United States Army
Fort Monmouth, New Jersey

COPY

Underground Storage Tank Closure and Site Investigation Report

Building 400
Main Post-East Area

NJDEP UST Registration No. 0090010-70

OCTOBER 1998

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

BUILDING 400

MAIN POST-EAST AREA
NJDEP UST REGISTRATION NO. 0090010-70

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
501 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

PROJECT NO. 2491-308

400.DOC

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EXECUTIVE SUMMARY

UST Closure

On May 7, 1998, a steel 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-East area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0090010-70 (Fort Monmouth ID No. 400), was located northeast of Building 400. UST No. 0090010-70 was a 275-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. Groundwater was encountered at a depth of 5.5 feet bgs. No evidence of potentially contaminated soil or groundwater was observed surrounding the tank. 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. 0090010-70 at Building 400.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0090010-70, was closed at Building 400 at the Main Post-East area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on May 7, 1998. Refer to site location map on Figure 1. This report presents the results of the Department of Public Works= (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a steel 275-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0090010-70 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. 0090010-70 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. 0090010-70 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 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 400 is located in the Main Post-East area of the Fort Monmouth Army Base. UST No. 0090010-70 was located northeast of Building 400 and appurtenant copper piping ran approximately five (5) feet south from the excavation to the emergency generator. The vent line ran approximately eleven (11) feet south from the excavation to Building 400. 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 400. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

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

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

Local Geology

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

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

Hydrogeology

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

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

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

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

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 400 located approximately 100 feet southwest of Parkers Creek, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 400 is anticipated to be to the northeast.

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 encountered at a depth of 5.5 feet bgs. 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 Red Bank Recycling Auto Wreckers, 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 encountered at a depth of 5.5 feet bgs and no sheen was observed.

2.3 SOIL SAMPLING

On May 7, 1998, following the removal of the UST, post-excavation soil samples PP, V, S, E, E2, N, W, and SP were collected from a total of seven (7) locations of the UST excavation. Sidewall samples S, E, E2, N, and W were collected at a depth of 5.0 feet bgs. Sample V was collected along the vent line at a depth of 1.0 feet bgs. Piping sample PP was collected at a depth of 1.0 feet bgs and sample SP was taken from the stockpile. 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 7, 1998, from a total of seven (7) 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 7, 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 400 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. 0090010-70 at Building 400.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 400, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
PP	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
V	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
S	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E2	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
N	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
W	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
SP	5/7/98	5/9/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:
* TPHC Total Petroleum Hydrocarbons

TABLE 2

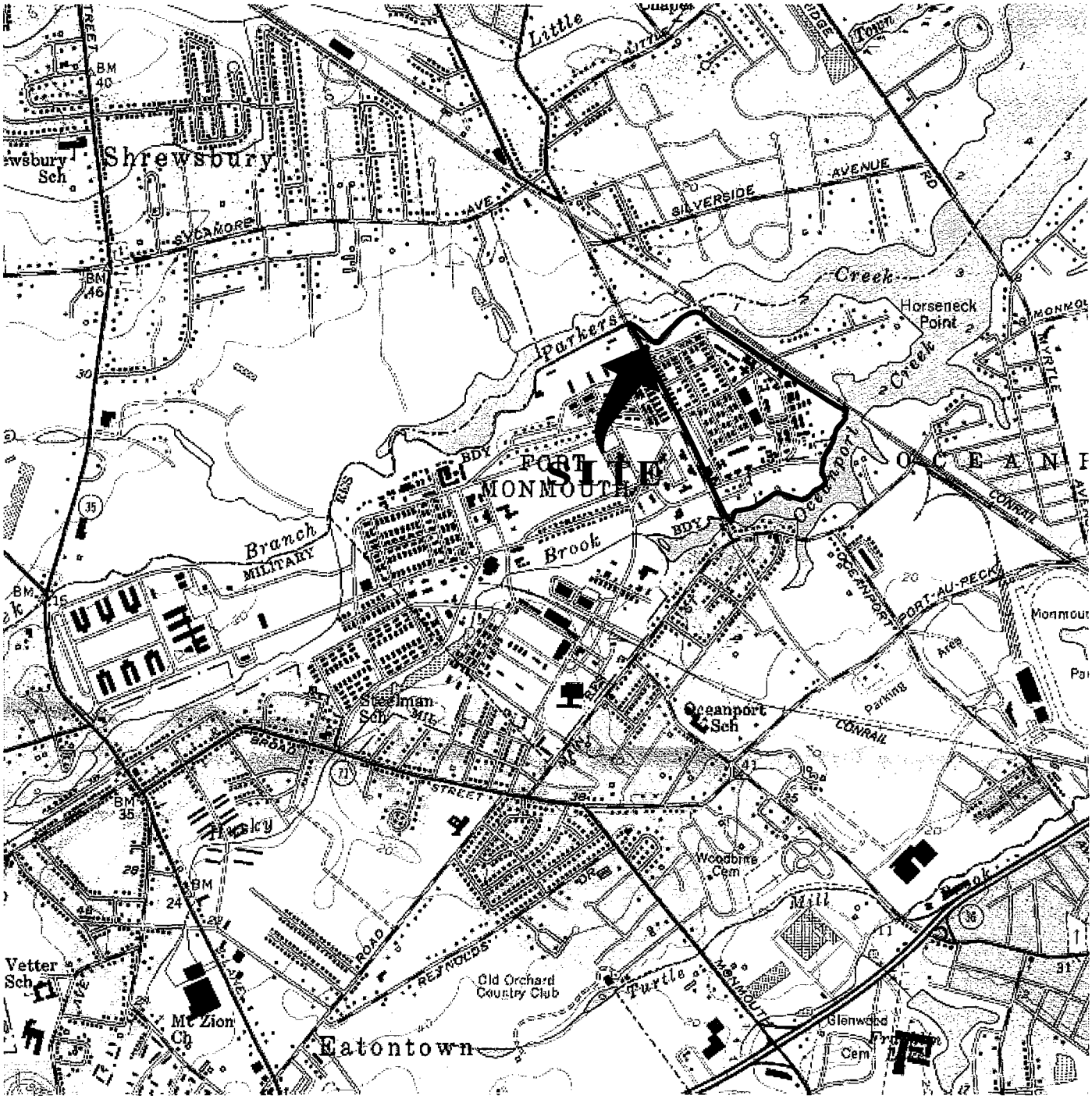
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 400, MAIN POST-EAST AREA
FORT MONMOUTH, NEW JERSEY

Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
PP/1.0=	3554.01	5/7/98	5/9/98	Total Solid	--	--	81.02	--	--
				TPHC	193	yes	ND	10,000	No
V/1.0=	3554.02	5/7/98	5/9/98	Total Solid	--	--	80.49	--	--
				TPHC	191	yes	ND	10,000	No
S/5.0=	3554.03	5/7/98	5/9/98	Total Solid	--	--	80.86	--	--
				TPHC	193	yes	ND	10,000	No
E/5.0=	3554.04	5/7/98	5/9/98	Total Solid	--	--	83.71	--	--
				TPHC	181	yes	ND	10,000	No
E2/5.0=	3554.05	5/7/98	5/9/98	Total Solid	--	--	84.80	--	--
				TPHC	180	yes	ND	10,000	No
N/5.0=	3554.06	5/7/98	5/9/98	Total Solid	--	--	76.49	--	--
				TPHC	202	yes	ND	10,000	No
W/5.0=	3554.07	5/7/98	5/9/98	Total Solid	--	--	82.99	--	--
				TPHC	179	yes	ND	10,000	No
SP=	3554.08	5/7/98	5/9/98	Total Solid	--	--	82.09	--	--
				TPHC	181	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



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

SITE LOCATION MAP
Building 400
Main Post-East
Fort Monmouth Army Base
Monmouth County, NJ

SMC Environmental Services Group

Engineers, Managers, Scientists & Planners

Valley Forge, PA.

