United States Army
Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Building 801B
Main Post-West Area

NJDEP UST Registration No. 0081533-129

August 2001

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 801B

MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0081533-129

AUGUST 2001

PREPARED FOR:

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

PREPARED BY:

VERSAR
1900 FROST ROAD
SUITE 110
BRISTOL, PA 19007

PROJECT NO. 2491-308

TABLE OF CONTENTS

EXECUTIVE SUMMARY

UST Closure

On November 9, 1995, 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. 0081533-129 (Fort Monmouth ID No. 801B), was located northeast of Building 801. UST No. 0081533-129 was a 1,000-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. No holes or punctures were noted in the UST there were signs of patches on the inside bottom of the tank. Groundwater was encountered at a depth of 5.0 feet bgs. Signs of soil contamination were present in the excavation and a slight sheen appeared on groundwater in the excavation. Soil samples contained TPH concentrations ranging from 144 to 2190 mg/kg in the first round of samples collected November 16, 1995 and 621 to 976 mg/kg in the second round of sampling conducted November 25, 1995. Groundwater samples were collected at the location of the former tank on April 23, 2001 and May 21, 2001. There were no detectable concentrations of VOCs or SVOCs in either groundwater sample.

Site Restoration

Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with crushed stone, sand, and any available clean (response of <5 PPM on the PID) native backfill and restored to its original condition. A total of 35 cubic yards of contaminated soil was removed from the site.

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with TPH concentrations exceeding the NJDEP soil cleanup criteria (N.J.A.C. 7:26D) for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping. Groundwater has not been impacted by the former tank.

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-129 at Building 801B.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

New Jersey Department of Environmental Protection (NJDEP) Registration No. 0081533-129, was closed at Building 801B at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey (Figure 1) on November 9, 1995. The UST was a fiberglass, 1,000-gallon tank containing No. 2 fuel oil. This report presents the results of the Department of Public Works (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP.

Decommissioning activities for UST No. 0081533-129 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. 0081533-129 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 0081533-129 are included in Appendices A and B, respectively.

This UST Closure and Site Investigation Report has been prepared by Versar, 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 801B is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-129 was located northeast of Building 801 and appurtenant copper piping ran from the excavation to Building 801. 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 801. 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 thickness of these units varies 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 801 located approximately 400 feet south of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 801B is anticipated to be to the north.

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 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 15 gallons of liquid from the UST and its associated piping were transported by Lorco Petroleum Services to Lionetti Oil Recovery, an NJDEP-approved petroleum recycling and disposal company located in Old Bridge, 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. No holes or punctures 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. Soil screening was also performed along the piping run associated with the UST closure. Groundwater was encountered at a depth of 5.0 feet bgs and no sheen was observed.

1.5 MANAGEMENT OF EXCAVATED SOILS

Based on PID air monitoring and TPH analysis results from the post-excavation soil samples, 35 cubic yards of soil exhibited signs of contamination and were removed from the site.

2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory, an NJDEP-certified testing laboratory. All sampling was performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator according to the methods described in the NJDEP *Field Sampling Procedures Manual* (1992). Sampling frequency and parameters analyzed complied with the NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (October 1990 and revisions dated November 1, 1991) which was the applicable regulation at the date of the closure. All records of the Site Investigation activities are maintained by the Fort Monmouth DPW Environmental Office.

The following Parties participated in Closure and Site Investigation Activities:

- Subsurface Evaluator: Dinker DeSai
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (732) 532-6224
  NJDEP Certification No.: 0010173

- Analytical Laboratory: U.S. Army Fort Monmouth Environmental Laboratory
  Contact Person: Daniel K. Wright
  Phone Number: (908) 532-4359
  NJDEP Company Certification No.: 13461

- Hazardous Waste Hauler: Casie Protank Environmental Services
  Contact Person: Bob Corsiglia
  Phone Number: (609) 696-4401
  NJDEP Company Certification No.: 16931

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using a PID and visual observations to identify potentially contaminated material. Soil excavated from around the tank and appurtenant piping, as well as the UST excavation sidewalls and bottom, did not exhibit any evidence of potential contamination. Groundwater was encountered at a depth of 5.0 feet bgs with a slight sheen.

2.3 SOIL SAMPLING

On November 16, 1995, following the removal of the UST, nine (9) post-excavation soil samples and one duplicate sample were collected from the UST excavation. Samples were collected at depths ranging from 2 feet along the piping and 5 to 6 feet in the excavation. All samples were analyzed for

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST, post-excavation soil samples were collected on April 23 and May 21, 2001 from eleven (11) locations. All samples were analyzed for TPH and total solids. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling locations are shown on Figure 4. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected from the UST excavation and from below piping associated with the UST contained concentrations of TPH below the NJDEP soil cleanup criteria. Samples contained levels of TPH ranging in concentration from 144 to 2190 mg/kg.

Two groundwater samples were collected from the former UST location. Groundwater sample results were compared to the NJDEP Groundwater Quality Standards (N.J.A.C. 7:9-6). Only one compound was detected above the method detection limit. Acetone was present at a concentration of 13.59 ug/L, which is below the GWQS of 700 ug/L.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 801B were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, there are no soils with TPH concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, in the former location of the UST or associated piping.

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-129 at Building 801B.

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 801B, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
A	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
B	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
C	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
D	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
E	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
F	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
G	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
H	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
I	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
J (dupe)	11/16/95	11/20/95	Soil	Post-Excavation	TPH	OQA-QAM-025
J	11/27/95	11/29/95	Soil	Post-Excavation	TPH	OQA-QAM-025
K	11/27/95	11/29/95	Soil	Post-Excavation	TPH	OQA-QAM-025
L (dupe)	11/27/95	11/29/95	Soil	Post-Excavation	TPH	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 2
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 801B, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (% solid) (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A piping 1'=	1971.1	11/16/95	11/20/95	Total Solid	--	--	87	--	--
				TPH	100	Yes	586	10,000	No
B piping 2'□	1971.2	11/16/95	11/20/95	Total Solid	--	--	84	--	--
				TPH	100	Yes	231	10,000	No
C sidewall 5'□	1971.3	11/16/98	11/20/95	Total Solid	--	--	85	--	--
				TPH	100	Yes	341	10,000	No
D sidewall 6'□	1971.4	11/16/95	11/20/95	Total Solid	--	--	85	--	--
				TPH	100	Yes	2190	10,000	No
E sidewall 6'□	1971.5	11/16/95	11/20/95	Total Solid	--	--	85	--	--
				TPH	100	Yes	247	10,000	No
F sidewall 5'=	1971.6	11/16/95	11/20/95	Total Solid	--	--	83	--	--
				TPH	100	Yes	209	10,000	No
G sidewall 5'=	1971.7	11/16/95	11/20/95	Total Solid	--	--	83	--	--
				TPH	100	Yes	144	10,000	No
H floor 9'=	1971.8	11/16/95	11/20/95	Total Solid	--	--	77	--	--
				TPH	100	Yes	273	10,000	No
I floor 9'=	1971.9	11/16/95	11/20/95	Total Solid	--	--	80	--	--
				TPH	100	Yes	148	10,000	No
J duplicate of I=	1971.10	11/16/95	11/20/95	Total Solid	--	--	82	--	--
				TPH	100	Yes	238	10,000	No
J sidewall 5'=	1984.1	11/27/95	11/29/95	Total Solid	--	--	90	--	--
				TPH	100	Yes	976	10,000	No
K sidewall 8'=	1984.3	11/27/95	11/29/95	Total Solid	--	--	99	--	--
				TPH	100	Yes	621	10,000	No
K duplicate 8'=	1984.3	11/27/95	11/29/95	Total Solid	--	--	96	--	--
				TPH	100	Yes	865	10,000	No

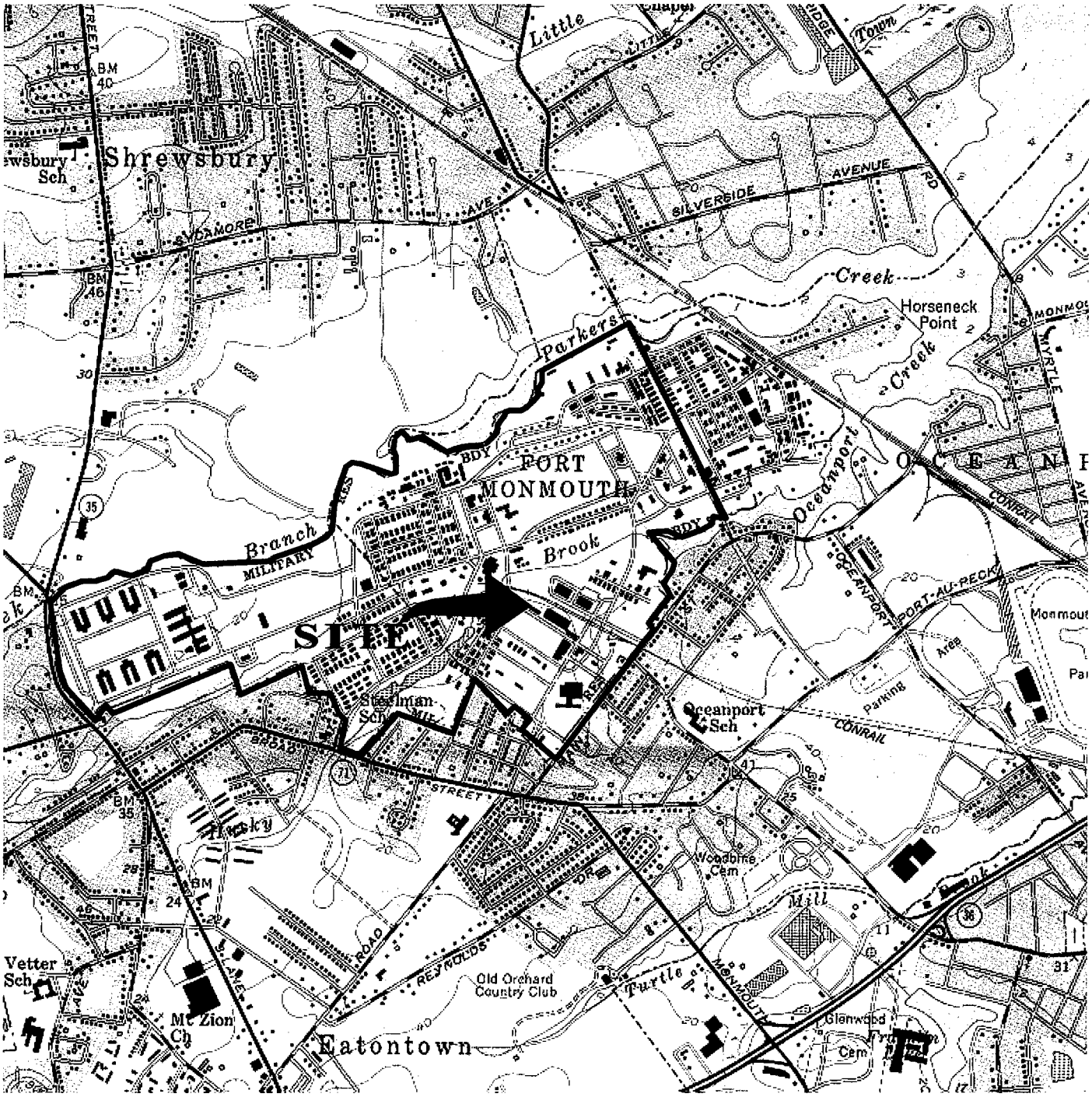
Note:

* NJDEP Residential Direct Contact soil cleanup criteria for total organics

-- Not detected above stated sample quantitation limit

TPH Total Petroleum Hydrocarbons

FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

NEW JERSEY

QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

LOCATION MAP
Building 801B
Main-Post West
Fort Monmouth Army Base
Monmouth County, NJ

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

Scale: 1" = 2000'

Date: Nov. 1995

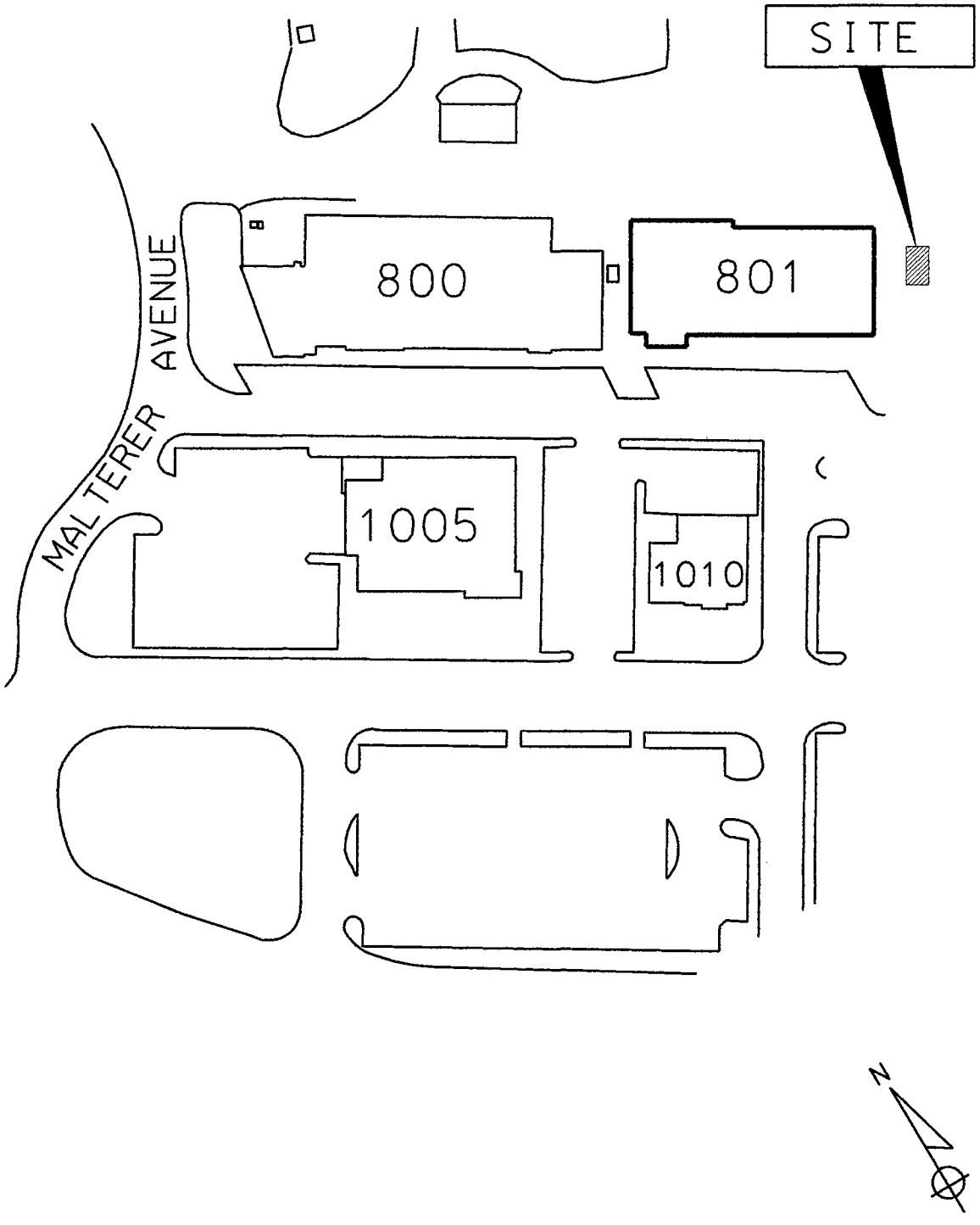


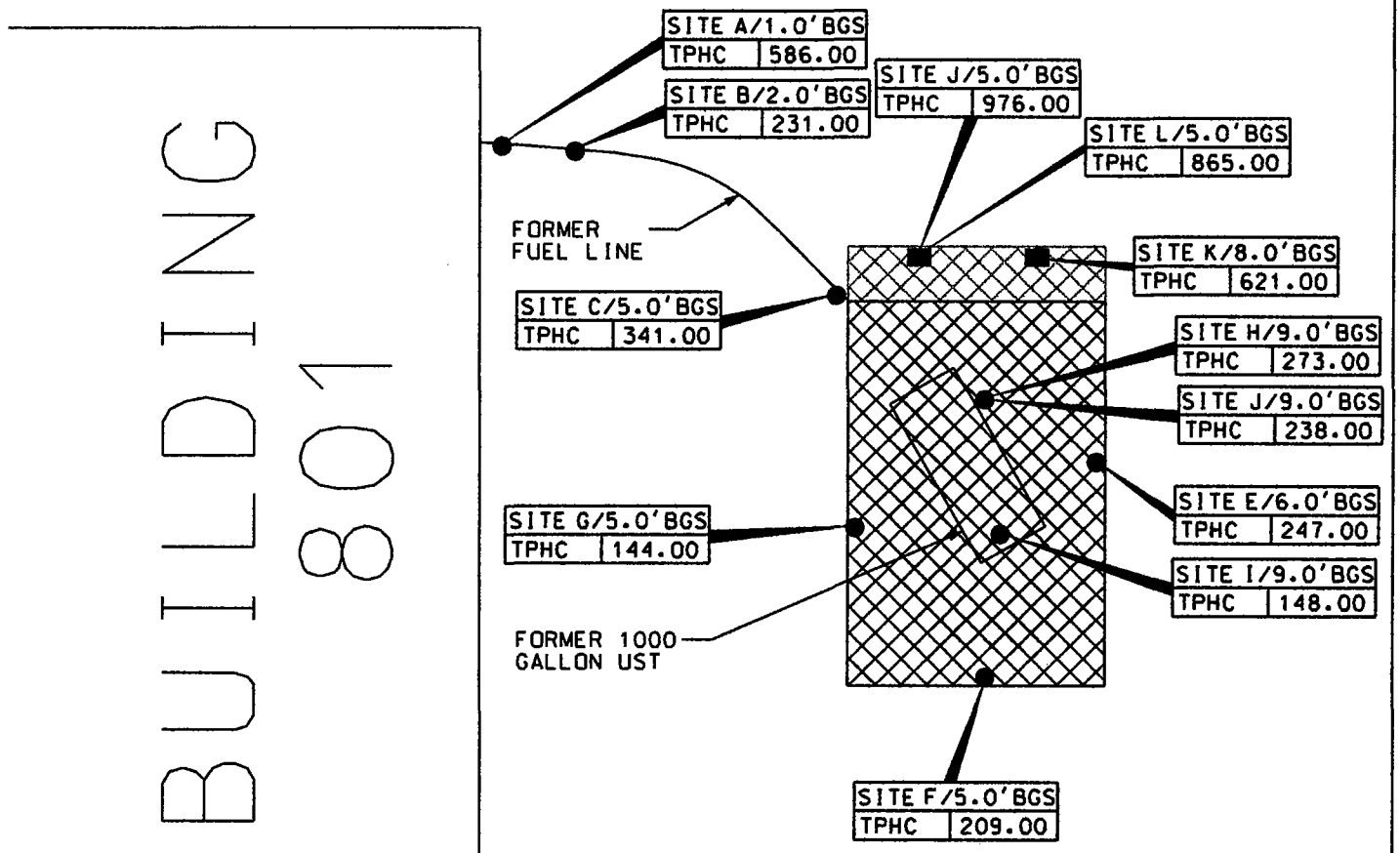
FIGURE 2
SITE MAP
BUILDING 801
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=100'

DATE: August 2001

8018 F1G2



LEGEND

- SOIL SAMPLE LOCATION (NOVEMBER 17, 1995)
- SOIL SAMPLE LOCATION (NOVEMBER 27, 1995)
- LIMIT OF EXCAVATION (NOVEMBER 17, 1995)
- LIMIT OF EXCAVATION (NOVEMBER 27, 1995)

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
BUILDING 801
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

VERSAR
ENGINEERS, MANAGERS, SCIENTISTS & PLANNERS
BRISTOL, PA.

SCALE: 1"=10' | DATE: AUG 2001

8018 F1b4

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 : 0081533-129
- Incident Report Number : 95-11-13-1007-23
- Tank Closure Number: C-93-3906

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: _____

Company Name: U.S. Army Fort Monmouth Date: _____

APPENDIX B

WASTE MANIFEST

State of New Jersey
Department of Environmental Protection
Hazardous Waste Regulation Program
Manifest Section
CN 421, Trenton, NJ 08625-0421

* 2277648

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

Form Approved. OMB No. 2050-0039. Expires 9-3(

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ321002059 Manifest Document No. 7648
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
U.S. ARMY COMMUNICATIONS ELECTRONICS COMMAND
MAIN POST - C/O JAMES SHERGHIO, BLDG 173
ATTN: SELFM-ON-EV - FORT MONMOUTH, NJ 07703
4. Generator's Phone (908) 532-6223

A. State Manifest Document Number NJA 2277648
B. State Generator's ID-(Gen. Site Address) SAME

5. Transporter 1 Company Name: LIONETTI OIL RECOVERY CO., INC.
6. US EPA ID Number: NJD084044064
C. State Trans. ID-NJDEPE S6247
Decal No.-
D. Transporter's Phone (908) 721-0900

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID-NJDEPE
Decal No.-
F. Transporter's Phone ( )

9. Designated Facility Name and Site Address
LIONETTI OIL RECOVERY CO., INC./DBA LORCO PETROLEUM SVCS.
RUNYON & CHEESEQUAKE ROADS
OLD BRIDGE NJ 08857
10. US EPA ID Number: NJD084044064
G. State Facility's ID
H. Facility's Phone (908) 721-0900

	11. US DOT Description (Including Proper Shipping Name, Hazard Class or Division, ID Number and Packing Group)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	PETROLUEM OIL (PETROLEUM OIL) COMBUSTIBLE LIQUID UN 1270 PG III	X	001	TT	XX400 ~~XXX~~	G	X72
b.	PETROLUEM OIL (PETROLEUM OIL) COMBUSTIBLE LIQUID UN1270 PG III	X	001	TT	XXX15	G	X72
c.							
d.							

J. Additional Descriptions for Materials Listed Above
a. T,L PETROLEUM OIL 2 WATER 98 %
b. T, L PETROLEUM OIL 99% WATER 1% NOT EPA REGULATED REGULATED AS HAZARDOUS WASTE IN NEW JERSEY
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04-FILTRATION
b. T04-FILTRATION
c.
d.

15. Special Handling Instructions and Additional Information
24 HOUR EMERGENCY RESPONSE #(908)721-0900
DECAL# 73630 ERG# 27 DEXSIL TEST KIT RESULTS <1000 %
a) 008153-130/8
b) 008153-129/8

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

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to t economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present ar future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and sele the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Ye
EUGENE W LESINSKI		11	09	9

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye
Anibal Vazquez		11	09	9

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Ye

FACILITY

19. Discrepancy Indication Space

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

Printed/Typed Name	Signature	Month	Da

EPA Form 8700-22 (Rev. 9/68) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

LORCO
PETROLEUM SERVICES

GENERATOR CERTIFICATION

I hereby certify to the best of my knowledge that the waste described on Hazardous Waste Manifest No. 2277648 dated 11-9-91, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

X721: Waste automotive crankcase and lubricating oils from automotive service and gasoline stations, truck terminals, and garages.

X722: Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel oil tanks.

X723: Waste oil and bottom sludge generated by gasoline stations when gasoline and oil tanks are tested, cleaned or replaced.

X724: Waste petroleum oil generated when tank trucks or other vehicles or mobile vessels are cleaned, including, but not limited to, oil ballast water from product transport units of boats, barges, ships or other vessels.

X725: Oil spill cleanup residue which: A. is contaminated beyond saturation; or B. the generator fails to demonstrate that the spill material was not one of the listed hazardous waste oils.

X726: The following used and unused waste oils: metal working oils; turbine lubricating oils; diesel lubricating oils; and quenching oils.

X728: Bottom sludge generated from the processing, blending, and treatment of waste oil in waste oil processing facilities.

I am duly authorized to sign said certification.

Generator fort monmouth

Generator's EPA ID No. NJ3210020597

Address Bld 804 + 801 fort monmouth NJ 07703

Print Name EUGENE W LESINSKI Signature E.W Lesinski

Title ENVIRONMENTAL PROTECTION SPECIALIST

Date 11-9-91

Form 003 8/94

LORCO PETROLEUM SERVICES
RD1 Box 5A
Old Bridge, N.J. 08857
(908) 721-0900
Fax (908) 721-0231

BLDG 801B

STANDARD COLLECTION ORDER FORM

114065

OFFICE USE ONLY

GENERATOR/LOCATION

NAME: fort monmouth
INFORMATION/ATTENTION LINE:
ACCOUNT APPROVAL CODE:
DELIVERY ADDRESS: R435 Bld 801
CITY: Fatontown STATE: NJ ZIP: 07703
PHONE NUMBER: —
PURCHASE ORDER NUMBER:
USA EPA ID NO. (IF APPLICABLE): NJ0321002059
STATE ID NO:

BILL TO (IF DIFFERENT FROM LOCATION)

NAME: fort monmouth
INFORMATION/ATTENTION LINE:
ACCOUNT APPROVAL CODE: 13214
DELIVERY ADDRESS:
CITY: STATE: ZIP:
PHONE NUMBER:
PURCHASE ORDER NUMBER:

MANIFEST NUMBER: 72776445

SHIPPING INFORMATION

This is to certify that the below named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

NO.	TYPE	QTY.	UNIT	US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	SALES REPRESENTATIVE

SERVICE SECTION

SALES CODE	DESCRIPTION	WASTE CODE	QUANTITY	UNIT OF MEASURE	PRICE	TAX	LINE TOTAL
40500	USED OIL REMOVAL						
40501	OIL WATER DISPOSAL						
40502	SLUDGE DISPOSAL	X722	15	gallons			
41000	NON HAZARDOUS DISPOSAL						
41001	RCRA WASTE DISPOSAL						
41500	VAC TRUCK & OPERATOR	2 mcn	8.10Am	1.45pm			
41501	DRUM DISPOSAL						
41502	SEPARATOR CLEANING						
41503	QAQC ANALYTICAL TESTING						
41504	TANK CLEANING	1	1000	Tank			
41505	CONFINED SPACE ENTRY						
42000	MANIFEST PROCESSING FEE						
42001	DEXSIL TEST KIT						
						TOTAL	

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT SECTION. $

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1½% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES.

GENERATOR WARRANTS AND REPRESENTS THAT THE MATERIALS PROVIDED LORCO HEREUNDER HAVE NOT BEEN MIXED, COMBINED, OR OTHERWISE BLENDED IN ANY QUANTITY WITH MATERIALS CONTAINING POLYCHLORINATED BIPHENYLS (PCB) OR ANY OTHER MATERIAL DEFINED AS HAZARDOUS WASTE UNDER APPLICABLE LAWS, INCLUDING BUT NOT LIMITED TO 40 CFR PART 261, GENERATOR AGREES TO INDEMNIFY AND HOLD LORCO HARMLESS FOR ANY DAMAGES, COSTS, ATTORNEY'S FEES, ETC. ARISING OUT OF OR IN ANY WAY RELATED TO A BREACH OF THE ABOVE WARRANTY BY THE GENERATOR.

Generator certifies that the waste is X722
In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

EUGENE W LESINSKI — Title
Print Name
Signature — 11-9-95 Date
GENERATOR/CUSTOMER

SMALL QUANTITY GENERATOR CERTIFICATION

I certify that this generator generates less than 100 kilograms (approximately 220 pounds or 30 gallons) of hazardous waste per month, as defined at 40 C.F.R. 261, and does not accumulate more than 1,000 kilograms of such waste during the month.

N/A
GENERATOR'S SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT TEST RESULTS
<1,000 PPM

PAYMENT RECEIVED SECTION

CASH ☐	TOTAL RECEIVED
CHECK NUMBER	

PAYMENT MADE SECTION

PAYMENT METHOD	PAYMENT AMOUNT
CASH ☐ CHECK ☐	

RECEIVED BY:

CUSTOMER'S SIGNATURE

In accordance with 40 CFR 266 § 43(5) LORCO has notified the US EPA of its location and used oil management activities.

Anibal Vazquez
Print Name
Signature — 11-9-95 Date
LORCO REPRESENTATIVE

CUSTOMER

VHW-001 (REV 9/86)

State of New Jersey
Department of Environmental Protection
Division of Hazardous Waste Management
Manifest Section
CN 028, Trenton, NJ 08625

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

Form Approved. OMB No. 2050-0039. Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 — Manifest Document No. 99491

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
US Army Communications Electronics Command
Main Post Oo James Shirgtio Bldg 2504
Fort Monmouth NJ 07703

A. State Manifest Document Number **NJA 1549241**

B. State Generator's ID SAME

4. Generator's Phone (908 532 6223 A++SEIFM-AL-EM-MS

5. Transporter 1 Company Name: L+L Oil Service INC — 6. US EPA ID Number: NJD011142895

C. State Trans. ID: NJDEPS66601

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

D. Transporter's Phone: 908 566-2785

E. State Trans. ID

9. Designated Facility Name and Site Address: Lionetti Oil Recovery, Cheesequake + Runyon Rd., Old Bridge NJ. 08857 — 10. US EPA ID Number: NJD084044064

F. Transporter's Phone ( )

G. State Facility's ID

H. Facility's Phone: 908 721-0900

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Petroleum Oil NOS #2 Fuel Oil Combustible Liquid UN1203	01	TT	1000	G	X122
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
a. L.T. 95% water 5% #2 Fuel Oil
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. T04 Filtration
b.
d.

15. Special Handling Instructions and Additional Information
DECA1-96350 ERG 27 Bldg - #801 B
UST - 8153310 #129
1000 GAL - #2 Oil
24 Hr Emer 908-566-2785

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.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR — Printed/Typed Name: Charles Appleby DEH Environmentalist — Signature — Month Day Year: 02 18 93

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials — Printed/Typed Name: JEFF TODD — Signature — Month Day Year: 02 18 93

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 hazardous materials covered by this manifest except as noted in Item 19. — Printed/Typed Name — Signature — Month Day Year

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection. (609) 292-5560 (Day) (609) 292-7172 (Night)

EPA Form 8700-22 (Rev. 9/88) Previous editions are obsolete.

SIGNATURE AND INFORMATION *MUST* BE LEGIBLE ON ALL COPIES

1 — TSD MAIL TO TSD'S STATE

GENERATOR CERTIFICATION

I hereby certify that the waste described on Hazardous Waste Manifest No. NJA1549241 dated 2/18/93, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

X721: Waste automotive crankcase and lubricating oils from automotive service and gasoline stations, truck terminals, and garages.

X722; Waste oil and bottom sludge generated from tank cleanouts from residential/commercial fuel oil tanks.

X723: Waste oil and bottom sludge generated by gasoline stations when gasoline and oil tanks are tested, cleaned or replaced.

X724: Waste petroleum oil generated when tank trucks or other vehicles or mobile vessels are cleaned, including, but not limited to, oil ballast water from product transport units of boats, barges, ships or other vessels.

X725: Oil spill cleanup residue which: A. is contaminated beyond saturation; or B. the generator fails to demonstrate that the spill material was not one of the listed hazardous waste oils.

X726: The following used and unused waste oils: metal working oils; turbine lubricating oils; diesel lubricating oils; and quenching oils.

X728: Bottom sludge generated from the processing, blending, and treatment of waste oil in waste oil processing facilities.

I am duly authorized to sign said certification.

Generator U.S. Army Communications Electronics Command Mail Post

Generator's EPA ID No. NJ3210020597

Address CO. James Stirgato Bld. 2504 Ft. Monmouth

Print Name Charles Appley Signature

Title DEH Environmental Protection Specialist

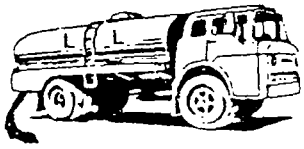
Date 2/19/93

Form 003 5/91

L & L OIL SERVICE INC.

PETROLEUM RECYCLING & DISPOSAL

740 Lloyd Road
Aberdeen, N.J. 07747
Tel. (908) 566-2785
FAX (908) 583-4604



Non Conditionally Exempt Small Quantity Generator

Phone E. Systems Date 2/18/93

Name Ft. Monmouth

Address Bldg. 1009 Commisary
Ft. Monmouth N.J

Time In Destination	Time Out Destination
10:00	11:40

Pumped water & Oil
from 1000 GAL Tank.

1000 GAL

Driver for L&L Oil Service conducted a Chlorde-Tect 1000 field test kit for halogens. The oil sample has been found to be ~~OVER~~ UNDER 1000 ppm.

Load Rejected ~~YES~~ NO

Customer's Name (Print) B. McKee Title Chief

Cusomer's Signature BMcK

Manifest Doc# NJA 1549241

E.P.A. ID# NJ3210020597

L & L will not be responsible for any ground contamination.

Thank you

Thurs 900AM

6305

L. & L. OIL SERVICE, INC.

D.E.P. & E.P.A. Approved

740 Lloyd Road

ABERDEEN, NEW JERSEY 07747

Tel: (908) 566-2785 • Fax: (908) 583-4604

SOLD TO: Ft Monmouth
Bldg 1004 Commissary
Ft Monmouth

BILL TO: E Systems

CONTACT: _____ ATTN: _____

ACCT. #	ORDER DATE	DRIVER	JOB SCHEDULED FOR
			2-18-93

PHONE #	EPA ID #	CUSTOMER PO #	TERMS

#	TYPE OF WORK	TYPE OF MATERIALS
1	Pump out	Water + oil
2		

SPECIAL INSTRUCTIONS: Non Conel

PRICE QUOTED:

ESTIMATED GALLONAGE: 1000 GAL

DISPOSAL PER GALLON: _____

HOURLY RATE: _____

ENTER & CLEAN TANK: _____

THIS WORK HAS BEEN INSPECTED AND PERFORMED TO THE CUSTOMER'S SATISFACTION.

SIGNATURE: B. McK

This order has been signed and confirmed by the customer that L.&L. Oil Service has left the grounds in good condition and is not responsible for any spills or soil contamination.

WHITE/OFFICE **YELLOW/DRIVER** **PINK/CUSTOMER**

APPENDIX C

UST DISPOSAL CERTIFICATE

APPENDIX NOT AVAILABLE

AS OF THE DATE OF THIS REPORT

APPENDIX D

SOIL ANALYTICAL DATA PACKAGE

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

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

Lab. ID #: 1971.1-.10
Sample Rec'd: 11/17/95
Analysis Start: 11/20/95
Analysis Comp: 11/21/95

Analysis: 418.1 (TPH)
Matrix: Soil
Analyst: S. Hubbard
Ext. Meth: 3540A

NJDEPE UST Reg.#:
Closure #:
DICAR #:
Location #: **Bldg. 801B**

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1971.1	A - Pipe run @ 1' * OVA=ND	87	586.	100
1971.2	B - Pipe run @ 2' OVA=ND	84	231.	100
1971.3	C - Sidewall @ 5' OVA=ND	85	341.	100
1971.4	D - Sidewall @ 6' OVA=ND	85	2190.	100
1971.5	E - Sidewall @ 6' OVA=ND	85	247.	100
1971.6	F - Sidewall @ 5' OVA=ND	83	209.	100
1971.7	G - Sidewall @ 5' OVA=ND	83	144.	100
1971.8	H - Excavation Floor @ 9' OVA=ND	77	273.	100
1971.9	I - Excavation Floor @ 9' OVA=ND	80	148.	100
1971.10	J - Duplicate OVA=ND	82	238.	100
M. Bl.	Method Blank	100	ND	100

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1971.2S=104%,1971.2SD=103%,RPD= 2.3%,1971.2Dup=103%
QC Limits: Recovery = 60% to 140% and RPD = 14.9% at 2 Std. Dev.

