

United States Army
Fort Monmouth, New Jersey

COPY

Underground Storage Tank Closure and Site Investigation Report

***Building 170D
Main Post-West Area***

NJDEP UST Registration No. 0090010-69

October 1998

**UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT**

BUILDING 170D

**MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0090010-69**

OCTOBER 1998

PREPARED FOR:

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

PREPARED BY:

**SMC ENVIRONMENTAL SERVICES GROUP
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KING OF PRUSSIA, PA 19406**

PROJECT NO. 2491-308

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES	1
1.1 OVERVIEW	1
1.2 SITE DESCRIPTION	2
1.2.1 Geological/Hydrogeological Setting	2
1.3 HEALTH AND SAFETY	4
1.4 REMOVAL OF UNDERGROUND STORAGE TANK	4
1.4.1 General Procedures	4
1.4.2 Underground Storage Tank Excavation and Cleaning	4
1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL	5
1.6 MANAGEMENT OF EXCAVATED SOILS	5
2.0 SITE INVESTIGATION ACTIVITIES	6
2.1 OVERVIEW	6
2.2 FIELD SCREENING/MONITORING	6
2.3 SOIL SAMPLING	7
3.0 CONCLUSIONS AND RECOMMENDATIONS	8
3.1 SOIL SAMPLING RESULTS	8
3.2 CONCLUSIONS AND RECOMMENDATIONS	8

TABLE OF CONTENTS (CONTINUED)

TABLES

Table 1	Summary of Post-Excavation Sampling Activities
Table 2	Post-Excavation Soil Sampling Results

FIGURES

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Cross Sectional View
Figure 4	Soil Sampling Location Map

APPENDICES

Appendix A	NJDEP Standard Reporting Form
Appendix B	Site Assessment Summary
Appendix C	Waste Manifest
Appendix D	UST Disposal Certificate
Appendix E	Soil Analytical Data Package
Appendix F	Photographs

EXECUTIVE SUMMARY

UST Closure

On May 4, 1998, a fiberglass 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. 0090010-69 (Fort Monmouth ID No. 170D), was located west of Building 170D. UST No. 0090010-69 was a 550-gallon No. 2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes or punctures. No holes or punctures were noted in the UST and no evidence of potentially contaminated soils was observed surrounding the tank. Groundwater was not encountered. Samples contained non-detectable levels of TPHC.

Site Restoration

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

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist 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. 0090010-69 at Building 170D.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0090010-69, was closed at Building 170D at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on May 4, 1998. Refer to site location map on Figure 1. This report presents the results of the Department of Public Works= (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a fiberglass 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0090010-69 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 SMC Environmental Services Group personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 0090010-69 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. 0090010-69 are included in Appendices A and B, respectively.

Based on inspecting the UST, field screening of subsurface soils and groundwater, and reviewing analytical results of collected soil samples, the DPW has concluded that no significant historical discharges are associated with the UST or associated piping.

This UST Closure and Site Investigation Report has been prepared by SMC Environmental Services Group, 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 170D is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0090010-69 was located west of Building 170D and appurtenant copper piping ran approximately seven (7) feet northeast from the excavation to an emergency generator. 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 170D. 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 (Zapeczka, 1989). These sediments, predominantly derived from deltaic, shallow marine, and continental shelf environments, date from Cretaceous through the Quaternary Periods. The mineralogy ranges from quartz to glauconite.

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

Local Geology

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

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

Hydrogeology

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

Based on records of wells drilled in the Main Post area, water is typically encountered at depths of 2 to 9 feet below ground surface (bgs). According to Jablonski, wells drilled in the Red Bank and Tinton Sands may produce 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

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

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

- X tidal influence (based on proximity to the Atlantic Ocean, rivers, and tributaries)
- X topography
- X nature of the fill material within the Main Post area
- X presence of clay and silt lenses in the natural overburden deposits
- X 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 170D is located approximately 200 feet south of Parkers Creek, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 170D 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

- X All underground obstructions (utilities, etc.) were identified by the contractor performing the closure prior to excavation activities.
- X All activities were carried out with the greatest regard to safety and health and the safeguarding of the environment.
- X 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.
- X 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.
- X A Sub-Surface Evaluator from the DPW was present during all site assessment activities.

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. . Approximately 25 gallons of liquid from the UST and its associated piping were transported by Lionetti Oil Recovery Co. Inc to the Lionetti Oil Recovery Co. Inc. facility, a 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. No evidence of contamination was observed. Soil screening was also performed along the piping run associated with the UST closure. No contamination was noted anywhere along the piping length. Groundwater was not encountered. See Figure 3 for a cross-sectional view of the excavated area.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

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

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

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

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.

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, a 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:

- X Subsurface Evaluator: David H. Daniels
Employer: SMC Environmental Services Group
Phone Number: (215) 788-7844
NJDEP Certification No.: 10279

- X Project Manager: Dinker Desai
Employer: U.S. Army, Fort Monmouth
Phone Number: (730) 532-6224
NJDEP Certification No.: 10173

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

- X Hazardous Waste Hauler: Lionetti Oil Recovery Co. Inc
Contact Person: Charles Clayton
Phone Number: (908) 721-0900
NJDEP Hazardous Waste Hauler No.: S6247

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using an OVA 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 not encountered.

2.3 SOIL SAMPLING

On May 4, 1998, following the removal of the UST, post-excavation soil samples N, N2, W, S, E, and PP were collected from a total of five (5) locations of the UST excavation. Sidewall samples N, N2, W, S, and E were collected at a depth of 7.0 feet bgs. Piping sample PP was collected at a depth of 2.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

SMC Environmental Services Group personnel in accordance with the NJDEP Technical Requirements and the NJDEP Field Sampling Procedures Manual performed the site assessment.

A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using NJDEP *Field Sampling Procedures Manual* (1992) standard sampling procedures. Following soil sampling activities, the samples were chilled and delivered to U.S. Army Fort Monmouth Environmental Laboratory located in Fort Monmouth, New Jersey, for analysis.

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 May 4, 1998, from a total of five (5) locations. All samples were analyzed for TPHC 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 on May 4, 1998, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Samples contained non-detectable levels of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 170D were below the NJDEP soil cleanup criteria for total organic contaminants.

Based on the post-excavation sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist 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. 0090010-69 at Building 170D.

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 170D, MAIN POST-WEST AREA
FORT MONMOUTH, NEW JERSEY

Page 1 of 1

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
N	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
N2	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
W	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
S	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
PP	5/4/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 170D, MAIN POST-WEST AREA
 FORT MONMOUTH, NEW JERSEY

Page 1 of 1

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
N/7.0=	3542.01	5/4/98	5/9/98	Total Solid	--	--	82.49	--	--
				TPHC	189	Yes	ND	10,000	No
N2/7.0=	3542.02	5/4/98	5/9/98	Total Solid	--	--	80.39	--	--
				TPHC	192	Yes	ND	10,000	No
W/7.0=	3542.03	5/4/98	5/9/98	Total Solid	--	--	78.10	--	--
				TPHC	196	Yes	ND	10,000	No
S/7.0=	3542.04	5/4/98	5/9/98	Total Solid	--	--	80.00	--	--
				TPHC	191	Yes	ND	10,000	No
E/7.0=	3542.05	5/4/98	5/9/98	Total Solid	--	--	82.50	--	--
				TPHC	190	Yes	ND	10,000	No
PP/2.0=	3542.06	5/4/98	5/9/98	Total Solid	--	--	79.48	--	--
				TPHC	188	Yes	ND	10,000	No

Note:

- * Total Solid results are expressed as a percentage.
 ** NJDEP Residential Direct Contact soil cleanup criteria for total organics
 -- Not detected above stated sample quantitation limit
 TPHC Total Petroleum Hydrocarbons

