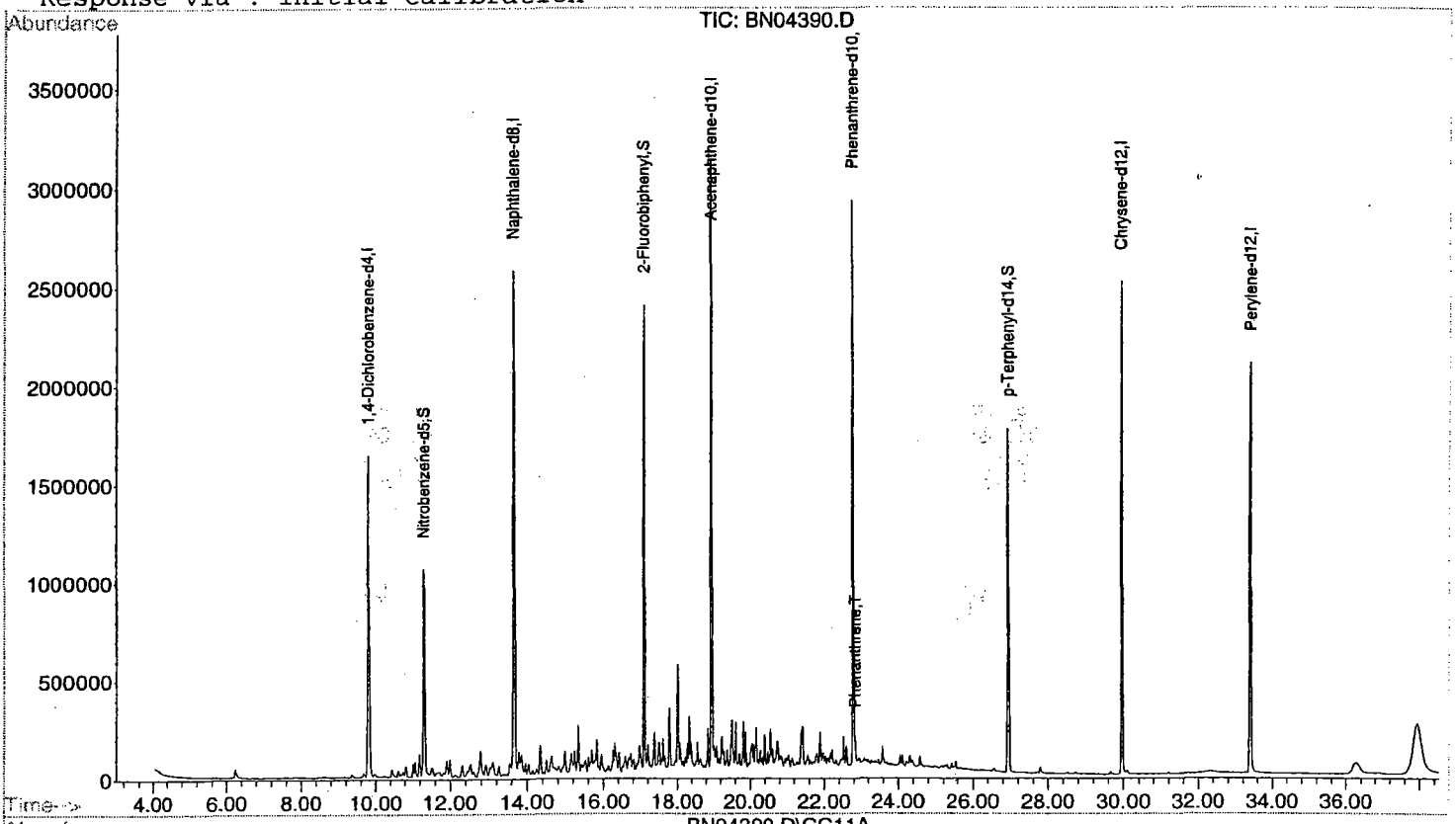
000065

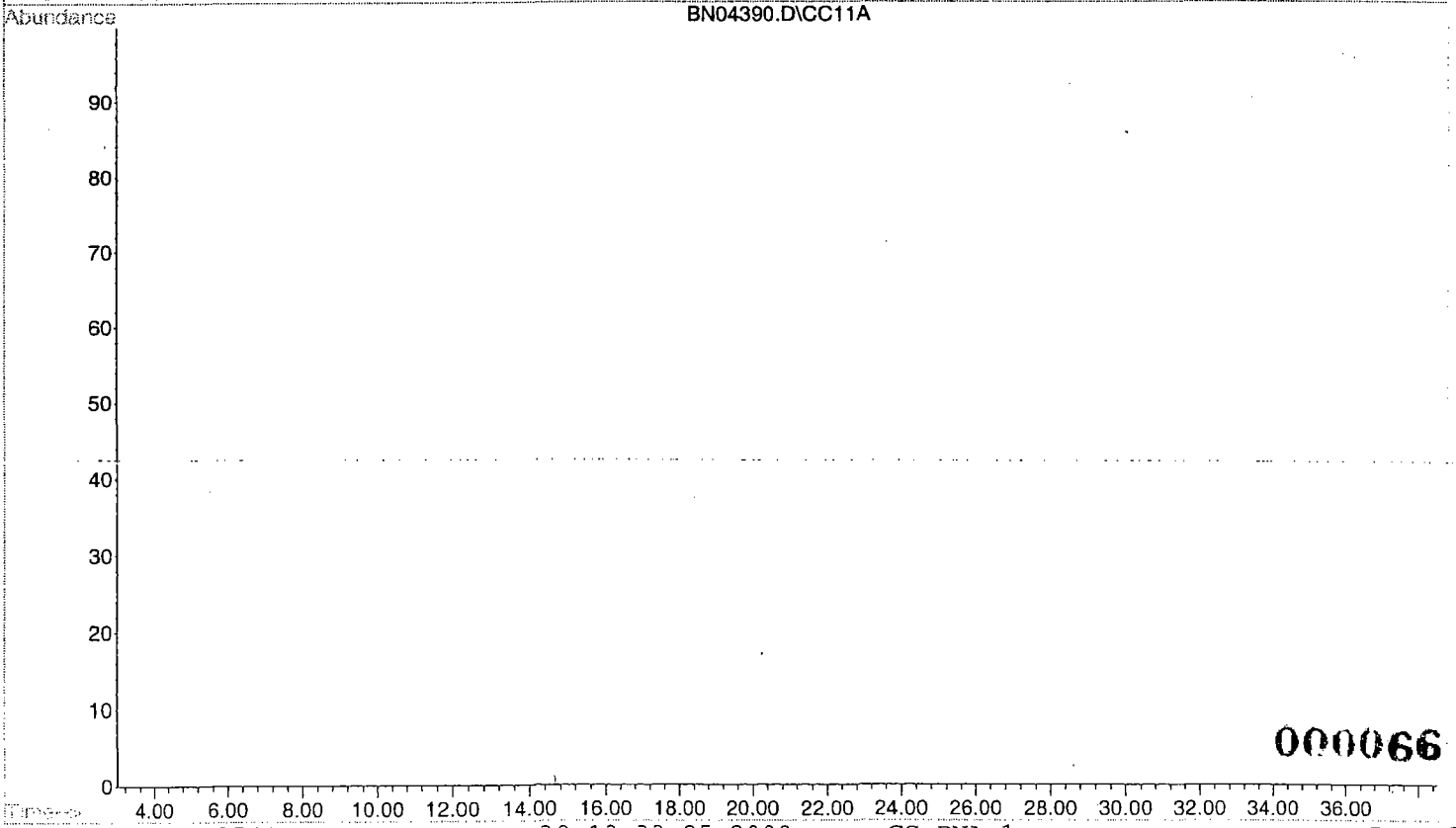
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000526\BN04390.D Vial: 12
Acq On : 26 May 2000 7:39 pm Operator: Bhaskar
Sample : 5428.01 Inst : GC/MS Ins
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 30 13:31 2000 Quant Results File: M62541.RES

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration





000066

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000524\BN04374.D Vial: 20
Acq On : 25 May 2000 4:55 am Operator: Bhaskar
Sample : 5420.10MS Inst : GC/MS Ins
Misc : CW1MW291MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 25 8:30 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.82	152	765161	40.00	ug/L	0.00
19) Naphthalene-d8	13.70	136	2619166	40.00	ug/L	0.00
34) Acenaphthene-d10	18.98	164	1311173	40.00	ug/L	0.00
54) Phenanthrene-d10	22.82	188	1952552	40.00	ug/L	0.00
66) Chrysene-d12	30.02	240	1643406	40.00	ug/L	-0.01
75) Perylene-d12	33.47	264	1548299	40.00	ug/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	6.86	112	1327868	46.80	ug/L	0.02
Spiked Amount 100.000	Range 21 - 100		Recovery = 46.80%			
6) Phenol-d5	8.94	99	1058444	30.50	ug/L	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery = 30.50%			
20) Nitrobenzene-d5	11.35	82	984914	34.81	ug/L	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery = 69.62%			
38) 2-Fluorobiphenyl	17.14	172	1612256	37.25	ug/L	0.00
Spiked Amount 50.000	Range 43 - 116		Recovery = 74.50%			
58) 2,4,6-Tribromophenol	21.09	330	488551	85.06	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 85.06%			
69) p-Terphenyl-d14	27.00	244	1528577	41.18	ug/L	0.00
Spiked Amount 50.000	Range 33 - 141		Recovery = 82.36%			
Target Compounds						Qvalue
2) Pyridine	4.57	79	218884m	6.54	ug/L	
3) N-nitroso-dimethylamine	4.54	74	187572	9.26	ug/L	95
5) Aniline	9.07	93	329106	9.41	ug/L	99
7) Phenol	8.97	94	212367	6.18	ug/L	98
8) bis(2-Chloroethyl)ether	9.22	93	428019	13.23	ug/L	99
9) 2-Chlorophenol	9.32	128	381686	13.70	ug/L	96
10) 1,3-Dichlorobenzene	9.68	146	383932	13.52	ug/L	99
11) 1,4-Dichlorobenzene	9.87	146	392542	13.54	ug/L	99
12) Benzyl alcohol	10.22	108	214673	12.72	ug/L	96
13) 1,2-Dichlorobenzene	10.27	146	371050	13.82	ug/L	99
14) 2-Methylphenol	10.50	108	304333	11.73	ug/L	99
15) bis(2-chloroisopropyl)ethe	10.58	45	743690	16.95	ug/L	98
16) 4-Methylphenol	10.92	108	299044	11.76	ug/L	99
17) n-Nitroso-di-n-propylamine	10.94	130	73600	12.96	ug/L	95
18) Hexachloroethane	11.11	117	157786	12.92	ug/L	94
21) Nitrobenzene	11.40	77	391544	14.17	ug/L	98
22) Isophorone	12.13	82	823614	15.07	ug/L	99
23) 2-Nitrophenol	12.43	139	215984	13.63	ug/L	96
24) 2,4-Dimethylphenol	12.59	107	263931	10.40	ug/L	96
25) bis(2-Chloroethoxy)methane	12.97	93	480121	13.91	ug/L	99
26) 2,4-Dichlorophenol	13.25	162	273276	13.94	ug/L	98
27) Benzoic Acid	13.01	105	70980	4.02	ug/L	93
28) 1,2,4-Trichlorobenzene	13.52	180	291944	14.13	ug/L	99
29) Naphthalene	13.77	128	1001700	13.95	ug/L	100
30) 4-Chloroaniline	14.06	127	310928	13.48	ug/L	98
31) Hexachlorobutadiene	14.23	225	141351	13.28	ug/L	99
32) 4-Chloro-3-methylphenol	15.65	107	305289	14.65	ug/L	98
33) 2-Methylnaphthalene	15.99	142	683239	15.92	ug/L	99
35) Hexachlorocyclopentadiene	16.50	237	20570	2.56	ug/L	98
36) 2,4,6-Trichlorophenol	16.89	196	190105	15.53	ug/L	99
37) 2,4,5-Trichlorophenol	16.99	196	208433	15.56	ug/L	98
39) 2-Chloronaphthalene	17.42	162	575011	15.34	ug/L	99
40) 2-Nitroaniline	17.83	138	279353	17.86	ug/L	96
41) Dimethylphthalate	18.37	163	737440	16.06	ug/L	98

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

000067

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000524\BN04374.D Vial: 20
Acq On : 25 May 2000 4:55 am Operator: Bhaskar
Sample : 5420.10MS Inst : GC/MS Ins
Misc : CW1MW291MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 25 8:30 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	Acenaphthylene	18.58	152	899246	15.08	ug/L		99
43)	2,6-Dinitrotoluene	18.56	63	158693	23.71	ug/L	#	78
44)	3-Nitroaniline	18.99	138	175452	19.41	ug/L		93
45)	Acenaphthene	19.06	153	558347	15.56	ug/L		99
46)	2,4-Dinitrophenol	19.32	184	28598m	3.82	ug/L		
47)	Dibenzofuran	19.52	168	898339	18.02	ug/L		99
48)	4-Nitrophenol	19.62	65	78029m	10.23	ug/L		
49)	2,4-Dinitrotoluene	19.63	165	246151	16.61	ug/L		96
50)	Diethylphthalate	20.26	149	766417	16.42	ug/L		100
51)	Fluorene	20.43	166	653446	17.03	ug/L		98
52)	4-Chlorophenyl-phenylether	20.46	204	314790	16.99	ug/L		99
53)	4-Nitroaniline	20.61	138	183498	22.78	ug/L		93
55)	4,6-Dinitro-2-methylphenol	20.67	198	80159	8.45	ug/L		99
56)	n-Nitrosodiphenylamine	20.80	169	477945	17.41	ug/L		98
57)	Azobenzene	20.86	77	801317	15.97	ug/L		98
59)	4-Bromophenyl-phenylether	21.71	248	175844	16.32	ug/L		99
60)	Hexachlorobenzene	21.88	284	191522	16.88	ug/L		98
61)	Pentachlorophenol	22.41	266	95476	13.36	ug/L		97
62)	Phenanthrene	22.88	178	910533	16.86	ug/L		99
63)	Anthracene	23.00	178	927404	16.24	ug/L		100
64)	Di-n-butylphthalate	24.37	149	1381358	16.83	ug/L		100
65)	Fluoranthene	25.85	202	954464	16.85	ug/L		99
68)	Pyrene	26.47	202	992552	17.67	ug/L		97
70)	Butylbenzylphthalate	28.56	149	608887	17.74	ug/L		99
71)	Benzo[a]anthracene	29.97	228	870734	17.63	ug/L		100
73)	Chrysene	30.08	228	780432	16.63	ug/L		99
74)	bis(2-Ethylhexyl)phthalate	30.14	149	869079	18.33	ug/L		98
76)	Di-n-octylphthalate	31.67	149	1435216	16.98	ug/L		100
77)	Benzo[b]fluoranthene	32.52	252	818727	15.96	ug/L		99
78)	Benzo[k]fluoranthene	32.58	252	824213	16.43	ug/L		98
79)	Benzo[a]pyrene	33.30	252	718875	15.29	ug/L		100
80)	Indeno[1,2,3-cd]pyrene	36.58	276	804355	16.00	ug/L		99
81)	Dibenz[a,h]anthracene	36.64	278	662572	17.85	ug/L		99
82)	Benzo[g,h,i]perylene	37.54	276	707262	15.88	ug/L		99

000068

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000524\BN04375.D Vial: 21
Acq On : 25 May 2000 5:48 am Operator: Bhaskar
Sample : 5420.10MSD Inst : GC/MS Ins
Misc : CW1MW291MSD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 25 8:31 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	9.82	152	787282	40.00	ug/L	0.00
19) Naphthalene-d8	13.70	136	2665859	40.00	ug/L	-0.01
34) Acenaphthene-d10	18.98	164	1363691	40.00	ug/L	0.00
54) Phenanthrene-d10	22.83	188	2006525	40.00	ug/L	0.00
66) Chrysene-d12	30.02	240	1672322	40.00	ug/L	-0.02
75) Perylene-d12	33.46	264	1579317	40.00	ug/L	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	6.86	112	1327276	45.46	ug/L	0.02
Spiked Amount 100.000	Range 21 - 100		Recovery = 45.46%			
6) Phenol-d5	8.94	99	1078573	30.21	ug/L	0.00
Spiked Amount 100.000	Range 10 - 94		Recovery = 30.21%			
20) Nitrobenzene-d5	11.35	82	1009683	35.06	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery = 70.12%			
38) 2-Fluorobiphenyl	17.13	172	1632767	36.27	ug/L	-0.01
Spiked Amount 50.000	Range 43 - 116		Recovery = 72.54%			
58) 2,4,6-Tribromophenol	21.09	330	494330	83.75	ug/L	0.00
Spiked Amount 100.000	Range 10 - 123		Recovery = 83.75%			
69) p-Terphenyl-d14	26.99	244	1554898	41.17	ug/L	-0.01
Spiked Amount 50.000	Range 33 - 141		Recovery = 82.34%			
Target Compounds						Qvalue
2) Pyridine	4.57	79	205025m	5.96	ug/L	
3) N-nitroso-dimethylamine	4.54	74	184379	8.84	ug/L	94
5) Aniline	9.06	93	350622	9.75	ug/L	99
7) Phenol	8.97	94	210685	5.96	ug/L	99
8) bis(2-Chloroethyl)ether	9.21	93	426952	12.83	ug/L	99
9) 2-Chlorophenol	9.31	128	372667	13.00	ug/L	97
10) 1,3-Dichlorobenzene	9.68	146	379087	12.97	ug/L	100
11) 1,4-Dichlorobenzene	9.86	146	393400	13.19	ug/L	99
12) Benzyl alcohol	10.22	108	220236	12.69	ug/L	96
13) 1,2-Dichlorobenzene	10.28	146	369516	13.38	ug/L	98
14) 2-Methylphenol	10.50	108	297776	11.15	ug/L	98
15) bis(2-chloroisopropyl)ethe	10.58	45	730651	16.18	ug/L	96
16) 4-Methylphenol	10.91	108	291454	11.14	ug/L	99
17) n-Nitroso-di-n-propylamine	10.95	130	72246	12.37	ug/L	90
18) Hexachloroethane	11.12	117	154908	12.33	ug/L	96
21) Nitrobenzene	11.40	77	392283	13.95	ug/L	98
22) Isophorone	12.14	82	806680	14.50	ug/L	99
23) 2-Nitrophenol	12.43	139	214518	13.30	ug/L	95
24) 2,4-Dimethylphenol	12.59	107	260439	10.08	ug/L	100
25) bis(2-Chloroethoxy)methane	12.97	93	466688	13.28	ug/L	99
26) 2,4-Dichlorophenol	13.25	162	266534	13.36	ug/L	99
27) Benzoic Acid	13.03	105	72285	4.02	ug/L	96
28) 1,2,4-Trichlorobenzene	13.53	180	292106	13.89	ug/L	98
29) Naphthalene	13.76	128	981763	13.43	ug/L	100
30) 4-Chloroaniline	14.05	127	345316	14.71	ug/L	96
31) Hexachlorobutadiene	14.22	225	141634	13.08	ug/L	100
32) 4-Chloro-3-methylphenol	15.65	107	302772	14.28	ug/L	96
33) 2-Methylnaphthalene	15.99	142	687135	15.73	ug/L	98
35) Hexachlorocyclopentadiene	16.51	237	22281	2.66	ug/L	92
36) 2,4,6-Trichlorophenol	16.90	196	187109	14.70	ug/L	98
37) 2,4,5-Trichlorophenol	16.99	196	212485	15.25	ug/L	99
39) 2-Chloronaphthalene	17.42	162	572704	14.69	ug/L	99
40) 2-Nitroaniline	17.83	138	278144	17.09	ug/L	97
41) Dimethylphthalate	18.38	163	716681	15.01	ug/L	99

000070

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000524\BN04375.D Vial: 21
Acq On : 25 May 2000 5:48 am Operator: Bhaskar
Sample : 5420.10MSD Inst : GC/MS Ins
Misc : CW1MW291MSD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 25 8:31 2000 Quant Results File: M62541.RES

Quant Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration
DataAcq Meth : M62541

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
42)	Acenaphthylene	18.58	152	879548	14.18	ug/L		99
43)	2,6-Dinitrotoluene	18.57	63	156773	22.52	ug/L	#	68
44)	3-Nitroaniline	18.98	138	180302	19.18	ug/L		90
45)	Acenaphthene	19.06	153	553695	14.84	ug/L		99
46)	2,4-Dinitrophenol	19.31	184	37467m	4.81	ug/L		
47)	Dibenzofuran	19.52	168	879000	16.95	ug/L		99
48)	4-Nitrophenol	19.52	65	26620	3.36	ug/L	#	1
49)	2,4-Dinitrotoluene	19.63	165	242998	15.77	ug/L		100
50)	Diethylphthalate	20.26	149	729903	15.04	ug/L		98
51)	Fluorene	20.42	166	633884	15.88	ug/L		98
52)	4-Chlorophenyl-phenylether	20.46	204	306840	15.92	ug/L		98
53)	4-Nitroaniline	20.61	138	179945	21.48	ug/L		94
55)	4,6-Dinitro-2-methylphenol	20.67	198	87892	9.02	ug/L		96
56)	n-Nitrosodiphenylamine	20.79	169	471458	16.72	ug/L		100
57)	Azobenzene	20.86	77	776354	15.06	ug/L		97
59)	4-Bromophenyl-phenylether	21.71	248	169422	15.31	ug/L		95
60)	Hexachlorobenzene	21.88	284	187614	16.09	ug/L		99
61)	Pentachlorophenol	22.41	266	103403m	14.08	ug/L		
62)	Phenanthrene	22.88	178	884930	15.94	ug/L		100
63)	Anthracene	23.00	178	878572	14.97	ug/L		99
64)	Di-n-butylphthalate	24.36	149	1334253	15.82	ug/L		100
65)	Fluoranthene	25.85	202	930995	15.99	ug/L		99
68)	Pyrene	26.47	202	968251	16.94	ug/L		98
70)	Butylbenzylphthalate	28.56	149	607187	17.39	ug/L		98
71)	Benzo[a]anthracene	29.97	228	849930	16.91	ug/L		99
73)	Chrysene	30.08	228	769346	16.11	ug/L		99
74)	bis(2-Ethylhexyl)phthalate	30.14	149	840545	17.42	ug/L		99
76)	Di-n-octylphthalate	31.67	149	1422109	16.49	ug/L		99
77)	Benzo[b]fluoranthene	32.52	252	816556	15.61	ug/L		98
78)	Benzo[k]fluoranthene	32.58	252	826790	16.16	ug/L		98
79)	Benzo[a]pyrene	33.30	252	709177	14.79	ug/L		98
80)	Indeno[1,2,3-cd]pyrene	36.58	276	789279	15.39	ug/L		99
81)	Dibenz[a,h]anthracene	36.65	278	652208	17.23	ug/L		98
82)	Benzo[g,h,i]perylene	37.53	276	697655	15.36	ug/L		99

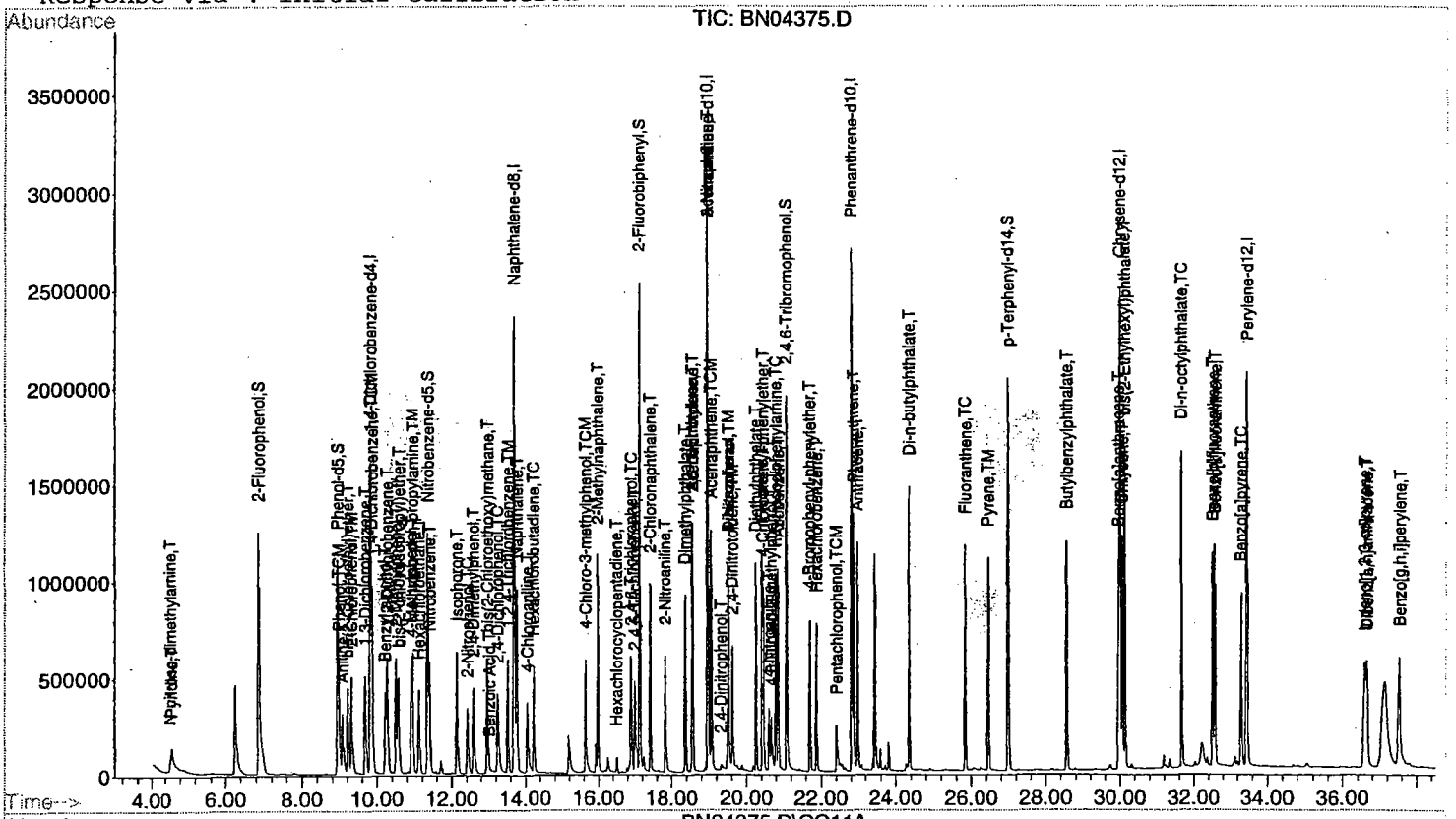
000071

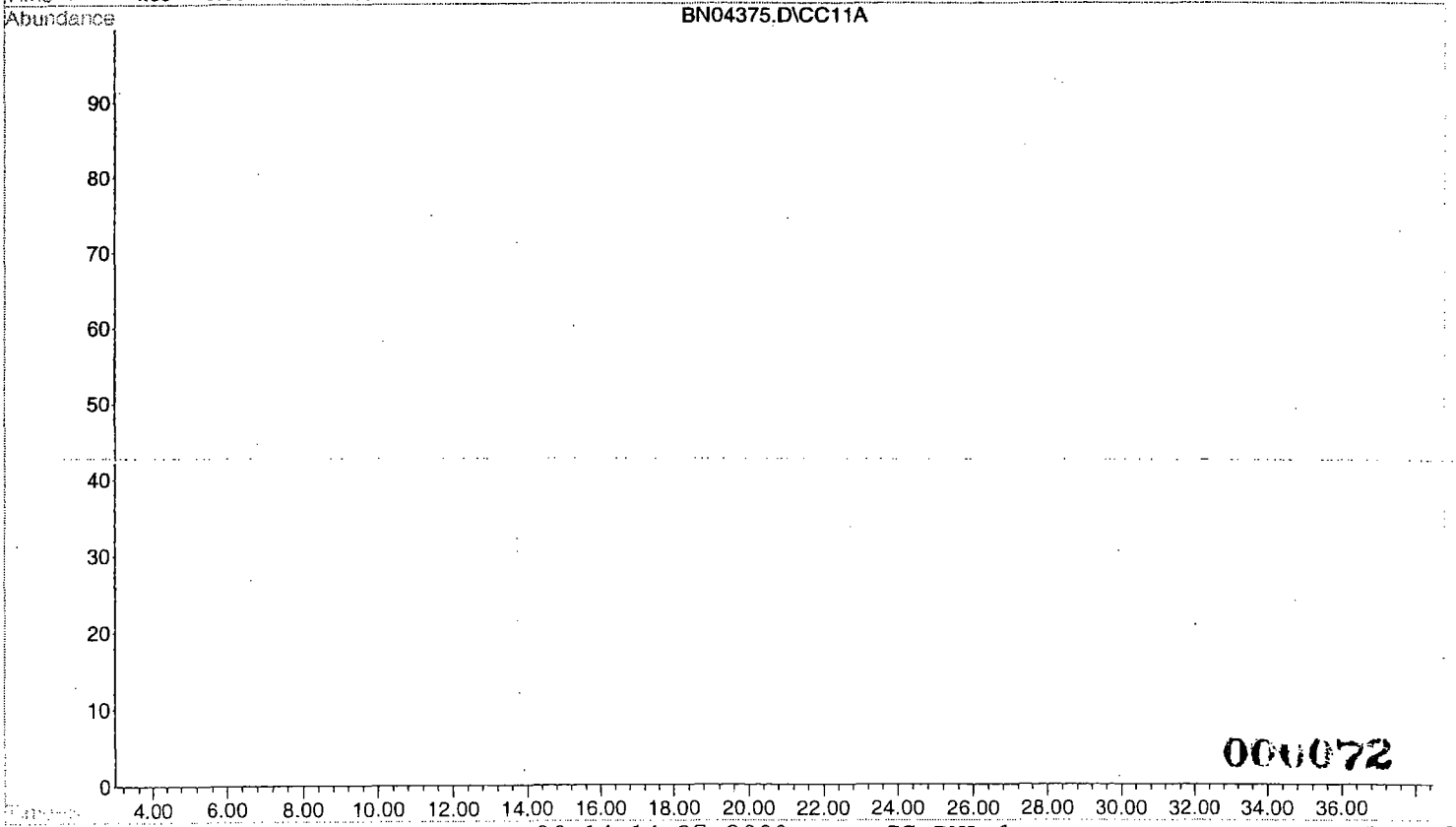
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000524\BN04375.D Vial: 21
Acq On : 25 May 2000 5:48 am Operator: Bhaskar
Sample : 5420.10MSD Inst : GC/MS Ins
Misc : CW1MW291MSD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 25 8:31 2000 Quant Results File: M62541.RES

Method : C:\HPCHEM\1\METHODS\M62541.M (RTE Integrator)
Title : BNA Calibration
Last Update : Wed May 24 10:41:26 2000
Response via : Initial Calibration





000072

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 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 <u>and</u> 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 NA
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 6/8/00

Laboratory Certification #13461

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

FORT MONMOUTH ENVIRONMENTAL TESTING LABORATORY

DIRECTORATE OF PUBLIC WORKS
PHONE: (732) 532-6224 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: UST Program

Bldg. 876

Field Sample Location	Laboratory Sample ID#	Matrix	Date and Time of Collection	Date Received
876-1	5369.01	Aqueous	22-Apr-00 10:10	04/24/00

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

ENCLOSURE:
CHAIN OF CUSTODY
RESULTS

5-8-00
Daniel Wright/Date
Laboratory Director

Table of Contents

CHAIN OF CUSTODY

METHOD SUMMARY

Method 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 Method 3510/8270
Gas Chromatographic Determination of Semi-volatiles in Water

Surrogates are added to 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 concentrated and internal standards are added. The sample is injected into a GC/MS system. Semi-volatiles are identified and quantitated.

