United States Army

Fort Monmouth, New Jersey

Underground Storage Tank Closure and Site Investigation Report

Former Building T-80
Main Post

NJDEP UST Registration No. 090010-06
NJDEP Closure Approval No. C-93-4297
NJDEP Case No. 94-6-16-1127-25

July 1998

UNDERGROUND STORAGE TANK
CLOSURE AND SITE INVESTIGATION REPORT

FORMER BUILDING T-80

MAIN POST
NJDEP UST REGISTRATION NO. 090010-06
NJDEP CLOSURE APPROVAL NO. C-93-4297
NJDEP CASE NO. 94-6-16-1127-25

JULY 1998

PROJECT NO.: 09-5004-12
CONTRACT NO.: DACA51-94-D-0014

PREPARED FOR:

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

PREPARED BY:

BCM ENGINEERS
A DIVISION OF ATC
BROMLEY CORPORATE CENTER
THREE TERRI LANE
BURLINGTON, NEW JERSEY 08016

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EXECUTIVE SUMMARY

On June 16, 1994, a steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) Closure Approval No. C-93-4297 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 090010-06, was located immediately adjacent to Former Building T-80 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 090010-06 was a 1,000-gallon No. 2 fuel oil UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

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*. 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. One corrosion hole was observed on each of the end seams of the UST, and evidence of potentially contaminated soils was observed surrounding the tank. Based on the inspection of the UST, Directorate of Public Works (DPW) concluded that a discharge was associated with this UST. On June, 1994 a spill was reported to the NJDEP "Hot Line" for UST number 090010-06 and Case Number 94-6-16-1127-25 was assigned. On July 16, 1994, following the removal of the UST, approximately 56 cubic yards of potentially contaminated soil were removed from the excavation. Groundwater was present in the excavation at approximately 6.0 feet below ground surface. No product lines were found during the excavation of the UST.

All post-excavation soil samples collected from the UST excavation at Former Building T-80 contained TPHC concentrations below the NJDEP residential direct contact total organic contaminants soil cleanup criteria of 10,000 milligrams per kilogram (mg/kg) (N.J.A.C. 7:26D and revisions dated February 3, 1994). The soil samples contained TPHC concentrations ranging from non-detectable to 440.0 mg/kg. Following receipt of all post-excavation soil sampling results, the excavation was backfilled to grade with a combination of uncontaminated excavated soil and certified clean fill. The excavation site was then restored to its original condition.

In response to the observation of potentially contaminated soil near the shallow water table, one shallow overburden monitoring well (MW-1) was installed at the Former Building T-80 area on September 15, 1994. On May 19, 1995, and June 13, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs). All groundwater analytical results were either below the detection limit or in compliance with the New Jersey Ground Water Quality Criteria (GWQC) with the exception to the volatile compound benzene. This compound was detected at a concentration of 1.4 ug/l, above the GWQC of 1.0 ug/l, in monitoring well MW-1 during both sampling events. No product or sheen was observed in MW-1 on either of the sampling dates.

Based on the analytical results of the groundwater samples collected on May 18, 1995 and June 13, 1995, groundwater quality at the Former Building T-80 UST closure site exceeds the New Jersey Groundwater Quality Standard for benzene. Collection of the samples on a quarterly basis from MW-1 for BTEX is recommended. The BTEX analysis will determine if the low levels of benzene detected previously are declining. The need for any additional actions to address groundwater quality should be evaluated following receipt of the additional groundwater data.

1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 090010-06, was closed at Former Building T-80 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 16, 1994. Refer to site location map on Figure 1. This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on August 5, 1993. The plan was approved on December 7, 1993 and assigned TMS No. C-93-4297. The UST was a steel 1,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 090010-06 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 on site for inspection. CUTE, the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 090010-06 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval and signed certifications for UST No. 090010-06 are included in Appendices A and B, respectively.

This UST Closure and Site Investigation Report has been prepared by Smith Technology Corporation, to assist the United States Army Directorate of Public Works (DPW) in complying with the NJDEP Bureau of Underground Storage Tanks (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. September 1990 and revisions dated November 1, 1991).

This report was prepared using information required 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.

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Department of Public Works
Fort Monmouth, New Jersey

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SCALE
0 2000 FT.

NEW JERSEY

QUADRANGLE LOCATION

Source: Long Branch, New Jersey Quadrangle

Project No. 09-5004-14

Figure 1
Site Location Map

1.2 SITE DESCRIPTION

Former Building T-80 was located in the eastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 090010-06, located north of the Former Building T-80, was exposed during excavation activities performed to demolish Building T-80. No product lines (piping) were found during the excavation of the UST or Building T-80. The fill port area was located directly above the tank. 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 Former Building T-80. 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-

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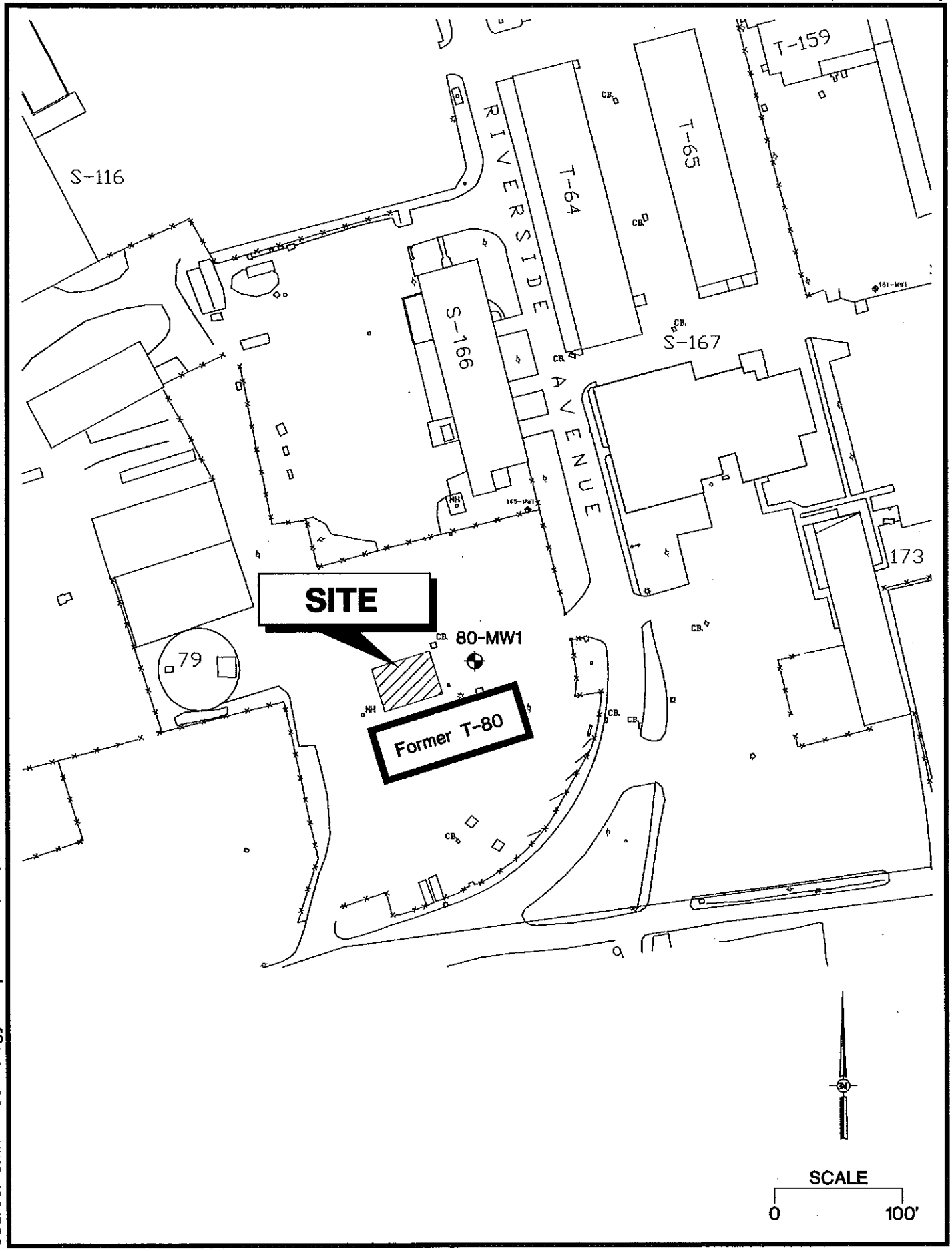