Brian K. McKee
Laboratory Director

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

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

Lab. ID #: 1971.1-.10
Sample Rec'd: 11/17/95
Analysis Start: 11/20/95
Analysis Comp: 11/21/95

Analysis: Munsel

Lab ID#	Soil Color
1971.1	10YR 3/2 Dark Yellowish Brown
1971.2	2.5Y 4/2 Olive Brown
1971.3	5Y 4/4 Olive
1971.4	5Y 6/2 Light Olive Gray
1971.5	5Y 4/2 Olive Gray
1971.6	5Y 4/3 Olive
1971.7	5Y 5/2 Olive Gray
1971.8	5Y 3/1 Very Dark Gray
1971.9	5Y 4/2 Olive Gray
1971.10	5Y 2.5/1 Black

Brian K. McKee
Laboratory Director

SERV-AIR, INC. An E-SYSTEMS Co.

P.O. #: PWS-7

Chain of Custody

Project #:	Sampler: GARY DiMARTINIS/SAI	Date / Time 11-16-95 1400	Analysis Parameters	Start:
Customer: G. LESINSKI SELFM-PW-EV	Site Name: BLDG. 801B			Finish:
Phone: (908) 532-0989				Preservation Method

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHC	% Solids	Munsel	OVA	Remarks	
1971.1	11-16-95 1513	801B-A (Piping Run @ 1' Below Grade)	Soil	1	X	X	X	ND		*
.2	1508	801B-B (Piping Run @ 2')			X	X	X	ND		*
.3	1420	801B-C (Side Wall @ 5')			X	X	X	ND	*=Samples	*
.4	1431	801B-D (Side Wall @ 6')			X	X	X	ND	Kept Below	*
.5	1436	801B-E (Side Wall @ 6')			X	X	X	ND	4°C.	*
.6	1439	801B-F (Side Wall @ 5')			X	X	X	ND		*
.7	1443	801B-G (Side Wall @ 5')			X	X	X	ND		*
.8	1500	801B-H (Excav. Floor @ 9')			X	X	X	ND		*
.9	1504	801B-I (Excav. Floor @ 9')			X	X	X	ND		*
.10	—	801B-J (Duplicate)			X	X	X	ND		*

NOTE: OVA CALIBRATED TO 95 PPM METER READING W/95 PPM CH_4 & ZERO (0) AIR @ 1400 HRS. ON 11-16-95 BY G. DiMARTINS (SERIAL # A52114)

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
			HAND

Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	11/17/95 9:50	Sarah J. Hubbard	11/17/95 0950

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLE LOCATIONS.

Environmental Laboratory

Sample Receipt Form

Date Received: 11-17-95 Lab Project ID #: _____

Site/Project Name: BLDG. 801B Cooler Temp: C 4°C

Received by: JGN

Circle the appropriate answer

1. Did the samples come in a cooler?	(yes)	no
2. Were chain of custody papers filled out correctly and legibly?	(yes)	no
3. Did you sign the chain of custody in the appropriate place?	(yes)	no
4. Was the project identifiable from the chain of custody?	(yes)	no
5. Did all bottles arrive unbroken and were labels in good condition?	(yes)	no
6. Did all labels agree with the chain of custody?	(yes)	no
7. Were correct containers and/or preservatives used for the tests indicated?	(yes)	no
8. Were bubbles absent from aqueous VOC sample containers?	yes	no N/A

Fill out the following for each sample bottle.

Sample ID	Preservative	pH	Sample ID	Preservative	pH
ALL SAMPLES	C 4°C	N/A			

Comments: _____

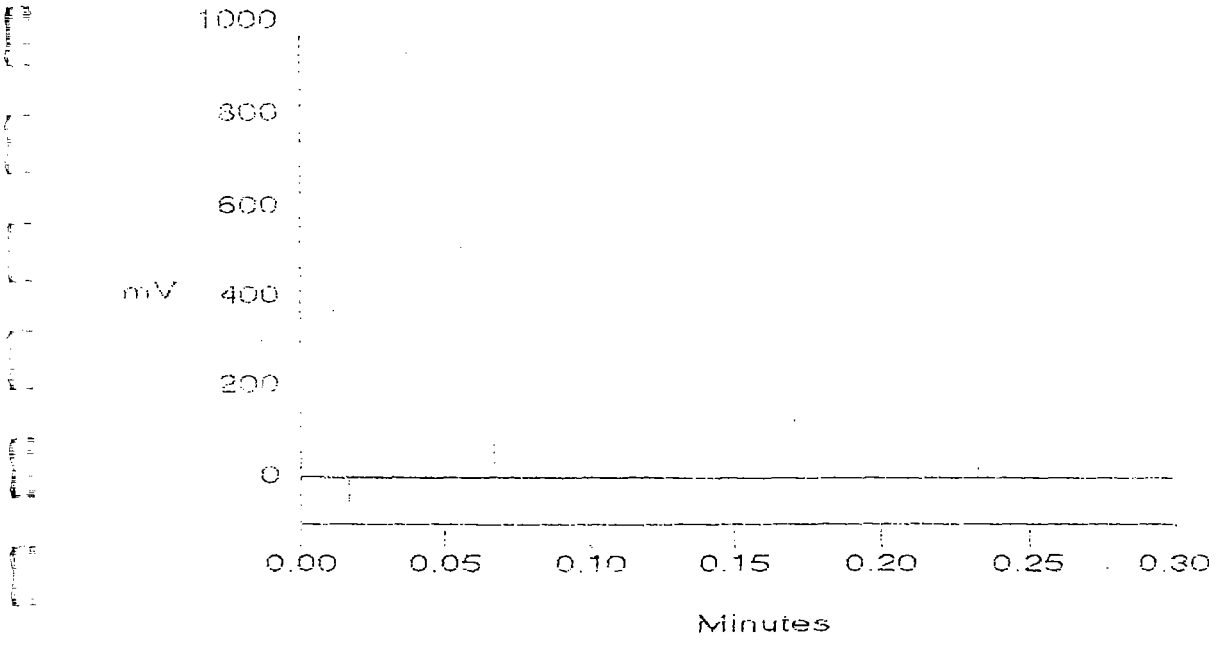
Samples Accepted By: Sarah J. Hubbard

Sample Name: BLANK Date: 11/21/1995 11:21:02
Data File : C:\DX\DATA\11219511.D01
Method : c:\dx\method\toh.met
ICI Address: 1 System: 1 Inject#: 1 Detector:OTHER
Analyst: BKM Column: IR

Operation	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
Curve	1	1	200	50Hz	0.00	0.30	30000

********** Component Report, Components Found **********

Ret Component	Concentration	Height	Area	dl,	%Delta
Peak Time Name	ppM			Code	
Totals:	0.000	0	0		



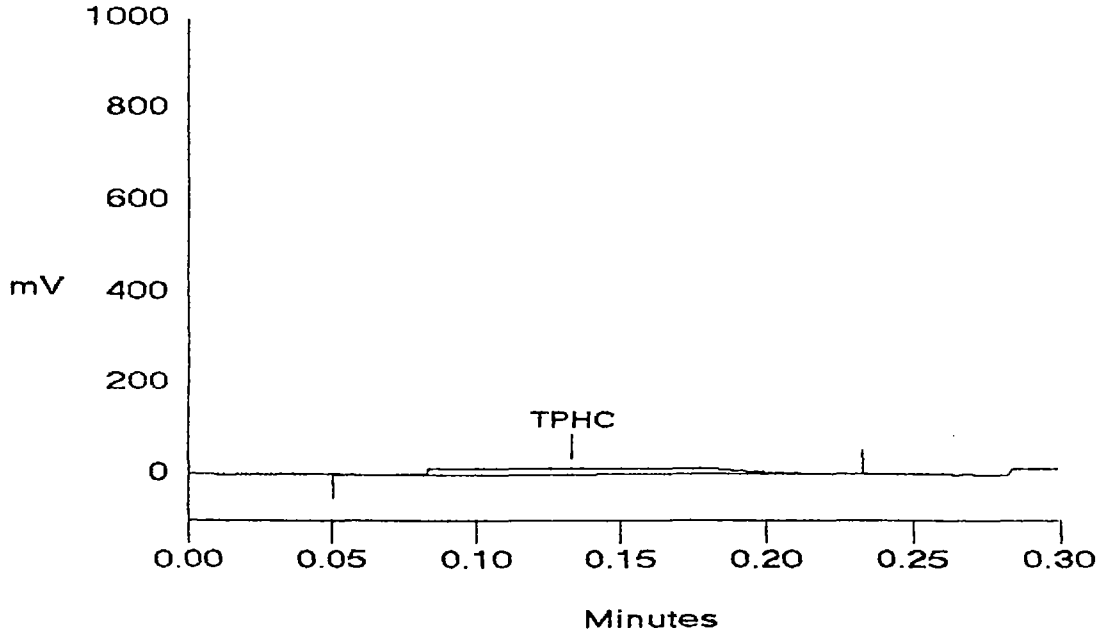
Sample Name: 1971.7 801B-G Date: 11/21/1995 12:47:25
Data File : C:\DX\DATA\11219511.D11
Method : c:\dx\method\tph.met
GC Address: 1 System: 1 Inject#: 11 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ernal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

.. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.13	TPHC	8.142	11980	82960	1	0.00
		Totals	8.142	11980	82960		

File: 11219511.D11 Sample: 1971.7 801B-G



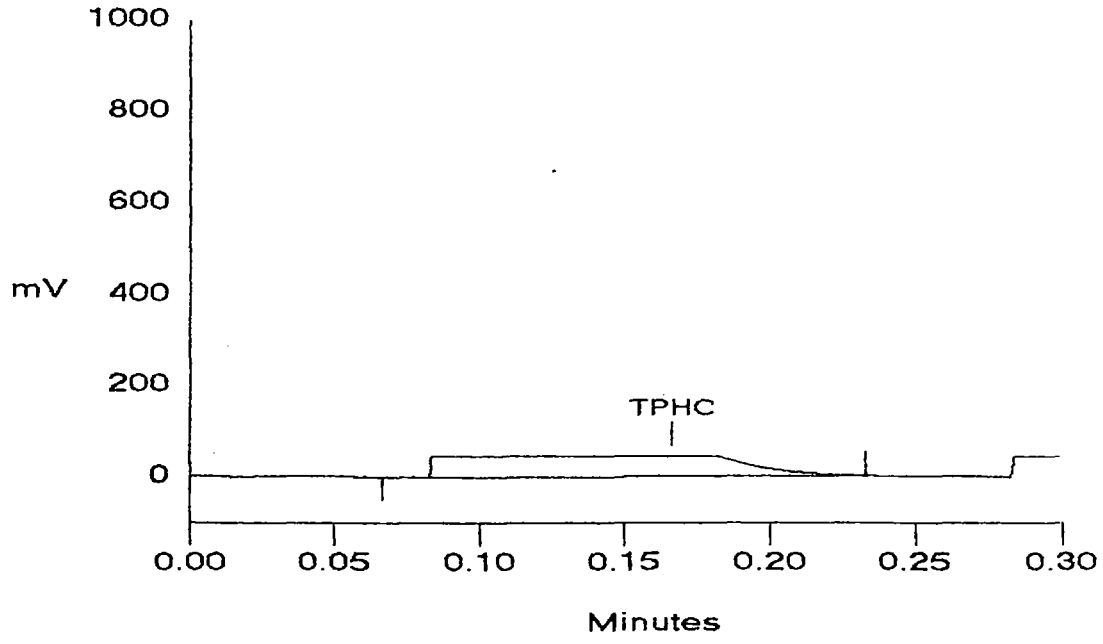
Sample Name: 1971.1 801B-A Date: 11/21/1995 13:25:14
Data File : C:\DX\DATA\11219551.D02
Method : c:\dx\method\tph.met
GC Address: 1 System: 1 Inject#: 2 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ernal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

...um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	30.588	45007	311815	1	0.00
		Totals	30.588	45007	311815		

File: 11219551.D02 Sample: 1971.1 801B-A



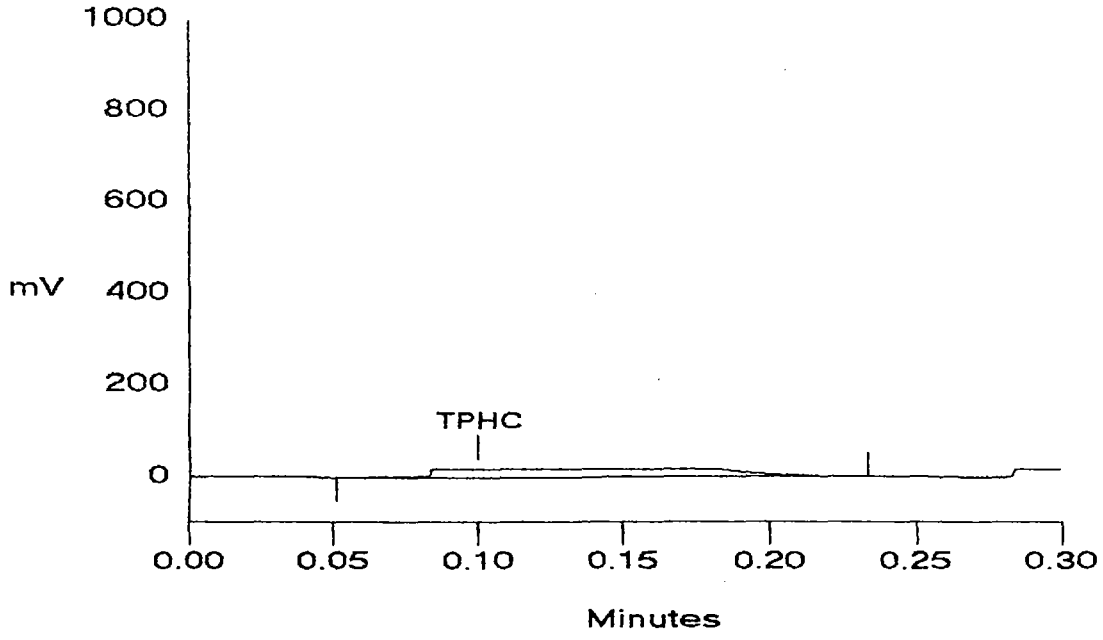
Sample Name: 1971.2 801B-B Date: 11/21/1995 13:50:13
Data File : C:\DX\DATA\11219531.D03
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 3 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ernal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

K. um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.10	TPHC	11.628	17108	114134	1	0.00
		Totals	11.628	17108	114134		

File: 11219531.D03 Sample: 1971.2 801B-B



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

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

Lab. ID #: 1984.1-.3
Sample Rec'd: 11/27/95
Analysis Start: 11/29/95
Analysis Comp: 12/01/95

Analysis: Munsel

Lab ID#	Soil Color
1984.1	10YR 5/6 Dark Yellowish Brown
1984.2	5Y 5/3 Olive
1984.3	10YR 5/6 Dark Yellowish Brown

Brian K. McKee
Laboratory Director

SERV-AIR, INC. An E-SYSTEMS Co.

P.O. #: PWS-07

Chain of Custody

Project #:	Sampler: GARY DiMartini's-SAI	Date / Time 11-27-95 14:00	Analysis Parameters	Start:
Customer: G. LESINSKI SELFM-PW-EV	Site Name: BLDG. 801B			Finish:
Phone: (808) 532-0989				

Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	TPHL	% Solids	Munsel			OVA	Remarks	Preservation Method
1984.1	11-27-95 1446	801B-J (SIDE WALL @ 5')	SOIL	1	X	X	X			ND		*
.2	1452	801B-K (SIDE WALL @ 5')			X	X	X			ND	*=SAMPLES	*
.3	N/A	DUPLICATE (801B-L)			X	X	X			ND	KEPT BELOW 4°C.	*

NOTE: OVA CALIBRATED TO 95 PPM METER READING W/ 95 PPM CH_4 + ZERO (0) AIR @ 1400 HRS. ON 11-27-95 BY G. DiMARTINI'S. (SERIAL #A52114)

Relinquished By (signature)	Date / Time	Received By (signature)	Shipped By:
			HAND
Relinquished By (signature)	Date / Time	Received for Lab by (signature):	Date / Time
	11-27-95 15:35		11/27/95 1540

Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody. DEDICATED SAMPLING TOOLS USED. SEE PROJECT FILE FOR SAMPLING LOCATIONS.

Environmental Laboratory

Sample Receipt Form

Date Received: 11-27-95 Lab Project ID #: _____

Site/Project Name: BLDG. 801B Cooler Temp: <4°C

Received by: S. Hubbard

Circle the appropriate answer

1. Did the samples come in a cooler?	(yes)	no
2. Were chain of custody papers filled out correctly and legibly?	(yes)	no
3. Did you sign the chain of custody in the appropriate place?	(yes)	no
4. Was the project identifiable from the chain of custody?	(yes)	no
5. Did all bottles arrive unbroken and were labels in good condition?	(yes)	no
6. Did all labels agree with the chain of custody?	(yes)	no
7. Were correct containers and/or preservatives used for the tests indicated?	(yes)	no
8. Were bubbles absent from aqueous VOC sample containers?	yes	no N/A

Fill out the following for each sample bottle.

Sample ID	Preservative	pH	Sample ID	Preservative	pH
ALL SAMPLES	<4°C	N/A			

Comments: NONE

Samples Accepted By: _____

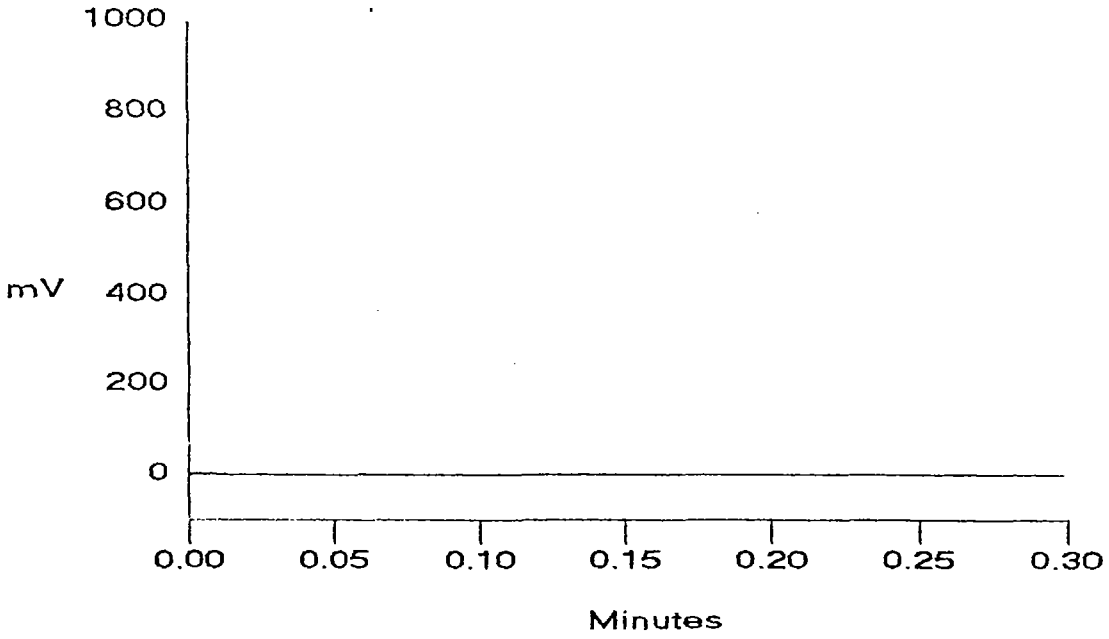
Sample Name: BLANK Date: 12/01/1995 10:07:51
Data File : C:\DX\DATA\11219531.D01
Method : c:\dx\method\tph.met
GC Address: 1 System: 1 Inject#: 1 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
Totals			0.000	0	0		

File: 11219531.D01 Sample: BLANK



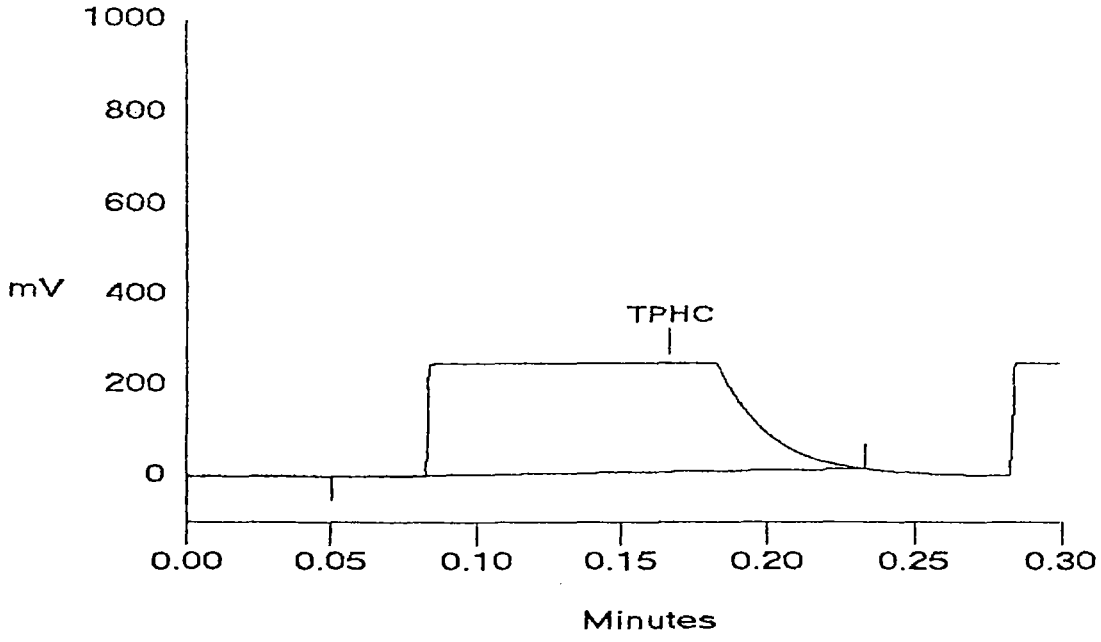
Sample Name: AUTOCAL3 Date: 12/01/1995 10:20:00
Data File : C:\DX\DATA\11219541.D04
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 4 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

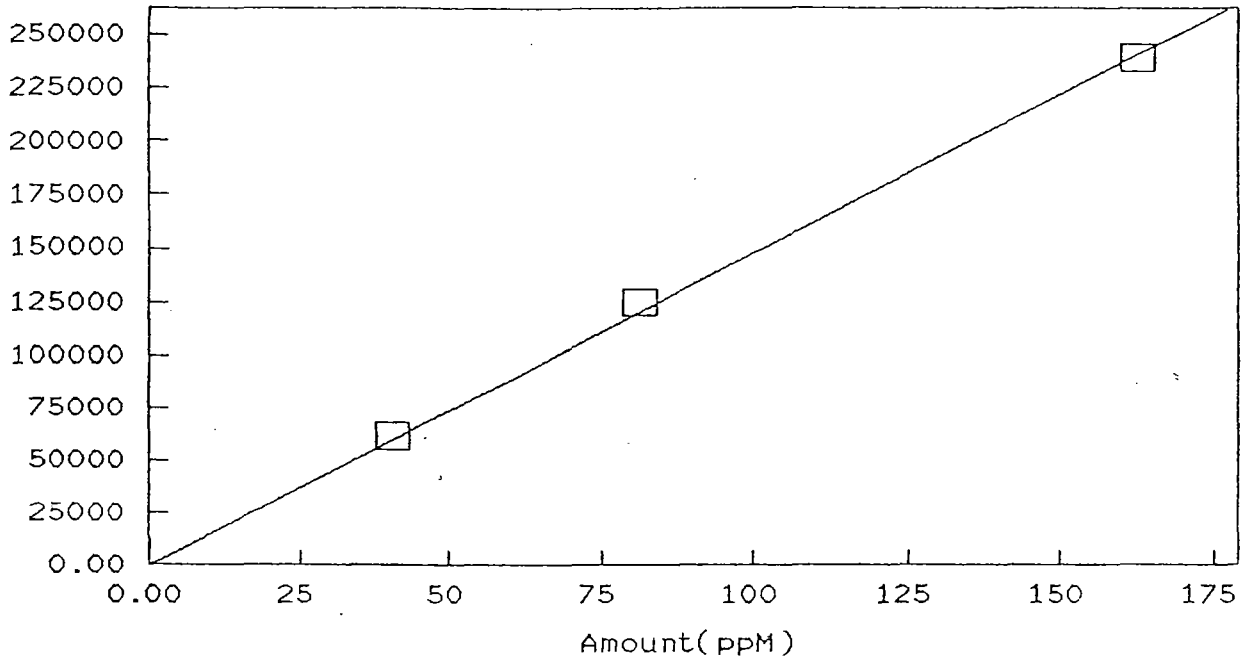
Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	163.000	238839	1651771	1	0.00
		Totals	163.000	238839	1651771		

File: 11219541.D04 Sample: AUTOCAL3



-Method Updated. 10:20 on Fri, 01 Dec 1995

Component: TPHC
Fit Type: Linear
r^2 = 0.998616
Amt = Resp * 0.0006756 + 0
Resp = Amt * 1480 + 0
Standardization: External
Calibration: Height



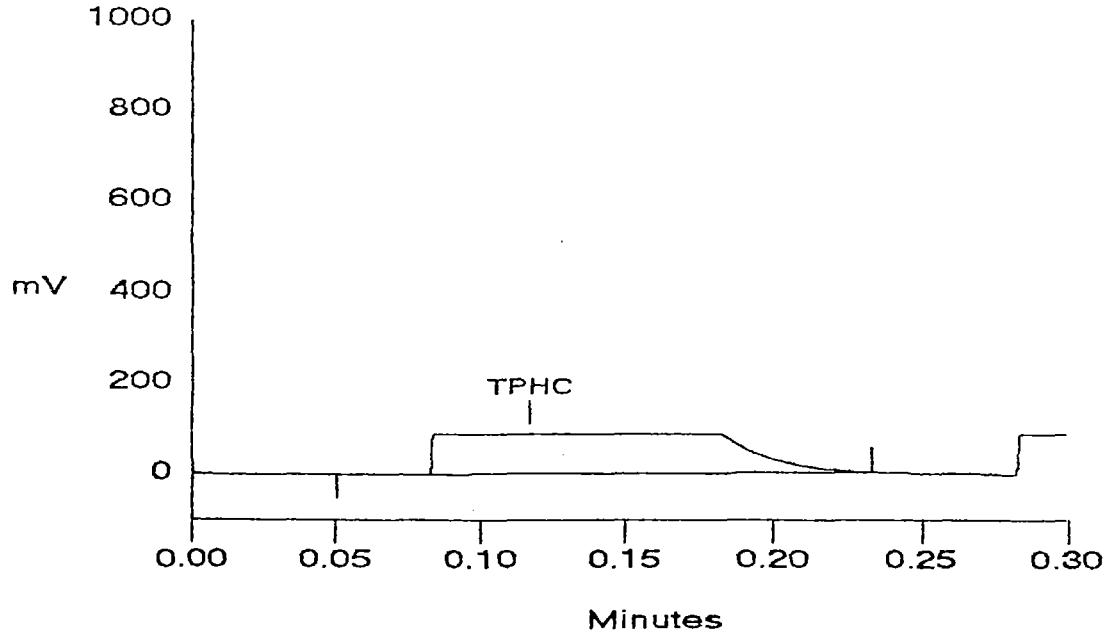
Sample Name: 1984.1 B801B-J Date: 12/01/1995 10:59:33
Data File : C:\DX\DATA\12019521.D03
ethod : c:\dx\method\tph.met
HCI Address: 1 System: 1 Inject#: 3 Detector:OTHER
Analyst : BKM Column: IR

libration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
ernal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

um	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.12	TPHC	58.602	86736	587840	1	0.00
		Totals	58.602	86736	587840		

File: 12019521.D03 Sample: 1984.1 B801B-J



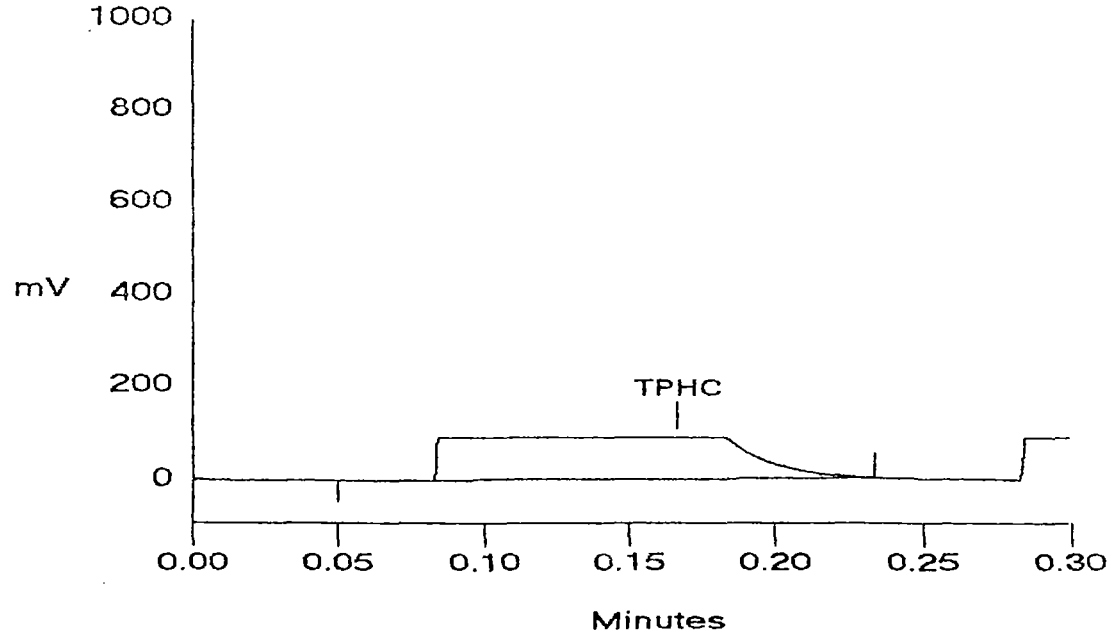
Sample Name: 1984.1 DUP. Date: 12/01/1995 11:02:11
Data File : C:\DX\DATA\12019521.D04
Method : c:\dx\method\tph.met
ACI Address: 1 System: 1 Inject#: 4 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
Internal	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.17	TPHC	58.611	86750	600246	1	0.00
		Totals	58.611	86750	600246		

File: 12019521.D04 Sample: 1984.1 DUP.



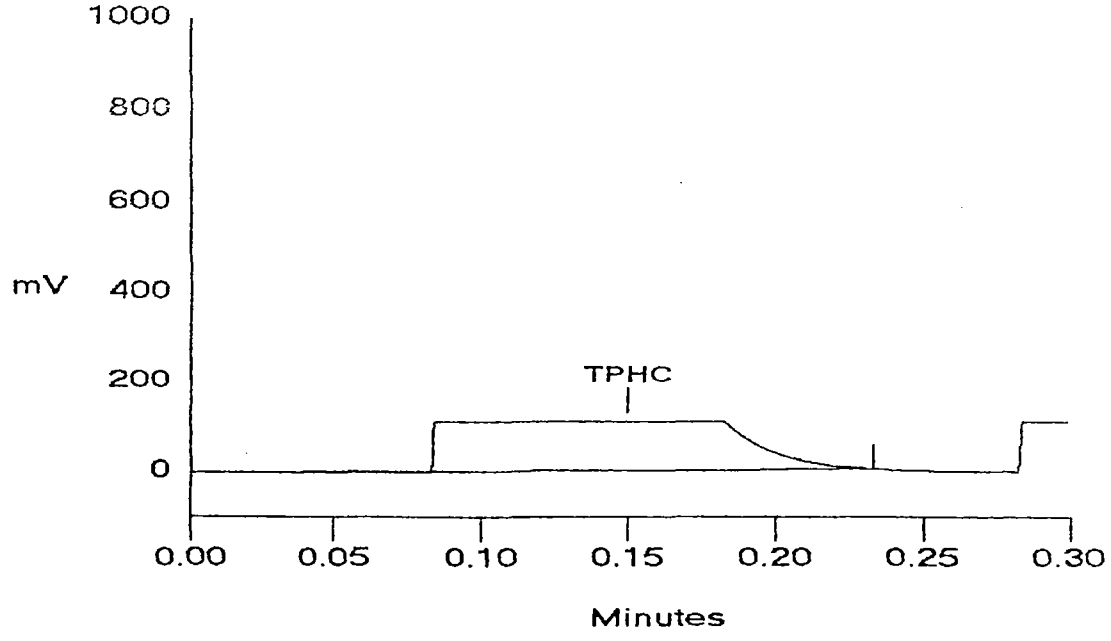
Sample Name: 1984.1 SPK. Date: 12/01/1995 11:04:47
Data File : C:\DX\DATA\12019521.D05
Method : c:\dx\method\tph.met
GC Address: 1 System: 1 Inject#: 5 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Pk. Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.15	TPHC	72.473	107267	731389	1	0.00
		Totals	72.473	107267	731389		

File: 12019521.D05 Sample: 1984.1 SPK.



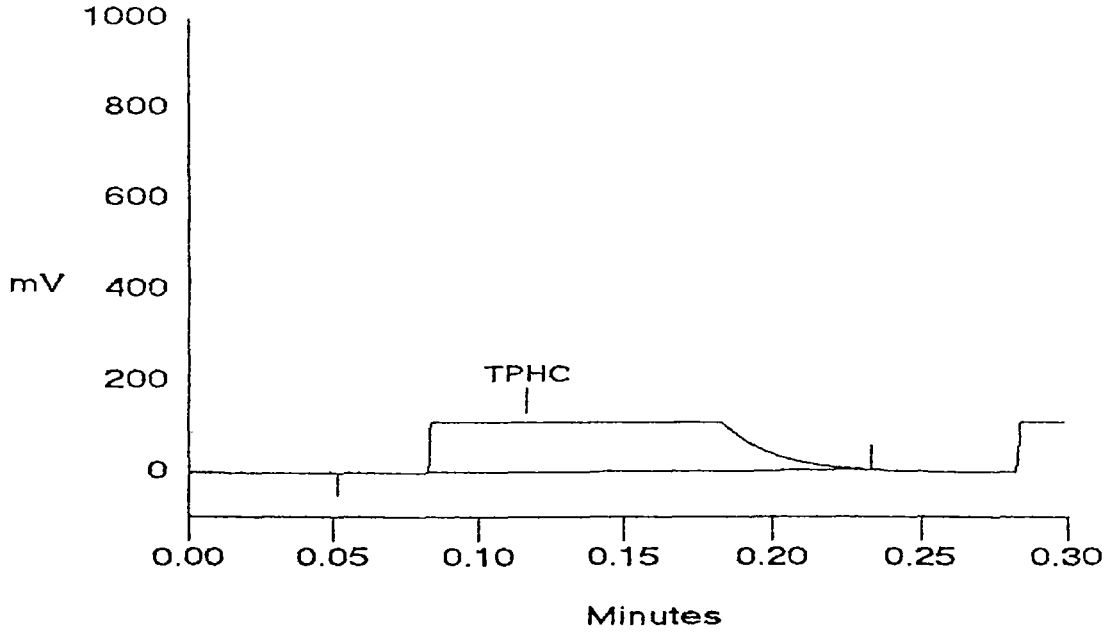
Sample Name: 1984.1 DUP. SPK. Date: 12/01/1995 11:06:58
Data File : C:\DX\DATA\12019521.D06
Method : c:\dx\method\tph.met
GC Address: 1 System: 1 Inject#: 6 Detector:OTHER
Analyst : BKM Column: IR

Calibration	Volume	Dilution	Points	Rate	Start	Stop	Area Reject
External	1	1	900	50Hz	0.00	0.30	30000

********** Component Report: Components Found **********

Num	Ret Time	Component Name	Concentration ppM	Height	Area	Bl. Code	%Delta
1	0.12	TPHC	73.704	109088	740269	1	0.00
		Totals	73.704	109088	740269		

File: 12019521.D06 Sample: 1984.1 DUP. SPK.