FIGURES

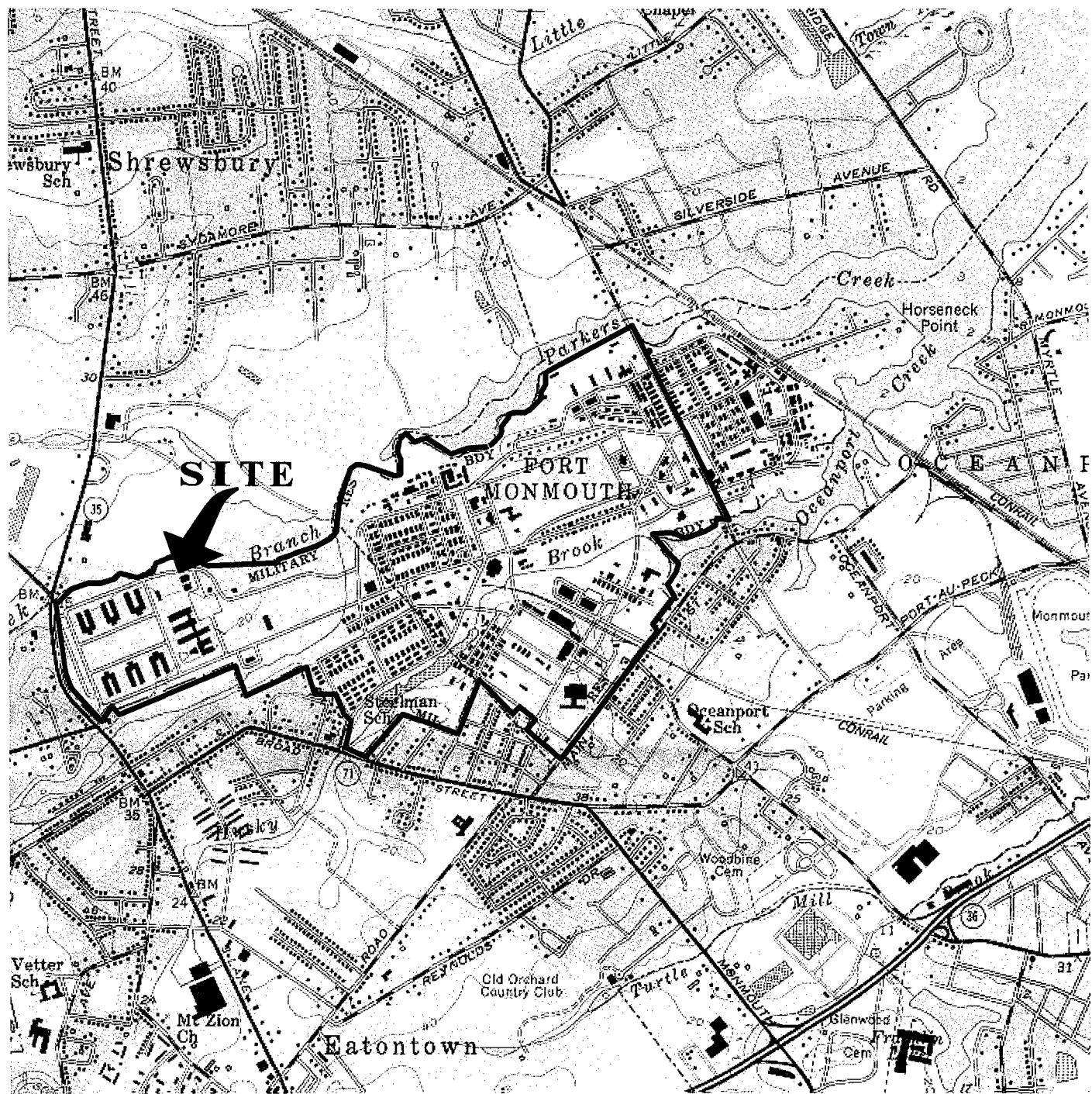


FIGURE 1

SITE LOCATION MAP
Building 170D
Main Post-West
Fort Monmouth Army Base
Monmouth County, NJ



SMC Environmental
Services Group

Engineers, Managers, Scientists & Planners
 Valley Forge, PA.

SCALE: 1"= 2000'

DATE: MAY 1998

LONG BRANCH, N. J.

40073-C8-TF-024

1954

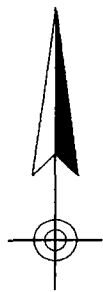
PHOTOREVISED 1981

DMA 6164 1 SE-SERIES V822

NEW JERSEY



QUADRANGLE LOCATION



170D 2429 FIG2

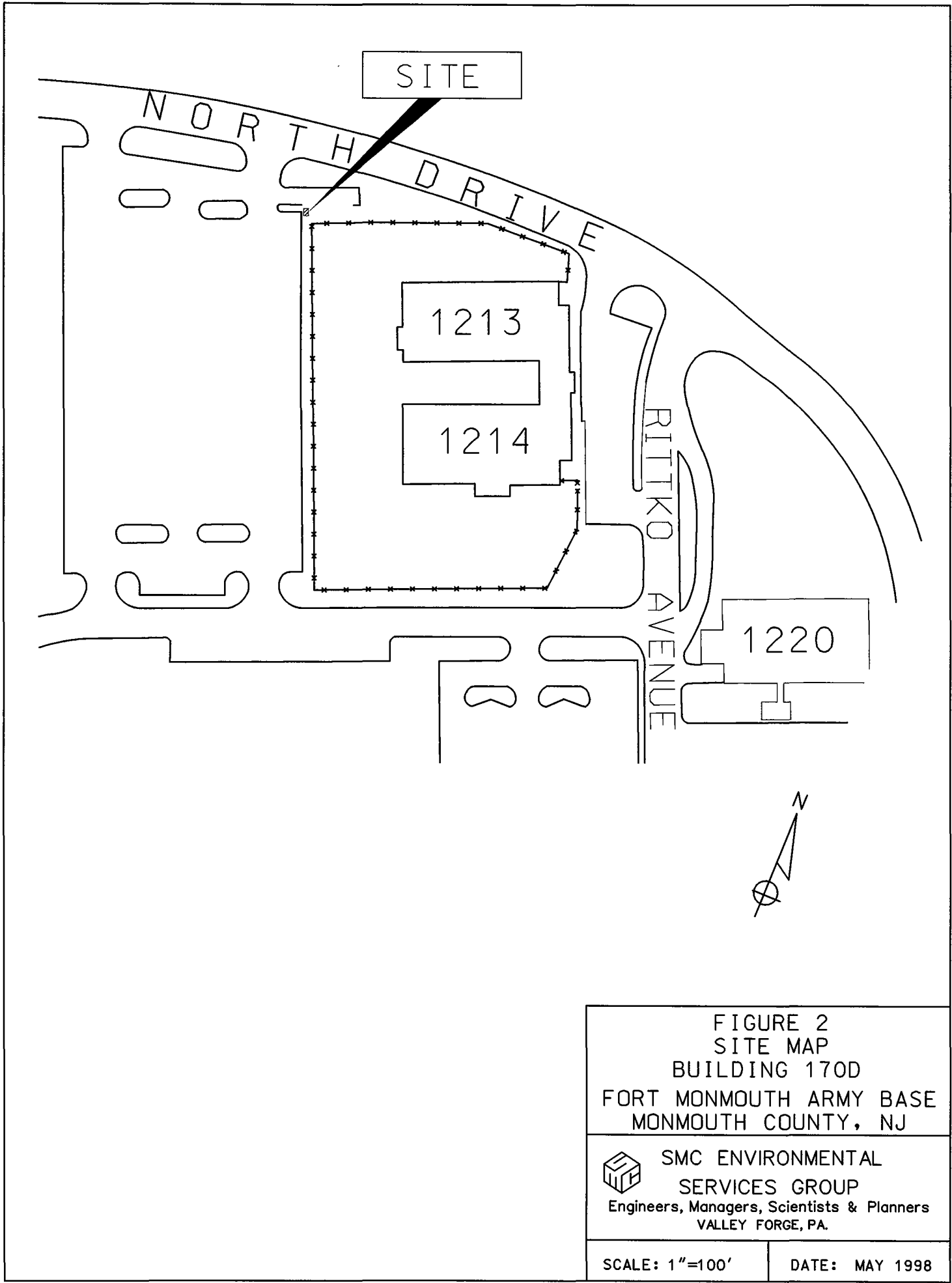



FIGURE 2
 SITE MAP
 BUILDING 170D
 FORT MONMOUTH ARMY BASE
 MONMOUTH COUNTY, NJ

 SMC ENVIRONMENTAL
 SERVICES GROUP
 Engineers, Managers, Scientists & Planners
 VALLEY FORGE, PA.

SCALE: 1"=100' DATE: MAY 1998

0 FT

GROUND SURFACE

SANDY LOAM
(BROWN)

SANDY LOAM
(BROWN)

2.0 FT

SANDY LOAM
(BROWN)

UNDERGROUND
STORAGE TANK

5.0 FT

FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 170D
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

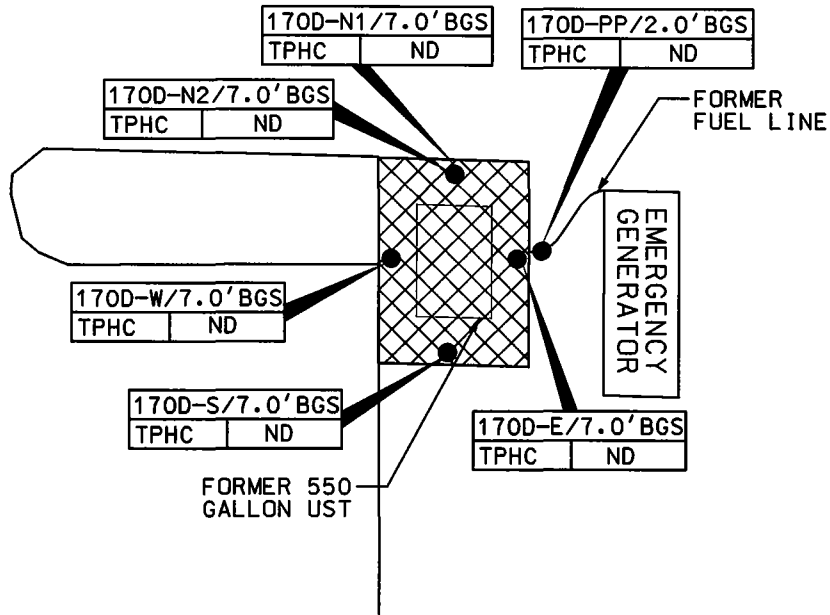


**SMC ENVIRONMENTAL
SERVICES GROUP**

Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: NTS

DATE: MAY 1998



LEGEND

● SOIL SAMPLE LOCATION
(MAY 4, 1998)

▨ LIMIT OF EXCAVATION
(MAY 4, 1998)

NOTES:

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

FIGURE 4
SOIL SAMPLING LOCATION MAP
BUILDING 170D
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ



**SMC ENVIRONMENTAL
SERVICES GROUP**

Engineers, Managers, Scientists & Planners
VALLEY FORGE, PA.