CONFROMANCE/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: — ND
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

8. Surrogate Recoveries Meet Criteria — ND

   If not met, list those compounds and their recoveries, which fall outside the acceptable range:
   a. VOA Fraction _____
   b. B/N Fraction Nitrobenzene d5 + Terphenyl-d14 low
   c. Acid Fraction NA

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

9. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list those compounds and their recoveries, which fall outside the acceptable range) — Yes
   a. VOA Fraction _____
   b. B/N Fraction _____
   c. Acid Fraction NA

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:
Low surrogates in BN fraction. Reanalyzed with the same results

Laboratory Manager: _____ Date: 5-8-00

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 5369

Site: Bldg. 876

	Date	Hold Time
Date Sampled	04/22/00	NA
Receipt/Refrigeration	04/22,24/00*	NA
Extractions		
1. Base Neutral	04/26/00	14 days
Analyses		
1. Volatile Organics	04/26,27/00	14 days
2. Base Neutral	04/27/00	40 days

- Samples collected and refrigerated on 04/22/00, Laboratory received the sample on Monday 04/24/00.

VOLATILES ORGANIC

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

Definition of Qualifiers

MDL	: Method Detection Limit
J	: Compound identified below detection limit
B	: Compound in both sample and blank
D	: Results from dilution of sample
U	: Compound searched for but not detected
E	: Compound exceeds calibration limit

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

Data File	**VC003143.D**	Sample Name	**Vblk80**
Operator	**Skelton**	Field ID	**Vblk80**
Date Aquired	**26-Apr-00**	Multiplier	**1**

CAS#	Compound Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL	Qualifier
107028	Acrolein			not detected	50	1.85 ug/L	
107131	Acrylonitrile			not detected	50	2.78 ug/L	
75650	tert-Butyl alcohol			not detected	nle	8.52 ug/L	
1634044	Methyl-tert-Butyl ether			not detected	nle	0.16 ug/L	
108203	Di-isopropyl ether			not detected	nle	0.25 ug/L	
75718	Dichlorodifluoromethane			not detected	nle	1.68 ug/L	
74-87-3	Chloromethane			not detected	30	1.16 ug/L	
75-01-4	Vinyl Chloride			not detected	5	1.06 ug/L	
74-83-9	Bromomethane			not detected	10	1.10 ug/L	
75-00-3	Chloroethane			not detected	nle	1.01 ug/L	
75-69-4	Trichlorofluoromethane			not detected	nle	0.50 ug/L	
75-35-4	1,1-Dichloroethene			not detected	2	0.24 ug/L	
67-64-1	Acetone			not detected	700	1.36 ug/L	
75-15-0	Carbon Disulfide			not detected	nle	0.46 ug/L	
75-09-2	Methylene Chloride			not detected	2	0.24 ug/L	
156-60-5	trans-1,2-Dichloroethene			not detected	100	0.16 ug/L	
75-34-3	1,1-Dichloroethane			not detected	70	0.12 ug/L	
108-05-4	Vinyl Acetate			not detected	nle	0.78 ug/L	
78-93-3	2-Butanone			not detected	300	0.62 ug/L	
156594	cis-1,2-Dichloroethene			not detected	10	0.17 ug/L	
67-66-3	Chloroform			not detected	6	0.30 ug/L	
75-55-6	1,1,1-Trichloroethane			not detected	30	0.23 ug/L	
56-23-5	Carbon Tetrachloride			not detected	2	0.47 ug/L	
71-43-2	Benzene			not detected	1	0.23 ug/L	
107-06-2	1,2-Dichloroethane			not detected	2	0.18 ug/L	
79-01-6	Trichloroethene			not detected	1	0.23 ug/L	
78-87-5	1,2-Dichloropropane			not detected	1	0.40 ug/L	
75-27-4	Bromodichloromethane			not detected	1	0.55 ug/L	
110-75-8	2-Chloroethyl vinyl ether			not detected	nle	0.65 ug/L	
10061-01-5	cis-1,3-Dichloropropene			not detected	nle	0.69 ug/L	
108-10-1	4-Methyl-2-Pentanone			not detected	400	0.59 ug/L	
108-88-3	Toluene			not detected	1000	0.37 ug/L	
10061-02-6	trans-1,3-Dichloropropene			not detected	nle	0.87 ug/L	
79-00-5	1,1,2-Trichloroethane			not detected	3	0.48 ug/L	
127-18-4	Tetrachloroethene			not detected	1	0.32 ug/L	
591-78-6	2-Hexanone			not detected	nle	0.71 ug/L	
126-48-1	Dibromochloromethane			not detected	10	0.86 ug/L	
108-90-7	Chlorobenzene			not detected	4	0.39 ug/L	
100-41-4	Ethylbenzene			not detected	700	0.65 ug/L	
1330-20-7	m+p-Xylenes			not detected	nle	1.14 ug/L	
1330-20-7	o-Xylene			not detected	nle	0.62 ug/L	
100-42-5	Styrene			not detected	100	0.56 ug/L	
75-25-2	Bromoform			not detected	4	0.70 ug/L	
79-34-5	1,1,2,2-Tetrachloroethane			not detected	2	0.47 ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.55 ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.57 ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.64 ug/L	

*Higher of PQL's and Ground Water Quality Criteria as per N.J.A.C., 7:9-6 2-Sept 97

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

D:\HPCHEM\Custrpt\Volatile\624fy00.crt

5/3/00 11:16 AM

000012

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Vblk80**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Vblk80

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC003143.D

Level: (low/med) LOW Date Received: 4/24/00

% Moisture: not dec. Date Analyzed: 4/26/00

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.: 5369 Location: 876 SDG No.:

Lab File ID: VC002800.D BFB Injection Date: 4/5/00

Instrument ID: VoaInst#3 BFB Injection Time: 7:56

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	16.4
75	30.0 - 66.0% of mass 95	48.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	79.2
175	4.0 - 9.0% of mass 174	5.5 (6.9)1
176	93.0 - 101.0% of mass 174	76.3 (96.3)1
177	5.0 - 9.0% of mass 176	4.7 (6.1)2

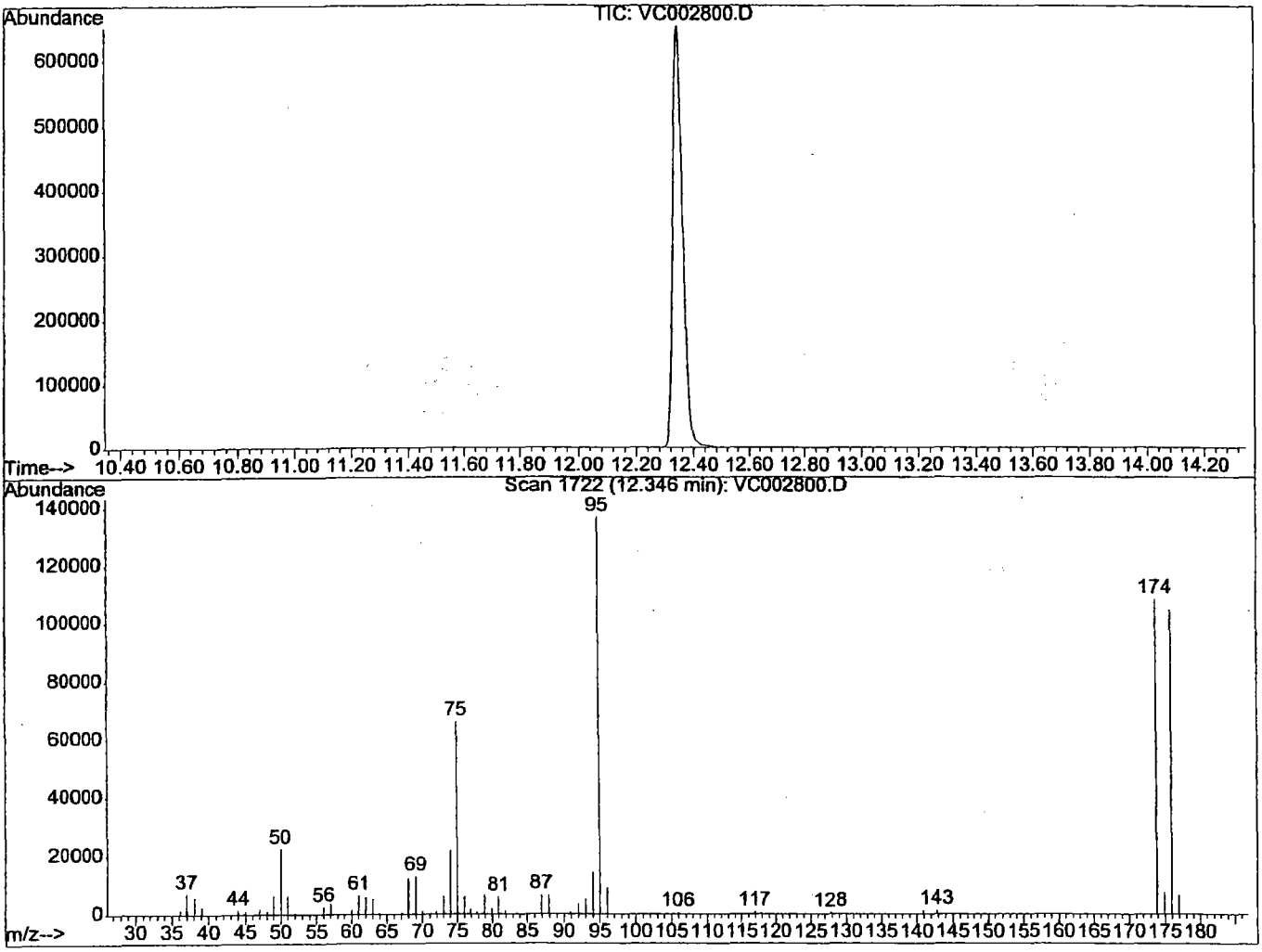
1-Value is % mass 174 2-Value is % mass 176

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	VSTD020	VSTD020	VC002801.D	4/5/00	8:29
02	VSTD005	VSTD005	VC002803.D	4/5/00	10:07
03	VSTD100	VSTD100	VC002804.D	4/5/00	11:07
04	VSTD050	VSTD050	VC002805.D	4/5/00	11:47
05	VSTD010	VSTD010	VC002806.D	4/5/00	12:27

BFB

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002800.D Vial: 1
Acq On : 5 Apr 2000 7:56 am Operator: Skelton
Sample : BFB Tune Inst : GC/MS I
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: LSCINT.P
Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 1722

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	22456	PASS
75	95	30	60	48.3	65976	PASS
95	95	100	100	100.0	136640	PASS
96	95	5	9	6.5	8859	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	79.2	108232	PASS
175	174	5	9	6.9	7470	PASS
176	174	95	101	96.3	104280	PASS
177	176	5	9	6.1	6397	PASS

VC002800.D M362423.M Wed May 03 11:25:45 2000

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID: VC003141.D BFB Injection Date: 4/26/00

Instrument ID: VoaInst#3 BFB Injection Time: 9:25

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	16.4
75	30.0 - 66.0% of mass 95	47.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	1.0 (1.1)1
174	50.0 - 120.0% of mass 95	87.5
175	4.0 - 9.0% of mass 174	6.7 (7.6)1
176	93.0 - 101.0% of mass 174	87.2 (99.7)1
177	5.0 - 9.0% of mass 176	5.0 (5.7)2

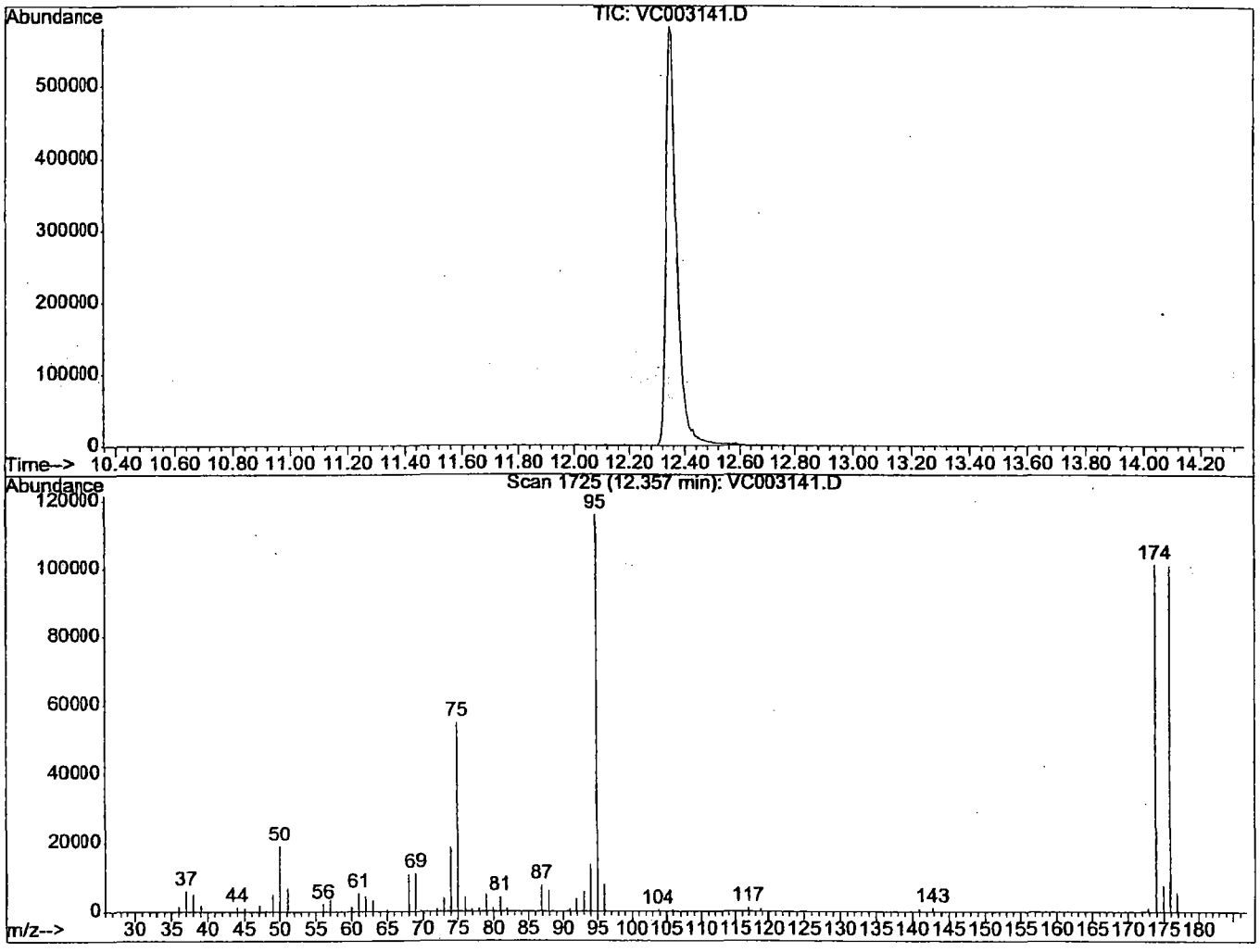
1-Value is % mass 174 2-Value is % mass 176

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	VSTD020	VSTD020	VC003142.D	4/26/00	9:58
02	VBLK80	VBLK80	VC003143.D	4/26/00	10:51
03	5369.01	5369.01	VC003169.D	4/27/00	4:36

BFB

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003141.D Vial: 1
Acq On : 26 Apr 2000 9:25 am Operator: Skeltor
Sample : BFB Tune Inst : GC/MS I
Misc : BFB Tune Multiplr: 1.00
MS Integration Params: LSCINT.P
Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP



Spectrum Information: Scan 1725

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	19000	PASS
75	95	30	60	47.3	54856	PASS
95	95	100	100	100.0	115936	PASS
96	95	5	9	6.8	7858	PASS
173	174	0.00	2	1.1	1103	PASS
174	95	50	100	87.5	101408	PASS
175	174	5	9	7.6	7736	PASS
176	174	95	101	99.7	101072	PASS
177	176	5	9	5.7	5766	PASS

VC003141.D M362423.M Wed May 03 11:20:01 2000

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID: VC003045.D BFB Injection Date: 4/21/00

Instrument ID: VoaInst#3 BFB Injection Time: 8:08

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	21.0
75	30.0 - 66.0% of mass 95	47.6
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	84.5
175	4.0 - 9.0% of mass 174	5.2 (6.2)1
176	93.0 - 101.0% of mass 174	81.8 (96.8)1
177	5.0 - 9.0% of mass 176	5.5 (6.8)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	VSTD020	VSTD020	VC003046.D	4/21/00	8:42
02	VBLK77	VBLK77	VC003047.D	4/21/00	9:36
03	5351.09MS	5351.09MS	VC003060.D	4/21/00	18:48
04	5351.09MSD	5351.09MSD	VC003061.D	4/21/00	19:29

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

Vblk77

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID: VC003047.D Lab Sample ID: Vblk77

Date Analyzed: 4/21/00 Time Analyzed: 9:36

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

Instrument ID: VoaInst#3

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

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	5351.09MS	5351.09MS	VC003060.D	18:48
02	5351.09MSD	5351.09MSD	VC003061.D	19:29

COMMENTS:

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

Vblk80

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID: VC003143.D Lab Sample ID: Vblk80

Date Analyzed: 4/26/00 Time Analyzed: 10:51

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

Instrument ID: VoaInst#3

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

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	5369.01	5369.01	VC003169.D	4:36

COMMENTS:

Response Factor Report GC/MS Ins

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration

Calibration Files
50 =VC002805.D 5 =VC002803.D 10 =VC002806.D
20 =VC002801.D 100 =VC002804.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	ISTD						
2)	t	Acrolein	0.515	0.454	0.461	0.393	0.531	0.471	11.66
3)	t	Acrylonitrile	1.002	0.669	0.654	0.810	0.991	0.825	20.34
4)	t	tert-Butyl alcohol	0.157	0.160	0.141	0.134	0.164	0.151	8.67
5)	t	Methyl-tert-Butyl eth	5.177	3.413	3.526	3.361	4.456	3.987	20.11
6)	t	Di-isopropyl ether	1.431	1.117	1.226	1.089	1.507	1.274	14.69
7)	T	Dichlorodifluorometha	2.371	2.224	2.167	2.028	2.372	2.232	6.52
8)	TP	Chloromethane	3.324	3.267	3.102	2.715	3.367	3.155	8.43
9)	TC	Vinyl Chloride	1.802	2.586	2.435	1.705	1.666	2.039	21.41
10)	T	Bromomethane	2.066	2.061	2.017	1.673	2.295	2.023	11.05
11)	T	Chloroethane	2.171	2.143	2.061	1.798	2.384	2.112	10.04
12)	T	Trichlorofluoromethan	4.451	4.346	4.229	3.798	5.122	4.389	10.92
13)	MC	1,1-Dichloroethene	3.689	3.461	3.470	3.027	4.073	3.544	10.74
14)	T	Acetone	0.528	0.763	0.669	0.536	0.619	0.623	15.72
15)	T	Carbon Disulfide	8.751	8.157	8.112	7.336	9.596	8.390	10.02
16)	T	Methylene Chloride	3.352	5.128	3.991	3.118	3.552	3.828	20.75
17)	T	trans-1,2-Dichloroeth	2.476	2.079	2.225	1.921	2.678	2.276	13.36
18)	TP	1,1-Dichloroethane	3.169	2.916	2.975	2.552	3.342	2.991	9.95
19)	T	Vinyl Acetate	2.893	2.223	2.402	2.163	3.244	2.585	18.06
20)	T	2-Butanone	0.561	0.502	0.520	0.457	0.621	0.532	11.69
21)	T	cis-1,2-Dichloroethen	2.419	2.142	2.229	1.948	2.688	2.285	12.32
22)	TC	Chloroform	2.955	2.921	2.895	2.473	3.231	2.895	9.39
23)	T	1,1,1-Trichloroethane	2.253	1.995	2.036	1.850	2.555	2.138	12.83
24)	T	Carbon Tetrachloride	1.931	1.621	1.674	1.541	2.184	1.790	14.77
25)	S	1,2-Dichloroethane-d4	1.932	1.956	1.921	1.902	1.913	1.925	1.06
26)	I	1,4-Difluorobenzene	ISTD						
27)	TM	Benzene	1.139	1.056	1.063	0.933	1.194	1.077	9.16
28)	T	1,2-Dichloroethane	0.316	0.305	0.301	0.266	0.337	0.305	8.41
29)	TM	Trichloroethene	0.296	0.261	0.270	0.240	0.319	0.277	11.12
30)	TC	1,2-Dichloropropane	0.280	0.250	0.256	0.221	0.303	0.262	11.93
31)	T	Bromodichloromethane	0.309	0.260	0.271	0.240	0.343	0.285	14.45
32)	T	2-Chloroethyl vinyl e	0.096	0.091	0.090	0.079	0.103	0.092	9.61
33)	T	cis-1,3-Dichloroprope	0.426	0.326	0.352	0.317	0.471	0.378	17.79
34)	T	4-Methyl-2-Pentanone	0.077	0.059	0.060	0.060	0.084	0.068	17.73
35)	S	Toluene-d8	1.238	1.191	1.204	1.198	1.238	1.214	1.87
36)	TCM	Toluene	1.226	1.106	1.129	0.986	1.273	1.144	9.78
37)	I	Chlorobenzene-d5	ISTD						
38)	T	trans-1,3-Dichloropro	1.463	1.138	1.208	1.106	1.577	1.298	16.15
39)	T	1,1,2-Trichloroethane	0.963	0.882	0.874	0.785	1.002	0.901	9.36
40)	T	Tetrachloroethene	1.054	0.965	0.982	0.862	1.107	0.994	9.39
41)	T	2-Hexanone	0.401	0.331	0.319	0.314	0.445	0.362	16.05

(#) = Out of Range

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration

Calibration Files
50 =VC002805.D 5 =VC002803.D 10 =VC002806.D
20 =VC002801.D 100 =VC002804.D

		Compound	50	5	10	20	100	Avg	%RSD
42)	T	Dibromochloromethane	0.811	0.656	0.666	0.634	0.900	0.733	15.88
43)	TMP	Chlorobenzene	2.962	2.880	2.853	2.495	3.078	2.853	7.66
44)	TC	Ethylbenzene	5.068	4.724	4.709	4.236	5.192	4.786	7.80
45)	T	m+p-Xylenes	1.954	1.734	1.802	1.611	2.227	1.866	12.70
46)	T	o-Xylene	3.914	3.419	3.444	3.169	4.087	3.607	10.55
47)	T	Styrene	3.235	2.613	2.703	2.519	3.392	2.893	13.61
48)	TP	Bromoform	0.497	0.375	0.370	0.374	0.556	0.434	19.97
49)	S	Bromofluorobenzene	1.628	1.491	1.477	1.542	1.565	1.541	3.95
50)	TP	1,1,2,2-Tetrachloroet	1.205	1.101	1.037	0.968	1.236	1.110	10.11
51)	T	1,3-Dichlorobenzene	2.140	1.798	1.896	1.796	2.325	1.991	11.73
52)	T	1,4-Dichlorobenzene	2.161	1.848	1.933	1.818	2.351	2.022	11.26
53)	T	1,2-Dichlorobenzene	2.046	1.813	1.840	1.695	2.272	1.933	11.76

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002801.D Vial: 1
Acq On : 5 Apr 2000 8:29 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:09 2000 Quant Results File: M362423.RES

Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Apr 05 13:08:39 2000
Response via : Initial Calibration
DataAcq Meth : M362422

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.70	128	387933	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.42	114	2542277	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	649741	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.31	65	737995	29.65	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 98.83%				
35) Toluene-d8	23.42	98	3046356	29.61	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 98.70%				
49) Bromofluorobenzene	30.25	95	1001866	30.02	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 100.07%				
Target Compounds							Qvalue
2) Acrolein	8.62	56	1016594	166.96	ug/L		99
3) Acrylonitrile	11.68	53	2095649	196.33	ug/L		97
4) tert-Butyl alcohol	9.71	59	346268	176.86	ug/L		96
5) Methyl-tert-Butyl ether	11.86	73	869197	16.86	ug/L	#	92
6) Di-isopropyl ether	13.56	87	281727	17.10	ug/L		89
7) Dichlorodifluoromethane	4.15	85	524537	18.17	ug/L		99
8) Chloromethane	4.76	50	702124	17.21	ug/L		98
9) Vinyl Chloride	5.02	62	475830m	18.05	ug/L		
10) Bromomethane	6.22	94	432727	16.55	ug/L		96
11) Chloroethane	6.45	64	464998	17.03	ug/L		99
12) Trichlorofluoromethane	7.22	101	982287	17.31	ug/L		99
13) 1,1-Dichloroethene	9.29	61	782931	17.08	ug/L		96
14) Acetone	8.87	43	138568	17.21	ug/L		73
15) Carbon Disulfide	11.11	76	1897220	17.49	ug/L		100
16) Methylene Chloride	11.18	84	806404	16.29	ug/L		95
17) trans-1,2-Dichloroethene	12.30	61	496689	16.88	ug/L		95
18) 1,1-Dichloroethane	13.79	63	659915	17.06	ug/L		99
19) Vinyl Acetate	13.88	43	559284	16.73	ug/L		99
20) 2-Butanone	15.24	43	118123	17.17	ug/L		100
21) cis-1,2-Dichloroethene	15.75	61	503719	17.05	ug/L		90
22) Chloroform	16.24	83	639571	17.08	ug/L		100
23) 1,1,1-Trichloroethane	17.41	97	478462	17.31	ug/L		94
24) Carbon Tetrachloride	18.13	117	398423	17.21	ug/L		99
27) Benzene	18.61	78	1581328	17.32	ug/L		100
28) 1,2-Dichloroethane	18.57	62	451564	17.47	ug/L		99
29) Trichloroethene	20.30	130	406446	17.30	ug/L		96
30) 1,2-Dichloropropane	20.76	63	374580	16.86	ug/L		97
31) Bromodichloromethane	21.37	83	407128	16.88	ug/L		94
32) 2-Chloroethyl vinyl ether	18.59	63	133615	17.19	ug/L		79