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: — yes

   a. VOA Fraction _____
   b. B/N Fraction Diethylphthalate @ 4.96 ug/L
   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 — 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

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

Indicate
Yes, No, N/A

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

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

11. Extraction Holding Time Met — yes

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

12. Analysis Holding Time Met — yes

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

Additional Comments:

Laboratory Manager: _____ Date: 5-8-01

VOLATILE ORGANICS

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**

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Dupe**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1606803

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005583.D

Level: (low/med) LOW Date Received: 4/23/01

% Moisture: not dec. Date Analyzed: 4/23/01

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

FIELD ID: **801GW**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 1606804

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005584.D

Level: (low/med) LOW Date Received: 4/23/01

% Moisture: not dec. _____ Date Analyzed: 4/23/01

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.: 16068 Location: Bldg80 SDG No.:

Lab File ID: VC005537.D BFB Injection Date: 4/17/01

Instrument ID: VoaInst#3 BFB Injection Time: 11:24

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	21.8
75	30.0 - 66.0% of mass 95	55.2
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.4 (0.6)1
174	50.0 - 120.0% of mass 95	66.9
175	4.0 - 9.0% of mass 174	5.0 (7.4)1
176	93.0 - 101.0% of mass 174	65.3 (97.7)1
177	5.0 - 9.0% of mass 176	4.3 (6.6)2

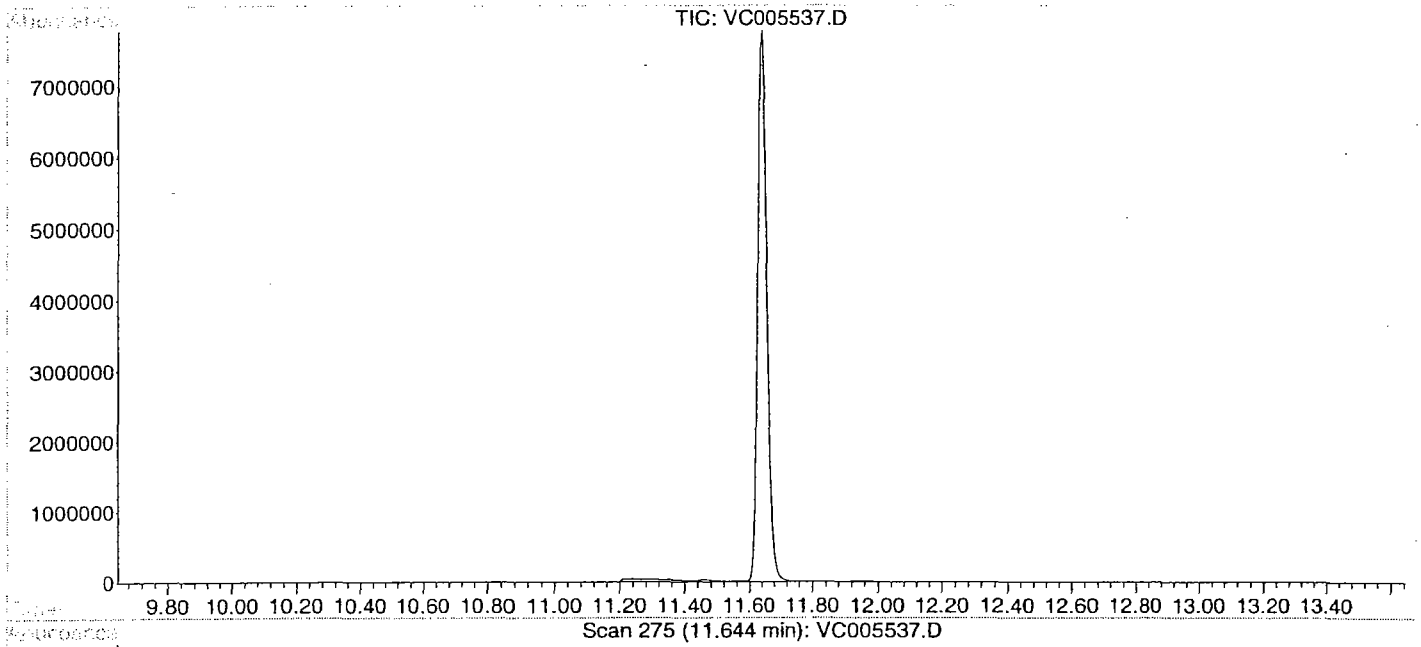
1-Value is % mass 174 2-Value is % mass 176

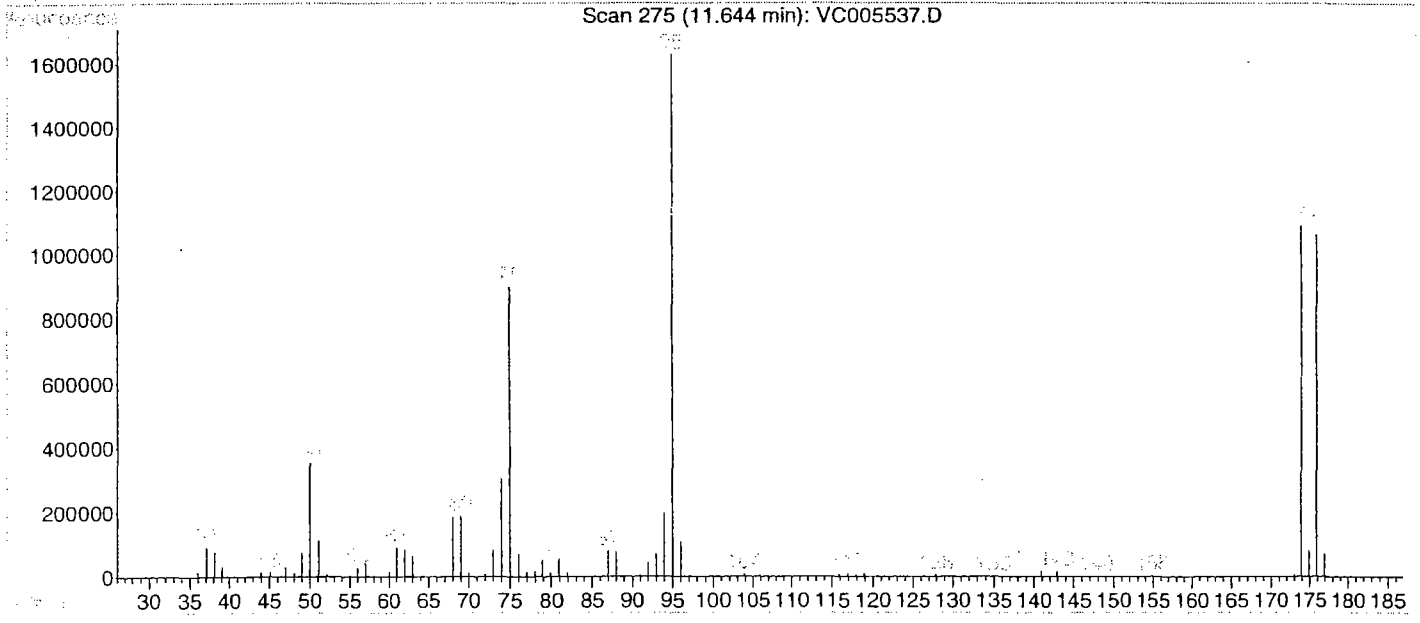
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VC005538.D	4/17/01	11:54
02	VSTD100	VSTD100	VC005539.D	4/17/01	13:09
03	VSTD005	VSTD005	VC005540.D	4/17/01	13:49
04	VSTD050	VSTD050	VC005541.D	4/17/01	14:44
05	VSTD010	VSTD010	VC005542.D	4/17/01	15:25

Data File : D:\HPCHEM\1\DATA\010417\VC005537.D
Acq On : 17 Apr 2001 11:24 am
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

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





Spectrum Information: Scan 275

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.8	355648	PASS
75	95	30	60	55.2	900288	PASS
95	95	100	100	100.0	1629696	PASS
96	95	5	9	6.7	109032	PASS
173	174	0.00	2	0.6	6981	PASS
174	95	50	100	66.9	1090048	PASS
175	174	5	9	7.4	80688	PASS
176	174	95	101	97.7	1064448	PASS
177	176	5	9	6.6	70096	PASS

Response Factor Report GC/MS Ins

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Initial Calibration

Calibration Files
50 =VC005541.D 5 =VC005540.D 10 =VC005542.D
20 =VC005538.D 100 =VC005539.D

		Compound	50	5	10	20	100	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------						
2)	t	Acrolein	0.648	0.619	0.694	0.676	0.636	0.655	4.63
3)	t	Acrylonitrile	1.392	1.552	1.669	1.663	1.102	1.475	16.05
4)	t	tert-Butyl alcohol	0.177	0.145	0.163	0.182	0.206	0.175	13.16
5)	t	Methyl-tert-Butyl eth	5.854	5.186	5.587	5.967	6.414	5.801	7.85
6)	t	Di-isopropyl ether	1.681	1.306	1.528	1.669	1.868	1.611	12.95
7)	T	Dichlorodifluorometha	3.588	4.998	4.351	4.276	3.683	4.179	13.67
8)	TP	Chloromethane	3.676	4.840	4.518	4.111	3.607	4.150	12.82
9)	TC	Vinyl Chloride	3.495	4.576	4.308	4.072	3.165	3.923	14.83
10)	T	Bromomethane	1.440	1.809	1.649	1.586	1.526	1.602	8.69
11)	T	Chloroethane	1.784	2.061	2.044	1.974	1.906	1.954	5.78
12)	T	Trichlorofluoromethan	2.666	3.085	3.054	2.890	2.827	2.904	5.91
13)	MC	1,1-Dichloroethene	3.449	3.393	3.514	3.539	3.708	3.521	3.38
14)	T	Acetone	1.187	5.745	1.221	2.109	1.291	2.311	84.70
15)	T	Carbon Disulfide	6.414	6.600	6.653	6.996	6.646	6.662	3.16
16)	T	Methylene Chloride	2.271	2.655	2.579	2.520	2.434	2.492	5.93
17)	T	trans-1,2-Dichloroeth	3.445	3.511	3.598	3.584	3.653	3.558	2.28
18)	TP	1,1-Dichloroethane	4.340	4.588	4.720	4.652	4.538	4.568	3.17
19)	T	Vinyl Acetate	6.075	4.531	5.542	5.623	6.030	5.560	11.20
20)	T	2-Butanone	1.640	1.532	1.553	1.536	1.681	1.588	4.28
21)	T	cis-1,2-Dichloroethen	3.326	3.076	3.289	3.405	3.529	3.325	5.02
22)	TC	Chloroform	3.657	3.941	4.009	3.981	3.835	3.885	3.69
23)	T	1,1,1-Trichloroethane	2.784	2.713	2.800	2.882	3.050	2.846	4.53
24)	T	Carbon Tetrachloride	2.252	2.141	2.302	2.349	2.511	2.311	5.87
25)	S	1,2-Dichloroethane-d4	3.062	3.110	3.123	3.017	2.969	3.056	2.10
26)	I	1,4-Difluorobenzene	----------ISTD----------						
27)	TM	Benzene	1.320	1.475	1.547	1.415	1.146	1.381	11.25
28)	T	1,2-Dichloroethane	0.482	0.550	0.563	0.493	0.482	0.514	7.60
29)	TM	Trichloroethene	0.263	0.262	0.276	0.270	0.280	0.270	2.87
30)	TC	1,2-Dichloropropane	0.378	0.388	0.409	0.376	0.388	0.388	3.36
31)	T	Bromodichloromethane	0.355	0.343	0.367	0.351	0.376	0.358	3.73
32)	T	2-Chloroethyl vinyl e	0.139	0.146	0.155	0.139	0.144	0.145	4.46
33)	T	cis-1,3-Dichloroprope	0.486	0.388	0.446	0.458	0.508	0.457	10.00
34)	T	4-Methyl-2-Pentanone	0.138	0.090	0.122	0.127	0.148	0.125	17.52
35)	S	Toluene-d8	1.254	1.236	1.257	1.256	1.268	1.254	0.94
36)	TCM	Toluene	1.234	1.371	1.429	1.326	1.080	1.288	10.58
37)	I	Chlorobenzene-d5	----------ISTD----------						
38)	T	trans-1,3-Dichloropro	1.629	1.349	1.518	1.490	1.623	1.522	7.55
39)	T	1,1,2-Trichloroethane	0.977	1.037	1.086	0.987	0.974	1.012	4.78
40)	T	Tetrachloroethene	0.878	0.909	0.951	0.876	0.887	0.900	3.46
41)	T	2-Hexanone	0.879	0.544	0.684	0.722	0.867	0.739	18.80
42)	T	Dibromochloromethane	0.747	0.630	0.711	0.700	0.802	0.718	8.79
43)	TMP	Chlorobenzene	2.671	3.103	3.103	2.776	2.452	2.821	10.02
44)	TC	Ethylbenzene	4.702	5.188	5.491	5.008	3.666	4.811	14.58
45)	T	m+p-Xylenes	1.787	1.895	1.988	1.838	1.602	1.822	7.90
46)	T	o-Xylene	3.518	3.091	3.523	3.472	3.109	3.343	6.66
47)	T	Styrene	2.939	2.469	2.802	2.830	2.757	2.759	6.36
48)	TP	Bromoform	0.459	0.360	0.402	0.424	0.517	0.432	13.69
49)	S	Bromofluorobenzene	1.654	1.507	1.552	1.592	1.686	1.598	4.56
50)	TP	1,1,2,2-Tetrachloroet	1.450	1.467	1.582	1.482	1.430	1.482	3.99
51)	T	1,3-Dichlorobenzene	1.786	1.648	1.725	1.702	1.800	1.732	3.61
52)	T	1,4-Dichlorobenzene	1.791	1.616	1.770	1.747	1.779	1.741	4.11
53)	T	1,2-Dichlorobenzene	1.698	1.630	1.718	1.676	1.698	1.684	1.99

(#) = Out of Range

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.:

Lab File ID: VC005575.D BFB Injection Date: 4/23/01

Instrument ID: VoaInst#3 BFB Injection Time: 10:20

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	24.7
75	30.0 - 66.0% of mass 95	55.4
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	66.6
175	4.0 - 9.0% of mass 174	4.9 (7.4)1
176	93.0 - 101.0% of mass 174	64.5 (96.9)1
177	5.0 - 9.0% of mass 176	4.4 (6.8)2

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

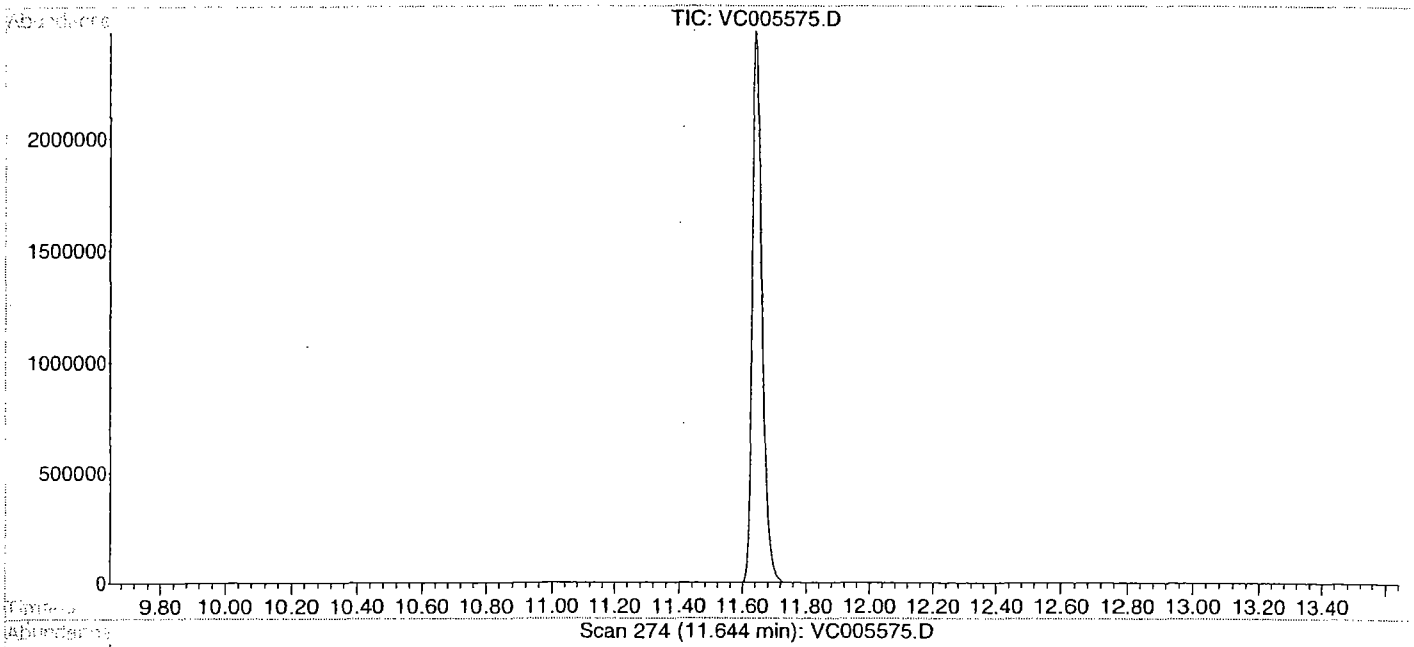
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

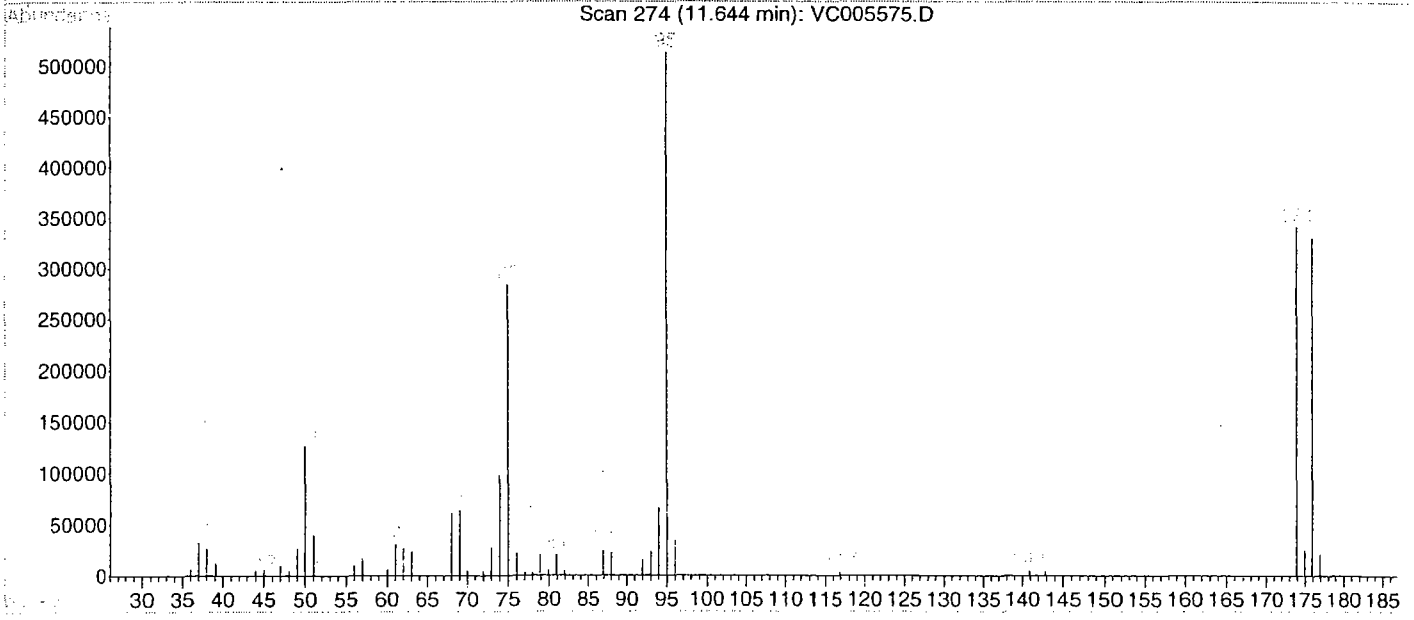
	FIELD ID:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD020	VSTD020	VC005576.D	4/23/01	10:49
02	MB 1699	MB	VC005577.D	4/23/01	11:40
03	TRIP BLANK	1606801	VC005581.D	4/23/01	14:25
04	FIELD BLANK	1606802	VC005582.D	4/23/01	15:07
05	DUPE	1606803	VC005583.D	4/23/01	15:53
06	801GW	1606804	VC005584.D	4/23/01	20:04
07	1607001 MS	1607001 MS	VC005586.D	4/23/01	21:26
08	1607001 MSD	1607001 MSD	VC005587.D	4/23/01	22:07

BFB

Data File : D:\HPCHEM\1\DATA\010423\VC005575.D
Acq On : 23 Apr 2001 10:20 am
Sample : BFB Tune
Misc : BFB Tune
MS Integration Params: ACETONE.P
Method : D:\HPCHEM\1\METHODS\M362440.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP

Vial: 30
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00





Spectrum Information: Scan 274

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.7	126920	PASS
75	95	30	60	55.4	284224	PASS
95	95	100	100	100.0	513088	PASS
96	95	5	9	7.0	36112	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	66.6	341824	PASS
175	174	5	9	7.4	25296	PASS
176	174	95	101	96.9	331072	PASS
177	176	5	9	6.8	22520	PASS

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\010423\VC005576.D Vial: 31
Acq On : 23 Apr 2001 10:49 am Operator: Skelton
Sample : Vstd020 Inst : GC/MS Ins
Misc : Vstd020 Multiplr: 1.00
MS Integration Params: ACETONE.P

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Single 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	87	0.00
2	t	Acrolein	0.655	0.579	11.6	75	0.00
3	t	Acrylonitrile	1.475	1.670	-13.2	88	0.00
4	t	tert-Butyl alcohol	0.175	0.175	0.0	84	0.01
5	t	Methyl-tert-Butyl ether	5.801	5.366	7.5	78	0.00
6	t	Di-isopropyl ether	1.611	1.435	10.9	75	0.00
7	T	Dichlorodifluoromethane	4.179	3.963	5.2	81	0.00
8	TP	Chloromethane	4.150	4.126	0.6	87	0.00
9	TC	Vinyl Chloride	3.923	4.140	-5.5	89	0.00
10	T	Bromomethane	1.602	1.227	23.4	67	0.00
11	T	Chloroethane	1.954	1.905	2.5	84	0.00
12	T	Trichlorofluoromethane	2.904	2.834	2.4	85	0.01
13	MC	1,1-Dichloroethene	3.521	3.453	1.9	85	0.00
14	T	Acetone	2.311	1.443	37.6#	60	0.00
15	T	Carbon Disulfide	6.662	6.768	-1.6	84	0.00
16	T	Methylene Chloride	2.492	2.404	3.5	83	0.01
17	T	trans-1,2-Dichloroethene	3.558	3.507	1.4	85	0.01
18	TP	1,1-Dichloroethane	4.568	4.568	0.0	86	0.00
19	T	Vinyl Acetate	5.560	6.289	-13.1	97	0.00
20	T	2-Butanone	1.588	1.779	-12.0	101	0.01
21	T	cis-1,2-Dichloroethene	3.325	3.285	1.2	84	0.00
22	TC	Chloroform	3.885	3.776	2.8	83	0.01
23	T	1,1,1-Trichloroethane	2.846	2.741	3.7	83	0.00
24	T	Carbon Tetrachloride	2.311	2.212	4.3	82	0.00
25	S	1,2-Dichloroethane-d4	3.056	3.271	-7.0	94	0.00
26	I	1,4-Difluorobenzene	1.000	1.000	0.0	79	0.00
27	TM	Benzene	1.381	1.471	-6.5	83	0.01
28	T	1,2-Dichloroethane	0.514	0.543	-5.6	87	0.00
29	TM	Trichloroethene	0.270	0.263	2.6	77	0.01
30	TC	1,2-Dichloropropane	0.388	0.397	-2.3	84	0.00
31	T	Bromodichloromethane	0.358	0.367	-2.5	83	0.01
32	T	2-Chloroethyl vinyl ether	0.145	0.152	-4.8	87	0.00
33	T	cis-1,3-Dichloropropene	0.457	0.460	-0.7	80	0.00
34	T	4-Methyl-2-Pentanone	0.125	0.145	-16.0	91	0.00
35	S	Toluene-d8	1.254	1.286	-2.6	81	0.00
36	TCM	Toluene	1.288	1.360	-5.6	81	0.00
37	I	Chlorobenzene-d5	1.000	1.000	0.0	78	0.00
38	T	trans-1,3-Dichloropropene	1.522	1.543	-1.4	80	0.00
39	T	1,1,2-Trichloroethane	1.012	1.057	-4.4	83	0.00
40	T	Tetrachloroethene	0.900	0.905	-0.6	80	0.01
41	T	2-Hexanone	0.739	0.915	-23.8	99	0.00
42	T	Dibromochloromethane	0.718	0.741	-3.2	82	0.00
43	TMP	Chlorobenzene	2.821	2.883	-2.2	81	0.00
44	TC	Ethylbenzene	4.811	5.275	-9.6	82	0.00
45	T	m+p-Xylenes	1.822	1.956	-7.4	83	0.00
46	T	o-Xylene	3.343	3.698	-10.6	83	0.00
47	T	Styrene	2.759	3.026	-9.7	83	0.00
48	TP	Bromoform	0.432	0.442	-2.3	81	0.00
49	S	Bromofluorobenzene	1.598	1.623	-1.6	79	0.00
50	TP	1,1,2,2-Tetrachloroethane	1.482	1.589	-7.2	83	0.00
51	T	1,3-Dichlorobenzene	1.732	1.704	1.6	78	0.00
52	T	1,4-Dichlorobenzene	1.741	1.747	-0.3	78	0.00
53	T	1,2-Dichlorobenzene	1.684	1.670	0.8	77	0.00

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

4A

VOLATILE METHOD BLANK SUMMARY

FIELD ID: **MB 1699**

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.:

Lab File ID: VC005577.D Lab Sample ID: MB

Date Analyzed: 4/23/01 Time Analyzed: 11:40

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	TRIP BLANK	1606801	VC005581.D	14:25
02	FIELD BLANK	1606802	VC005582.D	15:07
03	DUPE	1606803	VC005583.D	15:53
04	801GW	1606804	VC005584.D	20:04
05	1607001 MS	1607001 MS	VC005586.D	21:26
06	1607001 MSD	1607001 MSD	VC005587.D	22:07

COMMENTS:

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.: _____

	FIELD ID:	SMC1 DCE #	SMC2 TOL #	SMC3 BFB #	TOT OUT
01	MB 1699	105	99	86	0
02	TRIP BLANK	108	100	86	0
03	FIELD BLANK	109	100	86	0
04	DUPE	110	100	86	0
05	801GW	109	100	89	0
06	1607001 MS	104	105	115	0
07	1607001 MSD	99	101	109	0

				QC LIMITS
SMC1	DCE	=	1,2-Dichloroethane-d4	(76-121)
SMC2	TOL	=	Toluene-d8	(88-110)
SMC3	BFB	=	Bromofluorobenzene	(74-121)

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	VC005586.D	Sample Name	1607001 MS
Date Aquired	23-Apr-01	Field ID	1607001 MS

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	192.91 ug/L	96.46
Acrylonitrile	200	223.30 ug/L	111.65
tert-Butyl alcohol	200	242.88 ug/L	121.44
Methyl-tert-Butyl ether	20	30.93 ug/L	154.64
Di-isopropyl ether	20	23.37 ug/L	116.84
Dichlorodifluoromethane	20	22.99 ug/L	114.97
Chloromethane	20	22.67 ug/L	113.37
Vinyl Chloride	20	21.51 ug/L	107.53
Bromomethane	20	17.82 ug/L	89.08
Chloroethane	20	21.79 ug/L	108.97
Trichlorofluoromethane	20	21.60 ug/L	107.98
1,1-Dichloroethene	20	22.65 ug/L	113.23
Acetone	20	27.10 ug/L	135.49
Carbon Disulfide	20	21.04 ug/L	105.21
Methylene Chloride	20	22.04 ug/L	110.19
trans-1,2-Dichloroethene	20	22.15 ug/L	110.73
1,1-Dichloroethane	20	22.61 ug/L	113.04
Vinyl Acetate	20	21.93 ug/L	109.65
2-Butanone	20	28.05 ug/L	140.24
cis-1,2-Dichloroethene	20	23.27 ug/L	116.34
Chloroform	20	22.51 ug/L	112.55
1,1,1-Trichloroethane	20	22.31 ug/L	111.53
Carbon Tetrachloride	20	21.21 ug/L	106.03
Benzene	20	27.66 ug/L	138.30
1,2-Dichloroethane	20	23.94 ug/L	119.72
Trichloroethene	20	22.79 ug/L	113.95
1,2-Dichloropropane	20	23.69 ug/L	118.46
Bromodichloromethane	20	23.42 ug/L	117.11
2-Chloroethyl vinyl ether	20	25.56 ug/L	127.82
cis-1,3-Dichloropropene	20	24.47 ug/L	122.37
4-Methyl-2-Pentanone	20	30.10 ug/L	150.48
Toluene	20	27.78 ug/L	138.92
trans-1,3-Dichloropropene	20	21.98 ug/L	109.91
1,1,2-Trichloroethane	20	21.82 ug/L	109.11
Tetrachloroethene	20	19.85 ug/L	99.23
2-Hexanone	20	29.22 ug/L	146.10
Dibromochloromethane	20	23.79 ug/L	118.96
Chlorobenzene	20	21.34 ug/L	106.69
Ethylbenzene	20	35.28 ug/L	176.40
m+p-Xylenes	40	57.34 ug/L	143.35
o-Xylene	20	23.56 ug/L	117.80
Styrene	20	22.74 ug/L	113.72
Bromoform	20	25.01 ug/L	125.06
1,1,2,2-Tetrachloroethane	20	24.40 ug/L	122.00
1,3-Dichlorobenzene	20	24.56 ug/L	122.79
1,4-Dichlorobenzene	20	25.96 ug/L	129.78
1,2-Dichlorobenzene	20	33.86 ug/L	169.32

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

Data File	**VC005587.D**	Sample Name	**1607001 MSD**
Date Aquired	**23-Apr-01**	Field ID	**1607001 MSD**

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	185.21 ug/L	92.60
Acrylonitrile	200	186.92 ug/L	93.46
tert-Butyl alcohol	200	240.08 ug/L	120.04
Methyl-tert-Butyl ether	20	31.69 ug/L	158.44
Di-isopropyl ether	20	24.34 ug/L	121.70
Dichlorodifluoromethane	20	18.63 ug/L	93.14
Chloromethane	20	16.01 ug/L	80.06
Vinyl Chloride	20	14.41 ug/L	72.04
Bromomethane	20	18.50 ug/L	92.48
Chloroethane	20	19.59 ug/L	97.95
Trichlorofluoromethane	20	21.38 ug/L	106.90
1,1-Dichloroethene	20	20.70 ug/L	103.50
Acetone	20	23.11 ug/L	115.55
Carbon Disulfide	20	18.83 ug/L	94.16
Methylene Chloride	20	20.81 ug/L	104.05
trans-1,2-Dichloroethene	20	20.14 ug/L	100.72
1,1-Dichloroethane	20	20.26 ug/L	101.30
Vinyl Acetate	20	18.63 ug/L	93.15
2-Butanone	20	23.42 ug/L	117.09
cis-1,2-Dichloroethene	20	21.31 ug/L	106.57
Chloroform	20	21.40 ug/L	106.98
1,1,1-Trichloroethane	20	22.24 ug/L	111.18
Carbon Tetrachloride	20	20.87 ug/L	104.33
Benzene	20	25.23 ug/L	126.13
1,2-Dichloroethane	20	22.36 ug/L	111.78
Trichloroethene	20	22.83 ug/L	114.13
1,2-Dichloropropane	20	22.54 ug/L	112.69
Bromodichloromethane	20	23.16 ug/L	115.80
2-Chloroethyl vinyl ether	20	23.12 ug/L	115.58
cis-1,3-Dichloropropene	20	23.33 ug/L	116.67
4-Methyl-2-Pentanone	20	27.35 ug/L	136.75
Toluene	20	23.21 ug/L	116.03
trans-1,3-Dichloropropene	20	20.75 ug/L	103.74
1,1,2-Trichloroethane	20	20.39 ug/L	101.95
Tetrachloroethene	20	18.45 ug/L	92.26
2-Hexanone	20	23.83 ug/L	119.13
Dibromochloromethane	20	24.73 ug/L	123.63
Chlorobenzene	20	20.04 ug/L	100.22
Ethylbenzene	20	30.98 ug/L	154.88
m+p-Xylenes	40	52.07 ug/L	130.19
o-Xylene	20	21.43 ug/L	107.14
Styrene	20	20.90 ug/L	104.49
Bromoform	20	22.43 ug/L	112.13
1,1,2,2-Tetrachloroethane	20	21.14 ug/L	105.68
1,3-Dichlorobenzene	20	21.79 ug/L	108.97
1,4-Dichlorobenzene	20	22.64 ug/L	113.18
1,2-Dichlorobenzene	20	28.55 ug/L	142.75

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: UST Case No.: 16068 Location: Bldg80 SDG No.:

Lab File ID (Standard): VC005576.D Date Analyzed: 4/23/01

Instrument ID: VoaInst#3 Time Analyzed: 10:49

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	952308	16.69	6252607	19.41	1793893	27.25
	UPPER LIMIT	1904616	17.19	12505214	19.91	3587786	27.75
	LOWER LIMIT	476154	16.19	3126304	18.91	896947	26.75
	FIELD ID:						
01	MB 1699	875517	16.69	5694510	19.42	1614013	27.25
02	TRIP BLANK	790796	16.70	5118795	19.42	1456964	27.25
03	FIELD BLANK	776387	16.69	5064262	19.42	1446142	27.25
04	DUPE	766140	16.69	5030742	19.42	1435145	27.25
05	801GW	789641	16.69	5172375	19.42	1485565	27.25
06	1607001 MS	971410	16.69	6508541	19.42	2178636	27.25
07	1607001 MSD	1476660	16.69	9795342	19.42	3268731	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\010423\VC005577.D Vial: 31
Acq On : 23 Apr 2001 11:40 am Operator: Skelton
Sample : MB 1699 Inst : GC/MS Ins
Misc : MB 1699 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 12:16 2001 Quant Results File: M362439.RES

Quant Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D
DataAcq Meth : M362439