SCALE: 1"= 2000'	DATE: MAY 1998

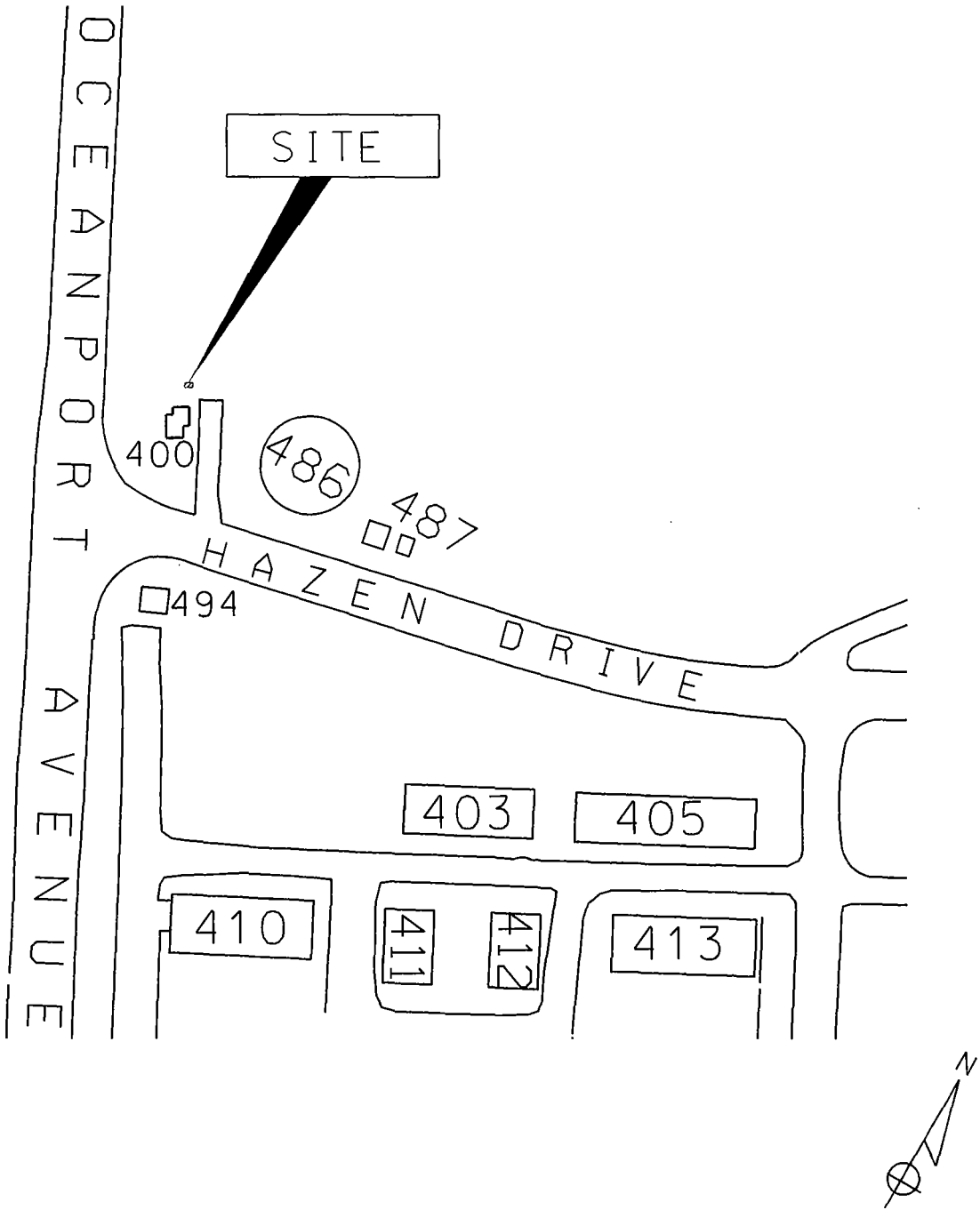


FIGURE 2
SITE MAP
BUILDING 400
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=100'

DATE: May 1998

400 2429 FIG2

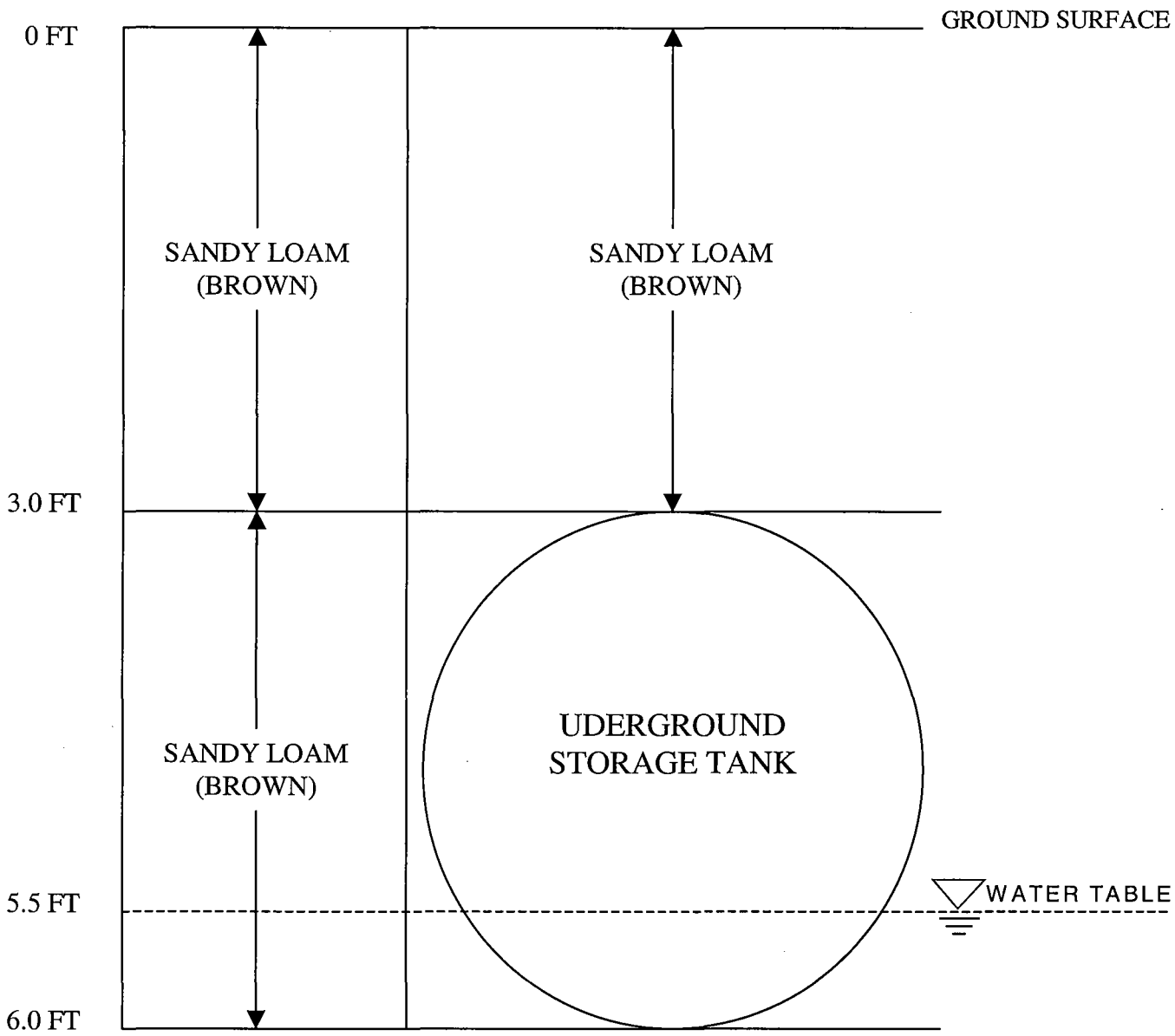
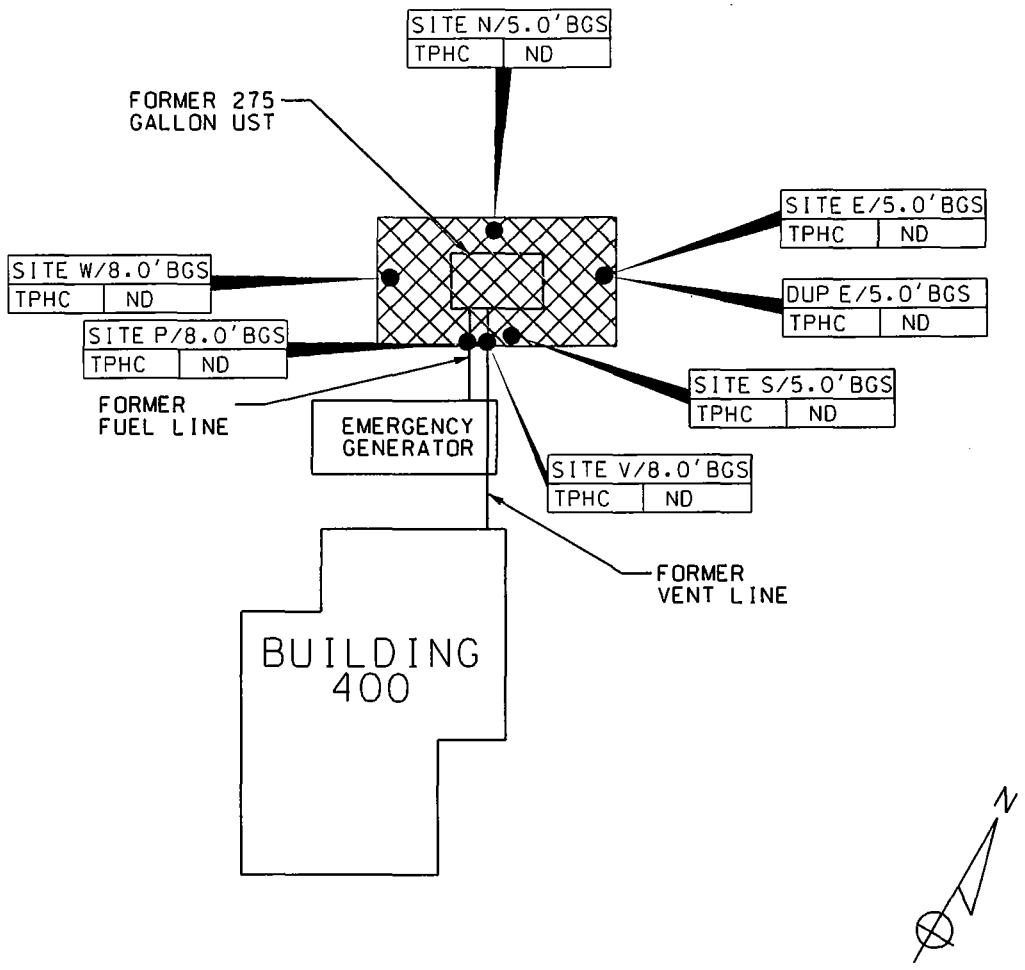


FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 400
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: NTS | DATE: MAY 1998



LEGEND

- SOIL SAMPLE LOCATION (MAY 7, 1998)
- LIMIT OF EXCAVATION (MAY 7, 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 400
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10' | DATE: MAY 1998