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002801.D Vial: 1
Acq On : 5 Apr 2000 8:29 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:09 2000 Quant Results File: M362423.RES

Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Wed Apr 05 13:08:39 2000
Response via : Initial Calibration
DataAcq Meth : M362422

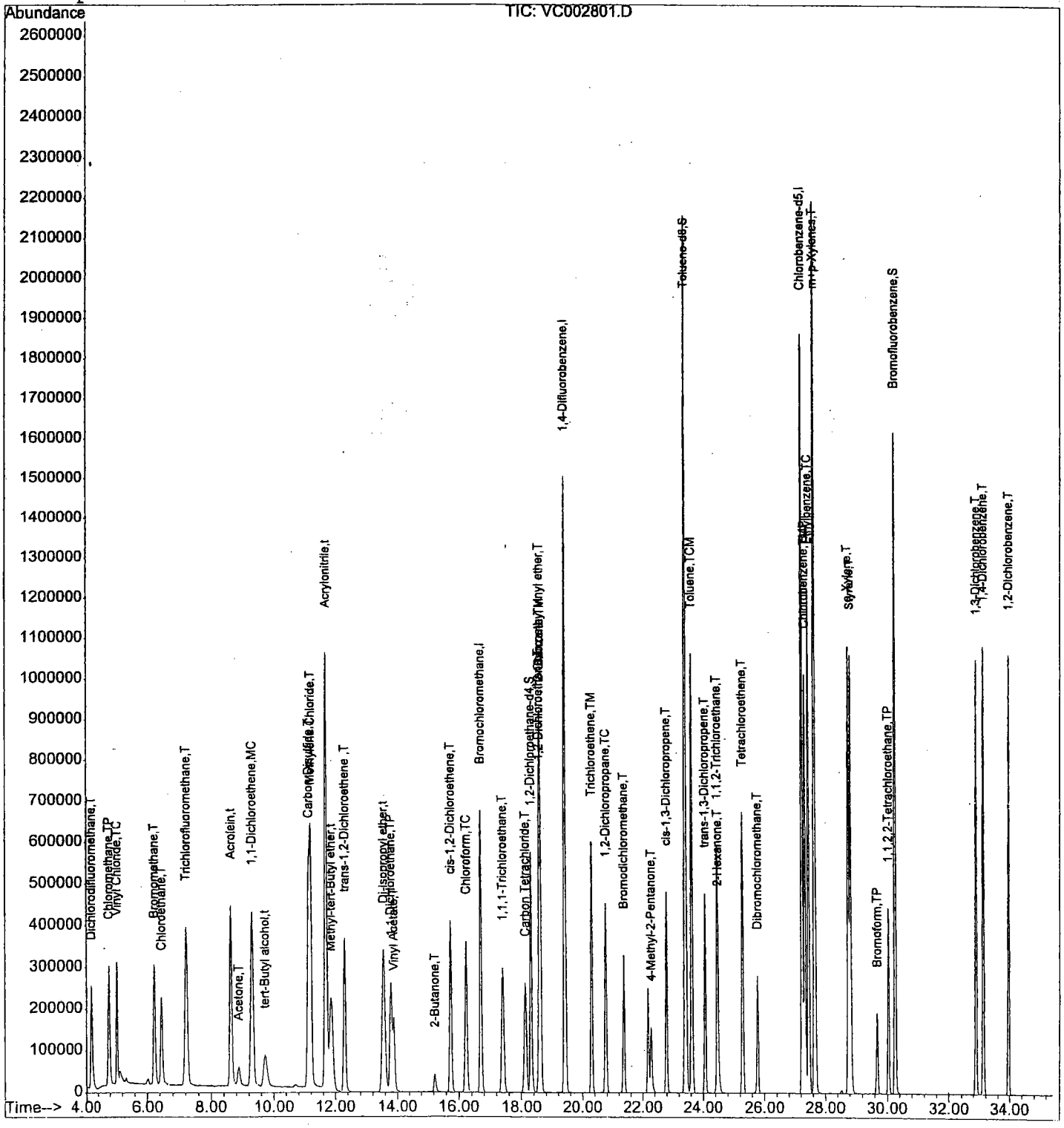
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	cis-1,3-Dichloropropene	22.79	75	536871	16.75	ug/L	98
34)	4-Methyl-2-Pentanone	22.28	58	101671	17.63	ug/L	93
36)	Toluene	23.62	91	1670416	17.23	ug/L	98
38)	trans-1,3-Dichloropropene	24.06	75	479046	17.04	ug/L	96
39)	1,1,2-Trichloroethane	24.46	97	339952	17.42	ug/L	98
40)	Tetrachloroethene	25.29	166	373248	17.34	ug/L	97
41)	2-Hexanone	24.49	43	136205	17.37	ug/L	93
42)	Dibromochloromethane	25.78	129	274505	17.28	ug/L	99
43)	Chlorobenzene	27.34	112	1080695	17.49	ug/L	97
44)	Ethylbenzene	27.46	91	1834821	17.70	ug/L	97
45)	m+p-Xylenes	27.66	106	1395777	34.54	ug/L	94
46)	o-Xylene	28.75	91	1372644	17.57	ug/L	95
47)	Styrene	28.83	104	1091345	17.42	ug/L	99
48)	Bromoform	29.68	173	162007	17.22	ug/L	98
50)	1,1,2,2-Tetrachloroethane	30.04	83	419495	17.46	ug/L	98
51)	1,3-Dichlorobenzene	32.89	146	777780	18.04	ug/L	95
52)	1,4-Dichlorobenzene	33.12	146	787458	17.98	ug/L	97
53)	1,2-Dichlorobenzene	33.97	146	734375	17.54	ug/L	98

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002801.D Vial: 1
Acq On : 5 Apr 2000 8:29 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:09 2000 Quant Results File: M362423.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



000027

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002803.D Vial: 2
Acq On : 5 Apr 2000 10:07 am Operator: Skelton
Sample : Vstd005 Inst : GC/MS Ins
Misc : Vstd005 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:08 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	363255	30.00	ug/L	0.01
26) 1,4-Difluorobenzene	19.42	114	2425864	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	619552	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	710386	34.58	ug/L	0.01
Spiked Amount 30.000	Range 76 - 117		Recovery = 115.27%			
35) Toluene-d8	23.42	98	2888439	31.96	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 106.53%			
49) Bromofluorobenzene	30.26	95	923455	30.60	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 102.00%			
Target Compounds						Qvalue
2) Acrolein	8.63	56	274650	237.93	ug/L	98
3) Acrylonitrile	11.69	53	405317	110.22	ug/L	98
4) tert-Butyl alcohol	9.78	59	97101m	141.07	ug/L	
5) Methyl-tert-Butyl ether	11.87	73	206651	5.48	ug/L	98
6) Di-isopropyl ether	13.57	87	67619	4.17	ug/L	86
7) Dichlorodifluoromethane	4.16	85	134620	4.17	ug/L	99
8) Chloromethane	4.76	50	197819	10.08	ug/L	100
9) Vinyl Chloride	5.03	62	156559m	9.33	ug/L	
10) Bromomethane	6.22	94	124753	8.93	ug/L	86
11) Chloroethane	6.46	64	129759	8.71	ug/L	97
12) Trichlorofluoromethane	7.22	101	263107	7.28	ug/L	100
13) 1,1-Dichloroethene	9.30	61	209524	7.59	ug/L	95
14) Acetone	8.88	43	46181	16.43	ug/L	73
15) Carbon Disulfide	11.12	76	493816	8.17	ug/L	88
16) Methylene Chloride	11.19	84	310441	7.12	ug/L	96
17) trans-1,2-Dichloroethene	12.29	61	125858	4.88	ug/L	94
18) 1,1-Dichloroethane	13.79	63	176547m	5.26	ug/L	
19) Vinyl Acetate	13.88	43	134558	6.36	ug/L	98
20) 2-Butanone	15.25	43	30374m	8.33	ug/L	
21) cis-1,2-Dichloroethene	15.75	61	129692	4.97	ug/L	87
22) Chloroform	16.23	83	176815	5.02	ug/L	98
23) 1,1,1-Trichloroethane	17.41	97	120793	3.79	ug/L	92
24) Carbon Tetrachloride	18.13	117	98120	3.71	ug/L	96
27) Benzene	18.61	78	427127	5.60	ug/L	96
28) 1,2-Dichloroethane	18.58	62	123340	6.04	ug/L	97
29) Trichloroethene	20.30	130	105539	4.27	ug/L	92
30) 1,2-Dichloropropane	20.77	63	100878	5.75	ug/L	99
31) Bromodichloromethane	21.37	83	105041	4.77	ug/L	99
32) 2-Chloroethyl vinyl ether	18.58	63	36710	6.43	ug/L	93

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

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002803.D Vial: 2
Acq On : 5 Apr 2000 10:07 am Operator: Skelton
Sample : Vstd005 Inst : GC/MS Ins
Misc : Vstd005 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:08 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

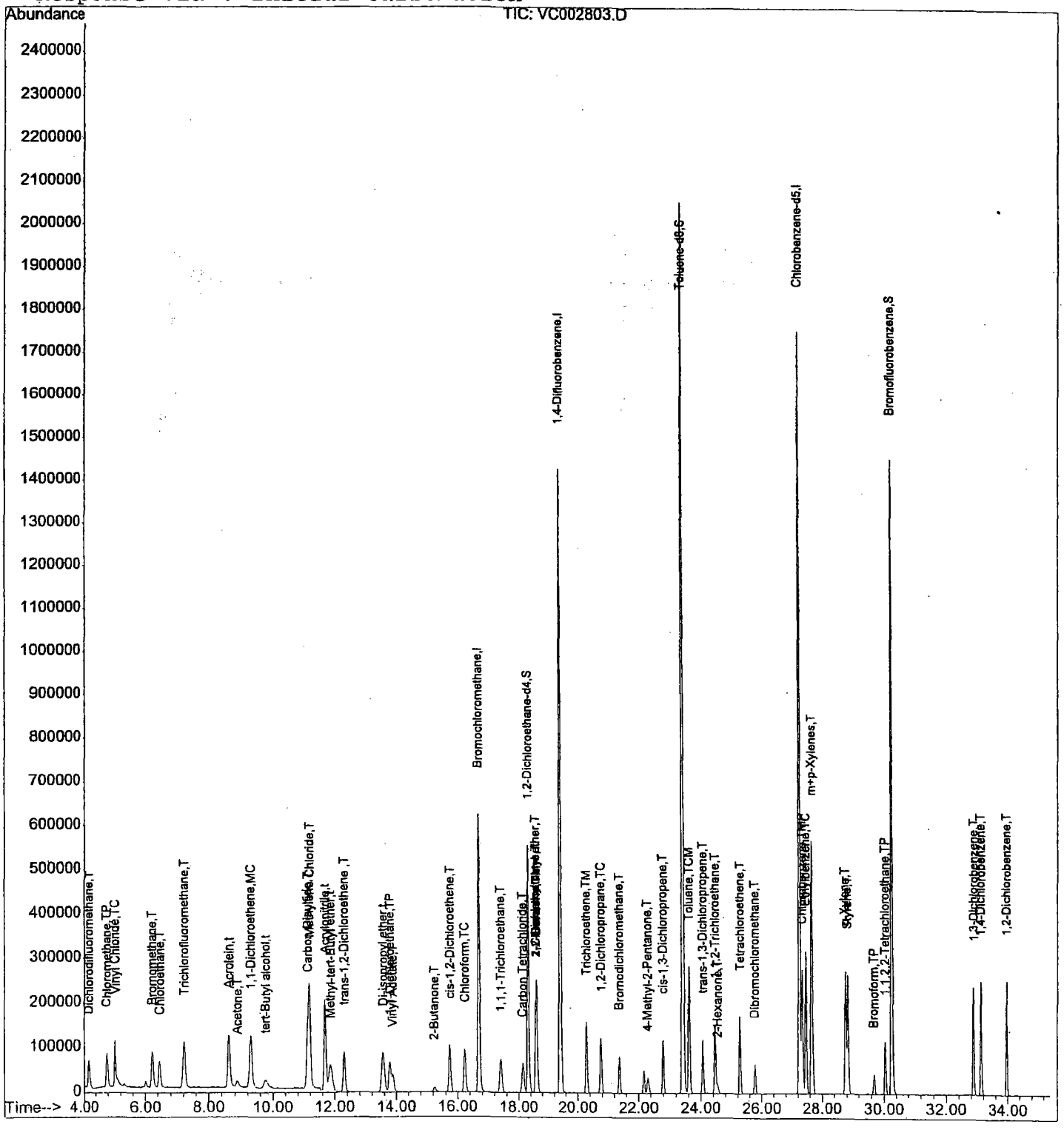
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
33) cis-1,3-Dichloropropene	22.79	75	131628	4.81 ug/L	96
34) 4-Methyl-2-Pentanone	22.31	58	23739m	8.06 ug/L	
36) Toluene	23.63	91	447359	5.12 ug/L	95
38) trans-1,3-Dichloropropene	24.06	75	117474	5.35 ug/L	94
39) 1,1,2-Trichloroethane	24.47	97	91090	6.58 ug/L	99
40) Tetrachloroethene	25.28	166	99648	4.04 ug/L	97
41) 2-Hexanone	24.54	43	34170m	9.34 ug/L	
42) Dibromochloromethane	25.78	129	67761	4.97 ug/L	94
43) Chlorobenzene	27.34	112	297404	4.92 ug/L	96
44) Ethylbenzene	27.46	91	487767	5.06 ug/L	94
45) m+p-Xylenes	27.66	106	358171	9.37 ug/L	96
46) o-Xylene	28.75	91	353075	4.86 ug/L	95
47) Styrene	28.83	104	269793	4.50 ug/L	96
48) Bromoform	29.68	173	38699	6.21 ug/L	95
50) 1,1,2,2-Tetrachloroethane	30.03	83	113699	8.59 ug/L	93
51) 1,3-Dichlorobenzene	32.89	146	185613	4.42 ug/L	93
52) 1,4-Dichlorobenzene	33.12	146	190861	4.89 ug/L	92
53) 1,2-Dichlorobenzene	33.97	146	187207	5.05 ug/L	98

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002803.D Vial: 2
Acq On : 5 Apr 2000 10:07 am Operator: Skelton
Sample : Vstd005 Inst : GC/MS Ins
Misc : Vstd005 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:08 2000 Quant Results File: M362422.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



000030

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002804.D Vial: 1
Acq On : 5 Apr 2000 11:07 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 11:42 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	377785	30.00	ug/L	0.01
26) 1,4-Difluorobenzene	19.41	114	2636040	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	710729	30.00	ug/L	0.01
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	722797	33.83	ug/L	0.02
Spiked Amount 30.000	Range 76 - 117		Recovery = 112.77%			
35) Toluene-d8	23.42	98	3263652	33.23	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 110.77%#			
49) Bromofluorobenzene	30.26	95	1112608	32.14	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 107.13%			
Target Compounds						Qvalue
2) Acrolein	8.62	56	6691884	5574.16	ug/L	100
3) Acrylonitrile	11.69	53	12482739	3263.98	ug/L	100
4) tert-Butyl alcohol	9.77	59	2067835	2888.55	ug/L #	94
5) Methyl-tert-Butyl ether	11.86	73	5611539	143.07	ug/L #	93
6) Di-isopropyl ether	13.54	87	1898328	112.51	ug/L	84
7) Dichlorodifluoromethane	4.15	85	2986471	88.93	ug/L	99
8) Chloromethane	4.76	50	4240378	207.74	ug/L	99
9) Vinyl Chloride	5.02	62	2098546	120.21	ug/L	99
10) Bromomethane	6.21	94	2890644	199.05	ug/L	98
11) Chloroethane	6.44	64	3002540	193.72	ug/L	100
12) Trichlorofluoromethane	7.21	101	6450537	171.71	ug/L	97
13) 1,1-Dichloroethene	9.29	61	5128532	178.69	ug/L	96
14) Acetone	8.87	43	778914	266.41	ug/L	72
15) Carbon Disulfide	11.11	76	12084276	192.35	ug/L	96
16) Methylene Chloride	11.18	84	4472473	98.62	ug/L	94
17) trans-1,2-Dichloroethene	12.29	61	3372740	125.73	ug/L	96
18) 1,1-Dichloroethane	13.79	63	4208556	120.49	ug/L	97
19) Vinyl Acetate	13.88	43	4085107	185.74	ug/L	100
20) 2-Butanone	15.23	43	781909	206.24	ug/L	99
21) cis-1,2-Dichloroethene	15.75	61	3384400	124.79	ug/L	93
22) Chloroform	16.23	83	4068926	111.12	ug/L	99
23) 1,1,1-Trichloroethane	17.41	97	3217861	97.16	ug/L	91
24) Carbon Tetrachloride	18.14	117	2750029	99.88	ug/L	100
27) Benzene	18.61	78	10491311	126.69	ug/L	98
28) 1,2-Dichloroethane	18.58	62	2957513	133.20	ug/L	98
29) Trichloroethene	20.30	130	2801414	104.25	ug/L	94
30) 1,2-Dichloropropane	20.76	63	2664966	139.87	ug/L	99
31) Bromodichloromethane	21.37	83	3015204	126.12	ug/L	98
32) 2-Chloroethyl vinyl ether	18.58	63	903237	145.70	ug/L	87

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002804.D Vial: 1
Acq On : 5 Apr 2000 11:07 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 11:42 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

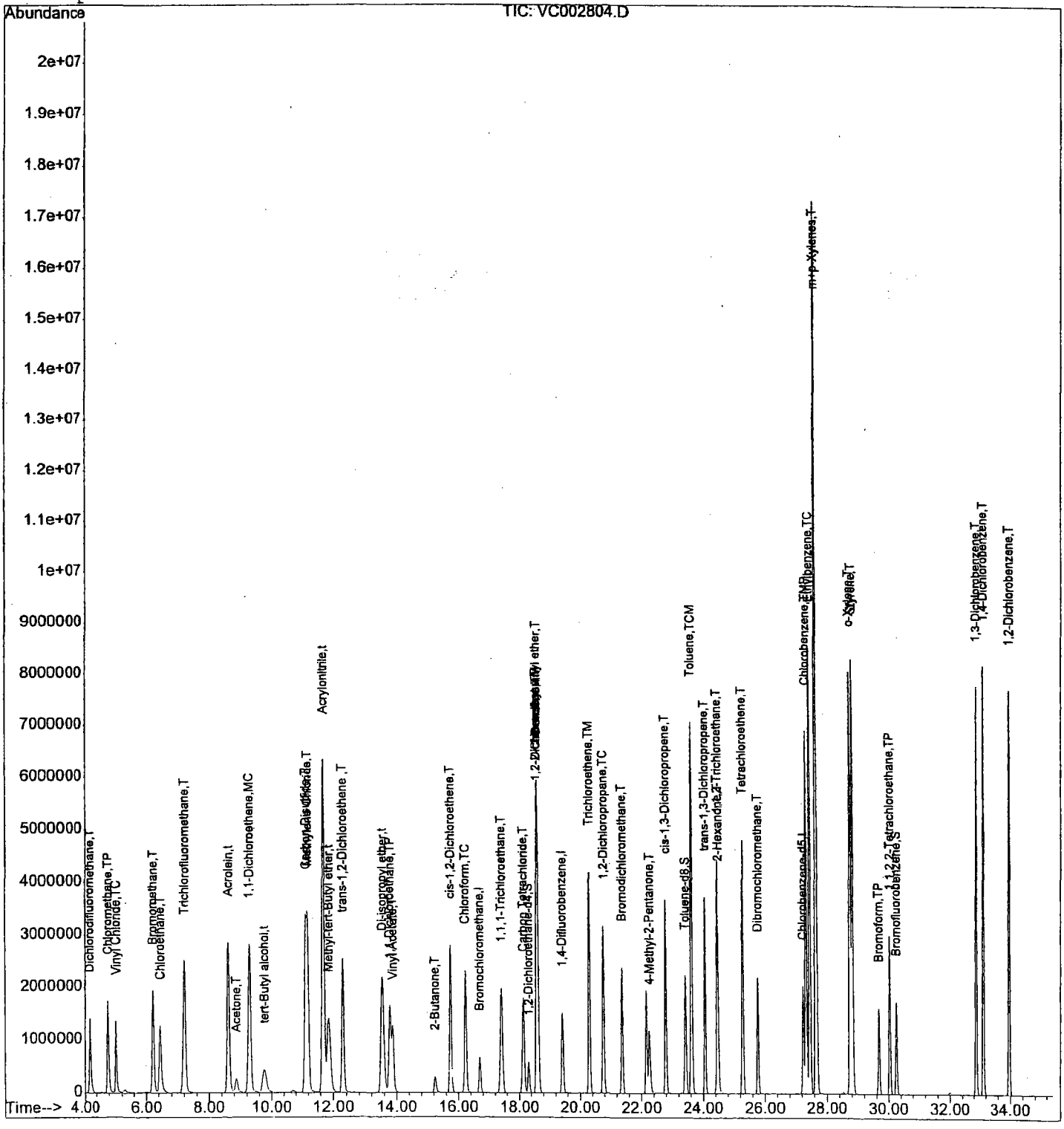
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33) cis-1,3-Dichloropropene	22.79	75	4136191	139.00	ug/L	95
34) 4-Methyl-2-Pentanone	22.27	58	741863	231.70	ug/L	88
36) Toluene	23.62	91	11181471	117.74	ug/L	100
38) trans-1,3-Dichloropropene	24.06	75	3736355	148.33	ug/L	97
39) 1,1,2-Trichloroethane	24.47	97	2372720	149.30	ug/L	98
40) Tetrachloroethene	25.29	166	2621826	92.70	ug/L	98
41) 2-Hexanone	24.49	43	1054560	251.18	ug/L	92
42) Dibromochloromethane	25.77	129	2132627	136.31	ug/L	97
43) Chlorobenzene	27.34	112	7291122	105.13	ug/L	99
44) Ethylbenzene	27.46	91	12301270	111.25	ug/L	100
45) m+p-Xylenes	27.66	106	10551787	240.55	ug/L	93
46) o-Xylene	28.75	91	9682786	116.28	ug/L	99
47) Styrene	28.83	104	8035439	116.72	ug/L	94
48) Bromoform	29.68	173	1316593	184.20	ug/L	98
50) 1,1,2,2-Tetrachloroethane	30.04	83	2929090	193.01	ug/L	99
51) 1,3-Dichlorobenzene	32.88	146	5508178	114.25	ug/L	95
52) 1,4-Dichlorobenzene	33.12	146	5570507	124.50	ug/L	97
53) 1,2-Dichlorobenzene	33.97	146	5381754	126.50	ug/L	97

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002804.D Vial: 1
Acq On : 5 Apr 2000 11:07 am Operator: Skelton
Sample : Vstd100 Inst : GC/MS Ins
Misc : Vstd100 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 11:42 2000 Quant Results File: M362422.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002805.D Vial: 2
Acq On : 5 Apr 2000 11:47 am Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:22 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	366668	30.00	ug/L	0.01
26) 1,4-Difluorobenzene	19.42	114	2529126	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.24	119	676548	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	708477	34.17	ug/L	0.01
Spiked Amount 30.000	Range 76 - 117		Recovery =	113.90%		
35) Toluene-d8	23.43	98	3132311	33.25	ug/L	0.01
Spiked Amount 30.000	Range 88 - 110		Recovery =	110.83%#		
49) Bromofluorobenzene	30.26	95	1101573	33.42	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery =	111.40%		
Target Compounds						Qvalue
2) Acrolein	8.62	56	3147147	2700.97	ug/L	99
3) Acrylonitrile	11.69	53	6125472	1650.24	ug/L	99
4) tert-Butyl alcohol	9.73	59	961272	1383.51	ug/L #	91
5) Methyl-tert-Butyl ether	11.84	73	3163857	83.11	ug/L	95
6) Di-isopropyl ether	13.53	87	874448	53.40	ug/L	87
7) Dichlorodifluoromethane	4.15	85	1449239	44.46	ug/L	99
8) Chloromethane	4.75	50	2031608	102.55	ug/L	99
9) Vinyl Chloride	5.02	62	1101376	65.00	ug/L	99
10) Bromomethane	6.22	94	1262812	89.59	ug/L	98
11) Chloroethane	6.45	64	1326848	88.20	ug/L	99
12) Trichlorofluoromethane	7.22	101	2720052	74.60	ug/L	96
13) 1,1-Dichloroethene	9.29	61	2254379	80.93	ug/L	97
14) Acetone	8.87	43	322577	113.68	ug/L #	71
15) Carbon Disulfide	11.11	76	5347680	87.70	ug/L	96
16) Methylene Chloride	11.18	84	2048168	46.53	ug/L	97
17) trans-1,2-Dichloroethene	12.30	61	1512935	58.11	ug/L	98
18) 1,1-Dichloroethane	13.79	63	1936863	57.13	ug/L	99
19) Vinyl Acetate	13.88	43	1767653	82.81	ug/L	100
20) 2-Butanone	15.24	43	342883	93.18	ug/L	96
21) cis-1,2-Dichloroethene	15.74	61	1477983	56.15	ug/L	90
22) Chloroform	16.23	83	1806112	50.82	ug/L	99
23) 1,1,1-Trichloroethane	17.41	97	1377031	42.84	ug/L	91
24) Carbon Tetrachloride	18.13	117	1180067	44.16	ug/L	99
27) Benzene	18.61	78	4803142	60.45	ug/L	99
28) 1,2-Dichloroethane	18.58	62	1334045	62.62	ug/L	100
29) Trichloroethene	20.30	130	1248434	48.42	ug/L	93
30) 1,2-Dichloropropane	20.76	63	1182286	64.68	ug/L	98
31) Bromodichloromethane	21.37	83	1301062	56.72	ug/L	96
32) 2-Chloroethyl vinyl ether	18.58	63	404769	68.05	ug/L	86

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

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002805.D Vial: 2
Acq On : 5 Apr 2000 11:47 am Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:22 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