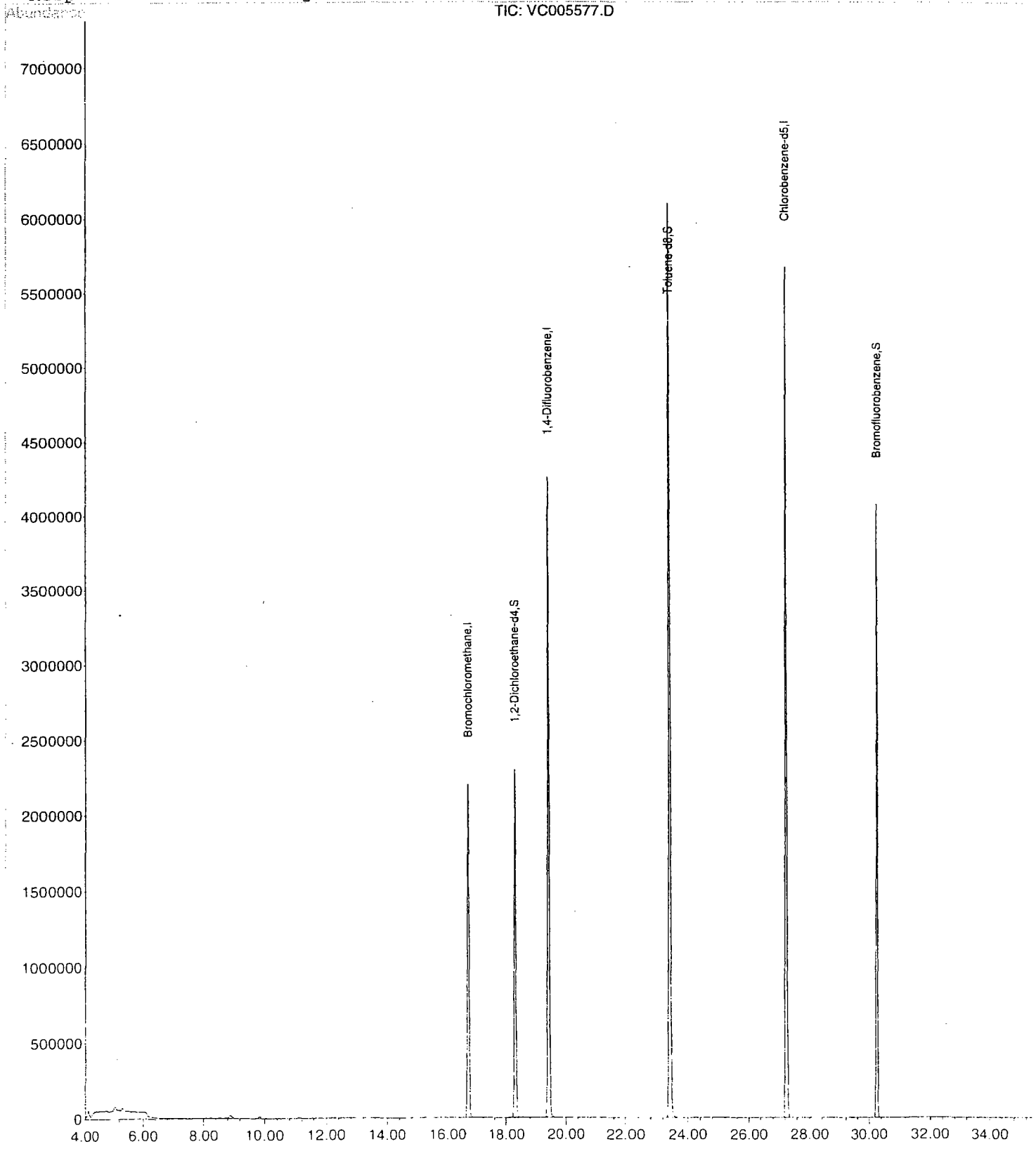
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	875517	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5694510	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	1614013	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2996437	31.36	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 104.53%			
35) Toluene-d8	23.42	98	7195542	29.61	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.70%			
49) Bromofluorobenzene	30.25	95	2237696	25.82	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 86.07%			
Target Compounds						Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010423\VC005577.D Vial: 31
Acq On : 23 Apr 2001 11:40 am Operator: Skelton
Sample : MB 1699 Inst : GC/MS Ins
Misc : MB 1699 Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 12:16 2001 Quant Results File: M362439.RES

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 11:26:26 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010423\VC005581.D Vial: 35
Acq On : 23 Apr 2001 2:25 pm Operator: Skelton
Sample : 1606801 Inst : GC/MS Ins
Misc : Trip Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 15:01 2001 Quant Results File: M362439.RES

Quant Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D
DataAcq Meth : M362439

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	790796	30.00	ug/L	0.01
26) 1,4-Difluorobenzene	19.42	114	5118795	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	1456964	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2783794	32.25	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 107.50%			
35) Toluene-d8	23.42	98	6541768	29.95	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 99.83%			
49) Bromofluorobenzene	30.25	95	2007563	25.66	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 85.53%			
Target Compounds						Qvalue
16) Methylene Chloride	11.16	84	172786	2.70	ug/L	91

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

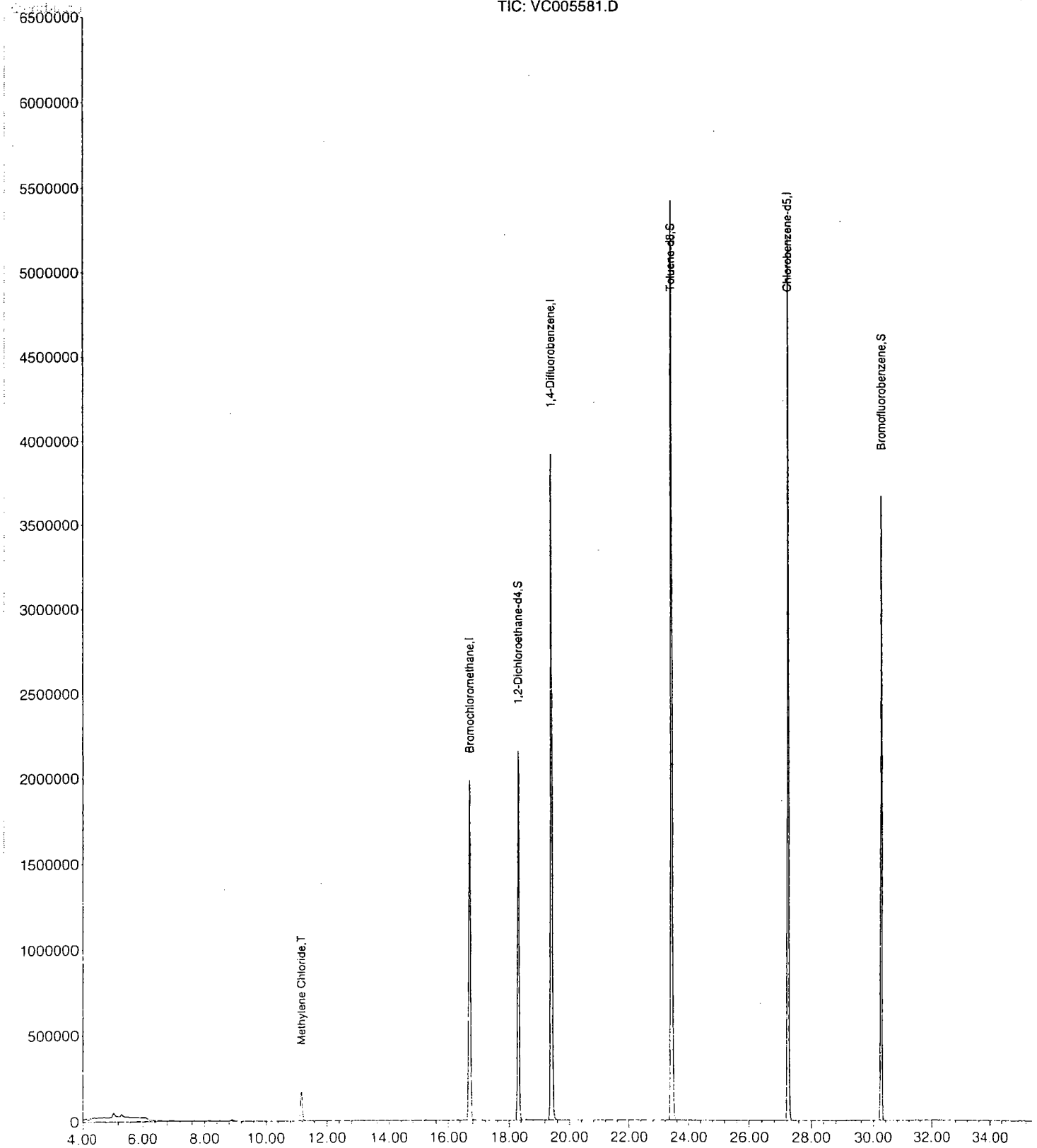
Quantitation Report

Data File : D:\HPCHEM\1\DATA\010423\VC005581.D
Acq On : 23 Apr 2001 2:25 pm
Sample : 1606801
Misc : Trip Blank
MS Integration Params: ACETONE.P
Quant Time: Apr 23 15:01 2001

Vial: 35
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: M362439.RES

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 11:26:26 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D

TIC: VC005581.D



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010423\VC005582.D Vial: 36
Acq On : 23 Apr 2001 3:07 pm Operator: Skelton
Sample : 1606802 Inst : GC/MS Ins
Misc : Field Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 15:43 2001 Quant Results File: M362439.RES

Quant Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D
DataAcq Meth : M362439

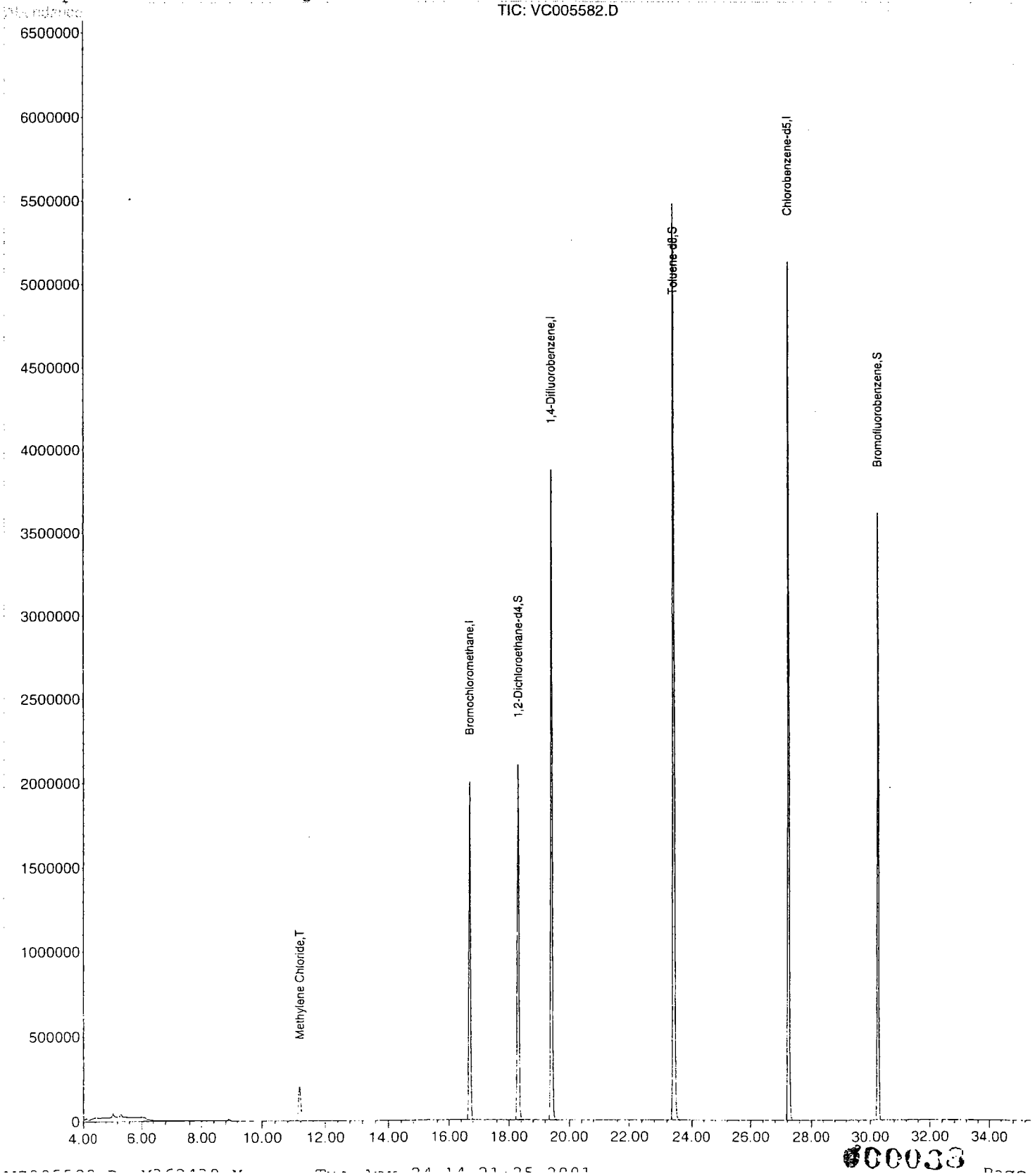
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	776387	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5064262	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	1446142	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2777359	32.78	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 109.27%			
35) Toluene-d8	23.42	98	6484427	30.01	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 100.03%			
49) Bromofluorobenzene	30.25	95	1996726	25.71	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 85.70%			
Target Compounds						Qvalue
16) Methylene Chloride	11.18	84	210610	3.35	ug/L	97

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010423\VC005582.D Vial: 36
Acq On : 23 Apr 2001 3:07 pm Operator: Skelton
Sample : 1606802 Inst : GC/MS Ins
Misc : Field Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 15:43 2001 Quant Results File: M362439.RES

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 11:26:26 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010423\VC005583.D Vial: 37
Acq On : 23 Apr 2001 3:53 pm Operator: Skelton
Sample : 1606803 Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 16:28 2001 Quant Results File: M362439.RES

Quant Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D
DataAcq Meth : M362439

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	766140	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5030742	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	1435145	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2759595	33.00	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 110.00%			
35) Toluene-d8	23.42	98	6433552	29.97	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 99.90%			
49) Bromofluorobenzene	30.25	95	1999149	25.94	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 86.47%			
Target Compounds						Qvalue
14) Acetone	8.87	43	302378	9.20	ug/L	95

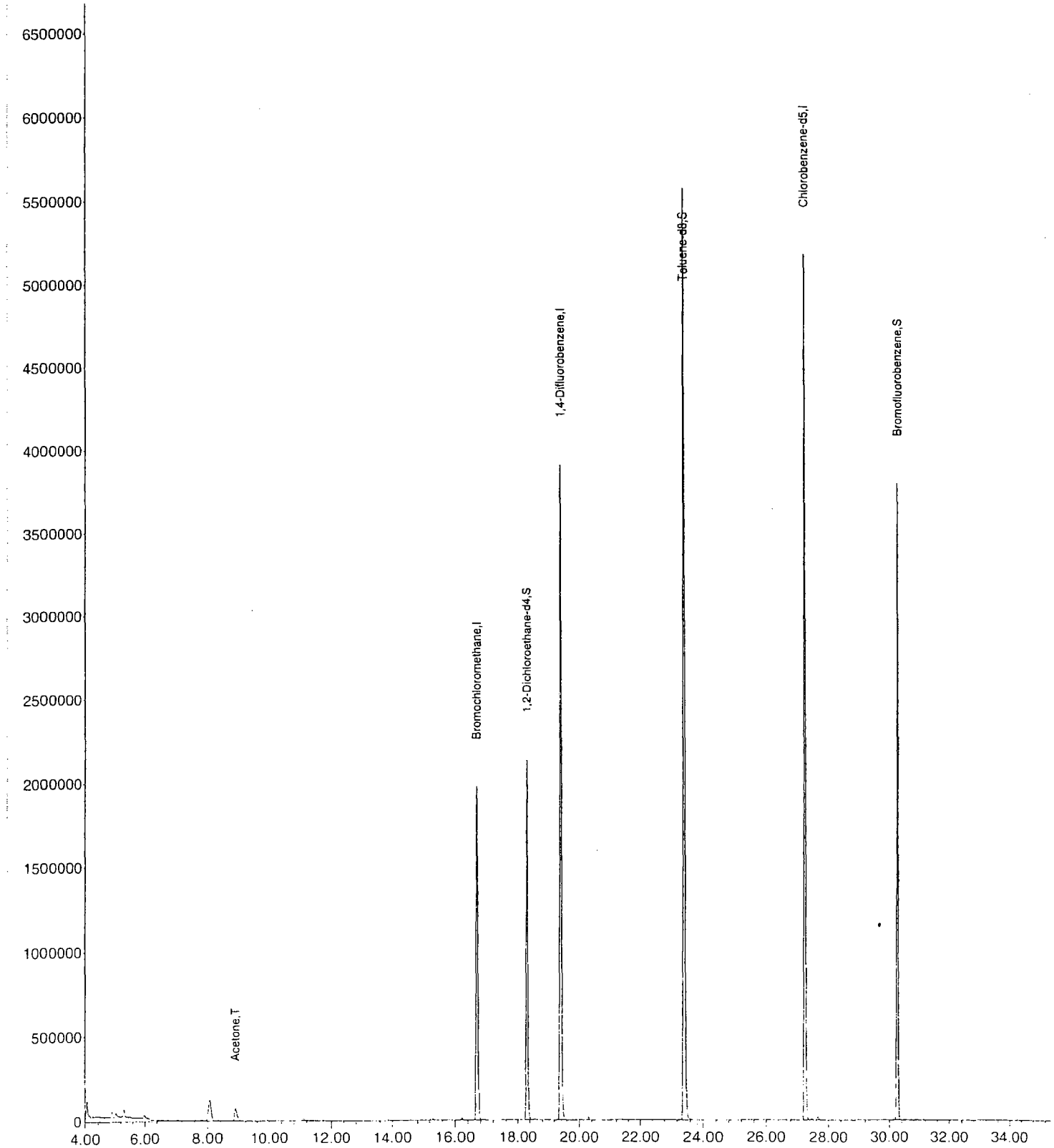
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010423\VC005583.D Vial: 37
Acq On : 23 Apr 2001 3:53 pm Operator: Skelton
Sample : 1606803 Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 16:28 2001 Quant Results File: M362439.RES

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 11:26:26 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D

TIC: VC005583.D



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\010423\VC005584.D Vial: 38
Acq On : 23 Apr 2001 8:04 pm Operator: Skelton
Sample : 1606804 Inst : GC/MS Ins
Misc : 801GW Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 20:39 2001 Quant Results File: M362439.RES

Quant Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 08:29:49 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D
DataAcq Meth : M362439

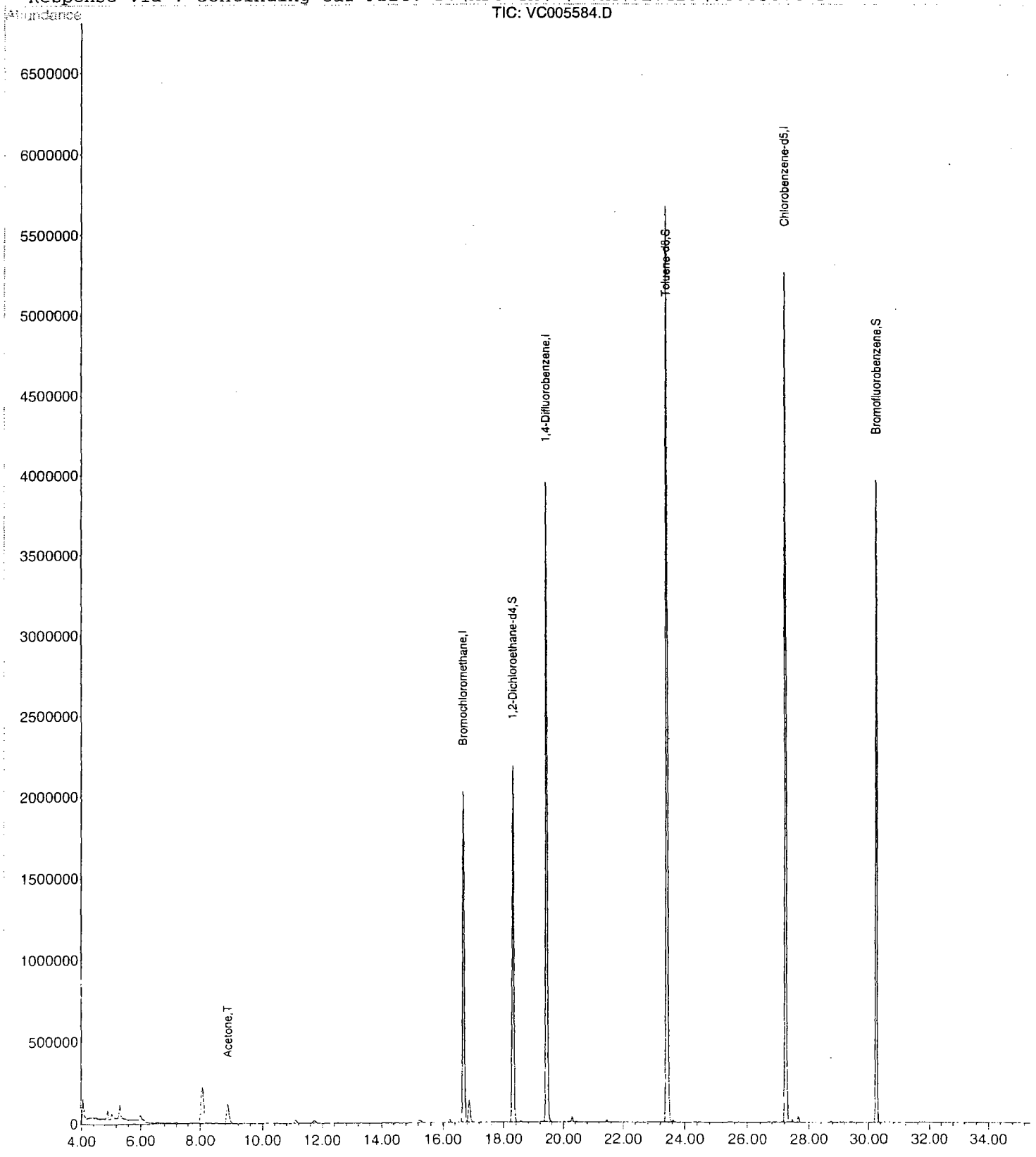
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	789641	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5172375	30.00	ug/L	0.01
37) Chlorobenzene-d5	27.25	119	1485565	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2821352	32.74	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 109.13%			
35) Toluene-d8	23.42	98	6643410	30.10	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 100.33%			
49) Bromofluorobenzene	30.25	95	2119974	26.58	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 88.60%			
Target Compounds						Qvalue
14) Acetone	8.87	43	460183	13.59	ug/L	95

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010423\VC005584.D Vial: 38
Acq On : 23 Apr 2001 8:04 pm Operator: Skelton
Sample : 1606804 Inst : GC/MS Ins
Misc : 801GW Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: Apr 23 20:39 2001 Quant Results File: M362439.RES

Method : D:\HPCHEM\1\METHODS\M362439.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon Apr 23 11:26:26 2001
Response via : Continuing Cal File: D:\HPCHEM\1\DATA\010423\VC005576.D



SEMI-VOLATILES

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05290.D**	Sample Name	**MB-1700**
Operator	**Bhaskar**	Misc Info	**MB-010424**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate	18.45	184731	4.96 ug/L	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05290.D**	Sample Name	**MB-1700**
Operator	**Bhaskar**	Misc Info	**MB-010424**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **MB-1700**

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16068 Location: BI.80 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB-1700

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05290.D

Level: (low/med) LOW Date Received: 4/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 4/24/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/24/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05295.D**	Sample Name	**1606802**
Operator	**Bhaskar**	Misc Info	**Field Blank**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05295.D**	Sample Name	**1606802**
Operator	**Bhaskar**	Misc Info	**Field Blank**
Date Acquired	**24-Apr-01**	Sample Multiplier	1

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **Field Blank**

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16068 Location: BI.80 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1606802

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05295.D

Level: (low/med) LOW Date Received: 4/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 4/24/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/24/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05296.D**	Sample Name	**1606803**
Operator	**Bhaskar**	Misc Info	**Dupe**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05296.D**	Sample Name	**1606803**
Operator	**Bhaskar**	Misc Info	**Dupe**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **Dupe**

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16068 Location: BI.80 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1606803

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05296.D

Level: (low/med) LOW Date Received: 4/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 4/24/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/24/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05297.D**	Sample Name	**1606804**
Operator	**Bhaskar**	Misc Info	**801GW**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05297.D**	Sample Name	**1606804**
Operator	**Bhaskar**	Misc Info	**801GW**
Date Acquired	**24-Apr-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **801GW**

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16068 Location: BI.80 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1606804

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05297.D

Level: (low/med) LOW Date Received: 4/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 4/24/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 4/24/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16068 Location: BI.80 SDG No.:

Lab File ID: BNA05123.D DFTPP Injection Date: 3/27/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 8:44

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.3
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	53.7
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	23.7
365	Greater than 0.75% of mass 198	2.7
441	Present, but less than mass 443	10.0
442	40.0 - 110.0% of mass 198	68.7
443	15.0 - 24.0% of mass 442	13.7 (19.9)2

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

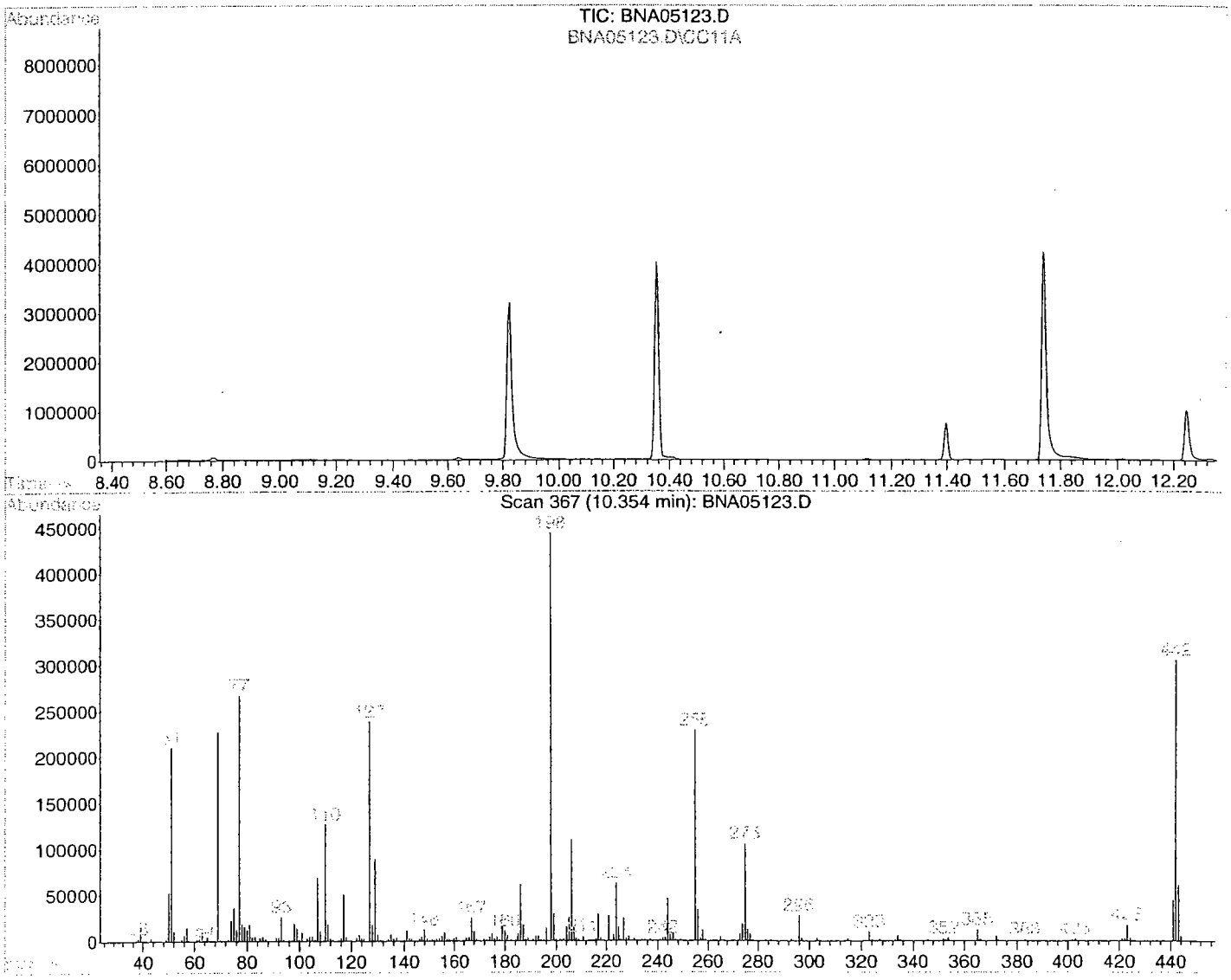
THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD120	120 PPM CAL	BNA05124.D	3/27/01	9:08
02	SSTD010	10 PPM CAL	BNA05125.D	3/27/01	9:55
03	SSTD050	50 PPM CAL	BNA05126.D	3/27/01	10:42
04	SSTD080	80 PPM CAL	BNA05127.D	3/27/01	11:28
05	SSTD020	20 PPM CAL	BNA05128.D	3/27/01	12:13

CLP

Data File : D:\DATA\010327\BNA05123.D
Acq On : 27 Mar 2001 8:44 am
Sample : DFTPP TUNE
Misc : 50 NG/2UL
MS Integration Params: RTEINT.P
Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration

Vial: 99
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p



Spectrum Information: Scan 367

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.4	210304	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.3	227520	PASS
70	69	0.00	2	0.8	1892	PASS
127	198	40	60	53.7	238528	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	443904	PASS
199	198	5	9	6.6	29456	PASS
275	198	10	30	23.7	105416	PASS
365	198	1	100	2.7	12022	PASS
441	443	1	99	73.0	44304	PASS
442	198	40	100	68.7	305152	PASS
443	442	17	23	19.9	60680	PASS

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.143	0.142	0.139	0.129	0.114	0.133	9.09
56)	TC	n-Nitrosodiphenylamin	0.435	0.452	0.471	0.496	0.510	0.473	6.47
57)	T	Azobenzene	0.729	0.777	0.819	0.855	0.879	0.812	7.39
58)	S	2,4,6-Tribromophenol	0.090	0.090	0.091	0.090	0.089	0.090	0.84
59)	T	4-Bromophenyl-phenyle	0.172	0.175	0.182	0.190	0.194	0.182	5.12
60)	T	Hexachlorobenzene	0.184	0.188	0.193	0.202	0.212	0.196	5.74
61)	TCM	Pentachlorophenol	0.124	0.123	0.122	0.109	0.103	0.116	8.31
62)	T	Phenanthrene	0.841	0.901	0.974	1.046	1.102	0.973	10.83
63)	T	Anthracene	0.863	0.922	0.991	1.063	1.107	0.989	10.08
64)	T	Di-n-butylphthalate	0.955	1.039	1.108	1.177	1.200	1.096	9.21
65)	TC	Fluoranthene	0.895	0.950	1.019	1.096	1.136	1.019	9.80
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.361	0.366	0.394	0.424	0.434	0.396	8.29
68)	TM	Pyrene	1.050	1.100	1.153	1.229	1.263	1.159	7.59
69)	S	p-Terphenyl-d14	0.751	0.772	0.793	0.823	0.844	0.797	4.74
70)	T	Butylbenzylphthalate	0.562	0.570	0.574	0.574	0.565	0.569	0.96
71)	T	Benzo[a]anthracene	1.023	1.057	1.094	1.125	1.162	1.092	5.02
72)	T	3,3'-Dichlorobenzidin	0.334	0.346	0.353	0.368	0.366	0.354	4.06
73)	T	Chrysene	0.964	1.001	1.031	1.071	1.116	1.037	5.74
74)	T	bis(2-Ethylhexyl)phth	0.760	0.780	0.791	0.792	0.772	0.779	1.72
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.214	1.325	1.400	1.410	1.374	1.345	5.98
77)	T	Benzo[b]fluoranthene	1.045	1.067	1.130	1.144	1.184	1.114	5.12
78)	T	Benzo[k]fluoranthene	1.001	1.043	1.117	1.192	1.220	1.115	8.40
79)	TC	Benzo[a]pyrene	0.993	1.031	1.084	1.117	1.139	1.073	5.65
80)	T	Indeno[1,2,3-cd]pyren	1.131	1.093	1.092	1.069	1.043	1.086	3.01
81)	T	Dibenz[a,h]anthracene	1.065	1.095	1.119	1.128	1.111	1.104	2.24
82)	T	Benzo[g,h,i]perylene	1.073	1.079	1.100	1.107	1.120	1.096	1.77

(#) = Out of Range

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05245.D** Sample Name **MS-1662**

