

United States Army
Fort Monmouth, New Jersey

COPY

Underground Storage Tank Closure and Site Investigation Report

***Building 2018
Charles Wood-East***

NJDEP UST Registration No. 192486-34

October 1998

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

BUILDING 2018

**CHARLES WOOD-EAST
NJDEP UST REGISTRATION NO. 192486-34**

OCTOBER 1998

PREPARED FOR:

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

PREPARED BY:

**SMC ENVIRONMENTAL SERVICES GROUP
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PROJECT NO. 2491-308

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EXECUTIVE SUMMARY

UST Closure

On May 20, 1998, a fiberglass underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) underground storage tank procedures at the Charles Wood-East area of the U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 192486-34 (Fort Monmouth ID No. 2018), was located east of Building 2018. UST No. 192486-34 was a 550-gallon No. 2 fuel oil UST.

Site Assessment

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) and the NJDEP *Field Sampling Procedures Manual*. The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements for Site Remediation*. Soils surrounding the tank were screened visually and with air monitoring equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes or punctures. No holes or punctures were noted in the UST. Groundwater was encountered at a depth of 4.0 feet bgs. No evidence of potentially contaminated soil or groundwater was observed surrounding the tank. Soil samples contained TPHC concentrations ranging from non-detect to 233.42 mg/kg.

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. 192486-34 at Building 2018.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 192486-34, was closed at Building 2018 at the Charles Wood-East area of U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on May 20, 1998. Refer to site location map on Figure 1. This report presents the results of the Department of Public Works= (DPW) implementation of the UST Decommissioning/Closure Plan approved by the NJDEP. The UST was a fiberglass 550-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 192486-34 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. 192486-34 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. 192486-34 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 2018 is located in the Charles Wood-East area of the Fort Monmouth Army Base. UST No. 192486-34 was located east of Building 2018 and appurtenant copper piping ran approximately five (5) feet west from the excavation to Building 2018. 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 2018. 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 Charles Wood area.

Regional Geology

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

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

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

Local Geology

Based on the regional geologic map (Jablonski, 1968), the Cretaceous age Red Bank and Tinton Sands outcrop at the Charles Wood 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 ironoxide encrusted (Minard).

Over the last 80 years, the natural topography of Fort Monmouth has been altered by excavation and filling activities by the military. Topographic elevations for the Charles Wood area range from 20 feet above mean seal level (MSL) to 71 feet above MSL.

Hydrogeology

The water table aquifer in the Charles Wood 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.

Six well records for monitor wells installed at locations within the Charles Wood area in February 1981 were used for reference. The wells were completed to total depths ranging from 20 to 25 feet below ground surface (bgs). Water was encountered at depths ranging from 5 to 12 feet bgs.

The lithologic descriptions for these borings described deposits that were primarily fine to coarse, glauconitic sands, with traces of gravel, silt, and clay. These sediments are part of the Hornerstown Marl, from the Tertiary Period (Paleocene Series, approximately 58 to 66 Ma). According to Jablonski, wells drilled in the Red Bank and Tinton Sands may produce from 2 to 25 gallons per minute (gpm). Some well owners have reported acidic water that requires treatment to remove iron.

Shallow groundwater is locally influenced within the Charles Wood 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 Charles Wood 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. Building 2018 is located approximately 500 feet south of an unnamed stream which runs from east to west through the Charles Wood area.

Based on the Charles Wood area topography, the groundwater flow in the area of Building 2018 is anticipated to be to the north.

1.3 HEALTH AND SAFETY

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

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

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

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST and associated piping. All free product present in the piping was drained into the UST, and the UST was purged to remove vapors prior to cutting and removal of the piping. After removal of the associated piping, a manway was made in the UST to allow for proper cleaning. The UST was completely emptied of all liquids prior to removal from the ground. Approximately 25 gallons of liquid from the UST and its associated piping were transported by Lionetti Oil Recovery Co. Inc to the Lionetti Oil Recovery Co. Inc. facility, a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifest.

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No holes or punctures were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. No evidence of contamination was observed. Soil screening was also performed along the piping run associated with the UST closure. No contamination was noted anywhere along the piping length. Groundwater was encountered at a depth of 4.0 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: 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 4.0 feet bgs and no sheen was observed.

2.3 SOIL SAMPLING

On May 20, 1998, following the removal of the UST, post-excavation soil samples V, W, N, E, S, and DUP S2 were collected from a total of five (5) locations of the UST excavation. Sidewall samples W, N, E, S, and DUP S2 were collected at a depth of 3.5 feet bgs. Piping sample V was collected at a depth of 1.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC) and total solids.

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

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

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST, post-excavation soil samples were collected on May 20, 1998, from a total of five (5) locations. All samples were analyzed for TPHC and total solids. The post-excavation sampling results were compared to the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 mg/kg (N.J.A.C. 7:26D and revisions dated February 3, 1994). A summary of the analytical results and comparison to the NJDEP soil cleanup criteria is provided in Table 2 and the soil sampling locations are shown on Figure 4. The analytical data package is provided in Appendix E.

All post-excavation soil samples collected on May 20, 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 levels of TPHC ranging in concentration from non-detect to 233.42 mg/kg.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 2018 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. 192486-34 at Building 2018.

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TABLES

TABLE 1

SUMMARY OF POST-EXCAVATION SAMPLING ACTIVITIES
BUILDING 2018, CHARLES WOOD-EAST AREA
FORT MONMOUTH, NEW JERSEY

Page 1 of 1

Sample ID	Date of Collection	Date Analysis Started	Matrix	Sample Type	Analytical Parameters*	Analysis Method
V	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
W	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
N	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
E	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
S	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025
S2	5/20/98	5/21/98	Soil	Post-Excavation	TPHC	OQA-QAM-025

Note:

* TPHC Total Petroleum Hydrocarbons

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 2018, CHARLES WOOD-EAST AREA
FORT MONMOUTH, NEW JERSEY

Page 1 of 1

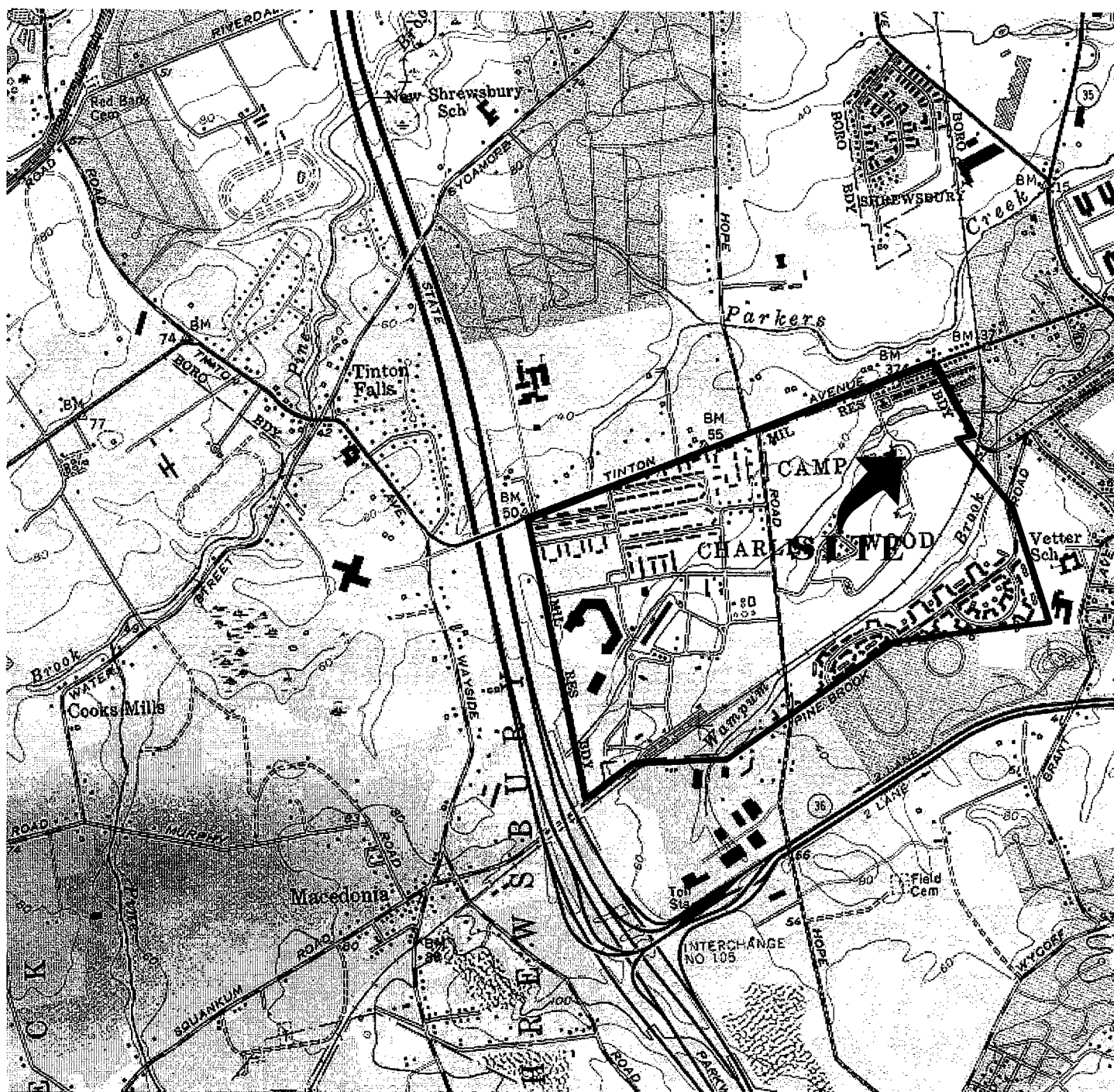
Sample ID/ Depth	Sample Laboratory ID	Sample Date	Analysis Date	Analytical Method Used	Method Detection Limit (mg/kg)	Compound of Concern	Result (mg/kg) *	NJDEP Soil Cleanup Criteria ** (mg/kg)	Exceeds Cleanup Criteria
V/1.0=	3583.01	5/20/98	5/21/98	Total Solid	--	--	86.78	--	--
				TPHC	175	yes	233.42	10,000	No
W/3.5=	3583.02	5/20/98	5/21/98	Total Solid	--	--	79.17	--	--
				TPHC	192	yes	229.14	10,000	No
N/3.5=	3583.03	5/20/98	5/21/98	Total Solid	--	--	73.70	--	--
				TPHC	212	yes	ND	10,000	No
E/3.5=	3583.04	5/20/98	5/21/98	Total Solid	--	--	82.21	--	--
				TPHC	189	yes	ND	10,000	No
S/3.5=	3583.05	5/20/98	5/21/98	Total Solid	--	--	80.84	--	--
				TPHC	194	yes	ND	10,000	No
S2/3.5=	3583.06	5/20/98	5/21/98	Total Solid	--	--	81.76	--	--
				TPHC	184	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