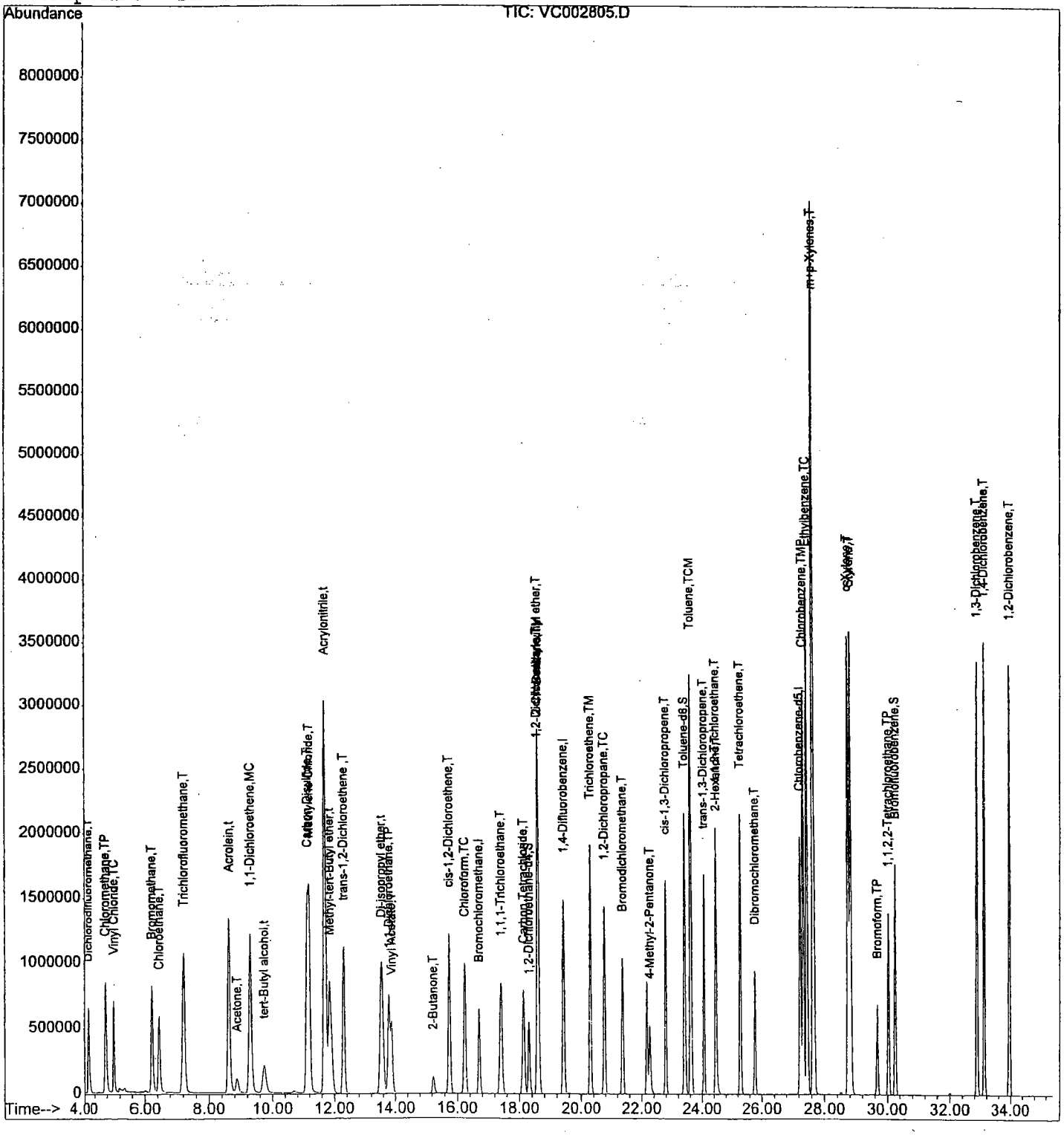
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	cis-1,3-Dichloropropene	22.79	75	1796315	62.92	ug/L	96
34)	4-Methyl-2-Pentanone	22.27	58	326669	106.34	ug/L	89
36)	Toluene	23.62	91	5168405	56.72	ug/L	97
38)	trans-1,3-Dichloropropene	24.06	75	1649838	68.80	ug/L	97
39)	1,1,2-Trichloroethane	24.46	97	1085477	71.76	ug/L	100
40)	Tetrachloroethene	25.29	166	1188700	44.15	ug/L	99
41)	2-Hexanone	24.48	43	451783	113.04	ug/L	92
42)	Dibromochloromethane	25.77	129	914438	61.40	ug/L	99
43)	Chlorobenzene	27.34	112	3339806	50.59	ug/L	99
44)	Ethylbenzene	27.46	91	5714588	54.29	ug/L	97
45)	m+p-Xylenes	27.66	106	4407181	105.55	ug/L	95
46)	o-Xylene	28.75	91	4413510	55.68	ug/L	97
47)	Styrene	28.83	104	3648132	55.67	ug/L	95
48)	Bromoform	29.68	173	560828	82.43	ug/L	99
50)	1,1,2,2-Tetrachloroethane	30.04	83	1358465	94.04	ug/L	99
51)	1,3-Dichlorobenzene	32.89	146	2412571	52.57	ug/L	95
52)	1,4-Dichlorobenzene	33.12	146	2436568	57.21	ug/L	97
53)	1,2-Dichlorobenzene	33.96	146	2307063	56.97	ug/L	96

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002805.D Vial: 2
Acq On : 5 Apr 2000 11:47 am Operator: Skelton
Sample : Vstd050 Inst : GC/MS Ins
Misc : Vstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 12:22 2000 Quant Results File: M362422.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002806.D Vial: 2
Acq On : 5 Apr 2000 12:27 pm Operator: Skelton
Sample : Vstd010 Inst : GC/MS Ins
Misc : Vstd010 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:03 2000 Quant Results File: M362422.RES

Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	357939	30.00	ug/L	0.02
26) 1,4-Difluorobenzene	19.42	114	2401861	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.24	119	623649	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	687614	33.97	ug/L	0.01
Spiked Amount 30.000	Range 76 - 117		Recovery = 113.23%			
35) Toluene-d8	23.42	98	2892215	32.32	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 107.73%			
49) Bromofluorobenzene	30.26	95	921309	30.33	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 101.10%			
Target Compounds						Qvalue
2) Acrolein	8.62	56	550347	483.84	ug/L	100
3) Acrylonitrile	11.69	53	780305	215.35	ug/L	98
4) tert-Butyl alcohol	9.74	59	168529	248.47	ug/L #	91
5) Methyl-tert-Butyl ether	11.87	73	420699	11.32	ug/L #	93
6) Di-isopropyl ether	13.55	87	146316	9.15	ug/L	89
7) Dichlorodifluoromethane	4.15	85	258496	8.12	ug/L	99
8) Chloromethane	4.76	50	370120	19.14	ug/L	98
9) Vinyl Chloride	5.02	62	290475	17.56	ug/L	100
10) Bromomethane	6.22	94	240672	17.49	ug/L	97
11) Chloroethane	6.45	64	245955	16.75	ug/L	99
12) Trichlorofluoromethane	7.22	101	504550	14.18	ug/L	99
13) 1,1-Dichloroethene	9.29	61	413959	15.22	ug/L	96
14) Acetone	8.89	43	79788	28.80	ug/L #	67
15) Carbon Disulfide	11.11	76	967876	16.26	ug/L	99
16) Methylene Chloride	11.19	84	476195	11.08	ug/L	97
17) trans-1,2-Dichloroethene	12.30	61	265417	10.44	ug/L	97
18) 1,1-Dichloroethane	13.79	63	355008	10.73	ug/L	98
19) Vinyl Acetate	13.87	43	286607	13.75	ug/L	98
20) 2-Butanone	15.24	43	62013	17.26	ug/L	100
21) cis-1,2-Dichloroethene	15.75	61	265918	10.35	ug/L	92
22) Chloroform	16.24	83	345369	9.95	ug/L	97
23) 1,1,1-Trichloroethane	17.41	97	242972	7.74	ug/L	90
24) Carbon Tetrachloride	18.14	117	199672	7.65	ug/L	99
27) Benzene	18.61	78	851210	11.28	ug/L	100
28) 1,2-Dichloroethane	18.58	62	240814	11.90	ug/L	98
29) Trichloroethene	20.30	130	216448	8.84	ug/L	95
30) 1,2-Dichloropropane	20.76	63	205320	11.83	ug/L	98
31) Bromodichloromethane	21.37	83	217170	9.97	ug/L	99
32) 2-Chloroethyl vinyl ether	18.58	63	72118	12.77	ug/L	85

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

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002806.D Vial: 2
Acq On : 5 Apr 2000 12:27 pm Operator: Skelton
Sample : Vstd010 Inst : GC/MS Ins
Misc : Vstd010 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:03 2000 Quant Results File: M362422.RES

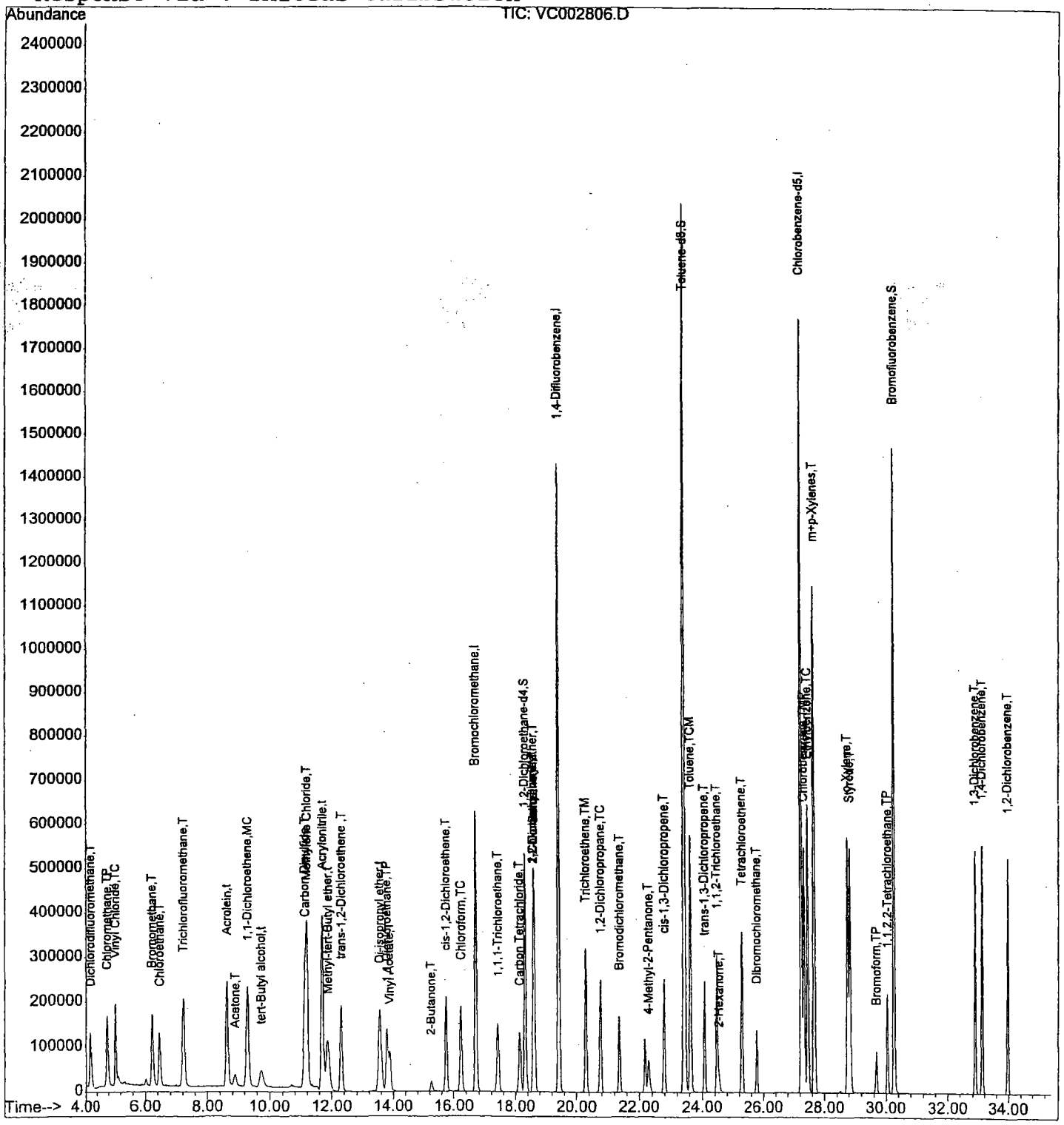
Quant Method : D:\HPCHEM\1\METHODS\M362422.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Mar 27 14:43:51 2000
Response via : Initial Calibration
DataAcq Meth : M362422

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33)	cis-1,3-Dichloropropene	22.79	75	281639	10.39	ug/L	96
34)	4-Methyl-2-Pentanone	22.28	58	47679	16.34	ug/L	81
36)	Toluene	23.62	91	903557	10.44	ug/L	98
38)	trans-1,3-Dichloropropene	24.06	75	251062	11.36	ug/L	95
39)	1,1,2-Trichloroethane	24.46	97	181780	13.04	ug/L	99
40)	Tetrachloroethene	25.29	166	204043	8.22	ug/L	97
41)	2-Hexanone	24.54	43	66257	17.98	ug/L	97
42)	Dibromochloromethane	25.78	129	138502	10.09	ug/L	99
43)	Chlorobenzene	27.34	112	593038	9.74	ug/L	97
44)	Ethylbenzene	27.46	91	978991	10.09	ug/L	96
45)	m+p-Xylenes	27.66	106	749085	19.46	ug/L	95
46)	o-Xylene	28.75	91	715900	9.80	ug/L	100
47)	Styrene	28.84	104	561956	9.30	ug/L	96
48)	Bromoform	29.68	173	76828	12.25	ug/L	97
50)	1,1,2,2-Tetrachloroethane	30.04	83	215644	16.19	ug/L	95
51)	1,3-Dichlorobenzene	32.89	146	394179	9.32	ug/L	93
52)	1,4-Dichlorobenzene	33.12	146	401840	10.24	ug/L	97
53)	1,2-Dichlorobenzene	33.97	146	382574	10.25	ug/L	94

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

Data File : D:\HPCHEM\1\DATA\APRIL2000\000405\VC002806.D Vial: 2
Acq On : 5 Apr 2000 12:27 pm Operator: Skelton
Sample : Vstd010 Inst : GC/MS Ins
Misc : Vstd010 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 5 13:03 2000 Quant Results File: M362422.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003142.D Vial: 2
Acq On : 26 Apr 2000 9:58 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Multiple Level Calibration

Min. RRF : 0.025 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Bromochloromethane	1.000	1.000	0.0	149	0.00
2	t	Acrolein	0.471	0.469	0.4	177	0.00
3	t	Acrylonitrile	0.825	0.749	9.2	137	0.00
4	t	tert-Butyl alcohol	0.151	0.144	4.6	160	0.00
5	t	Methyl-tert-Butyl ether	3.987	3.498	12.3	155	0.00
6	t	Di-isopropyl ether	1.274	1.184	7.1	161	0.00
7	T	Dichlorodifluoromethane	2.232	1.891	15.3	138	0.00
8	TP	Chloromethane	3.155	3.111	1.4	170	0.00
9	TC	Vinyl Chloride	2.039	1.934	5.1	168	0.00
10	T	Bromomethane	2.023	1.971	2.6	175	0.00
11	T	Chloroethane	2.112	2.072	1.9	171	0.00
12	T	Trichlorofluoromethane	4.389	4.413	-0.5	173	0.00
13	MC	1,1-Dichloroethene	3.544	3.374	4.8	166	0.00
14	T	Acetone	0.623	0.592	5.0	164	0.00
15	T	Carbon Disulfide	8.390	7.948	5.3	161	0.00
16	T	Methylene Chloride	3.828	3.435	10.3	164	0.00
17	T	trans-1,2-Dichloroethene	2.276	2.167	4.8	168	0.00
18	TP	1,1-Dichloroethane	2.991	3.042	-1.7	177	0.00
19	T	Vinyl Acetate	2.585	2.328	9.9	160	0.00
20	T	2-Butanone	0.532	0.465	12.6	151	0.00
21	T	cis-1,2-Dichloroethene	2.285	2.144	6.2	163	0.00
22	TC	Chloroform	2.895	2.880	0.5	173	0.00
23	T	1,1,1-Trichloroethane	2.138	2.108	1.4	169	0.00
24	T	Carbon Tetrachloride	1.790	1.749	2.3	169	0.00
25	S	1,2-Dichloroethane-d4	1.925	1.758	8.7	137	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	141	0.00
27	TM	Benzene	1.077	1.222	-13.5	185	0.00
28	T	1,2-Dichloroethane	0.305	0.323	-5.9	171	0.00
29	TM	Trichloroethene	0.277	0.307	-10.8	181	0.00
30	TC	1,2-Dichloropropane	0.262	0.288	-9.9	185	0.00
31	T	Bromodichloromethane	0.285	0.296	-3.9	174	0.00
32	T	2-Chloroethyl vinyl ether	0.092	0.098	-6.5	176	0.00
33	T	cis-1,3-Dichloropropene	0.378	0.397	-5.0	177	0.00
34	T	4-Methyl-2-Pentanone	0.068	0.068	0.0	161	0.00
35	S	Toluene-d8	1.214	1.214	0.0	143	0.00
36	TCM	Toluene	1.144	1.262	-10.3	181	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	145	0.00
38	T	trans-1,3-Dichloropropene	1.298	1.341	-3.3	176	0.00
39	T	1,1,2-Trichloroethane	0.901	1.022	-13.4	189	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003142.D Vial: 2
Acq On : 26 Apr 2000 9:58 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Multiple Level Calibration

Min. RRF : 0.025 Min. Rel. Area : 25% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
40	T	Tetrachloroethene	0.994	1.098	-10.5	185	0.00
41	T	2-Hexanone	0.362	0.322	11.0	149	0.00
42	T	Dibromochloromethane	0.733	0.745	-1.6	171	0.00
43	TMP	Chlorobenzene	2.853	3.140	-10.1	183	0.00
44	TC	Ethylbenzene	4.786	5.193	-8.5	178	0.00
45	T	m+p-Xylenes	1.866	2.017	-8.1	182	0.00
46	T	o-Xylene	3.607	3.761	-4.3	173	0.00
47	T	Styrene	2.893	3.197	-10.5	185	0.00
48	TP	Bromoform	0.434	0.456	-5.1	178	0.00
49	S	Bromofluorobenzene	1.541	1.473	4.4	139	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.110	1.137	-2.4	171	0.00
51	T	1,3-Dichlorobenzene	1.991	2.127	-6.8	172	0.00
52	T	1,4-Dichlorobenzene	2.022	2.208	-9.2	177	0.00
53	T	1,2-Dichlorobenzene	1.933	2.173	-12.4	186	0.00

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003142.D Vial: 2
Acq On : 26 Apr 2000 9:58 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:34 2000 Quant Results File: M362423.RES

Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Apr 11 13:41:21 2000
Response via : Initial Calibration
DataAcq Meth : M362423

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Bromochloromethane	16.70	128	576179	30.00	ug/L		0.00
26) 1,4-Difluorobenzene	19.42	114	3595978	30.00	ug/L		0.00
37) Chlorobenzene-d5	27.24	119	945110	30.00	ug/L		0.00
System Monitoring Compounds							
25) 1,2-Dichloroethane-d4	18.31	65	1012740	27.39	ug/L		0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 91.30%				
35) Toluene-d8	23.42	98	4365442	30.00	ug/L		0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 100.00%				
49) Bromofluorobenzene	30.25	95	1392324	28.69	ug/L		0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 95.63%				
Target Compounds							Qvalue
2) Acrolein	8.62	56	1800988	199.14	ug/L		99
3) Acrylonitrile	11.69	53	2878635	181.57	ug/L		98
4) tert-Butyl alcohol	9.72	59	554522	190.70	ug/L	#	92
5) Methyl-tert-Butyl ether	11.87	73	1343762	17.55	ug/L		97
6) Di-isopropyl ether	13.55	87	454723	18.58	ug/L		97
7) Dichlorodifluoromethane	4.15	85	726202	16.94	ug/L		99
8) Chloromethane	4.75	50	1195006	19.72	ug/L		98
9) Vinyl Chloride	5.02	62	742743	18.97	ug/L		100
10) Bromomethane	6.22	94	757044	19.49	ug/L		99
11) Chloroethane	6.45	64	796060	19.63	ug/L		100
12) Trichlorofluoromethane	7.22	101	1695154	20.11	ug/L		99
13) 1,1-Dichloroethene	9.29	61	1295939	19.04	ug/L		93
14) Acetone	8.88	43	227574	19.03	ug/L		83
15) Carbon Disulfide	11.11	76	3053079	18.95	ug/L		99
16) Methylene Chloride	11.18	84	1319268	17.94	ug/L		95
17) trans-1,2-Dichloroethene	12.29	61	832408	19.05	ug/L		95
18) 1,1-Dichloroethane	13.78	63	1168585	20.34	ug/L		98
19) Vinyl Acetate	13.88	43	894040	18.01	ug/L		100
20) 2-Butanone	15.24	43	178577	17.48	ug/L		100
21) cis-1,2-Dichloroethene	15.75	61	823481	18.76	ug/L		96
22) Chloroform	16.24	83	1106250	19.90	ug/L		98
23) 1,1,1-Trichloroethane	17.41	97	809576	19.72	ug/L		100
24) Carbon Tetrachloride	18.14	117	671756	19.54	ug/L		95
27) Benzene	18.61	78	2928606	22.68	ug/L		99
28) 1,2-Dichloroethane	18.58	62	773694	21.16	ug/L		99
29) Trichloroethene	20.30	130	735165	22.12	ug/L		98
30) 1,2-Dichloropropane	20.76	63	691203	22.00	ug/L		98
31) Bromodichloromethane	21.37	83	708438	20.77	ug/L		99
32) 2-Chloroethyl vinyl ether	18.59	63	235466	21.42	ug/L		99

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

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003142.D Vial: 2
Acq On : 26 Apr 2000 9:58 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:34 2000 Quant Results File: M362423.RES

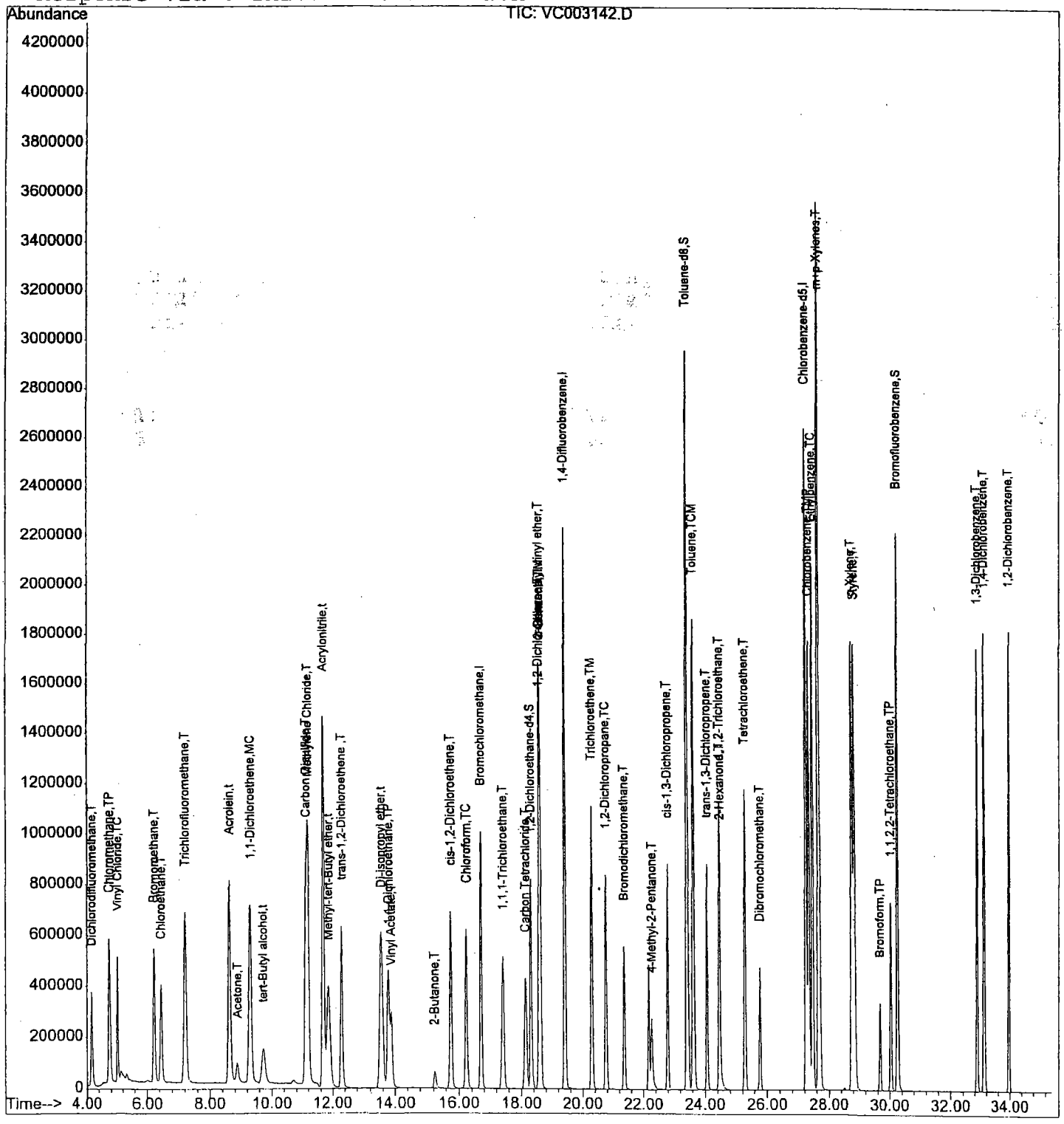
Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Apr 11 13:41:21 2000
Response via : Initial Calibration
DataAcq Meth : M362423

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
33) cis-1,3-Dichloropropene	22.79	75	951062	20.98	ug/L	9
34) 4-Methyl-2-Pentanone	22.28	58	163330	20.03	ug/L	9
36) Toluene	23.62	91	3024967	22.06	ug/L	10
38) trans-1,3-Dichloropropene	24.06	75	845080	20.66	ug/L	10
39) 1,1,2-Trichloroethane	24.46	97	643755	22.68	ug/L	9
40) Tetrachloroethene	25.29	166	691563	22.09	ug/L	9
41) 2-Hexanone	24.49	43	202684	17.77	ug/L	9
42) Dibromochloromethane	25.77	129	469532	20.32	ug/L	9
43) Chlorobenzene	27.34	112	1978133	22.00	ug/L	9
44) Ethylbenzene	27.47	91	3272139	21.70	ug/L	9
45) m+p-Xylenes	27.67	106	2541466	43.24	ug/L	9
46) o-Xylene	28.76	91	2369491	20.85	ug/L	9
47) Styrene	28.84	104	2014155	22.10	ug/L	9
48) Bromoform	29.68	173	287579	21.02	ug/L	9
50) 1,1,2,2-Tetrachloroethane	30.04	83	716101	20.49	ug/L	9
51) 1,3-Dichlorobenzene	32.89	146	1339878	21.36	ug/L	9
52) 1,4-Dichlorobenzene	33.12	146	1391241	21.84	ug/L	9
53) 1,2-Dichlorobenzene	33.97	146	1369201	22.48	ug/L	9

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

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003142.D Vial: 2
Acq On : 26 Apr 2000 9:58 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:34 2000 Quant Results File: M362423.R

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



000044

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	VBLK77	104	100	88	0
02	5351.09MS	100	102	97	0
03	5351.09MSD	101	102	97	0
04	VBLK80	96	98	84	0
05	5369.01	102	102	89	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(70-117)
SMC2	TOL	=	Toluene-d8	(88-110)
SMC3	BFB	=	Bromofluorobenzene	(81-115)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Matrix Spike Report
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification Number #13461

Data File	VC002810.D	Sample Name	5351.09MS
Date Aquired	5-Apr-00	Field ID	CEA-HY-35@28'MS

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	199.52 ug/L	99.76
Acrylonitrile	200	182.93 ug/L	91.47
tert-Butyl alcohol	200	214.56 ug/L	107.28
Methyl-tert-Butyl ether	20	16.77 ug/L	83.86
Di-isopropyl ether	20	16.12 ug/L	80.58
Dichlorodifluoromethane	20	15.17 ug/L	75.85
Chloromethane	20	19.89 ug/L	99.47
Vinyl Chloride	20	20.61 ug/L	103.04
Bromomethane	20	18.97 ug/L	94.86
Chloroethane	20	19.72 ug/L	98.58
Trichlorofluoromethane	20	20.86 ug/L	104.31
1,1-Dichloroethene	20	19.88 ug/L	99.42
Acetone	20	19.57 ug/L	97.85
Carbon Disulfide	20	19.17 ug/L	95.83
Methylene Chloride	20	19.06 ug/L	95.30
trans-1,2-Dichloroethene	20	18.40 ug/L	92.01
1,1-Dichloroethane	20	18.82 ug/L	94.08
Vinyl Acetate	20	17.44 ug/L	87.20
2-Butanone	20	17.84 ug/L	89.18
cis-1,2-Dichloroethene	20	17.82 ug/L	89.09
Chloroform	20	18.44 ug/L	92.20
1,1,1-Trichloroethane	20	17.17 ug/L	85.85
Carbon Tetrachloride	20	16.42 ug/L	82.08
Benzene	20	19.73 ug/L	98.63
1,2-Dichloroethane	20	19.23 ug/L	96.17
Trichloroethene	20	18.35 ug/L	91.75
1,2-Dichloropropane	20	19.73 ug/L	98.65
Bromodichloromethane	20	17.98 ug/L	89.88
2-Chloroethyl vinyl ether	20	19.23 ug/L	96.16
cis-1,3-Dichloropropene	20	17.58 ug/L	87.88
4-Methyl-2-Pentanone	20	18.86 ug/L	94.28
Toluene	20	19.44 ug/L	97.20
trans-1,3-Dichloropropene	20	17.59 ug/L	87.95
1,1,2-Trichloroethane	20	19.99 ug/L	99.95
Tetrachloroethene	20	18.35 ug/L	91.77
2-Hexanone	20	18.29 ug/L	91.46
Dibromochloromethane	20	16.78 ug/L	83.91
Chlorobenzene	20	19.05 ug/L	95.24
Ethylbenzene	20	19.36 ug/L	96.78
m+p-Xylenes	40	37.16 ug/L	92.90
o-Xylene	20	18.31 ug/L	91.53
Styrene	20	18.95 ug/L	94.76
Bromoform	20	16.88 ug/L	84.42
1,1,2,2-Tetrachloroethane	20	19.04 ug/L	95.18
1,3-Dichlorobenzene	20	17.75 ug/L	88.74
1,4-Dichlorobenzene	20	17.76 ug/L	88.79
1,2-Dichlorobenzene	20	18.87 ug/L	94.35