Date Acquired **13-Apr-01**

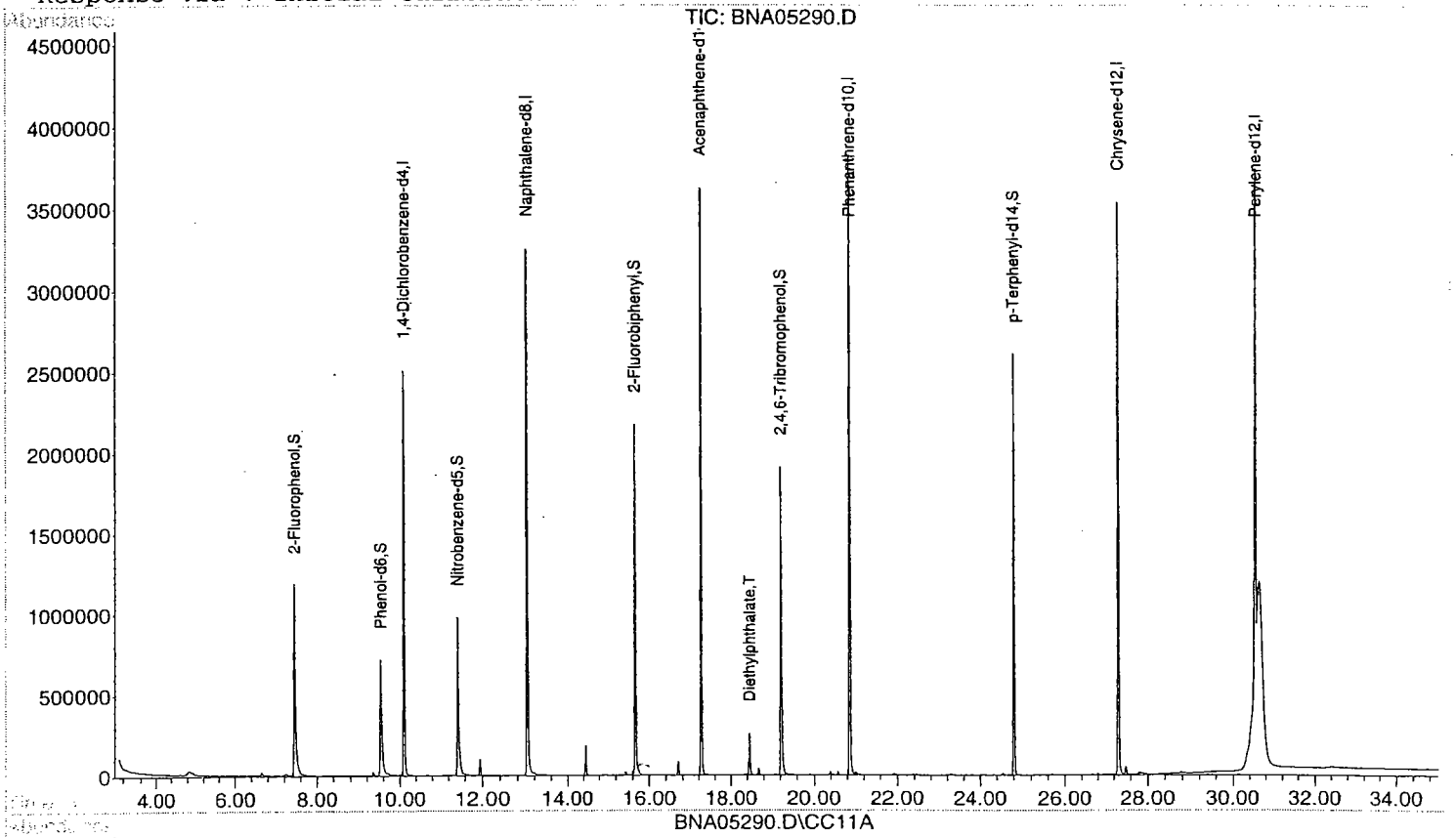
CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		7.88 ug/L	39.41
62-75-9	N-nitroso-dimethylamine		9.69 ug/L	48.47
62-53-3	Aniline		7.83 ug/L	39.16
111-44-4	bis(2-Chloroethyl)ether		14.77 ug/L	73.85
541-73-1	1,3-Dichlorobenzene		14.26 ug/L	71.28
106-46-7	1,4-Dichlorobenzene		14.39 ug/L	71.96
100-51-6	Benzyl alcohol		13.56 ug/L	67.80
95-50-1	1,2-Dichlorobenzene		15.15 ug/L	75.74
39638-32-9	bis(2-chloroisopropyl)ether		20.43 ug/L	102.16
621-64-7	n-Nitroso-di-n-propylamine		17.01 ug/L	85.04
67-72-1	Hexachloroethane		13.83 ug/L	69.13
98-95-3	Nitrobenzene		15.94 ug/L	79.72
78-59-1	Isophorone		16.69 ug/L	83.43
111-91-1	bis(2-Chloroethoxy)methane		14.98 ug/L	74.89
120-82-1	1,2,4-Trichlorobenzene		15.02 ug/L	75.11
91-20-3	Naphthalene		15.66 ug/L	78.30
106-47-8	4-Chloroaniline		9.93 ug/L	49.64
87-68-3	Hexachlorobutadiene		14.78 ug/L	73.91
91-57-6	2-Methylnaphthalene		16.18 ug/L	80.88
77-47-4	Hexachlorocyclopentadiene		17.53 ug/L	87.67
91-58-7	2-Chloronaphthalene		18.42 ug/L	92.11
88-74-4	2-Nitroaniline		16.59 ug/L	82.93
131-11-3	Dimethylphthalate		18.68 ug/L	93.39
208-96-8	Acenaphthylene		18.56 ug/L	92.80
606-20-2	2,6-Dinitrotoluene		19.14 ug/L	95.69
99-09-2	3-Nitroaniline		12.75 ug/L	63.75
83-32-9	Acenaphthene		18.60 ug/L	92.99
132-64-9	Dibenzofuran		18.48 ug/L	92.42
121-14-2	2,4-Dinitrotoluene		18.16 ug/L	90.80
84-66-2	Diethylphthalate		19.32 ug/L	96.58
86-73-7	Fluorene		19.11 ug/L	95.53
7005-72-3	4-Chlorophenyl-phenylether		18.66 ug/L	93.29
100-01-6	4-Nitroaniline		12.97 ug/L	64.83
86-30-6	n-Nitrosodiphenylamine		17.75 ug/L	88.75
103-33-3	Azobenzene		17.16 ug/L	85.79
101-55-3	4-Bromophenyl-phenylether		17.30 ug/L	86.51
118-74-1	Hexachlorobenzene		17.08 ug/L	85.42
85-01-8	Phenanthrene		18.03 ug/L	90.15
120-12-7	Anthracene		17.86 ug/L	89.29
84-74-2	Di-n-butylphthalate		18.28 ug/L	91.42
206-44-0	Fluoranthene		17.60 ug/L	88.01
129-00-0	Pyrene		18.27 ug/L	91.37
85-68-7	Butylbenzylphthalate		17.83 ug/L	89.14
56-55-3	Benzo[a]anthracene		17.70 ug/L	88.50
218-01-9	Chrysene		17.74 ug/L	88.71
117-81-7	bis(2-Ethylhexyl)phthalate		17.31 ug/L	86.55
117-84-0	Di-n-octylphthalate		21.43 ug/L	107.13
205-99-2	Benzo[b]fluoranthene		20.62 ug/L	103.10
207-08-9	Benzo[k]fluoranthene		21.13 ug/L	105.65
50-32-8	Benzo[a]pyrene		20.32 ug/L	101.60
193-39-5	Indeno[1,2,3-cd]pyrene		19.24 ug/L	96.22
53-70-3	Dibenz[a,h]anthracene		19.88 ug/L	99.42
191-24-2	Benzo[g,h,i]perylene		19.87 ug/L	99.36

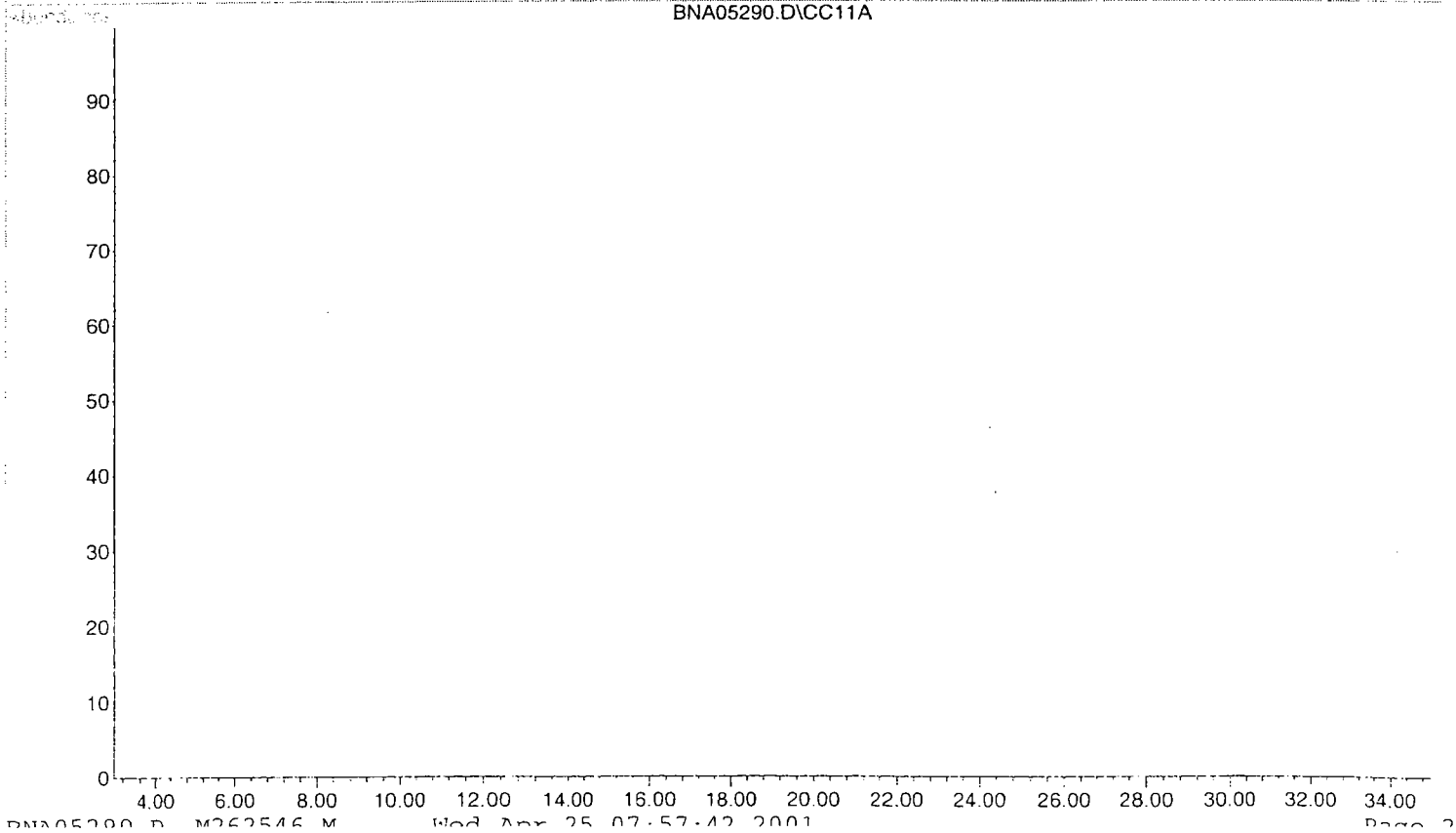
Quantitation Report

Data File : D:\DATA\010424\BNA05290.D
Acq On : 24 Apr 2001 2:18 pm
Sample : MB-1700
Misc : MB-010424
MS Integration Params: RTEINT.P
Quant Time: Apr 25 7:38 2001

Vial: 1
Operator: Bhaskar
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





Quantitation Report (QT Reviewed)

Data File : D:\DATA\010424\BNA05296.D Vial: 7
Acq On : 24 Apr 2001 6:59 pm Operator: Bhaskar
Sample : 1606803 Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Apr 25 7:43 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.10	152	645415	40.00	ug/L	-0.02
19) Naphthalene-d8	13.03	136	2383894	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.26	164	1292228	40.00	ug/L	-0.02
54) Phenanthrene-d10	20.85	188	2301998	40.00	ug/L	-0.02
66) Chrysene-d12	27.30	240	2099958	40.00	ug/L	-0.03
75) Perylene-d12	30.53	264	1583661	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-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.42	82	697577	29.14	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery =	58.28%		
38) 2-Fluorobiphenyl	15.67	172	1214301	33.77	ug/L	-0.02
Spiked Amount 50.000	Range 43 - 116		Recovery =	67.54%		
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	24.80	244	827838	19.79	ug/L	-0.02
Spiked Amount 50.000	Range 33 - 141		Recovery =	39.58%		

Target Compounds Qvalue

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

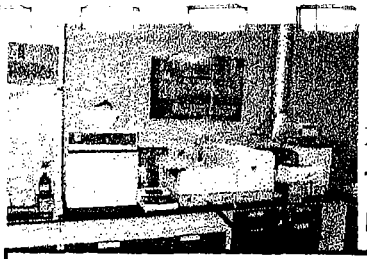
Laboratory Authentication Statement

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

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)532-6263 EMail:wrightd@mail1.monmouth.army.mil
NJDEP Certification #13461

Chain of Custody Record

Customer:

Phone #:

( )DERA ( )OMA ( )Other:_____

Project No:

Location: Bldg 801

2nd Rnd

Samplers Name / Company: Corey McCormach, TVS

LIMS/Work Order #	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: + Xylene VO+15	BN+15						Hex Rnd	Comments: Remarks / Preservation Method
16138 .01	Trip	5/19/01	0640	AQ	2	✓							—	HCL/4°C
.02	Field Blank		0800		3	✓	✓						—	
.03	Dupe		—		3	✓	✓						—	
.04	801 GW *		0910		3	✓	✓						00	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
Corey McCarroll	5/21/01 0915				
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

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

Turnaround time: ( )Standard 3 wks, ( )Rush ____ Days, ( )ASAP Verbal ____ Hrs.

Remarks:

200002

print legibly

Coc.xls5/15/01

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 3510/625
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.

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 FORMAT (cont.)

Indicate
Yes, No, N/A

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

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

11. Extraction Holding Time Met — Yes

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

12. Analysis Holding Time Met — Yes

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

Additional Comments:

Laboratory Manager: _____ Date: 6-26-01

LABORATORY CHRONICLE

Laboratory Chronicle

Lab ID: 16133 Site: Bldg. 801

	Date	Hold Time
Date Sampled	05/19/01	NA
Receipt/Refrigeration	05/19/01*	NA
Extractions		
1. BN	05/25/01	7 days
Analyses		
1. Volatile Organics	05/21/01	14 days
2. BN	06/05,06/01	40 days

* Sampled and refrigerated on 05/19/01 received on 05/21/01.

VOLATILE ORGANICS

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**

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

Data File	**VC005804.D**	Sample Name	**MB**
Operator	**Skelton**	Field ID	**MB**
Date Aquired	**21-May-01**	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	
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

6/21/01 8:39 AM

000012

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **MB**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16133 Location: B801 SDG No.:

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

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005804.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: not dec. Date Analyzed: 5/21/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC005806.D**	Sample Name	**1613301s**
Operator	**Skelton**	Field ID	**Trip Blank**
Date Aquired	**21-May-01**	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	
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

6/21/01 8:39 AM

000014

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FIELD ID: **Trip Blank**

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16133 Location: B801 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1613401

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: VC005806.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: not dec. Date Analyzed: 5/21/01

GC Column: RTX502. ID: 0.25 (mm) Dilution Factor: 1.0

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

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

Number TICs found: 0

CAS NO.	COMPOUND NAME	RT	EST. CONC.	Q

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

Data File	**VC005807.D**	Sample Name	**1613302s**
Operator	**Skelton**	Field ID	**Field Blank**
Date Aquired	**21-May-01**	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	
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

6/21/01 8:39 AM

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

000016

4A

FIELD ID:

VOLATILE METHOD BLANK SUMMARY

MB

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16133 Location: B801 SDG No.:

Lab File ID: VC005804.D Lab Sample ID: MB

Date Analyzed: 5/21/01 Time Analyzed: 12:12

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	TRIP BLANK	1613401	VC005806.D	14:13
02	FIELD BLANK	1613402	VC005807.D	14:54
03	DUPE	1613403	VC005808.D	15:35
04	801GW	1613404	VC005809.D	16:15
05	801GW MS	1613404 MS	VC005810.D	16:56
06	801GW MSD	1613404 MSD	VC005811.D	17:36

COMMENTS:

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

Data File	VC005811.D	Sample Name	1613304 MSD
Date Aquired	21-May-01	Field ID	1613304 MSD

CAS#	Amount Added ug/L	Result ug/L	Percent Recovery
Acrolein	200	121.68 ug/L	60.84
Acrylonitrile	200	220.31 ug/L	110.16
tert-Butyl alcohol	200	170.65 ug/L	85.32
Methyl-tert-Butyl ether	20	18.93 ug/L	94.65
Di-isopropyl ether	20	20.02 ug/L	100.09
Dichlorodifluoromethane	20	15.16 ug/L	75.82
Chloromethane	20	18.47 ug/L	92.36
Vinyl Chloride	20	19.50 ug/L	97.51
Bromomethane	20	19.48 ug/L	97.39
Chloroethane	20	19.85 ug/L	99.27
Trichlorofluoromethane	20	19.97 ug/L	99.83
1,1-Dichloroethene	20	19.80 ug/L	98.98
Acetone	20	10.04 ug/L	50.22
Carbon Disulfide	20	19.84 ug/L	99.18
Methylene Chloride	20	20.82 ug/L	104.11
trans-1,2-Dichloroethene	20	20.20 ug/L	101.00
1,1-Dichloroethane	20	20.41 ug/L	102.03
Vinyl Acetate	20	15.53 ug/L	77.65
2-Butanone	20	16.90 ug/L	84.48
cis-1,2-Dichloroethene	20	20.00 ug/L	100.02
Chloroform	20	20.81 ug/L	104.05
1,1,1-Trichloroethane	20	20.14 ug/L	100.70
Carbon Tetrachloride	20	19.87 ug/L	99.37
Benzene	20	21.63 ug/L	108.17
1,2-Dichloroethane	20	20.65 ug/L	103.27
Trichloroethene	20	19.58 ug/L	97.89
1,2-Dichloropropane	20	20.49 ug/L	102.46
Bromodichloromethane	20	20.34 ug/L	101.68
2-Chloroethyl vinyl ether	20	20.18 ug/L	100.90
cis-1,3-Dichloropropene	20	20.01 ug/L	100.05
4-Methyl-2-Pentanone	20	16.09 ug/L	80.46
Toluene	20	22.71 ug/L	113.56
trans-1,3-Dichloropropene	20	18.84 ug/L	94.19
1,1,2-Trichloroethane	20	20.34 ug/L	101.70
Tetrachloroethene	20	18.98 ug/L	94.89
2-Hexanone	20	17.68 ug/L	88.38
Dibromochloromethane	20	19.75 ug/L	98.77
Chlorobenzene	20	20.46 ug/L	102.31
Ethylbenzene	20	21.45 ug/L	107.23
m+p-Xylenes	40	39.94 ug/L	99.86
o-Xylene	20	20.99 ug/L	104.94
Styrene	20	19.81 ug/L	99.05
Bromoform	20	18.34 ug/L	91.72
1,1,2,2-Tetrachloroethane	20	20.80 ug/L	103.99
1,3-Dichlorobenzene	20	18.61 ug/L	93.03
1,4-Dichlorobenzene	20	19.11 ug/L	95.55
1,2-Dichlorobenzene	20	18.98 ug/L	94.90

6/21/01 8:39 AM

D:\HPCHEM\CUSTRPT\VOLATILE\624MSD00.CRT

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL NJDEP#: 13461

Project: LTM Case No.: 16133 Location: B801 SDG No.:

Lab File ID (Standard): VC005803.D Date Analyzed: 5/21/01

Instrument ID: VoaInst#3 Time Analyzed: 11:26

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	892403	16.70	6044487	19.42	1773134	27.24
	UPPER LIMIT	1784806	17.20	12088974	19.92	3546268	27.74
	LOWER LIMIT	446202	16.20	3022244	18.92	886567	26.74
	FIELD ID:						
01	MB	783403	16.69	5418241	19.42	1556553	27.25
02	TRIP BLANK	751542	16.69	5160912	19.42	1496224	27.25
03	FIELD BLANK	728937	16.70	5018406	19.42	1495147	27.25
04	DUPE	729268	16.70	4888846	19.42	1440697	27.25
05	801GW	684695	16.70	4679735	19.42	1377031	27.24
06	801GW MS	803823	16.70	5314547	19.42	1625625	27.25
07	801GW MSD	823030	16.69	5455381	19.42	1648813	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 (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\010521\VC005804.D Vial: 22
Acq On : 21 May 2001 12:12 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 12:48 2001 Quant Results File: M362441.RES

Quant Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Fri May 18 14:35:15 2001
Response via : Initial Calibration
DataAcq Meth : M362441

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	783403	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5418241	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1556553	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2929024	32.29	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 107.63%			
35) Toluene-d8	23.42	98	6907433	29.61	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 98.70%			
49) Bromofluorobenzene	30.25	95	2214749	25.92	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 86.40%			
Target Compounds						Qvalue

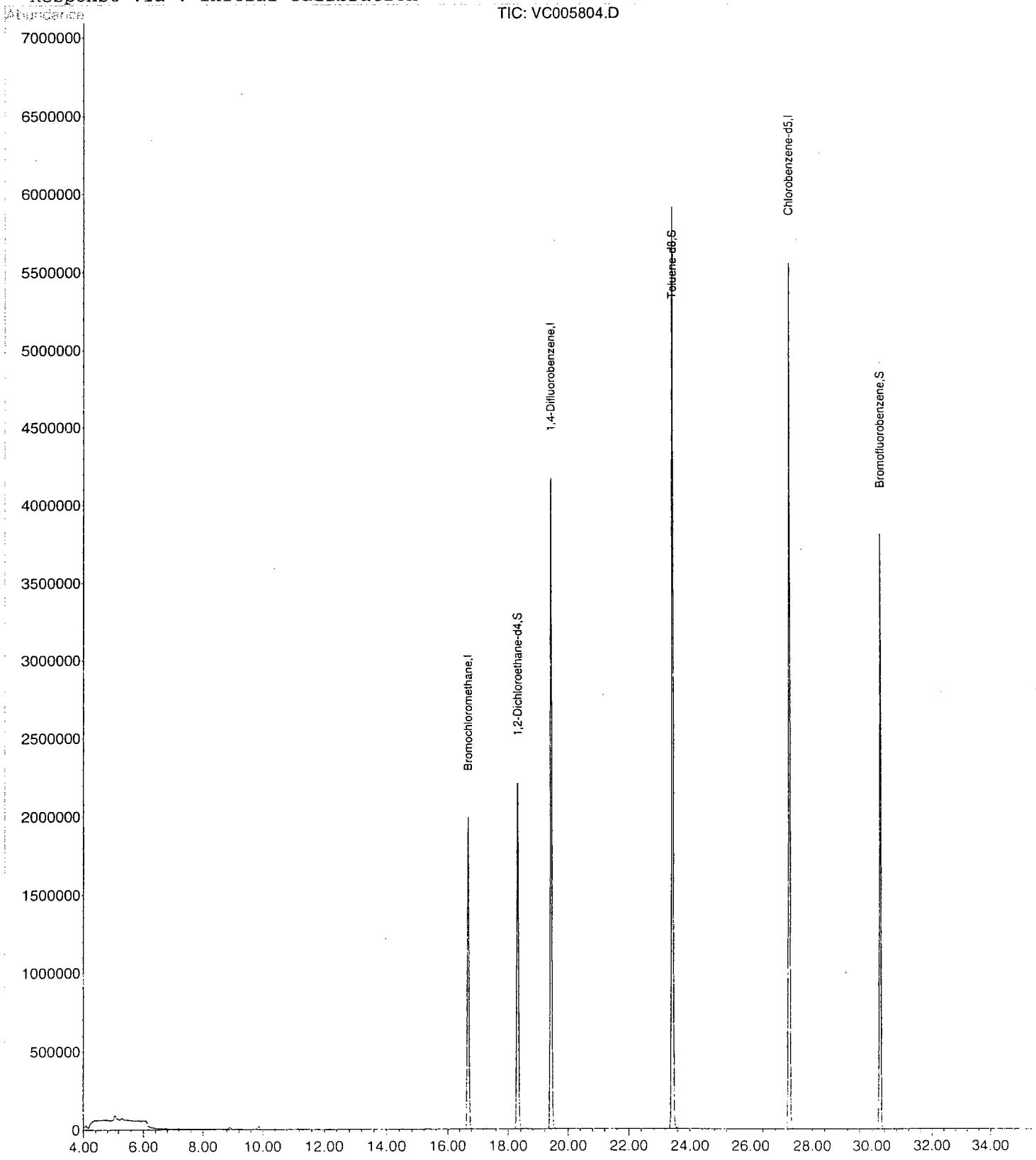
(#) = qualifier out of range (m) = manual integration

000032

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010521\VC005804.D Vial: 22
Acq On : 21 May 2001 12:12 pm Operator: Skelton
Sample : MB Inst : GC/MS Ins
Misc : MB Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 12:48 2001 Quant Results File: M362441.RES

Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\010521\VC005806.D Vial: 1
Acq On : 21 May 2001 2:13 pm Operator: Skelton
Sample : 1613301s Inst : GC/MS Ins
Misc : Trip Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 14:49 2001 Quant Results File: M362441.RES

Quant Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration
DataAcq Meth : M362441

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.69	128	751542	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5160912	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1496224	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2830718	32.52	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 108.40%			
35) Toluene-d8	23.42	98	6651618	29.93	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 99.77%			
49) Bromofluorobenzene	30.25	95	2167923	26.40	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 88.00%			

Target Compounds Qvalue

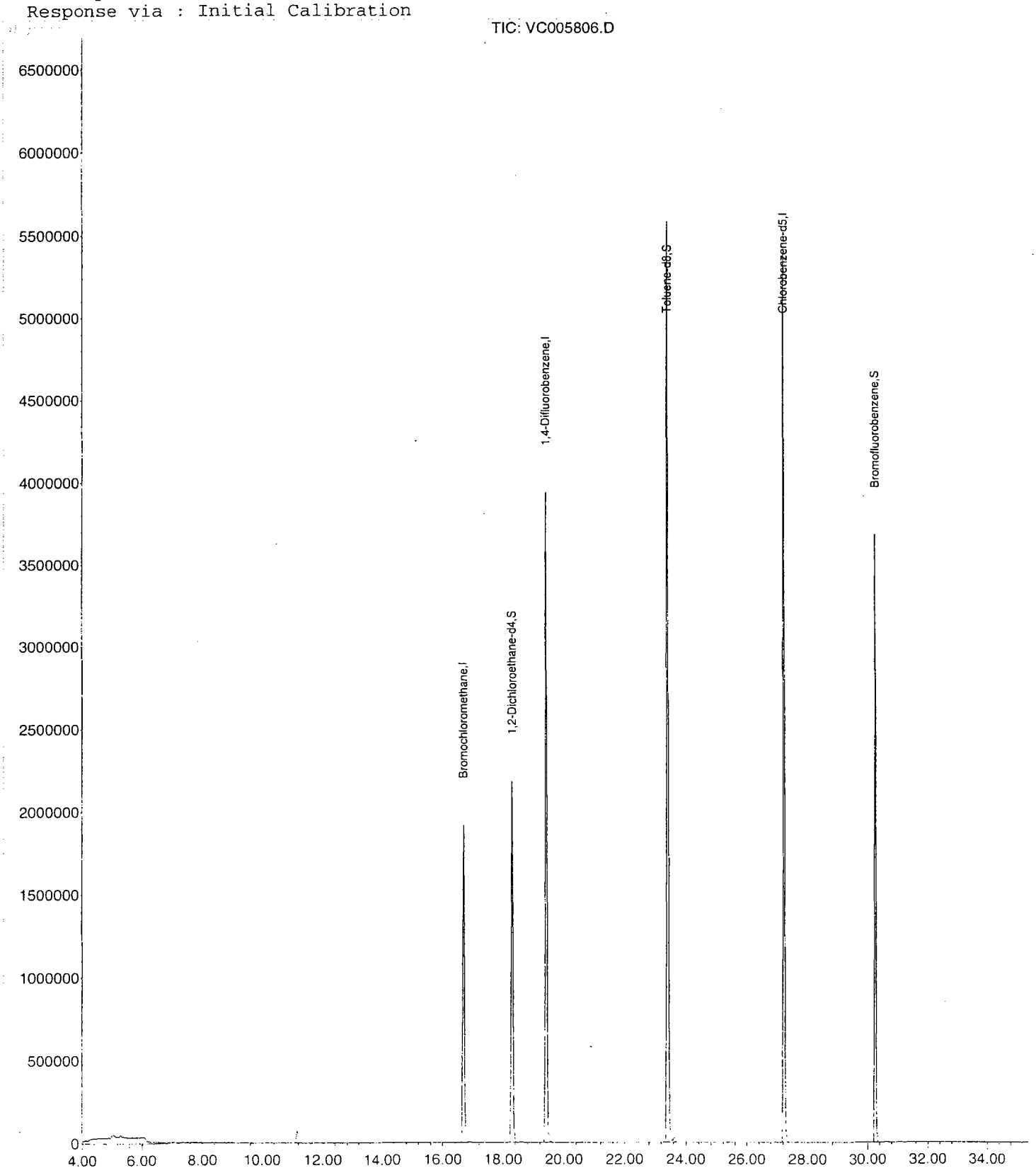
(#) = qualifier out of range (m) = manual integration

000034

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010521\VC005806.D Vial: 1
Acq On : 21 May 2001 2:13 pm Operator: Skelton
Sample : 1613301s Inst : GC/MS Ins
Misc : Trip Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 14:49 2001 Quant Results File: M362441.RES

Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\010521\VC005807.D Vial: 2
Acq On : 21 May 2001 2:54 pm Operator: Skelton
Sample : 1613302s Inst : GC/MS Ins
Misc : Field Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 15:30 2001 Quant Results File: M362441.RES

Quant Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration
DataAcq Meth : M362441

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	728937	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	5018406	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1495147	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2807912	33.26	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 110.87%			
35) Toluene-d8	23.42	98	6608268	30.58	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 101.93%			
49) Bromofluorobenzene	30.25	95	2081676	25.36	ug/L	0.00
Spiked Amount 30.000	Range 74 - 121		Recovery = 84.53%			

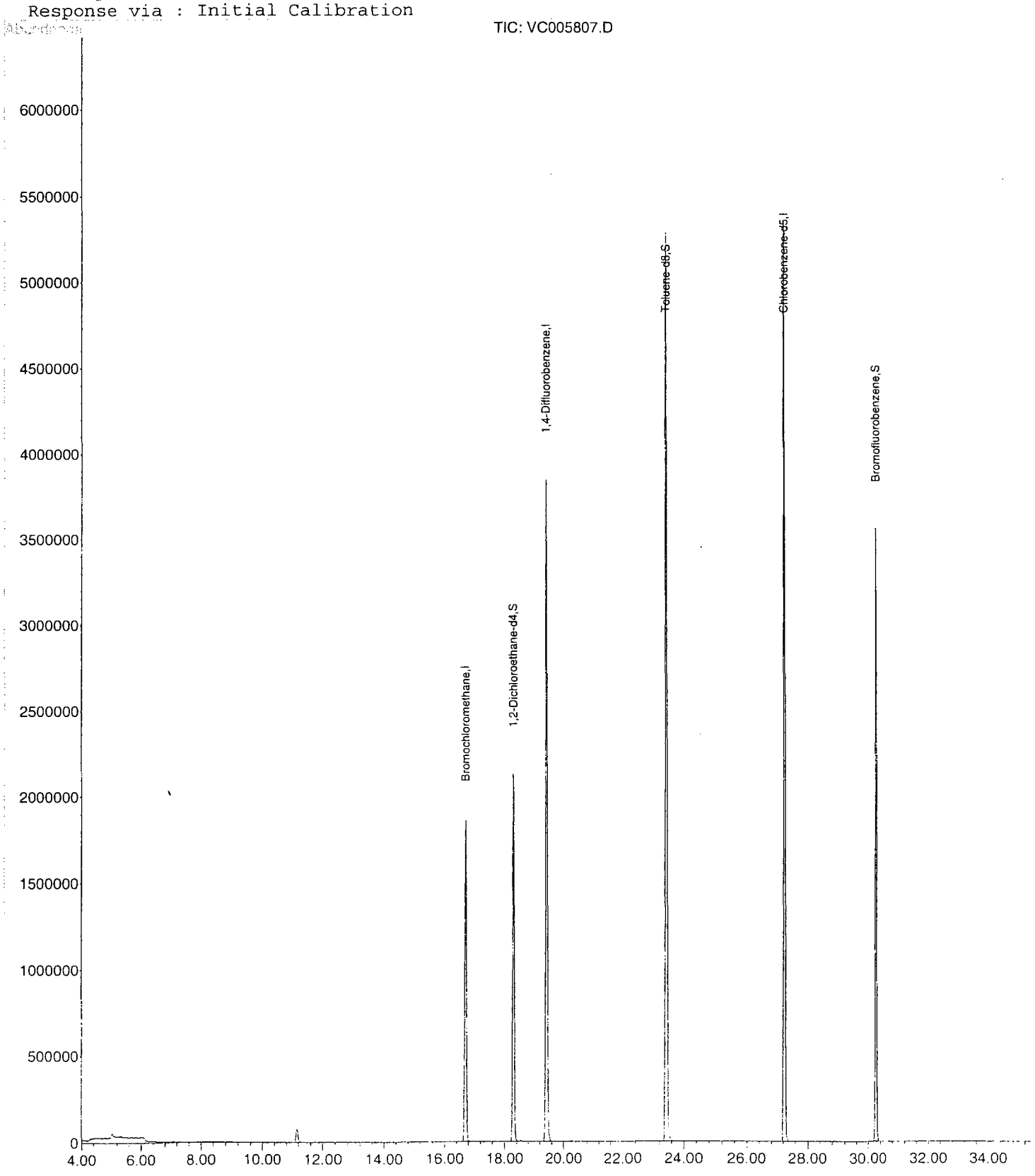
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010521\VC005807.D Vial: 2
Acq On : 21 May 2001 2:54 pm Operator: Skelton
Sample : 1613302s Inst : GC/MS Ins
Misc : Field Blank Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 15:30 2001 Quant Results File: M362441.RES

Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration



000037

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\010521\VC005808.D Vial: 3
Acq On : 21 May 2001 3:35 pm Operator: Skelton
Sample : 1613303s Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 16:10 2001 Quant Results File: M362441.RES

Quant Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration
DataAcq Meth : M362441

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	729268	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	4888846	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.25	119	1440697	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.30	65	2715704	32.16	ug/L	0.00
Spiked Amount 30.000	Range 70 - 121		Recovery = 107.20%			
35) Toluene-d8	23.42	98	6517301	30.96	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 103.20%			
49) Bromofluorobenzene	30.26	95	2001060	25.30	ug/L	0.01
Spiked Amount 30.000	Range 74 - 121		Recovery = 84.33%			

Target Compounds Qvalue

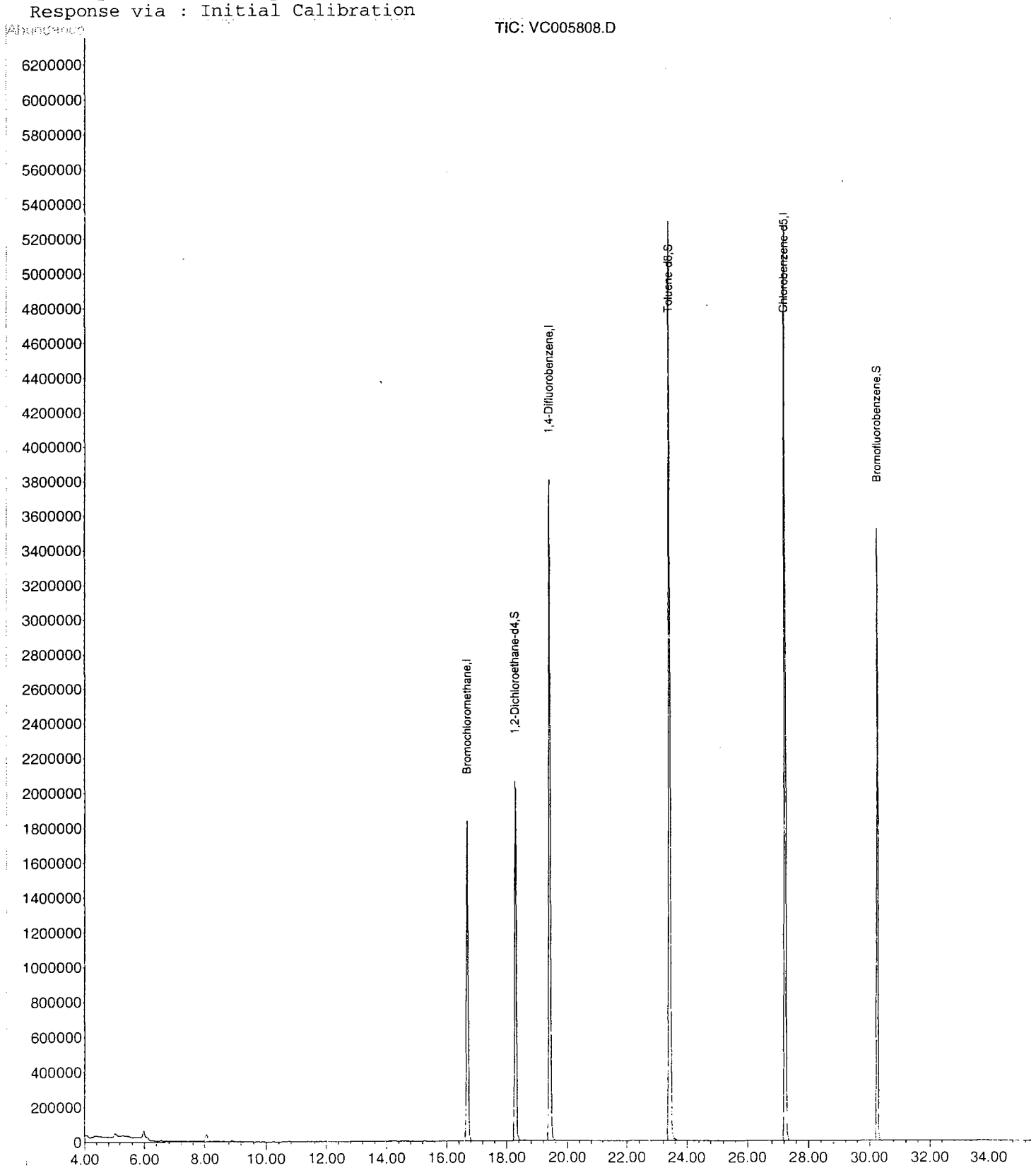
(#) = qualifier out of range (m) = manual integration