Source: Smith Technology Corporation (157)

Project No. 09-5004-12

Figure 2
Former Building T-80
Site Map

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.

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 involve with, or were affected by, the decommissioning of the UST system were minimized. All areas which posed, or may have been suspected to pose a vapor hazard were monitored by a qualified individual utilizing an organic vapor analyzer (OVA). The individual ascertained if the area was properly vented to render the area safe, as defined by OSHA.

1.4 REMOVAL OF UNDERGROUND STORAGE TANK

1.4.1 General Procedures

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

1.4.2 Underground Storage Tank Excavation and Cleaning

Prior to UST decommissioning activities, surficial soil was removed to expose the UST. No product lines (piping) were found during the excavation of the UST. The UST was purged to remove vapors prior to cutting. 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 1,024 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifests (NJA-1603186 and NJA-1603243).

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. One hole was observed on each of the end seams of the tank during the inspection by the Sub-Surface Evaluator. Soil surrounding the UST were screened visually and with an OVA for evidence of contamination. Evidence of potential contamination was observed.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

The tank was transported by CUTE to Mazza and Sons Inc. for disposal in compliance with all applicable regulations and laws. See Appendix D for UST Disposal Certificate.

The removal contractor labeled the UST prior to transport with the following information:

- site of origin
- contact person
- NJDEP UST Facility ID number
- name of transporter/contact person
- destination site/contact person

1.6 MANAGEMENT OF EXCAVATED SOILS

Based on visual observations, approximately 56 cubic yards of potentially contaminated soils were excavated from the UST excavation. Potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were stored on-site prior to ultimate disposal at Soil Remediation of Philadelphia. Soils that did not exhibit signs of contamination 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 he NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (September 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.

- Closure Contractor: Cleaning Up The Environment Inc. (CUTE)
  Closure Supervisor: John Lonergan
  Phone Number: (201)427-2881
  NJDEP Company Certification No.: 0200128
  NJDEP -UST Closure Certification No.: 3248

- Subsurface Evaluator: Dinkerrai M. Desai
  Employer: U.S. Army, Fort Monmouth
  Phone Number: (908) 532-1475
  NJDEP Certification No.: E0002266

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

- Hazardous Waste Hauler: Freehold Cartage Inc.
  Contact Person: Barry Olsen
  Phone Number: (908)721-0900
  NJDEP Hazardous Waste Hauler No.: 2265

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. Additional soils were removed from the excavation surrounding UST No. 090010-06 until no evidence of contamination remained.

2.3 SOIL SAMPLING

On July 16, 1994, post-excavation soil samples A, B, C, D, E, F, G, and H were collected from a total of eight (8) locations along the sidewalls of the UST excavation, at a depth of 5.5 feet below ground surface (bgs). No product lines (piping) were found during the excavation of the UST or excavations performed to demolish Building T-80. The soil samples were analyzed for TPHC.

The site assessment was performed by U.S. Army personnel in accordance with the NJDEP *Technical Requirements* and the NJDEP *Field Sampling Procedures Manual.* A summary of sampling activities including parameters analyzed is provided in Table 1. The post-excavation soil samples were collected using polystyrene scoops. Actual soil TPHC values may be higher than reported, due to sample utensil absorbency. If absorbency resulted in reducing the actual soil TPHC concentration by 50 %, the highest soil contaminant would have been 880.0 mg/kg, still below the applicable NJDEP soil cleanup standard for total organic contaminants of 10,000 mg/kg. 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.

2.4 GROUNDWATER SAMPLING

2.4.1 Monitoring Well Installation

In response to the observation of potentially contaminated soil near the shallow water table, one shallow monitoring well (MW-1) was installed at the Former Building T-80 area on September 15, 1994. It was installed approximately 30 feet east of the former UST excavation. The monitoring well was screened in the 3.0 to 13.0 foot interval, across the water table, which is approximately 3.0 feet below grade surface.

The well was constructed in accordance with the NJDEP's well construction protocols outlined in its May 1992 *Field Sampling Procedures Manual.* The NJDEP well drilling permit and a well construction log is presented in Appendix E.

The well was constructed with 4-inch (ID) PVC riser and 0.020 slotted PVC well screen. A silica sand pack was installed in the annulus between the borehole wall and the screen. The sand

TABLE 1
SUMMARY OF SAMPLING ACTIVITIES
BUILDING 80, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP B	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP D	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	6/16/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
MW-1	5/18/95	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Fill Bailer
MW-1	6/3/95	Aqueous	Groundwater	VOCs, SVOCs	Teflon Bottom Fill Bailer

* NOTES:

TPHC: Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)

VOCs: Volatile Organic Compounds plus 15 tentatively identified compounds (Method 624 / soil and aqueous)

SVOCs: Semivolatile organic compounds plus 15 tentatively identified compounds (Method 625 / aqueous)

Pb: Lead (Method SW-846 / soil and aqueous)

Source: Smith Technology Corporation (Smith Project No. 09-5004-12)

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pack was extended approximately 2 feet above the top of the screen. The sand pack above the well screen was graded down to a fine sand to minimize grout intrusion.