5/3/00 8:38

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000046

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

Data File	VC002810.D	Sample Name	5351.09MSD
Date Aquired	5-Apr-00	Field ID	CEA-HY-35@28'MSD

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	195.57 ug/L	97.78
Acrylonitrile	200	172.48 ug/L	86.24
tert-Butyl alcohol	200	201.80 ug/L	100.90
Methyl-tert-Butyl ether	20	15.94 ug/L	79.71
Di-isopropyl ether	20	16.20 ug/L	81.01
Dichlorodifluoromethane	20	14.82 ug/L	74.11
Chloromethane	20	19.06 ug/L	95.29
Vinyl Chloride	20	19.48 ug/L	97.41
Bromomethane	20	19.18 ug/L	95.91
Chloroethane	20	19.04 ug/L	95.21
Trichlorofluoromethane	20	20.56 ug/L	102.82
1,1-Dichloroethene	20	18.91 ug/L	94.53
Acetone	20	18.44 ug/L	92.19
Carbon Disulfide	20	16.18 ug/L	80.89
Methylene Chloride	20	11.57 ug/L	57.87
trans-1,2-Dichloroethene	20	17.78 ug/L	88.91
1,1-Dichloroethane	20	18.06 ug/L	90.31
Vinyl Acetate	20	16.63 ug/L	83.15
2-Butanone	20	16.99 ug/L	84.95
cis-1,2-Dichloroethene	20	16.99 ug/L	84.93
Chloroform	20	17.74 ug/L	88.71
1,1,1-Trichloroethane	20	16.61 ug/L	83.06
Carbon Tetrachloride	20	16.25 ug/L	81.25
Benzene	20	18.75 ug/L	93.73
1,2-Dichloroethane	20	18.47 ug/L	92.36
Trichloroethene	20	17.67 ug/L	88.34
1,2-Dichloropropane	20	18.78 ug/L	93.91
Bromodichloromethane	20	17.32 ug/L	86.60
2-Chloroethyl vinyl ether	20	18.45 ug/L	92.25
cis-1,3-Dichloropropene	20	17.19 ug/L	85.97
4-Methyl-2-Pentanone	20	18.63 ug/L	93.16
Toluene	20	18.63 ug/L	93.16
trans-1,3-Dichloropropene	20	17.16 ug/L	85.80
1,1,2-Trichloroethane	20	19.39 ug/L	96.93
Tetrachloroethene	20	17.95 ug/L	89.76
2-Hexanone	20	16.67 ug/L	83.34
Dibromochloromethane	20	16.55 ug/L	82.76
Chlorobenzene	20	18.59 ug/L	92.93
Ethylbenzene	20	18.87 ug/L	94.33
m+p-Xylenes	40	35.87 ug/L	89.68
o-Xylene	20	17.83 ug/L	89.15
Styrene	20	18.43 ug/L	92.17
Bromoform	20	16.65 ug/L	83.25
1,1,2,2-Tetrachloroethane	20	18.59 ug/L	92.95
1,3-Dichlorobenzene	20	17.15 ug/L	85.73
1,4-Dichlorobenzene	20	17.46 ug/L	87.28
1,2-Dichlorobenzene	20	18.21 ug/L	91.07

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID (Standard): VC003046.D Date Analyzed: 4/21/00

Instrument ID: VoaInst#3 Time Analyzed: 8:42

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	523707	16.70	3430140	19.42	899105	27.24
	UPPER LIMIT	1047414	17.20	6860280	19.92	1798210	27.74
	LOWER LIMIT	261854	16.20	1715070	18.92	449553	26.74
	FIELD ID:						
01	VBLK77	432531	16.71	3041397	19.42	775161	27.25
02	5351.09MS	465174	16.71	3047756	19.42	806441	27.25
03	5351.09MSD	469046	16.70	3073819	19.42	801364	27.25

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

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 5369 Location: 876 SDG No.:

Lab File ID (Standard): VC003142.D Date Analyzed: 4/26/00

Instrument ID: VoaInst#3 Time Analyzed: 9:58

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	576179	16.70	3595978	19.42	945110	27.24
	UPPER LIMIT	1152358	17.20	7191956	19.92	1890220	27.74
	LOWER LIMIT	288090	16.20	1797989	18.92	472555	26.74
	FIELD ID:						
01	VBLK80	464382	16.71	3098066	19.42	793157	27.25
02	5369.01	421346	16.70	2796294	19.42	757563	27.24

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 : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003143.D Vial: 2
Acq On : 26 Apr 2000 10:51 am Operator: Skelton
Sample : Vblk80 Inst : GC/MS Ins
Misc : Vblk80 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 27 8:42 2000 Quant Results File: M362423.RES

Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Apr 11 13:41:21 2000
Response via : Initial Calibration
DataAcq Meth : M362423

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.71	128	464382	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	3098066	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	793157	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	854415	28.68	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 95.60%			
35) Toluene-d8	23.42	98	3683595	29.38	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 97.93%			
49) Bromofluorobenzene	30.27	95	1022627	25.11	ug/L	0.01
Spiked Amount 30.000	Range 86 - 115		Recovery = 83.70%#			

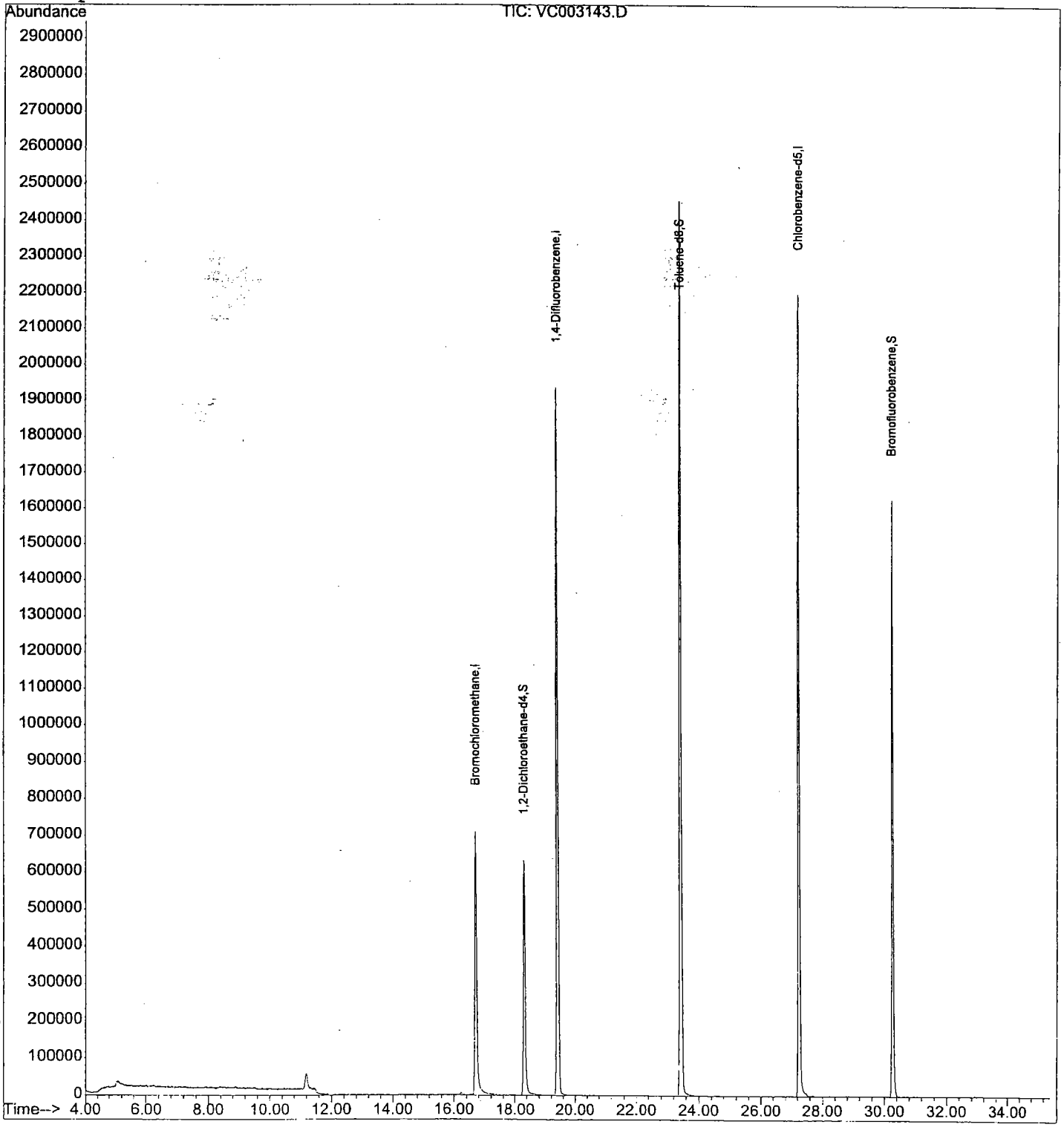
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003143.D Vial: 2
Acq On : 26 Apr 2000 10:51 am Operator: Skelton
Sample : Vblk80 Inst : GC/MS Ins
Misc : Vblk80 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 27 8:42 2000 Quant Results File: M362423.RE

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



000051

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003169.D Vial: 20
Acq On : 27 Apr 2000 4:36 am Operator: Skelton
Sample : 5369.01 Inst : GC/MS Ins
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 27 5:11 2000 Quant Results File: M362423.RES

Quant Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue Apr 11 13:41:21 2000
Response via : Initial Calibration
DataAcq Meth : M362423

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	421346	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	2796294	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	757563	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	827072	30.59	ug/L	0.00
Spiked Amount 30.000	Range 76 - 117		Recovery = 101.97%			
35) Toluene-d8	23.42	98	3472920	30.69	ug/L	0.00
Spiked Amount 30.000	Range 88 - 110		Recovery = 102.30%			
49) Bromofluorobenzene	30.25	95	1037592	26.67	ug/L	0.00
Spiked Amount 30.000	Range 86 - 115		Recovery = 88.90%			

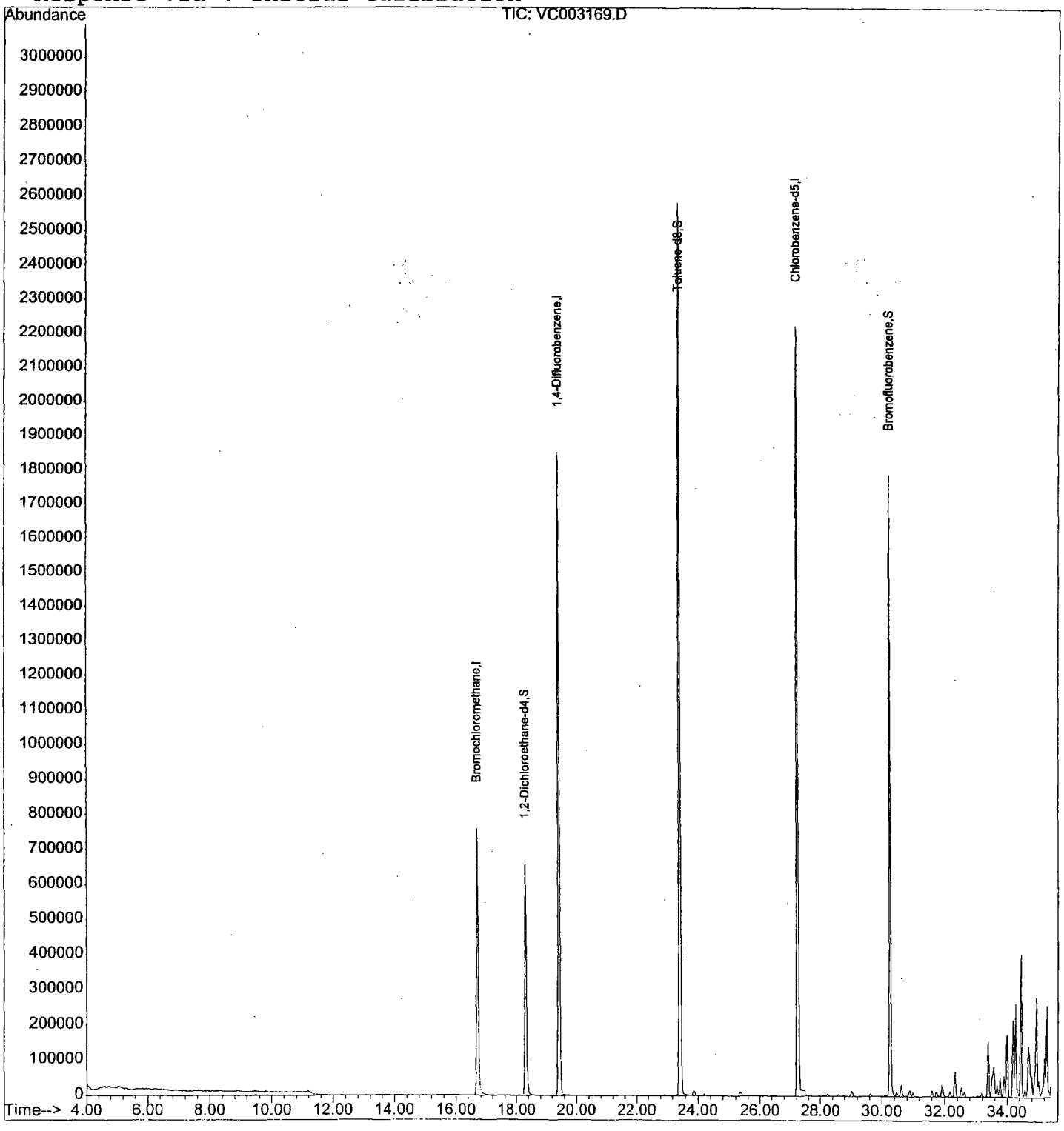
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\APRIL2000\000426\VC003169.D Vial: 20
Acq On : 27 Apr 2000 4:36 am Operator: Skelton
Sample : 5369.01 Inst : GC/MS Ins
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 27 5:11 2000 Quant Results File: M362423.RI

Method : D:\HPCHEM\1\METHODS\M362423.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Tue May 02 13:14:41 2000
Response via : Initial Calibration



000053

BASE NEUTRAL

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA03856.D**	Sample Name	**Sblk365**
Operator	**Bhaskar**	Misc Info	**Sblk365 A 000426**
Date Acquired	**27-Apr-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.83	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.91	ug/L	
62-53-3	Aniline			not detected	NLE	1.63	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	1.28	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	1.21	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	1.19	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	1.02	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	1.13	ug/L	
108-60-1	bis(2-chloroisopropyl)ether			not detected	300	1.39	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.80	ug/L	
67-72-1	Hexachloroethane			not detected	10	1.50	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.97	ug/L	
78-59-1	Isophorone			not detected	100	1.01	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	1.21	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	1.22	ug/L	
91-20-3	Naphthalene			not detected	NLE	1.27	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.09	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.71	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	1.08	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	1.32	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	1.01	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	0.96	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.52	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.96	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.81	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	0.79	ug/L	
83-32-9	Acenaphthene			not detected	400	1.10	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	1.00	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	0.87	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.62	ug/L	
86-73-7	Fluorene			not detected	300	0.99	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	1.10	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	1.05	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.01	ug/L	
103-33-3	Azobenzene			not detected	NLE	0.67	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	0.76	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	0.94	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.23	ug/L	
120-12-7	Anthracene			not detected	2000	1.12	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	1.70	ug/L	
206-44-0	Fluoranthene			not detected	300	1.64	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA03856.D**	Sample Name	**Sblk365**
Operator	**Bhaskar**	Misc Info	**Sblk365 A 000426**
Date Acquired	**27-Apr-00**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	4.18	ug/L	
129-00-0	Pyrene			not detected	200	1.25	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.05	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	1.19	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.75	ug/L	
218-01-9	Chrysene			not detected	20	1.38	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.74	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.25	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.29	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	1.05	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	0.83	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	0.64	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	0.84	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
PQL= Practical Quantitation Limit

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

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Sblk365**

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: Sblk365

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA03856.D

Level: (low/med) LOW Date Received: 4/24/00

% Moisture: decanted: (Y/N) N Date Extracted: 4/26/00

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/27/00

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7

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 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID: BNA03721.D DFTPP Injection Date: 3/23/00

Instrument ID: BNA#2 DFTPP Injection Time: 8:06

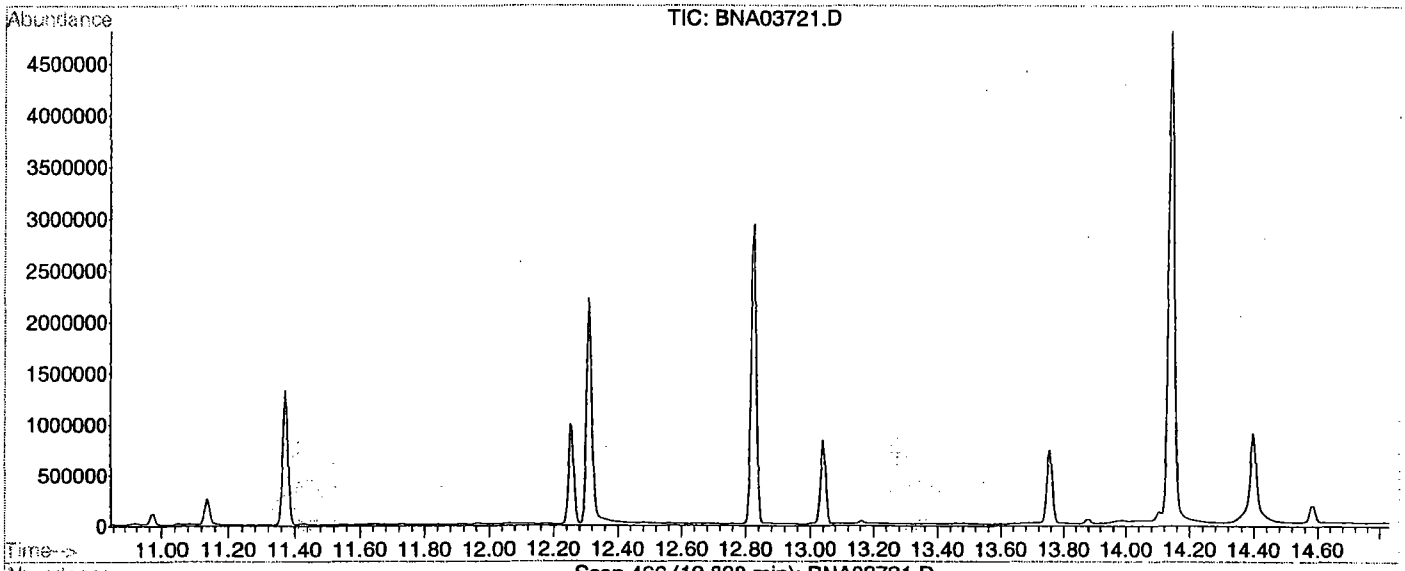
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	54.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	49.4
70	Less than 2.0% of mass 69	0.4 (0.7)1
127	25.0 - 75.0% of mass 198	52.4
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
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	13.0
442	40.0 - 110.0% of mass 198	88.1
443	15.0 - 24.0% of mass 442	17.1 (19.4)2

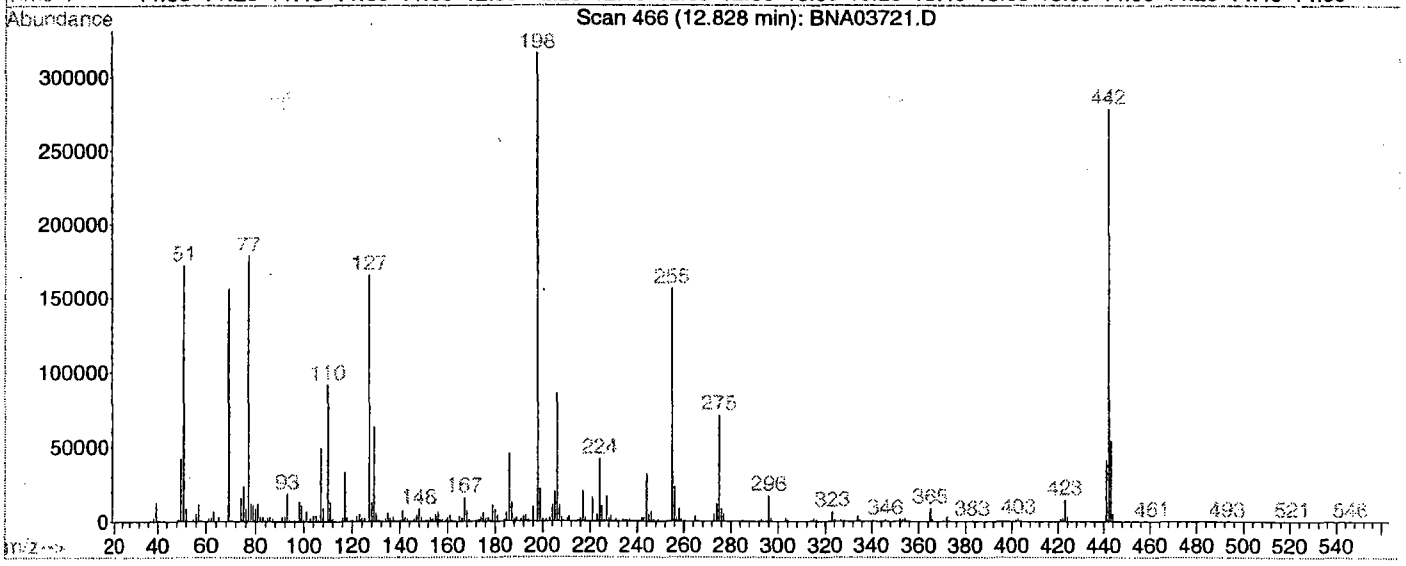
1-Value is % mass 69 2-Value is % mass 442

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	SSTD050	DAILY CAL	BNA03722.D	3/23/00	8:33
02	5244.09MS	5244.09MS	BNA03733.D	3/23/00	17:31
03	5244.09DUP	5244.09DUP	BNA03734.D	3/23/00	18:19

Data File : C:\HPCHEM\1\DATA\000323\BNA03721.D Vial: 99
Acq On : 23 Mar 2000 8:06 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration





Spectrum Information: Scan 466

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	54.4	171904	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	49.4	156224	PASS
70	69	0.00	2	0.7	1158	PASS
127	198	40	60	52.4	165504	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	316096	PASS
199	198	5	9	6.8	21496	PASS
275	198	10	30	22.5	71024	PASS
365	198	1	100	2.8	8828	PASS
441	443	1	99	75.9	41040	PASS
442	198	40	100	88.1	278400	PASS
443	442	17	23	19.4	54096	PASS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID: BNA03835.D DFTPP Injection Date: 4/24/00

Instrument ID: BNA#2 DFTPP Injection Time: 9:52

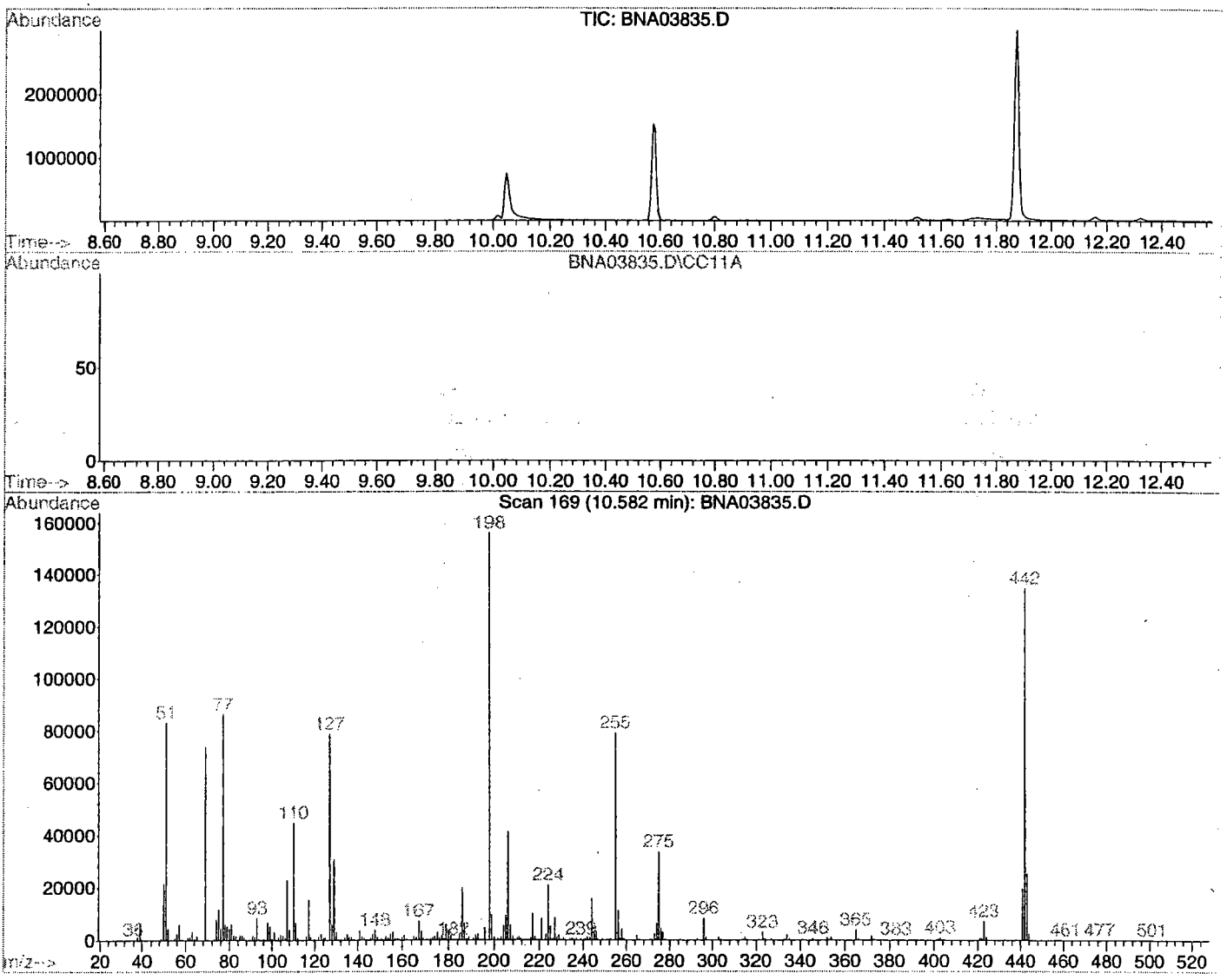
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	53.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	47.4
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	25.0 - 75.0% of mass 198	50.5
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.1
275	10.0 - 30.0% of mass 198	21.6
365	Greater than 0.75% of mass 198	2.5
441	Present, but less than mass 443	12.7
442	40.0 - 110.0% of mass 198	86.3
443	15.0 - 24.0% of mass 442	16.2 (18.8)2

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

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	SSTD050	50 PPM STD	BNA03836.D	4/24/00	10:20
02	SSTD120	120 PPM STD	BNA03837.D	4/24/00	11:08
03	SSTD080	80 PPM STD	BNA03838.D	4/24/00	11:56
04	SSTD020	20 PPM STD	BNA03839.D	4/24/00	12:44
05	SSTD010	10 PPM STD	BNA03840.D	4/24/00	13:33

Data File : C:\HPCHEM\1\DATA\000424\BNA03835.D Vial: 99
Acq On : 24 Apr 2000 9:52 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 169

