

United States Army
Fort Monmouth, New Jersey

COPY

**Underground Storage Tank
Closure and Site Investigation
Report**

***Building 866
Main Post-West Area***

NJDEP UST Registration No. 0081533-137

September 1998

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

BUILDING 866

**MAIN POST-WEST AREA
NJDEP UST REGISTRATION NO. 0081533-137**

SEPTEMBER 1998

PREPARED FOR:

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

PREPARED BY:

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PROJECT NO. 2491-308

866.DOC

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EXECUTIVE SUMMARY

UST Closure

On June 4, 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-West area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-137 (Fort Monmouth ID No. 866), was located south of Building 866. UST No. 0081533-137 was a 1,000-gallon No. 2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes or punctures. No holes or punctures were noted in the UST and no evidence of potentially contaminated soils was observed surrounding the tank. Groundwater was encountered at 6.0 feet below ground surface and no sheen was observed. 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. 0081533-137 at Building 866.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0081533-137, was closed at Building 866 at the Main Post-West area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 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 steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0081533-137 complied with all applicable Federal, State and Local laws and ordinances in effect at the date of decommissioning. These laws included but were not limited to N.J.A.C. 7:14B-1 et seq., N.J.A.C. 5:23-1 et seq., and Occupational Safety and Health Administration (OSHA) 1910.146 & 1910.120. All permits including but not limited to the NJDEP-approved Decommissioning/Closure Plan were posted onsite for inspection. The decommissioning activities were conducted by DPW personnel who are registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 0081533-137 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The Standard Reporting Form and signed Site Assessment Summary form for UST No. 0081533-137 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 866 is located in the Main Post-West area of the Fort Monmouth Army Base. UST No. 0081533-137 was located south of Building 866 and appurtenant copper piping ran approximately eight (8) feet southwest from the excavation to Building 866. 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 866. 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 866 located approximately 1400 feet southeast of Husky Brook, the nearest water body. Based on the Main Post topography, the groundwater flow in the area of Building 866 is anticipated to be to the northwest.

1.3 HEALTH AND SAFETY

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

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

- 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 40 gallons of liquid from the UST and its associated piping were transported by Casie Protank to Casie Ecology Oil Salvage, Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Vineland, New Jersey. Refer to Appendix C for the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. 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 6.0 feet bgs and no sheen was observed. 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 Mazza and Sons, Inc., Metal Recyclers. See Appendix D for a copy of the UST disposal certificate and Appendix F for photographs of the UST. The transportation of the UST was in compliance with all applicable regulations and laws.

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

- 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: Charles Appleby
Employer: U.S. Army, Fort Monmouth
Phone Number: (732) 532-6224
NJDEP Certification No.: 2056

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

2.2 FIELD SCREENING/MONITORING

Field screening was performed by a NJDEP Certified Sub-Surface Evaluator using 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 6.0 feet bgs and no sheen was observed.

2.3 SOIL SAMPLING

On June 4, 1998, following the removal of the UST, post-excavation soil samples A, B, C, D, E, F, and DUP C were collected from a total of six (6) locations of the UST excavation. Samples A, B, C, and DUP C were collected along the centerline at a depth of 6.0 feet bgs. Sidewall samples D and E were collected at a depth of 5.5 feet bgs. Sample F was collected along the former piping length of the excavation, which was approximately eight (8) feet in length. The piping sample was collected at a depth of 1.5 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

U.S. Army 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 June 4, 1998, from a total of six (6) 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 June 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 866 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. 0081533-137 at Building 866.

TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 866, 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
A	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
B	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
C	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
D	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
F	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
DUP C	6/4/98	6/5/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 866, 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
A/6.0=	3622.01	6/4/98	6/5/98	Total Solid	--	--	81.44	--	--
				TPHC	186	Yes	ND	10,000	No
B/6.0=	3622.02	6/4/98	6/5/98	Total Solid	--	--	76.57	--	--
				TPHC	202	Yes	ND	10,000	No
C/6.0=	3622.03	6/4/98	6/5/98	Total Solid	--	--	80.26	--	--
				TPHC	187	Yes	ND	10,000	No
D/5.5=	3622.04	6/4/98	6/5/98	Total Solid	--	--	82.06	--	--
				TPHC	187	Yes	ND	10,000	No
E/5.5=	3622.05	6/4/98	6/5/98	Total Solid	--	--	82.70	--	--
				TPHC	190	Yes	ND	10,000	No
F/1.5 =	3622.06	6/4/98	6/5/98	Total Solid	--	--	84.21	--	--
				TPHC	182	Yes	ND	10,000	No
DUP C/6.0 =	3622.07	6/4/98	6/5/98	Total Solid	--	--	81.41	--	--
				TPHC	189	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

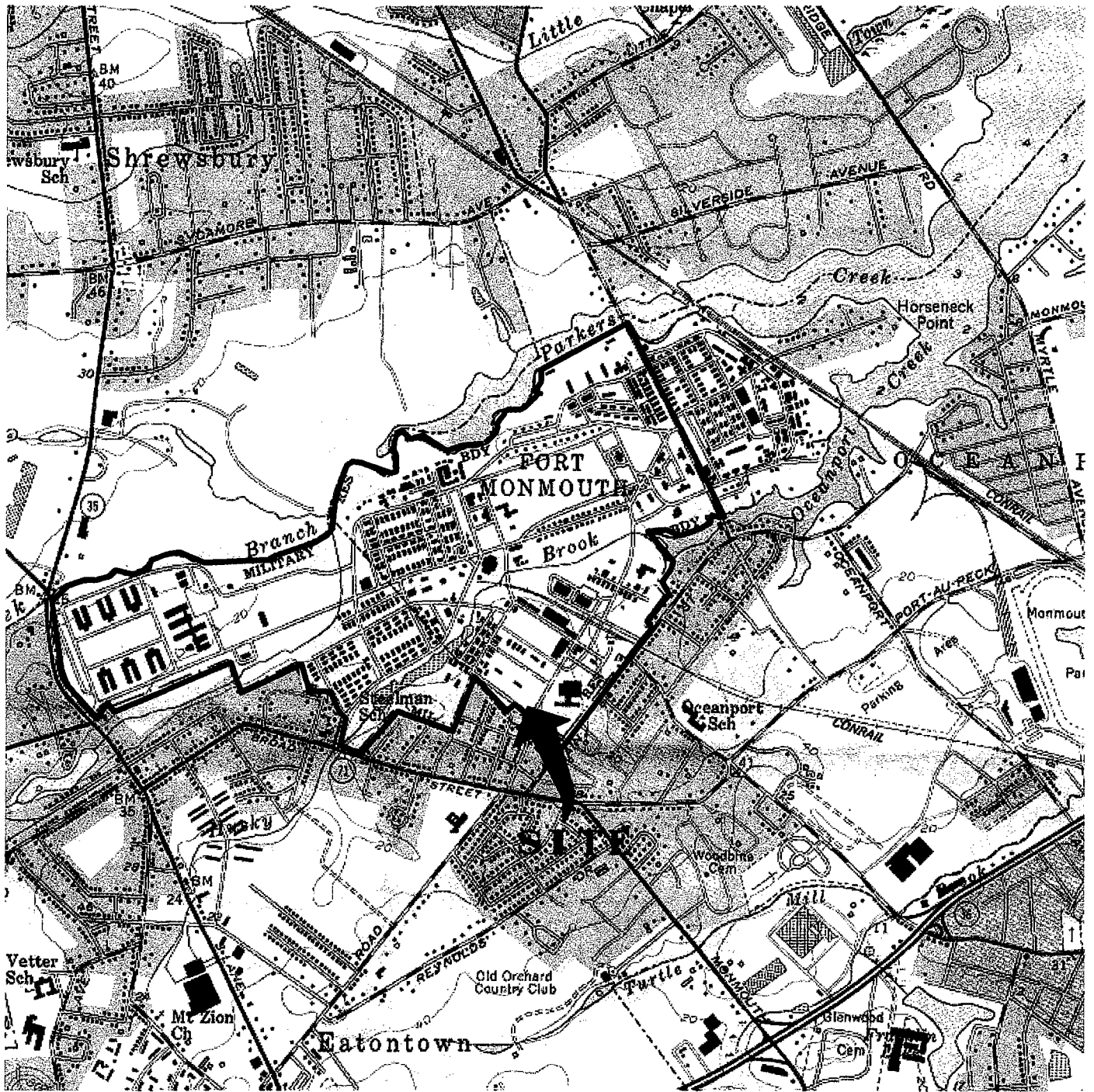


FIGURE 1

SITE LOCATION MAP
Building 866
Main Post-West
Fort Monmouth Army Base
Monmouth County, NJ



SMC Environmental
Services Group
Engineers, Managers, Scientists & Planners
 Valley Forge, PA.

LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 I SE-SERIES V822

NEW
 JERSEY



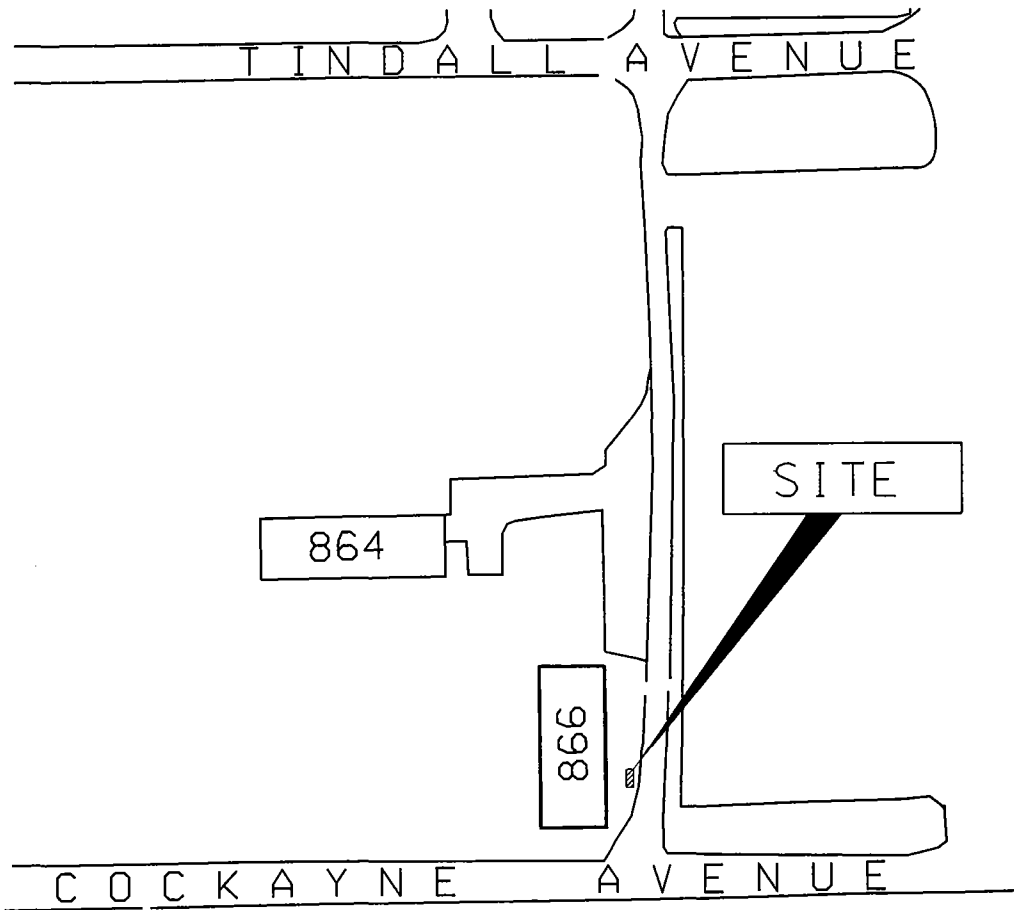
QUADRANGLE LOCATION



Mapped, edited and published by the Geological Survey


SCALE: 1"= 2000'

DATE: JUNE 1998



866 2429 FIG2

FIGURE 2
SITE MAP
BUILDING 866
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=100'

DATE: JUNE 1998

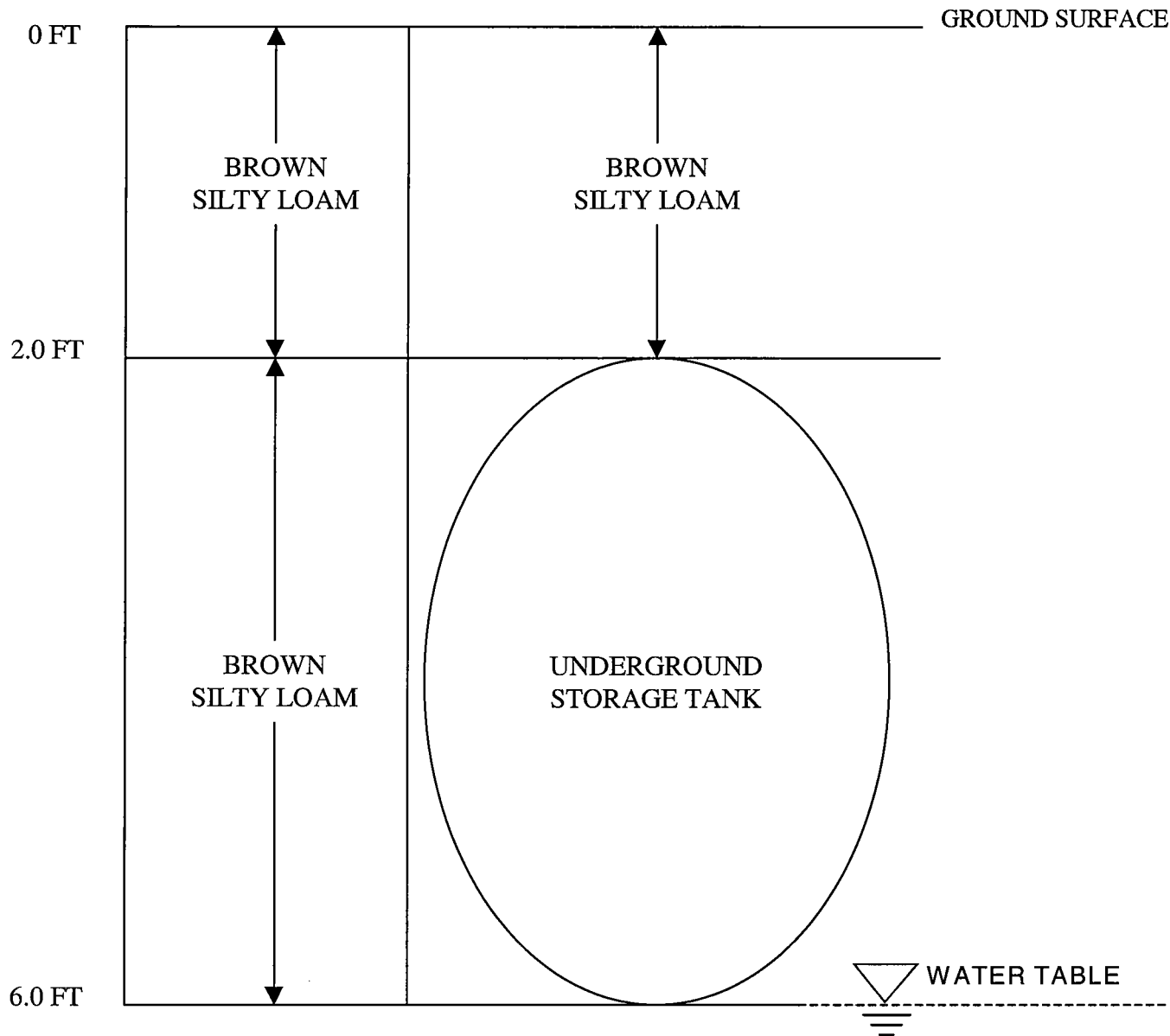


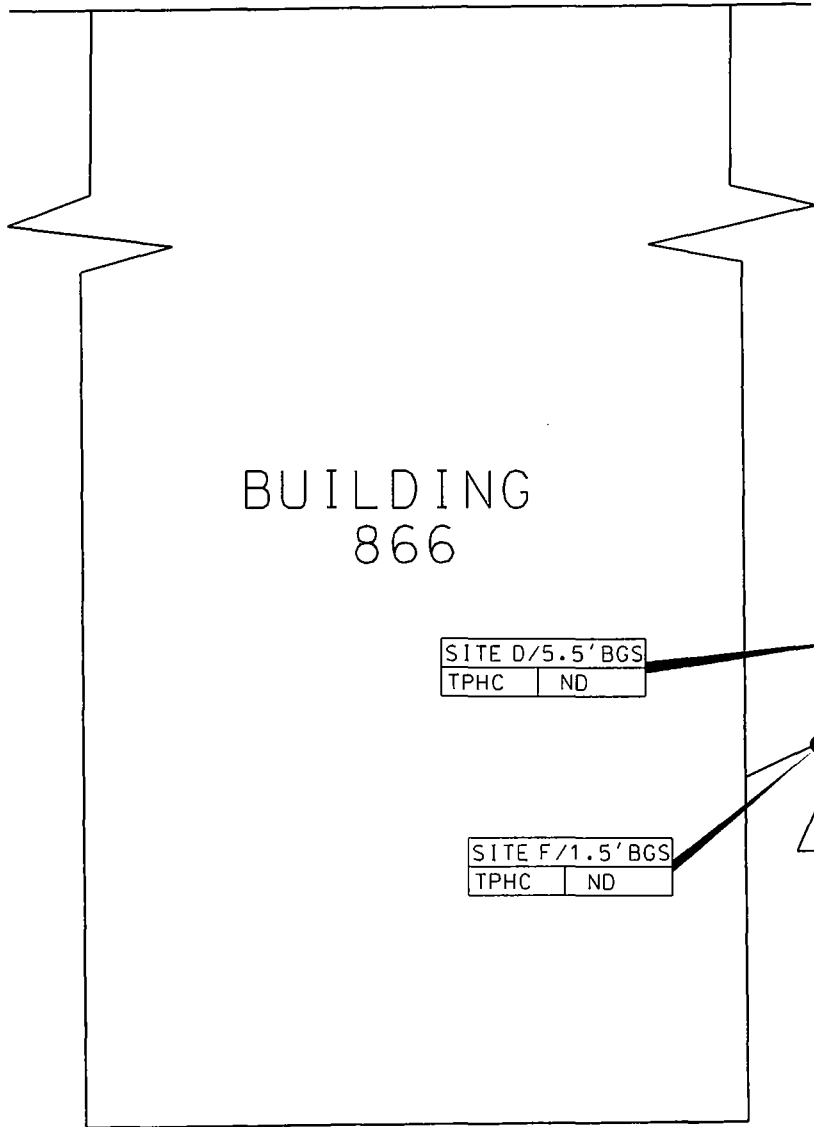
FIGURE 3
 CROSS SECTIONAL VIEW
 BUILDING 866
 FORT MONMOUTH ARMY BASE
 MONMOUTH COUNTY, NJ