Figure 1
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FIGURES



LONG BRANCH, N. J.

40073-C8-TF-024

1954

PHOTOREVISED 1981

DMA 6164 1 SE-SERIES V822



QUADRANGLE LOCATION

Mapped, edited and published by the Geological Survey

FIGURE 1

SITE LOCATION MAP Building 2018

Charles Wood Area
Fort Monmouth Army Base
Monmouth County, NJ



SMC Environmental

Services Group

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

SCALE: 1"= 2000'

DATE: MAY 1998

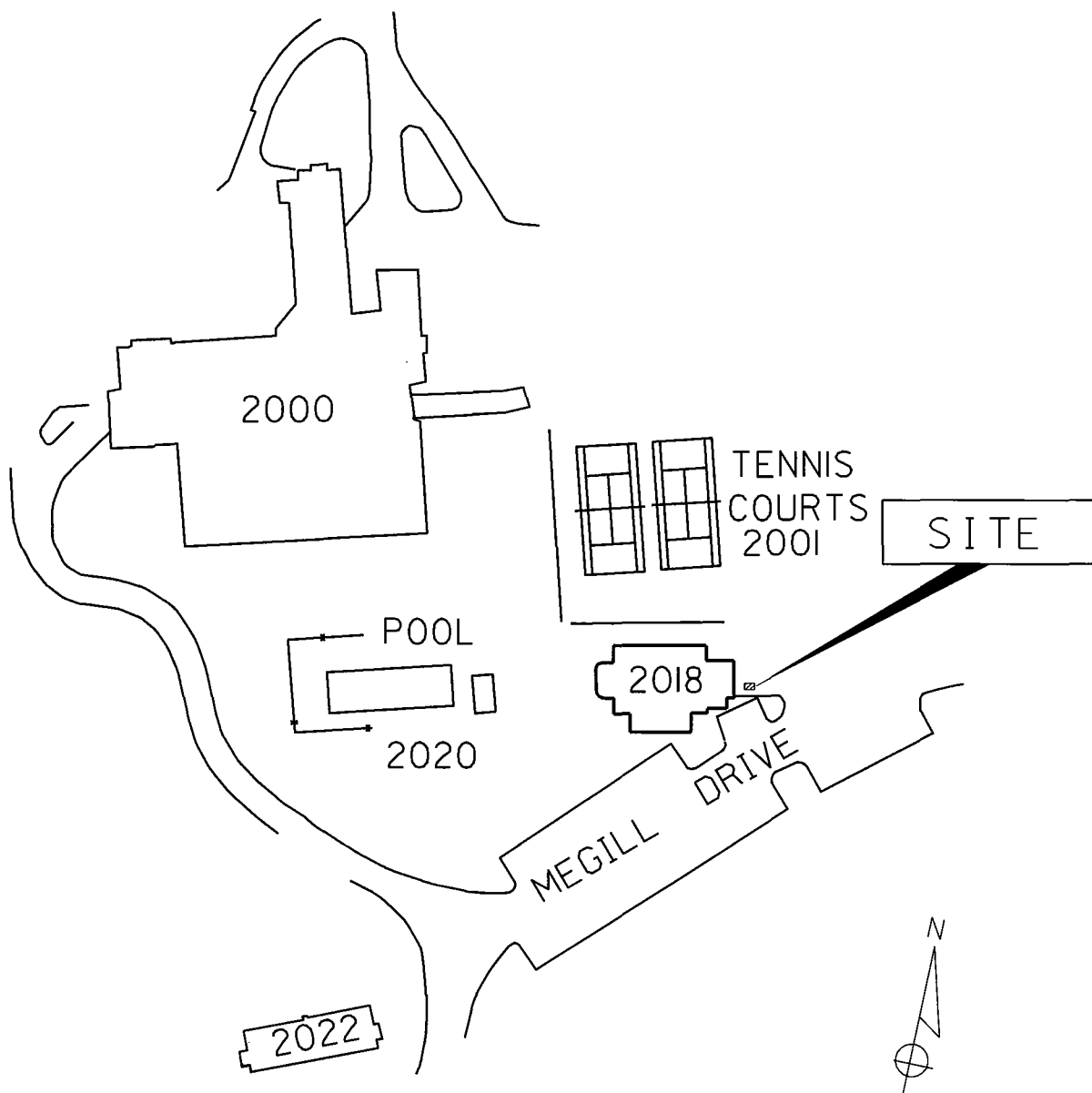


FIGURE 2
SITE MAP
BUILDING 2018
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ



SMC ENVIRONMENTAL
SERVICES GROUP

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

SCALE: 1"=100'

DATE: MAY 1998

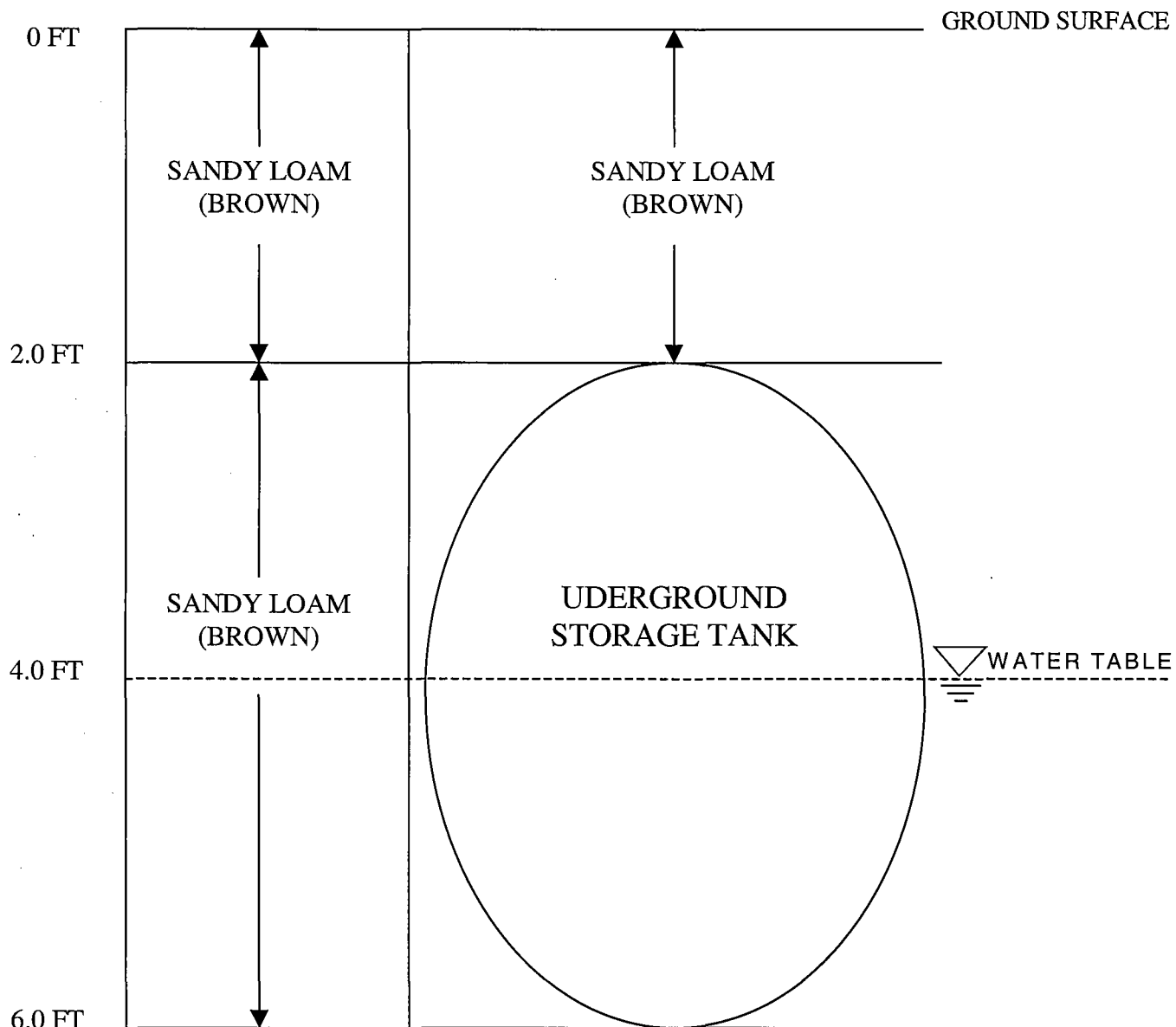


FIGURE 3
CROSS SECTIONAL VIEW
BUILDING 2018
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ



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

SCALE: NTS

DATE: MAY 1998

BUILDING
2018

SITE W/3.5' BGS
TPHC 229.14

SITE V/1.0' BGS
TPHC 233.42

FORMER
VENT LINE

SITE N/3.5' BGS
TPHC ND

SITE E/3.5' BGS
TPHC ND

EMERGENCY
GENERATOR

FORMER 550
GALLON UST

SITE S2/3.5' BGS
TPHC ND

SITE S1/3.5' BGS
TPHC ND



LEGEND

● SOIL SAMPLE LOCATION
(MAY 20, 1998)

▣ LIMIT OF EXCAVATION
(MAY 20, 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 2018
FORT MONMOUTH ARMY BASE
MONMOUTH COUNTY, NJ



SMC ENVIRONMENTAL
SERVICES GROUP

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

SCALE: 1"=10'

DATE: MAY 1998

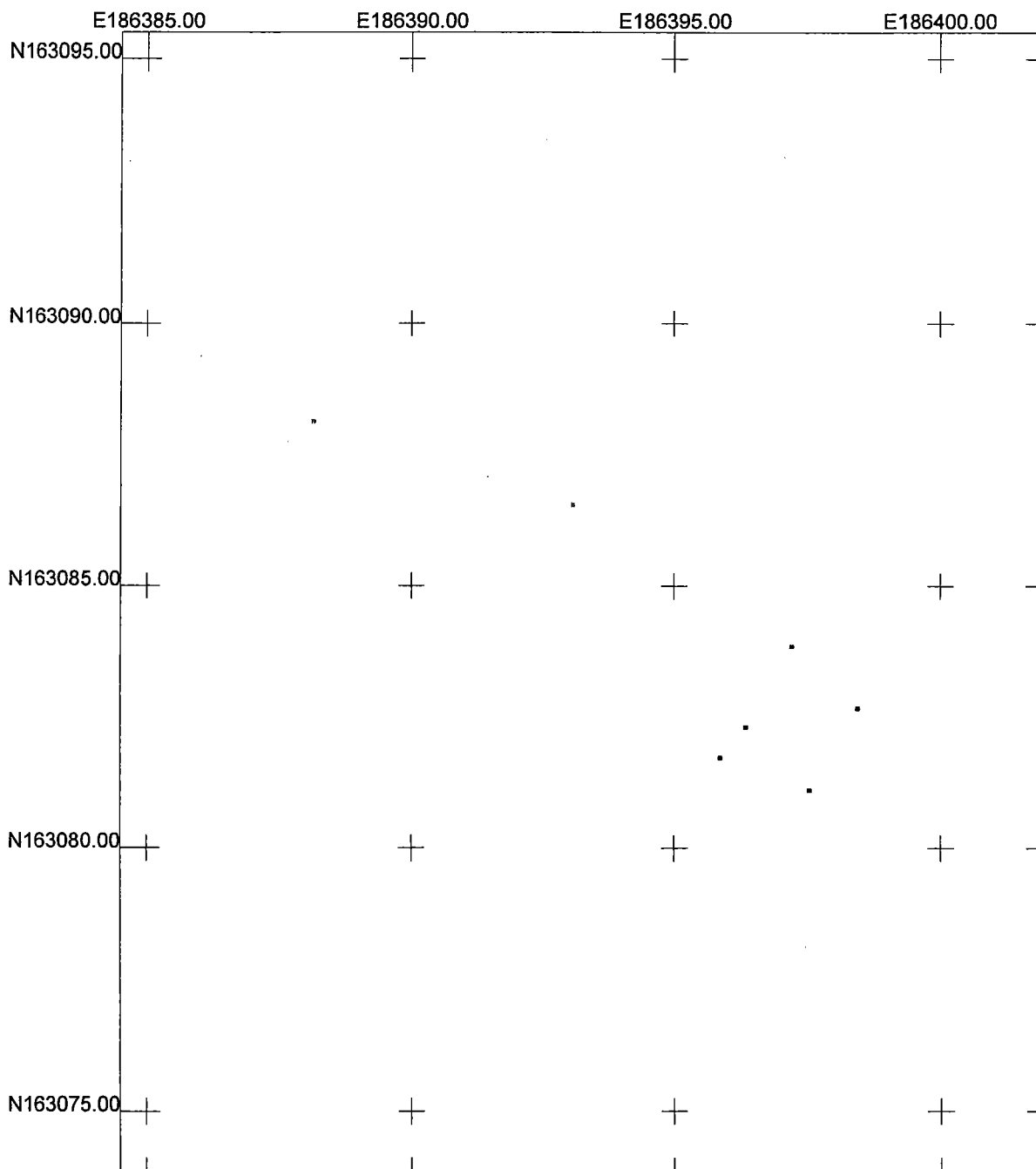


Figure 4 GPS Sampling Location Map

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



Scale 1:125
0 4.000
Meters

r020317b2018.cor
2/5/1999
Pathfinder Office
 **Trimble**

Figure 4 GPS Sample Location Point Data

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

(In Meters)

Sample Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
2018 E	163082.678	186398.44
2018 N	163083.861	186397.199
2018 S1 S2	163081.113	186397.53
2018 W	163082.316	186396.334
2018 V	163081.733	186395.854

Reference Points

<u>Location/Desc.</u>	<u>Y Coord. (Northing)</u>	<u>X Coord. (Easting)</u>
2018 CORN	163086.556	186393.061
2018 CORN	163088.141	186388.118

8. Total number of regulated underground storage tanks at facility

--	--	--	--

 (Complete Section B for each tank)

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

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

SECTION B - SPECIFIC TANK INFORMATION

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

1. Tank Identification Number	TANK NO.			TANK NO.			TANK NO.			TANK NO.			TANK NO.		
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. Lead gasoline	☐			☐			☐			☐			☐		
B. Unleaded gasoline	☐			☐			☐			☐			☐		
C. Alcohol endriched 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
13. Closure Information - Tank ID No.	TANK NO.		TANK NO.		TANK NO.		TANK NO.		TANK NO.			
	0034											
A. Date abandoned in place	Mo.	Day	Year	Mo.	Day	Year	Mo.	Day	Year	Mo.	Day	Year
B. Date taken temporarily out of service												
C. Date removed	05	20	1998									
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.

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

IMPORTANT INFORMATION

- FEE:** Please make check payable to: "Treasurer, State of New Jersey". Use 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 UST Act or regulations may result in the penalties set forth in N.J.S.A. 58:10A-10.
- EMERGENCY:** If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7172 must be called IMMEDIATELY - 24 hours a day.
- UPGRADE EXEMPTION:** Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines)

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

CERTIFICATIONS

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

CERTIFICATION NO. 1:

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

"I certify under penalty of law that the information provided in this document is true, accurate and complete to the best of my knowledge, information and belief. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

JAMES OTT

(Typed / Printed Name)

DIRECTOR, DPW

(Title)

(Signature)

5/25/98

(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, SMC SITE

(Typed / Printed Name)

(Title)

MGR.

(Signature)

5.20.98

(Date)

SMC ENVIRONMENTAL SERVICES

(Name of Firm, if applicable)

GROUP

(NJ. Certification Number)

10279

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APPENDIX B

SITE ASSESSMENT SUMMARY

Site Remediation Program

UST Site/Remedial Investigation Report Certification Form

A. Facility Name : U.S. Army Fort Monmouth New Jersey

Facility Street Address : Directorate of Public Works Building 173

Municipality: Eatontown County : Monmouth

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

B. Owner (RP)'s Name:

Street Address: _____ City: _____

State: _____ Zip: _____ Telephone Number : _____

C. (Check as appropriate)

Site Investigation

Report (SIR) \$500 Fee

____ Remedial Investigation

Report (RIR) \$1000 Fee

X NA – Federal Agreement

D. (Complete all that apply)

- Assigned Case Manager : Ian Curtis, Federal Case Manager

• UST Registration Number : 192486-34 (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: 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:

Company Name: U.S. Army Fort Monmouth

Date: 3/25/99

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APPENDIX C

WASTE MANIFEST



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

STANDARD
COLLECTION
ORDER FORM
199329

GENERATOR/LOCATION **Fort Monmouth** SALES ORDER #
NAME **Fort Monmouth** ACCOUNT APPROVAL CODE:
INFORMATION/ATTENTION LINE
DELIVERY ADDRESS **Riverside Ave Bldg 280. 281**
CITY **Fort Monmouth** STATE **NJ** ZIP
PHONE NUMBER PURCHASE ORDER NUMBER
USA EPA ID NO. (IF APPLICABLE) **NJ3210020587** STATE ID NO.