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.3	83272	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	47.4	74024	PASS
70	69	0.00	2	0.6	429	PASS
127	198	40	60	50.5	78872	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	156096	PASS
199	198	5	9	6.1	9527	PASS
275	198	10	30	21.6	33680	PASS
365	198	1	100	2.5	3856	PASS
441	443	1	99	78.2	19768	PASS
442	198	40	100	86.3	134720	PASS
443	442	17	23	18.8	25288	PASS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID: BNA03852.D DFTPP Injection Date: 4/27/00

Instrument ID: BNA#2 DFTPP Injection Time: 9:06

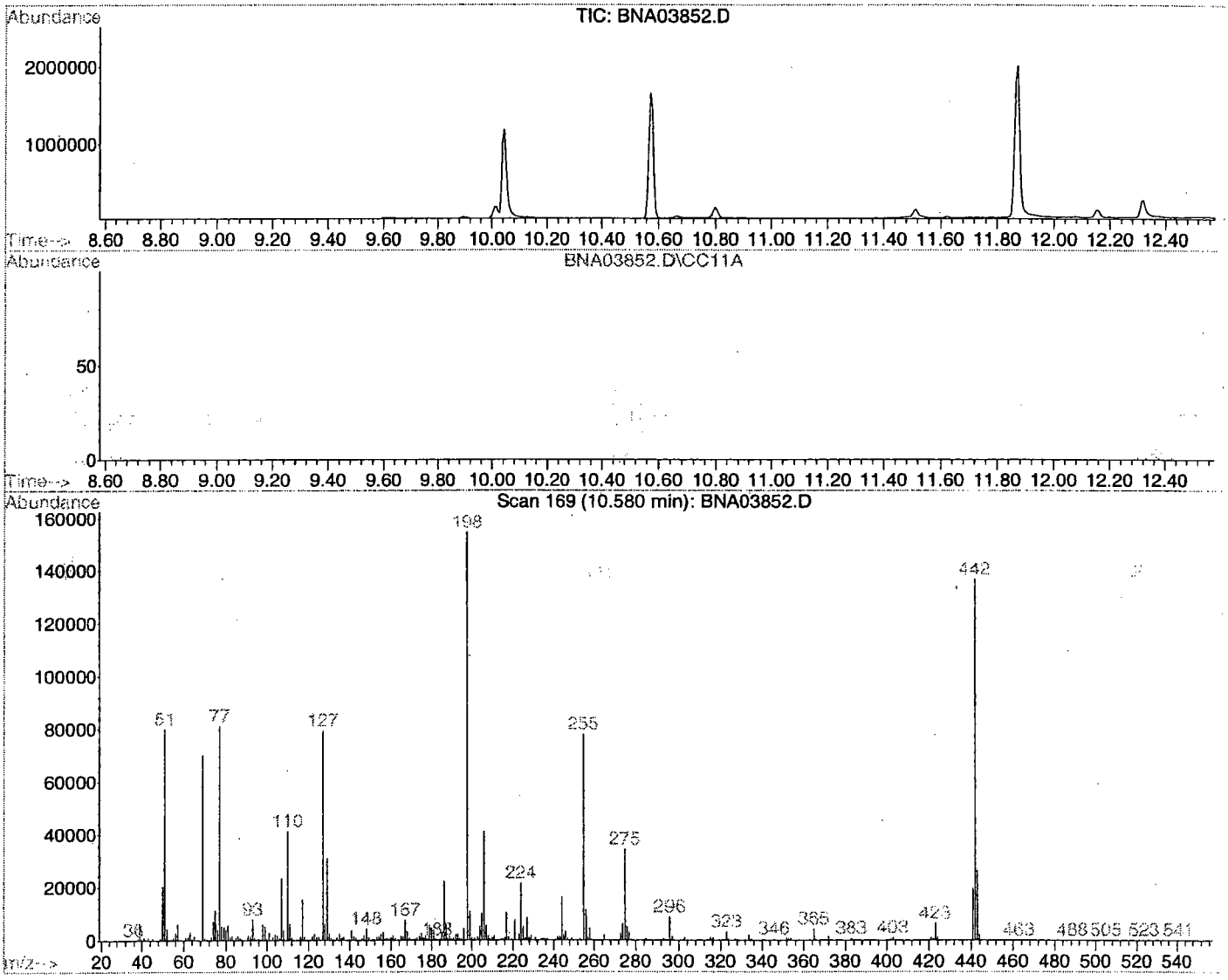
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	51.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	45.3
70	Less than 2.0% of mass 69	0.4 (0.9)1
127	25.0 - 75.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 30.0% of mass 198	22.2
365	Greater than 0.75% of mass 198	2.7
441	Present, but less than mass 443	12.6
442	40.0 - 110.0% of mass 198	88.3
443	15.0 - 24.0% of mass 442	17.0 (19.3)2

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

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	SSTD050	DAILY CAL	BNA03853.D	4/27/00	9:34
02	SBLK365	SBLK365	BNA03856.D	4/27/00	12:03
03	876-1	5369.01	BNA03861.D	4/27/00	16:18

Data File : C:\HPCHEM\1\DATA\000427\BNA03852.D Vial: 99
Acq On : 27 Apr 2000 9:06 am Operator: Bhaskar
Sample : DFTPP TUNE Inst : GC BNA 2
Misc : 50 NG/2UL Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 169

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	51.7	80024	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.3	70096	PASS
70	69	0.00	2	0.9	609	PASS
127	198	40	60	51.3	79360	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	154816	PASS
199	198	5	9	6.9	10755	PASS
275	198	10	30	22.2	34360	PASS
365	198	1	100	2.7	4219	PASS
441	443	1	99	73.9	19480	PASS
442	198	40	100	88.3	136768	PASS
443	442	17	23	19.3	26368	PASS

4B

FIELD ID

SEMIVOLATILE METHOD BLANK SUMMARY

Sblk365

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID: BNA03856.D Lab Sample ID: Sblk365

Instrument ID: GC BNA 2 Date Extracted: 4/26/00

Matrix: (soil/water) WATER Date Analyzed: 4/27/00

Level: (low/med) LOW Time Analyzed: 12:03

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

	FIELD ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	876-1	5369.01	BNA03861.D	4/27/00

COMMENTS:

Response Factor Report GC BNA 2

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03837.D 80 =BNA03838.D 50 =BNA03836.D
20 =BNA03839.D 10 =BNA03840.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.642	1.616	1.583	1.585	1.637	1.613	1.74
3)	T	N-nitroso-dimethylami	0.882	0.867	0.849	0.850	0.918	0.873	3.25
4)	S	2-Fluorophenol	1.447	1.426	1.425	1.383	1.440	1.424	1.75
5)	T	Aniline	2.013	2.055	1.858	1.969	2.076	1.994	4.33
6)	S	Phenol-d5	1.753	1.743	1.756	1.749	1.852	1.771	2.57
7)	TCM	Phenol	1.879	1.881	1.886	1.874	1.998	1.904	2.78
8)	T	bis(2-Chloroethyl)eth	1.614	1.582	1.602	1.544	1.627	1.594	2.03
9)	TM	2-Chlorophenol	1.379	1.371	1.382	1.358	1.456	1.389	2.75
10)	T	1,3-Dichlorobenzene	1.503	1.507	1.546	1.548	1.646	1.550	3.73
11)	TCM	1,4-Dichlorobenzene	1.506	1.514	1.543	1.556	1.674	1.559	4.36
12)	T	Benzyl alcohol	0.912	0.916	0.925	0.893	0.921	0.913	1.37
13)	T	1,2-Dichlorobenzene	1.344	1.386	1.429	1.458	1.563	1.436	5.77
14)	T	2-Methylphenol	1.332	1.341	1.360	1.351	1.474	1.371	4.24
15)	T	bis(2-chloroisopropyl	2.009	2.044	2.145	2.147	2.337	2.137	5.99
16)	T	4-Methylphenol	1.240	1.292	1.317	1.313	1.402	1.313	4.45
17)	TPM	n-Nitroso-di-n-propyl	0.256	0.265	0.271	0.274	0.290	0.271	4.66
18)	T	Hexachloroethane	0.559	0.591	0.611	0.608	0.641	0.602	4.96
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.494	0.498	0.509	0.509	0.555	0.513	4.80
21)	T	Nitrobenzene	0.479	0.486	0.505	0.515	0.552	0.507	5.66
22)	T	Isophorone	0.883	0.876	0.901	0.911	1.012	0.917	6.00
23)	TC	2-Nitrophenol	0.202	0.206	0.210	0.207	0.214	0.208	2.15
24)	T	2,4-Dimethylphenol	0.414	0.425	0.440	0.452	0.497	0.446	7.17
25)	T	bis(2-Chloroethoxy)me	0.489	0.492	0.505	0.505	0.560	0.510	5.63
26)	TC	2,4-Dichlorophenol	0.295	0.306	0.317	0.324	0.349	0.318	6.42
27)	T	Benzoic Acid	0.299	0.277	0.230	0.176		0.246	22.15
28)	TM	1,2,4-Trichlorobenzen	0.318	0.327	0.338	0.349	0.385	0.344	7.54
29)	T	Naphthalene	0.962	1.016	1.075	1.122	1.245	1.084	9.99
30)	T	4-Chloroaniline	0.381	0.389	0.377	0.370	0.415	0.386	4.54
31)	TC	Hexachlorobutadiene	0.170	0.178	0.189	0.195	0.214	0.189	8.95
32)	TCM	4-Chloro-3-methylphen	0.364	0.373	0.390	0.385	0.417	0.386	5.22
33)	T	2-Methylnaphthalene	0.640	0.659	0.695	0.713	0.788	0.699	8.20
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.280	0.266	0.273	0.188		0.252	17.04
36)	TC	2,4,6-Trichlorophenol	0.356	0.365	0.371	0.367	0.398	0.371	4.35
37)	T	2,4,5-Trichlorophenol	0.389	0.392	0.395	0.373	0.425	0.395	4.78
38)	S	2-Fluorobiphenyl	1.152	1.215	1.262	1.344	1.506	1.296	10.56
39)	T	2-Chloronaphthalene	1.032	1.078	1.114	1.165	1.292	1.136	8.79
40)	T	2-Nitroaniline	0.387	0.386	0.390	0.391	0.417	0.394	3.32
41)	T	Dimethylphthalate	1.267	1.314	1.363	1.426	1.609	1.396	9.53
42)	T	Acenaphthylene	1.577	1.670	1.766	1.849	2.094	1.791	11.02
43)	T	2,6-Dinitrotoluene	0.236	0.241	0.245	0.245	0.270	0.247	5.41
44)	T	3-Nitroaniline	0.256	0.243	0.221	0.272	0.316	0.262	13.64
45)	TCM	Acenaphthene	0.983	1.037	1.077	1.132	1.272	1.100	10.02
46)	TP	2,4-Dinitrophenol	0.190	0.181	0.157	0.109		0.159	22.70
47)	T	Dibenzofuran	1.334	1.406	1.468	1.554	1.762	1.505	10.98
48)	TMP	4-Nitrophenol	0.359	0.360	0.339	0.316	0.297	0.334	8.24
49)	TM	2,4-Dinitrotoluene	0.415	0.418	0.430	0.433	0.466	0.432	4.71
50)	T	Diethylphthalate	1.214	1.302	1.386	1.456	1.677	1.407	12.51
51)	T	Fluorene	1.119	1.196	1.262	1.329	1.524	1.286	11.99
52)	T	4-Chlorophenyl-phenyl	0.547	0.571	0.599	0.633	0.721	0.614	11.04
53)	T	4-Nitroaniline	0.224	0.237	0.234	0.253	0.268	0.243	7.09
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration

Calibration Files
120 =BNA03837.D 80 =BNA03838.D 50 =BNA03836.D
20 =BNA03839.D 10 =BNA03840.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.158	0.153	0.149	0.126	0.113	0.140	13.74
56)	TC	n-Nitrosodiphenylamin	0.480	0.514	0.547	0.593	0.666	0.560	12.93
57)	T	Azobenzene	1.033	1.032	1.102	1.048	1.178	1.078	5.79
58)	S	2,4,6-Tribromophenol	0.093	0.092	0.093	0.091	0.096	0.093	2.24
59)	T	4-Bromophenyl-phenyle	0.196	0.200	0.207	0.211	0.234	0.210	7.09
60)	T	Hexachlorobenzene	0.194	0.196	0.202	0.206	0.230	0.206	7.03
61)	TCM	Pentachlorophenol	0.135	0.132	0.121	0.111	0.086	0.117	16.65
62)	T	Phenanthrene	1.015	1.063	1.138	1.207	1.375	1.160	12.16
63)	T	Anthracene	1.035	1.089	1.167	1.230	1.390	1.182	11.67
64)	T	Di-n-butylphthalate	1.203	1.298	1.415	1.534	1.728	1.436	14.30
65)	TC	Fluoranthene	1.076	1.117	1.184	1.272	1.440	1.218	11.89
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.295	0.297	0.261	0.328	0.442	0.325	21.50
68)	TM	Pyrene	1.278	1.310	1.410	1.480	1.673	1.430	11.03
69)	S	p-Terphenyl-d14	0.881	0.888	0.929	0.948	1.070	0.943	8.06
70)	T	Butylbenzylphthalate	0.697	0.726	0.779	0.801	0.888	0.778	9.52
71)	T	Benzo[a]anthracene	1.229	1.246	1.297	1.338	1.489	1.320	7.87
72)	T	3,3'-Dichlorobenzidin	0.312	0.281	0.233	0.300	0.357	0.297	15.26
73)	T	Chrysene	1.130	1.137	1.194	1.224	1.371	1.211	8.04
74)	T	bis(2-Ethylhexyl)phth	0.928	0.984	1.055	1.087	1.200	1.051	9.85
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.684	1.802	1.956	2.044	2.175	1.932	10.04
77)	T	Benzo[b]fluoranthene	1.305	1.389	1.431	1.404	1.570	1.420	6.76
78)	T	Benzo[k]fluoranthene	1.321	1.273	1.279	1.344	1.468	1.337	5.89
79)	TC	Benzo[a]pyrene	1.254	1.265	1.283	1.301	1.402	1.301	4.55
80)	T	Indeno[1,2,3-cd]pyren	1.395	1.385	1.390	1.357	1.445	1.395	2.29
81)	T	Dibenz[a,h]anthracene	1.024	1.009	1.008	0.980	1.042	1.013	2.26
82)	T	Benzo[g,h,i]perylene	1.217	1.211	1.228	1.199	1.274	1.226	2.37

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000427\BNA03853.D Vial: 100
Acq On : 27 Apr 2000 9:34 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
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	101	0.00
2	T	Pyridine	1.613	1.583	1.9	100	0.00
3	T	N-nitroso-dimethylamine	0.873	0.849	2.7	101	0.00
4	S	2-Fluorophenol	1.424	1.428	-0.3	101	0.00
5	T	Aniline	1.994	1.939	2.8	105	0.00
6	S	Phenol-d5	1.771	1.753	1.0	100	0.00
7	TCM	Phenol	1.904	1.909	-0.3	102	-0.01
8	T	bis(2-Chloroethyl)ether	1.594	1.647	-3.3	103	0.00
9	TM	2-Chlorophenol	1.389	1.388	0.1	101	-0.01
10	T	1,3-Dichlorobenzene	1.550	1.546	0.3	101	0.00
11	TCM	1,4-Dichlorobenzene	1.559	1.545	0.9	101	0.00
12	T	Benzyl alcohol	0.913	0.918	-0.5	100	0.00
13	T	1,2-Dichlorobenzene	1.436	1.432	0.3	101	0.00
14	T	2-Methylphenol	1.371	1.353	1.3	100	0.00
15	T	bis(2-chloroisopropyl)ether	2.137	2.145	-0.4	101	0.00
16	T	4-Methylphenol	1.313	1.308	0.4	100	0.00
17	TPM	n-Nitroso-di-n-propylamine	0.271	0.268	1.1	100	0.00
18	T	Hexachloroethane	0.602	0.601	0.2	99	-0.01
19	I	Naphthalene-d8	1.000	1.000	0.0	100	0.00
20	S	Nitrobenzene-d5	0.513	0.509	0.8	100	0.00
21	T	Nitrobenzene	0.507	0.507	0.0	100	0.00
22	T	Isophorone	0.917	0.890	2.9	99	0.00
23	TC	2-Nitrophenol	0.208	0.211	-1.4	100	0.00
24	T	2,4-Dimethylphenol	0.446	0.442	0.9	100	0.00
25	T	bis(2-Chloroethoxy)methane	0.510	0.501	1.8	99	0.00
26	TC	2,4-Dichlorophenol	0.318	0.318	0.0	100	0.00
27	T	Benzoic Acid	0.246	0.282	-14.6	123	0.00
28	TM	1,2,4-Trichlorobenzene	0.344	0.340	1.2	101	-0.01
29	T	Naphthalene	1.084	1.078	0.6	100	-0.01
30	T	4-Chloroaniline	0.386	0.383	0.8	102	-0.01
31	TC	Hexachlorobutadiene	0.189	0.188	0.5	99	0.00
32	TCM	4-Chloro-3-methylphenol	0.386	0.384	0.5	99	-0.01
33	T	2-Methylnaphthalene	0.699	0.689	1.4	99	0.00
34	I	Acenaphthene-d10	1.000	1.000	0.0	98	-0.01
35	TP	Hexachlorocyclopentadiene	0.252	0.232	7.9	84	-0.01
36	TC	2,4,6-Trichlorophenol	0.371	0.379	-2.2	100	0.00
37	T	2,4,5-Trichlorophenol	0.395	0.407	-3.0	101	0.00
38	S	2-Fluorobiphenyl	1.296	1.279	1.3	100	0.00
39	T	2-Chloronaphthalene	1.136	1.122	1.2	99	0.00
40	T	2-Nitroaniline	0.394	0.379	3.8	95	0.00
41	T	Dimethylphthalate	1.396	1.366	2.1	98	0.00
42	T	Acenaphthylene	1.791	1.752	2.2	98	0.00
43	T	2,6-Dinitrotoluene	0.247	0.249	-0.8	100	0.00
44	T	3-Nitroaniline	0.262	0.188	28.2#	83	0.00
45	TCM	Acenaphthene	1.100	1.072	2.5	98	-0.01
46	TP	2,4-Dinitrophenol	0.159	0.162	-1.9	101	0.00
47	T	Dibenzofuran	1.505	1.475	2.0	99	-0.01
48	TMP	4-Nitrophenol	0.334	0.270	19.2	78	0.00
49	TM	2,4-Dinitrotoluene	0.432	0.423	2.1	97	0.00
50	T	Diethylphthalate	1.407	1.379	2.0	98	-0.01
51	T	Fluorene	1.286	1.260	2.0	98	-0.01
52	T	4-Chlorophenyl-phenylether	0.614	0.593	3.4	97	-0.01
53	T	4-Nitroaniline	0.243	0.232	4.5	98	-0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\000427\BNA03853.D Vial: 100
Acq On : 27 Apr 2000 9:34 am Operator: Bhaskar
Sample : DAILY CAL Inst : GC BNA 2
Misc : 50 PPM STD Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
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)
54	I	Phenanthrene-d10	1.000	1.000	0.0	97	-0.01
55	T	4,6-Dinitro-2-methylphenol	0.140	0.157	-12.1	102	0.00
56	TC	n-Nitrosodiphenylamine	0.560	0.510	8.9	90	0.00
57	T	Azobenzene	1.078	1.102	-2.2	97	0.00
58	S	2,4,6-Tribromophenol	0.093	0.093	0.0	98	-0.01
59	T	4-Bromophenyl-phenylether	0.210	0.208	1.0	97	0.00
60	T	Hexachlorobenzene	0.206	0.201	2.4	97	-0.01
61	TCM	Pentachlorophenol	0.117	0.127	-8.5	102	0.00
62	T	Phenanthrene	1.160	1.138	1.9	97	0.00
63	T	Anthracene	1.182	1.163	1.6	97	0.00
64	T	Di-n-butylphthalate	1.436	1.414	1.5	97	0.00
65	TC	Fluoranthene	1.218	1.196	1.8	98	0.00
66	I	Chrysene-d12	1.000	1.000	0.0	98	0.00
67	T	Benzidine	0.325	0.150	53.8#	56	0.00
68	TM	Pyrene	1.430	1.391	2.7	96	-0.01
69	S	p-Terphenyl-d14	0.943	0.921	2.3	97	0.00
70	T	Butylbenzylphthalate	0.778	0.738	5.1	93	0.00
71	T	Benzo[a]anthracene	1.320	1.279	3.1	96	0.00
72	T	3,3'-Dichlorobenzidine	0.297	0.236	20.5	99	0.00
73	T	Chrysene	1.211	1.179	2.6	97	-0.01
74	T	bis(2-Ethylhexyl)phthalate	1.051	1.000	4.9	93	-0.01
75	I	Perylene-d12	1.000	1.000	0.0	96	-0.01
76	TC	Di-n-octylphthalate	1.932	1.859	3.8	91	-0.01
77	T	Benzo[b]fluoranthene	1.420	1.416	0.3	95	-0.02
78	T	Benzo[k]fluoranthene	1.337	1.314	1.7	99	-0.01
79	TC	Benzo[a]pyrene	1.301	1.281	1.5	96	-0.01
80	T	Indeno[1,2,3-cd]pyrene	1.395	1.375	1.4	95	-0.02
81	T	Dibenz[a,h]anthracene	1.013	0.997	1.6	95	-0.03
82	T	Benzo[g,h,i]perylene	1.226	1.216	0.8	95	-0.02

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.: _____

	FIELD ID	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	5244.09MS	75	79	80	0
02	5244.09DUP	70	74	79	0
03	SBLK365	61	61	52	0
04	876-1	33 *	32	18 *	2

QC LIMITS

S1	NBZ	=	Nitrobenzene-d5	(34-112)
S2	2FP	=	2-Fluorobiphenyl	(30-128)
S3	TPL	=	p-Terphenyl-d14	(29-151)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03857.D** Sample Name **Sblk365BS**

Date Acquired **27-Apr-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		6.99 ug/L	34.93
62-75-9	N-nitroso-dimethylamine		5.85 ug/L	29.26
62-53-3	Aniline		6.09 ug/L	30.45
111-44-4	bis(2-Chloroethyl)ether		13.22 ug/L	66.12
541-73-1	1,3-Dichlorobenzene		13.29 ug/L	66.45
106-46-7	1,4-Dichlorobenzene		13.59 ug/L	67.94
100-51-6	Benzyl alcohol		9.04 ug/L	45.20
95-50-1	1,2-Dichlorobenzene		13.92 ug/L	69.61
108-60-1	bis(2-chloroisopropyl)ether		19.20 ug/L	95.98
621-64-7	n-Nitroso-di-n-propylamine		14.31 ug/L	71.56
67-72-1	Hexachloroethane		12.77 ug/L	63.84
98-95-3	Nitrobenzene		14.72 ug/L	73.61
78-59-1	Isophorone		15.12 ug/L	75.60
111-91-1	bis(2-Chloroethoxy)methane		13.73 ug/L	68.66
120-82-1	1,2,4-Trichlorobenzene		13.35 ug/L	66.73
91-20-3	Naphthalene		13.86 ug/L	69.30
106-47-8	4-Chloroaniline		12.03 ug/L	60.17
87-68-3	Hexachlorobutadiene		13.19 ug/L	65.93
91-57-6	2-Methylnaphthalene		15.04 ug/L	75.19
77-47-4	Hexachlorocyclopentadiene		4.98 ug/L	24.92
91-58-7	2-Chloronaphthalene		14.82 ug/L	74.10
88-74-4	2-Nitroaniline		14.89 ug/L	74.44
131-11-3	Dimethylphthalate		12.94 ug/L	64.70
208-96-8	Acenaphthylene		14.39 ug/L	71.97
606-20-2	2,6-Dinitrotoluene		15.85 ug/L	79.26
99-09-2	3-Nitroaniline		15.83 ug/L	79.16
83-32-9	Acenaphthene		14.88 ug/L	74.42
132-64-9	Dibenzofuran		16.23 ug/L	81.13
121-14-2	2,4-Dinitrotoluene		15.54 ug/L	77.68
84-66-2	Diethylphthalate		15.19 ug/L	75.96
86-73-7	Fluorene		15.29 ug/L	76.45
7005-72-3	4-Chlorophenyl-phenylether		15.44 ug/L	77.19
100-01-6	4-Nitroaniline		16.24 ug/L	81.18
86-30-6	n-Nitrosodiphenylamine		15.33 ug/L	76.65
103-33-3	Azobenzene		14.39 ug/L	71.95
101-55-3	4-Bromophenyl-phenylether		14.76 ug/L	73.80
118-74-1	Hexachlorobenzene		14.63 ug/L	73.13
85-01-8	Phenanthrene		15.50 ug/L	77.51
120-12-7	Anthracene		15.19 ug/L	75.96
84-74-2	Di-n-butylphthalate		15.74 ug/L	78.68
206-44-0	Fluoranthene		15.49 ug/L	77.43
129-00-0	Pyrene		16.03 ug/L	80.16
85-68-7	Butylbenzylphthalate		14.53 ug/L	72.64
56-55-3	Benzo[a]anthracene		15.13 ug/L	75.66
218-01-9	Chrysene		15.27 ug/L	76.33
117-81-7	bis(2-Ethylhexyl)phthalate		14.63 ug/L	73.17
117-84-0	Di-n-octylphthalate		12.63 ug/L	63.13
205-99-2	Benzo[b]fluoranthene		13.21 ug/L	66.07
207-08-9	Benzo[k]fluoranthene		13.80 ug/L	68.98
50-32-8	Benzo[a]pyrene		13.00 ug/L	64.99
193-39-5	Indeno[1,2,3-cd]pyrene		13.07 ug/L	65.33
53-70-3	Dibenz[a,h]anthracene		14.64 ug/L	73.19
191-24-2	Benzo[g,h,i]perylene		12.92 ug/L	64.61

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA03733.D** Sample Name **5244.09MS**

Date Acquired **23-Mar-00**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		2.88 ug/L	14.39
62-75-9	N-nitroso-dimethylamine		9.71 ug/L	48.56
62-53-3	Aniline		10.54 ug/L	52.72
111-44-4	bis(2-Chloroethyl)ether		13.28 ug/L	66.41
541-73-1	1,3-Dichlorobenzene		12.01 ug/L	60.03
106-46-7	1,4-Dichlorobenzene		12.09 ug/L	60.46
100-51-6	Benzyl alcohol		14.79 ug/L	73.95
95-50-1	1,2-Dichlorobenzene		12.64 ug/L	63.22
108-60-1	bis(2-chloroisopropyl)ether		18.83 ug/L	94.16
621-64-7	n-Nitroso-di-n-propylamine		14.73 ug/L	73.64
67-72-1	Hexachloroethane		12.16 ug/L	60.80
98-95-3	Nitrobenzene		12.89 ug/L	64.45
78-59-1	Isophorone		13.84 ug/L	69.21
111-91-1	bis(2-Chloroethoxy)methane		14.10 ug/L	70.48
120-82-1	1,2,4-Trichlorobenzene		11.84 ug/L	59.21
91-20-3	Naphthalene		14.09 ug/L	70.46
106-47-8	4-Chloroaniline		15.71 ug/L	78.56
87-68-3	Hexachlorobutadiene		11.74 ug/L	58.70
91-57-6	2-Methylnaphthalene		14.91 ug/L	74.56
77-47-4	Hexachlorocyclopentadiene		10.17 ug/L	50.87
91-58-7	2-Chloronaphthalene		13.67 ug/L	68.34
88-74-4	2-Nitroaniline		15.95 ug/L	79.74
131-11-3	Dimethylphthalate		15.96 ug/L	79.80
208-96-8	Acenaphthylene		15.16 ug/L	75.78
606-20-2	2,6-Dinitrotoluene		14.02 ug/L	70.11
99-09-2	3-Nitroaniline		15.74 ug/L	78.69
83-32-9	Acenaphthene		15.64 ug/L	78.22
132-64-9	Dibenzofuran		16.70 ug/L	83.49
121-14-2	2,4-Dinitrotoluene		14.39 ug/L	71.97
84-66-2	Diethylphthalate		16.07 ug/L	80.34
86-73-7	Fluorene		15.64 ug/L	78.21
7005-72-3	4-Chlorophenyl-phenylether		15.72 ug/L	78.60
100-01-6	4-Nitroaniline		14.65 ug/L	73.27
86-30-6	n-Nitrosodiphenylamine		16.02 ug/L	80.10
103-33-3	Azobenzene		13.14 ug/L	65.68
101-55-3	4-Bromophenyl-phenylether		15.11 ug/L	75.57
118-74-1	Hexachlorobenzene		12.79 ug/L	63.95
85-01-8	Phenanthrene		15.56 ug/L	77.79
120-12-7	Anthracene		15.21 ug/L	76.03
84-74-2	Di-n-butylphthalate		16.26 ug/L	81.31
206-44-0	Fluoranthene		15.03 ug/L	75.15
129-00-0	Pyrene		16.35 ug/L	81.76
85-68-7	Butylbenzylphthalate		17.75 ug/L	88.75
56-55-3	Benzo[a]anthracene		15.82 ug/L	79.08
218-01-9	Chrysene		15.89 ug/L	79.45
117-81-7	bis(2-Ethylhexyl)phthalate		17.40 ug/L	87.01
117-84-0	Di-n-octylphthalate		15.83 ug/L	79.13
205-99-2	Benzo[b]fluoranthene		13.70 ug/L	68.51
207-08-9	Benzo[k]fluoranthene		13.28 ug/L	66.38
50-32-8	Benzo[a]pyrene		13.17 ug/L	65.85
193-39-5	Indeno[1,2,3-cd]pyrene		13.73 ug/L	68.67
53-70-3	Dibenz[a,h]anthracene		15.43 ug/L	77.14
191-24-2	Benzo[g,h,i]perylene		14.14 ug/L	70.70