400 2429 FIG4

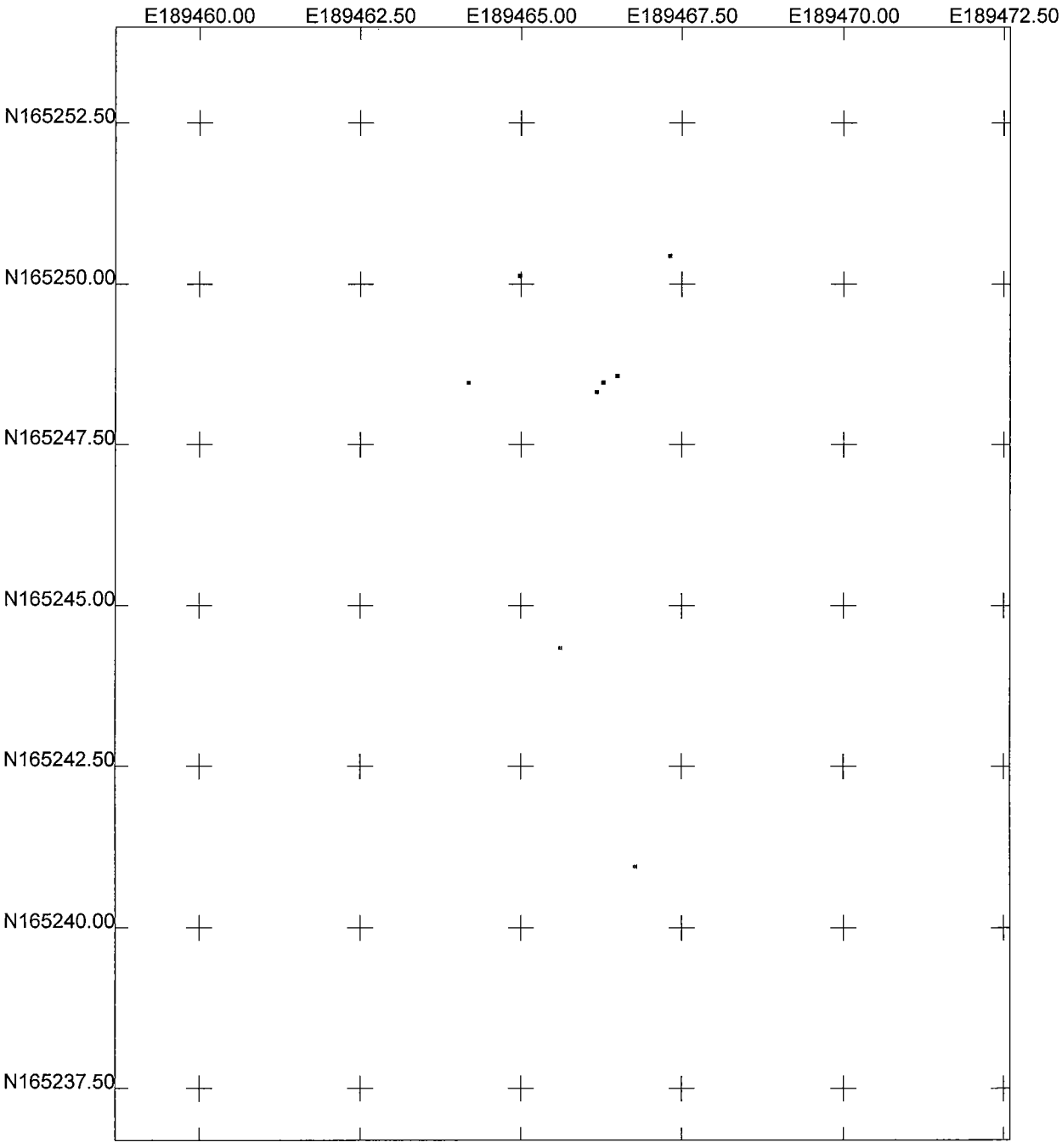


Figure 4 GPS Sample Location Map

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

N

Scale 1:100
0 3.000
Meters

r020315a400.cor
2/10/1999
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

Location/Desc.	Y Coord. (Northing)	X Coord. (Easting)
400 V	165248.482	189466.267
400 S	165248.58	189466.484
400 P	165248.333	189466.165
400 N	165250.142	189464.967
400 W	165248.476	189464.169
400 E	165250.451	189467.302

Reference Points

Location/Desc.	Y Coord. (Northing)	X Coord. (Easting)
400 CORN	165244.359	189465.603
400 CORN	165240.962	189466.762

APPENDIX A

NJDEP-STANDARD REPORTING FORM

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF APPLICABILITY AND COMPLIANCE
Registration and Billing Unit
CN 028, Trenton, N.J. 08625-0028
1-609-984-3156

FOR STATE USE ONLY
Check In ☐ Yes ☐ No
STATUS Active ☐ Inactive ☐ COMCODE ☐☐☐☐

UNDERGROUND STORAGE TANK FACILITY QUESTIONNAIRE

FACILITY UST # 90010 (Tank #70) Building 400

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

☐ Facility Name and/or Address Change
☐ Owner Name and/or Address Change
☐ Facility Operator and/or Address Change
☐ Owner Contact Person Change
☐ Type of Product(s) Stored
☐ Spills, Leaks, Releases
☐ Tank(s) and/or Piping Changes
☒ Closure (Complete Question #13)
☐ Financial Responsibility Change
☐ Substantial Modification(s)
☐ Sale or Transfer (Complete Questions 4,5,6 & 13D)
☐ Other *(please specify)*

SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name: Main Point Point Monmouth

2. Facility Location
NUMBER AND STREET
CITY OR MUNICIPALITY
COUNTY | STATE: NJ | 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; B ☐ Commercial/Industrial; ☐ County/Municipal; ☐ Federal; E ☐ Charitable / Pt; F ☐ Residence; School; G ☐ Other; 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.

	TANK NO.	TANK NO.	TANK NO.	TANK NO.	TANK NO.
1. Tank Identification Number					
2. CAS Number (hazardous substances only)					
3. Date Tank Installed (Month/Day/Year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
4. Tank Size (gallons)					
5. Tank Contents (Mark one "X" for each tank)					
A. Leaded gasoline					
B. Unleaded gasoline					
C. Alcohol enriched gasoline					
D. Light diesel fuel (No. 1-D)					
E. Medium diesel fuel (No. 2-D)					
F. Waste Oil					
G. Kerosene (No. 1)					
H. Home heating oil (No. 2)					
J. Heating oil (No. 4)					
K. Heavy heating oil (No. 6)					
L. Aviation fuel					
M. Motor oil					
N. Lubricating oil					
P. Sewage					
Q. Sewage sludge					
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					
B. Cathodically protected steel					
C. Fiberglass-coated steel					
D. Fiberglass-reinforced plastic					
E. Internally lined					
F. Other (please specify)					
7. Tank & Piping Structure (Mark one each for both tank & piping)	Tank Piping	Tank Piping	Tank Piping	Tank Piping	Tank Piping
A. Single wall					
B. Double wall					
C. Other (please specify)					
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					
B. Manual Tank Gauging					
C. Inventory Control					
D. Interstitial					
E. Precision Test					
F. Ground water observation wells					
G. Vapor observation wells					
H. In-tank (automatic) monitoring gauge					
J. Periodic Tank Test					

Tank Identification Number	TANK NO.	TANK NO.	TANK NO.	TANK NO.	TANK NO.
8. Type of Monitoring/Detection System	Tank Piping	Tank Piping	Tank Piping	Tank Piping	Tank Piping
K. None					
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. 0070	TANK NO.	TANK NO.	TANK NO.	TANK NO.
	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
A. Date abandoned in place	05071998				
B. Date taken temporarily out of service					
C. Date removed	05071998				
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 _____

____/____/____ Effective Date ____/____/____ Expiration Date _____ Policy Number $_____ Amount

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.

1. Does this facility have cathodic protection systems for all steel tanks and piping? ☐ YES ☐ NO
   If "Yes", are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO
2. 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
3. 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
4. Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5? ☐ YES ☐ NO
5. Does the facility have spill and over fill protection systems pursuant to N.J.A.C. 7:14B-4? ☐ YES ☐ NO
6. 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 ch payble to: "Treasurer, State of New Jersey". L the enclosed return envelope will expedite processing. Reg...ration and Billing Schedule can be found in N.J.A.C. 7:14B. 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/overfill protection.
September 4, 1990	—	All new State-only regulated tank systems must have cathodic protection and spill/overfill 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/overfill 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)

James Ott
(Signature)

Director, DPW
(Title)

5/11/98
(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)

(Signature)

(Title)

(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)

David H. Daniels 5.7.98
(Signature)

(Date)

SMC Environmental Services
(Name of Firm, if applicable)

10279
(N.J. Certification Number)

UST-021 (9/94)

APPENDIX B

SITE ASSESSMENT SUMMARY

(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

_X_ NA – Federal Agreement

D. (Complete all that apply)

- Assigned Case Manager : Ian Curtis, Federal Case Manager
- UST Registration Number : 90010-70 (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. A copy of the resolution, certified as a true copy by the secretary of the corporation, shall be submitted along with the certification; or
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, federal or other public agency by either a principal executive officer or ranking elected Official.

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

Name (Print or Type): James Ott Title: Directorate of Public Works

Signature: James Ott

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

APPENDIX C

WASTE MANIFEST

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

STANDARD COLLECTION ORDER FORM

199329

SALES ORDER #

GENERATOR/LOCATION

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): NJ3210020597
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	Ocums	gallons
40500	USED OIL REMOVAL				1221	1	20
40300	ANTI-FREEZE REMOVAL						
40600	USED OIL FILTER REMOVAL				1700	1	25
40501	OILY-WATER DISPOSAL	TDJ2	220	gallons			
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		1 7.40am	10.30AM			
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

Total → 9 → 220 gallons

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 TDJ2.
In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

DINESH M DESAI
Print Name Title
Signature Date
GENERATOR/CUSTOMER

SMALL QUANTITY 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.