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

SCALE: NTS

DATE: JUNE 1998



BUILDING
866

SITE A/6.0' BGS
TPHC | ND

SITE B/6.0' BGS
TPHC | ND

SITE E/5.5' BGS
TPHC | ND

SITE D/5.5' BGS
TPHC | ND

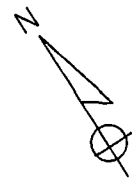
FORMER 1000
GALLON UST

SITE C/6.0' BGS
TPHC | ND

SITE F/1.5' BGS
TPHC | ND

FORMER
FUEL LINES

DUP C/6.0' BGS
TPHC | ND




LEGEND

- SOIL SAMPLE LOCATION
(JUNE 4, 1998)
- ▨ LIMIT OF EXCAVATION
(JUNE 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 866
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ

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

SCALE: 1"=10'

DATE: JUNE 1998

866 2429 FIG4

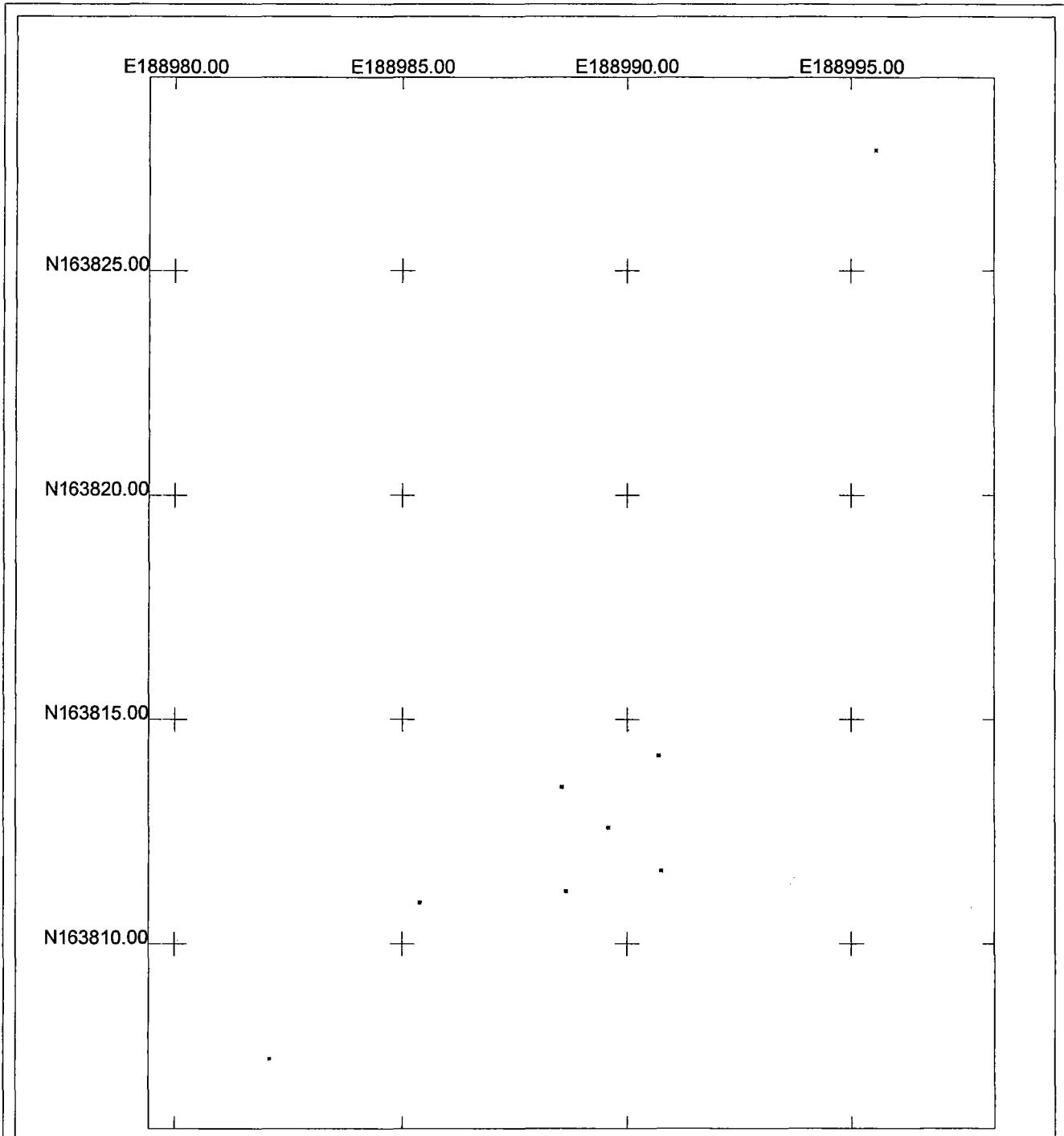
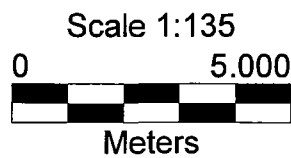


Figure 4 GPS Sampling Locations Map

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



r102720a.cor
 12/7/1998
 Pathfinder Office
 **Trimble**

Figure 4 GPS Sampling Location Point Data

US State Plane 1983 NJ (NY East) 2900 Nad 1983 (Conus)

Reference Points

<u>Loactions</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
866 BLDG S CORNER	163807.475	188982.059
866 BLDG E CORNER	163827.67	188995.519

Sample Points

<u>Loactions</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
866 A	163814.209	188990.693
866 B	163812.613	188989.561
866 C	163811.193	188988.626
866 D	163813.515	188988.54
866 E	163811.654	188990.746
866 F	163810.944	188985.364

APPENDIX A
NJDEP-STANDARD REPORTING FORM

ust file copy

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 **COMCODE**
 Active Inactive

**UNDERGROUND STORAGE TANK
 FACILITY QUESTIONNAIRE**

FACILITY UST # 0081533 Bldg 866

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 # _____
- 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 MAINPOST West

2. Facility Location Ft. Monmouth

NUMBER AND STREET

CITY OR MUNICIPALITY

COUNTY STATE N.J. ZIP CODE BLOCK LOT

3. Facility Operator _____ Contact Tele. No. _____

PERSON OR TITLE (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)

Blk 866

9. Total regulated underground storage tank capacity at facility (gallons)

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.A.C. 17:27.1 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	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2. CAS Number (hazardous substances only)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3. Date Tank Installed (Month/Day/Year)	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year	Mo. Day Year
4. Tank Size (gallons)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
R. Other hazardous substances (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"/>
S. Hazardous waste (specify ID number)	<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"/>
T. Mixtures (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"/>
U. Emergency spill tank (specify substance)	<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"/>
V. Other petroleum products (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"/>
W. 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"/>
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	TANK NO.	TANK NO.	TANK NO.	TANK NO.	TANK NO.
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. <i>Bldg 866</i>	TANK NO.	TANK NO.	TANK NO.	TANK NO.	TANK NO.
	<i>137</i>				
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	<i>06041998</i>				
D. Date of Sale or Transfer					
E. TMS # (if applicable)					
F. ISRA # (if applicable)	<i>Clean Site</i>				

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.

- 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 checks payable to: "Treasurer, State of New Jersey". Use of the enclosed return envelope will expedite processing. Registration 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 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, THE 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."

Mr. James Ott
(Typed / Printed Name)
Director of Public Works
(Title)

[Signature]
(Signature)
6/5/98
(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."

Charles M. Appleby
(Typed / Printed Name)
U.S. Army
(Title)
(Name of Firm, if applicable)

[Signature]
(Signature)
6/4/98
(Date)
2056

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: 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 : 81533-137 (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: Charles Appleby Signature: UST Cert. No.: 2056

Firm: U.S. Army Fort Monmouth Firm's UST Cert. Number: NA - U.S. Army

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

State: New Jersey Zip: 07703 Telephone Number : 732-532-6224

(NOTE: Certification numbers required only if work was conducted on USTs regulated per N.J.S.A. 58:10A-21 et seq.)