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID (Standard): BNA03722.D Date Analyzed: 3/23/00

Instrument ID: BNA#2 Time Analyzed: 8:33

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	421566	10.42	1493653	13.37	936905	17.73
	UPPER LIMIT	843132	10.92	2987306	13.87	1873810	18.23
	LOWER LIMIT	210783	9.92	746827	12.87	468453	17.23
	FIELD ID						
01	5244.09MS	397832	10.42	1499835	13.36	892486	17.72
02	5244.09DUP	401701	10.42	1507447	13.36	901483	17.72

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 100004 Case No.: 5369 Location 876 SDG No.:

Lab File ID (Standard): BNA03722.D Date Analyzed: 03/23/00

Instrument ID: BNA#2 Time Analyzed: 08:33

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1484401	20.99	1282020	26.50	1154458	29.61
	UPPER LIMIT	2968802	20.49	2564040	26.00	2308916	29.11
	LOWER LIMIT	742201	21.49	641010	27.00	577229	30.11
	EPA SAMPLE NO.						
01	5244.09MS	1445413	20.99	1226360	26.50	1247102	29.60
02	5244.09DUP	1434429	20.99	1217551	26.50	1235109	29.59

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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project 100004 Case No.: 5368 Location 875 SDG No.:

Lab File ID (Standard): BNA03853.D Date Analyzed: 4/27/00

Instrument ID: BNA#2 Time Analyzed: 9:34

		IS1DCB AREA	#	RT	#	IS2NAP AREA	#	RT	#	IS3ANE AREA	#	RT	#
	12 HOUR STD	458540		10.38		1620903		13.33		1000461		17.68	
	UPPER LIMIT	917080		10.88		3241806		13.83		2000922		18.18	
	LOWER LIMIT	229270		9.88		810452		12.83		500231		17.18	
	FIELD ID												
01	SBLK365	440922		10.38		1640007		13.32		980527		17.68	
02	876-1	471996		10.38		1706545		13.32		1018647		17.68	

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 100004 Case No.: 5368 Location 875 SDG No.:

Lab File ID (Standard): BNA03853.D Date Analyzed: 04/27/00

Instrument ID: BNA#2 Time Analyzed: 09:34

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	1578827	20.96	1355485	26.47	1206762	29.56
	UPPER LIMIT	3157654	20.46	2710970	25.97	2413524	29.06
	LOWER LIMIT	789414	21.46	677743	26.97	603381	30.06
	EPA SAMPLE NO.						
01	SBLK365	1591112	20.95	1345004	26.46	1280315	29.55
02	876-1	1645387	20.95	1465778	26.46	1446204	29.55

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\000427\BNA03856.D Vial: 3
Acq On : 27 Apr 2000 12:03 pm Operator: Bhaskar
Sample : Sblk365 Inst : GC BNA 2
Misc : Sblk365 A 000426 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 27 12:39 2000 Quant Results File: M262539.RES

Quant Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration
DataAcq Meth : M262539

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.38	152	440922	40.00	ug/L	-0.01
19) Naphthalene-d8	13.32	136	1640007	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.68	164	980527	40.00	ug/L	-0.01
54) Phenanthrene-d10	20.95	188	1591112	40.00	ug/L	-0.02
66) Chrysene-d12	26.46	240	1345004	40.00	ug/L	-0.02
75) Perylene-d12	29.55	264	1280315	40.00	ug/L	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.72	82	640509	30.45	ug/L	-0.02
Spiked Amount 50.000	Range 35 - 114		Recovery =	60.90%		
38) 2-Fluorobiphenyl	16.07	172	974146	30.67	ug/L	-0.02
Spiked Amount 50.000	Range 43 - 116		Recovery =	61.34%		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.32	244	821410	25.90	ug/L	-0.02
Spiked Amount 50.000	Range 33 - 141		Recovery =	51.80%		

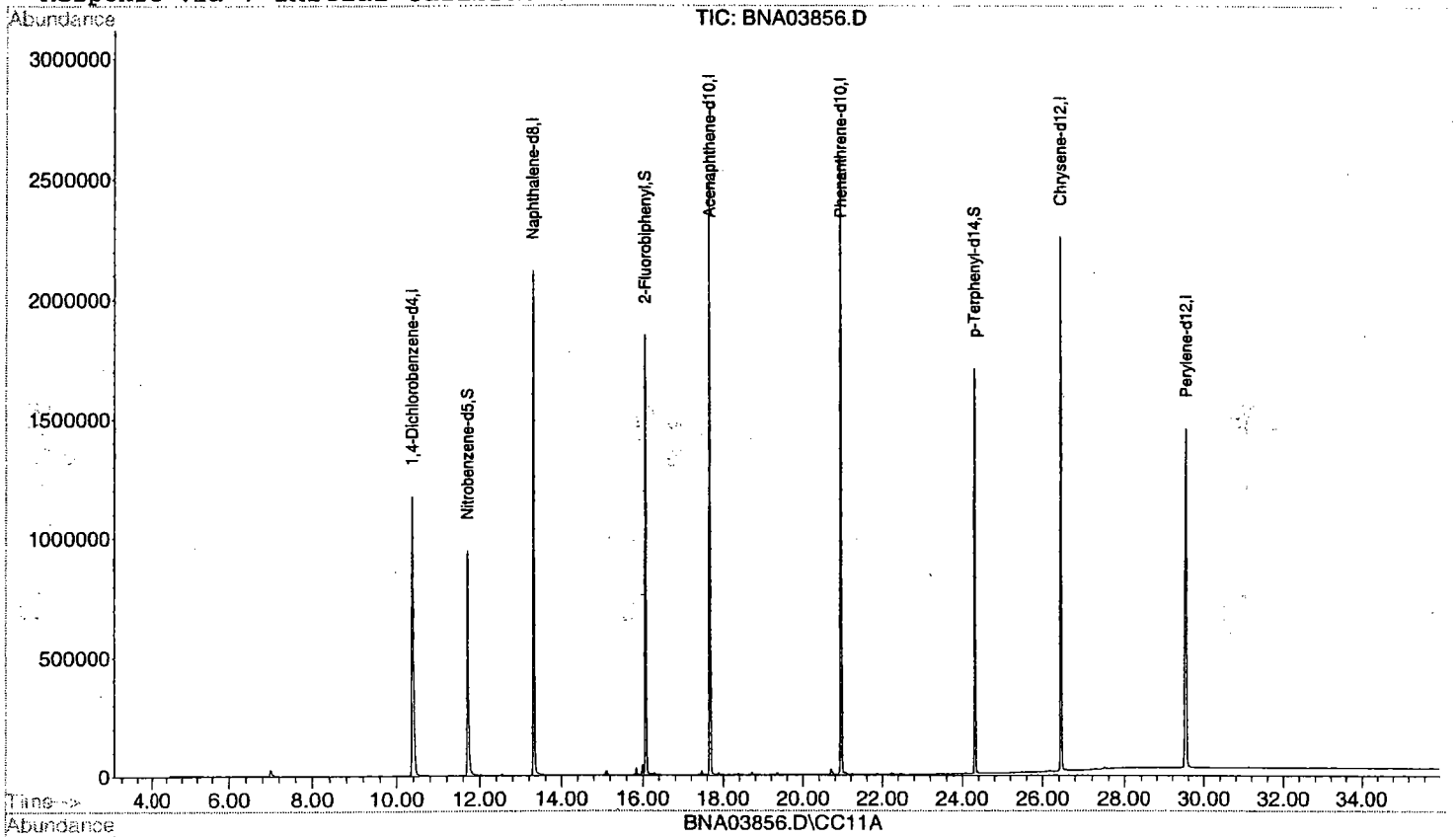
Target Compounds Qvalue

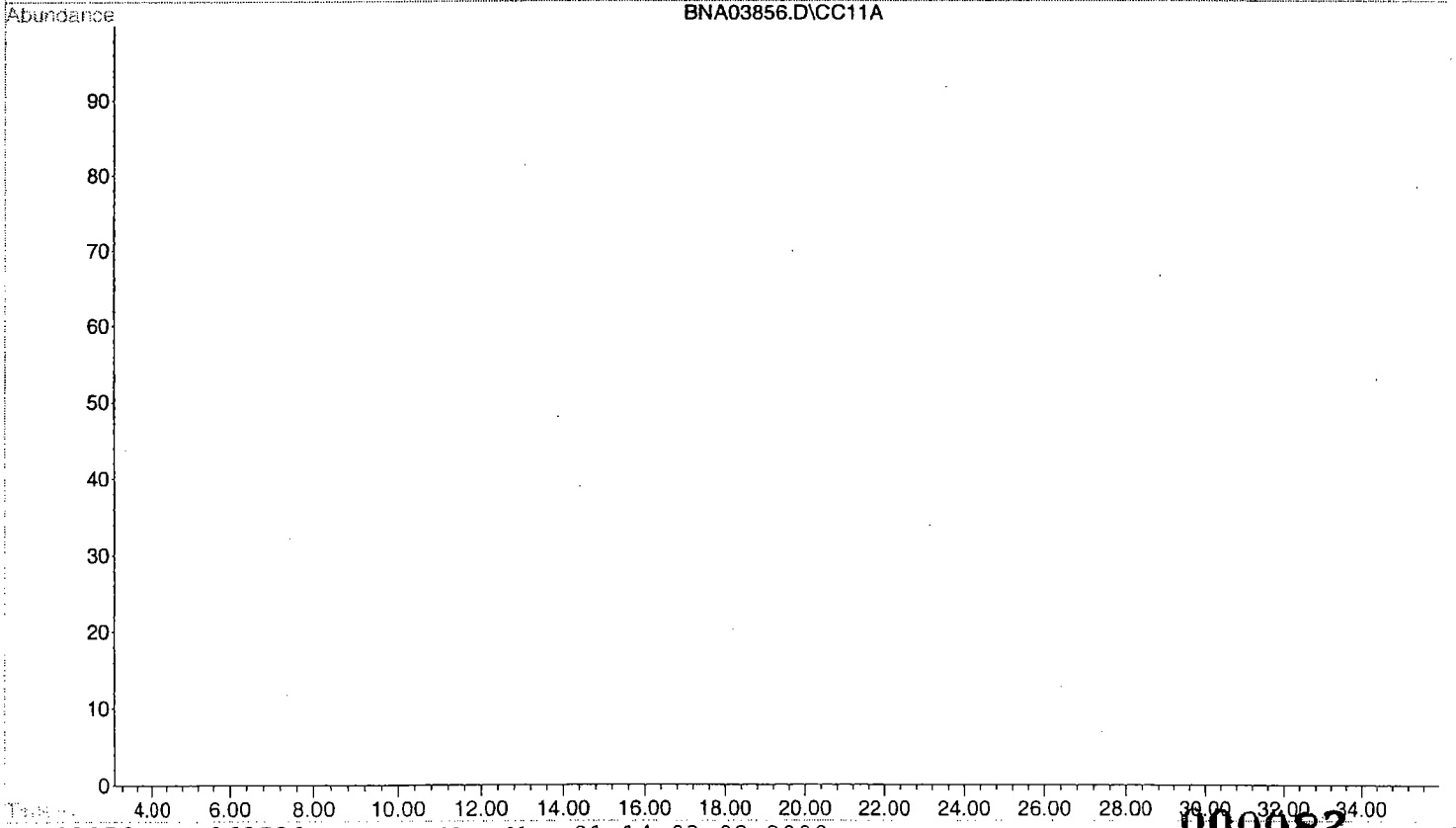
(#) = qualifier out of range (m) = manual integration
BNA03856.D M262539.M Mon May 01 14:02:59 2000

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000427\BNA03856.D Vial: 3
Acq On : 27 Apr 2000 12:03 pm Operator: Bhaskar
Sample : Sblk365 Inst : GC BNA 2
Misc : Sblk365 A 000426 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 27 12:39 2000 Quant Results File: M262539.RES

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000427\BNA03861.D Vial: 8
Acq On : 27 Apr 2000 4:18 pm Operator: Bhaskar
Sample : 5369.01 Inst : GC BNA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 1 10:15 2000 Quant Results File: M262539.RES

Quant Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration
DataAcq Meth : M262539

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.38	152	471996	40.00	ug/L	0.00
19) Naphthalene-d8	13.32	136	1706545	40.00	ug/L	-0.01
34) Acenaphthene-d10	17.68	164	1018647	40.00	ug/L	-0.01
54) Phenanthrene-d10	20.95	188	1645387	40.00	ug/L	-0.02
66) Chrysene-d12	26.46	240	1465778	40.00	ug/L	-0.02
75) Perylene-d12	29.55	264	1446204	40.00	ug/L	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ug/L	
Spiked Amount 100.000	Range 21 - 100		Recovery =	0.00%#		
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.72	82	355609	16.25	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery =	32.50%#		
38) 2-Fluorobiphenyl	16.07	172	528307	16.01	ug/L	-0.02
Spiked Amount 50.000	Range 43 - 116		Recovery =	32.02%#		
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery =	0.00%#		
69) p-Terphenyl-d14	24.32	244	315814	9.14	ug/L	-0.02
Spiked Amount 50.000	Range 33 - 141		Recovery =	18.28%#		
Target Compounds						Qvalue
62) Phenanthrene	21.00	178	51061	1.07	ug/L	99

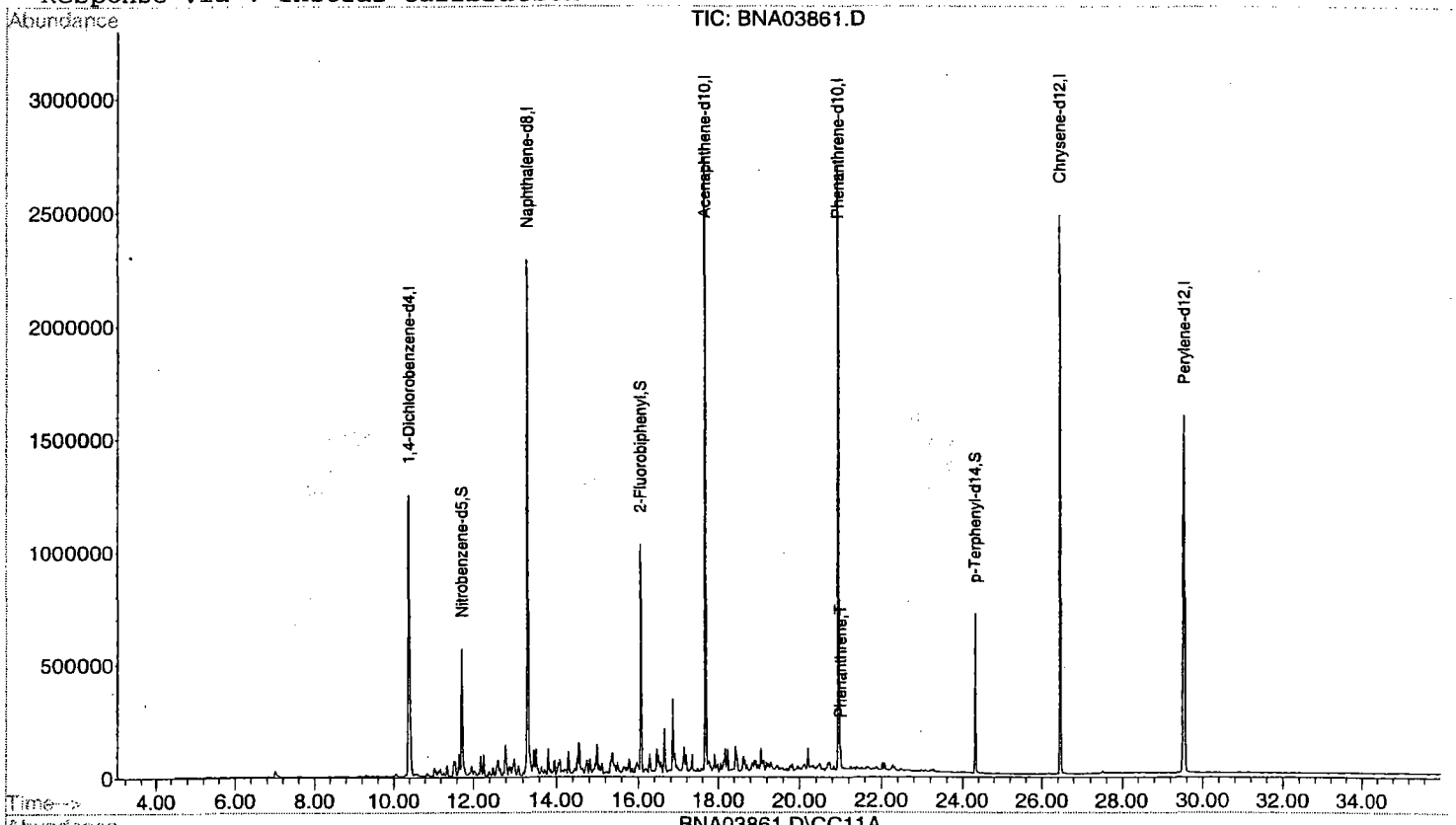
(#) = qualifier out of range (m) = manual integration
BNA03861.D M262539.M Mon May 01 13:55:35 2000

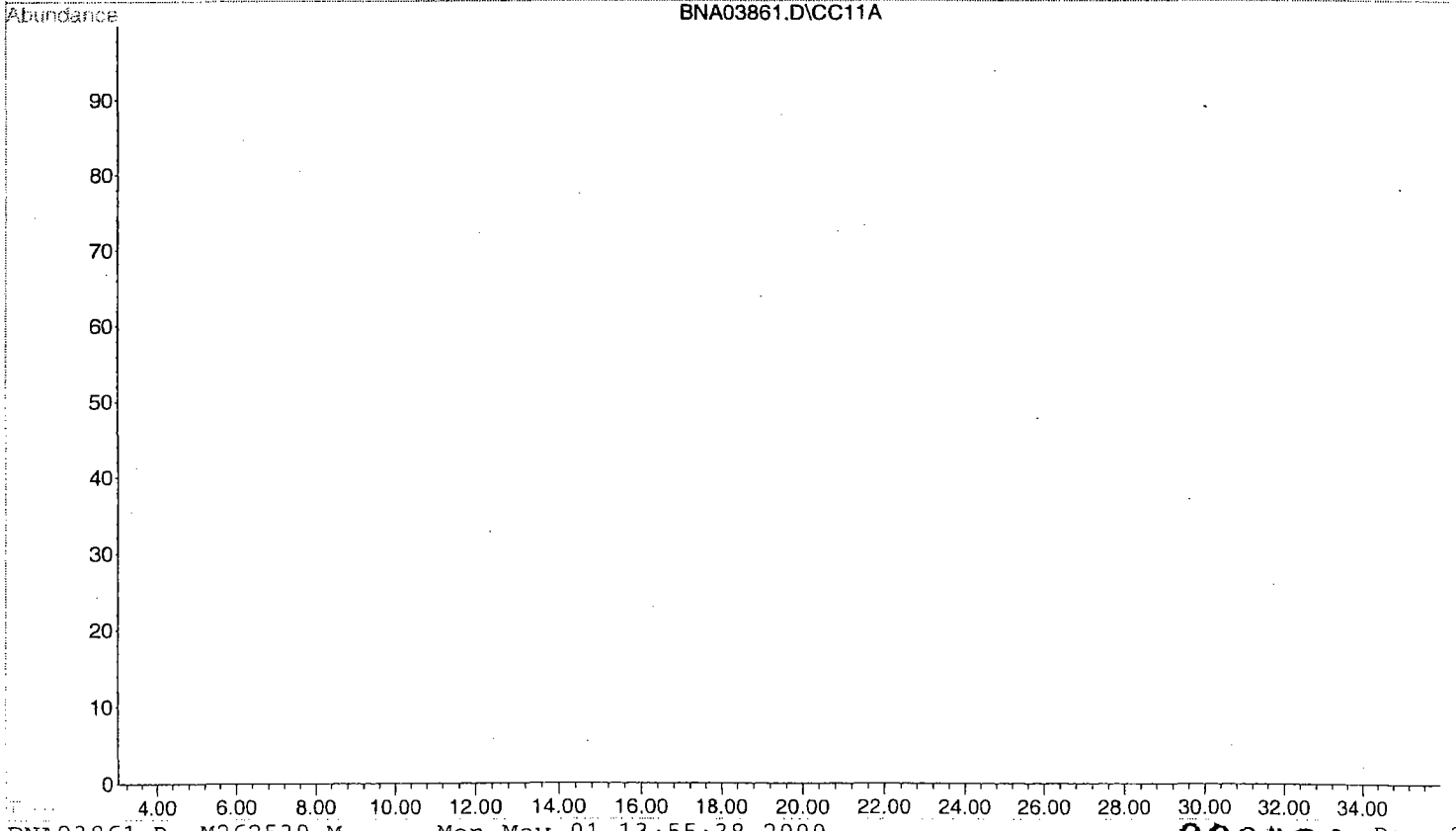
000083

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000427\BNA03861.D Vial: 8
Acq On : 27 Apr 2000 4:18 pm Operator: Bhaskar
Sample : 5369.01 Inst : GC BNA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 1 10:15 2000 Quant Results File: M262539.RES

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration





Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000427\BNA03863.D Vial: 10
Acq On : 28 Apr 2000 7:28 am Operator: Bhaskar
Sample : 5369.01 Inst : GC BNA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 1 10:17 2000 Quant Results File: M262539.RES

Quant Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration
DataAcq Meth : M262539

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.37	152	503104	40.00	ug/L	-0.01
19) Naphthalene-d8	13.32	136	1816137	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.68	164	1084251	40.00	ug/L	-0.01
54) Phenanthrene-d10	20.95	188	1735091	40.00	ug/L	-0.02
66) Chrysene-d12	26.46	240	1531979	40.00	ug/L	-0.02
75) Perylene-d12	29.55	264	1526970	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 21 - 100		Recovery = 0.00%#			
6) Phenol-d5	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery = 0.00%#			
20) Nitrobenzene-d5	11.71	82	384174	16.49	ug/L	-0.02
Spiked Amount 50.000	Range 35 - 114		Recovery = 32.98%#			
38) 2-Fluorobiphenyl	16.07	172	561861	16.00	ug/L	-0.02
Spiked Amount 50.000	Range 43 - 116		Recovery = 32.00%#			
58) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 123		Recovery = 0.00%#			
69) p-Terphenyl-d14	24.32	244	330918	9.16	ug/L	-0.02
Spiked Amount 50.000	Range 33 - 141		Recovery = 18.32%#			
Target Compounds						Qvalue
62) Phenanthrene	20.99	178	55032	1.09	ug/L	99

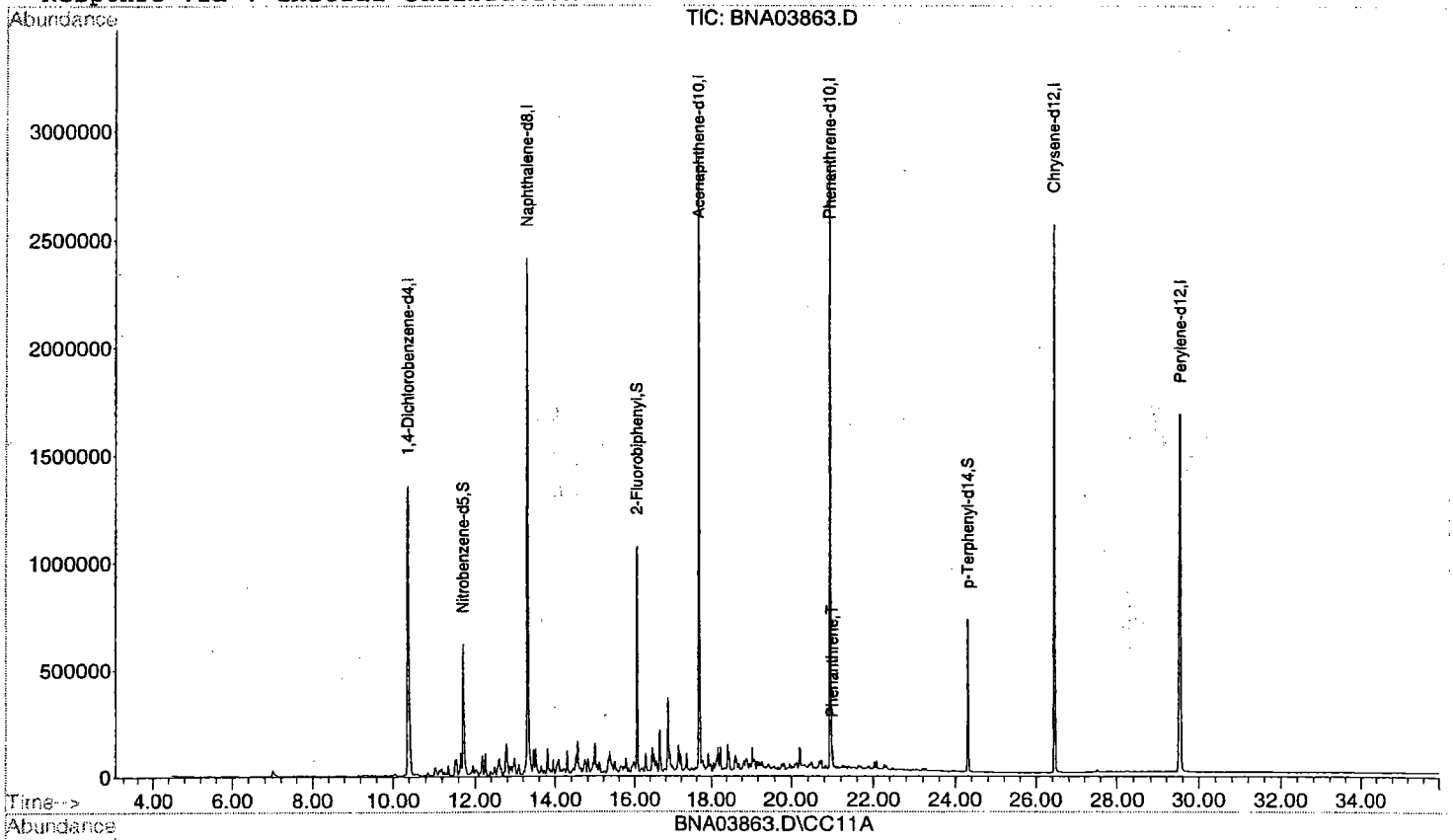
(#) = qualifier out of range (m) = manual integration
BNA03863.D M262539.M Mon May 01 13:55:52 2000