GENERATOR'S SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT
TEST RESULTS
2,100C
TA PPM

TOTAL

PAYMENT RECEIVED SECTION

CASH ☐	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

Print Name
Signature
LORCO REPRESENTATIVE

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

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 | Manifest Document No. 14023
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 ATTN: SCLEM-PW-EV
4. Generator's Phone (732) 532-6223 Fortmonmouth, NJ 07703 Suma

5. Transporter 1 Company Name: LIONETTI OIL RECOVERY CO INC
6. US EPA ID Number: NJD084044064
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 CC INC DBA LCRCO PETROLEUM SVCS
RUNYON&CHEESEQUAKE RDS
OLD BRIDGE, NJ 08857
10. US EPA ID Number: NJD084044064
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) COMBUSTIBLEL LIQUID UN1270 PGIII	001	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 #7066 ERG#128 DEXSIL TEST KIT RESULTS: ~~4000~~ PPM
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.

GENERATOR

Printed/Typed Name	Signature	Month	Day	Year
DINCER. M. DERAI		06	01	98

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Anibal Vazquez		06	01	98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

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

Printed/Typed Name	Signature	Month	Day

ORIGINAL RETURN TO GENERATOR

APPENDIX D

UST DISPOSAL CERTIFICATE

Reorder From:
The Drawing Board
PO Box 2844 · Hartford, CT 06104-2844
Call Toll Free: 1-800-527-9964

REORDER ITEM# B-LN74

STRAIGHT BILL OF LADING

ORIGINAL - NOT NEGOTIABLE

Shipper No. 008

SMC ENVIRONMENTAL SERVICES GROUP
(Name of Carrier)

Carrier No. _____

Date _____

To (Consignee) Red Bank Recycling	From (Shipper) Fort Monmouth (U.S. Army)
Street 164 Central Avenue	At Building 400
Destination Red Bank, N.J. 07701	City Oceanport, N.J.
Route	Vessel No.

No. Shipping Units	Kind of Packing, Description of Articles, Special Marks and Exceptions	Weight (Subject to Correction)	RATE	CHARGES
1	For Scrap Only			
	1-275 Gallon U.S.T Shell			
	Clean "			
	TANK # 90010-70			
	Building # 400			

REMIT C.O.D. TO: ADDRESS

COD Amt: $

C.O.D. FEE PREPAID ☐ $ COLLECT ☐

TOTAL CHARGES $

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 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.

_____ Signature

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

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), marked, consigned, and destined 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 Fort Monmouth (U.S. Army)	CARRIER SMC ENVIRONMENTAL SERVICES GROUP
PER	PER Mark C. Lucas
	DATE 05/14/98

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

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. 400
Tetra Tech - BRAC

Project # 3554
Date Rec. 05/07/98
Date Compl. 05/09/98
Released by:

Daniel K. Wright
Laboratory Director

Method Summary

NJDEP Method OQA-QAM-025-10/97

Gas Chromatographic Determination of Total Petroleum Hydrocarbons in Soil

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

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

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

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

PHC Conformance/Non-conformance Summary Report

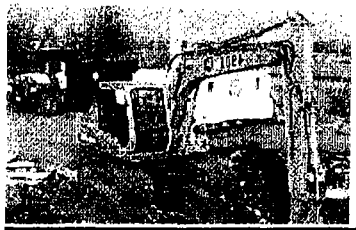
	No	Yes
1. Method Detection Limits provided.	__	✓
2. Method Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank.	✓	__
3. Matrix Spike Results Summary Meet Criteria. (If not met, list the sample and corresponding recovery which falls outside the acceptable range).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

Additional Comments: _____

Laboratory Authentication Statement

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

Daniel K. Wright
Laboratory Manager



Fort Monmouth Environmental Testing Laboratory

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

Chain of Custody Record

Customer: Charles Appleby
Phone #: X26224
( )DERA (X)OMA ( )Other:_____

Project No: **98-0779**
Location: Building 400

Samplers Name / Company : Dave Daniels (SMC)

Lab Sample I.D.	Sample Location	Date	Time	Sample Type	# bottles	Analysis Parameters: TPHC	Analysis Parameters: H-Nu Readings (ppm)	Comments: Remarks / Preservation Method
3554.01	400-PP	5.7.98	10:35	soil	1	X	0	Ice
02	400-V		10:40				0	
03	400-S		10:45				0	
04	400-E		10:50				0	
05	400-E2		10:55				0	
06	400-N		11:00				0	
07	400-W		11:05				0	
08	400-SP		11:10				0	

Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):
David H. Daniels	5-7-98 1515	J. Vergara			
Relinquished by (signature):	Date/Time:	Received by (signature):	Relinquished by (signature):	Date/Time:	Received by (signature):

Report Type: (_)Full, (X)Reduced, (_)Standard, (_)Screen / non-certified
Turnaround time: (_)Standard 4 wks, (X)Rush 5 Days, (_)ASAP Verbal ____ Hrs.

Remarks: H-Nu calibration → zero gas = 0.0 ppm
Isobutylene 100 ppm = 100 ppm at setting 2.85

print legibly

SMCcoc.XLS4/2/98

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

Client :	U.S. Army	**Lab. ID # :**	3554
	DPW. SELFM-PW-EV	**Date Rec'd:**	07-May-98
	Bldg. 173	**Analysis Start:**	09-May-98
	Ft. Monmouth, NJ 07703	**Analysis Complete:**	09-May-98
Analysis:	OQA-QAM-025	**UST Reg. #:**	
Matrix:	Soil	**Closure #:**	
Analyst:	D.DEINHARDT	**DICAR #:**	
Ext. Meth:	Shake	**Location #:**	Bldg 400

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3554.01	400-PP	**1.00**	15.03	81.02	193	**ND**
3554.02	400-V	**1.00**	15.32	80.49	191	**ND**
3554.03	400-S	**1.00**	15.09	80.86	193	**ND**
3554.04	400-E	**1.00**	15.50	83.71	181	**ND**
3554.05	400-E2	**1.00**	15.39	84.80	180	**ND**
3554.06	400-N	**1.00**	15.19	76.49	202	**ND**
3554.07	400-W	**1.00**	15.86	82.99	179	**ND**
3554.08	400-SP	**1.00**	15.82	82.09	181	**ND**
METHOD BLANK	TBLK 97	**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 : Tue May 12 15:20:37 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

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980511\T05317.D Vial: 9
Acq On : 12 May 98 6:50 am Operator: DEINHARDT
Sample : 50 PPM STD Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E

Method : C:\HPCHEM\1\METHODS\TPH35.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue May 12 15:20:37 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	11.597 E3	-3.8	103	0.00
2	tC	C10	12.559	13.274 E3	-5.7	102	0.00
3	TC	C12	14.232	15.221 E3	-6.9	103	0.00
4	tC	C14	15.360	16.148 E3	-5.1	102	0.00
5	tC	C16	16.177	16.759 E3	-3.6	102	0.00
6	tC	C18	18.795	19.112 E3	-1.7	103	0.00
7	tC	C20	18.045	18.493 E3	-2.5	102	0.00
8	tC	C22	18.026	18.442 E3	-2.3	102	0.00
9	tC	C24	18.446	18.836 E3	-2.1	102	0.00
10	tC	C26	18.583	18.931 E3	-1.9	102	0.00
11	tC	C28	19.056	19.357 E3	-1.6	102	0.00
12	tC	C30	20.125	20.437 E3	-1.6	103	0.00
13	tC	C32	19.769	19.868 E3	-0.5	103	0.00
14	tC	C34	18.311	18.096 E3	1.2	104	0.00
15	tC	C36	13.961	13.246 E3	5.1	102	0.00
16	tC	C38	10.077	8.908 E3	11.6	102	0.00
17	tC	C40	6.958	5.810 E3	16.5	99	0.00
18	tC	c42	4.591	4.180 E3	9.0	102	0.00
19	TC	Pristane	17.333	18.037 E3	-4.1	105	0.00
20	TC	Phytane	18.286	18.732 E3	-2.4	102	0.00
21	sC	o-terphenyl	20.892	21.500 E3	-2.9	102	0.00
22	tC	TPHC - total	22.230	18.740 E3	15.7	101	0.00

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

Surrogate Recovery Report

Lab. ID # : 3554

Location #: BLDG. 400

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3554.01		10.00	10.40	**103.95**
3554.02		10.00	10.58	**105.80**
3554.03		10.00	11.21	**112.11**
3554.04		10.00	10.52	**105.15**
3554.05		10.00	11.27	**112.74**
3554.06		10.00	12.04	**120.35**
3554.07		10.00	10.81	**108.13**
3554.08		10.00	11.06	**110.58**
METHOD BLANK	TBLK 97	10.00	12.28	**122.76**

Surrogate Added : **o-Terphenyl**

5/13/98

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05319.D Vial: 22
Acq On : 12 May 98 8:23 am Operator: DEINHARDT
Sample : 3554.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:06 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\980509\T05255.D
DataAcq Meth : TPH35.M

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

Compound	Spike Amount Added (ppm)	Sample Amount (ppm)	R.T. Matrix Spike Amount (ppm)	Response Percent Recovery	Conc Limits %	Conc Units
System Monitoring Compounds						
21) sC o-terphenyl	1000	13.94	1007.00	254784	75 - 125	10.395 mg/L
Spiked Amount 10.000	MSD	Range 80 - 120	951.50	Recovery	= 103.95%#	
Target Compounds						
				RPD	5.67	20.00