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

SHIPPING INFORMATION

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

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

SERVICE SECTION

SALES CODE	DESCRIPTION	WASTE CODE	QUANTITY	UNIT PRICE	Building	Drums	gallons
40500	USED OIL REMOVAL				1221	1	20
40300	ANTI-FREEZE REMOVAL						
40600	USED OIL FILTER REMOVAL				1700	1	25
40501	OILY-WATER DISPOSAL	ID72	220	gallons	400	1	25
40502	SLUDGE DISPOSAL						
41001	GASOLINE/WATER				949	1	30
41501	DRUM DISPOSAL						
41504	TANK ENTRY				979	1	20
40800	PARTS WASHER SERVICE						
41500	TRUCK & OPERATOR				286	1	30
41511	NEW 55 GAL DRUM /17H						
41503	QAQC ANALYTICAL TESTING				2018	1	25
42001	DEXSIL TEST KIT	TAX			977	1	25
41509	TRANSPORTATION						
					2021A	1	20

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

INVOICES REFLECTING CHARGES TO CUSTOMER ARE SUBJECT TO AN INTEREST RATE OF THE LESSER OF 1 1/2% PER MONTH (18% PER ANNUM) OR THE MAXIMUM RATE ALLOWED BY LAW ON ANY INVOICES THAT ARE NOT PAID WITHIN 30 DAYS. IN THE EVENT OF DEFAULT, LORCO SHALL BE ENTITLED TO RECOVER COSTS OF COLLECTION, INCLUDING REASONABLE ATTORNEY'S FEES.

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

Generator certifies that the waste is **ID72**
In accordance the N.J.A.C. 7:26-12.1 et seq, LORCO has the required permits to accept the above described waste.

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

SMALL QUANTITY TOTAL GENERATOR CERTIFICATION

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

[Signature]
GENERATOR'S SIGNATURE

LARGE QUANTITY GENERATOR CERTIFICATION

DEXSIL CDT
TEST RESULTS
2100C
TA PPM

Total → 9 → 220 gallons

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.

Anibal Vucovic
Print Name
[Signature] **6.1.98**
Signature Date
LORCO REPRESENTATIVE



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

NON-HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

NJ321002059714023

Manifest
Document No.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 BTR: SCLM2-PW-EV

4. Generator's Phone

(732) 532-6223 Fort Monmouth, NJ 07703

5. Transporter 1 Company Name

LIONETTI OIL RECOVERY CO INC

6. US EPA ID Number

NJ D 0 8 4 0 4 4 0 6 4

A. Transporter's Phone

SUMA
908 721-0900

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

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

10. US EPA ID Number

NJ D 0 8 4 0 4 4 0 6 4

C. Facility's Phone

908 721-0900

11. Waste Shipping Name and Description

a. PETROLEUM OIL (PETROLEUM OIL)
COMBUSTIBLE LIQUID UN1270 PGIII12. Containers
No. Type

0 0 1 T 1220 G

13. Total
Quantity14. Unit
Wt/Vol

D. Additional Descriptions for Materials Listed Above

T, L PETROLEUM OIL 90 %
WATER 10 %

E. Handling Codes for Wastes Listed Above

T04 FILTRATION

15. Special Handling Instructions and Additional Information

24 HR EMERGENCY RESPONSE#(908) 721-0900
DECAL 87066 ERG#128 DEXSIL TEST KIT RESULTS 4100PPM
MANIFEST USED FOR TRACKING PURPOSES ONLY

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

Printed/Typed Name

DENKER, M. DEBAZ

Signature

[Signature]

Month Day Year

06/01/98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Anibal Vazquez

Signature

[Signature]

Month Day Year

06/01/98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

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

Printed/Typed Name

Signature

Month Day Year

ORIGINAL RETURN TO GENERATOR

4. $\frac{1}{2}$

UST DISPOSAL CERTIFICATE



Reader From:
The Drawing Board
P.O. Box 2044 • Hartford, CT 06104-2944
Call Toll Free: 1-800-527-9539

REORDER ITEM # BLN74

STRAIGHT BILL OF LADING
ORIGINAL - NOT NEGOTIABLE

Shipper No. _____

Carrier No. _____

Date _____

SMC ENVIRONMENTAL SERVICES GROUP

(Name of Carrier)

To: Designer Marpal Company, INC	From: Shipper Fort Monmouth (U.S. Army)
Street 1861 Wayside Road	Street Building 2018
Destination Tuxton Falls NJ Zip Code 07724	Origin Eaton town, N.J. 07724

No. Shipping Unit	Kind of Packaging, Description of Article, Special Marks and Markings	Weight (Subject to Correction)	RATE	CHARGES
①	For SERAP ONLY (FBRP) 1- 500 Gallon U.S.T. Skel TANK # 192486-34 Building # 2018			

REMIT C.O.D. TO: ADDRESS 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 _____	COD Amt: \$ _____ This is to certify that the above named material is the property of the shipper, described, packaged, marked and labeled, and is in proper condition for transportation according to the applicable regulations of the Department of Transportation. Signature _____	C.O.D. FEE: PREPAID ☐ \$ _____ COLLECT ☐ \$ _____ TOTAL CHARGES: \$ _____ PREPAID CHARGES: Freight, Insurance, etc. (if any) to be paid by shipper at destination.
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RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above to appear in good order, except as noted (contents and condition of contents of packages unknown, repacked, consigned, and delivered 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 Marpal Co.
DATE _____	DATE 5/29/98

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

Reorder Item #BLN74 The Drawing Board, P.O. Box 2044, Hartford, CT 06104-2944
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FROM JMT ENVIRON. TECH 610 759 6149

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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. 2018
Tetra Tech - BRAC

Project # 3583
Date Rec. 05/20/98
Date Compl. 05/21/98
Released by:



Daniel K. Wright
Laboratory Director

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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.

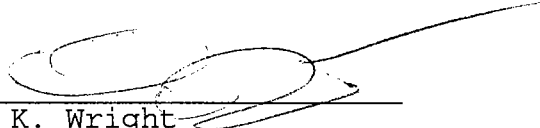
The final concentration of Total Petroleum Hydrocarbons is calculated using percent solid, sample weight and concentration.

PHC Conformance/Non-conformance Summary Report

	<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

[illegible]

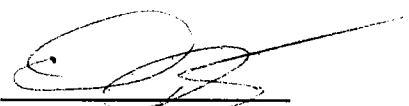
Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEP Certification # 13461

Client : U.S. Army Lab. ID # : 3583
DPW. SELFM-PW-EV Date Rec'd: 20-May-98
Bldg. 173 Analysis Start: 21-May-98
Ft. Monmouth, NJ 07703 Analysis Complete: 21-May-98

Analysis: OQA-QAM-025 UST Reg. #:
Matrix: Soil Closure #:
Analyst: D.DEINHARDT DICAR #:
Ext. Meth: Shake Location #: BLDG. 2018

Sample	Field ID	Dilution Factor	Weight (g)	% Solid	MDL (mg/kg)	TPHC Result (mg/kg)
3583.01	2018-V	1.00	15.44	86.78	175	233.42
3583.02	2018-W	1.00	15.42	79.17	192	229.14
3583.03	2018-N	1.00	15.04	73.70	212	ND
3583.04	2018-E	1.00	15.12	82.21	189	ND
3583.05	2018-S	1.00	15.02	80.84	194	ND
3583.06	2018-S2	1.00	15.62	81.76	184	ND
METHOD BLANK	TBLK 102	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\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998

Calibration Files

100 =T05448.D 50 =T05449.D 20 =T05445.D
 10 =T05446.D 5 =T05450.D

Compound	100	50	20	10	5	Avg	%RSD
1) tC C8	1.540	1.542	1.585	1.532	1.483	1.536 E4	2.38
2) tC C10	1.788	1.827	1.834	1.750	1.854	1.811 E4	2.30
3) TC C12	2.020	2.070	2.075	1.968	2.045	2.036 E4	2.14
4) tC C14	2.112	2.182	2.213	2.109	2.192	2.162 E4	2.22
5) tC C16	2.179	2.261	2.301	2.206	2.299	2.249 E4	2.44
6) tC C18	2.563	2.675	2.727	2.468	2.693	2.625 E4	4.09
7) tC C20	2.414	2.504	2.547	2.452	2.580	2.499 E4	2.71
8) tC C22	2.399	2.484	2.518	2.433	2.565	2.480 E4	2.66
9) tC C24	2.457	2.531	2.564	2.492	2.633	2.536 E4	2.67
10) tC C26	2.460	2.486	2.560	2.506	2.634	2.529 E4	2.74
11) tC C28	2.501	2.480	2.606	2.564	2.696	2.569 E4	3.37
12) tC C30	2.618	2.580	2.784	2.704	2.994	2.736 E4	6.01
13) tC C32	2.596	2.527	2.687	2.702	2.834	2.669 E4	4.35
14) tC C34	2.400	2.340	2.531	2.487	2.617	2.475 E4	4.39
15) tC C36	1.841	1.794	1.937	1.880	1.961	1.883 E4	3.63
16) tC C38	1.342	1.311	1.397	1.327	1.366	1.348 E4	2.52
17) tC C40	9.745	9.509	9.933	8.920	8.778	9.377 E3	5.41
18) tC c42	7.541	7.026	7.336	6.410	5.372	6.737 E3	12.98
19) TC Pristane	2.309	2.449	2.441	2.365	2.460	2.405 E4	2.72
20) TC Phytane	2.428	2.530	2.576	2.494	2.615	2.529 E4	2.87
21) sC o-terphenyl	2.756	2.878	2.928	2.833	2.983	2.876 E4	3.04
22) tC TPHC - total	2.354	2.416	2.742	2.560	2.978	2.610 E4	9.74