SCALE: 1"=10'

DATE: MAY 1998

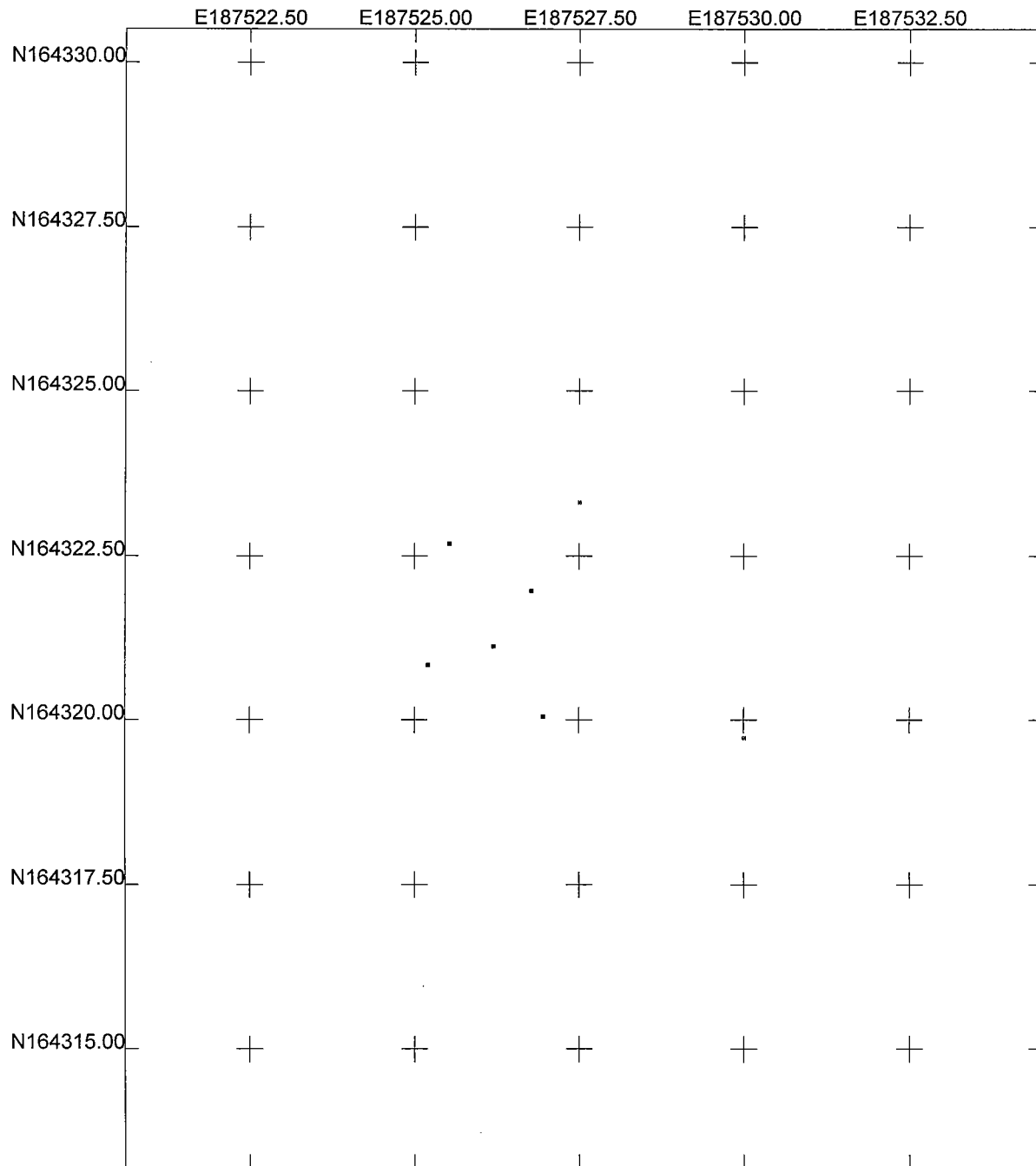
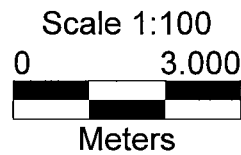


Figure 4 GPS Sampling Location Map

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



r020319a170d.cor
 2/5/1999
 Pathfinder Office
Trimble

Figure 4 GPS Sample Location Point Data

US State Plane 1983 NJ (NY East) 2900 NAD 1983 (CONUS)

(In Meters)

Sample Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
170D W	164320.846	187525.191
170D S	164320.063	187526.944
170D N1 N2	164322.7	187525.519
170D E	164321.136	187526.188
170D PP	164321.979	187526.767

Reference Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
170D CORN	164323.324	187527.494
170D CORN	164319.742	187529.993

APPENDIX A

NJDEP-STANDARD REPORTING FORM

Check In Yes No

STATUS COMCODE
 Active Inactive

UNDERGROUND STORAGE TANK FACILITY QUESTIONNAIRE

FACILITY UST # 90010 (Tank # 69) Building 170-D

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21, and the Registration and Billing Regulations N.J.A.C. 7:14B-2.

[Check appropriate box(es)]

- A. Is this a registration of a proposed or newly installed underground storage tank? (This form must be filed at least 30 days prior to operation)
- B. Is this a registration of an existing underground storage tank not presently registered?
- C. Is this a correction or amendment to an existing facility registration? UST # 90010
- D. There have been no changes to the facility registration since last submittal. UST # _____ (Go to certification page for signatures)

If "C" is checked above, please check the appropriate type of change(s) below

- | | | |
|--|---|--|
| <input type="checkbox"/> Facility Name and/or Address Change | <input type="checkbox"/> Type of Product(s) Stored | <input type="checkbox"/> Financial Responsibility Change |
| <input type="checkbox"/> Owner Name and/or Address Change | <input type="checkbox"/> Spills, Leaks, Releases | <input type="checkbox"/> Substantial Modification(s) |
| <input type="checkbox"/> Facility Operator and/or Address Change | <input type="checkbox"/> Tank(s) and/or Piping Changes | <input type="checkbox"/> Sale or Transfer (Complete Questions 4,5,6 & 13D) |
| <input type="checkbox"/> Owner Contact Person Change | <input checked="" type="checkbox"/> Closure (Complete Question #13) | <input type="checkbox"/> Other (please specify) |

SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name MAIN POST FORT MONMOUTH

2. Facility Location

NUMBER AND STREET

CITY OR MUNICIPALITY

COUNTY STATE ZIP CODE BLOCK LOT

3. Facility Operator PERSON OR TITLE Contact Tele. No. _____ (Area Code) _____ (Extension)

Operator Address (if different than #2)

NUMBER AND STREET

CITY OR MUNICIPALITY

STATE ZIP CODE

4. Tank Owner

5. Tank Owner Address

NUMBER AND STREET

CITY OR MUNICIPALITY

STATE ZIP CODE

Contact Person (Tank Owner) _____ Contact Tele. No. (Area Code) _____ (Extension)

7. EPA ID #

8. Total number of regulated underground storage tanks at facility (Complete Section B for each tank)

10. Facility Type: A State C County/Municipal E Charitable / Public School G Other
 B Commercial/Industrial D Federal F Residence H Farm (as defined in N.J.S.A. 54:4-23.1 et seq.)

11. Is a copy of the facility site plan submitted with this registration pursuant to N.J.A.C. 7:14B-2? YES NO

SECTION B - SPECIFIC TANK INFORMATION

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/3/86) must be registered. Report all tank/piping status changes unless previously submitted.

1. Tank Identification Number	TANK NO.		TANK NO.		TANK NO.		TANK NO.		TANK NO.			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. CAS Number (hazardous substances only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. Date Tank Installed (Month/Day/Year)	Mo.	Day	Year	Mo.	Day	Year	Mo.	Day	Year	Mo.	Day	Year
4. Tank Size (gallons)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Tank Contents (Mark one "X" for each tank)												
A. Leaded gasoline	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
B. Unleaded gasoline	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
C. Alcohol enriched gasoline	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
D. Light diesel fuel (No. 1-D)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
E. Medium diesel fuel (No. 2-D)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
F. Waste Oil	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
G. Kerosene (No. 1)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
H. Home heating oil (No. 2)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
J. Heating oil (No. 4)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
K. Heavy heating oil (No. 6)	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
L. Aviation fuel	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
M. Motor oil	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
N. Lubricating oil	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
P. Sewage	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
Q. Sewage sludge	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>			
R. Other hazardous substances (specify)												
S. Hazardous waste (specify ID number)												
T. Mixtures (please specify)												
U. Emergency spill tank (specify substance)												
V. Other petroleum products (please specify)												
W. Other (please specify)												
6. Tank & Piping Construction (Mark one each for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping		
A. Bare Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B. Cathodically protected steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C. Fiberglass-coated steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
D. Fiberglass-reinforced plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
E. Internally lined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
F. Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping		
A. Single wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B. Double wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C. Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
8. Type of Monitoring/Detection System (Mark all that apply for both tank & piping)	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping	Tank	Piping		
A. Statistical Inventory Reconciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
B. Manual Tank Gauging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
C. Inventory Control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
D. Interstitial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
E. Precision Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
F. Ground water observation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
G. Vapor observation wells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
H. In-tank (automatic) monitoring gauge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
J. Periodic Tank Test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Tank Identification Number					
8. Type of Monitoring/Detection System K. None	Tank Piping	Tank Piping	Tank Piping	Tank Piping	Tank Piping
L. Other (please specify)					
9. Overfill Protection (tank only) (Mark one X for each tank)					
A. Yes					
B. No					
10. Spill Containment Around Fill Pipe (Mark one X for each tank)					
A. Yes					
B. No					
11. Tank Status (Mark one X for each tank)	Tank Piping	Tank Piping	Tank Piping	Tank Piping	Tank Piping
A. In-use					
B. Empty less than 12 months					
C. Empty 12 months or more					
D. Emergency spill tank (sump)					
E. Emergency backup generator tank					
F. Abandoned in Place					
G. Removed					
H. Other (please specify)					
12. If box 11B, C, or D above has been marked, indicate the estimated date last used (month/day/year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
13. Closure Information - Tank ID No.	TANK NO. 0069	TANK NO.	TANK NO.	TANK NO.	TANK NO.
A. Date abandoned in place	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
B. Date taken temporarily out of service					
C. Date removed	05041998				
D. Date of Sale or Transfer					
E. TMS # (if applicable)					
F. ISRA # (if applicable)					

SECTION C - FINANCIAL RESPONSIBILITY

Does this facility have a Financial Responsibility Assurance Mechanism as required in 40 CFR 280? YES NO
Please list the appropriate financial information below:

Type	Carrier / Issuing Agency	Policy Number	Amount
Effective Date: ___/___/___	Expiration Date: ___/___/___		\$

SECTION D - MONITORING SYSTEMS

Does this facility have a release detection monitoring system which is in compliance with N.J.A.C. 7:14B-6? YES NO
If "No", please be aware that the facility must meet the appropriate deadline. (See "Dates to Know" on Page 4)

SECTION E - RECORDKEEPING/COMPLIANCE

Please answer all the questions in this section on a facility basis. Any one tank not in compliance requires a "NO" answer for the entire facility.