The borehole was tremie-grouted with bentonite-cement grout from the top of the sand pack to 0.5 inches bgs. The well was secured with a water-tight, flush-mounted locking road box. The road box was set in place with concrete, which was placed in the remaining open borehole. The elevation of the well riser was surveyed to the nearest 0.01 feet by a New Jersey-licensed surveyor. The well permit number was marked on the well casing as required.

The monitoring well was developed using a peristaltic surface pump. The well was pumped for 1 hour or until silt free. All residual soils and liquids generated during monitoring well installation and development program were collected in New Jersey Department of Transportation-approved 55-gallon drums. The drums were placed in a designated secure location for waste characterization and offsite disposal.

2.4.2 Monitoring Well Sampling

On May 18, 1995 and June 13, 1995, MW-1 was sampled for volatile organic compounds calibrated for xylene plus 15 tentatively identified compounds (VOCs), and semivolatile organic compounds plus 15 tentatively identified compounds (SVOCs). Sampling and analysis were performed in accordance with the NJDEP *Field Sampling Procedures Manual* and the *Technical Requirements For Site Remediation.*

Prior to sampling, the water level was measured to the nearest 0.01 feet, and the distance to the bottom of the well was to be measured to the nearest 0.1 feet. The well was checked for floating product (light non-aqueous phase liquids). The well was purged of three to five well volumes of standing water. Sample volume was then collected using a dedicated decontaminated Teflon bottom-filled bailer attached to PTFE (Teflon)-coated stainless steel cable.

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 from a total of eight (8) locations on July 16, 1994. No product lines (piping) were found during the excavation activities. All samples were analyzed for TPHC. 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 results are shown on Figure 3. The analytical data package is provided in Appendix E.

All post-excavation soil samples contained concentrations of TPHC below the NJDEP soil cleanup criteria. Post-excavation soil samples C, E, F, and H contained TPHC concentrations ranging from 11.7 mg/kg to 440.0 mg/kg. All other samples contained non-detectable concentrations of TPHC.

3.2 GROUNDWATER SAMPLING RESULTS

The sample collected from MW-1 on May 18, 1995, contained methylene chloride at 1.4 ug/l, benzene at 1.7 ug/l, chlorobenzene at 3.6 ug/l, sec-butylbenzene at 1.6 ug/l, 1,4-dichlorobenzene at 0.9 ug/l, 1,2-dichlorobenzene at 2.3 ug/l, naphthalene at 2.0 ug/l, and di-n-butylphthalate at 70.0 ug/l. No other compounds were detected. The benzene concentration exceeded the GWQS of 1.0 ug/l. Methylene chloride and di-n-butylphthalate were detected in the field blank at concentrations of 5.1 ug/l and 55 ug/l, respectively. No other compounds were detected in the field blank.

The sample collected from MW-1 on June 13, 1995, contained methylene chloride at 1.3 ug/l, benzene at 1.4 ug/l, chlorobenzene at 3.4 ug/l, isopropylbenzene at 1.4 ug/l, sec-butylbenzene at 1.6 ug/l, 1,4-dichlorobenzene at 1.0 ug/l, 1,2-dichlorobenzene at 2.3 ug/l, and n-butylbenzene at 1.0 ug/l. No other compounds were detected. The benzene concentration exceeded the GWQS of 1.0 ug/l. Methylene chloride was detected in the field blank at a concentration of 2.1 ug/l. No other compounds were detected in the field blank.

No product or sheen was observed in MW-1 on either of the sampling dates. The depth to the water table was 2.96 feet below grade surface on May 18, 1995 and 3.24 feet below grade surface on June 13, 1995.

All groundwater analytical results are presented in Table 3 and shown on Figure 4. The groundwater analytical data package is provided in Appendix F. The full data package, including quality control, is on file at U.S. Army Fort Monmouth, DPW.

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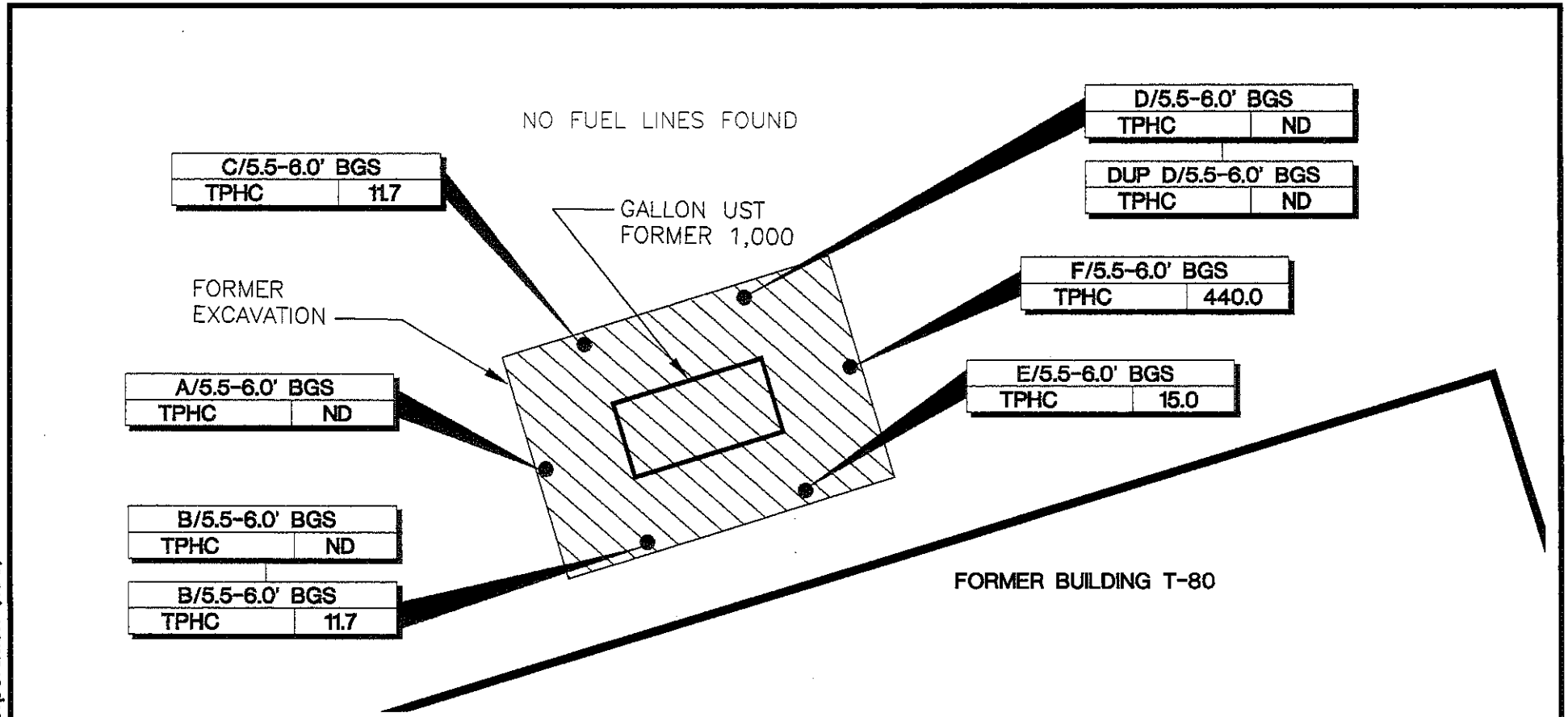