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980520\T05462.D
 Acq On : 21 May 98 3:49 am
 Sample : 50 PPM STANDARD
 Misc :
 IntFile : TPHCINT.E

Vial: 13
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998
 Response via : Multiple Level Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 tC	C8	15.364	16.442 E3	-7.0	100	0.00
2 tC	C10	18.107	19.446 E3	-7.4	100	0.00
3 TC	C12	20.357	21.689 E3	-6.5	100	0.00
4 tC	C14	21.617	22.672 E3	-4.9	100	0.00
5 tC	C16	22.493	23.436 E3	-4.2	100	0.00
6 tC	C18	26.250	27.115 E3	-3.3	100	0.00
7 tC	C20	24.993	25.917 E3	-3.7	100	0.00
8 tC	C22	24.798	25.704 E3	-3.7	100	0.00
9 tC	C24	25.356	26.222 E3	-3.4	100	0.00
10 tC	C26	25.291	25.984 E3	-2.7	100	0.00
11 tC	C28	25.694	26.039 E3	-1.3	100	0.00
12 tC	C30	27.361	26.879 E3	1.8	100	0.00
13 tC	C32	26.692	25.904 E3	3.0	100	0.00
14 tC	C34	24.748	23.546 E3	4.9	100	0.00
15 tC	C36	18.826	17.941 E3	4.7	100	0.00
16 tC	C38	13.485	13.147 E3	2.5	100	0.00
17 tC	C40	9.377	9.658 E3	-3.0	100	0.00
18 tC	c42	6.737	7.472 E3	-10.9	100	0.00
19 TC	Pristane	24.049	24.495 E3	-1.9	100	0.00
20 TC	Phytane	25.285	25.957 E3	-2.7	100	0.00
21 sC	o-terphenyl	28.757	29.781 E3	-3.6	100	0.00
22 tC	TPHC - total	26.101	24.905 E3	4.6	100	0.00

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\980520\T05475.D
 Acq On : 21 May 98 3:33 pm
 Sample : 50 PPM STANDARD
 Misc :
 IntFile : TPHCINT.E

Vial: 25
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998
 Response via : Multiple Level Calibration

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

Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 tC C8	15.364	16.379 E3	-6.6	100	0.00
2 tC C10	18.107	19.108 E3	-5.5	98	0.00
3 TC C12	20.357	21.554 E3	-5.9	99	0.00
4 tC C14	21.617	22.560 E3	-4.4	100	0.00
5 tC C16	22.493	23.360 E3	-3.9	100	0.00
6 tC C18	26.250	26.670 E3	-1.6	98	0.00
7 tC C20	24.993	25.923 E3	-3.7	100	0.00
8 tC C22	24.798	25.809 E3	-4.1	100	0.00
9 tC C24	25.356	26.366 E3	-4.0	101	0.00
10 tC C26	25.291	26.014 E3	-2.9	100	0.00
11 tC C28	25.694	26.158 E3	-1.8	100	0.00
12 tC C30	27.361	27.176 E3	0.7	101	0.00
13 tC C32	26.692	26.374 E3	1.2	102	0.00
14 tC C34	24.748	23.794 E3	3.9	101	0.00
15 tC C36	18.826	18.025 E3	4.3	100	0.00
16 tC C38	13.485	13.190 E3	2.2	100	0.00
17 tC C40	9.377	9.721 E3	-3.7	101	0.00
18 tC c42	6.737	7.731 E3	-14.8	103	0.01
19 TC Pristane	24.049	24.980 E3	-3.9	102	0.00
20 TC Phytane	25.285	26.151 E3	-3.4	101	0.00
21 sC o-terphenyl	28.757	29.694 E3	-3.3	100	0.00
22 tC TPHC - total	26.101	25.973 E3	0.5	104	0.00

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

Surrogate Recovery Report

Lab. ID #: 3583

Location #: BLDG. 2018

Sample		Surrogate Added (ppm)	Amount Recovered (ppm)	Percent Recovery
3583.01		10.00	8.95	89.47
3583.02		10.00	8.86	88.59
3583.03		10.00	9.26	92.63
3583.04		10.00	9.29	92.93
3583.05		10.00	8.97	89.71
3583.06		10.00	9.08	90.75
METHOD BLANK	TBLK 102	10.00	9.02	90.22

Surrogate Added : o-Terphenyl

5/22/98

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

Matrix Spike Recovery Report

Lab. ID #: 3583

Location #: BLDG. 2018

Sample	Spike Amount Added (ppm)	Sample Amount (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
3583.01MS	1000	62.55	921.33	85.88	75-125
3583.01MSD	1000	62.55	877.58	81.50	75-125

RPD	5.23	20.00
-----	------	-------

5/22/98

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

Blank Spike Recovery Report

Lab. ID #: 3583
Location #: BLDG. 2018

Sample	Date Extracted	Spike Amount Added (ppm)	Matrix Spike Amount (ppm)	Percent Recovery	QC Limits %
Blank Spike	21-May-98	1000	875.70	87.57	75-125

5/22/98

Quantitation Report

(QT Reviewed)

Data File : C:\HPCHEM\1\DATA\980520\T05471.D

Vial: 21

Acq On : 21 May 98 11:33 am

Operator: DEINHARDT

Sample : 3583.01

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:40 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

Response via : Initial Calibration

DataAcq Meth : TPH38.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	257284	8.947 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	89.47%#
Target Compounds			
9) tC C24	14.94	1346	0.053 mg/L
12) tC C30	16.99	1549	0.057 mg/L
15) tC C36	18.71	1445	0.077 mg/L
22) tC TPHC - total	13.94	1632620	62.550 mg/L m

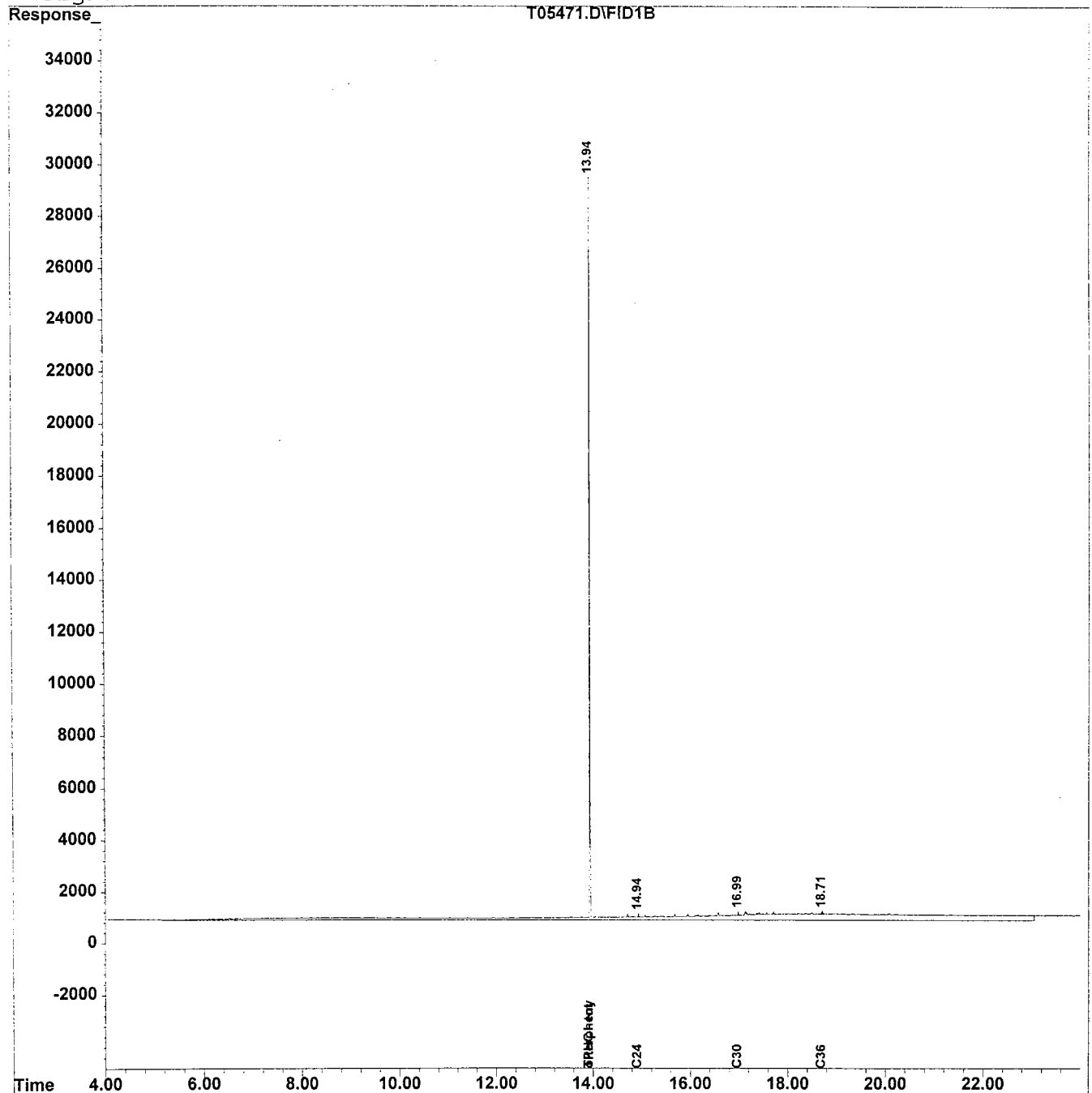
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05471.D
Acq On : 21 May 98 11:33 am
Sample : 3583.01
Misc :
IntFile : TPHCINT.E
Quant Time: May 22 7:40 1998 Quant Results File: TPH38.RES