- Does this facility have cathodic protection systems for all steel tanks and piping?
If "Yes", are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5? YES NO
- Are the performance claims and documentation of monitoring systems maintained by the owner or operator pursuant to N.J.A.C. 7:14B-5? YES NO
- Are the proper monitoring, testing, sampling, repair and inventory records kept on-site pursuant to N.J.A.C. 7:14B-5 and 6? YES NO
- Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5? YES NO
- Does the facility have spill and over fill protection systems pursuant to N.J.A.C. 7:14B-4? YES NO
- Have all Fill Ports been permanently marked as per API #1637 pursuant to N.J.A.C. 7:14B-5? YES NO

IMPORTANT INFORMATION

- FEE:** Please make check payable to: "Treasurer, State of New Jersey". Use enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:27. All Initial Registration fees are \$100 per facility.
- PENALTY:** Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in N.J.S.A. 58:10A-10.
- EMERGENCY:** If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day.
- UPGRADE EXEMPTION:** Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines)

- December 22, 1988 — All new federally regulated tank systems must have cathodic protection and spill/overflow protection.
- September 4, 1990 — All new State-only regulated tank systems must have cathodic protection and spill/overflow protection.
- December 22, 1990 — All federally regulated piping must have begun leak detection.
- February 19, 1993 — All federally regulated tank systems must maintain financial responsibility assurance.
- December 22, 1993 — All federally regulated tank systems must have begun leak detection.
- December 22, 1998 — All regulated tanks shall install cathodic protection and spill/overflow protection.

CERTIFICATIONS

NOTE: IF THE PERSON SIGNING CERTIFICATION NO. 2 IS THE SAME AS THE PERSON SIGNING CERTIFICATION NO. 1, THEN CERTIFICATION NO. 2 NEED NOT BE SIGNED. (If different persons are required to sign No. 1 and No. 2, then they must do so.)

CERTIFICATION NO. 1:

Must be signed by the highest ranking individual at the facility with overall responsibility

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal 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."

JAMES OTT
(Typed / Printed Name)

DIRECTOR, DPW
(Title)

James Ott
(Signature)
5/6/98
(Date)

CERTIFICATION NO. 2:

Must be signed as follows:

- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal 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."

(Typed / Printed Name)

(Title)

(Signature)

(Date)

CERTIFICATION NO. 3:

If applicable, must be signed by the individual who is certified to perform services.

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal 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."

DAVID H. DANIELS
(Typed / Printed Name) (Title)

SMC Environmental Services
(Name of Firm, if applicable) Group

David H. Daniels
(Signature)
10279 5/4/98
(N.J. Certification Number) (Date)

APPENDIX B
SITE ASSESSMENT SUMMARY

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: Eatontown 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
X NA - Federal Agreement

D. (Complete all that apply)

- Assigned Case Manager : Ian Curtis, Federal Case Manager
UST Registration Number : 90010-69 (7 digits)
Incident Report Number (10 or 12 digits)
Tank Closure Number : Federal Case Manager

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: David Daniels Signature: David H. Daniels UST Cert. No.: 10279

Firm: SMC Environmental Services Group Firm's UST Cert. Number: 00412

Firm Address: 501 Allendale Road City: King of Prussia

State: PA Zip: 19406 Telephone Number : 215-788-7844

(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.
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: [Signature]

Company Name: U.S. Army Fort Monmouth Date: 3/25/99

APPENDIX C
WASTE MANIFEST



RD1 Box 5A
Old Bridge, N.J. 08857
(732) 721-0900
Fax (732) 721-0231

STANDARD
COLLECTION
ORDER FORM
199329

GENERATOR/LOCATION Fort Monmouth SALES ORDER # _____
 NAME Fort Monmouth
 INFORMATION/ATTENTION LINE _____ ACCOUNT APPROVAL CODE: _____
 DELIVERY ADDRESS Riverside Ave Bldg 280. 281
 CITY Fort Monmouth STATE NJ ZIP _____
 PHONE NUMBER _____ PURCHASE ORDER NUMBER _____
 USA EPA ID NO. (IF APPLICABLE) NJ3210028597 STATE ID NO. _____

BILL TO (IF DIFFERENT FROM LOCATION)
 NAME SMC Environmental
 INFORMATION/ATTENTION LINE _____ ACCOUNT APPROVAL CODE: _____
 DELIVERY ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE NUMBER _____ PURCHASE ORDER NUMBER _____
 MANIFEST NUMBER 14023

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 PRICE	Building	Drums	Gallons
40500	USED OIL REMOVAL				1221	1	20
40300	ANTI-FREEZE REMOVAL						
40600	USED OIL FILTER REMOVAL				1700	1	25
40501	OILY-WATER DISPOSAL	<u>ID77</u>	<u>220</u>	<u>gallons</u>			
40502	SLUDGE DISPOSAL				400	1	25
41001	GASOLINE/WATER						
41501	DRUM DISPOSAL				949	1	30
41504	TANK ENTRY						
40800	PARTS WASHER SERVICE				979	1	20
41500	TRUCK & OPERATOR		<u>1</u>	<u>7.40am - 10.30am</u>			
41511	NEW 55 GAL DRUM /17H				286	1	30
41503	QAQC ANALYTICAL TESTING						
42001	DEXSIL TEST KIT	TAX			2018	1	25
41509	TRANSPORTATION				977	1	25
					2021A	1	20

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 1/2% 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 ID77
 In accordance with the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

DINLEK M. DESAI
 Print Name Title
[Signature] 6.1.98
 Signature Date
 GENERATOR/CUSTOMER

SMALL QUANTITY TOTAL GENERATOR CERTIFICATION

I certify that this generator generates less than 100 kilograms 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.

[Signature]
 GENERATOR'S SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT TEST RESULTS
2.100C
TA PPM

Total → 9 → 220 gallons

PAYMENT RECEIVED SECTION

CASH <input type="checkbox"/>	TOTAL RECEIVED
CHECK NUMBER	

CUSTOMER SERVICED EVERY 30 DAYS

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

Anibal Lucero
 Print Name
[Signature] 6/1/98
 Signature Date
 LORCO REPRESENTATIVE



RD. 1, BOX 5A - OLD BRIDGE, NJ 08857

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

NJ3210020597

Manifest Document No.

14073

2. Page 1 of 1

NHZ 014023

3. Generator's Name and Mailing Address

U.S. Army Communications Electronics Command
main Post, Bldg. 173 Joe Fallon BTTN: SCLM2-PW-EV

4. Generator's Phone

(732) 592-6223 Fort Monmouth, NJ 07703

SLM

5. Transporter 1 Company Name

LIONETTI OIL RECOVERY CO INC

6. US EPA ID Number

N J D 0 8 4 0 4 4 0 6 4

A. Transporter's Phone

908 721-0900

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

LIONETTI OIL RECOVERY CO INC DBA LORCO PETROLEUM SVCS
RUNYON&CHEESEQUAKE RDS
OLD BRIDGE, NJ 08857

10. US EPA ID Number

N J D 0 8 4 0 4 4 0 6 4

C. Facility's Phone

908 721-0900

11. Waste Shipping Name and Description

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

a. PETROLEUM OIL (PETROLEUM OIL)
COMBUSTIBLE LIQUID UN1270 PGIII

0 0 1 T 1220 G

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

T, L PETROLEUM OIL 90 %
WATER 10 %

E. Handling Codes for Wastes Listed Above

T04 FILTRATION

15. Special Handling Instructions and Additional Information

24 HR EMERGENCY RESPONSE#(908) 721-0900
DECAL 87066 ERG#128 DEXSIL TEST KIT RESULTS ~~41000PM~~
MANIFEST USED FOR TRACKING PURPOSES ONLY

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

DINKER, M. DESAI

Signature

[Signature]

Month Day Year

06 01 98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Anibal Vazquez

Signature

[Signature]

Month Day Year

06 01 98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

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

Printed/Typed Name

Signature

Month Day Year

ORIGINAL RETURN TO GENERATOR

GENERATOR

TRANSPORTER

FACILITY

APPENDIX D

UST DISPOSAL CERTIFICATE



Reader From:
The Drawing Board
P.O. Box 2044 • Hartford, CT 06104-2044
Call Toll Free: 1-800-527-0630

REORDER ITEM # BLN74

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

Shipper No. 007

Carrier No. _____

SMC ENVIRONMENTAL SERVICES GROUP

(Name of Carrier)

Date _____

To: Designee <u>Marpal Co. inc</u>	From: Shipper <u>Fort Monmouth (U.S. Army)</u>
Street <u>1861 Wayside Road</u>	Street <u>Building # 170-D</u>
Destination <u>Twiton Falls NJ Zip Code 07724</u>	Origin <u>Eaton town, N.J.</u>
Route _____	

No. Shipping Unit	Unit	Kind of Packaging, Description of Article, Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
①		<u>FOR SCRAP ONLY</u> <u>(Fiberglass) - 550 Gallon U.S.T Skel</u> <u>CLAIM !!</u> <u>TANK # 90010-69</u> <u>Building # 170-D</u>			

REMIT C.O.D. TO: ADDRESS _____	COD Amt: \$ _____	C.O.D. FEE: PREPAID <input type="checkbox"/> \$ COLLECT <input type="checkbox"/>
NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____	This is to certify that the above - named article/s 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.	TOTAL CHARGES: \$ _____ FREIGHT PREPAID <input type="checkbox"/> COLLECT <input type="checkbox"/>
_____ Signature	_____ Signature of Consignee	

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown, repacked, damaged, and damaged as indicated above which said carrier, the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to destination and as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.
Shipper hereby certifies that he is familiar with all the bill of lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER <u>Fort Monmouth (U.S. Army)</u>	CARRIER <u>SMC ENVIRONMENTAL SERVICES GROUP</u>
PER _____	PER <u>Marpal Co.</u>
DATE - <u>5/21/98</u>	

*Mark with "X" to designate Hazardous Material as defined in Title 49 of the Code of Federal Regulations.