LEGEND

- ● SOIL SAMPLE LOCATION (JUNE 16, 1994)
- LIMIT OF EXCAVATION (JUNE 16, 1994)

NOTES: 1. ALL RESULTS IN MILLIGRAMS PER KILOGRAM (DRY WEIGHT)
2. SEE TABLE 2 FOR NJDEP SOIL CLEANUP CRITERIA
3. BGS = BELOW GROUND SURFACE

SCALE
0 10'

Source: Smith Technology Corporation (158)

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Figure 3
Former Building T-80
Soil Sampling Results

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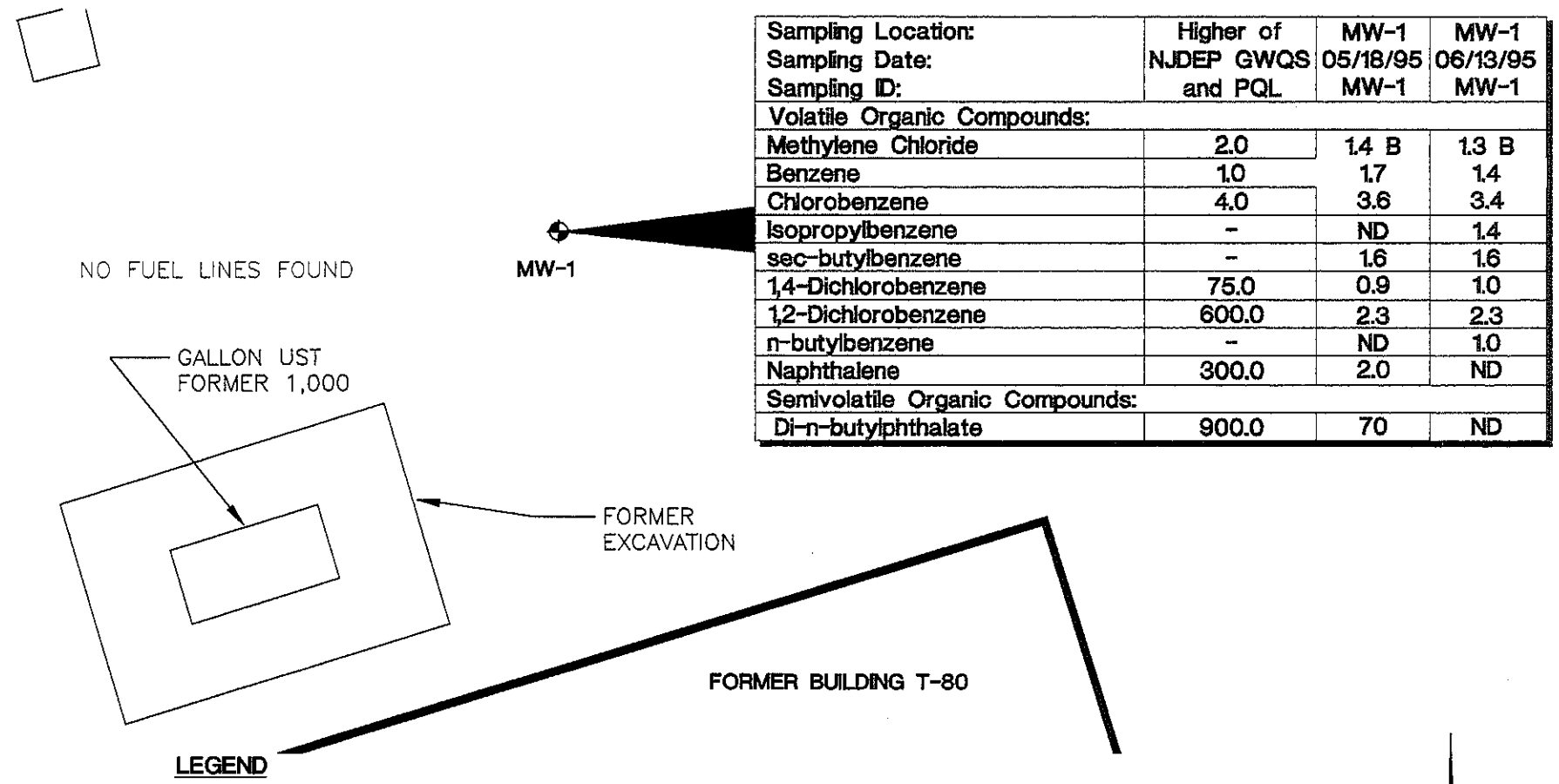
Sampling Location: Sampling Date: Sampling ID:	Higher of NJDEP GWQS and PQL	MW-1 05/18/95 MW-1	MW-1 06/13/95 MW-1
Volatile Organic Compounds:			
Methylene Chloride	2.0	1.4 B	1.3 B
Benzene	1.0	1.7	1.4
Chlorobenzene	4.0	3.6	3.4
Isopropylbenzene	-	ND	1.4
sec-butylbenzene	-	1.6	1.6
1,4-Dichlorobenzene	75.0	0.9	1.0
1,2-Dichlorobenzene	600.0	2.3	2.3
n-butylbenzene	-	ND	1.0
Naphthalene	300.0	2.0	ND
Semivolatile Organic Compounds:			
Di-n-butylphthalate	900.0	70	ND



Source: Smith Technology Corporation (159)

Project No. 09-5004-12

Figure 4

Former Building T-80
Goundwater Sampling Results

TABLE 2
POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 80, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID/Depth	Sample Laboratory ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (mg/kg)	Compound of Concern	Result (mg/kg)	NJDEP Soil Cleanup Criteria * (mg/kg)	Exceeds Cleanup Criteria
A/5.5-6.0	1526.1	6/16/94	6/16/94	TPHC	3.3	yes	ND	10,000	--
				Total % Solid	--	--	83 %	--	--
B/5.5-6.0	1526.2	6/16/94	6/16/94	TPHC	23	yes	ND	10,000	--
				Total % Solid	--	--	86 %	--	--
DUP B/5.5-6.0	1526.3	6/16/94	6/16/94	TPHC	9.9	yes	ND	10,000	--
				Total % Solid	--	--	89 %	--	--
C/5.5-6.0	1526.4	6/16/94	6/16/94	TPHC	69	yes	11.7	10,000	--
				Total % Solid	--	--	86 %	--	--
D/5.5-6.0	1526.5	6/16/94	6/16/94	TPHC	69	yes	ND	10,000	--
				Total % Solid	--	--	88 %	--	--
DUP D/5.5-6.0	1526.6	6/16/94	6/16/94	TPHC	69	yes	11.7	10,000	--
				Total % Solid	--	--	86 %	--	--
E/5.5-6.0	1526.7	6/16/94	6/16/94	TPHC	69	yes	15.0	10,000	--
				Total % Solid	--	--	85 %	--	--
F/5.5-6.0	1526.8	6/16/94	6/16/94	TPHC	69	yes	440.0	10,000	--
				Total % Solid	--	--	85 %	--	--