Vial: 21
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue May 19 15:34:03 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH38.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\980520\T05472.D
 Acq On : 21 May 98 12:29 pm
 Sample : 3583.02
 Misc :
 IntFile : TPHCINT.E
 Quant Time: May 22 7:41 1998

Vial: 22
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH38.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	254762	8.859 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	88.59%#
Target Compounds			
12) tC C30	16.99	1340	0.049 mg/L
15) tC C36	18.72	1100	0.058 mg/L
22) tC TPHC - total	13.94	1460305	55.948 mg/L m

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05472.D

Vial: 22

Acq On : 21 May 98 12:29 pm

Operator: DEINHARDT

Sample : 3583.02

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:41 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

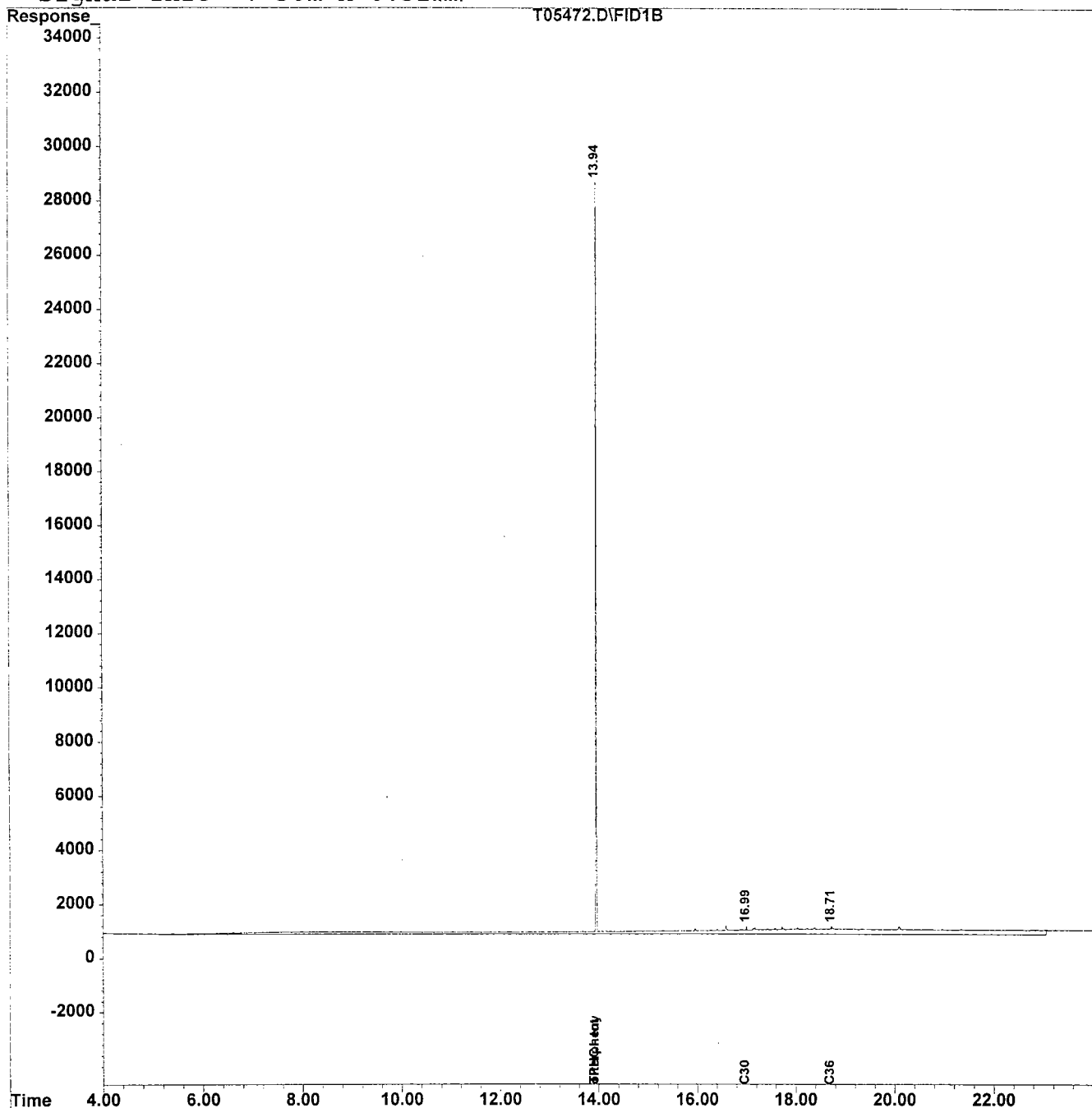
Response via : Multiple Level Calibration

DataAcq Meth : TPH38.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\980520\T05473.D

Vial: 23

Acq On : 21 May 98 1:27 pm

Operator: DEINHARDT

Sample : 3583.03

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:41 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

Response via : Initial Calibration

DataAcq Meth : TPH38.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	266380	9.263 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	92.63%#

Target Compounds

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05473.D

Vial: 23

Acq On : 21 May 98 1:27 pm

Operator: DEINHARDT

Sample : 3583.03

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:41 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

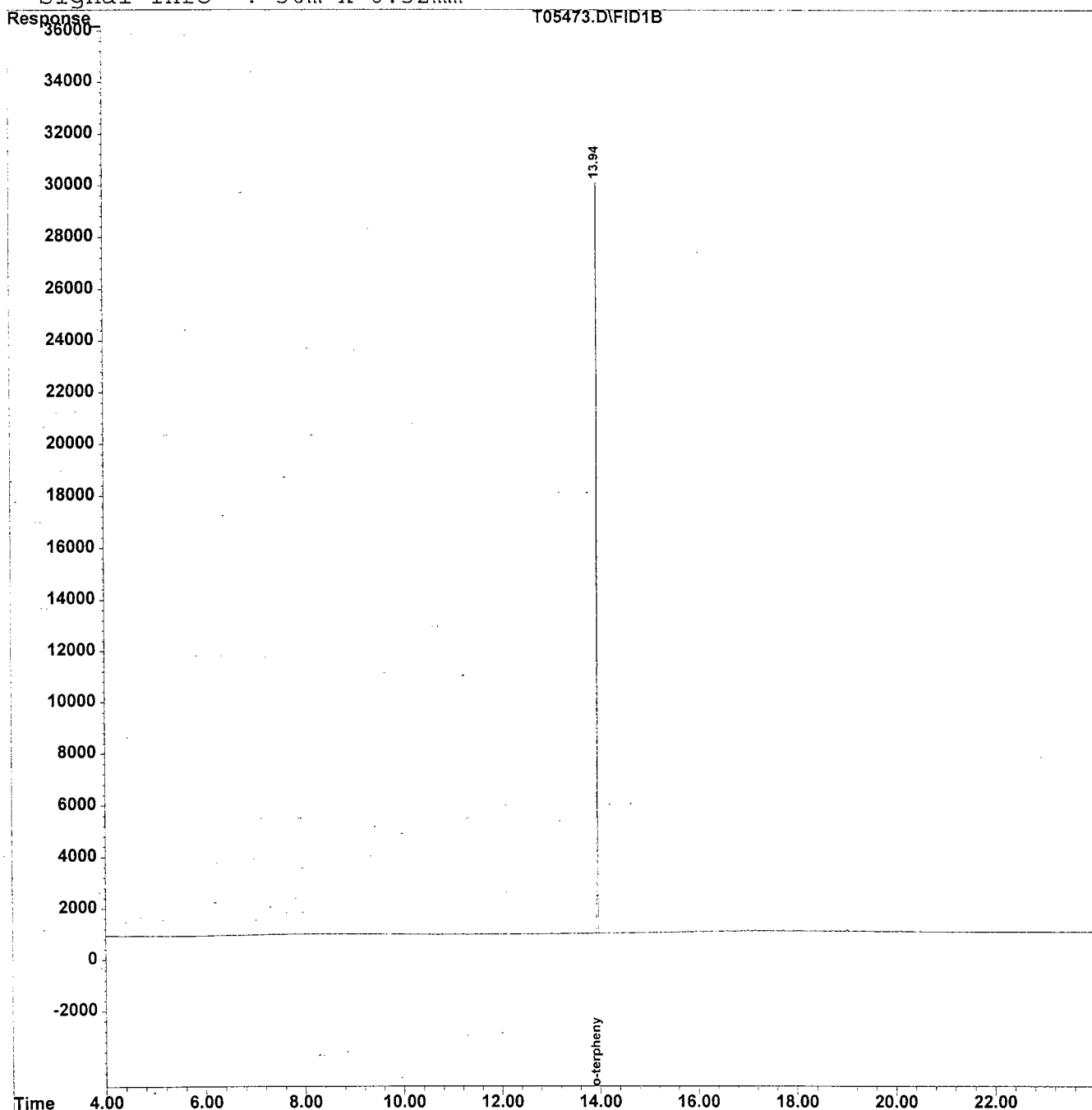
Response via : Multiple Level Calibration