000038

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010521\VC005808.D Vial: 3
Acq On : 21 May 2001 3:35 pm Operator: Skelton
Sample : 1613303s Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 16:10 2001 Quant Results File: M362441.RES

Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration



000039

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\010521\VC005809.D Vial: 4
Acq On : 21 May 2001 4:15 pm Operator: Skelton
Sample : 1613304s Inst : GC/MS Ins
Misc : 801GW Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 16:51 2001 Quant Results File: M362441.RES

Quant Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration
DataAcq Meth : M362441

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	16.70	128	684695	30.00	ug/L	0.00
26) 1,4-Difluorobenzene	19.42	114	4679735	30.00	ug/L	0.00
37) Chlorobenzene-d5	27.24	119	1377031	30.00	ug/L	0.00
System Monitoring Compounds						
25) 1,2-Dichloroethane-d4	18.31	65	2651850	33.44	ug/L	0.01
Spiked Amount 30.000	Range 70 - 121		Recovery = 111.47%			
35) Toluene-d8	23.42	98	6213459	30.84	ug/L	0.00
Spiked Amount 30.000	Range 81 - 117		Recovery = 102.80%			
49) Bromofluorobenzene	30.26	95	1885957	24.95	ug/L	0.01
Spiked Amount 30.000	Range 74 - 121		Recovery = 83.17%			

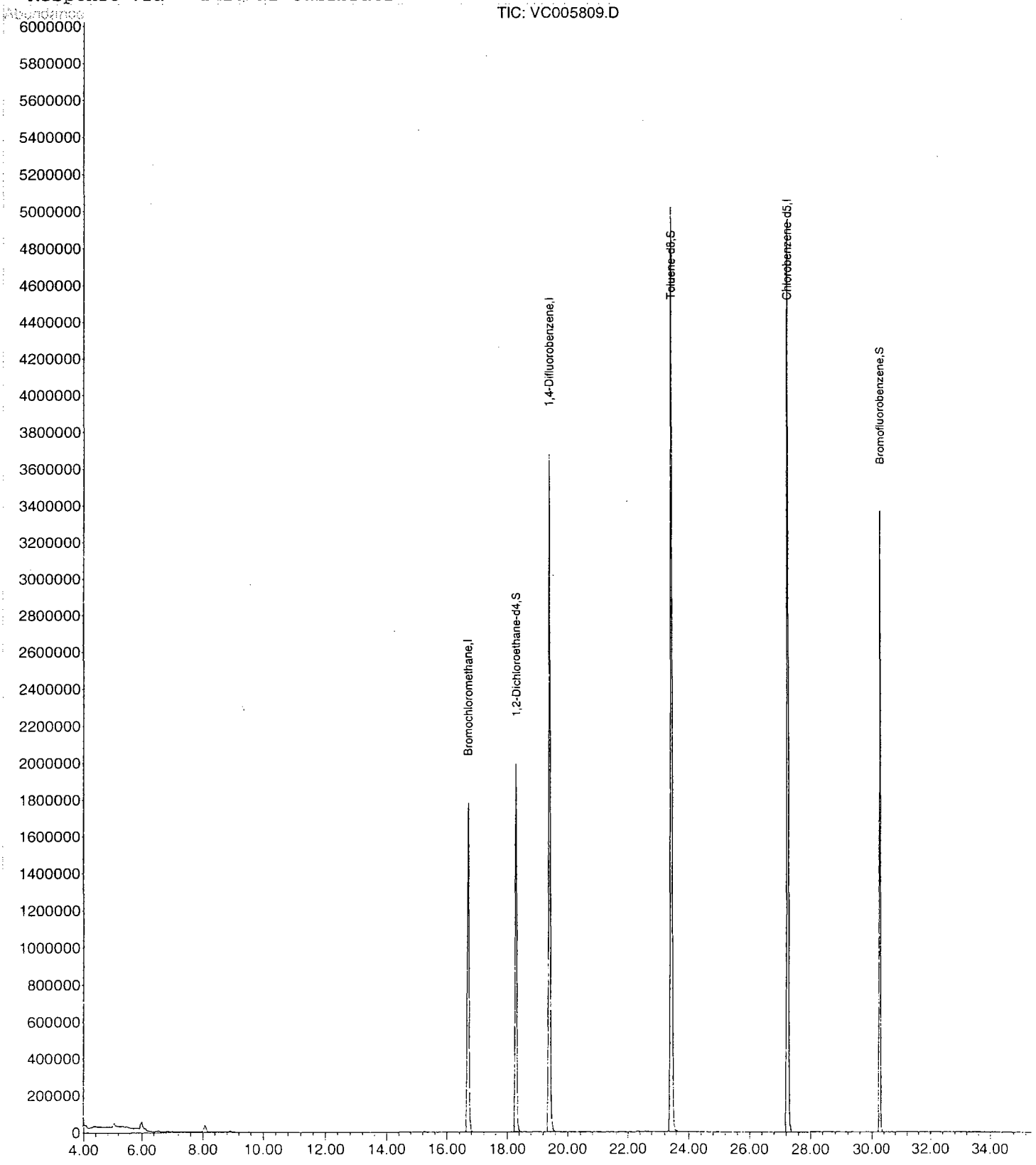
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\010521\VC005809.D Vial: 4
Acq On : 21 May 2001 4:15 pm Operator: Skelton
Sample : 1613304s Inst : GC/MS Ins
Misc : 801GW Multiplr: 1.00
MS Integration Params: ACETONE.P
Quant Time: May 21 16:51 2001 Quant Results File: M362441.RES

Method : D:\HPCHEM\1\METHODS\M362441.M (RTE Integrator)
Title : Volatile Organics by GC/MS Method 624/8260/TCLP
Last Update : Mon May 21 12:49:24 2001
Response via : Initial Calibration



BASE NEUTRALS

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05405.D**	Sample Name	**MB 1841**
Operator	**Skelton**	Misc Info	**25May01**
Date Acquired	**5-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05405.D**	Sample Name	**MB 1841**
Operator	**Skelton**	Misc Info	**25May01**
Date Acquired	**5-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **MB 1841**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: MB 1841

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05405.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/5/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05445.D**	Sample Name	**1613302**
Operator	**Skelton**	Misc Info	**Field Blank**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05445.D**	Sample Name	**1613302**
Operator	**Skelton**	Misc Info	**Field Blank**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate	27.48	118745	3.04 ug/L	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **Field Blank**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1613302

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05445.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/6/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05446.D**	Sample Name	**1613303**
Operator	**Skelton**	Misc Info	**Dupe**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05446.D**	Sample Name	**1613303**
Operator	**Skelton**	Misc Info	**Dupe**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **Dupe**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1613303

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05446.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/6/01

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

Semi-Volatile Analysis Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name	**BNA05447.D**	Sample Name	**1613304**
Operator	**Skelton**	Misc Info	**801 GW**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
110-86-1	Pyridine			not detected	NLE	1.54	ug/L	
62-75-9	N-nitroso-dimethylamine			not detected	20	0.69	ug/L	
62-53-3	Aniline			not detected	NLE	1.85	ug/L	
111-44-4	bis(2-Chloroethyl)ether			not detected	10	0.63	ug/L	
541-73-1	1,3-Dichlorobenzene			not detected	600	0.62	ug/L	
106-46-7	1,4-Dichlorobenzene			not detected	75	0.58	ug/L	
100-51-6	Benzyl alcohol			not detected	NLE	0.62	ug/L	
95-50-1	1,2-Dichlorobenzene			not detected	600	0.65	ug/L	
39638-32-9	bis(2-chloroisopropyl)ether			not detected	300	0.57	ug/L	
621-64-7	n-Nitroso-di-n-propylamine			not detected	20	0.64	ug/L	
67-72-1	Hexachloroethane			not detected	10	0.34	ug/L	
98-95-3	Nitrobenzene			not detected	10	0.51	ug/L	
78-59-1	Isophorone			not detected	100	0.45	ug/L	
111-91-1	bis(2-Chloroethoxy)methane			not detected	NLE	0.48	ug/L	
120-82-1	1,2,4-Trichlorobenzene			not detected	9	0.54	ug/L	
91-20-3	Naphthalene			not detected	NLE	0.72	ug/L	
106-47-8	4-Chloroaniline			not detected	NLE	1.78	ug/L	
87-68-3	Hexachlorobutadiene			not detected	1	0.43	ug/L	
91-57-6	2-Methylnaphthalene			not detected	NLE	0.55	ug/L	
77-47-4	Hexachlorocyclopentadiene			not detected	50	0.76	ug/L	
91-58-7	2-Chloronaphthalene			not detected	NLE	0.53	ug/L	
88-74-4	2-Nitroaniline			not detected	NLE	1.04	ug/L	
131-11-3	Dimethylphthalate			not detected	7000	1.04	ug/L	
208-96-8	Acenaphthylene			not detected	NLE	0.70	ug/L	
606-20-2	2,6-Dinitrotoluene			not detected	NLE	0.92	ug/L	
99-09-2	3-Nitroaniline			not detected	NLE	1.93	ug/L	
83-32-9	Acenaphthene			not detected	400	0.62	ug/L	
132-64-9	Dibenzofuran			not detected	NLE	0.73	ug/L	
121-14-2	2,4-Dinitrotoluene			not detected	10	1.41	ug/L	
84-66-2	Diethylphthalate			not detected	5000	1.54	ug/L	
86-73-7	Fluorene			not detected	300	0.98	ug/L	
7005-72-3	4-Chlorophenyl-phenylether			not detected	NLE	0.86	ug/L	
100-01-6	4-Nitroaniline			not detected	NLE	2.96	ug/L	
86-30-6	n-Nitrosodiphenylamine			not detected	20	1.44	ug/L	
103-33-3	Azobenzene			not detected	NLE	1.00	ug/L	
101-55-3	4-Bromophenyl-phenylether			not detected	NLE	1.28	ug/L	
118-74-1	Hexachlorobenzene			not detected	10	1.08	ug/L	
85-01-8	Phenanthrene			not detected	NLE	1.73	ug/L	
120-12-7	Anthracene			not detected	2000	1.85	ug/L	
84-74-2	Di-n-butylphthalate			not detected	900	2.49	ug/L	
206-44-0	Fluoranthene			not detected	300	1.48	ug/L	

Semi-Volatile Analysis Report
Page 2

Data File Name	**BNA05447.D**	Sample Name	**1613304**
Operator	**Skelton**	Misc Info	**801 GW**
Date Acquired	**6-Jun-01**	Sample Multiplier	**1**

CAS#	Name	R.T.	Response	Result	Regulatory Level (ug/L)*	MDL		Qualifiers
92-87-5	Benzidine			not detected	50	2.15	ug/L	
129-00-0	Pyrene			not detected	200	1.53	ug/L	
85-68-7	Butylbenzylphthalate			not detected	100	1.24	ug/L	
56-55-3	Benzo[a]anthracene			not detected	10	2.68	ug/L	
91-94-1	3,3'-Dichlorobenzidine			not detected	60	1.60	ug/L	
218-01-9	Chrysene			not detected	20	1.14	ug/L	
117-81-7	bis(2-Ethylhexyl)phthalate			not detected	30	1.34	ug/L	
117-84-0	Di-n-octylphthalate			not detected	100	1.44	ug/L	
205-99-2	Benzo[b]fluoranthene			not detected	10	1.32	ug/L	
207-08-9	Benzo[k]fluoranthene			not detected	2	1.15	ug/L	
50-32-8	Benzo[a]pyrene			not detected	20	2.43	ug/L	
193-39-5	Indeno[1,2,3-cd]pyrene			not detected	20	2.24	ug/L	
53-70-3	Dibenz[a,h]anthracene			not detected	20	1.94	ug/L	
191-24-2	Benzo[g,h,i]perylene			not detected	NLE	2.04	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: **801 GW**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 1613304

Sample wt/vol: 1000 (g/ml) ML Lab File ID: BNA05447.D

Level: (low/med) LOW Date Received: 5/21/01

% Moisture: decanted: (Y/N) N Date Extracted: 5/25/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 6/6/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: LTM Case No.: 16123 Location: M3 SDG No.:

Lab File ID: BNA05123.D DFTPP Injection Date: 3/27/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 8:44

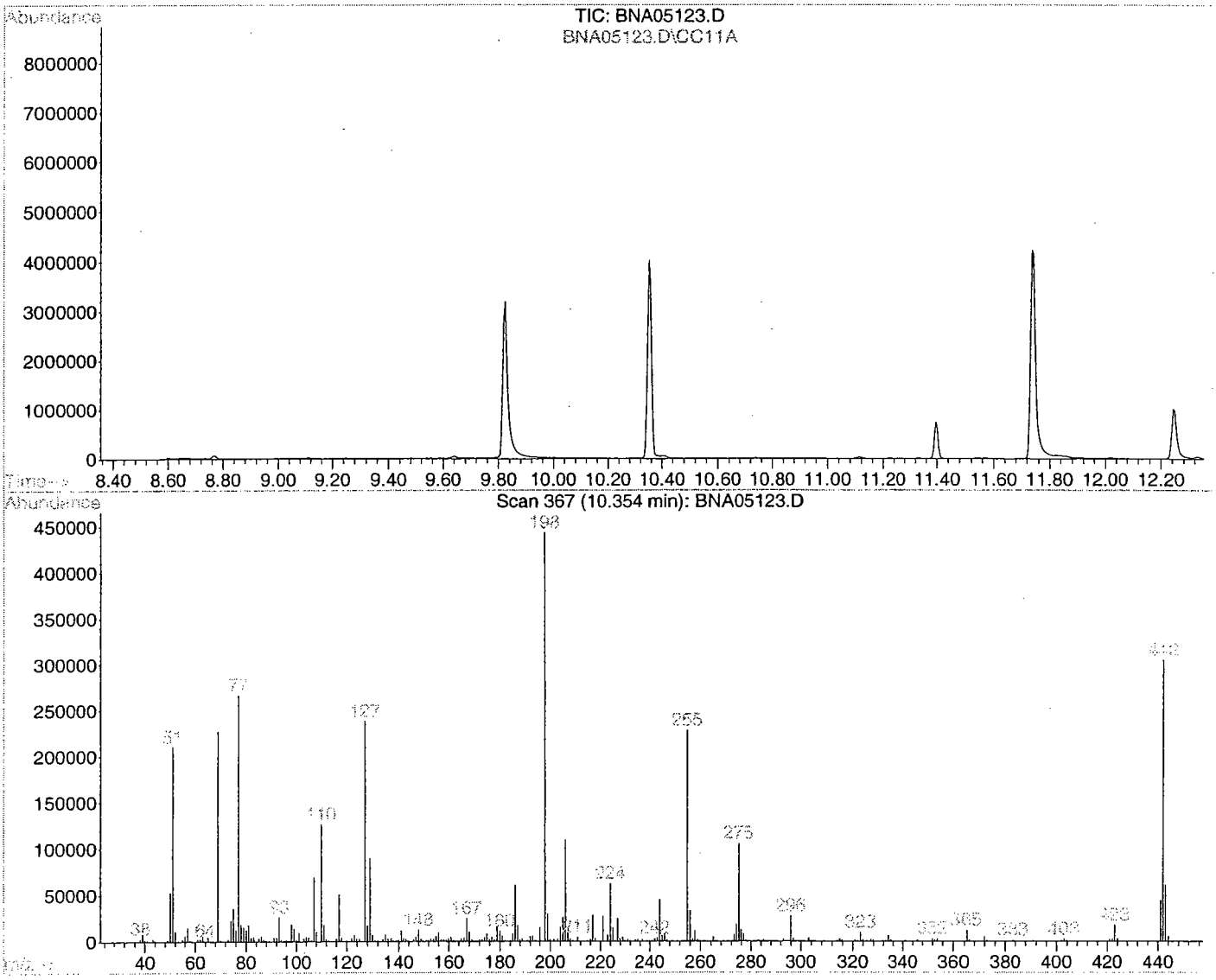
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	51.3
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	53.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	23.7
365	Greater than 0.75% of mass 198	2.7
441	Present, but less than mass 443	10.0
442	40.0 - 110.0% of mass 198	68.7
443	15.0 - 24.0% of mass 442	13.7 (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	BNA05124.D	3/27/01	9:08
02	SSTD010	10 PPM CAL	BNA05125.D	3/27/01	9:55
03	SSTD050	50 PPM CAL	BNA05126.D	3/27/01	10:42
04	SSTD080	80 PPM CAL	BNA05127.D	3/27/01	11:28
05	SSTD020	20 PPM CAL	BNA05128.D	3/27/01	12:13

Data File : D:\DATA\010327\BNA05123.D Vial: 99
Acq On : 27 Mar 2001 8:44 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\M262546.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 367

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	47.4	210304	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	51.3	227520	PASS
70	69	0.00	2	0.8	1892	PASS
127	198	40	60	53.7	238528	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	443904	PASS
199	198	5	9	6.6	29456	PASS
275	198	10	30	23.7	105416	PASS
365	198	1	100	2.7	12022	PASS
441	443	1	99	73.0	44304	PASS
442	198	40	100	68.7	305152	PASS
443	442	17	23	19.9	60680	PASS

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
2)	T	Pyridine	1.463	1.406	1.422	1.443	1.442	1.435	1.51
3)	T	N-nitroso-dimethylami	0.781	0.744	0.751	0.733	0.740	0.750	2.47
4)	S	2-Fluorophenol	1.158	1.132	1.141	1.133	1.124	1.137	1.13
5)	T	Aniline	1.794	1.806	1.875	1.892	1.891	1.852	2.57
6)	S	Phenol-d6	1.412	1.409	1.440	1.456	1.453	1.434	1.56
7)	TCM	Phenol	1.590	1.610	1.683	1.694	1.713	1.658	3.28
8)	T	bis(2-Chloroethyl)eth	1.192	1.165	1.186	1.231	1.228	1.201	2.37
9)	TM	2-Chlorophenol	1.154	1.146	1.172	1.191	1.186	1.170	1.66
10)	T	1,3-Dichlorobenzene	1.223	1.237	1.278	1.304	1.339	1.276	3.75
11)	TCM	1,4-Dichlorobenzene	1.235	1.256	1.305	1.344	1.379	1.304	4.59
12)	T	Benzyl alcohol	0.775	0.763	0.777	0.748	0.747	0.762	1.87
13)	T	1,2-Dichlorobenzene	1.117	1.134	1.197	1.242	1.280	1.194	5.79
14)	T	2-Methylphenol	1.051	1.047	1.081	1.098	1.107	1.077	2.50
15)	T	bis(2-chloroisopropyl	1.215	1.194	1.233	1.244	1.288	1.235	2.83
16)	T	4-Methylphenol	1.085	1.101	1.143	1.156	1.147	1.126	2.78
17)	TPM	n-Nitroso-di-n-propyl	0.187	0.192	0.195	0.195	0.188	0.191	1.93
18)	T	Hexachloroethane	0.489	0.488	0.499	0.503	0.514	0.498	2.16
19)	I	Naphthalene-d8	----------ISTD----------						
20)	S	Nitrobenzene-d5	0.399	0.393	0.401	0.404	0.412	0.402	1.70
21)	T	Nitrobenzene	0.389	0.391	0.400	0.411	0.424	0.403	3.62
22)	T	Isophorone	0.668	0.657	0.669	0.684	0.701	0.676	2.54
23)	TC	2-Nitrophenol	0.185	0.185	0.185	0.185	0.178	0.184	1.82
24)	T	2,4-Dimethylphenol	0.330	0.328	0.337	0.345	0.353	0.339	3.12
25)	T	bis(2-Chloroethoxy)me	0.388	0.389	0.397	0.409	0.412	0.399	2.74
26)	TC	2,4-Dichlorophenol	0.242	0.245	0.249	0.234	0.208	0.235	6.97
27)	T	Benzoic Acid	0.259	0.240	0.219	0.216	0.198	0.226	10.40
28)	TM	1,2,4-Trichlorobenzen	0.271	0.276	0.286	0.297	0.306	0.287	5.12
29)	T	Naphthalene	0.813	0.882	0.948	1.011	1.054	0.942	10.28
30)	T	4-Chloroaniline	0.357	0.377	0.388	0.389	0.384	0.379	3.44
31)	TC	Hexachlorobutadiene	0.147	0.153	0.159	0.165	0.170	0.159	6.03
32)	TCM	4-Chloro-3-methylphen	0.287	0.289	0.294	0.290	0.288	0.289	0.93
33)	T	2-Methylnaphthalene	0.554	0.579	0.614	0.644	0.666	0.612	7.47
34)	I	Acenaphthene-d10	----------ISTD----------						
35)	TP	Hexachlorocyclopentad	0.255	0.261	0.251	0.214	0.167	0.230	17.16
36)	TC	2,4,6-Trichlorophenol	0.307	0.312	0.320	0.317	0.313	0.314	1.58
37)	T	2,4,5-Trichlorophenol	0.337	0.338	0.346	0.326	0.315	0.332	3.58
38)	S	2-Fluorobiphenyl	0.986	1.046	1.128	1.184	1.222	1.113	8.73
39)	T	2-Chloronaphthalene	0.884	0.917	0.965	1.011	1.029	0.961	6.37
40)	T	2-Nitroaniline	0.370	0.366	0.375	0.360	0.345	0.363	3.21
41)	T	Dimethylphthalate	1.010	1.049	1.104	1.148	1.172	1.097	6.17
42)	T	Acenaphthylene	1.345	1.438	1.568	1.680	1.734	1.553	10.46
43)	T	2,6-Dinitrotoluene	0.266	0.270	0.285	0.291	0.295	0.281	4.59
44)	T	3-Nitroaniline	0.263	0.279	0.289	0.289	0.280	0.280	3.86
45)	TCM	Acenaphthene	0.892	0.925	0.986	1.031	1.065	0.980	7.32
46)	TP	2,4-Dinitrophenol	0.186	0.177	0.164	0.124	0.096	0.149	25.46
47)	T	Dibenzofuran	1.169	1.233	1.341	1.417	1.470	1.326	9.43
48)	TMP	4-Nitrophenol	0.239	0.203	0.198	0.199	0.186	0.205	9.69
49)	TM	2,4-Dinitrotoluene	0.356	0.355	0.362	0.366	0.354	0.359	1.40
50)	T	Diethylphthalate	1.025	1.063	1.120	1.162	1.196	1.113	6.27
51)	T	Fluorene	0.998	1.040	1.117	1.173	1.206	1.107	7.92
52)	T	4-Chlorophenyl-phenyl	0.489	0.507	0.534	0.549	0.564	0.529	5.75
53)	T	4-Nitroaniline	0.296	0.288	0.291	0.283	0.292	0.290	1.74
54)	I	Phenanthrene-d10	----------ISTD----------						

(#) = Out of Range

000057

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration

Calibration Files
120 =BNA05124.D 80 =BNA05127.D 50 =BNA05126.D
20 =BNA05128.D 10 =BNA05125.D

		Compound	120	80	50	20	10	Avg	%RSD
55)	T	4,6-Dinitro-2-methylp	0.143	0.142	0.139	0.129	0.114	0.133	9.09
56)	TC	n-Nitrosodiphenylamin	0.435	0.452	0.471	0.496	0.510	0.473	6.47
57)	T	Azobenzene	0.729	0.777	0.819	0.855	0.879	0.812	7.39
58)	S	2,4,6-Tribromophenol	0.090	0.090	0.091	0.090	0.089	0.090	0.84
59)	T	4-Bromophenyl-phenyle	0.172	0.175	0.182	0.190	0.194	0.182	5.12
60)	T	Hexachlorobenzene	0.184	0.188	0.193	0.202	0.212	0.196	5.74
61)	TCM	Pentachlorophenol	0.124	0.123	0.122	0.109	0.103	0.116	8.31
62)	T	Phenanthrene	0.841	0.901	0.974	1.046	1.102	0.973	10.83
63)	T	Anthracene	0.863	0.922	0.991	1.063	1.107	0.989	10.08
64)	T	Di-n-butylphthalate	0.955	1.039	1.108	1.177	1.200	1.096	9.21
65)	TC	Fluoranthene	0.895	0.950	1.019	1.096	1.136	1.019	9.80
66)	I	Chrysene-d12	----------ISTD----------						
67)	T	Benzidine	0.361	0.366	0.394	0.424	0.434	0.396	8.29
68)	TM	Pyrene	1.050	1.100	1.153	1.229	1.263	1.159	7.59
69)	S	p-Terphenyl-d14	0.751	0.772	0.793	0.823	0.844	0.797	4.74
70)	T	Butylbenzylphthalate	0.562	0.570	0.574	0.574	0.565	0.569	0.96
71)	T	Benzo[a]anthracene	1.023	1.057	1.094	1.125	1.162	1.092	5.02
72)	T	3,3'-Dichlorobenzidin	0.334	0.346	0.353	0.368	0.366	0.354	4.06
73)	T	Chrysene	0.964	1.001	1.031	1.071	1.116	1.037	5.74
74)	T	bis(2-Ethylhexyl)phth	0.760	0.780	0.791	0.792	0.772	0.779	1.72
75)	I	Perylene-d12	----------ISTD----------						
76)	TC	Di-n-octylphthalate	1.214	1.325	1.400	1.410	1.374	1.345	5.98
77)	T	Benzo[b]fluoranthene	1.045	1.067	1.130	1.144	1.184	1.114	5.12
78)	T	Benzo[k]fluoranthene	1.001	1.043	1.117	1.192	1.220	1.115	8.40
79)	TC	Benzo[a]pyrene	0.993	1.031	1.084	1.117	1.139	1.073	5.65
80)	T	Indeno[1,2,3-cd]pyren	1.131	1.093	1.092	1.069	1.043	1.086	3.01
81)	T	Dibenz[a,h]anthracene	1.065	1.095	1.119	1.128	1.111	1.104	2.24
82)	T	Benzo[g,h,i]perylene	1.073	1.079	1.100	1.107	1.120	1.096	1.77

(#) = Out of Range

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID: BNA05400.D DFTPP Injection Date: 6/5/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 12:07

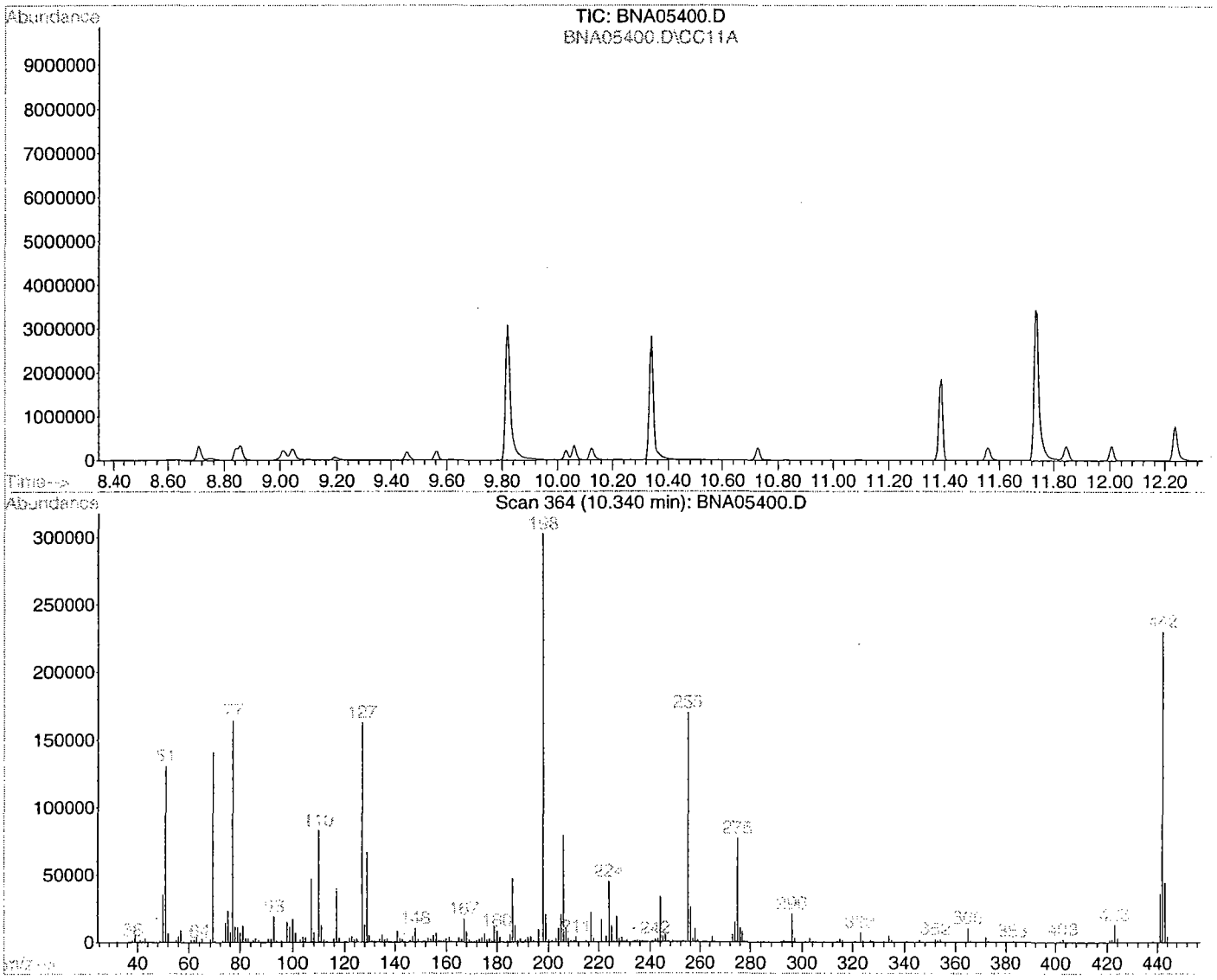
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	43.1
68	Less than 2.0% of mass 69	0.8 (1.8)1
69	Mass 69 Relative abundance	46.5
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	53.7
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 30.0% of mass 198	25.4
365	Greater than 0.75% of mass 198	3.5
441	Present, but less than mass 443	11.9
442	40.0 - 110.0% of mass 198	76.0
443	15.0 - 24.0% of mass 442	14.6 (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	SSTD050	BNA05401.D	6/5/01	12:34
02	MB 1841	MB 1841	BNA05405.D	6/5/01	15:42
03	LCS 1842	LCS 1842	BNA05411.D	6/5/01	20:15

Data File : D:\DATA\010605\BNA05400.D Vial: 99
Acq On : 5 Jun 2001 12:07 pm Operator: Bhaskar
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 364

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.1	130552	PASS
68	69	0.00	2	1.8	2476	PASS
69	198	0.00	100	46.5	140992	PASS
70	69	0.00	2	0.8	1161	PASS
127	198	40	60	53.7	162624	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	302912	PASS
199	198	5	9	6.7	20416	PASS
275	198	10	30	25.4	76800	PASS
365	198	1	100	3.5	10490	PASS
441	443	1	99	81.2	35992	PASS
442	198	40	100	76.0	230208	PASS
443	442	17	23	19.3	44336	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010605\BNA05401.D Vial: 100
Acq On : 5 Jun 2001 12:34 pm Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	69	-0.02
2	T	Pyridine	1.435	1.171	18.4	57	-0.02
3	T	N-nitroso-dimethylamine	0.750	0.618	17.6	57	0.00
4	S	2-Fluorophenol	1.137	1.024	9.9	62	0.06
5	T	Aniline	1.852	1.702	8.1	63	0.00
6	S	Phenol-d6	1.434	1.339	6.6	64	0.07
7	TCM	Phenol	1.658	1.372	17.2	56	0.07
8	T	bis(2-Chloroethyl)ether	1.201	1.068	11.1	62	-0.01
9	TM	2-Chlorophenol	1.170	1.107	5.4	65	0.02
10	T	1,3-Dichlorobenzene	1.276	1.245	2.4	67	-0.02
11	TCM	1,4-Dichlorobenzene	1.304	1.280	1.8	68	-0.02
12	T	Benzyl alcohol	0.762	0.702	7.9	63	0.01
13	T	1,2-Dichlorobenzene	1.194	1.186	0.7	69	-0.02
14	T	2-Methylphenol	1.077	1.035	3.9	66	0.04
15	T	bis(2-chloroisopropyl)ether	1.235	1.016	17.7	57	-0.02
16	T	4-Methylphenol	1.126	1.074	4.6	65	0.04
17	TPM	n-Nitroso-di-n-propylamine	0.191	0.187	2.1	66	-0.01
18	T	Hexachloroethane	0.498	0.503	-1.0	70	-0.02
19	I	Naphthalene-d8	1.000	1.000	0.0	75	-0.02
20	S	Nitrobenzene-d5	0.402	0.363	9.7	68	0.00
21	T	Nitrobenzene	0.403	0.358	11.2	67	-0.01
22	T	Isophorone	0.676	0.598	11.5	67	-0.01
23	TC	2-Nitrophenol	0.184	0.162	12.0	66	-0.01
24	T	2,4-Dimethylphenol	0.339	0.319	5.9	71	0.02
25	T	bis(2-Chloroethoxy)methane	0.399	0.332	16.8	63	-0.01
26	TC	2,4-Dichlorophenol	0.235	0.222	5.5	67	0.03
27	T	Benzoic Acid	0.226	0.127	43.8#	44#	0.02
28	TM	1,2,4-Trichlorobenzene	0.287	0.269	6.3	71	-0.02
29	T	Naphthalene	0.942	0.873	7.3	69	-0.02
30	T	4-Chloroaniline	0.379	0.328	13.5	64	0.00
31	TC	Hexachlorobutadiene	0.159	0.160	-0.6	76	-0.02
32	TCM	4-Chloro-3-methylphenol	0.289	0.271	6.2	69	0.04
33	T	2-Methylnaphthalene	0.612	0.573	6.4	70	-0.02
34	I	Acenaphthene-d10	1.000	1.000	0.0	81	-0.02
35	TP	Hexachlorocyclopentadiene	0.230	0.247	-7.4	80	-0.02
36	TC	2,4,6-Trichlorophenol	0.314	0.285	9.2	72	0.00
37	T	2,4,5-Trichlorophenol	0.332	0.300	9.6	70	0.04
38	S	2-Fluorobiphenyl	1.113	1.020	8.4	73	-0.02
39	T	2-Chloronaphthalene	0.961	0.852	11.3	71	-0.02
40	T	2-Nitroaniline	0.363	0.307	15.4	66	0.00
41	T	Dimethylphthalate	1.097	0.985	10.2	72	-0.01
42	T	Acenaphthylene	1.553	1.423	8.4	73	-0.02
43	T	2,6-Dinitrotoluene	0.281	0.262	6.8	74	-0.01
44	T	3-Nitroaniline	0.280	0.250	10.7	70	0.01
45	TCM	Acenaphthene	0.980	0.881	10.1	72	-0.02
46	TP	2,4-Dinitrophenol	0.149	0.135	9.4	67	0.00
47	T	Dibenzofuran	1.326	1.203	9.3	72	-0.02
48	TMP	4-Nitrophenol	0.205	0.214	-4.4	87	0.09
49	TM	2,4-Dinitrotoluene	0.359	0.315	12.3	70	0.00
50	T	Diethylphthalate	1.113	1.022	8.2	74	-0.02
51	T	Fluorene	1.107	1.009	8.9	73	-0.02
52	T	4-Chlorophenyl-phenylether	0.529	0.482	8.9	73	-0.02
53	T	4-Nitroaniline	0.290	0.237	18.3	66	0.01