NOTES:

--: Not applicable / does not exceed criteria

*: Cleanup criteria for total organics

ND: Indicates compound not detected

Actual soil TPHC values may be higher than reported due to absorbancy by polystyrene scoops. If absorbancy resulted in reducing the actual soil TPHC concentration by 50%, the highest soil contaminant would be 880 mg/kg.

Source: Smith Technology Corporation (Smith Project No. 09-5004-12)

80TBL.XLS

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 80, MAIN POST, MW-1

FORT MONMOUTH, NEW JERSEY

SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/2/95	N-nitrosodimethylamine	2	--	ND	20	--
			bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)ether	5	--	ND	--	--
			N-Nitroso-Di-N-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	300	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	--
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenylether	3	--	ND	--	--
			n-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine(as azo)	6	--	ND	--	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--
			Anthracene	2	--	ND	2,000	--
			Di-n-butylphthalate	70	--	70	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/2/95	Butylbenzylphthalate	9	--	ND	--	--
			Benzo(a)anthracene	2	--	ND	0.05	--
			3,3'-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	4	--	ND	30	--
			Di-n-octylphthalate	2	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	2	--	ND	0.5	--
			Benzo(a)pyrene	2	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	0.05	--
			Dibenz(a,h)anthracene	3	--	ND	0.005	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
			SEMIVOLATILE TICS:					
			Undecane,2,6-dimethyl	--	--	9 J	--	--
			Unknown Hydrocarbon	--	--	19 J	--	--
			Hexadecane	--	--	7 J	--	--
			Dodecane,2,7,10-trimethyl	--	--	14 J	--	--
			Unknown Hydrocarbon	--	--	7 J	--	--
			Unknown Hydrocarbon	--	--	6 J	--	--
			Unknown Hydrocarbon	--	--	6 J	--	--
			Heptadecane,2,6,10,14-tetra	--	--	27 J	--	--
			Naphthalene,1,4,6-trimethyl	--	--	4 J	--	--
			Naphthalene,1,6,7-trimethyl	--	--	4 J	--	--
			Unknown Hydrocarbon	--	--	8 J	--	--
			Dodecane,2,6,10-trimethyl	--	--	6 J	--	--
			Undecane,3,5-dimethyl	--	--	28 J	--	--
			Didecane,4,6-dimethyl	--	--	58 J	--	--
			Pentadecane	--	--	27 J	--	--
			Tetradecane	--	--	6 J	--	--
			Unknown	--	--	16 J	--	--
			TOTAL TICS:	--	--	252	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/2/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Bromomethane	0.5	--	ND	10	--
			Vinyl Chloride	0.5	--	ND	5	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			Methylene Chloride	1.4	--	1.4 B	2	--
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			Bromochloromethane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Chloroform	0.5	--	ND	6	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			1,2-Dichloroethane	0.5	--	ND	2	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Dibromomethane	0.5	--	ND	--	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			Bromodichloromethane	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Trichloroethene	0.5	--	ND	1	--
			Dibromochloromethane	0.5	--	ND	10	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Benzene	1.7	--	1.7	1	yes
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			Bromoform	0.5	--	ND	4	--
			1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	5/18/95	6/2/95	Tetrachloroethene	0.5	--	ND	1	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			Toluene	0.5	--	ND	1,000	--
			1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	3.6	--	3.6	4	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Isopropylbenzene	0.5	--	ND	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Propylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	1.6	--	1.6	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			1,4-Dichlorobenzene	0.9	--	0.9	75	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,2-Dichlorobenzene	2.3	--	2.3	600	--
			n-Butylbenzene	0.5	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	2	--	2	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	5/18/95	6/2/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Bromomethane	0.5	--	ND	10	--
			Vinyl Chloride	0.5	--	ND	5	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			Methylene Chloride	5.1	--	5.1 B	2	yes
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			Bromochloromethane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Chloroform	0.5	--	ND	6	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			1,2-Dichloroethane	0.5	--	ND	2	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Dibromomethane	0.5	--	ND	--	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			Bromodichloromethane	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Trichloroethene	0.5	--	ND	1	--
			Dibromochloromethane	0.5	--	ND	10	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Benzene	0.5	--	ND	1	--
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			Bromoform	0.5	--	ND	4	--
			1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 80, MAIN POST, TRIP BLANK