DataAcq Meth : TPH38.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\980520\T05476.D
 Acq On : 21 May 98 4:34 pm
 Sample : 3583.04
 Misc :
 IntFile : TPHCINT.E
 Quant Time: May 22 7:41 1998 Quant Results File: TPH38.RES

Vial: 26
 Operator: DEINHARDT
 Inst : FID/TCD
 Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH38.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	267232	9.293 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	92.93%#

Target Compounds

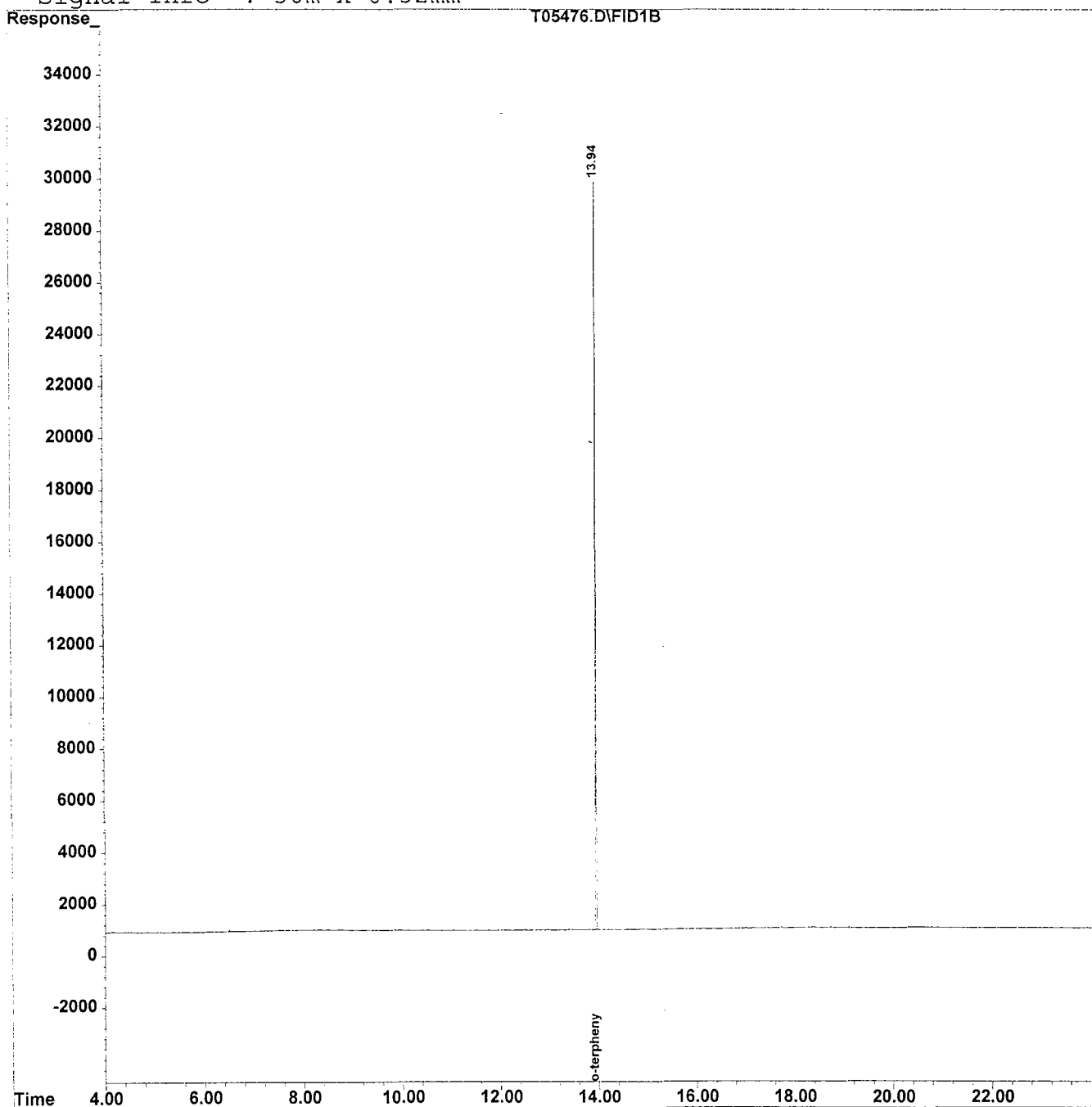
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05476.D
Acq On : 21 May 98 4:34 pm
Sample : 3583.04
Misc :
IntFile : TPHCINT.E
Quant Time: May 22 7:41 1998 Quant Results File: TPH38.RES

Vial: 26
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue May 19 15:34:03 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH38.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\980520\T05477.D Vial: 27
 Acq On : 21 May 98 5:31 pm Operator: DEINHARDT
 Sample : 3583.05 Inst : FID/TCD
 Misc : Multiplr: 1.00
 IntFile : TPHCINT.E
 Quant Time: May 22 7:42 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
 Title : TPHC Calibration 06/05/97 21 peaks
 Last Update : Tue May 19 15:34:03 1998
 Response via : Initial Calibration
 DataAcq Meth : TPH38.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	257979	8.971 mg/L
Spiked Amount	10.000	Range	8 - 13
		Recovery	= 89.71%#

Target Compounds

Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05477.D

Vial: 27

Acq On : 21 May 98 5:31 pm

Operator: DEINHARDT

Sample : 3583.05

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:42 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

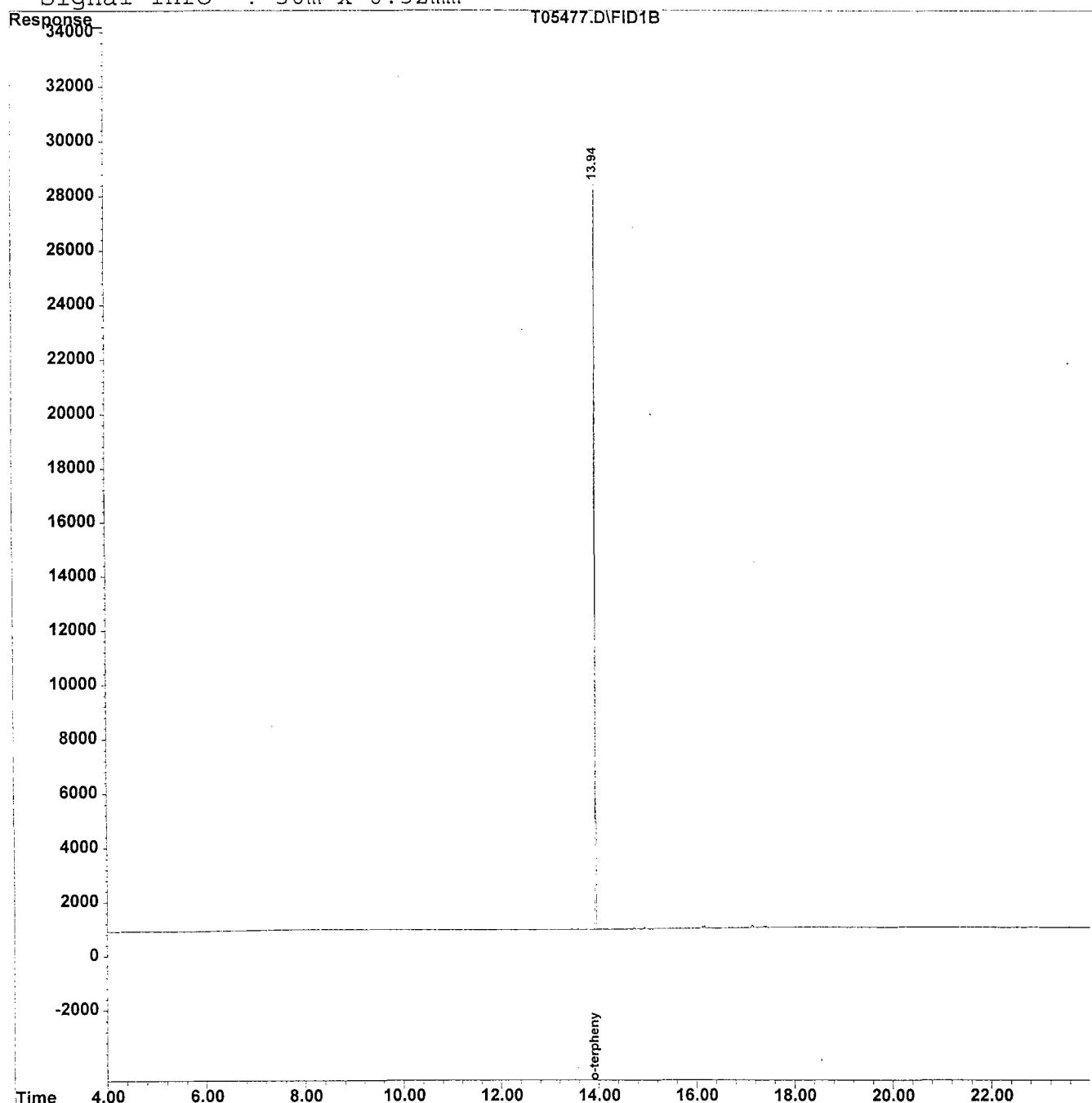
Response via : Multiple Level Calibration