(#) = Out of Range

000061

Evaluate Continuing Calibration Report

Data File : D:\DATA\010605\BNA05401.D Vial: 100
Acq On : 5 Jun 2001 12:34 pm Operator: Bhaskar
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	90	-0.01
55	T	4,6-Dinitro-2-methylphenol	0.133	0.103	22.6	67	0.00
56	TC	n-Nitrosodiphenylamine	0.473	0.376	20.5	72	-0.01
57	T	Azobenzene	0.812	0.641	21.1	71	-0.02
58	S	2,4,6-Tribromophenol	0.090	0.076	15.6	75	0.00
59	T	4-Bromophenyl-phenylether	0.182	0.149	18.1	74	-0.02
60	T	Hexachlorobenzene	0.196	0.160	18.4	75	-0.02
61	TCM	Pentachlorophenol	0.116	0.092	20.7	68	0.00
62	T	Phenanthrene	0.973	0.796	18.2	74	-0.02
63	T	Anthracene	0.989	0.811	18.0	74	-0.02
64	T	Di-n-butylphthalate	1.096	0.904	17.5	74	-0.02
65	TC	Fluoranthene	1.019	0.848	16.8	75	-0.01
66	I	Chrysene-d12	1.000	1.000	0.0	93	-0.02
67	T	Benzidine	0.396	0.404	-2.0	95	0.00
68	TM	Pyrene	1.159	0.933	19.5	75	-0.02
69	S	p-Terphenyl-d14	0.797	0.641	19.6	75	-0.02
70	T	Butylbenzylphthalate	0.569	0.456	19.9	73	-0.02
71	T	Benzo[a]anthracene	1.092	0.891	18.4	75	-0.02
72	T	3,3'-Dichlorobenzidine	0.354	0.354	0.0	93	0.00
73	T	Chrysene	1.037	0.833	19.7	75	-0.02
74	T	bis(2-Ethylhexyl)phthalate	0.779	0.617	20.8	72	-0.03
75	I	Perylene-d12	1.000	1.000	0.0	90	-0.02
76	TC	Di-n-octylphthalate	1.345	1.138	15.4	73	-0.03
77	T	Benzo[b]fluoranthene	1.114	0.906	18.7	72	-0.02
78	T	Benzo[k]fluoranthene	1.115	0.921	17.4	74	-0.02
79	TC	Benzo[a]pyrene	1.073	0.885	17.5	73	-0.02
80	T	Indeno[1,2,3-cd]pyrene	1.086	0.873	19.6	72	-0.03
81	T	Dibenz[a,h]anthracene	1.104	0.901	18.4	72	-0.03
82	T	Benzo[g,h,i]perylene	1.096	0.860	21.5	70	-0.02

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

000062

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID: BNA05435.D DFTPP Injection Date: 6/6/01

Instrument ID: GC_BNA_2 DFTPP Injection Time: 14:07

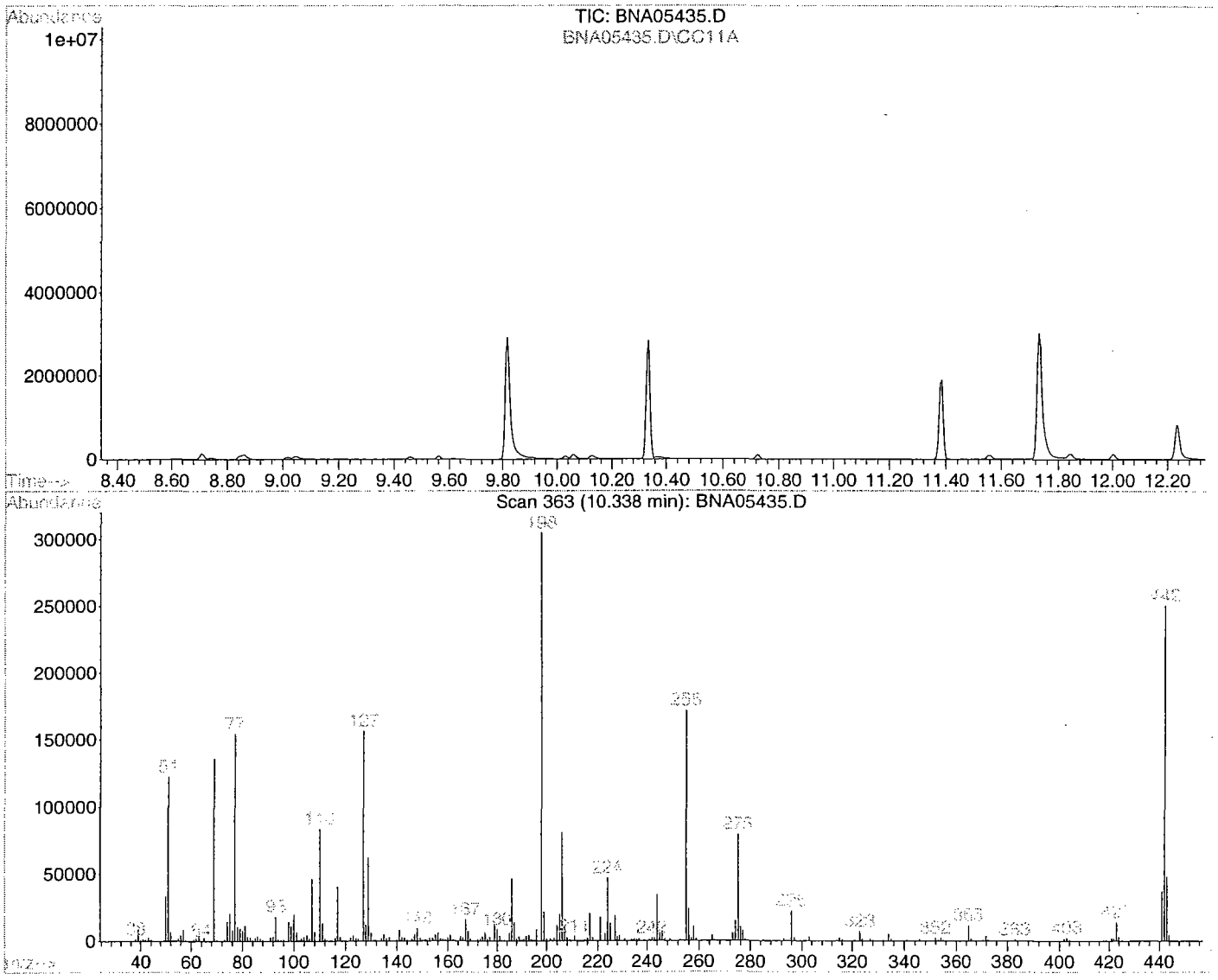
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	44.6
70	Less than 2.0% of mass 69	0.4 (0.8)1
127	25.0 - 75.0% of mass 198	51.3
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	26.0
365	Greater than 0.75% of mass 198	3.8
441	Present, but less than mass 443	12.1
442	40.0 - 110.0% of mass 198	82.0
443	15.0 - 24.0% of mass 442	15.7 (19.1)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	SSTD050	BNA05436.D	6/6/01	15:23
02	1612306 MS	1612306 MS	BNA05437.D	6/6/01	16:17
03	1612306 MSD	1612306 MSD	BNA05438.D	6/6/01	17:01
04	FIELD BLANK	1613302	BNA05445.D	6/6/01	22:02
05	DUPE	1613303	BNA05446.D	6/6/01	22:45
06	801 GW	1613304	BNA05447.D	6/6/01	23:28

Data File : D:\DATA\010606\BNA05435.D Vial: 99
Acq On : 6 Jun 2001 2:07 pm Operator: Skelton
Sample : DFTPP Tune Inst : GC/MS Ins
Misc : DFTPP Tune Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration



Spectrum Information: Scan 363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	40.3	122744	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.6	135872	PASS
70	69	0.00	2	0.8	1088	PASS
127	198	40	60	51.3	156480	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	304896	PASS
199	198	5	9	7.0	21408	PASS
275	198	10	30	26.0	79328	PASS
365	198	1	100	3.8	11618	PASS
441	443	1	99	77.3	37040	PASS
442	198	40	100	82.0	250112	PASS
443	442	17	23	19.1	47896	PASS

Evaluate Continuing Calibration Report

Data File : D:\DATA\010606\BNA05436.D Vial: 100
Acq On : 6 Jun 2001 3:23 pm Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	68	-0.02
2	T	Pyridine	1.435	1.220	15.0	58	-0.01
3	T	N-nitroso-dimethylamine	0.750	0.649	13.5	59	-0.01
4	S	2-Fluorophenol	1.137	1.079	5.1	64	0.05
5	T	Aniline	1.852	1.798	2.9	65	0.00
6	S	Phenol-d6	1.434	1.419	1.0	67	0.06
7	TCM	Phenol	1.658	1.437	13.3	58	0.06
8	T	bis(2-Chloroethyl)ether	1.201	1.138	5.2	65	-0.01
9	TM	2-Chlorophenol	1.170	1.173	-0.3	68	0.02
10	T	1,3-Dichlorobenzene	1.276	1.334	-4.5	71	-0.02
11	TCM	1,4-Dichlorobenzene	1.304	1.368	-4.9	71	-0.02
12	T	Benzyl alcohol	0.762	0.754	1.0	66	0.00
13	T	1,2-Dichlorobenzene	1.194	1.267	-6.1	72	-0.02
14	T	2-Methylphenol	1.077	1.099	-2.0	69	0.04
15	T	bis(2-chloroisopropyl)ether	1.235	1.070	13.4	59	-0.02
16	T	4-Methylphenol	1.126	1.147	-1.9	68	0.04
17	TPM	n-Nitroso-di-n-propylamine	0.191	0.199	-4.2	69	-0.02
18	T	Hexachloroethane	0.498	0.541	-8.6	73	-0.03
19	I	Naphthalene-d8	1.000	1.000	0.0	74	-0.02
20	S	Nitrobenzene-d5	0.402	0.388	3.5	71	-0.01
21	T	Nitrobenzene	0.403	0.378	6.2	70	-0.02
22	T	Isophorone	0.676	0.630	6.8	69	-0.02
23	TC	2-Nitrophenol	0.184	0.172	6.5	68	-0.02
24	T	2,4-Dimethylphenol	0.339	0.338	0.3	74	0.02
25	T	bis(2-Chloroethoxy)methane	0.399	0.354	11.3	66	-0.02
26	TC	2,4-Dichlorophenol	0.235	0.252	-7.2	75	0.02
27	T	Benzoic Acid	0.226	0.146	35.4#	49#	0.02
28	TM	1,2,4-Trichlorobenzene	0.287	0.287	0.0	74	-0.02
29	T	Naphthalene	0.942	0.925	1.8	72	-0.02
30	T	4-Chloroaniline	0.379	0.343	9.5	65	0.00
31	TC	Hexachlorobutadiene	0.159	0.172	-8.2	80	-0.03
32	TCM	4-Chloro-3-methylphenol	0.289	0.284	1.7	71	0.04
33	T	2-Methylnaphthalene	0.612	0.611	0.2	73	-0.02
34	I	Acenaphthene-d10	1.000	1.000	0.0	78	-0.02
35	TP	Hexachlorocyclopentadiene	0.230	0.257	-11.7	80	-0.03
36	TC	2,4,6-Trichlorophenol	0.314	0.305	2.9	75	0.00
37	T	2,4,5-Trichlorophenol	0.332	0.316	4.8	71	0.03
38	S	2-Fluorobiphenyl	1.113	1.093	1.8	76	-0.02
39	T	2-Chloronaphthalene	0.961	0.920	4.3	75	-0.02
40	T	2-Nitroaniline	0.363	0.331	8.8	69	0.00
41	T	Dimethylphthalate	1.097	1.065	2.9	76	-0.02
42	T	Acenaphthylene	1.553	1.529	1.5	76	-0.02
43	T	2,6-Dinitrotoluene	0.281	0.280	0.4	77	-0.01
44	T	3-Nitroaniline	0.280	0.274	2.1	74	0.01
45	TCM	Acenaphthene	0.980	0.942	3.9	75	-0.02
46	TP	2,4-Dinitrophenol	0.149	0.120	19.5	58	0.00
47	T	Dibenzofuran	1.326	1.289	2.8	75	-0.02
48	TMP	4-Nitrophenol	0.205	0.231	-12.7	91	0.09
49	TM	2,4-Dinitrotoluene	0.359	0.342	4.7	74	0.00
50	T	Diethylphthalate	1.113	1.108	0.4	78	-0.02
51	T	Fluorene	1.107	1.086	1.9	76	-0.02
52	T	4-Chlorophenyl-phenylether	0.529	0.524	0.9	77	-0.02
53	T	4-Nitroaniline	0.290	0.253	12.8	68	0.01

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\DATA\010606\BNA05436.D Vial: 100
Acq On : 6 Jun 2001 3:23 pm Operator: Skelton
Sample : Sstd050 Inst : GC/MS Ins
Misc : Sstd050 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
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	88	-0.02
55	T	4,6-Dinitro-2-methylphenol	0.133	0.104	21.8	66	0.00
56	TC	n-Nitrosodiphenylamine	0.473	0.404	14.6	75	-0.02
57	T	Azobenzene	0.812	0.682	16.0	73	-0.02
58	S	2,4,6-Tribromophenol	0.090	0.080	11.1	77	0.00
59	T	4-Bromophenyl-phenylether	0.182	0.162	11.0	78	-0.02
60	T	Hexachlorobenzene	0.196	0.172	12.2	78	-0.03
61	TCM	Pentachlorophenol	0.116	0.097	16.4	70	0.00
62	T	Phenanthrene	0.973	0.850	12.6	77	-0.02
63	T	Anthracene	0.989	0.868	12.2	77	-0.02
64	T	Di-n-butylphthalate	1.096	0.973	11.2	77	-0.02
65	TC	Fluoranthene	1.019	0.905	11.2	78	-0.02
66	I	Chrysene-d12	1.000	1.000	0.0	90	-0.02
67	T	Benzidine	0.396	0.398	-0.5	91	0.00
68	TM	Pyrene	1.159	0.991	14.5	77	-0.02
69	S	p-Terphenyl-d14	0.797	0.705	11.5	80	-0.02
70	T	Butylbenzylphthalate	0.569	0.496	12.8	78	-0.02
71	T	Benzo[a]anthracene	1.092	0.961	12.0	79	-0.02
72	T	3,3'-Dichlorobenzidine	0.354	0.357	-0.8	91	-0.01
73	T	Chrysene	1.037	0.907	12.5	79	-0.02
74	T	bis(2-Ethylhexyl)phthalate	0.779	0.673	13.6	76	-0.03
75	I	Perylene-d12	1.000	1.000	0.0	87	-0.02
76	TC	Di-n-octylphthalate	1.345	1.249	7.1	77	-0.03
77	T	Benzo[b]fluoranthene	1.114	1.005	9.8	77	-0.02
78	T	Benzo[k]fluoranthene	1.115	0.991	11.1	77	-0.02
79	TC	Benzo[a]pyrene	1.073	0.964	10.2	77	-0.02
80	T	Indeno[1,2,3-cd]pyrene	1.086	0.955	12.1	76	-0.02
81	T	Dibenz[a,h]anthracene	1.104	0.979	11.3	76	-0.04
82	T	Benzo[g,h,i]perylene	1.096	0.923	15.8	73	-0.03

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

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Field Id: **MB 1841**

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID: BNA05405.D Lab Sample ID: MB 1841

Instrument ID: GC/MS Ins Date Extracted: 5/25/01

Matrix: (soil/water) WATER Date Analyzed: 6/5/01

Level: (low/med) LOW Time Analyzed: 15:42

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

	Field Id:	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	LCS 1842	LCS 1842	BNA05411.D	6/5/01
02	1612306 MS	1612306 MS	BNA05437.D	6/6/01
03	1612306 MSD	1612306 MSD	BNA05438.D	6/6/01
04	FIELD BLANK	1613302	BNA05445.D	6/6/01
05	DUPE	1613303	BNA05446.D	6/6/01
06	801 GW	1613304	BNA05447.D	6/6/01

COMMENTS:

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.: _____

	Field Id:	S1 NBZ #	S2 2FP #	S3 TPL #	TOT OUT
01	MB 1841	57	71	56	0
02	LCS 1842	66	74	45	0
03	1612306 MS	84	95	81	0
04	1612306 MSD	69	79	69	0
05	FIELD BLANK	65	79	51	0
06	DUPE	60	73	39	0
07	801 GW	66	81	41	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 **BNA05411.D** Sample Name **LCS 1842**

Date Acquired **5-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		5.12 ug/L	25.59
62-75-9	N-nitroso-dimethylamine		5.25 ug/L	26.23
62-53-3	Aniline		8.98 ug/L	44.90
111-44-4	bis(2-Chloroethyl)ether		12.43 ug/L	62.16
541-73-1	1,3-Dichlorobenzene		13.74 ug/L	68.71
106-46-7	1,4-Dichlorobenzene		13.95 ug/L	69.75
100-51-6	Benzyl alcohol		4.63 ug/L	23.15
95-50-1	1,2-Dichlorobenzene		14.22 ug/L	71.12
39638-32-9	bis(2-chloroisopropyl)ether		16.83 ug/L	84.15
621-64-7	n-Nitroso-di-n-propylamine		13.64 ug/L	68.22
67-72-1	Hexachloroethane		13.58 ug/L	67.91
98-95-3	Nitrobenzene		13.17 ug/L	65.87
78-59-1	Isophorone		13.68 ug/L	68.38
111-91-1	bis(2-Chloroethoxy)methane		11.43 ug/L	57.14
120-82-1	1,2,4-Trichlorobenzene		13.16 ug/L	65.78
91-20-3	Naphthalene		13.33 ug/L	66.64
106-47-8	4-Chloroaniline		7.49 ug/L	37.46
87-68-3	Hexachlorobutadiene		13.19 ug/L	65.96
91-57-6	2-Methylnaphthalene		13.86 ug/L	69.29
77-47-4	Hexachlorocyclopentadiene		9.62 ug/L	48.11
91-58-7	2-Chloronaphthalene		14.59 ug/L	72.95
88-74-4	2-Nitroaniline		12.61 ug/L	63.06
131-11-3	Dimethylphthalate		9.29 ug/L	46.45
208-96-8	Acenaphthylene		15.11 ug/L	75.56
606-20-2	2,6-Dinitrotoluene		16.01 ug/L	80.04
99-09-2	3-Nitroaniline		12.86 ug/L	64.32
83-32-9	Acenaphthene		15.15 ug/L	75.76
132-64-9	Dibenzofuran		15.72 ug/L	78.58
121-14-2	2,4-Dinitrotoluene		14.44 ug/L	72.18
84-66-2	Diethylphthalate		14.08 ug/L	70.38
86-73-7	Fluorene		15.68 ug/L	78.40
7005-72-3	4-Chlorophenyl-phenylether		15.23 ug/L	76.13
100-01-6	4-Nitroaniline		5.72 ug/L	28.58
86-30-6	n-Nitrosodiphenylamine		14.61 ug/L	73.03
103-33-3	Azobenzene		14.24 ug/L	71.20
101-55-3	4-Bromophenyl-phenylether		13.30 ug/L	66.49
118-74-1	Hexachlorobenzene		11.88 ug/L	59.41
85-01-8	Phenanthrene		14.41 ug/L	72.06
120-12-7	Anthracene		13.93 ug/L	69.65
84-74-2	Di-n-butylphthalate		13.57 ug/L	67.84
206-44-0	Fluoranthene		12.95 ug/L	64.74
129-00-0	Pyrene		12.96 ug/L	64.82
85-68-7	Butylbenzylphthalate		11.14 ug/L	55.72
56-55-3	Benzo[a]anthracene		11.23 ug/L	56.16
218-01-9	Chrysene		10.23 ug/L	51.17
117-81-7	bis(2-Ethylhexyl)phthalate		9.30 ug/L	46.48
117-84-0	Di-n-octylphthalate		11.11 ug/L	55.53
205-99-2	Benzo[b]fluoranthene		12.67 ug/L	63.37
207-08-9	Benzo[k]fluoranthene		13.33 ug/L	66.66
50-32-8	Benzo[a]pyrene		12.28 ug/L	61.38
193-39-5	Indeno[1,2,3-cd]pyrene		13.72 ug/L	68.62
53-70-3	Dibenz[a,h]anthracene		11.21 ug/L	56.07
191-24-2	Benzo[g,h,i]perylene		11.41 ug/L	57.04

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05437.D** Sample Name **1612306 MS**

Date Acquired **6-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		not detected	#VALUE!
62-75-9	N-nitroso-dimethylamine		7.22 ug/L	36.11
62-53-3	Aniline		2.70 ug/L	13.50
111-44-4	bis(2-Chloroethyl)ether		14.79 ug/L	73.95
541-73-1	1,3-Dichlorobenzene		15.31 ug/L	76.53
106-46-7	1,4-Dichlorobenzene		15.93 ug/L	79.67
100-51-6	Benzyl alcohol		7.15 ug/L	35.77
95-50-1	1,2-Dichlorobenzene		16.46 ug/L	82.28
39638-32-9	bis(2-chloroisopropyl)ether		19.70 ug/L	98.51
621-64-7	n-Nitroso-di-n-propylamine		17.92 ug/L	89.59
67-72-1	Hexachloroethane		14.93 ug/L	74.67
98-95-3	Nitrobenzene		16.07 ug/L	80.35
78-59-1	Isophorone		17.69 ug/L	88.43
111-91-1	bis(2-Chloroethoxy)methane		14.48 ug/L	72.40
120-82-1	1,2,4-Trichlorobenzene		15.77 ug/L	78.87
91-20-3	Naphthalene		16.15 ug/L	80.76
106-47-8	4-Chloroaniline		8.24 ug/L	41.19
87-68-3	Hexachlorobutadiene		15.89 ug/L	79.43
91-57-6	2-Methylnaphthalene		18.29 ug/L	91.47
77-47-4	Hexachlorocyclopentadiene		12.31 ug/L	61.54
91-58-7	2-Chloronaphthalene		18.81 ug/L	94.07
88-74-4	2-Nitroaniline		19.12 ug/L	95.59
131-11-3	Dimethylphthalate		20.64 ug/L	103.19
208-96-8	Acenaphthylene		18.57 ug/L	92.84
606-20-2	2,6-Dinitrotoluene		19.74 ug/L	98.70
99-09-2	3-Nitroaniline		13.46 ug/L	67.29
83-32-9	Acenaphthene		19.56 ug/L	97.79
132-64-9	Dibenzofuran		21.17 ug/L	105.83
121-14-2	2,4-Dinitrotoluene		19.59 ug/L	97.95
84-66-2	Diethylphthalate		21.28 ug/L	106.40
86-73-7	Fluorene		20.21 ug/L	101.06
7005-72-3	4-Chlorophenyl-phenylether		20.35 ug/L	101.76
100-01-6	4-Nitroaniline		11.97 ug/L	59.84
86-30-6	n-Nitrosodiphenylamine		16.78 ug/L	83.92
103-33-3	Azobenzene		16.40 ug/L	82.01
101-55-3	4-Bromophenyl-phenylether		18.34 ug/L	91.68
118-74-1	Hexachlorobenzene		18.31 ug/L	91.55
85-01-8	Phenanthrene		18.80 ug/L	94.02
120-12-7	Anthracene		18.53 ug/L	92.63
84-74-2	Di-n-butylphthalate		19.57 ug/L	97.85
206-44-0	Fluoranthene		18.96 ug/L	94.81
129-00-0	Pyrene		18.46 ug/L	92.30
85-68-7	Butylbenzylphthalate		18.17 ug/L	90.83
56-55-3	Benzo[a]anthracene		18.34 ug/L	91.68
218-01-9	Chrysene		19.33 ug/L	96.66
117-81-7	bis(2-Ethylhexyl)phthalate		18.59 ug/L	92.93
117-84-0	Di-n-octylphthalate		22.26 ug/L	111.31
205-99-2	Benzo[b]fluoranthene		21.39 ug/L	106.94
207-08-9	Benzo[k]fluoranthene		22.55 ug/L	112.74
50-32-8	Benzo[a]pyrene		20.52 ug/L	102.62
193-39-5	Indeno[1,2,3-cd]pyrene		20.71 ug/L	103.54
53-70-3	Dibenz[a,h]anthracene		21.55 ug/L	107.76
191-24-2	Benzo[g,h,i]perylene		20.62 ug/L	103.10

Base Neutral Spike Report

U.S. Army, Fort Monmouth Environmental Laboratory

NJDEP Certification #13461

Data File Name **BNA05438.D** Sample Name **1612306 MSD**

Date Acquired **6-Jun-01**

CAS#	Name		Amount Recovered	Percent Recovered
110-86-1	Pyridine		4.06 ug/L	20.29
62-75-9	N-nitroso-dimethylamine		6.48 ug/L	32.41
62-53-3	Aniline		8.42 ug/L	42.09
111-44-4	bis(2-Chloroethyl)ether		12.33 ug/L	61.64
541-73-1	1,3-Dichlorobenzene		13.93 ug/L	69.66
106-46-7	1,4-Dichlorobenzene		14.54 ug/L	72.68
100-51-6	Benzyl alcohol		9.99 ug/L	49.93
95-50-1	1,2-Dichlorobenzene		14.87 ug/L	74.35
39638-32-9	bis(2-chloroisopropyl)ether		16.93 ug/L	84.65
621-64-7	n-Nitroso-di-n-propylamine		14.87 ug/L	74.33
67-72-1	Hexachloroethane		13.69 ug/L	68.44
98-95-3	Nitrobenzene		13.56 ug/L	67.81
78-59-1	Isophorone		14.64 ug/L	73.20
111-91-1	bis(2-Chloroethoxy)methane		12.89 ug/L	64.45
120-82-1	1,2,4-Trichlorobenzene		14.05 ug/L	70.26
91-20-3	Naphthalene		13.90 ug/L	69.48
106-47-8	4-Chloroaniline		10.45 ug/L	52.23
87-68-3	Hexachlorobutadiene		14.66 ug/L	73.30
91-57-6	2-Methylnaphthalene		14.89 ug/L	74.44
77-47-4	Hexachlorocyclopentadiene		10.94 ug/L	54.71
91-58-7	2-Chloronaphthalene		16.38 ug/L	81.92
88-74-4	2-Nitroaniline		16.03 ug/L	80.13
131-11-3	Dimethylphthalate		17.44 ug/L	87.21
208-96-8	Acenaphthylene		16.66 ug/L	83.31
606-20-2	2,6-Dinitrotoluene		17.04 ug/L	85.20
99-09-2	3-Nitroaniline		11.60 ug/L	58.01
83-32-9	Acenaphthene		17.19 ug/L	85.96
132-64-9	Dibenzofuran		17.38 ug/L	86.91
121-14-2	2,4-Dinitrotoluene		16.50 ug/L	82.51
84-66-2	Diethylphthalate		17.81 ug/L	89.05
86-73-7	Fluorene		17.56 ug/L	87.79
7005-72-3	4-Chlorophenyl-phenylether		17.64 ug/L	88.19
100-01-6	4-Nitroaniline		10.68 ug/L	53.39
86-30-6	n-Nitrosodiphenylamine		15.79 ug/L	78.96
103-33-3	Azobenzene		15.06 ug/L	75.30
101-55-3	4-Bromophenyl-phenylether		15.80 ug/L	79.02
118-74-1	Hexachlorobenzene		16.05 ug/L	80.25
85-01-8	Phenanthrene		16.15 ug/L	80.73
120-12-7	Anthracene		15.76 ug/L	78.81
84-74-2	Di-n-butylphthalate		16.54 ug/L	82.69
206-44-0	Fluoranthene		15.99 ug/L	79.96
129-00-0	Pyrene		16.03 ug/L	80.16
85-68-7	Butylbenzylphthalate		15.45 ug/L	77.26
56-55-3	Benzo[a]anthracene		15.38 ug/L	76.91
218-01-9	Chrysene		13.80 ug/L	68.99
117-81-7	bis(2-Ethylhexyl)phthalate		15.23 ug/L	76.16
117-84-0	Di-n-octylphthalate		18.42 ug/L	92.11
205-99-2	Benzo[b]fluoranthene		18.43 ug/L	92.17
207-08-9	Benzo[k]fluoranthene		18.57 ug/L	92.83
50-32-8	Benzo[a]pyrene		17.51 ug/L	87.57
193-39-5	Indeno[1,2,3-cd]pyrene		17.70 ug/L	88.51
53-70-3	Dibenz[a,h]anthracene		17.56 ug/L	87.80
191-24-2	Benzo[g,h,i]perylene		17.15 ug/L	85.75

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID (Standard): BNA05401.D Date Analyzed: 6/5/01

Instrument ID: GC_BNA_2 Time Analyzed: 12:34

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	665814	10.10	2536589	13.03	1600182	17.26
	UPPER LIMIT	1331628	10.60	5073178	13.53	3200364	17.76
	LOWER LIMIT	332907	9.60	1268295	12.53	800091	16.76
	Field Id:						
01	MB 1841	567400	10.10	2158426	13.03	1178820	17.26
02	LCS 1842	581986	10.10	2230035	13.03	1227872	17.26

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

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID (Standard): BNA05401.D Date Analyzed: 06/05/01

Instrument ID: GC_BNA_2 Time Analyzed: 12:34

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2951574	20.87	2681247	27.32	2441712	30.55
	UPPER LIMIT	5903148	20.37	5362494	26.82	4883424	30.05
	LOWER LIMIT	1475787	21.37	1340624	27.82	1220856	31.05
	EPA SAMPLE NO.						
01	MB 1841	2133139	20.86	2033519	27.31	1527886	30.54
02	LCS 1842	2212690	20.85	2071981	27.31	1546821	30.54

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: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID (Standard): BNA05436.D Date Analyzed: 6/6/01

Instrument ID: GC_BNA_2 Time Analyzed: 15:23

		IS1DCB AREA #	RT #	IS2NAP AREA #	RT #	IS3ANE AREA #	RT #
	12 HOUR STD	651196	10.09	2483925	13.03	1550884	17.26
	UPPER LIMIT	1302392	10.59	4967850	13.53	3101768	17.76
	LOWER LIMIT	325598	9.59	1241963	12.53	775442	16.76
	Field Id:						
01	1612306 MS	663542	10.10	2499834	13.03	1348530	17.26
02	1612306 MSD	637000	10.10	2401089	13.03	1289695	17.26
03	FIELD BLANK	562124	10.09	2164019	13.03	1178220	17.26
04	DUPE	595538	10.09	2236050	13.03	1237970	17.26
05	801 GW	588722	10.10	2251161	13.03	1224395	17.26

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

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

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: FMETL Lab Code 13461

Project: UST Case No.: 16133 Location: B 801 SDG No.:

Lab File ID (Standard): BNA05436.D Date Analyzed: 06/06/01

Instrument ID: GC_BNA_2 Time Analyzed: 15:23

		IS4PNE AREA #	RT #	IS5CYS AREA #	RT #	IS6PRL AREA #	RT #
	12 HOUR STD	2878471	20.86	2606503	27.31	2359653	30.54
	UPPER LIMIT	5756942	20.36	5213006	26.81	4719306	30.04
	LOWER LIMIT	1439236	21.36	1303252	27.81	1179827	31.04
	EPA SAMPLE NO.						
01	1612306 MS	2444495	20.86	2270787	27.31	1719284	30.54
02	1612306 MSD	2341886	20.85	2180285	27.31	1639472	30.54
03	FIELD BLANK	2129913	20.86	2007626	27.30	1502636	30.54
04	DUPE	2223066	20.86	2100183	27.31	1581124	30.54
05	801 GW	2194645	20.85	2076426	27.31	1567414	30.54

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 : D:\DATA\010605\BNA05405.D Vial: 4
Acq On : 5 Jun 2001 3:42 pm Operator: Skelton
Sample : MB 1841s Inst : GC/MS Ins
Misc : 25May01 Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 5 16:17 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.10	152	567400	40.00	ug/L	-0.01
19) Naphthalene-d8	13.03	136	2158426	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.26	164	1178820	40.00	ug/L	-0.02
54) Phenanthrene-d10	20.86	188	2133139	40.00	ug/L	-0.02
66) Chrysene-d12	27.31	240	2033519	40.00	ug/L	-0.02
75) Perylene-d12	30.54	264	1527886	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-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.43	82	620168	28.61	ug/L	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	57.22%		
38) 2-Fluorobiphenyl	15.67	172	1157983	35.30	ug/L	-0.02
Spiked Amount 50.000	Range 43 - 116		Recovery =	70.60%		
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	24.81	244	1125601	27.79	ug/L	-0.02
Spiked Amount 50.000	Range 33 - 141		Recovery =	55.58%		
Target Compounds						Qvalue

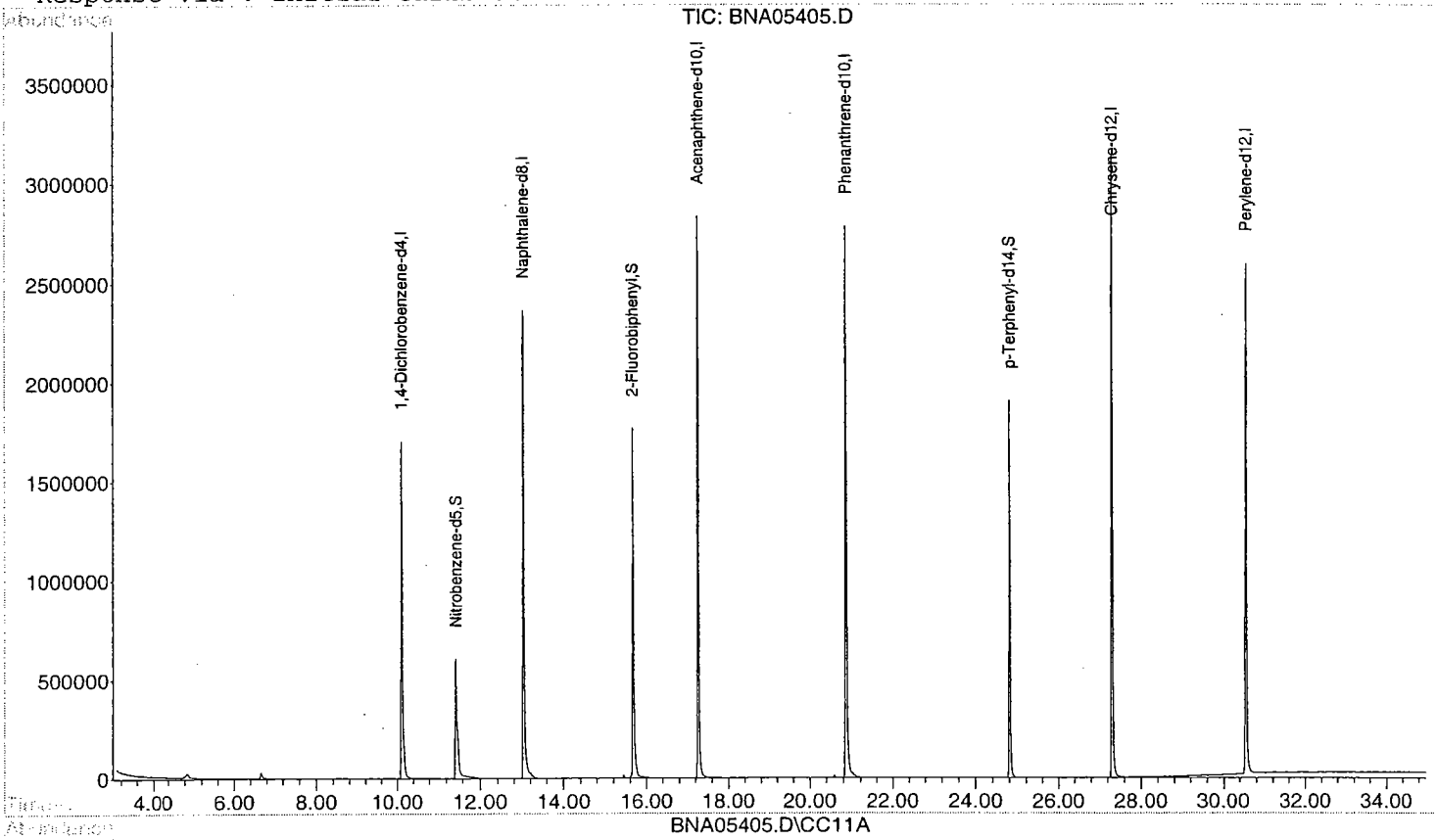
(#) = qualifier out of range (m) = manual integration