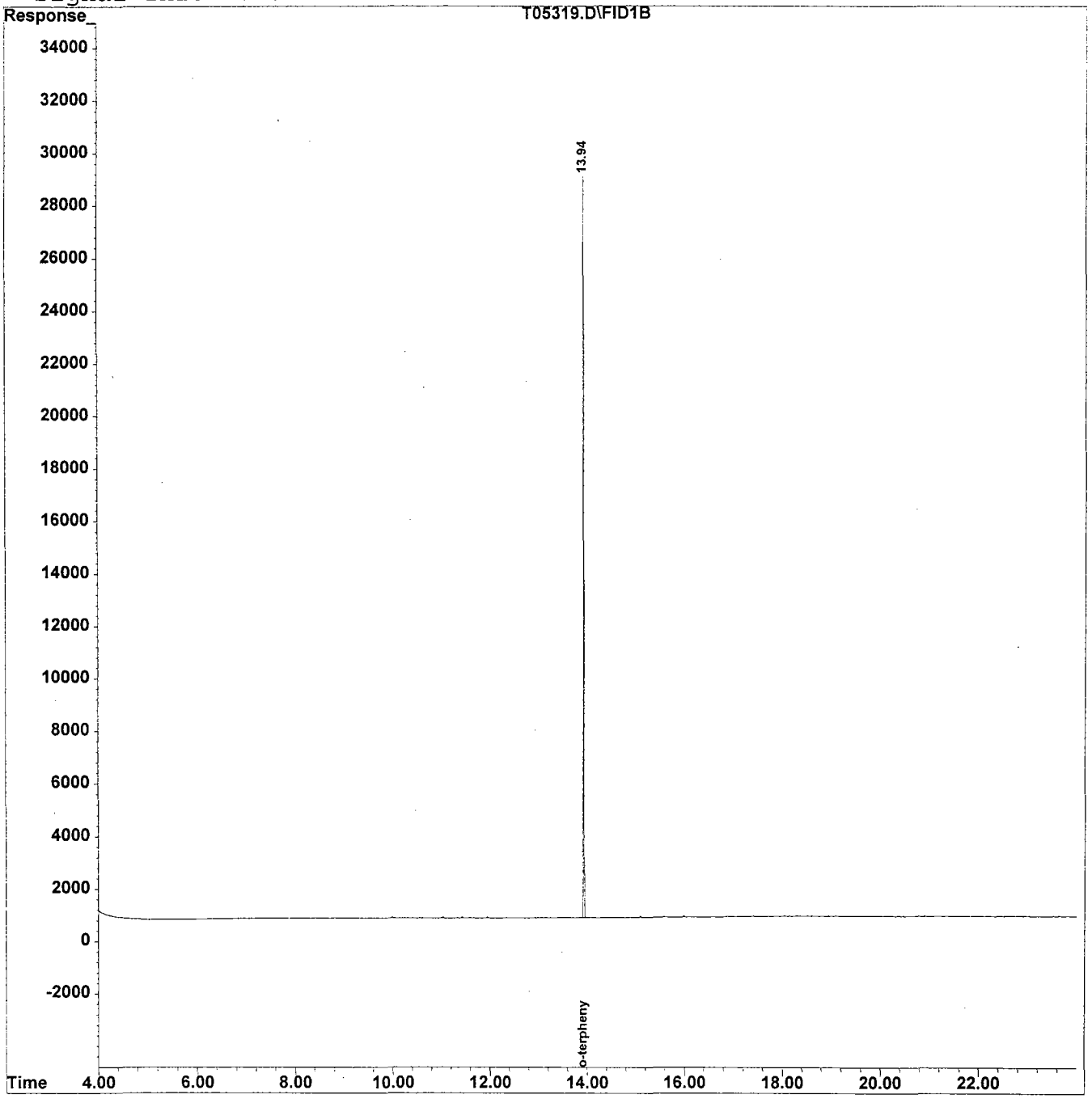
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05319.D Vial: 22
Acq On : 12 May 98 8:23 am Operator: DEINHARDT
Sample : 3554.01 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:06 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 : 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\T05320.D Vial: 23
Acq On : 12 May 98 9:10 am Operator: DEINHARDT
Sample : 3554.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:06 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\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	259332	10.580 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 105.80%#	
Target Compounds			

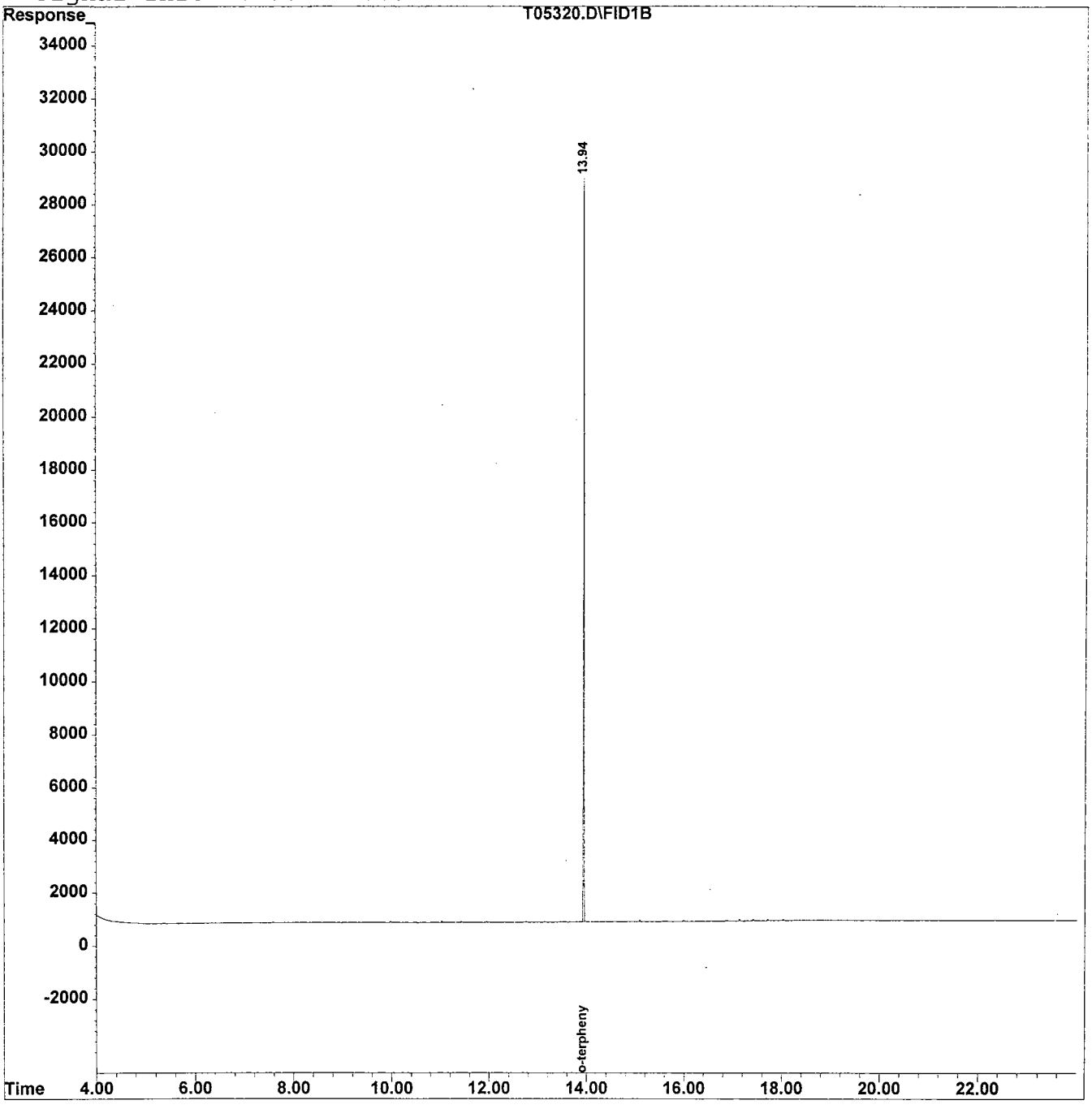
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05320.D Vial: 23
Acq On : 12 May 98 9:10 am Operator: DEINHARDT
Sample : 3554.02 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:06 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 : 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\T05321.D Vial: 24
Acq On : 12 May 98 9:56 am Operator: DEINHARDT
Sample : 3554.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:07 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\980509\T05255.D
DataAcq Meth : TPH35.M