FORT MONMOUTH, NEW JERSEY

VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	5/18/95	6/2/95	Tetrachloroethene	0.5	--	ND	1	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			Toluene	0.5	--	ND	1,000	--
			1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	0.5	--	ND	4	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Isopropylbenzene	0.5	--	ND	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Propylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	0.5	--	ND	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			1,4-Dichlorobenzene	0.5	--	ND	75	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,2-Dichlorobenzene	0.5	--	ND	600	--
			n-Butylbenzene	0.5	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	0.5	--	ND	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--
			VOLATILE TICs:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	5/18/95	6/2/95	N-nitrosodimethylamine	2	--	ND	20	--
			bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)ether	5	--	ND	--	--
			N-Nitroso-Di-N-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	300	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	--
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenylether	3	--	ND	--	--
			n-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine(as azo)	6	--	ND	--	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--
			Anthracene	2	--	ND	2,000	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	5/18/95	6/2/95	Di-n-butylphthalate	55	--	55	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	--	--
			Benzo(a)anthracene	2	--	ND	0.05	--
			3,3'-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	4	--	ND	30	--
			Di-n-octylphthalate	2	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	2	--	ND	0.5	--
			Benzo(a)pyrene	2	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	0.05	--
			Dibenz(a,h)anthracene	3	--	ND	0.005	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
			SEMIVOLATILE TICS:					
			Unknown	--	--	14 J	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	5/18/95	6/2/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Bromomethane	0.5	--	ND	10	--
			Vinyl Chloride	0.5	--	ND	5	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			Methylene Chloride	5.1	--	5.1 B	2	yes
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			Bromochloromethane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Chloroform	0.5	--	ND	6	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			1,2-Dichloroethane	0.5	--	ND	2	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Dibromomethane	0.5	--	ND	--	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			Bromodichloromethane	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Trichloroethene	0.5	--	ND	1	--
			Dibromochloromethane	0.5	--	ND	10	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Benzene	0.5	--	ND	1	--
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			Bromoform	0.5	--	ND	4	--
			1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	5/18/95	6/2/95	Tetrachloroethene	0.5	--	ND	1	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			Toluene	0.5	--	ND	1,000	--
			1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	0.5	--	ND	4	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Isopropylbenzene	0.5	--	ND	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Propylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	0.5	--	ND	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			1,4-Dichlorobenzene	0.5	--	ND	75	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,2-Dichlorobenzene	0.5	--	ND	600	--
			n-Butylbenzene	0.5	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	0.5	--	ND	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	N-nitrosodimethylamine	2	--	ND	20	--
			bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)ether	5	--	ND	--	--
			N-Nitroso-Di-N-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	300	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	--
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenylether	3	--	ND	--	--
			n-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine(as azo)	6	--	ND	--	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--
			Anthracene	2	--	ND	2,000	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	Di-n-butylphthalate	5	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	--	--
			Benzo(a)anthracene	2	--	ND	0.05	--
			3,3'-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	4	--	ND	30	--
			Di-n-octylphthalate	2	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	2	--	ND	0.5	--
			Benzo(a)pyrene	2	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	0.054	--
			Dibenz(a,h)anthracene	3	--	ND	0.005	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
			SEMIVOLATILE TICS:					
			Dodecane,2,6,11-trimethyl	--	--	8 J	--	--
			Heptadecane,2,6,10,14-tetra	--	--	5 J	--	--
			Unknown Hydrocarbon	--	--	9 J	--	--
			Benzene,[1-(2,4-cyclopentad	--	--	4 J	--	--
			Tetradecane	--	--	12 J	--	--
			Dodecane,2,7,10-trimethyl	--	--	28 J	--	--
			Tridecane,4-methyl	--	--	14 J	--	--
			TOTAL TICS:	--	--	80	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Vinyl Chloride	0.5	--	ND	5	--
			Bromomethane	0.5	--	ND	10	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			Methylene Chloride	1.3	--	1.3 B	2	--
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Bromochloromethane	0.5	--	ND	--	--
			Chloroform	0.5	--	ND	6	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			Benzene	1.4	--	1.4	1	yes
			1,2-Dichloroethane	0.5	--	ND	2	--
			Trichloroethene	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			Dibromomethane	0.5	--	ND	--	--
			Bromodichloromethane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			Toluene	0.5	--	ND	1,000	--
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Tetrachloroethene	0.5	--	ND	1	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Dibromochloromethane	0.5	--	ND	10	--
			1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	3.4	--	3.4	4	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Bromoform	0.5	--	ND	4	--
			Isopropylbenzene	1.4	--	1.4	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Butylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	1.6	--	1.6	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,4-Dichlorobenzene	1.0	--	1.0	75	--
			1,2-Dichlorobenzene	2.3	--	2.3	600	--
			n-Butylbenzene	1.0	--	1.0	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	0.5	--	ND	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, MW-1
FORT MONMOUTH, NEW JERSEY
VOLATILE TICs

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
MW-1	6/13/95	6/21/95	Unknown Hydrocarbon	--	--	8 J	--	--
			Benzene,4-ethyl-1.2-dimethyl	--	--	5 J	--	--
			Unknown	--	--	2 J	--	--
			Unknown	--	--	6 J	--	--
			Unknown	--	--	3 J	--	--
			Unknown	--	--	3 J	--	--
			Unknown	--	--	3 J	--	--
			2,3-Dihydro-1-methylindene	--	--	2 J	--	--
			Unknown	--	--	9 J	--	--
			Unknown	--	--	4 J	--	--
			Unknown	--	--	6 J	--	--
			Unknown	--	--	3 J	--	--
			Unknown	--	--	6 J	--	--
			1H-Indene,2,3-dihydro-4,7-d	--	--	3 J	--	--
			Unknown	--	--	4 J	--	--
			TOTAL TICS:	--	--	67	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	6/13/95	6/21/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Vinyl Chloride	0.5	--	ND	5	--
			Bromomethane	0.5	--	ND	10	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			Methylene Chloride	2.3	--	2.3 B	2	yes
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Bromochloromethane	0.5	--	ND	--	--
			Chloroform	0.5	--	ND	6	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			Benzene	0.5	--	ND	1	--
			1,2-Dichloroethane	0.5	--	ND	2	--
			Trichloroethene	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			Dibromomethane	0.5	--	ND	--	--
			Bromodichloromethane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			Toluene	0.5	--	ND	1,000	--
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Tetrachloroethene	0.5	--	ND	1	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Dibromochloromethane	0.5	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, TRIP BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
TRIP BLANK	6/13/95	6/21/95	1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	0.5	--	ND	4	--
			1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Bromoform	0.5	--	ND	4	--
			Isopropylbenzene	0.5	--	ND	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Butylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	0.5	--	ND	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,4-Dichlorobenzene	0.5	--	ND	--	--
			1,2-Dichlorobenzene	0.5	--	ND	600	--
			n-Butylbenzene	0.5	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	0.5	--	ND	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3