F. Certification by the Responsible Party(ies) of the Facility:

The following certification shall be signed [according to the requirements of N.J.A.C. 7:14B-1.7(b)] as follows:

- 1. For a Corporation by a person authorized by a resolution of the board of directors to sign the document.
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 O. Title: Directorate of Public Works

Signature:

Company Name: U.S. Army Fort Monmouth Date: 1/2/99


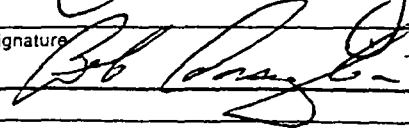
APPENDIX C
WASTE MANIFEST

CASIE PROTANK

ENVIRONMENTAL SERVICES

866

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

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. NJ 3 2 1 0 0 2 0 5 9 7 1 2 3 2 2		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. Army Com. Elec. Command Main Post Bldg 173/Attn: Fort Monmouth NJ 07703				A. Non-hazardous Manifest Document Number NHZ020 16448	
4. Generator's Phone (732) 532-6223		6. US EPA ID Number		B. State Generator's ID c/o James Shirchio Joe Fallon	
5. Transporter 1 Company Name Casie Ecology Oil Salvage, Inc. NJ D 0 4 5 9 9 5 6 9 3		8. US EPA ID Number		C. State Trans. ID 1 6 9 3 1	
7. Transporter 2 Company Name		10. US EPA ID Number		D. Transporter's Phone (609) 696-4401	
9. Designated Facility Name and Site Address Casie Ecology Oil Salvage, Inc. T/A 3209 N. Mill Rd / Casie Protank Vineland NJ 08360 NJ D 0 4 5 9 9 5 6 9 3		12. Containers		E. State Trans. ID	
		13. Total Quantity		F. Transporter's Phone ()	
		14. Unit Wt/Vol		G. State Facility's ID 0614D1HP05	
		L Waste No.		H. Facility's Phone (609) 696-4401	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		No.		Type	
a. Combustible liquid, n.o.s. (Fuel Oil) NA1993, PGIII		0 0 1		T T	
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above		K. Handling Codes for Wastes Listed Above			
L, T %oil/sed. %wtr.		a.		c.	
a.		b.		d.	
b.					
c.					
d.					
15. Special Handling Instructions and Additional Information					
a. 24 Hr. Emergency Response #609 696-4401 K. Ambrosia NAERG# 127					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.					
Printed/Typed Name Charles Appleby SELF-MAN-EV		Signature 		Month/Day/Year 09/01/98	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature 		Month/Day/Year 09/01/98	
Printed/Typed Name Bob Corsiglia		Signature		Month/Day/Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month/Day/Year	
Printed/Typed Name		Signature		Month/Day/Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Month/Day/Year	

GENERATOR

TRANSPORTER

FACILITY

CASIE / PROTANK

ENVIRONMENTAL SERVICES

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

NJ3210070597

NON-HAZARDOUS MANIFEST		1. Generator's US EPA ID No. NJ 2210020978		Document No. 14629		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. Army Com. Elec. Command c/o Joe Fallon/Bldg Fort Monmouth NJ 07703				A. Non-hazardous Manifest Document Number NHZ020 19112			
4. Generator's Phone (732) 532-6223		6. US EPA ID Number main Post		B. State Generator's ID SAME			
5. Transporter 1 Company Name Casie Ecology Oil Salvage, Inc.		7. Transporter 2 Company Name NJ D 045995693		C. State Trans. ID 1 0582		D. Transporter's Phone ((609) 696-4401	
9. Designated Facility Name and Site Address Casie Ecology Oil Salvage, Inc. T/A 3209 N. Mill Rd / Casie Protank Vineland NJ 08360		10. US EPA ID Number NJ D 045995693		E. State Trans. ID		F. Transporter's Phone ()	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Combustible liquid, n.o.s. (Fuel Oil) NA1993, III				12. Containers No. Type		13. Total Quantity 14. Unit Wt/Vol 15. Waste No.	
				X1946 SL		001 T T 00001 G I D 7 2	
16. Additional Descriptions for Materials Listed Above L, T 40 water SL LT 200 WATER				K. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information a. ERG# 128 b. 24 hr emergency response #609-696-4401 K. Ambrosia				CFI#1499			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Part 261, 264 and 279 or any applicable state law.							
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name Joseph M. Fallon		Signature Joseph M. Fallon		Month Day Year 06/18/88	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name Shawn Lee		Signature Shawn Lee		Month Day Year 06/18/88	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name		Signature		Month Day Year			

APPENDIX D

UST DISPOSAL CERTIFICATE

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
98-0001
Bldg. 866

Project # 3622
Date Rec. 06/04/98
Date Compl. 06/10/98
Released by:

 7-6-98
Daniel K. Wright Date:
Laboratory Director

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Method Summary

NJDEP Method OQA-OAM-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.

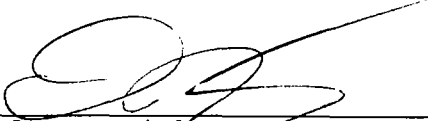
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

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: <i>C. Appleby - DPA</i>		Project No: <i>98-0001</i>		Analysis Parameters						Comments: <i>* = SAMPLES KEPT BELOW 4° C.</i>	
Phone #: <i>26224</i>		Location: <i>B. 866</i>		THAL	P. SOLIDS	MURSELL					OLIA
() DERA (X) OMA () Other: _____											
Samplers Name / Company: <i>GARY DIMARTINIS - TVS</i>				Sample #							
Lab Sample I.D.	Sample Location	Date	Time	Type	bottles						Remarks / Preservation Method
<i>3622.01</i>	<i>866-A</i>	<i>6-4-98</i>	<i>1430</i>	<i>SOIL</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>NO EXC. FEED @ 6.0' *</i>
<i>.02</i>	<i>B</i>		<i>1425</i>								<i>NO CENTER LINE @ 6.0'</i>
<i>.03</i>	<i>C</i>		<i>1418</i>								<i>NO "</i>
<i>.04</i>	<i>D</i>		<i>1434</i>								<i>NO SIDE WALL @ 5.5'</i>
<i>.05</i>	<i>E</i>		<i>1438</i>								<i>NO Piping Run @ 1.5'</i>
<i>.06</i>	<i>F</i>		<i>1442</i>								<i>NO FIELD DUPLICATE</i>
<i>.07</i>	<i>DUP</i>		<i>-</i>								
<p><i>NOTE: OLIA (#A52114) CALIBRATED W/95 ppm CH₄ + ZERO (0) AIR @ 14/2 HRS ON 6-4-98 by G. DIMARTINIS.</i></p>											
Relinquished by (signature): <i>[Signature]</i>		Date/Time: <i>6-4-98 16:04</i>	Received by (signature): <i>[Signature]</i>		Relinquished by (signature):		Date/Time:	Received by (signature):			
Relinquished by (signature):		Date/Time:	Received by (signature):		Relinquished by (signature):		Date/Time:	Received by (signature):			
Report Type: () Full, (X) Reduced, () Standard, () Screen / non-certified					Remarks: <i>DEDICATED SAMPLING TOOLS USED.</i>						
Turnaround time: (X) Standard 4 wks, () Rush Days, () ASAP Verbal Hrs.											

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

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

Lab. ID # : 3622
Date Rec'd: 04-Jun-98
Analysis Start: 05-Jun-98
Analysis Complete: 10-Jun-98

Analysis: OQA-QAM-025
Matrix: Soil
Analyst: D.DEINHARDT
Ext. Meth: Shake

UST Reg. #:
Closure #:
DICAR #:
Location #: B. 866

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3622.01	866-A	1.00	15.53	81.44	186	ND
3622.02	866-B	1.00	15.22	76.57	202	ND
3622.03	866-C	1.00	15.65	80.26	187	ND
3622.04	866-D	1.00	15.32	82.06	187	ND
3622.05	866-E	1.00	14.98	82.70	190	ND
3622.06	866-F	1.00	15.30	84.21	182	ND
3622.07	866-DUP	1.00	15.30	81.41	189	ND
METHOD BLANK	TBLK 113	1.00	15.00	100.00	157	ND

ND = Not Detected
 MDL = Method Detection Limit


Daniel K. Wright
 Laboratory Director

Tph41

Response Factor Report GC/MS Ins

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

Calibration Files

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

Compound	100	50	20	10	5	Avg	%RSD
1) tC C8	2.121	2.039	1.912	1.984	2.064	2.024 E4	3.93
2) tC C10	2.305	2.184	2.138	2.205	2.215	2.209 E4	2.76
3) TC C12	2.550	2.393	2.339	2.387	2.400	2.414 E4	3.30
4) tC C14	2.654	2.496	2.459	2.503	2.528	2.528 E4	2.96
5) tC C16	2.711	2.562	2.547	2.612	2.650	2.616 E4	2.56
6) tC C18	3.131	3.028	2.996	3.016	2.986	3.031 E4	1.91
7) tC C20	2.968	2.814	2.807	2.877	2.906	2.874 E4	2.34
8) tC C22	2.923	2.778	2.769	2.841	2.861	2.834 E4	2.24
9) tC C24	2.968	2.825	2.806	2.876	2.900	2.875 E4	2.25
10) tC C26	2.957	2.820	2.782	2.852	2.874	2.857 E4	2.30
11) tC C28	2.992	2.851	2.799	2.873	2.863	2.876 E4	2.47
12) tC C30	3.101	2.957	2.881	2.950	2.903	2.958 E4	2.90
13) tC C32	3.137	2.994	2.879	2.930	2.887	2.966 E4	3.58
14) tC C34	3.267	3.114	2.979	3.014	2.946	3.064 E4	4.24
15) tC C36	3.229	3.069	2.864	2.895	2.752	2.962 E4	6.33
16) tC C38	3.100	2.923	2.657	2.575	2.270	2.705 E4	11.86
17) tC C40	2.791	2.587	2.210	1.982	1.570	2.228 E4	21.76
18) tC c42	2.484	2.257	1.798	1.475	1.060	1.815 E4	31.76
19) TC Pristane	2.844	2.665	2.705	2.785	2.764	2.753 E4	2.54
20) TC Phytane	2.979	2.828	2.827	2.892	2.933	2.892 E4	2.29
21) sC o-terphenyl	3.572	3.380	3.368	3.461	3.500	3.456 E4	2.46
22) tC TPHC - total	3.082	2.986	2.975	3.099	3.340	3.096 E4	4.74

(#) = Out of Range

MEAN RSD % = 5.619

TPH41.M

Fri Jun 12 08:15:45 1998

T40init

Response Factor Report; GC/MS Ins

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

Calibration Files

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

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

(#) = Out of Range

MEAN %RSD = 14.34

TPH40.M

Wed Jun 10 09:00:58 1998

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980609\T05586.D
 Acq On : 10 Jun 98 6:38 am
 Sample : 50 PPM STANDARD
 Misc :
 IntFile : TPHCINT.E