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

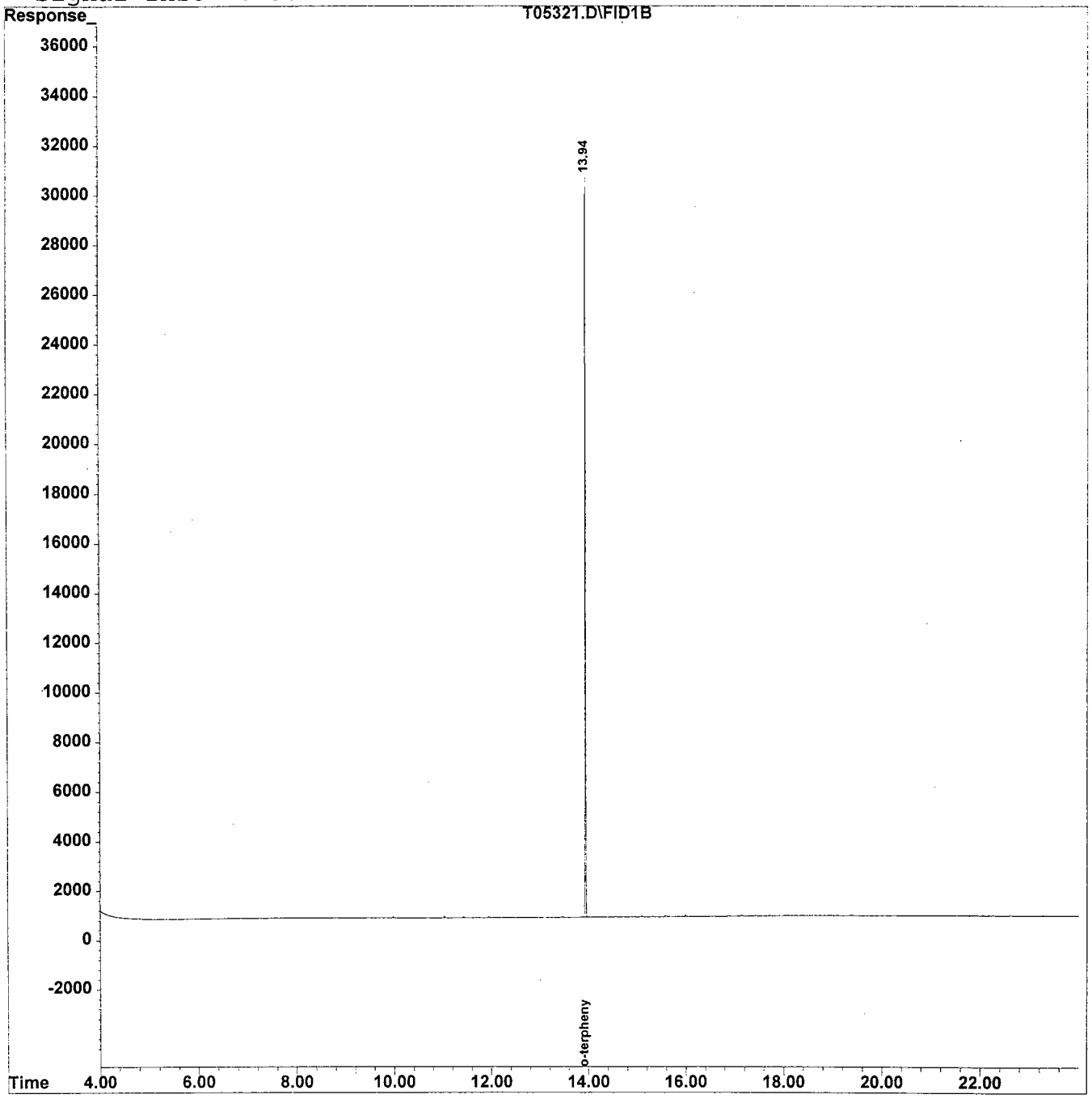
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.94	274783	11.211 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	112.11%#
Target Compounds			

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05321.D Vial: 24
Acq On : 12 May 98 9:56 am Operator: DEINHARDT
Sample : 3554.03 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:07 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 : 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\T05322.D Vial: 25
Acq On : 12 May 98 10:44 am Operator: DEINHARDT
Sample : 3554.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:07 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\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	257741	10.515 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	105.15%#
Target Compounds			

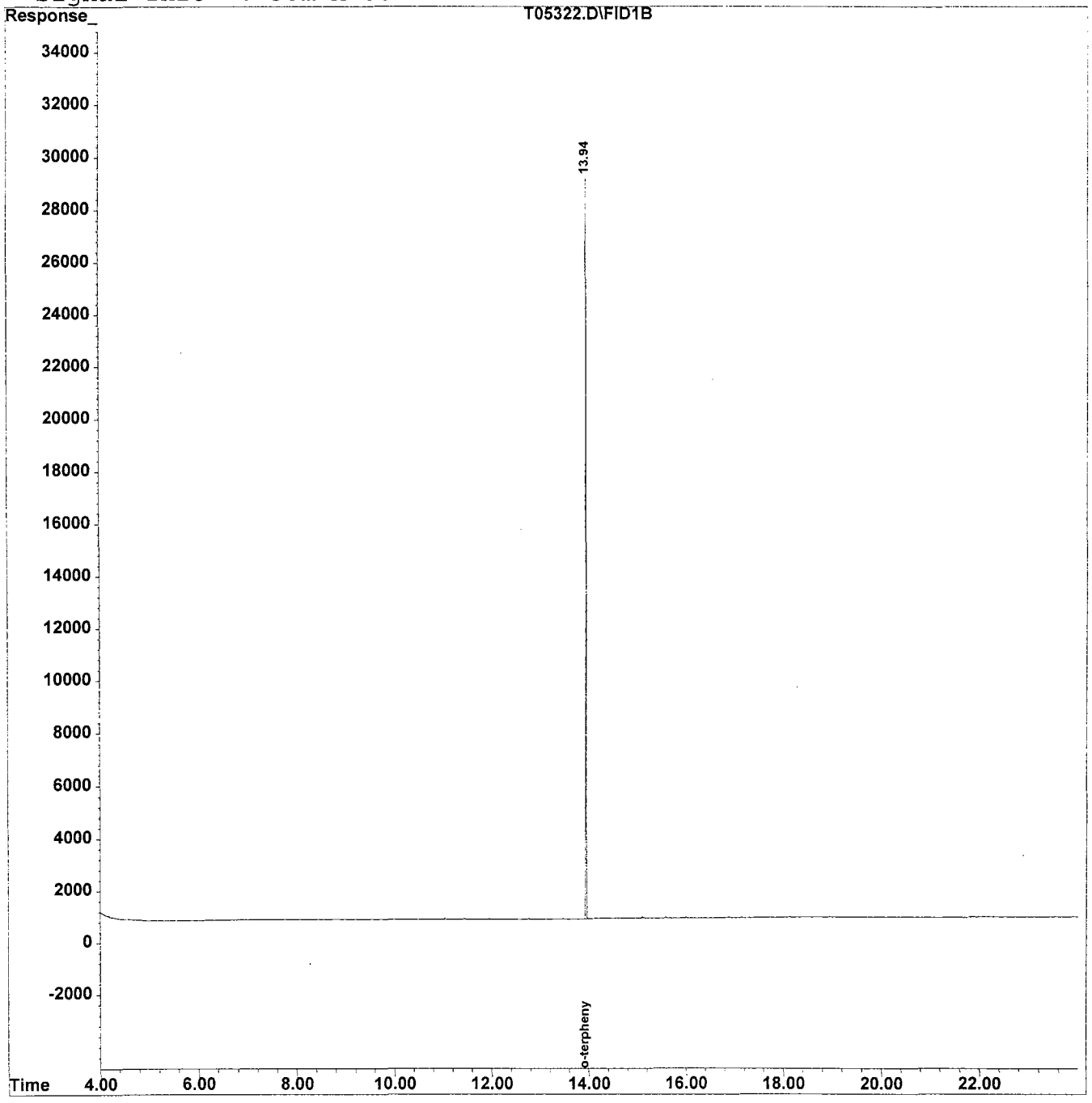
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05322.D Vial: 25
Acq On : 12 May 98 10:44 am Operator: DEINHARDT
Sample : 3554.04 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:07 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 : 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\T05323.D Vial: 26
Acq On : 12 May 98 11:32 am Operator: DEINHARDT
Sample : 3554.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:08 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\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	276340	11.274 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	112.74%#
Target Compounds			

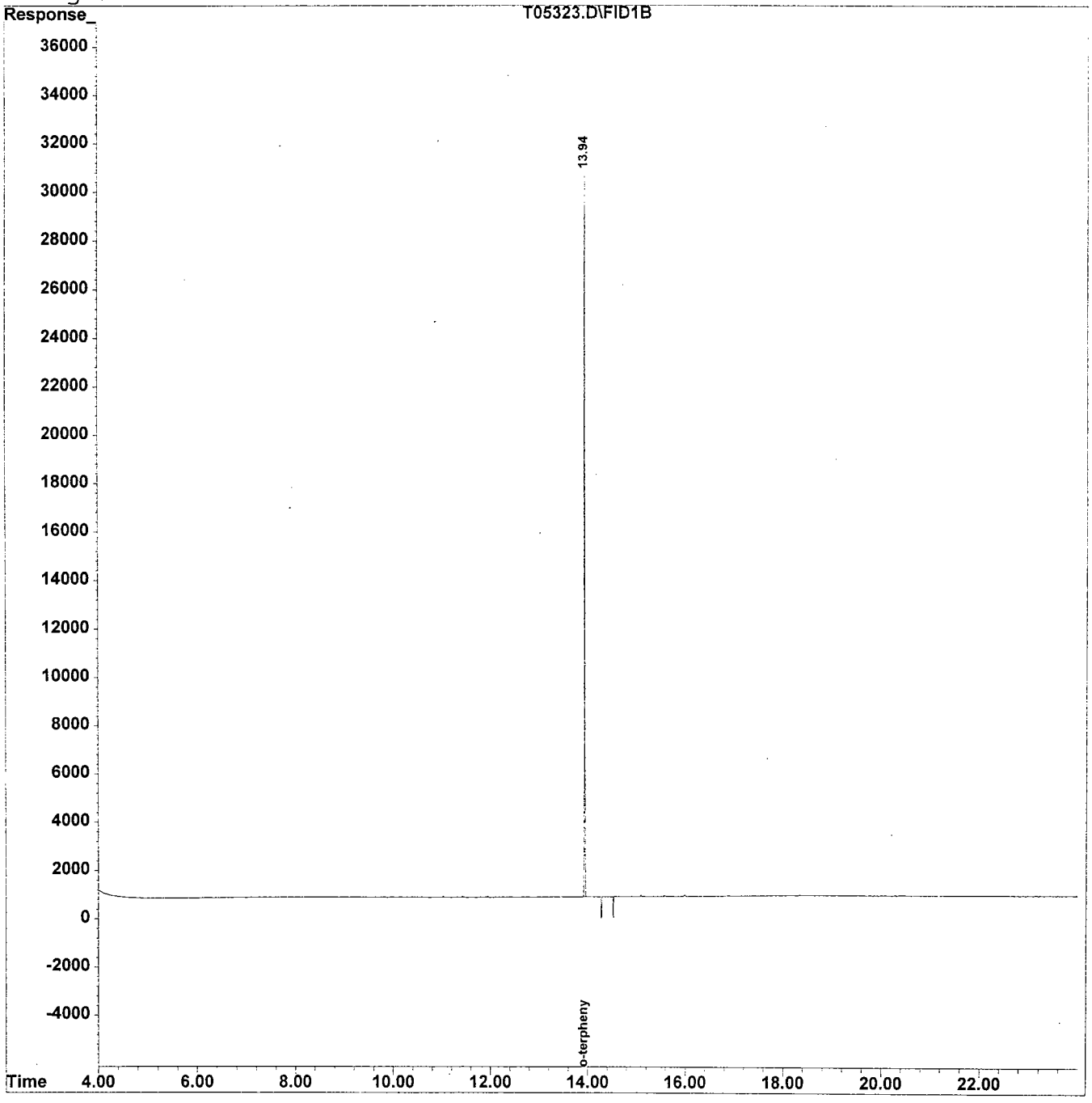
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05323.D Vial: 26
Acq On : 12 May 98 11:32 am Operator: DEINHARDT
Sample : 3554.05 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:08 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 : Single Level Calibration
DataAcq Meth : TPH35.M