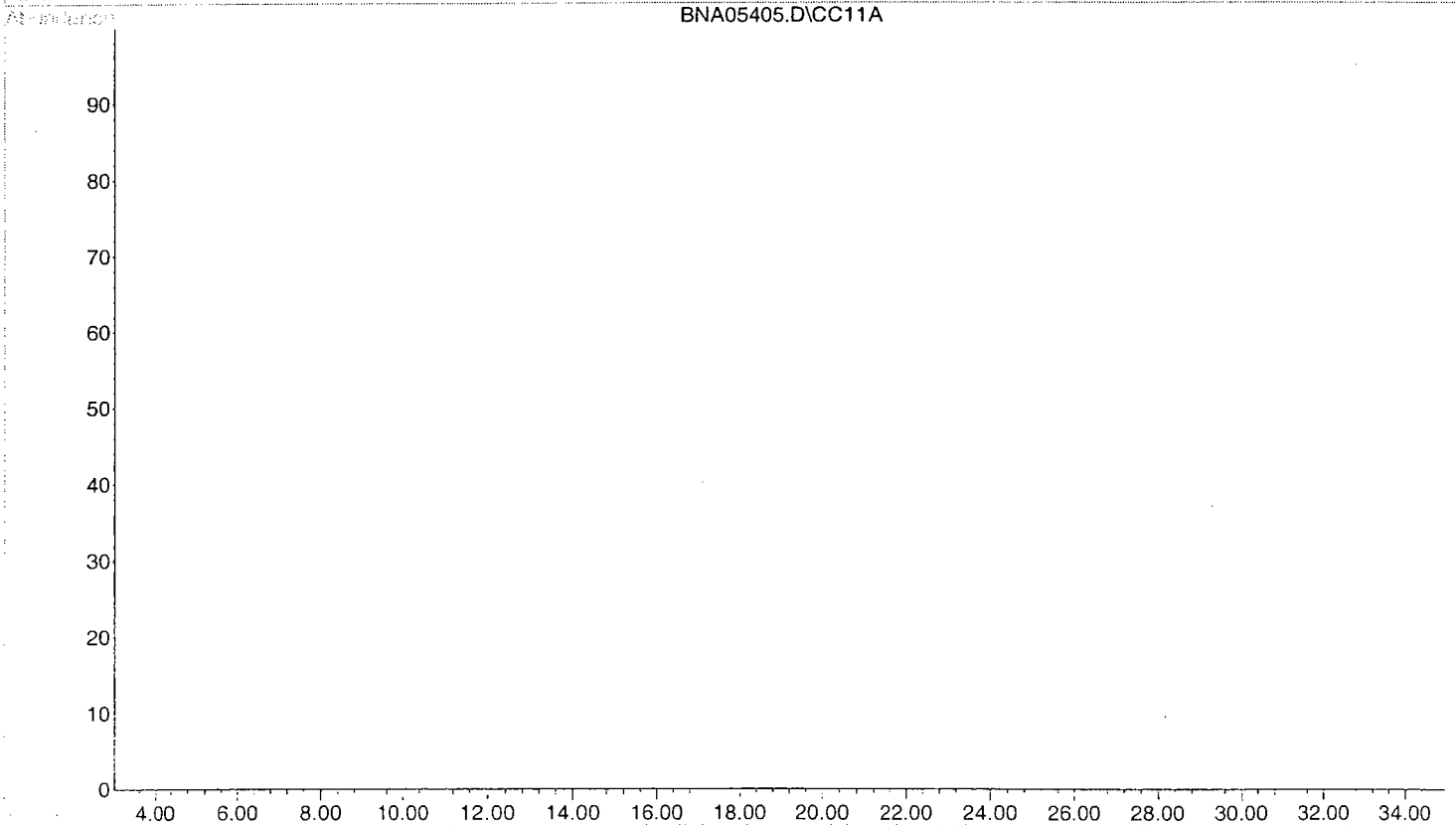
Quantitation Report

Data File : D:\DATA\010605\BNA05405.D
Acq On : 5 Jun 2001 3:42 pm
Sample : MB 1841s
Misc : 25May01
MS Integration Params: RTEINT.P
Quant Time: Jun 5 16:17 2001

Vial: 4
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000077

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010606\BNA05445.D Vial: 9
Acq On : 6 Jun 2001 10:02 pm Operator: Skelton
Sample : 1613302 Inst : GC/MS Ins
Misc : Field Blank Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 6 22:37 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.09	152	562124	40.00	ug/L	-0.02
19) Naphthalene-d8	13.03	136	2164019	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.26	164	1178220	40.00	ug/L	-0.02
54) Phenanthrene-d10	20.86	188	2129913	40.00	ug/L	-0.02
66) Chrysene-d12	27.30	240	2007626	40.00	ug/L	-0.03
75) Perylene-d12	30.54	264	1502636	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-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.43	82	709860	32.66	ug/L	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	65.32%		
38) 2-Fluorobiphenyl	15.66	172	1290974	39.38	ug/L	-0.03
Spiked Amount 50.000	Range 43 - 116		Recovery =	78.76%		
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	24.80	244	1020958	25.53	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery =	51.06%		
Target Compounds						Qvalue
74) bis(2-Ethylhexyl)phthalate	27.48	149	118745	3.04	ug/L	97

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

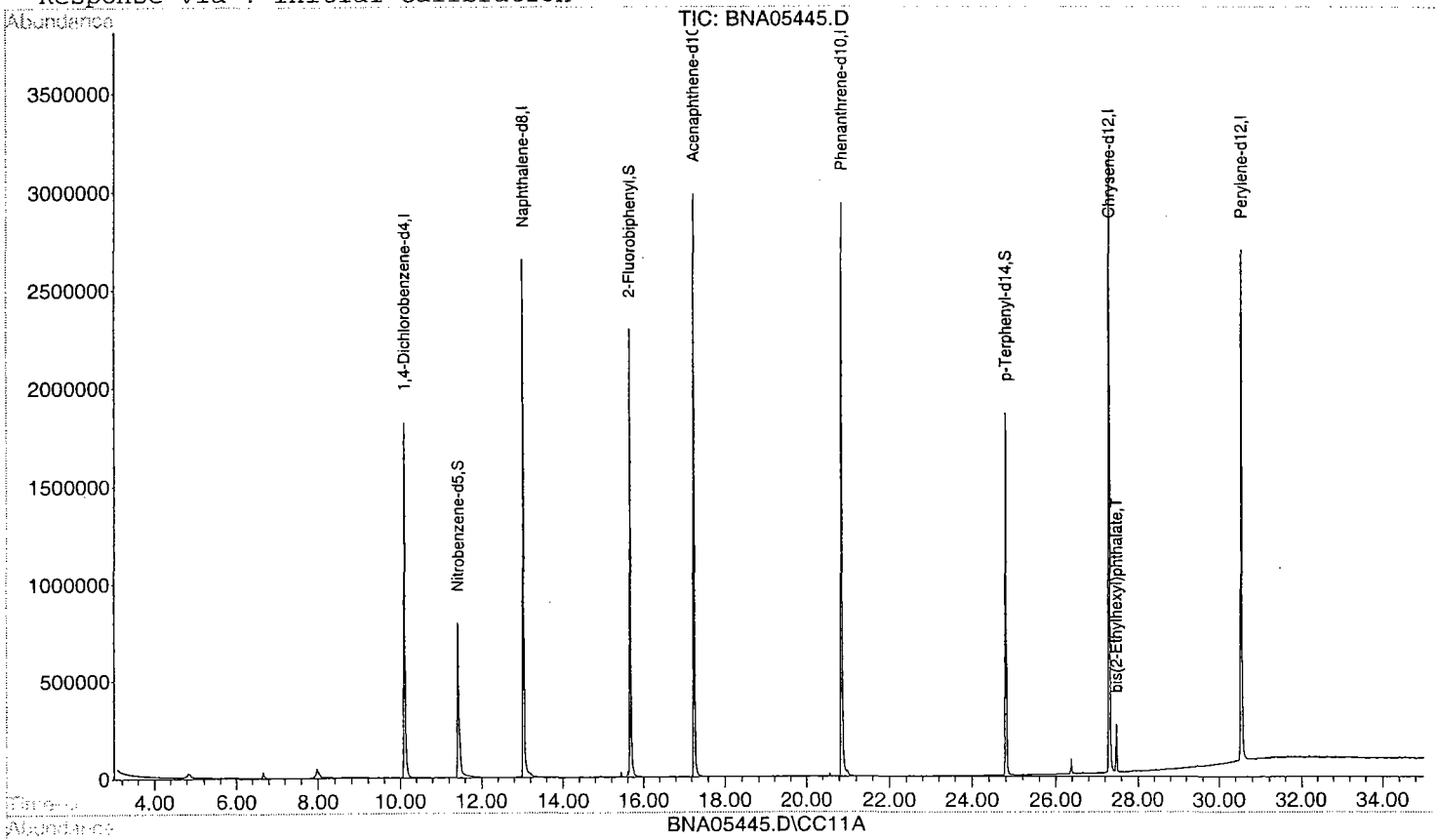
000078

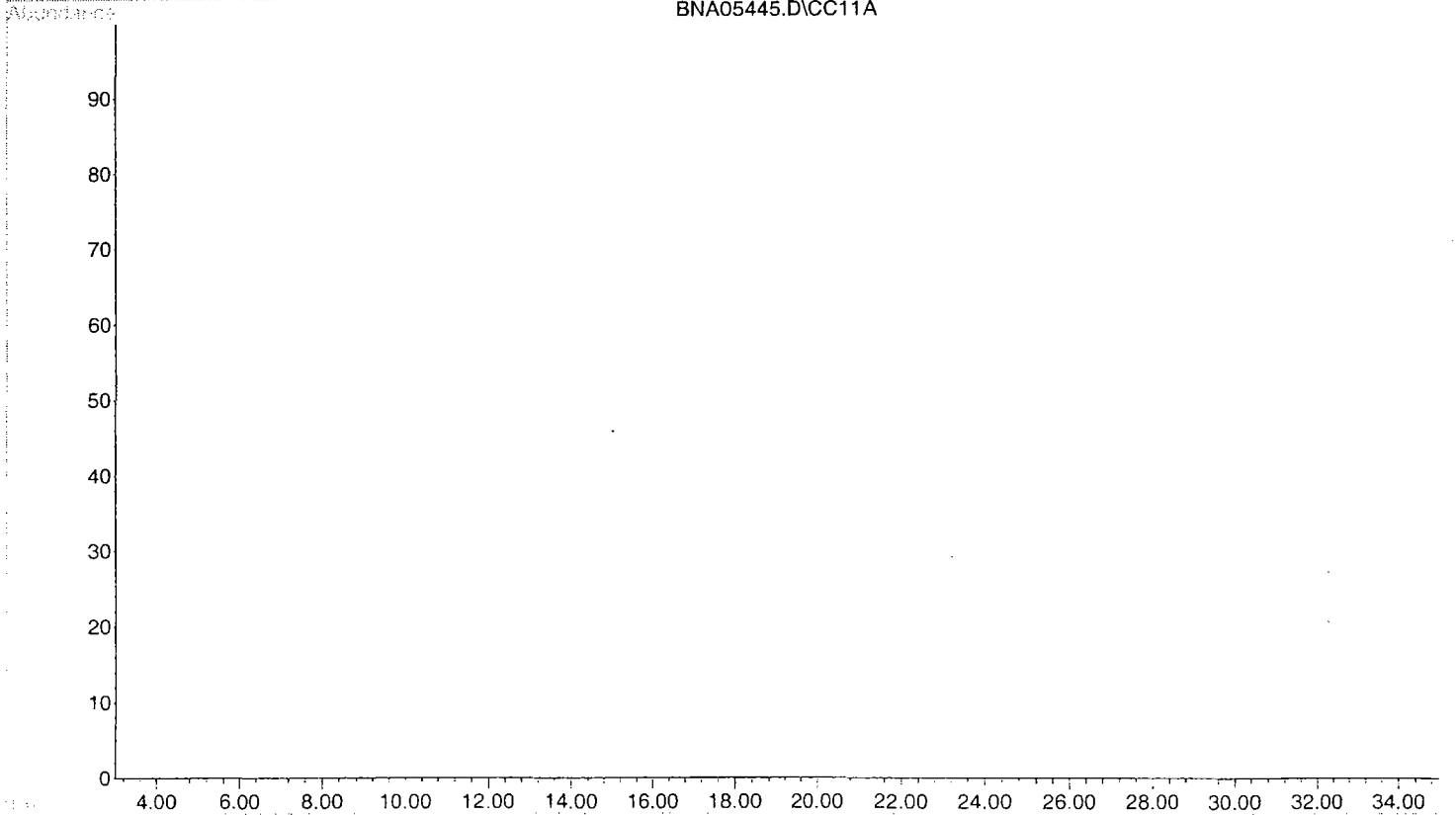
Quantitation Report

Data File : D:\DATA\010606\BNA05445.D
Acq On : 6 Jun 2001 10:02 pm
Sample : 1613302
Misc : Field Blank
MS Integration Params: RTEINT.P
Quant Time: Jun 6 22:37 2001

Vial: 9
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000079

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010606\BNA05446.D Vial: 10
Acq On : 6 Jun 2001 10:45 pm Operator: Skelton
Sample : 1613303 Inst : GC/MS Ins
Misc : Dupe Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 6 23:20 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.09	152	595538	40.00	ug/L	-0.02
19) Naphthalene-d8	13.03	136	2236050	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.26	164	1237970	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.86	188	2223066	40.00	ug/L	-0.02
66) Chrysene-d12	27.31	240	2100183	40.00	ug/L	-0.03
75) Perylene-d12	30.54	264	1581124	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-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.43	82	671498	29.90	ug/L	0.00
Spiked Amount 50.000	Range 35 - 114		Recovery =	59.80%		
38) 2-Fluorobiphenyl	15.66	172	1255110	36.44	ug/L	-0.03
Spiked Amount 50.000	Range 43 - 116		Recovery =	72.88%		
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	24.80	244	825184	19.73	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery =	39.46%		
Target Compounds						Qvalue

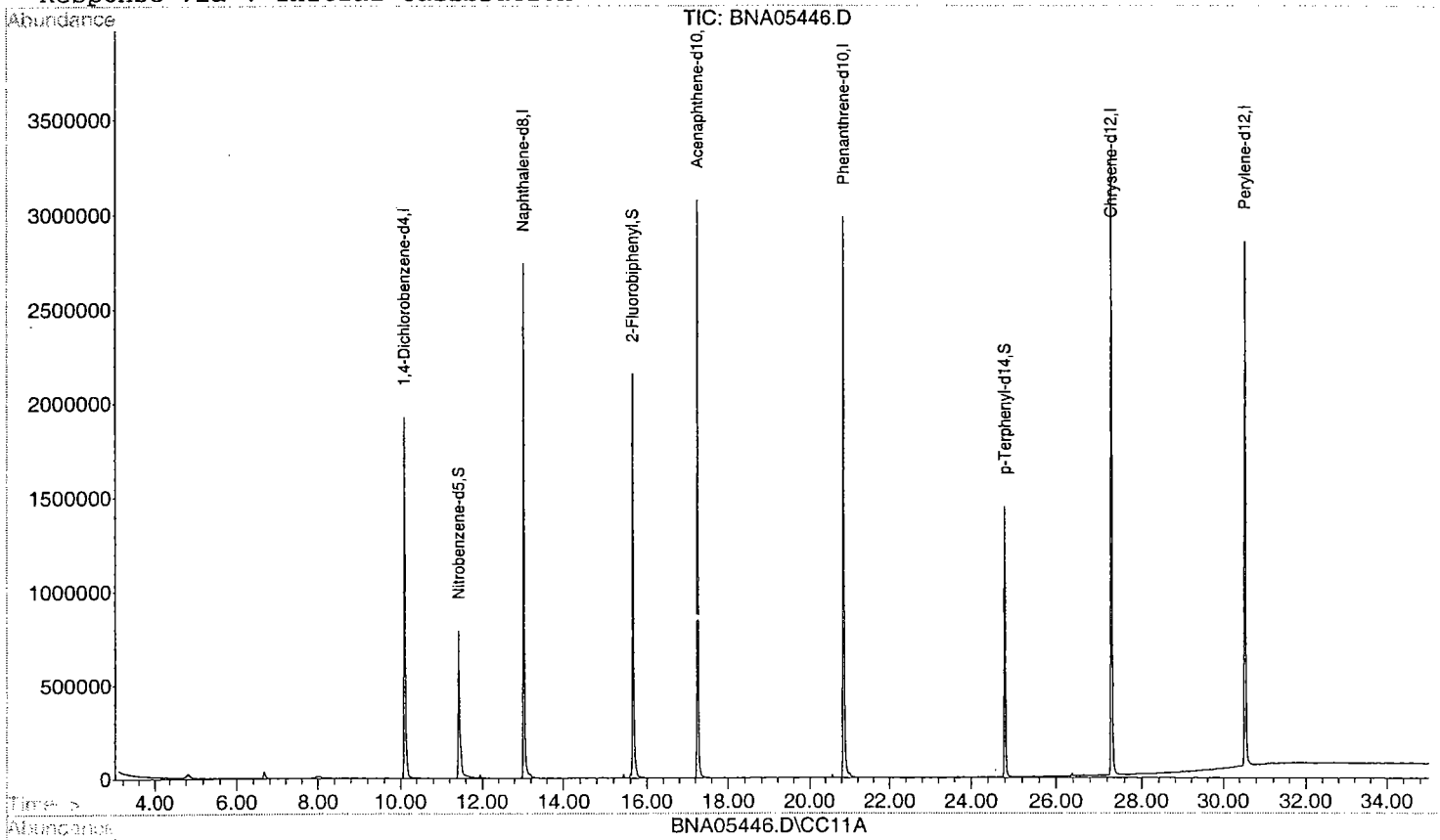
(#) = qualifier out of range (m) = manual integration

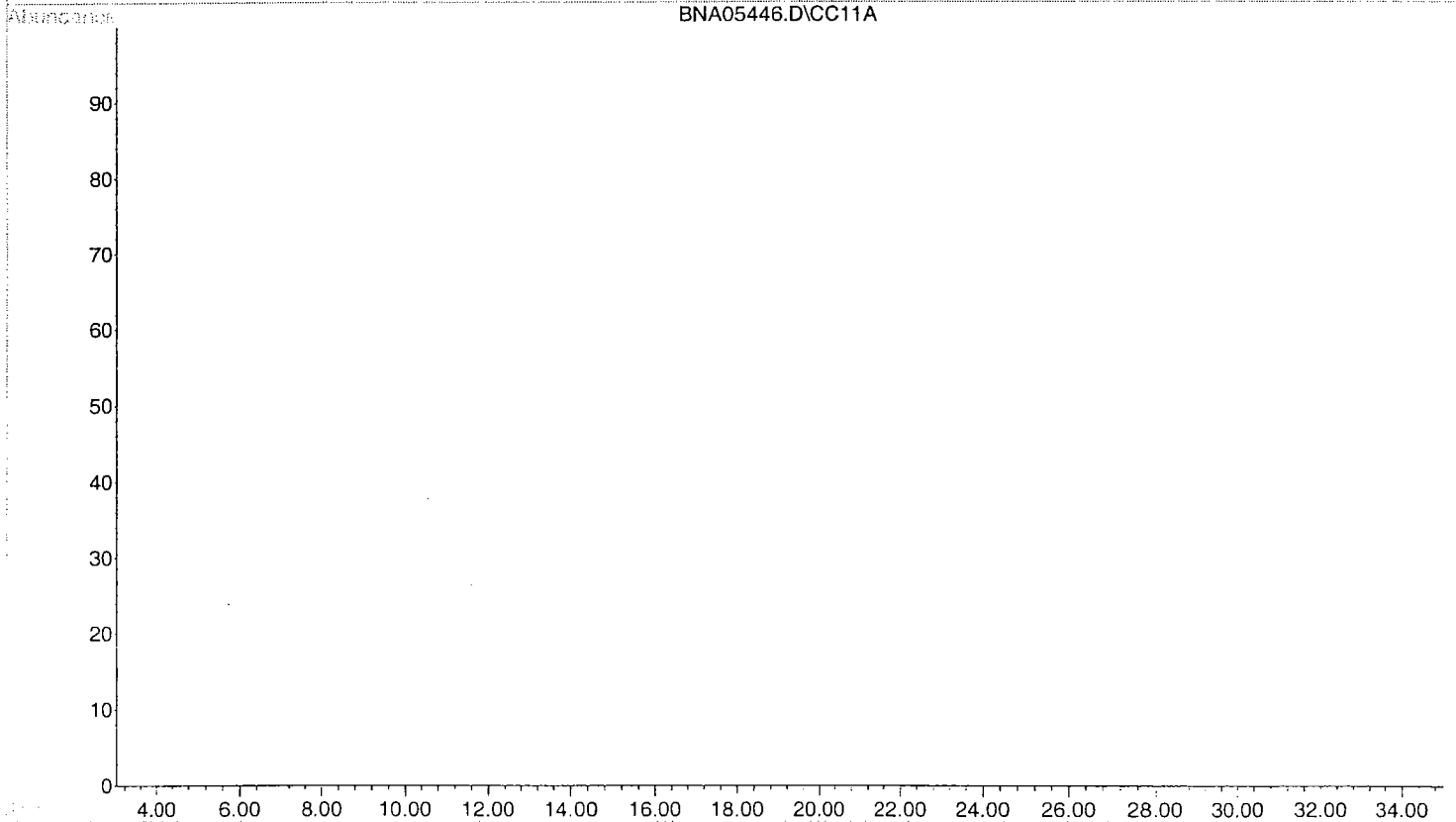
Quantitation Report

Data File : D:\DATA\010606\BNA05446.D
Acq On : 6 Jun 2001 10:45 pm
Sample : 1613303
Misc : Dupe
MS Integration Params: RTEINT.P
Quant Time: Jun 6 23:20 2001

Vial: 10
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000081

Quantitation Report (QT Reviewed)

Data File : D:\DATA\010606\BNA05447.D Vial: 11
Acq On : 6 Jun 2001 11:28 pm Operator: Skelton
Sample : 1613304 Inst : GC/MS Ins
Misc : 801 GW Multiplr: 1.00
MS Integration Params: RTEINT.P GC Integration Params: rteint2.p
Quant Time: Jun 7 0:03 2001 Quant Results File: M262546.RES

Quant Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration
DataAcq Meth : M262546

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	10.10	152	588722	40.00	ug/L	-0.02
19) Naphthalene-d8	13.03	136	2251161	40.00	ug/L	-0.02
34) Acenaphthene-d10	17.26	164	1224395	40.00	ug/L	-0.03
54) Phenanthrene-d10	20.85	188	2194645	40.00	ug/L	-0.03
66) Chrysene-d12	27.31	240	2076426	40.00	ug/L	-0.03
75) Perylene-d12	30.54	264	1567414	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-d6	0.00	99	0	0.00	ug/L	
Spiked Amount 100.000	Range 10 - 94		Recovery =	0.00%#		
20) Nitrobenzene-d5	11.42	82	747591	33.07	ug/L	-0.01
Spiked Amount 50.000	Range 35 - 114		Recovery =	66.14%		
38) 2-Fluorobiphenyl	15.66	172	1381500	40.55	ug/L	-0.03
Spiked Amount 50.000	Range 43 - 116		Recovery =	81.10%		
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	24.80	244	842747	20.38	ug/L	-0.03
Spiked Amount 50.000	Range 33 - 141		Recovery =	40.76%		
Target Compounds						Qvalue

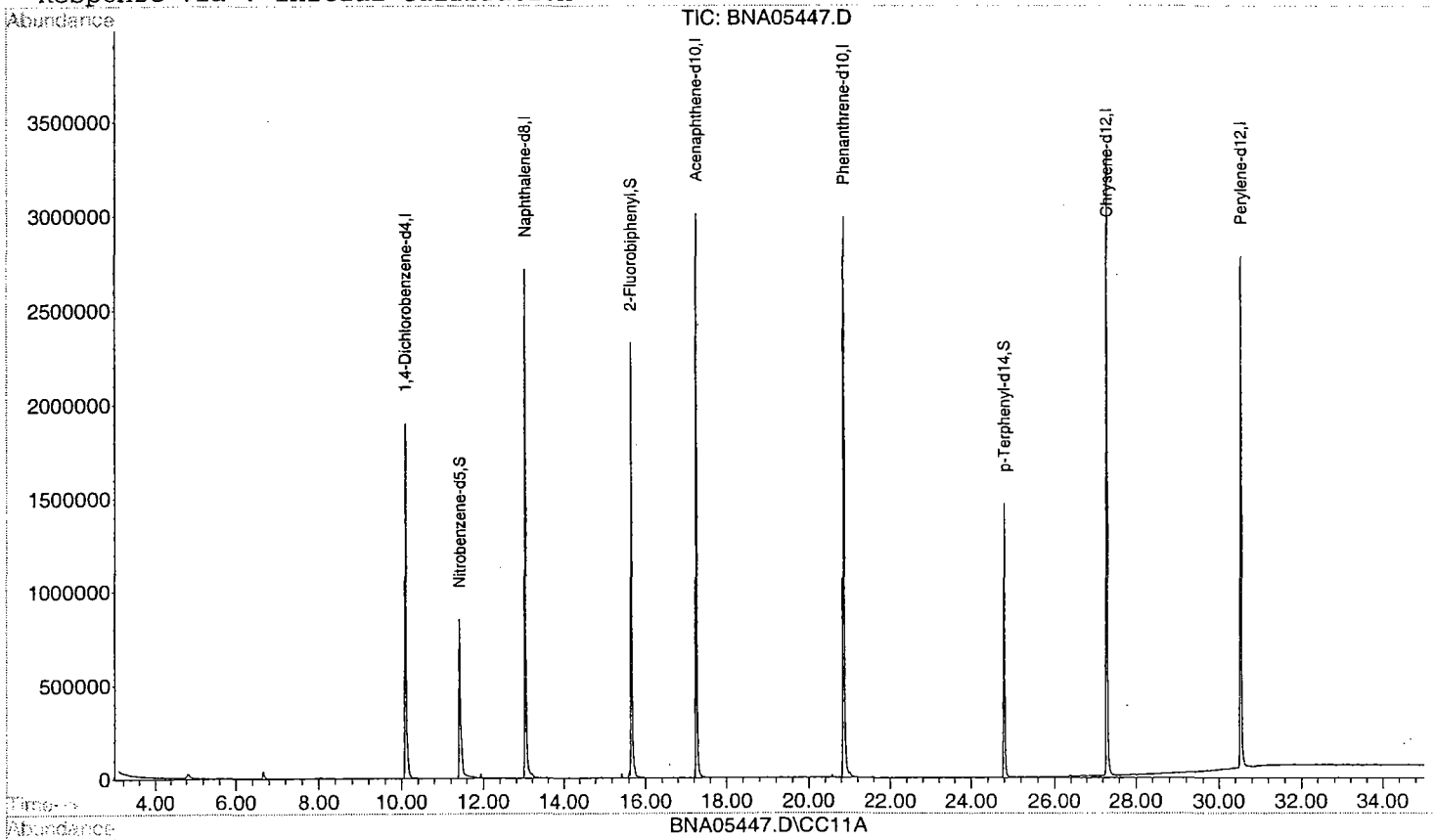
(#) = qualifier out of range (m) = manual integration

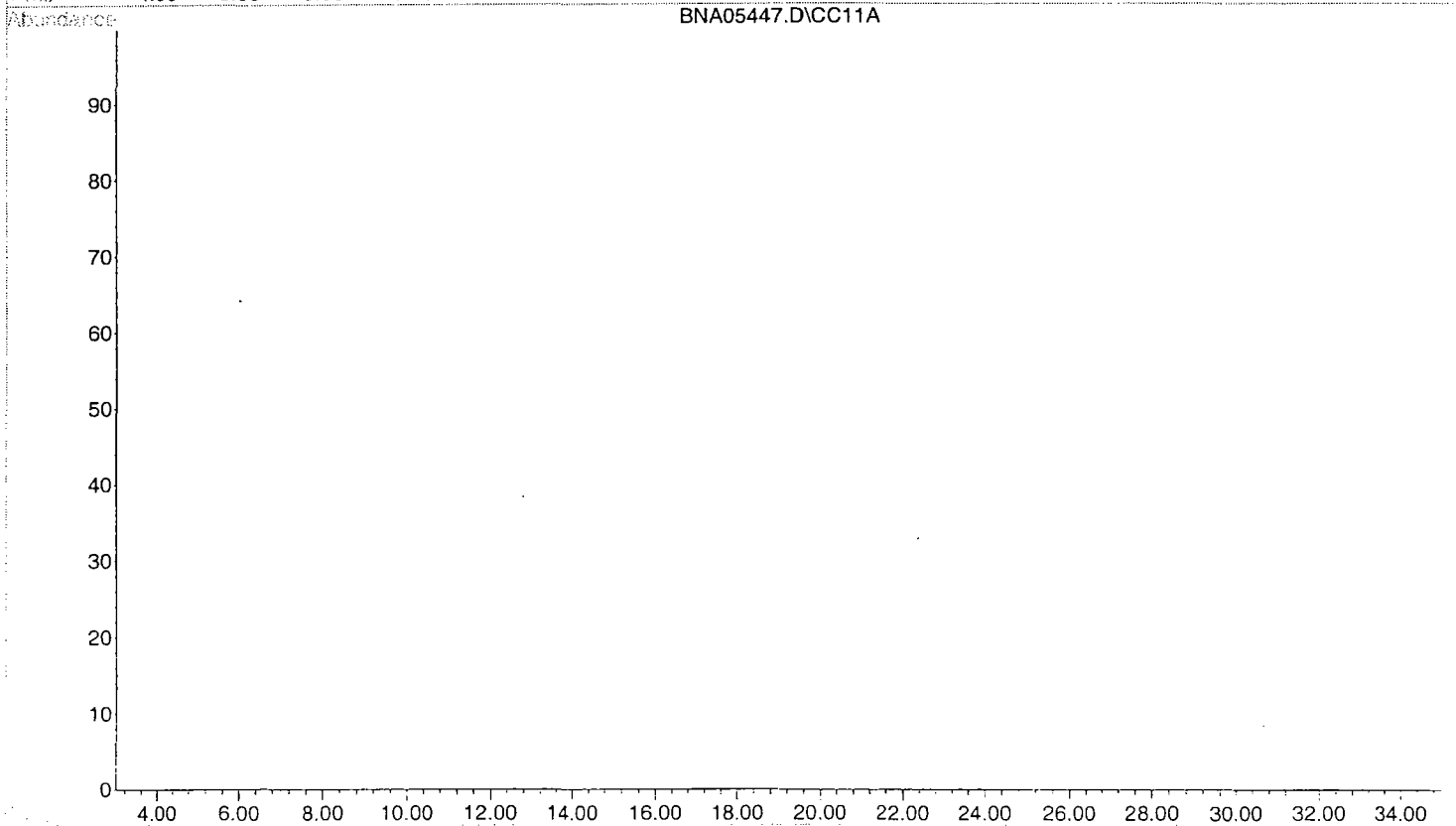
Quantitation Report

Data File : D:\DATA\010606\BNA05447.D
Acq On : 6 Jun 2001 11:28 pm
Sample : 1613304
Misc : 801 GW
MS Integration Params: RTEINT.P
Quant Time: Jun 7 0:03 2001

Vial: 11
Operator: Skelton
Inst : GC/MS Ins
Multiplr: 1.00
GC Integration Params: rteint2.p
Quant Results File: M262546.RES

Method : C:\HPCHEM\1\METHODS\M262546.M (RTE Integrator)
Title : BNA Calibration
Last Update : Tue Mar 27 12:58:41 2001
Response via : Initial Calibration





000083

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 6 / 26 / 01

Laboratory Certification #13461

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

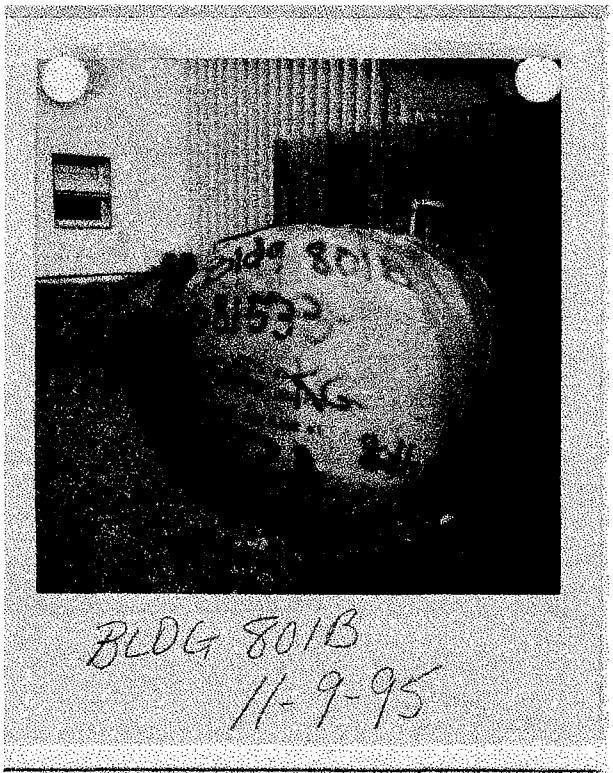
Laboratory Authentication Statement

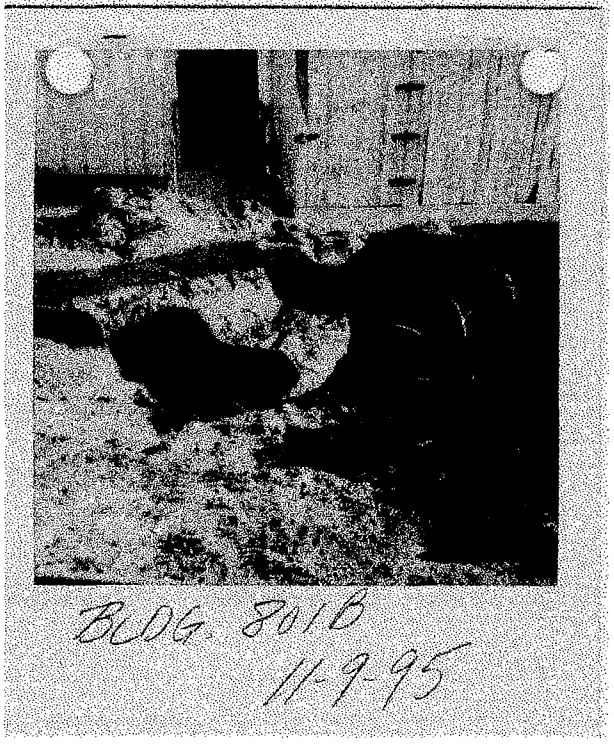
I certify under penalty of law, where applicable, that this laboratory meets the Laboratory Performance Standards and Quality Control requirements specified in N.J.A.C. 7:18 and 40 CFR Part 136 for Water and Wastewater Analyses and SW-846 for Solid Waste Analysis. I have personally examined the information 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





NOVEMBER 9, 1995

PHOTOGRAPHIC LOG

UST NO. 81533-129

Building 801B
Main Post-West
Fort Monmouth

VERSAR
Engineers, Managers, Scientists & Planners
Bristol, PA