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1996 8:52PM

APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

US ARMY FT. MONMOUTH ENVIRONMENTAL LABORATORY
NJDEPE # 13461

REPORT OF ANALYSIS

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

Project: Total Petroleum Hydrocarbons
98-0779
Bldg. 170-D
Tetra Tech

Project # 3542
Date Rec. 05/04/98
Date Compl. 05/14/98
Released by:



Daniel K. Wright
Laboratory Director

Table of Contents

<u>Section</u>	<u>Pages</u>
Cover Sheet	1
Table of Contents	2
Method Summary	3
Conformance/Non-Conformance	4
Chain of Custody	5
Results Summary	6
Initial Calibration Summary	7
Continuing Calibration Summary	8-10
Surrogate Results Summary	11
MS/MSD Results Summary	12
Quality Control Spike Summary	13
Raw Sample Data	14-25
Laboratory Deliverable Checklist	26

Method Summary

NJDEP Method OOA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

The extract is then injected directly into a GC-FID for analysis. The sample is analyzed for petroleum hydrocarbons covering a range of C8-C42 including pristane and phytane. Total Petroleum Hydrocarbon concentration is determined by integrating between 5 minutes and 22 minutes. The baseline is established by starting the integration after the end of the solvent peak and stopping after the last peak.

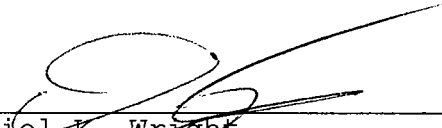
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

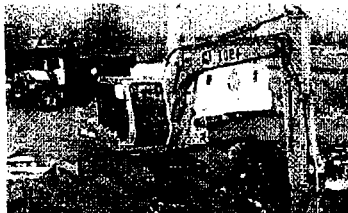
	<u>No</u>	<u>Yes</u>
1. Method Detection Limits provided.	—	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank. _____ _____	✓	—
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls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

Laboratory Authentication Statement

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



 Daniel K. Wright
 Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

Bldg. 173, SELFM-PW-EV, Fort Monmouth, NJ 07703

Tel (732)532-4359 Fax (732)532-3484 EMail:appleby@doim6.monmouth.army.mil

NJDEP Certification #13461

Chain of Custody Record


Customer: Charles Appleby				Project No: 98-0779			Analysis Parameters					Comments:	
Phone #: X26224				Location: Building 170-D			TPHC	H-Uu Readings (ppm)					
() DERA (X) OMA () Other: _____													
Samplers Name / Company : Dave Daniels (SMC)						Sample #						Remarks / Preservation Method	
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles								
3542 01	170-D-N (7')	5.4.98	11:30	soil	1	1	0					ICE	
02	170-D-N2(7')	↓	11:35	↓	↓	↓	0						
03	170-D-W(7')	↓	11:40	↓	↓	↓	0						
04	170-D-S(7')	↓	11:45	↓	↓	↓	0						
05	170-D-E(7')	↓	11:50	↓	↓	↓	0						
06	170-D-PP(2')	↓	11:55	↓	↓	↓	0						
Relinquished by (signature):		Date/Time:	Received by (signature):			Relinquished by (signature):		Date/Time:	Received by (signature):				
<i>Dave Daniels</i>		5.4.98	<i>J. Appleby</i>										
Relinquished by (signature):		Date/Time:	Received by (signature):			Relinquished by (signature):		Date/Time:	Received by (signature):				
Report Type: () Full, (X) Reduced, () Standard, () Screen / non-certified						Remarks: Calibration of H-Uu → zero = 0.0ppm 100 ppm at 3.12 setting							
Turnaround time: () Standard 4 wks, (X) Rush 3 Days, () ASAP Verbal Hrs.													

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

Client :	U.S. Army	Lab. ID # :	3542
	DPW. SELFM-PW-EV	Date Rec'd:	04-May-98
	Bldg. 173	Analysis Start:	06-May-98
	Ft. Monmouth, NJ 07703	Analysis Complete:	14-May-98
Analysis:	OQA-QAM-025	UST Reg. #:	
Matrix:	Soil	Closure #:	
Analyst:	D.DEINHARDT	DICAR #:	
Ext. Meth:	Shake	Location #:	BLDG. 170-D

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3542.01	170-D-N	1.00	15.09	82.49	189	ND
3542.02	170-D-N2	1.00	15.21	80.39	192	ND
3542.03	170-D-W	1.00	15.33	78.10	196	ND
3542.04	170-D-S	1.00	15.38	80.00	191	ND
3542.05	170-D-E	1.00	15.03	82.80	189	ND
3542.06	170-D-PP	1.00	15.76	79.48	188	ND
METHOD BLANK	TBLK 95	1.00	15.00	100.00	157	ND

ND = Not Detected
MDL = Method Detection Limit



Daniel K. Wright
Laboratory Director

Response Factor Report FID/TCD

Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998

Calibration Files

100 =T05275.D 50 =T05277.D 20 =T05279.D
 10 =T05281.D 5 =T05283.D

Compound		100	50	20	10	5	Avg		%RSD
1)	tC C8	1.067	1.181	1.225	1.023	1.091	1.117	E4	7.45
2)	tC C10	1.240	1.300	1.340	1.117	1.281	1.256	E4	6.80
3)	TC C12	1.420	1.476	1.528	1.257	1.435	1.423	E4	7.16
4)	tC C14	1.515	1.585	1.659	1.363	1.558	1.536	E4	7.18
5)	tC C16	1.585	1.661	1.754	1.442	1.647	1.618	E4	7.13
6)	tC C18	1.886	1.922	2.019	1.680	1.891	1.880	E4	6.60
7)	tC C20	1.755	1.843	1.945	1.618	1.861	1.804	E4	6.88
8)	tC C22	1.761	1.845	1.955	1.596	1.856	1.803	E4	7.46
9)	tC C24	1.808	1.885	2.003	1.626	1.901	1.845	E4	7.61
10)	tC C26	1.818	1.898	2.027	1.639	1.910	1.858	E4	7.72
11)	tC C28	1.864	1.946	2.082	1.682	1.953	1.906	E4	7.72
12)	tC C30	1.961	2.060	2.194	1.768	2.079	2.013	E4	7.93
13)	tC C32	1.907	2.022	2.161	1.733	2.061	1.977	E4	8.29
14)	tC C34	1.678	1.841	1.990	1.628	2.018	1.831	E4	9.66
15)	tC C36	1.195	1.385	1.495	1.277	1.629	1.396	E4	12.36
16)	tC C38	0.810	0.992	1.071	0.930	1.235	1.008	E4	15.76
17)	tC C40	5.503	7.029	7.423	6.320	8.515	6.958	E3	16.34
18)	tC c42	3.887	5.042	4.673	3.987	5.364	4.591	E3	14.07
19)	TC Pristane	1.689	1.774	1.901	1.495	1.809	1.733	E4	8.84
20)	TC Phytane	1.762	1.858	1.978	1.643	1.902	1.829	E4	7.11
21)	sC o-terphenyl	2.028	2.134	2.271	1.866	2.147	2.089	E4	7.25
22)	tC TPHC - total	1.833	2.021	2.433	2.109	2.719	2.223	E4	15.84

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980511\T05375.D
 Acq On : 14 May 98 6:06 am
 Sample : 50 PPM STANDARD
 Misc :
 IntFile : TPHCINT.E

Vial: 9
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Single Level Calibration

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

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 tC C8	11.174	12.519 E3	-12.0	89	0.00
2 tC C10	12.559	15.062 E3	-19.9	97	0.00
3 TC C12	14.232	17.033 E3	-19.7	97	0.00
4 tC C14	15.360	17.992 E3	-17.1	97	0.00
5 tC C16	16.177	18.597 E3	-15.0	97	0.00
6 tC C18	18.795	21.518 E3	-14.5	98	0.00
7 tC C20	18.045	20.624 E3	-14.3	97	0.00
8 tC C22	18.026	20.408 E3	-13.2	96	0.00
9 tC C24	18.446	20.847 E3	-13.0	96	0.00
10 tC C26	18.583	20.872 E3	-12.3	96	0.00
11 tC C28	19.056	21.258 E3	-11.6	96	0.00
12 tC C30	20.125	22.388 E3	-11.2	97	0.00
13 tC C32	19.769	21.768 E3	-10.1	96	0.00
14 tC C34	18.311	19.727 E3	-7.7	96	0.00
15 tC C36	13.961	14.555 E3	-4.3	97	0.00
16 tC C38	10.077	10.107 E3	-0.3	100	0.00
17 tC C40	6.958	6.919 E3	0.6	107	0.00
18 tC c42	4.591	4.930 E3	-7.4	117	-0.01
19 TC Pristane	17.333	20.028 E3	-15.5	99	0.00
20 TC Phytane	18.286	20.941 E3	-14.5	97	0.00
21 sC o-terphenyl	20.892	23.782 E3	-13.8	97	0.00
22 tC TPHC - total	22.230	20.719 E3	6.8	96	2.44#

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980511\T05295.D
 Acq On : 11 May 98 1:01 pm
 Sample : 50 ppm std
 Misc :
 IntFile : TPHCINT.E

Vial: 2
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Single Level Calibration

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

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 tC C8	11.174	11.266 E3	-0.8	80	0.00
2 tC C10	12.559	13.030 E3	-3.8	84	0.00
3 TC C12	14.232	14.787 E3	-3.9	84	0.00
4 tC C14	15.360	15.798 E3	-2.9	85	0.00
5 tC C16	16.177	16.478 E3	-1.9	86	0.00
6 tC C18	18.795	18.537 E3	1.4	84	0.00
7 tC C20	18.045	18.206 E3	-0.9	86	0.00
8 tC C22	18.026	18.123 E3	-0.5	86	0.00
9 tC C24	18.446	18.520 E3	-0.4	86	0.00
10 tC C26	18.583	18.540 E3	0.2	86	0.00
11 tC C28	19.056	18.900 E3	0.8	85	0.00
12 tC C30	20.125	19.924 E3	1.0	86	0.00
13 tC C32	19.769	19.355 E3	2.1	85	0.00
14 tC C34	18.311	17.484 E3	4.5	85	0.00
15 tC C36	13.961	12.949 E3	7.2	86	0.00
16 tC C38	10.077	8.758 E3	13.1	87	0.00
17 tC C40	6.958	5.893 E3	15.3	91	0.00
18 tC c42	4.591	4.099 E3	10.7	97	0.00
19 TC Pristane	17.333	17.099 E3	1.4	84	0.00
20 TC Phytane	18.286	18.400 E3	-0.6	86	0.00
21 sC o-terphenyl	20.892	21.141 E3	-1.2	86	0.00
22 tC TPHC - total	22.230	18.647 E3	16.1	86	2.44#