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



21

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980511\T05324.D Vial: 27
Acq On : 12 May 98 12:20 pm Operator: DEINHARDT
Sample : 3554.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:08 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\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	294987	12.035 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery = 120.35%#	
Target Compounds			

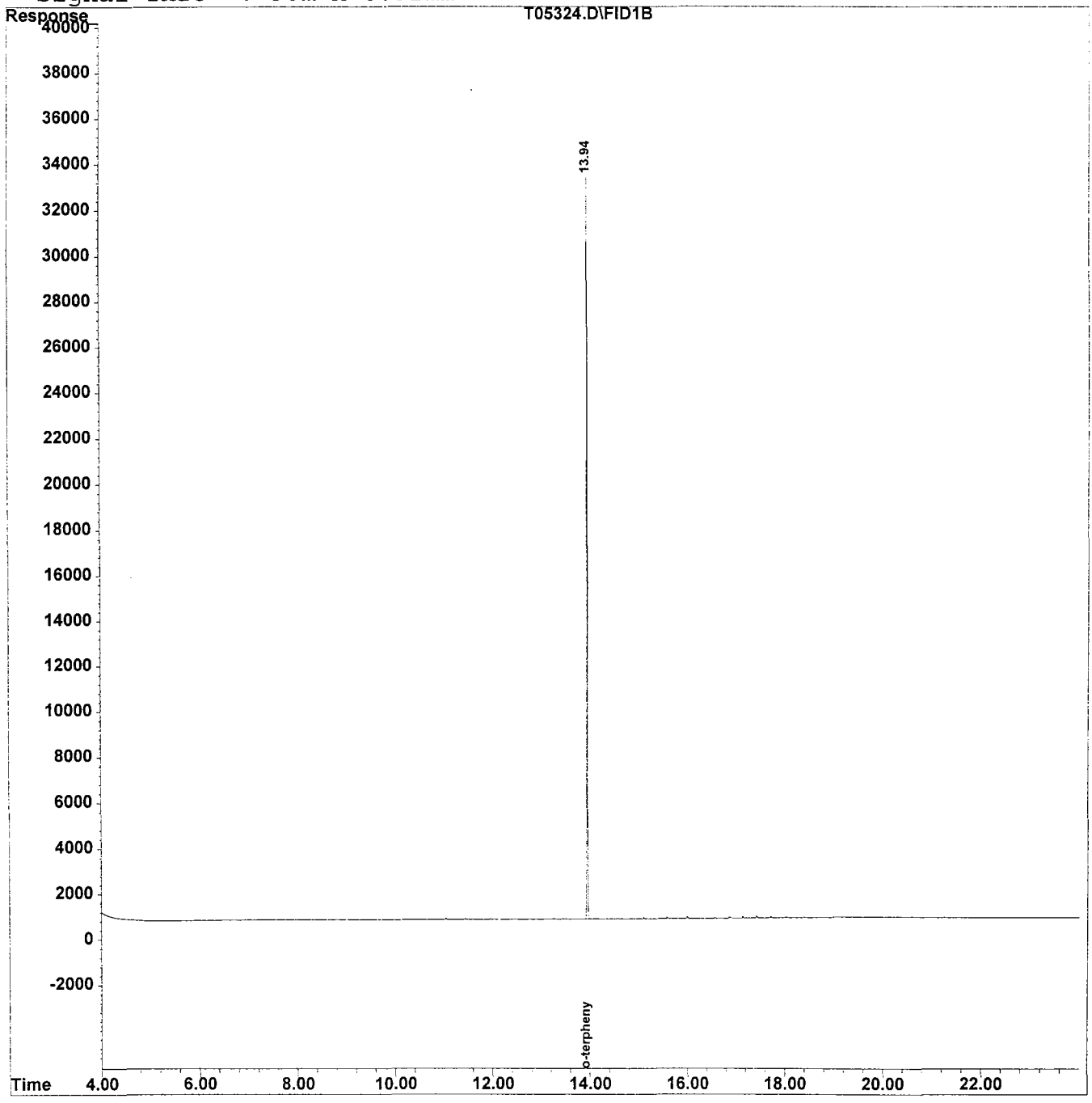
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05324.D Vial: 27
Acq On : 12 May 98 12:20 pm Operator: DEINHARDT
Sample : 3554.06 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:08 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 : 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\T05325.D Vial: 28
Acq On : 12 May 98 1:07 pm Operator: DEINHARDT
Sample : 3554.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:17 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\980428\T05172.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	265046	10.813 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	108.13%#
Target Compounds			

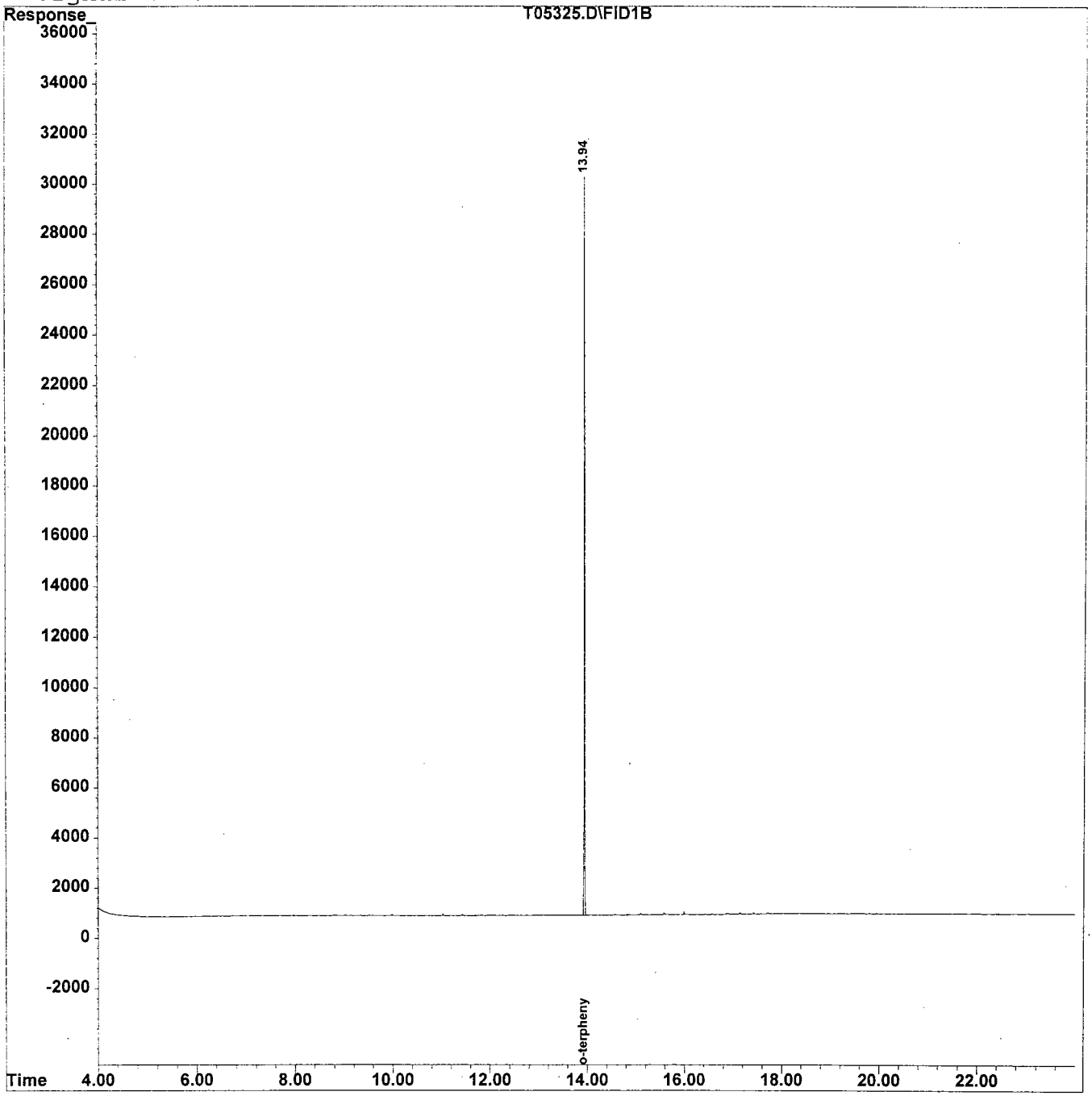
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05325.D Vial: 28
Acq On : 12 May 98 1:07 pm Operator: DEINHARDT
Sample : 3554.07 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:17 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 : 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\T05326.D Vial: 29
Acq On : 12 May 98 1:57 pm Operator: DEINHARDT
Sample : 3554.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:19 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\980428\T05172.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	271039	11.058 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	110.58%#
Target Compounds			