GROUNDWATER SAMPLING RESULTS

BUILDING 80, MAIN POST, FIELD BLANK

FORT MONMOUTH, NEW JERSEY

SEMIVOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	6/13/95	6/21/95	N-nitrosodimethylamine	2	--	ND	20	--
			bis(2-Chloroethyl)Ether	1	--	ND	10	--
			1,3-Dichlorobenzene	2	--	ND	600	--
			1,4-Dichlorobenzene	1	--	ND	75	--
			1,2-Dichlorobenzene	2	--	ND	600	--
			bis(2-chloroisopropyl)ether	5	--	ND	--	--
			N-Nitroso-Di-N-propylamine	2	--	ND	20	--
			Hexachloroethane	1	--	ND	10	--
			Nitrobenzene	2	--	ND	10	--
			Isophorone	1	--	ND	100	--
			bis(2-Chloroethoxy)methane	3	--	ND	--	--
			1,2,4-Trichlorobenzene	2	--	ND	9	--
			Naphthalene	2	--	ND	--	--
			Hexachlorobutadiene	2	--	ND	1	--
			Hexachlorocyclopentadiene	12	--	ND	50	--
			2-Chloronaphthalate	1	--	ND	--	--
			Dimethylphthalate	1	--	ND	--	--
			Acenaphthylene	5	--	ND	NA	--
			2,6-Dinitrotoluene	2	--	ND	NA	--
			Acenaphthene	3	--	ND	400	--
			2,4-Dinitrotoluene	3	--	ND	10	--
			Diethylphthalate	1	--	ND	5,000	--
			Fluorene	3	--	ND	300	--
			4-Chlorophenyl-phenylether	3	--	ND	--	--
			n-Nitrosodiphenylamine	6	--	ND	20	--
			1,2-Diphenylhydrazine(as azo)	6	--	ND	--	--
			4-Bromophenyl-phenylether	2	--	ND	--	--
			Hexachlorobenzene	2	--	ND	10	--
			Phenanthrene	2	--	ND	NA	--
			Anthracene	2	--	ND	2,000	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
SEMIVOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	6/13/95	6/21/95	Di-n-butylphthalate	5	--	ND	900	--
			Fluoranthene	1	--	ND	300	--
			Benzidine	1	--	ND	50	--
			Pyrene	2	--	ND	200	--
			Butylbenzylphthalate	9	--	ND	--	--
			Benzo(a)anthracene	2	--	ND	0.05	--
			3,3'-Dichlorobenzidine	15	--	ND	60	--
			Chrysene	2	--	ND	5	--
			bis(2-Ethylhexyl)phthalate	4	--	ND	30	--
			Di-n-octylphthalate	2	--	ND	100	--
			Benzo(b)fluoranthene	1	--	ND	0.05	--
			Benzo(k)fluoranthene	2	--	ND	0.5	--
			Benzo(a)pyrene	2	--	ND	0.005	--
			Indeno(1,2,3-cd)pyrene	2	--	ND	0.5	--
			Dibenz(a,h)anthracene	3	--	ND	0.005	--
			Benzo(g,h,i)perylene	2	--	ND	NA	--
			SEMIVOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	6/13/95	6/21/95	Dichlorodifluoromethane	0.5	--	ND	1,000	--
			Chloromethane	0.5	--	ND	30	--
			Vinyl Chloride	0.5	--	ND	5	--
			Bromomethane	0.5	--	ND	10	--
			Chloroethane	0.5	--	ND	--	--
			Trichlorofluoromethane	0.5	--	ND	--	--
			1,1-Dichloroethene	0.5	--	ND	2	--
			Methylene Chloride	2.1	--	2.1 B	2	yes
			trans,1,2-Dichloroethene	0.5	--	ND	100	--
			1,1-Dichloroethane	0.5	--	ND	70	--
			2,2-Dichloropropane	0.5	--	ND	--	--
			cis-1,2-Dichloroethene	0.5	--	ND	10	--
			Bromochloromethane	0.5	--	ND	--	--
			Chloroform	0.5	--	ND	6	--
			1,1,1-Trichloroethane	0.5	--	ND	30	--
			Carbon Tetrachloride	0.5	--	ND	2	--
			1,1-Dichloropropene	0.5	--	ND	--	--
			Benzene	0.5	--	ND	1	--
			1,2-Dichloroethane	0.5	--	ND	2	--
			Trichloroethene	0.5	--	ND	1	--
			1,2-Dichloropropane	0.5	--	ND	1	--
			Dibromomethane	0.5	--	ND	--	--
			Bromodichloromethane	0.5	--	ND	1	--
			cis-1,3-Dichloropropene	0.5	--	ND	NA	--
			Toluene	0.5	--	ND	1,000	--
			trans-1,3-Dichloropropene	0.5	--	ND	NA	--
			1,1,2-Trichloroethane	0.5	--	ND	3	--
			Tetrachloroethene	0.5	--	ND	1	--
			1,3-Dichloropropane	0.5	--	ND	--	--
			Dibromochloromethane	0.5	--	ND	10	--

TABLE 3
GROUNDWATER SAMPLING RESULTS
BUILDING 80, MAIN POST, FIELD BLANK
FORT MONMOUTH, NEW JERSEY
VOLATILES (continued)

Sample ID	Sample Date	Analysis Date	Compound Name	Sample Quantitation Limit (ug/l)	Compound of Concern	Result (ug/l)	GWQS (ug/l)	Exceeds Criteria
FIELD BLANK	6/13/95	6/21/95	1,2-Dibromoethane	0.5	--	ND	--	--
			Chlorobenzene	0.5	--	ND	4	--
			1,1,1,2-Tetrachloroethane	0.5	--	ND	10	--
			Ethylbenzene	0.5	--	ND	700	--
			Xylene (total)	0.5	--	ND	40	--
			Styrene	0.5	--	ND	100	--
			Bromoform	0.5	--	ND	4	--
			Isopropylbenzene	0.5	--	ND	--	--
			Bromobenzene	0.5	--	ND	--	--
			1,1,2,2-Tetrachloroethane	0.5	--	ND	2	--
			1,2,3-Trichloropropane	0.5	--	ND	40	--
			n-Butylbenzene	0.5	--	ND	--	--
			2-Chlorotoluene	0.5	--	ND	--	--
			4-Chlorotoluene	0.5	--	ND	--	--
			1,3,5-Trimethylbenzene	0.5	--	ND	--	--
			tert-Butylbenzene	0.5	--	ND	--	--
			1,2,4-Trimethylbenzene	0.5	--	ND	--	--
			sec-Butylbenzene	0.5	--	ND	--	--
			1,3-Dichlorobenzene	0.5	--	ND	600	--
			4-Isopropyltoluene	0.5	--	ND	--	--
			1,4-Dichlorobenzene	0.5	--	ND	--	--
			1,2-Dichlorobenzene	0.5	--	ND	600	--
			n-Butylbenzene	0.5	--	ND	--	--
			1,2-Dibromo-3-chloropropane	0.5	--	ND	NA	--
			1,2,4-Trichlorobenzene	0.5	--	ND	9	--
			Hexachlorobutadiene	0.5	--	ND	1	--
			Naphthalene	0.5	--	ND	300	--
			1,2,3-Trichlorobenzene	0.5	--	ND	--	--
			VOLATILE TICS:					
			NONE FOUND	--	--	--	--	--

TABLE 3

DATA ANALYSIS QUALIFIER DEFINITIONS

GROUNDWATER SAMPLING

FORT MONMOUTH, NEW JERSEY

--:	Not applicable / does not exceed criteria
(J):	Indicates detected below sample quantitation limit
(B):	Indicates also present in blank
(ND):	Indicates compound not detected
(NA):	Not available for this constituent
GWQS:	Groundwater Quality Standards

3.3 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Former Building T-80 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.

Based on the analytical results of the groundwater samples collected on May 18, 1995 and June 13, 1995, groundwater quality at the Former Building T-80 UST closure site exceeded the New Jersey Groundwater Quality Criteria (GWQC) for benzene. Based on the groundwater analytical results, the collection and analysis of two additional sets of samples from MW-1 for BTEX is recommended. The BTEX analysis will determine if the low levels of benzene detected previously are declining. The need for any additional actions to address groundwater quality should be evaluated following receipt of the additional groundwater data.