Vial: 3
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Thu Jun 11 14:59:41 1998
 Response via : Multiple Level Calibration

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

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 tC C8	18.471	19.471 E3	-5.4	102	0.00
2 tC C10	20.009	21.421 E3	-7.1	104	0.00
3 TC C12	21.828	23.505 E3	-7.7	104	0.00
4 tC C14	22.622	24.534 E3	-8.5	105	0.00
5 tC C16	23.153	25.202 E3	-8.8	106	0.00
6 tC C18	26.517	29.058 E3	-9.6	107	0.00
7 tC C20	25.440	27.728 E3	-9.0	106	0.00
8 tC C22	25.046	27.336 E3	-9.1	106	0.01
9 tC C24	25.302	27.615 E3	-9.1	106	0.01
10 tC C26	24.742	25.956 E3	-4.9	105	0.01
11 tC C28	23.536	21.858 E3	7.1	105	0.01
12 tC C30	22.513	18.570 E3	17.5	105	0.00
13 tC C32	20.681	16.769 E3	18.9	104	0.00
14 tC C34	18.031	16.687 E3	7.5	103	0.00
15 tC C36	14.141	16.122 E3	-14.0	104	0.00
16 tC C38	11.188	15.457 E3	-38.2#	103	0.00
17 tC C40	8.740	14.336 E3	-64.0#	105	0.00
18 tC c42	7.061	12.890 E3	-82.6#	106	0.00
19 TC Pristane	24.800	26.898 E3	-8.5	105	0.00
20 TC Phytane	25.652	27.872 E3	-8.7	105	0.00
21 sC o-terphenyl	30.499	33.201 E3	-8.9	106	0.00
22 tC TPHC - total	27.250	25.431 E3	6.7	98	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980611\T05735.D
 Acq On : 16 Jun 98 5:22 am
 Sample : 50 PPM STANDARD
 Misc :
 IntFile : TPHCINT.E

Vial: 3
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

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

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

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

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

Surrogate Recovery Report

Lab. ID #: 3622

Location #: B.866

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3622.01		10.00	10.92	109.18
3622.02		10.00	10.29	102.85
3622.03		10.00	10.27	102.67
3622.04		10.00	10.05	100.52
3622.05		10.00	10.58	105.82
3622.06		10.00	10.21	102.10
3622.07		10.00	10.53	105.33
METHOD BLANK	TBLK 110	10.00	10.71	107.08

Surrogate Added : o-Terphenyl

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

Matrix Spike Recovery Report

Lab. ID #: 3622

Location #: B. 866

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3622.01MS	1000	46.94	975.75	92.88	75-125
3622.01MSD	1000	46.94	928.76	88.18	75-125

RPD	5.19	20.00
-----	------	-------

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

Blank Spike Recovery Report

Lab. ID # : 3622

Location #: B. 866

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	5-Jun-98	1000	911.96	91.20	75-125

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05585.D
 Acq On : 10 Jun 98 5:42 am
 Sample : 3622.01
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 10:29 1998

Vial: 14
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Results File: TPH40.RES

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

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

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

System Monitoring Compounds

21) sC o-terphenyl	13.91	332980	10.918 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	109.18%#

Target Compounds

7) tC C20	13.52	1184	0.047 mg/L
9) tC C24	14.91	2264	0.089 mg/L
13) tC C32	17.34	1065	0.051 mg/L
20) TC Phytane	13.52	1184	0.046 mg/L
22) tC TPHC - total	13.91	1279125	46.940 mg/L m

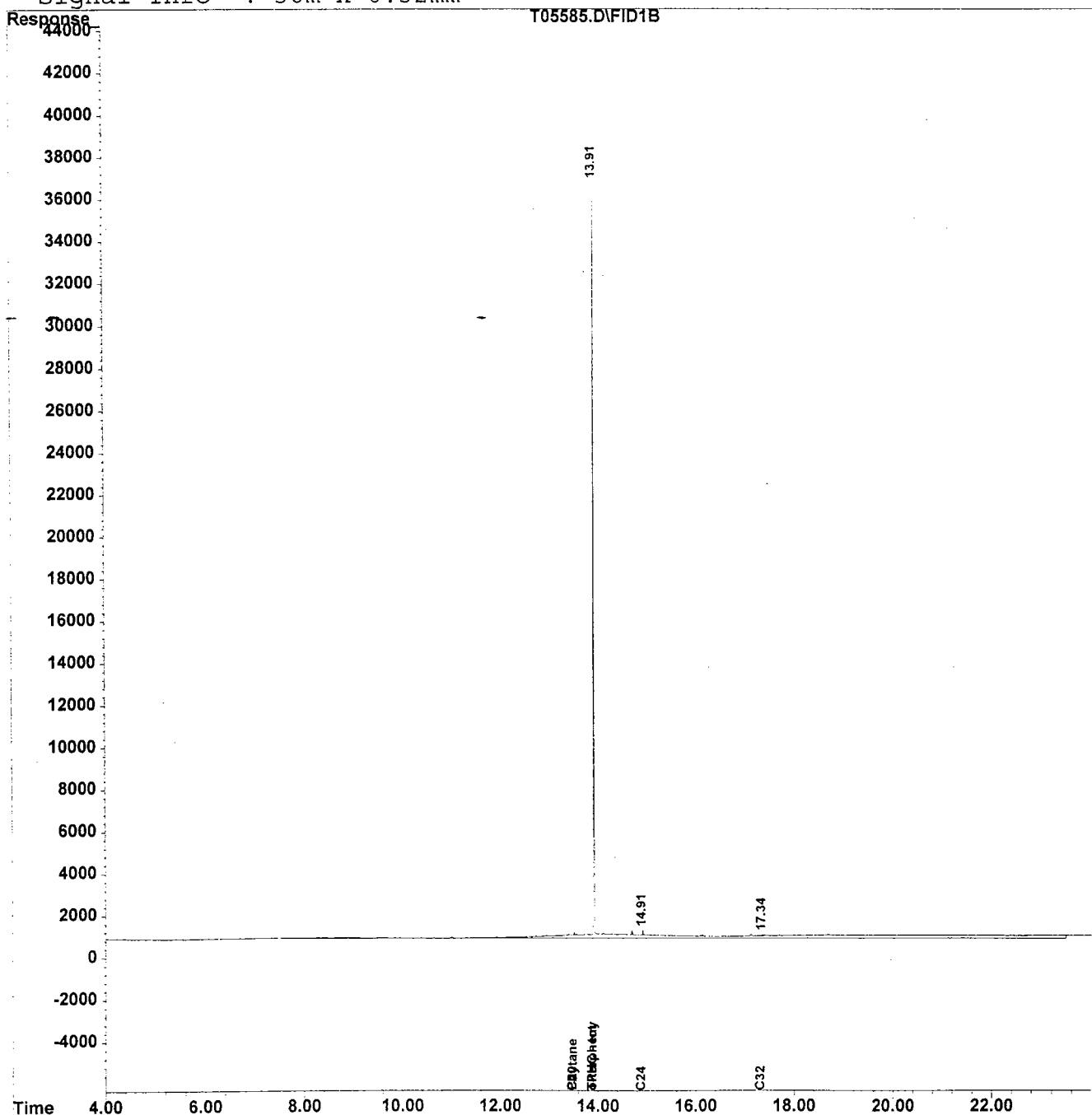
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05585.D
Acq On : 10 Jun 98 5:42 am
Sample : 3622.01
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 10:29 1998 Quant Results File: TPH40.RES

Vial: 14
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05587.D Vial: 16
 Acq On : 10 Jun 98 7:35 am Operator: Deinhardt
 Sample : 3622.02 Inst : GC/MS Ins
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: Jun 10 10:29 1998 Quant Results File: TPH40.RES

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

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

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

System Monitoring Compounds			
21) sC o-terphenyl	13.91	313672	10.285 mg/L
Spiked Amount	10.000	Range 8 - 13	Recovery = 102.85%#