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980511\T05306.D
 Acq On : 11 May 98 10:02 pm
 Sample : 50 PPM STD
 Misc :
 IntFile : TPHCINT.E

Vial: 9
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Single Level Calibration

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

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 tC C8	11.174	11.140 E3	0.3	79	0.00
2 tC C10	12.559	12.650 E3	-0.7	81	0.00
3 TC C12	14.232	14.307 E3	-0.5	81	0.00
4 tC C14	15.360	15.059 E3	2.0	81	0.00
5 tC C16	16.177	15.576 E3	3.7	81	0.00
6 tC C18	18.795	17.915 E3	4.7	81	0.00
7 tC C20	18.045	17.142 E3	5.0	81	0.00
8 tC C22	18.026	17.046 E3	5.4	81	0.00
9 tC C24	18.446	17.397 E3	5.7	80	0.00
10 tC C26	18.583	17.443 E3	6.1	81	0.00
11 tC C28	19.056	17.816 E3	6.5	81	0.00
12 tC C30	20.125	18.766 E3	6.8	81	0.00
13 tC C32	19.769	18.222 E3	7.8	80	0.00
14 tC C34	18.311	16.551 E3	9.6	81	0.00
15 tC C36	13.961	12.091 E3	13.4	81	0.00
16 tC C38	10.077	8.633 E3	14.3	85	0.00
17 tC C40	6.958	5.712 E3	17.9	88	0.00
18 tC c42	4.591	4.439 E3	3.3	105	0.00
19 TC Pristane	17.333	16.020 E3	7.6	79	0.00
20 TC Phytane	18.286	17.346 E3	5.1	81	0.00
21 sC o-terphenyl	20.892	19.927 E3	4.6	81	0.00
22 tC TPHC - total	22.230	17.965 E3	19.2	83	2.44#

17

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

Surrogate Recovery Report

Lab. ID #: 3542

Location #: BLDG. 170-D

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3542.01		10.00	9.97	99.69
3542.02		10.00	12.65	126.45
3542.03		10.00	9.49	94.91
3542.04		10.00	12.87	128.71
3542.05		10.00	10.63	106.27
3542.06		10.00	9.87	98.67
METHOD BLANK	TBLK 95	10.00	11.40	113.99

Surrogate Added : o-Terphenyl

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

Matrix Spike Recovery Report

Lab. ID #: 3542

Location #: BLDG. 170-D

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3542.01MS	1000	0.00	1021.32	102.13	75-125
3542.01MSD	1000	0.00	991.35	99.13	75-125

RPD	2.98	20.00
-----	------	-------

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

Blank Spike Recovery Report

Lab. ID #: 3542
Location #: BLDG. 170-D

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	6-May-98	1000	1050.09	105.01	75-125

5/14/98

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05377.D Vial: 80
 Acq On : 14 May 98 7:40 am Operator: DEINHARDT
 Sample : 3542.01 Inst : FID/TCD
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: May 14 10:38 1998 Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980511\T05295.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
----------	------	----------	------------

System Monitoring Compounds

21) sC o-terphenyl	13.94	244351	9.969 mg/L
Spiked Amount	10.000	Range	8 - 13
		Recovery	= 99.69%#

Target Compounds

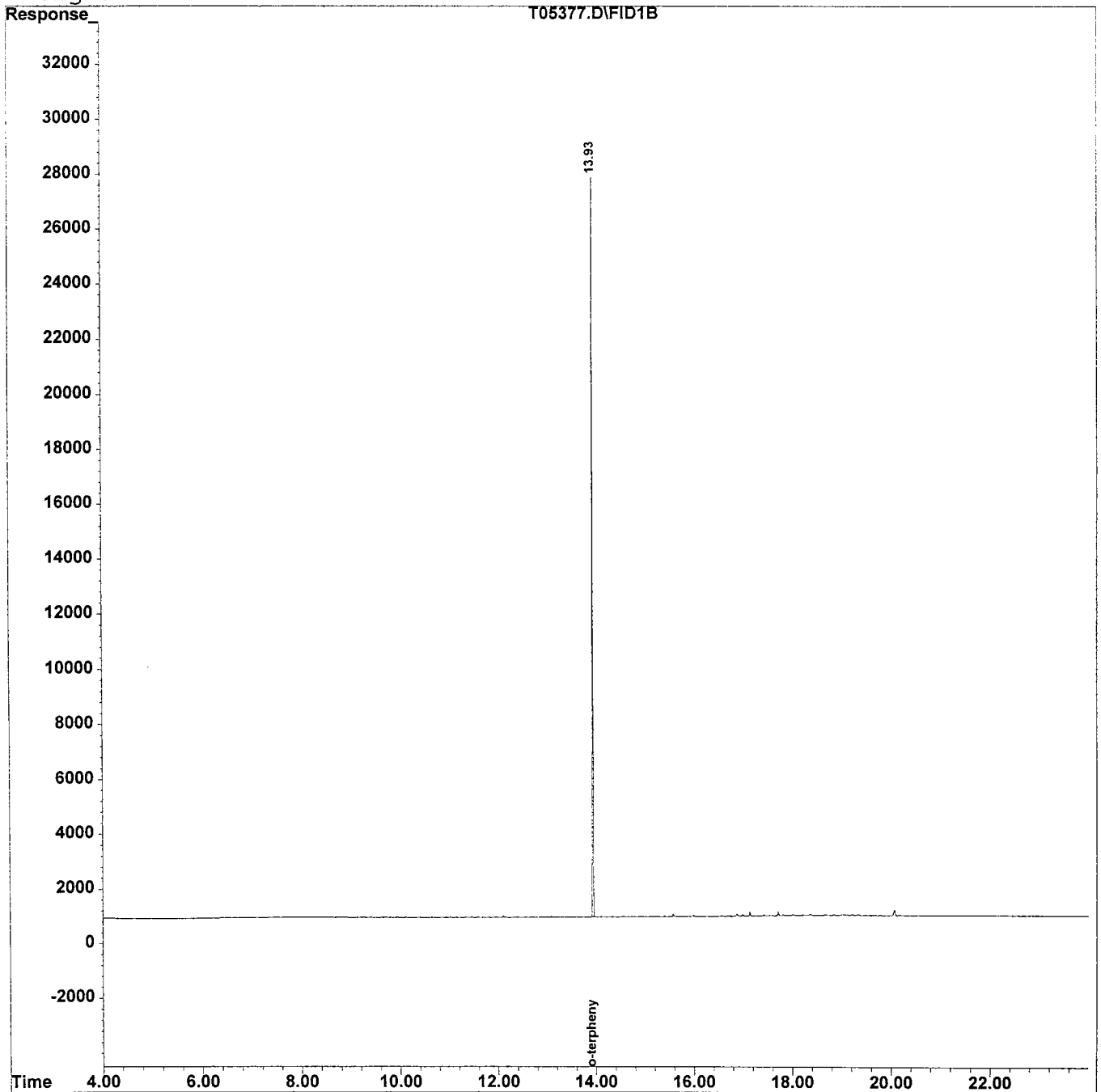
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05377.D
Acq On : 14 May 98 7:40 am
Sample : 3542.01
Misc :
IntFile : TPHCINT.E
Quant Time: May 14 10:38 1998

Vial: 80
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 13:33:42 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



15

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05305.D Vial: 8
 Acq On : 11 May 98 9:13 pm Operator: DEINHARDT
 Sample : 3542.02 Inst : FID/TCD
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: May 14 10:37 1998 Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 09:35:51 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980509\T05255.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
----------	------	----------	------------

System Monitoring Compounds

21) sC o-terphenyl	13.94	269821	12.645 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 126.45%#

Target Compounds

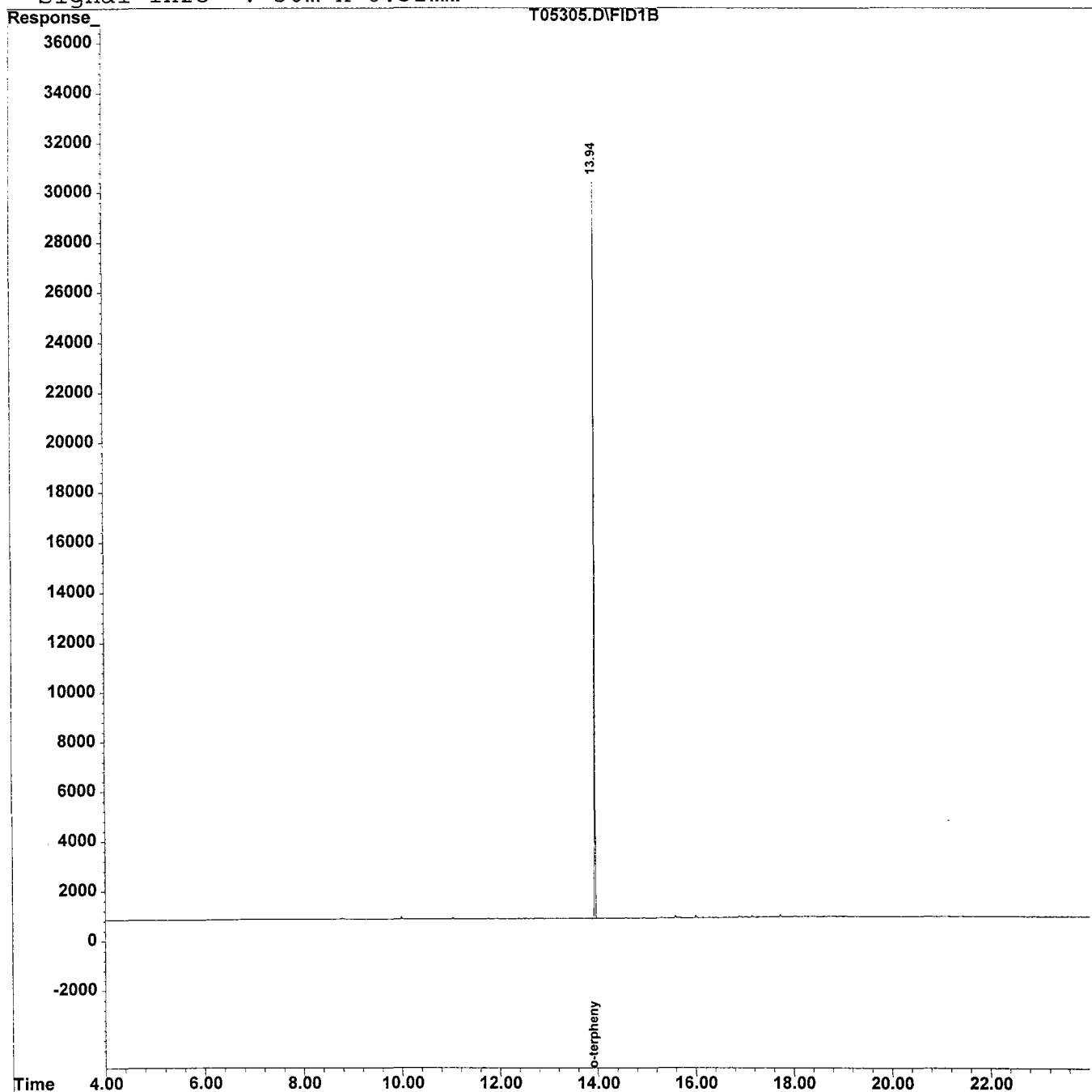
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05305.D
Acq On : 11 May 98 9:13 pm
Sample : 3542.02
Misc :
IntFile : TPHCINT.E
Quant Time: May 14 10:37 1998