DataAcq Meth : TPH38.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\980520\T05478.D

Vial: 28

Acq On : 21 May 98 6:26 pm

Operator: DEINHARDT

Sample : 3583.06

Inst : FID/TCD

Misc :

Multiplr: 1.00

IntFile : TPHCINT.E

Quant Time: May 22 7:42 1998 Quant Results File: TPH38.RES

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)

Title : TPHC Calibration 06/05/97 21 peaks

Last Update : Tue May 19 15:34:03 1998

Response via : Initial Calibration

DataAcq Meth : TPH38.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	260960	9.075 mg/L
Spiked Amount 10.000	Range 8 - 13	Recovery =	90.75%#

Target Compounds

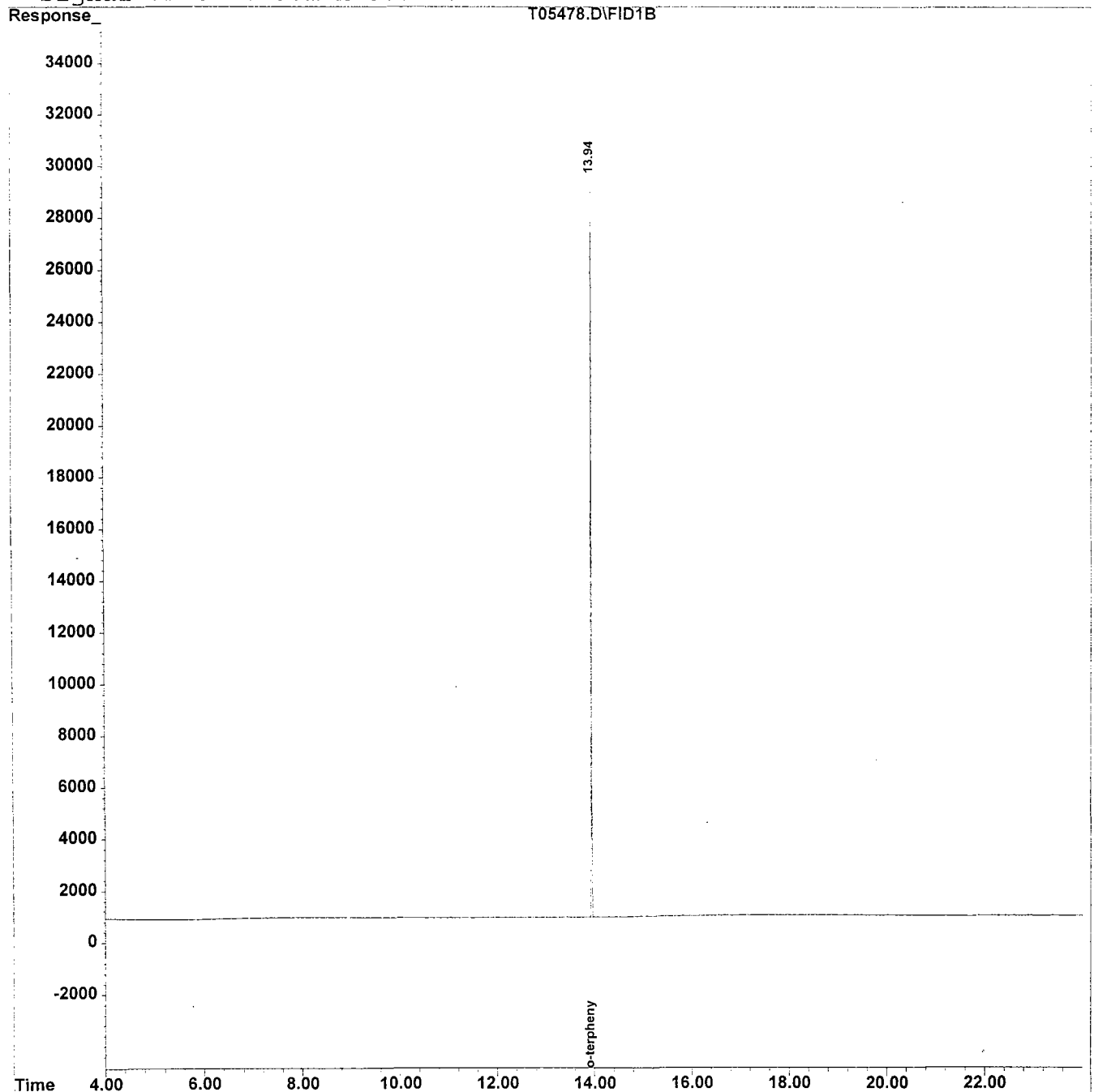
Quantitation Report

Data File : C:\HPCHEM\1\DATA\980520\T05478.D
Acq On : 21 May 98 6:26 pm
Sample : 3583.06
Misc :
IntFile : TPHCINT.E
Quant Time: May 22 7:42 1998 Quant Results File: TPH38.RES

Vial: 28
Operator: DEINHARDT
Inst : FID/TCD
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TPH38.M (Chemstation Integrator)
Title : TPHC Calibration 06/05/97 21 peaks
Last Update : Tue May 19 15:34:03 1998
Response via : Multiple Level Calibration
DataAcq Meth : TPH38.M

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



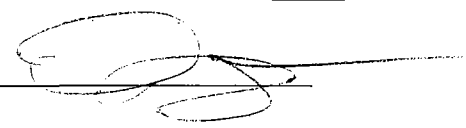
LABORATORY DELIVERABLES CHECKLIST AND NON-CONFORMANCE SUMMARY

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: 5/18/94

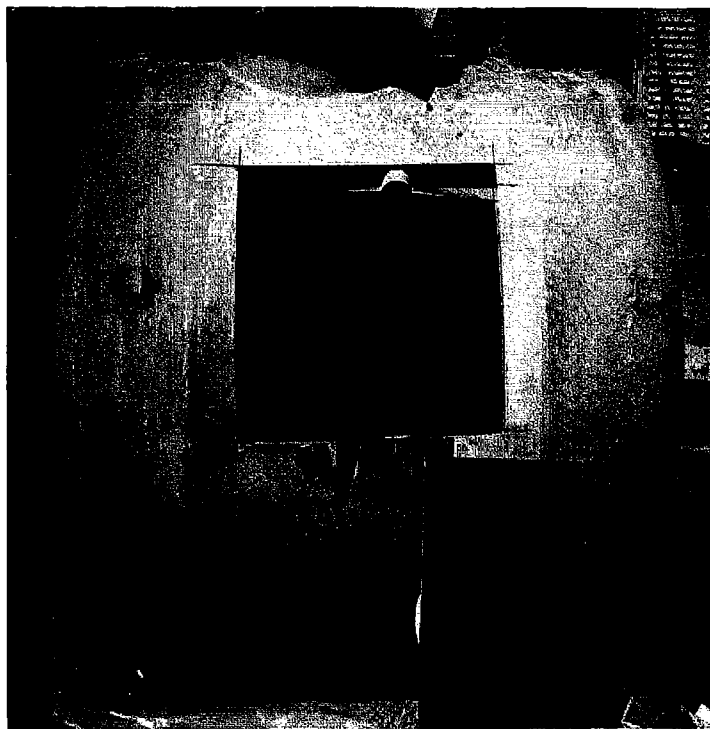
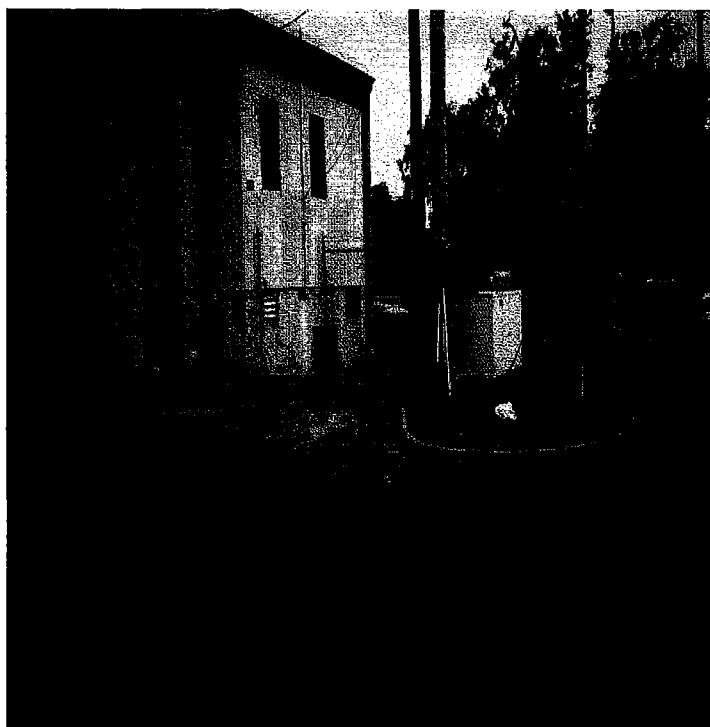
Laboratory Certification #13461

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

[illegible]

APPENDIX F

PHOTOGRAPHS



May 20, 1998

PHOTOGRAPHIC LOG

UST NO. 192486-34

Building 2018

Charles Wood-East

Fort Monmouth



**SMC ENVIRONMENTAL
SERVICES GROUP**

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