Target Compounds

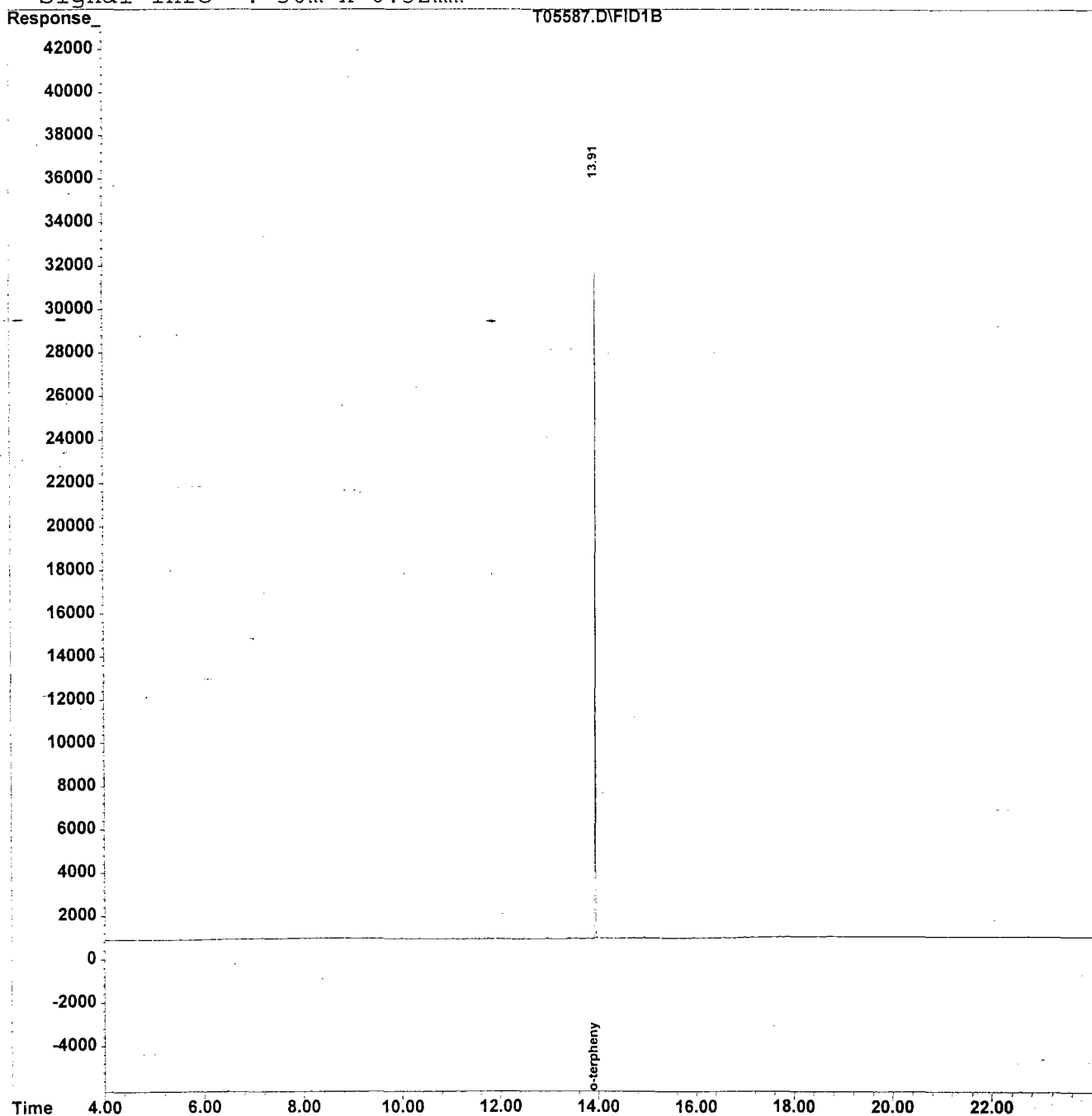
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05587.D
Acq On : 10 Jun 98 7:35 am
Sample : 3622.02
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 10:29 1998 Quant Results File: TPH40.RES

Vial: 16
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05588.D
 Acq On : 10 Jun 98 10:17 am
 Sample : 3622.03
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 15:18 1998

Vial: 3
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Results File: TPH40.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH40.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Wed Jun 10 08:52:44 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH40.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	13.91	313135	10.267 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	102.67%#

Target Compounds

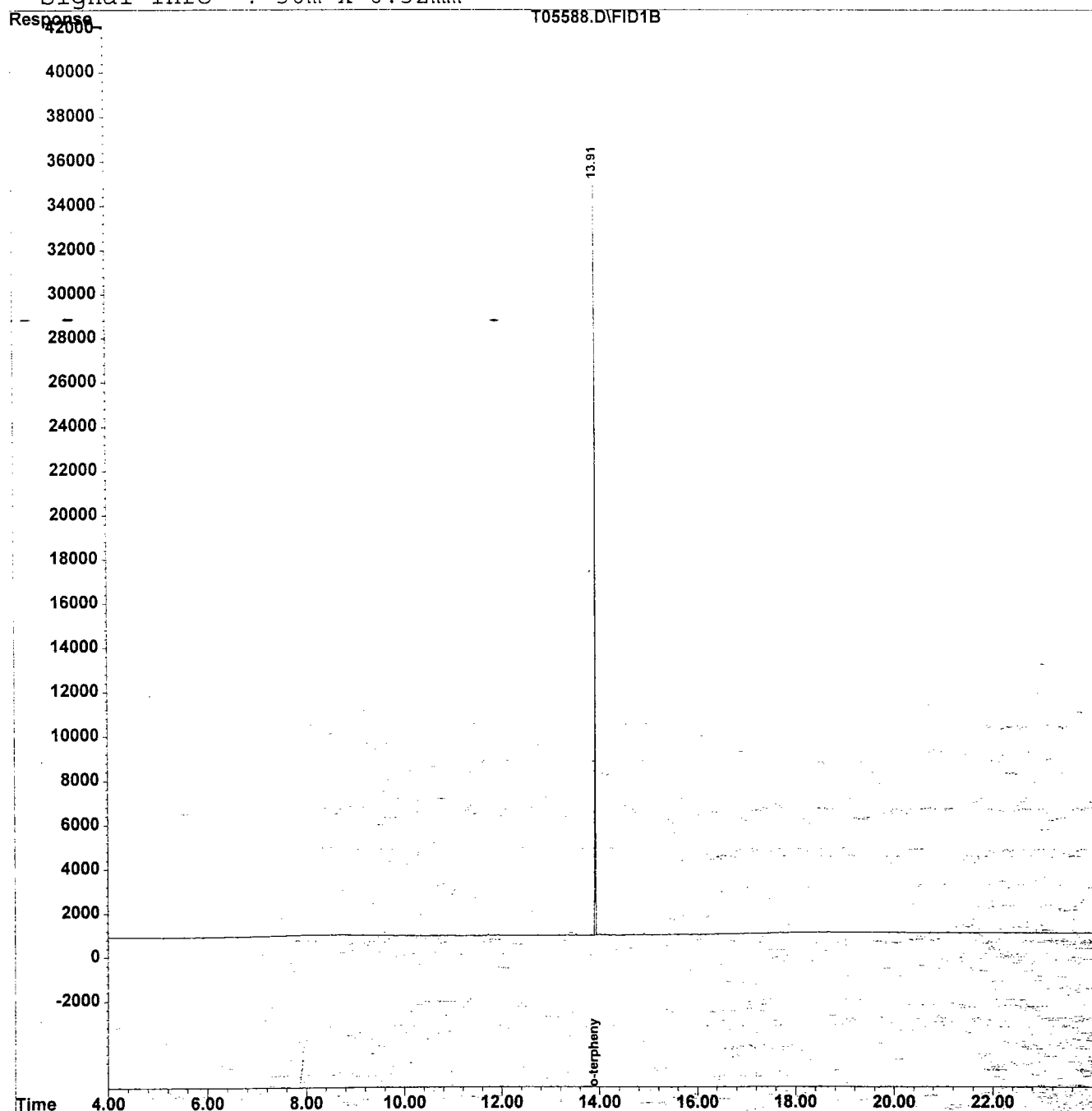
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05588.D
Acq On : 10 Jun 98 10:17 am
Sample : 3622.03
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 15:18 1998 Quant Results File: TPH40.RES

Vial: 3
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05589.D
 Acq On : 10 Jun 98 11:11 am
 Sample : 3622.04
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 15:19 1998 Quant Results File: TPH40.RES

Vial: 4
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Method : C:\HPCHEM\1\methods\TPH40.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Wed Jun 10 08:52:44 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH40.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	13.91	306579	10.052 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	100.52%#

Target Compounds

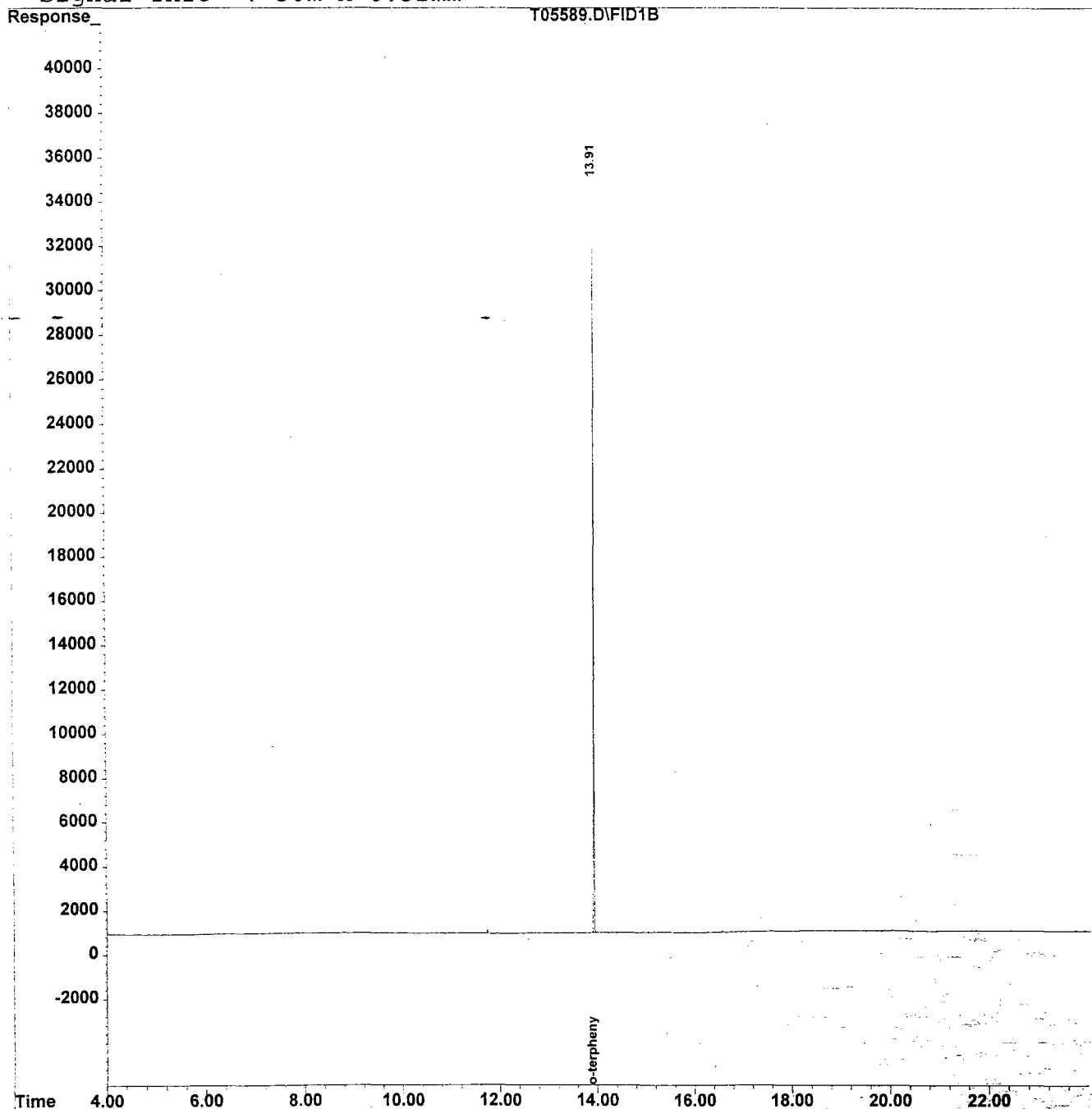
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05589.D
Acq On : 10 Jun 98 11:11 am
Sample : 3622.04
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 15:19 1998 Quant Results File: TPH40.RES