Vial: 8
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 09:35:51 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05378.D
 Acq On : 14 May 98 8:27 am
 Sample : 3542.03
 Misc :
 IntFile : TPHCINT.E
 Quant Time: May 14 10:39 1998

Vial: 81
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980511\T05295.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.94	232629	9.491 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 94.91%#

Target Compounds

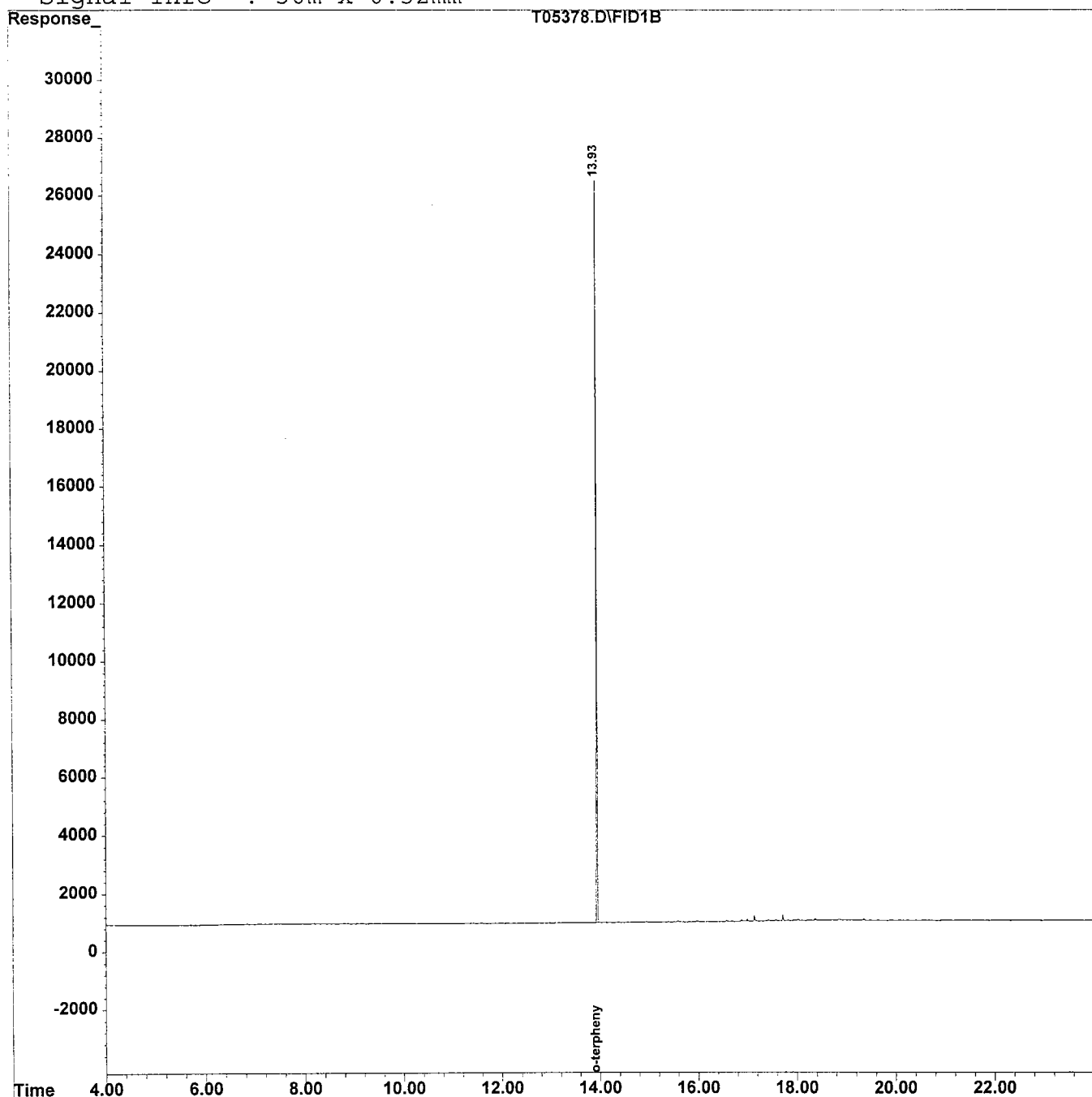
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05378.D
Acq On : 14 May 98 8:27 am
Sample : 3542.03
Misc :
IntFile : TPHCINT.E
Quant Time: May 14 10:39 1998

Vial: 81
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 13:33:42 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05308.D Vial: 11
 Acq On : 11 May 98 11:41 pm Operator: DEINHARDT
 Sample : 3542.04 Inst : FID/TCD
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: May 12 15:54 1998 Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 09:35:51 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980509\T05255.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
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System Monitoring Compounds			
21) sC o-terphenyl	13.94	274660	12.871 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 128.71%#

Target Compounds

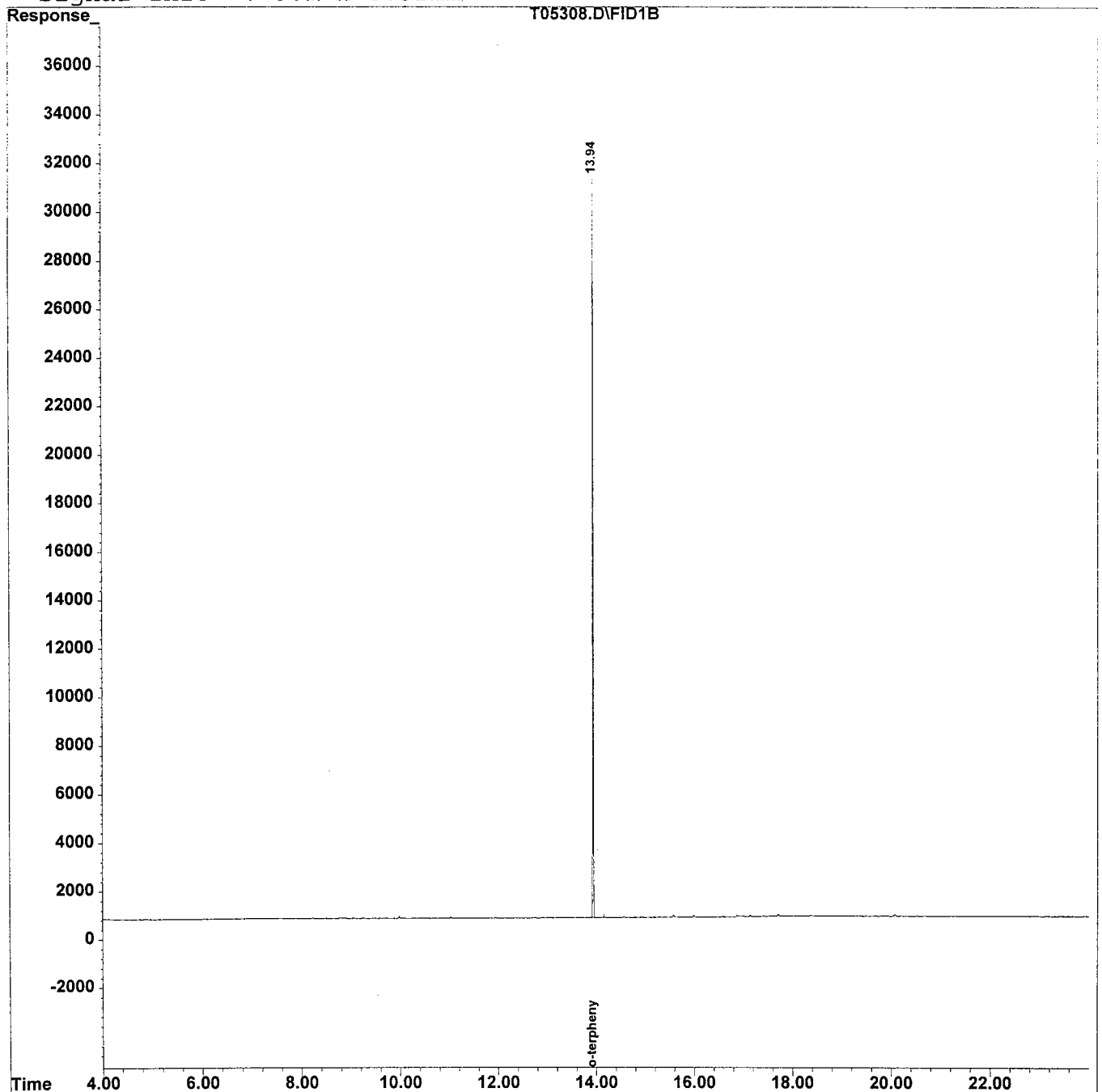
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05308.D
Acq On : 11 May 98 11:41 pm
Sample : 3542.04
Misc :
IntFile : TPHCINT.E
Quant Time: May 12 15:54 1998 Quant Results File: TPH35.RES