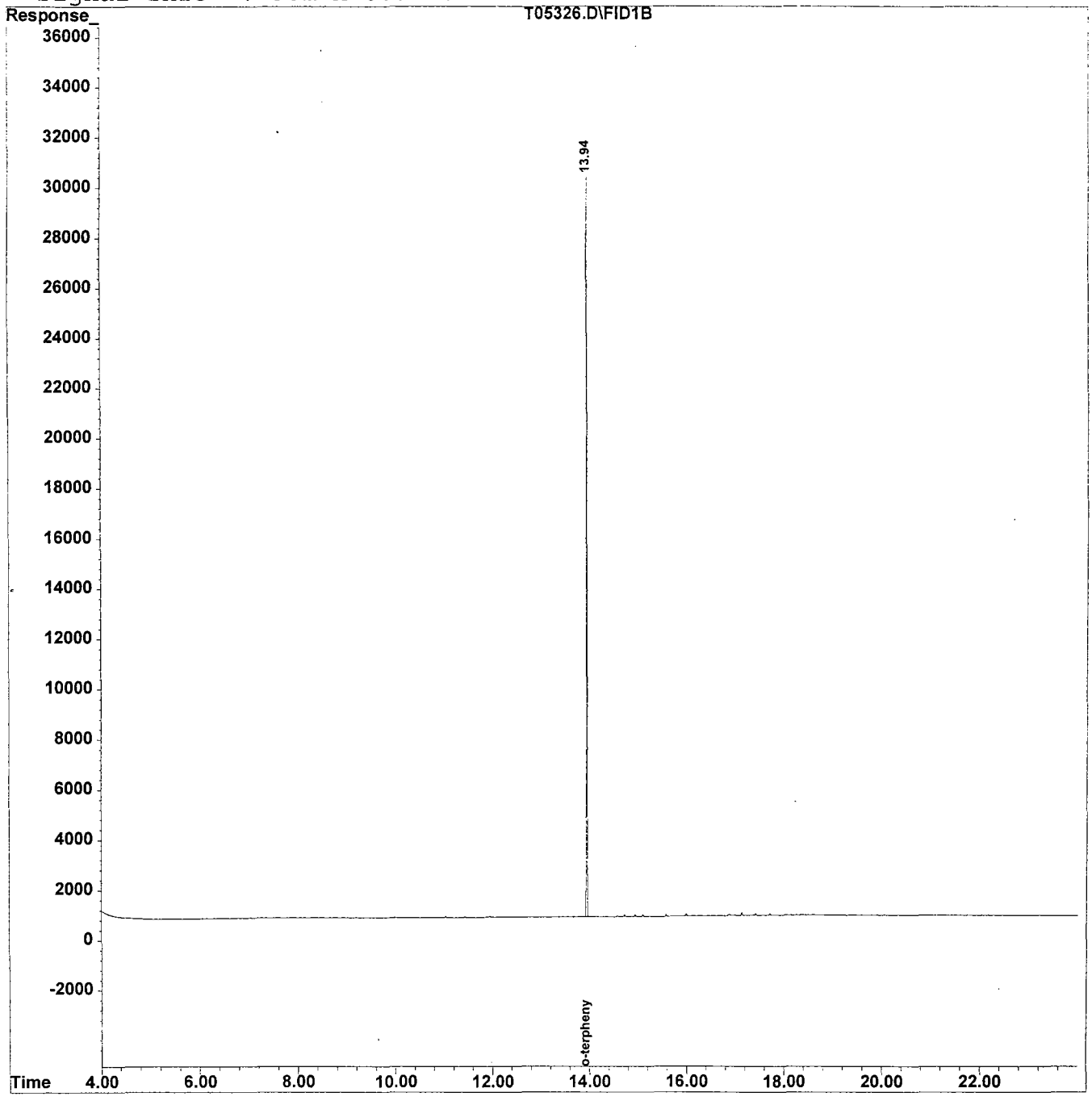
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980511\T05326.D Vial: 29
Acq On : 12 May 98 1:57 pm Operator: DEINHARDT
Sample : 3554.08 Inst : FID/TCD
Misc : Multiplr: 1.00
IntFile : TPHCINT.E
Quant Time: May 13 14:19 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 : 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 _____

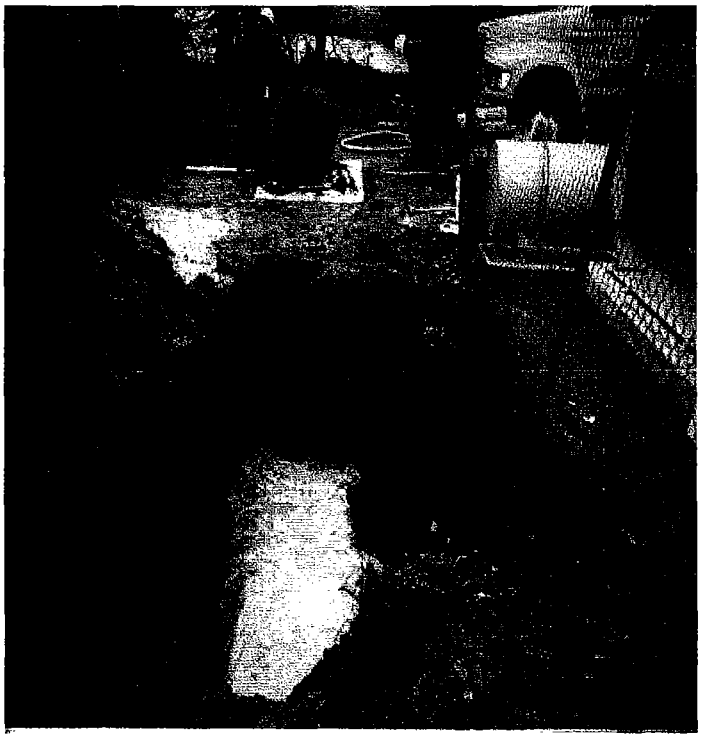
Date 5/15/25

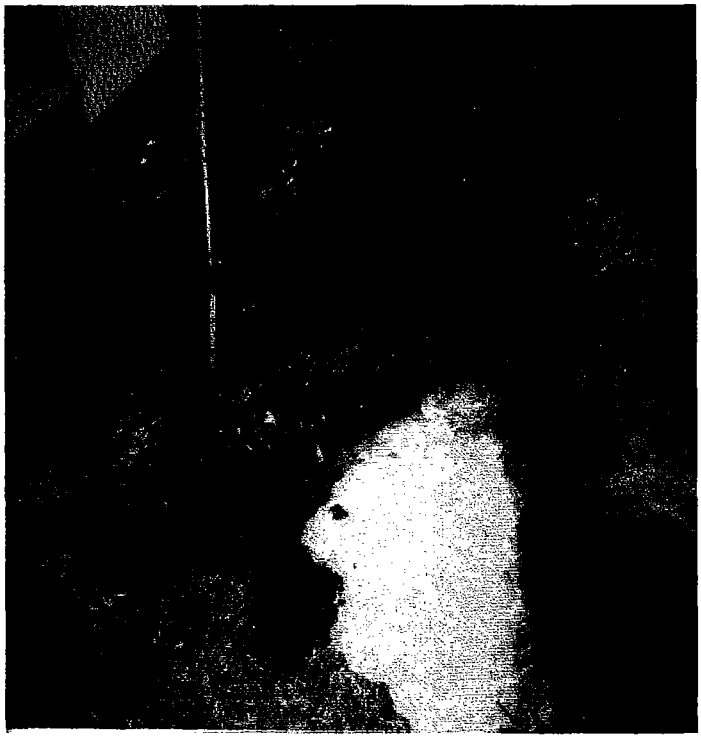
Laboratory Certification #13461

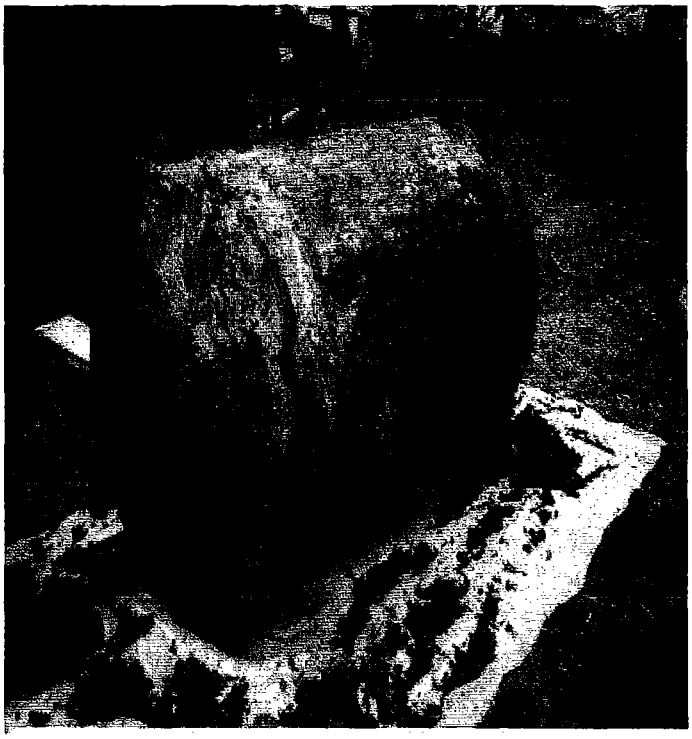
*Refer to NJAC 7:26E - Appendix A, Section IV - Reduced Data Deliverables - Non-USEPA/CLP Methods for further guidance

APPENDIX F

PHOTOGRAPHS







May 7, 1998

PHOTOGRAPHIC LOG

UST NO. 90010-70

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Fort Monmouth

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