Vial: 4
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05590.D
 Acq On : 10 Jun 98 12:16 pm
 Sample : 3622.05
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 15:17 1998

Vial: 5
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Results File: TPH40.RES

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

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
21) sC o-terphenyl	13.91	322748	10.582 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	105.82%#
Target Compounds			
7) tC C20	13.52	2225	0.087 mg/L
9) tC C24	14.91	1695	0.067 mg/L
20) TC Phytane	13.52	2225	0.087 mg/L
22) tC TPHC - total	13.91	1193973	43.815 mg/L m

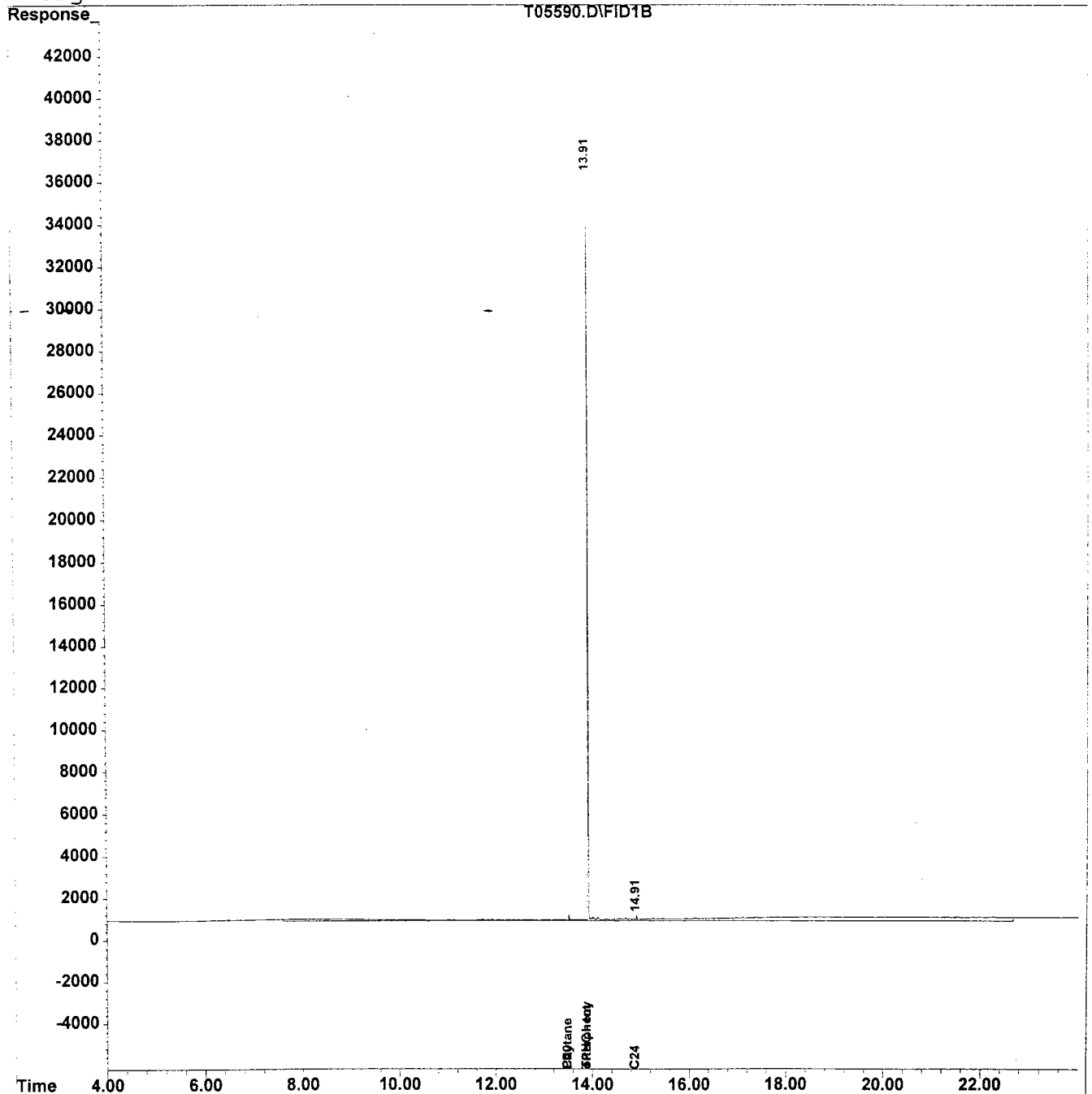
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05590.D
Acq On : 10 Jun 98 12:16 pm
Sample : 3622.05
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 15:17 1998 Quant Results File: TPH40.RES

Vial: 5
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05591.D
 Acq On : 10 Jun 98 1:55 pm
 Sample : 3622.06
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 15:20 1998 Quant Results File: TPH40.RES

Vial: 6
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

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

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

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
21) sC o-terphenyl	13.91	311387	10.210 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	102.10%#
Target Compounds			
10) tC C26	15.79	3020	0.122 mg/L
15) tC C36	18.68	2024	0.138 mg/L
22) tC TPHC - total	13.91	1091007	40.037 mg/L m

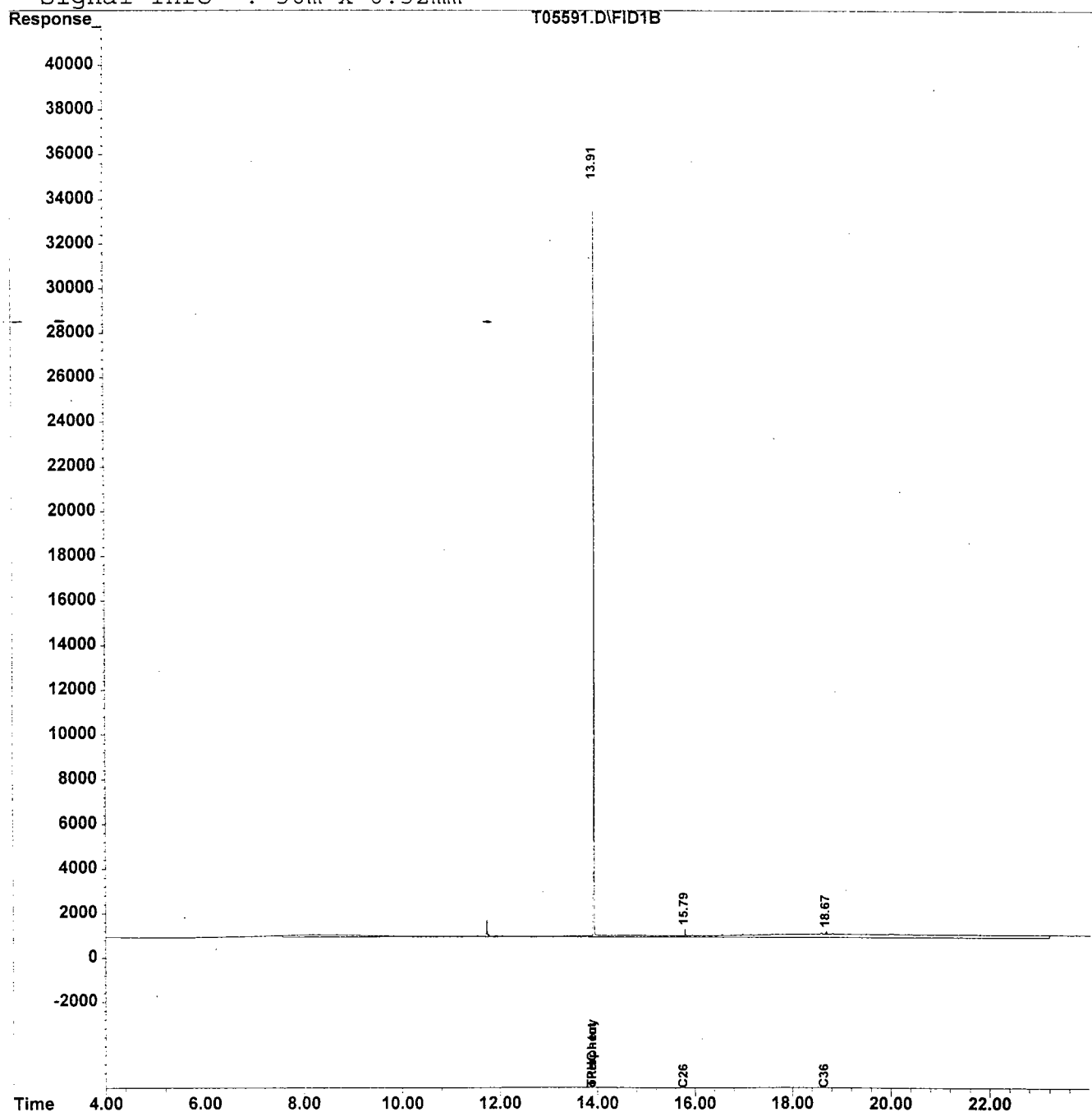
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05591.D
Acq On : 10 Jun 98 1:55 pm
Sample : 3622.06
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 15:20 1998 Quant Results File: TPH40.RES