Vial: 11
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 09:35:51 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05379.D Vial: 82
 Acq On : 14 May 98 9:17 am Operator: DEINHARDT
 Sample : 3542.05 Inst : FID/TCD
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: May 14 10:39 1998 Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980511\T05295.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
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System Monitoring Compounds			
21) sC o-terphenyl	13.94	260486	10.627 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 106.27%#

Target Compounds

Quantitation Report

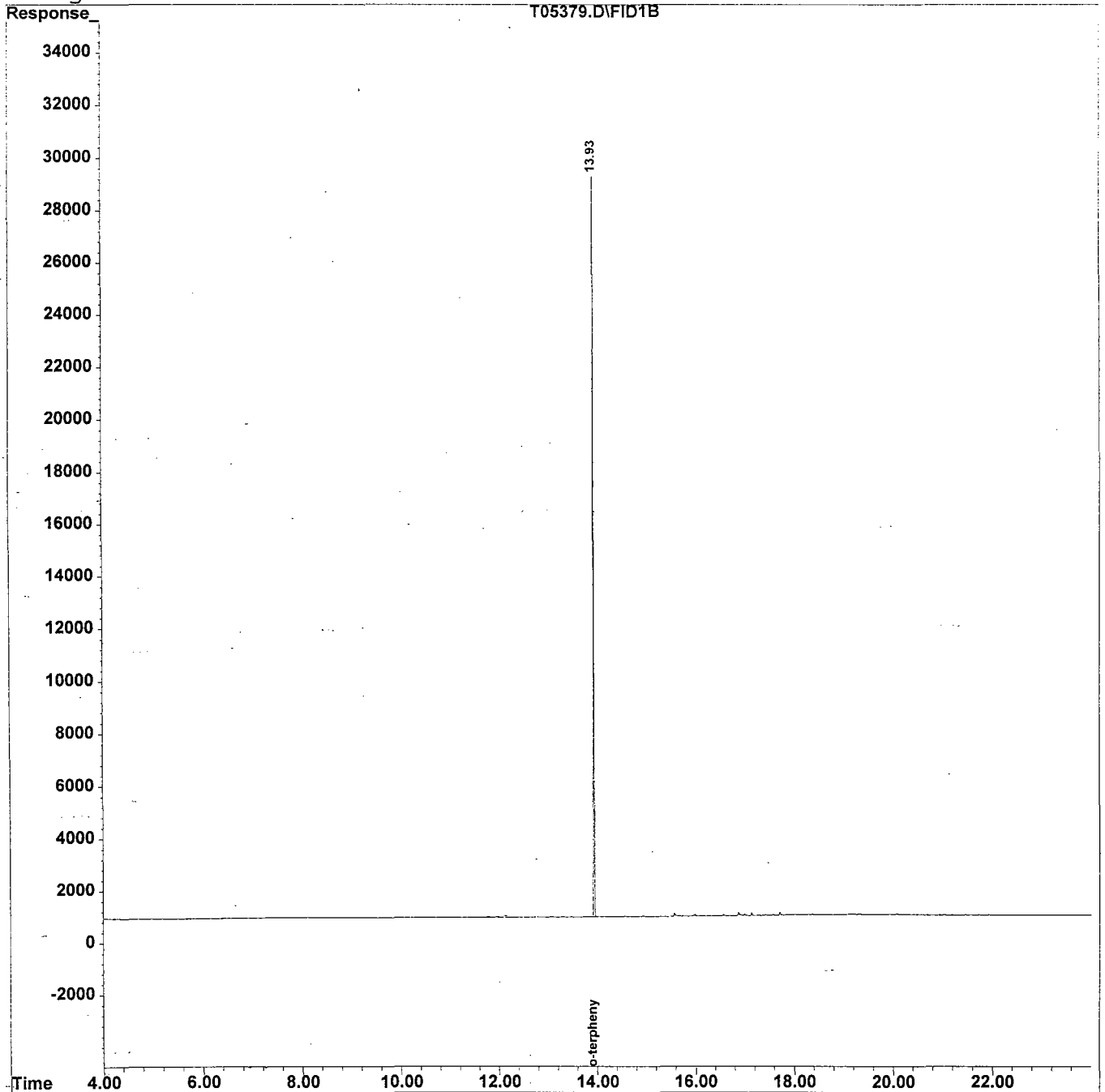
Data File : C:\HPCHEM\1\DATA\980511\T05379.D
Acq On : 14 May 98 9:17 am
Sample : 3542.05
Misc :
IntFile : TPHCINT.E
Quant Time: May 14 10:39 1998

Vial: 82
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 13:33:42 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05380.D
 Acq On : 14 May 98 10:09 am
 Sample : 3542.06
 Misc :
 IntFile : TPHCINT.E
 Quant Time: May 14 10:39 1998

Vial: 83
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Mon May 11 13:33:42 1998
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\980511\T05295.D
 DataAcq Meth : TPH35.M

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

Compound	R.T.	Response	Conc Units
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System Monitoring Compounds

21) sC o-terphenyl	13.94	241847	9.867 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	98.67%#

Target Compounds

Quantitation Report

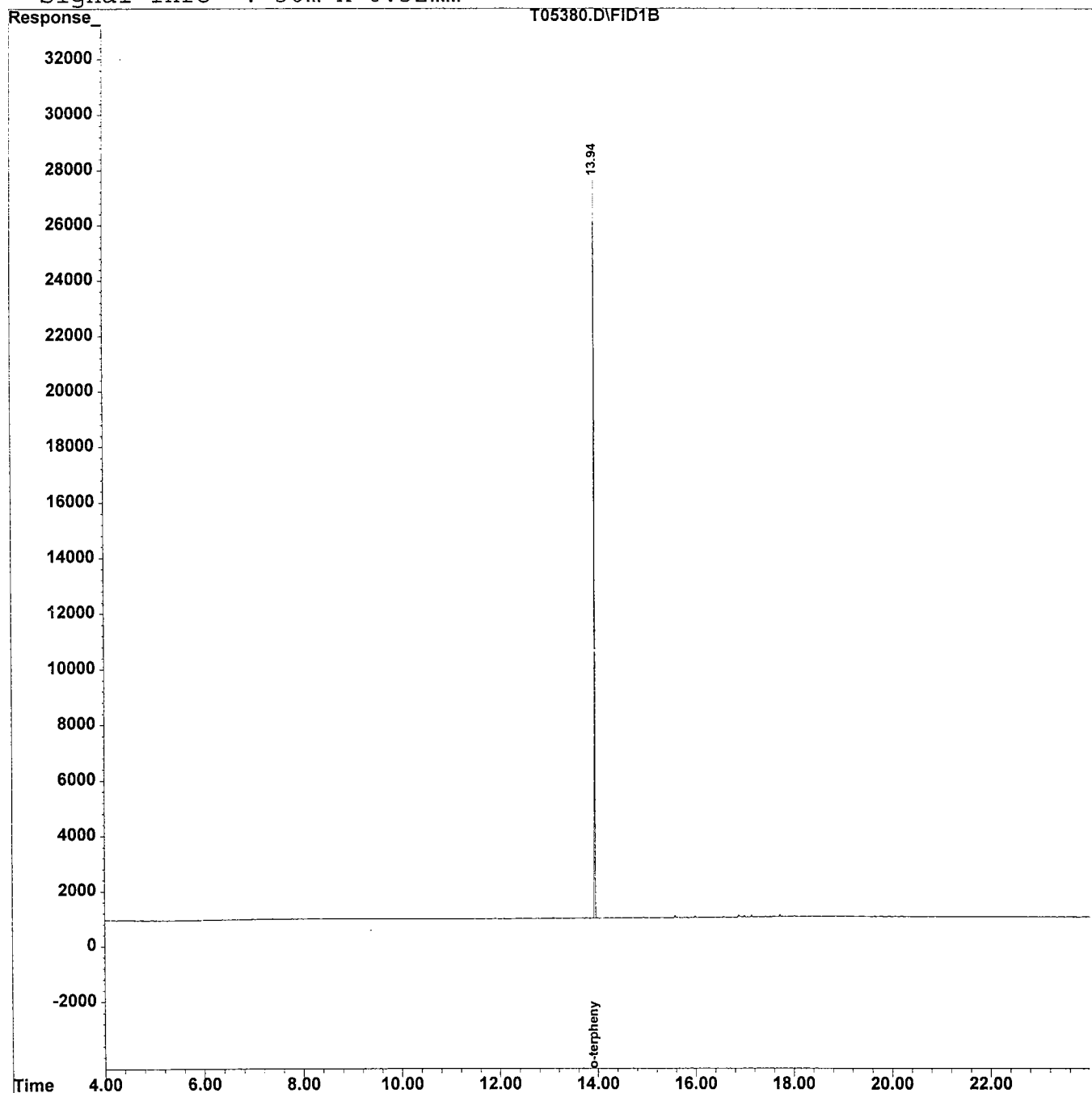
Data File : C:\HPCHEM\1\DATA\980511\T05380.D
Acq On : 14 May 98 10:09 am
Sample : 3542.06
Misc :
IntFile : TPHCINT.E
Quant Time: May 14 10:39 1998

Vial: 83
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Results File: TPH35.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Mon May 11 13:33:42 1998
Response via : Single Level Calibration
DataAcq Meth : TPH35.M

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



LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

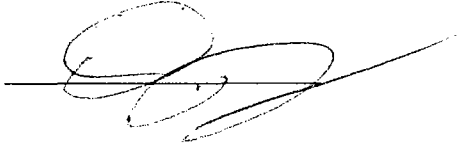
The following Laboratory Deliverables checklist and Non-Conformance Summary shall be included in the data submission. All deviations from the accepted methodology and procedures, of performance values outside acceptable ranges shall be summarized in the Non-Conformance Summary. The Technical Requirements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

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

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

Laboratory Manager or Environmental Consultant's Signature

Date 5/1/91



Laboratory Certification #13461

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