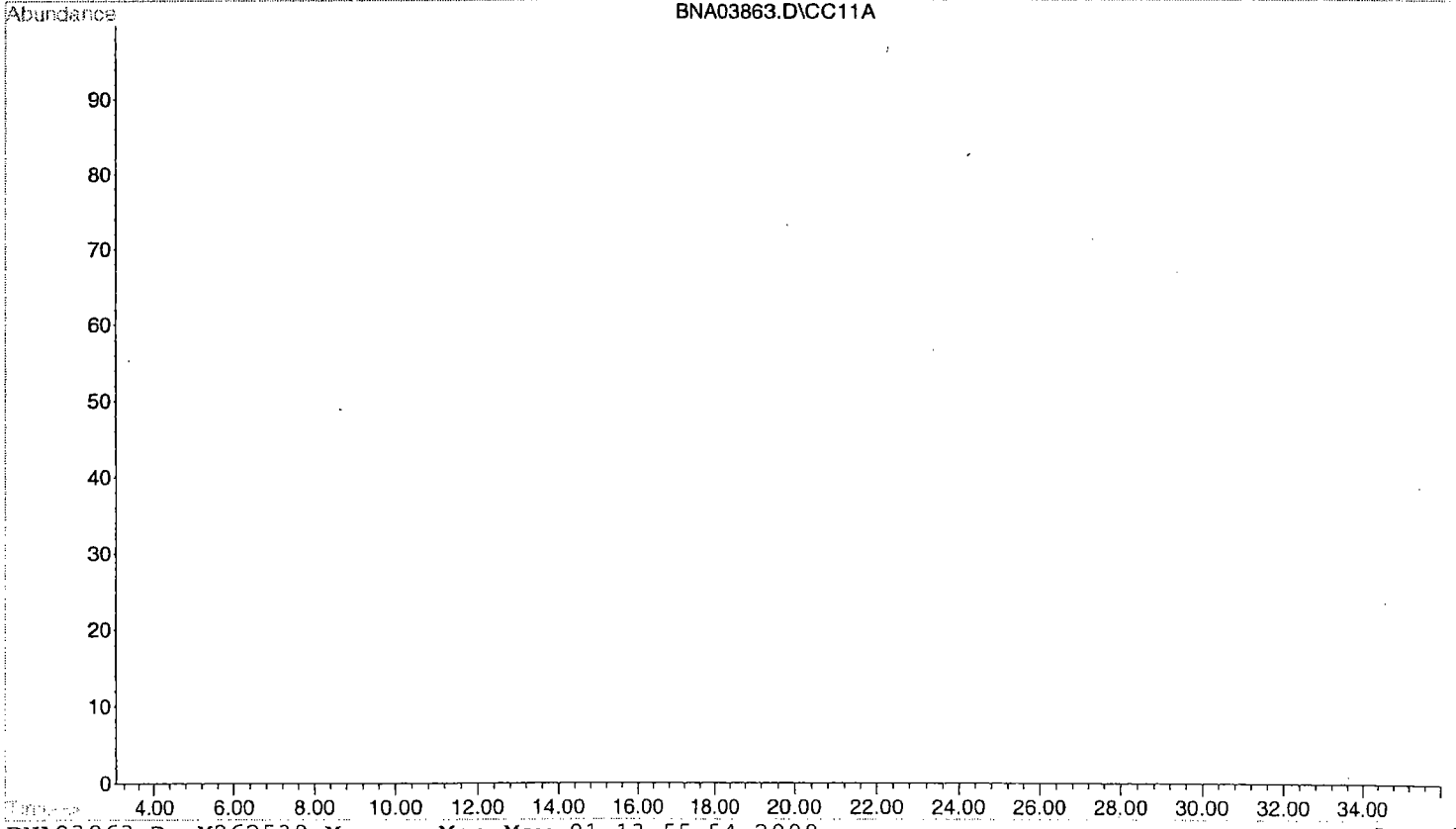
000085

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000427\BNA03863.D Vial: 10
Acq On : 28 Apr 2000 7:28 am Operator: Bhaskar
Sample : 5369.01 Inst : GC BNA 2
Misc : 876-1 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: May 1 10:17 2000 Quant Results File: M262539.RES

Method : C:\HPCHEM\1\METHODS\M262539.M (RTE Integrator)
Title : BNA Calibration
Last Update : Mon Apr 24 14:18:22 2000
Response via : Initial Calibration





000086

Quantitation Report (QT/LSC Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03734.D Vial: 12
Acq On : 23 Mar 2000 6:19 pm Operator: Bhaskar
Sample : 5244.09Dup Inst : GC BNA 2
Misc : 00M12MW24Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:00 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.42	152	401701	40.00	ug/L	-0.03
19) Naphthalene-d8	13.36	136	1507447	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.72	164	901483	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.99	188	1434429	40.00	ug/L	-0.03
66) Chrysene-d12	26.50	240	1217551	40.00	ug/L	-0.04
75) Perylene-d12	29.59	264	1235109	40.00	ug/L	-0.06
System Monitoring Compounds						
4) 2-Fluorophenol	7.87	112	727595	52.89	ug/L	-0.03
Spiked Amount 100.000	Range 21 - 100		Recovery = 52.89%			
6) Phenol-d5	9.90	99	610210	35.89	ug/L	-0.05
Spiked Amount 100.000	Range 10 - 94		Recovery = 35.89%			
20) Nitrobenzene-d5	11.76	82	632655	35.18	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 70.36%			
38) 2-Fluorobiphenyl	16.11	172	1009923	37.13	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery = 74.26%			
58) 2,4,6-Tribromophenol	19.55	330	242718	75.10	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 75.10%			
69) p-Terphenyl-d14	24.36	244	1057876	39.34	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery = 78.68%			

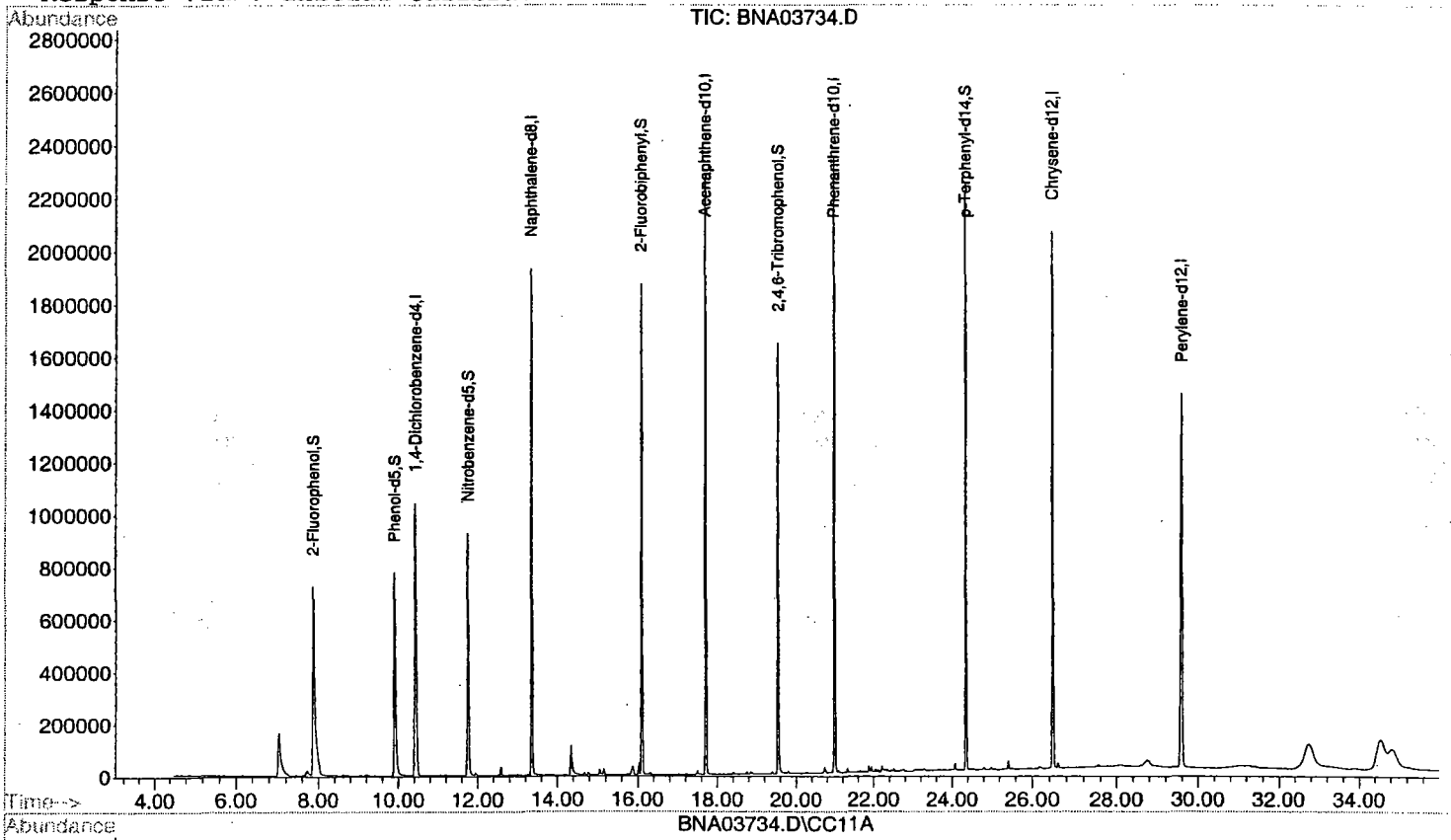
Target Compounds Qvalue

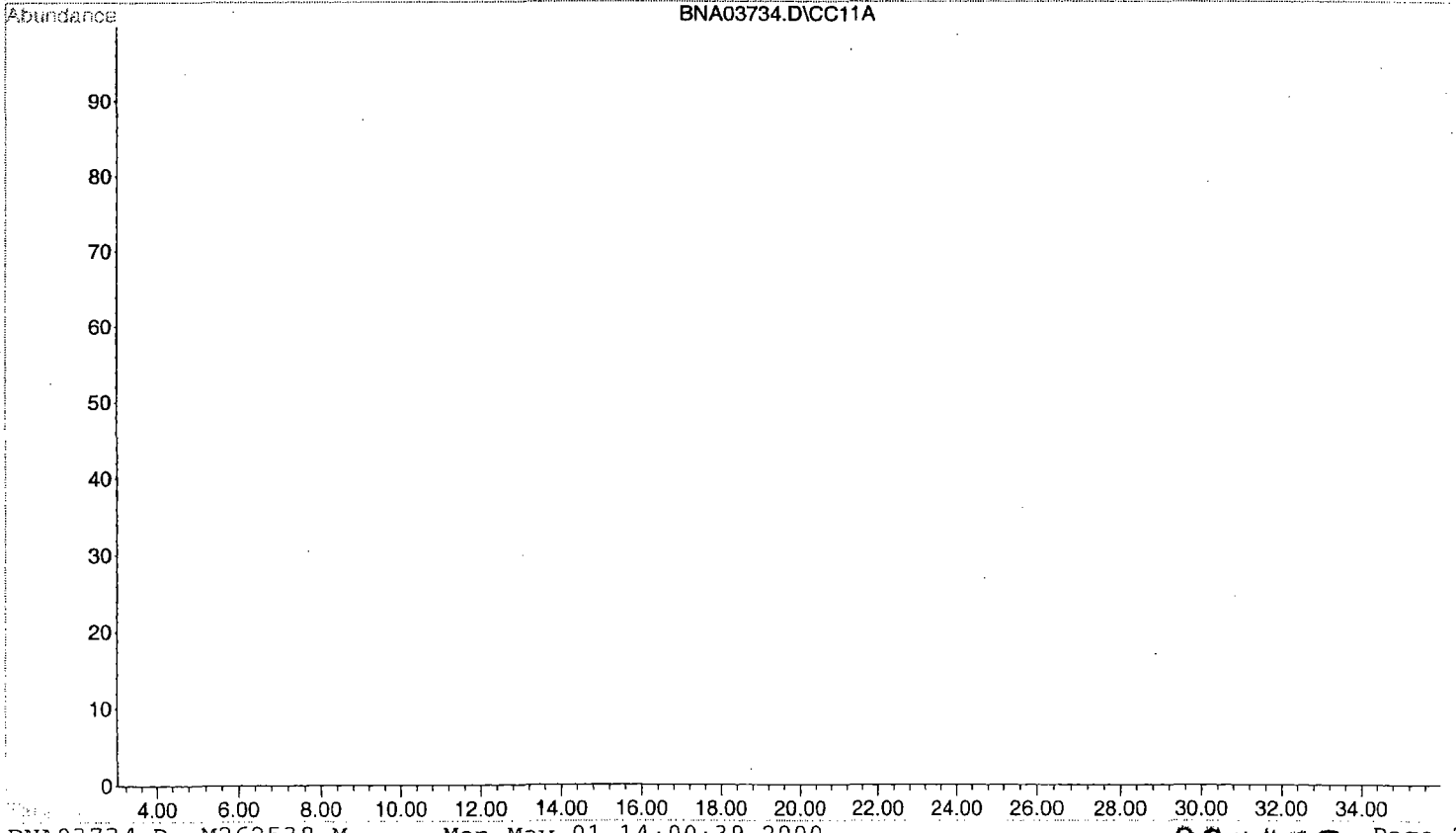
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\000323\BNA03734.D Vial: 12
Acq On : 23 Mar 2000 6:19 pm Operator: Bhaskar
Sample : 5244.09Dup Inst : GC BNA 2
Misc : 00M12MW24Dup Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 9:00 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.42	152	397832	40.00	ug/L	-0.03
19) Naphthalene-d8	13.36	136	1499835	40.00	ug/L	-0.03
34) Acenaphthene-d10	17.72	164	892486	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.99	188	1445413	40.00	ug/L	-0.03
66) Chrysene-d12	26.50	240	1226360	40.00	ug/L	-0.04
75) Perylene-d12	29.60	264	1247102	40.00	ug/L	-0.05
System Monitoring Compounds						
4) 2-Fluorophenol	7.87	112	703610	51.64	ug/L	-0.03
Spiked Amount 100.000	Range 21 - 100		Recovery = 51.64%			
6) Phenol-d5	9.90	99	590416	35.06	ug/L	-0.04
Spiked Amount 100.000	Range 10 - 94		Recovery = 35.06%			
20) Nitrobenzene-d5	11.76	82	669722	37.43	ug/L	-0.03
Spiked Amount 50.000	Range 35 - 114		Recovery = 74.86%			
38) 2-Fluorobiphenyl	16.11	172	1065247	39.56	ug/L	-0.04
Spiked Amount 50.000	Range 43 - 116		Recovery = 79.12%			
58) 2,4,6-Tribromophenol	19.56	330	260310	79.93	ug/L	-0.03
Spiked Amount 100.000	Range 10 - 123		Recovery = 79.93%			
69) p-Terphenyl-d14	24.36	244	1085622	40.09	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery = 80.18%			
Target Compounds						Qvalue
2) Pyridine	4.91	79	47157m	2.88	ug/L	
3) N-nitroso-dimethylamine	4.89	74	86649m	9.71	ug/L	
5) Aniline	9.83	93	162941	10.54	ug/L	98
7) Phenol	9.93	94	140061	7.59	ug/L	86
8) bis(2-Chloroethyl)ether	9.95	93	224088	13.28	ug/L	96
9) 2-Chlorophenol	10.08	128	211239	15.50	ug/L	99
10) 1,3-Dichlorobenzene	10.33	146	212419	12.01	ug/L	99
11) 1,4-Dichlorobenzene	10.45	146	214896	12.09	ug/L	98
12) Benzyl alcohol	10.85	108	134423	14.79	ug/L	98
13) 1,2-Dichlorobenzene	10.88	146	207349	12.64	ug/L	98
14) 2-Methylphenol	11.20	108	191067	14.32	ug/L	97
15) bis(2-chloroisopropyl)ethe	11.17	45	402870	18.83	ug/L	99
16) 4-Methylphenol	11.54	108	188804	14.71	ug/L	98
17) n-Nitroso-di-n-propylamine	11.48	130	41077	14.73	ug/L	95
18) Hexachloroethane	11.56	117	82314	12.16	ug/L	94
21) Nitrobenzene	11.80	77	280035	12.89	ug/L	98
22) Isophorone	12.33	82	534876	13.84	ug/L	99
23) 2-Nitrophenol	12.55	139	115087	15.06	ug/L	93
24) 2,4-Dimethylphenol	12.72	107	245895	15.38	ug/L	99
25) bis(2-Chloroethoxy)methane	12.90	93	273393	14.10	ug/L	99
26) 2,4-Dichlorophenol	13.14	162	184304	15.77	ug/L	100
27) Benzoic Acid	13.00	105	77048	7.33	ug/L	93
28) 1,2,4-Trichlorobenzene	13.27	180	174780	11.84	ug/L	99
29) Naphthalene	13.41	128	573992	14.09	ug/L	99
30) 4-Chloroaniline	13.64	127	168585	15.71	ug/L	98
31) Hexachlorobutadiene	13.85	225	96807	11.74	ug/L	98
32) 4-Chloro-3-methylphenol	14.91	107	227595	16.28	ug/L	98
33) 2-Methylnaphthalene	15.08	142	399677	14.91	ug/L	99
35) Hexachlorocyclopentadiene	15.68	237	66687	10.17	ug/L	99
36) 2,4,6-Trichlorophenol	15.95	196	136502	16.75	ug/L	99
37) 2,4,5-Trichlorophenol	16.08	196	145081	16.87	ug/L	97
39) 2-Chloronaphthalene	16.33	162	393219	13.67	ug/L	99
40) 2-Nitroaniline	16.74	138	140406	15.95	ug/L	94
41) Dimethylphthalate	17.25	163	496315	15.96	ug/L	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

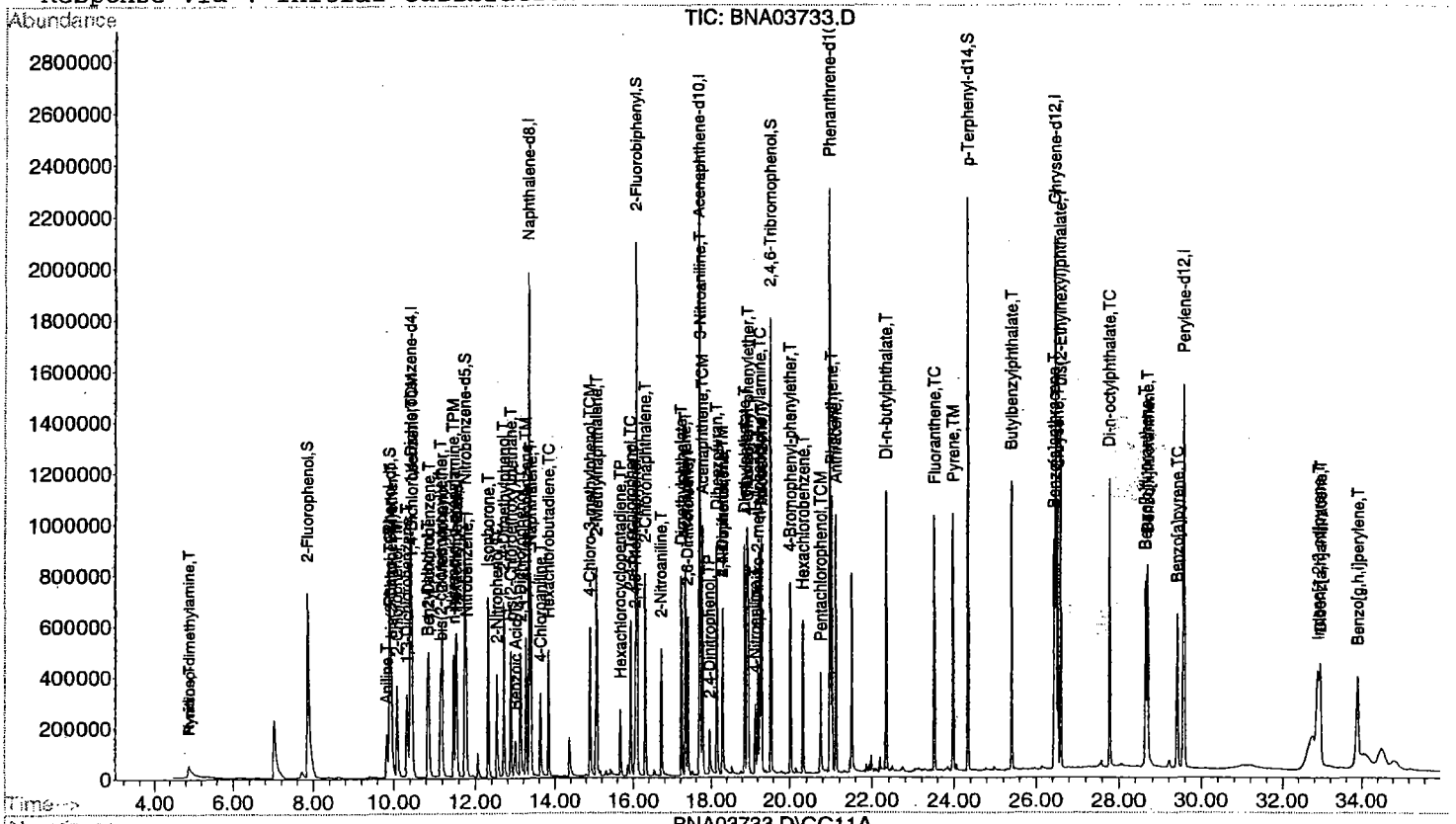
Quant Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration
DataAcq Meth : M262538

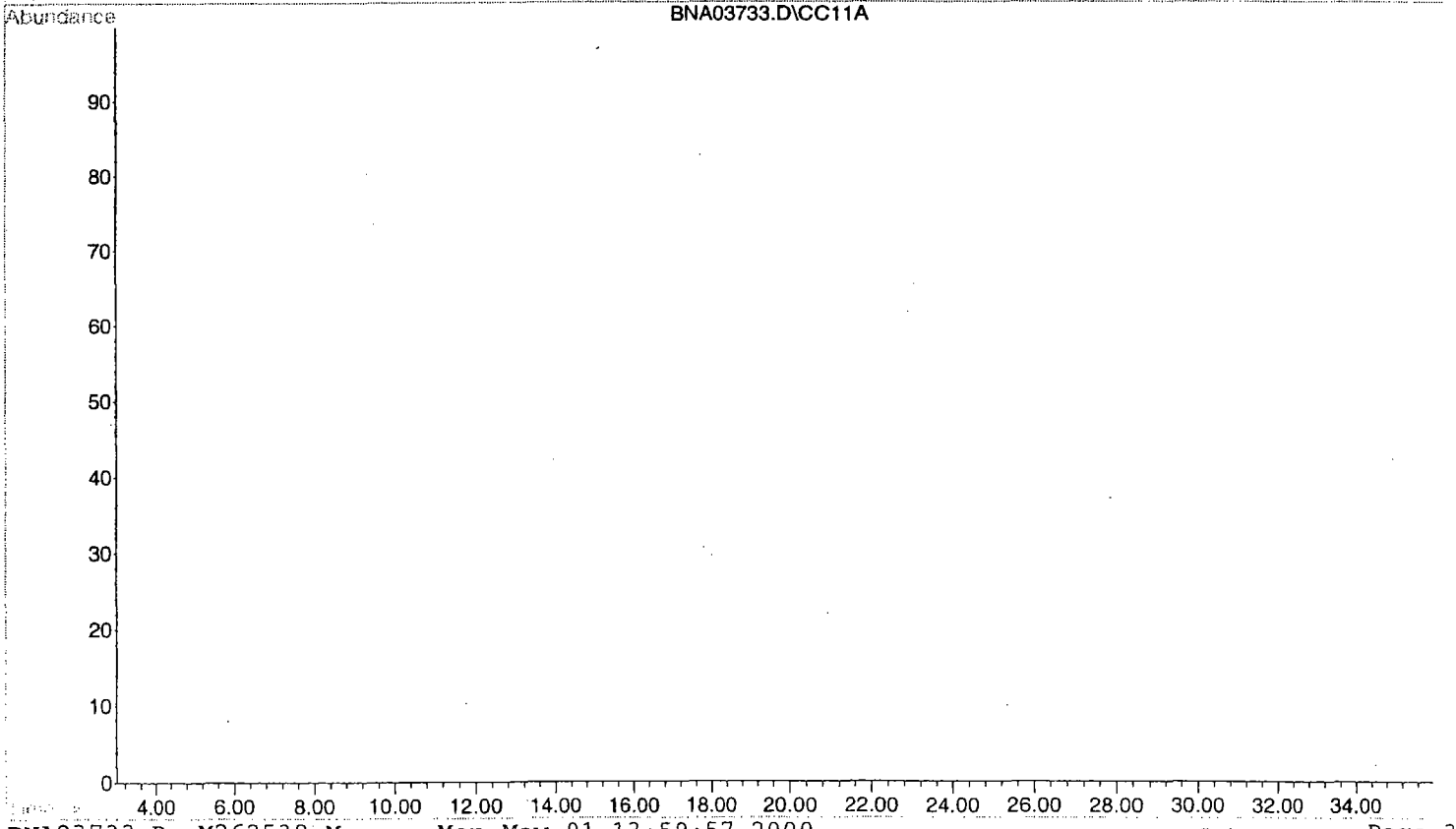
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
42)	Acenaphthylene	17.35	152	598927	15.16 ug/L	99
43)	2,6-Dinitrotoluene	17.41	63	86847	14.02 ug/L	97
44)	3-Nitroaniline	17.74	138	86371	15.74 ug/L	95
45)	Acenaphthene	17.79	153	382348	15.64 ug/L	98
46)	2,4-Dinitrophenol	17.97	184	43485	11.60 ug/L	100
47)	Dibenzofuran	18.16	168	563384	16.70 ug/L	99
48)	4-Nitrophenol	18.30	65	62382	9.10 ug/L	83
49)	2,4-Dinitrotoluene	18.31	165	155197	14.39 ug/L	97
50)	Diethylphthalate	18.88	149	510109	16.07 ug/L	99
51)	Fluorene	18.94	166	447403	15.64 ug/L	95
52)	4-Chlorophenyl-phenylether	18.97	204	217032	15.72 ug/L	97
53)	4-Nitroaniline	19.15	138	77685	14.65 ug/L	99
55)	4,6-Dinitro-2-methylphenol	19.22	198	81761	15.22 ug/L	96
56)	n-Nitrosodiphenylamine	19.27	169	327719	16.02 ug/L	98
57)	Azobenzene	19.31	77	577051	13.14 ug/L	98
59)	4-Bromophenyl-phenylether	20.04	248	115442	15.11 ug/L	93
60)	Hexachlorobenzene	20.34	284	110595	12.79 ug/L	96
61)	Pentachlorophenol	20.77	266	62627	13.96 ug/L	99
62)	Phenanthrene	21.03	178	654032	15.56 ug/L	98
63)	Anthracene	21.12	178	654490	15.21 ug/L	99
64)	Di-n-butylphthalate	22.36	149	865539	16.26 ug/L	99
65)	Fluoranthene	23.53	202	666614	15.03 ug/L	96
68)	Pyrene	24.00	202	699193	16.35 ug/L	94
70)	Butylbenzylphthalate	25.43	149	415328	17.75 ug/L	94
71)	Benzo[a]anthracene	26.46	228	635264	15.82 ug/L	98
73)	Chrysene	26.54	228	584171	15.89 ug/L	100
74)	bis(2-Ethylhexyl)phthalate	26.62	149	559621	17.40 ug/L	99
76)	Di-n-octylphthalate	27.80	149	933157	15.83 ug/L	99
77)	Benzo[b]fluoranthene	28.66	252	591482	13.70 ug/L	97
78)	Benzo[k]fluoranthene	28.71	252	576332	13.28 ug/L	97
79)	Benzo[a]pyrene	29.43	252	534538	13.17 ug/L	97
80)	Indeno[1,2,3-cd]pyrene	32.89	276	592940	13.73 ug/L	96
81)	Dibenz[a,h]anthracene	32.96	278	498726	15.43 ug/L	98
82)	Benzo[g,h,i]perylene	33.90	276	521003	14.14 ug/L	98

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

Data File : C:\HPCHEM\1\DATA\000323\BNA03733.D Vial: 11
Acq On : 23 Mar 2000 5:31 pm Operator: Bhaskar
Sample : 5244.09MS Inst : GC BNA 2
Misc : 00M12MW24MS Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 4 8:58 2000 Quant Results File: M262538.RES

Method : C:\HPCHEM\1\METHODS\M262538.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Feb 29 14:07:51 2000
Response via : Initial Calibration





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 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 NA
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 _____

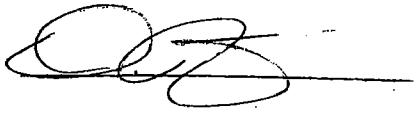
Date 5/31/00

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

APPENDIX F

PHOTOGRAPHS

June 2, 1998

PHOTOGRAPHIC LOG

UST NO. 81533-138

Building 876B
Main Post-West
Fort Monmouth

SMC ENVIRONMENTAL SERVICES GROUP
Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.