Vial: 6
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980609\T05592.D
 Acq On : 10 Jun 98 3:11 pm
 Sample : 3622.07
 Misc :
 IntFile : TPHCINT.E
 Quant Time: Jun 10 15:54 1998 Quant Results File: TPH40.RES

Vial: 7
 Operator: Deinhardt
 Inst : GC/MS Ins
 Multiplr: 1.00

Quant Method : C:\HPCHEM\1\methods\TPH40.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Wed Jun 10 08:52:44 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH40.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	13.91	321241	10.533 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	105.33%#

Target Compounds

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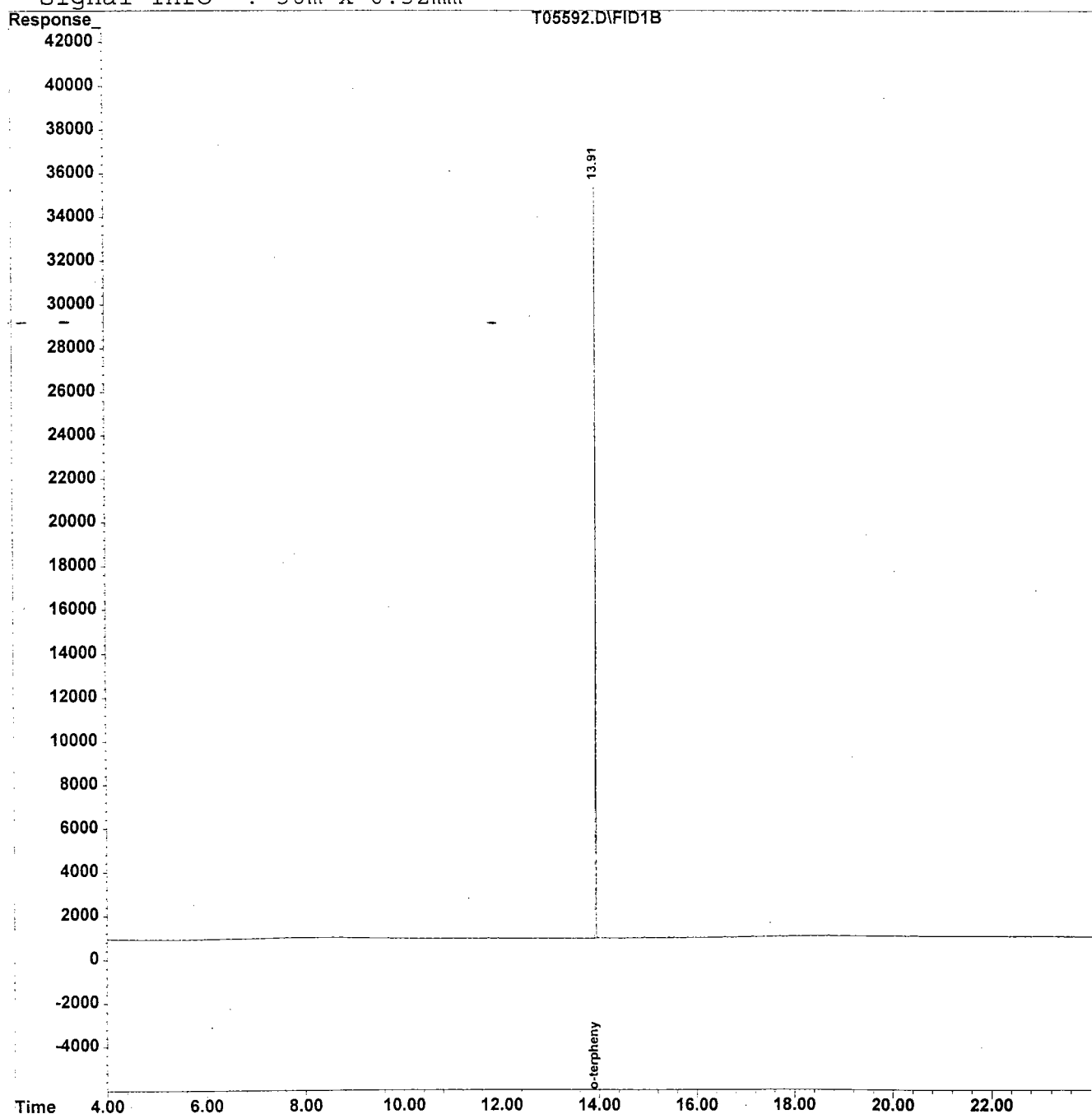
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980609\T05592.D
Acq On : 10 Jun 98 3:11 pm
Sample : 3622.07
Misc :
IntFile : TPHCINT.E
Quant Time: Jun 10 15:54 1998 Quant Results File: TPH40.RES

Vial: 7
Operator: Deinhardt
Inst : GC/MS Ins
Multiplr: 1.00

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

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




LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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

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

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

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

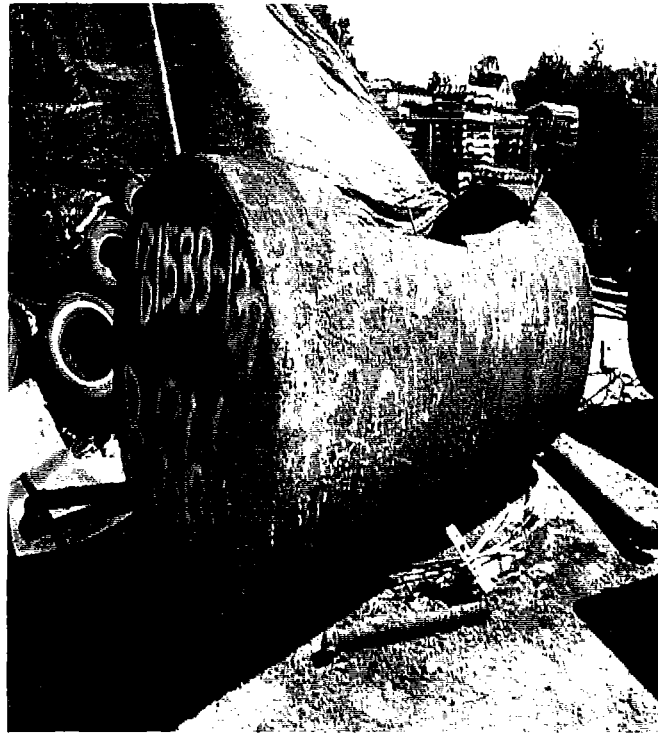
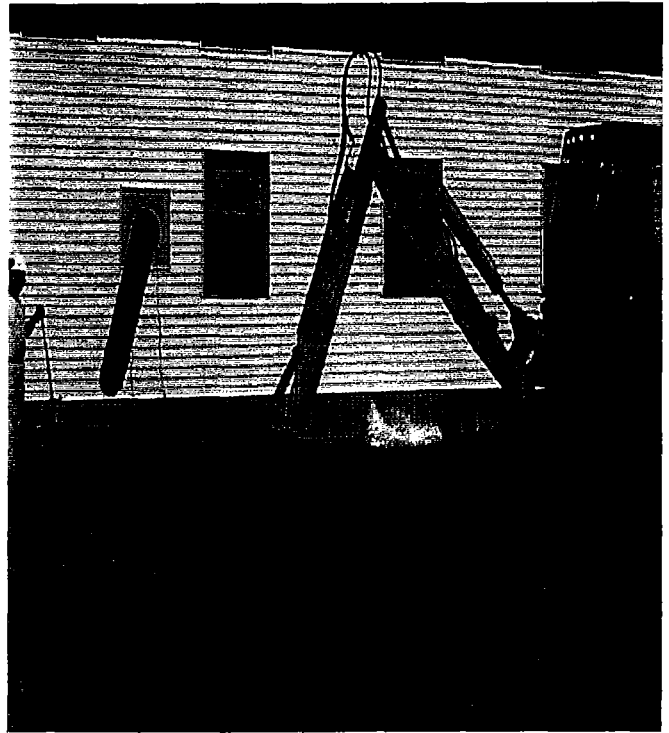
Laboratory Manager or Environmental Consultant's Signature 

Date 7/6/97

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



June 4, 1998

PHOTOGRAPHIC LOG

UST NO. 81533-137

**Building 866
Main Post-West
Fort Monmouth**



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