APPENDIX A

NJDEP BUST CLOSURE APPROVAL

UNDERGROUND STORAGE TANK SYSTEM
CLOSURE APPROVAL

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF UNDERGROUND STORAGE TANKS
CN-029, TRENTON, NJ 08625-0029

TMS # C93-4297 **UST #** 0090010

U. S. Army Fort Monmouth
DEH Bldg. 167 - 80
Fort Monmouth, NJ
(Monmouth)

THE ABOVE LISTED FACILITY IS HEREBY GRANTED APPROVAL TO PERFORM THE FOLLOWING ACTIVITY IN ACCORDANCE WITH N.J.A.C. 7:14B-1 et. seq.:

REMOVAL OF: one 1,000 gallon #2 fuel oil/ Heating Oil UST(s); and appurtenant piping.

SITE ASSESSMENT: Soil samples will be taken every five (5) feet along the center line of each tank and one (1) soil sample for every 15 feet along all associated piping. Two (2) additional samples will be taken per excavation and biased to the areas of highest field screened readings. Samples will be analyzed for TPHC. Analyze 25% of the samples over 1,000ppm PHC for VO+10.

ON-SITE MANAGER: Charles Appleby **TELEPHONE:** 908-532-1475

OWNER: **TELEPHONE:**

EFFECTIVE DATE: DEC 07 1993

THIS FORM MUST BE DISPLAYED AT THE SITE DURING THE APPROVED ACTIVITY AND MUST BE MADE AVAILABLE FOR INSPECTION AT ALL TIMES.

KEVIN F. KRATINA, BUREAU CHIEF
BUREAU OF UNDERGROUND STORAGE TANKS

APPENDIX B

CERTIFICATIONS

UNDERGROUND STORAGE TANK (UST) CLOSURE CERTIFICATION

BUILDING NO. 80

NJDEP UST REGISTRATION NO. 90010-06

DATE TANK REMOVED 6/16/94

IJO / CONTRACT NUMBER 91-0148

I CERTIFY UNDER PENALTY OF LAW THAT TANK DECOMMISSIONING ACTIVITIES WERE PERFORMED IN COMPLIANCE WITH NJAC 7:14B-9.2(b)3. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE, INACCURATE, OR INCOMPLETE INFORMATION, INCLUDING FINES AND/OR IMPRISONMENT.

NAME (Print or Type) John Donergan

SIGNATURE

NJDEP UST CLOSURE CERTIFICATE NO. 0003248

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 7/19/94

APPENDIX C

WASTE MANIFEST

GENERATOR CERTIFICATION

I hereby certify that the waste described on Hazardous Waste Manifest No. NJSA1603186 dated 6/13/94, is generated by one or more of the following processes and does not contain more than 2 ppm polychlorinated biphenyls (P.C.B.'s) and does not display any characteristic or contain any hazardous constituents other than for which waste oils are listed in New Jersey.

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

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

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

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

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

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

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

I am duly authorized to sign said certification.

Generator X Ch Apply U.S. Army

Generator's EPA ID No. NJ3210020597

Address U.S. Army Fort Monmouth SELFM-PW-EV

Print Name Charles Appleby Signature Ch Apply

Title Environ Protection Specialist

Date 6-13-94

Form 003 5/91

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

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

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597
Manifest Document No. 03116
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: US Army Communications Electronic Command
Main Post, c/o James Shirghio, Bldg 2504
ATTN: SELFM-DL-EM-MS, Fort Monmouth, NJ 07703
4. Generator's Phone (908) 532-6224

A. State Manifest Document Number **NJA 1603186**
B. State Generator's ID: MainPost Fort Monmouth, NJ — A-Bldg. 166, B-Bldg. T-80

5. Transporter 1 Company Name: Freehold Cartage Inc.
6. US EPA ID Number: NJD054126164
C. State Trans. ID: NJDEPE S2265
D. Transporter's Phone (908) 462-1001

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Trans. ID
F. Transporter's Phone

9. Designated Facility Name and Site Address:
Lionetti Oil Recovery
Runyon & Cheesequake Rds.
Old Bridge, NJ 08857
10. US EPA ID Number: NJD084044064
Facility's Phone: (908) 721-0900

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)

a. X Petroleum Oil N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III — 001 TT 033481G X 722

b. X Petroleum oil, NOS class 3 (Petroleum oil) combustible Liquid UN1270 PG III — 001 TT 000241G X 722

c.

d.

J. Additional Descriptions for Materials Listed Above
a. T,L petroleum oil 90% water 10%
b. T,L Petroleum oil 50% water 50%
c.
d.

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

15. Special Handling Instructions and Additional Information
NOT REGULATED BY EPA. REGULATED AS HAZARDOUS WASTE IN NJ
24 HOUR EMERGENCY PHONE: 201-427-2881
NJ DECAL# 55182
ERG# 27
a) NJDEPE# 0090010-17
b) NJDEPE# 0090010-06

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

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

Printed/Typed Name: Charles M. Appleby SELFM-PW-EV | Signature: [signature] | Month Day Year: 06 13 94

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: David S. Smith | Signature: [signature] | Month Day Year: 06 13 94

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

State of New Jersey
Department of Environmental Protection and Energy
Hazardous Waste Regulation Program
Manifest Section
CN 028, Trenton, NJ 08625-0028

Note: oil contaminated groundwater Bldg T-80 Bldg 166

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NJ3210020597 — Manifest Document No. 03243 — Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: NJA 1603243

Generator's Name and Mailing Address: US Army Communications Electronics Command
c/o James Shirghio, Bldg 2504, ATTN: SELFM-DL-EM-MS,
Fort Monmouth, NJ 07703
Generator's Phone: 908 532-6224

B. State Generator's ID: Main Post Ft. Monmouth

Transporter 1 Company Name: Freehold Cartage Inc.
US EPA ID Number: NJD054126164
C. State Transporter's ID: NJDEPES 2265
D. Transporter's Phone: 908 462-1001

Designated Facility Name and Site Address:
Lionetti Oil Recovery Co., Inc.
Runyon & Cheesequake Rds.
Old Bridge, NJ 08857
US EPA ID Number: NJD084044064
Facility's Phone: 908 721-0900

US DOT Description:

X Petroleum Oil N.O.S. Class 3 (Petroleum Oil)
Combustible Liquid UN 1270 PG III
001 TT 01000 G X722

X Petroleum oil, NOS class 3 (Petroleum oil)
combustible liquid UN1270 PGIII
001 TT 1938 G X722

Additional Descriptions for Materials Listed Above:
T,L Petroleum 1%
Water 99%
T,L Petroleum oil 1%
Water 99%

Handling Codes for Wastes Listed Above:
T04=Filtration
T04=Filtration

Special Handling Instructions and Additional Information:
NOT REGULATED BY EPA. REGULATED AS HAZARDOUS WASTE IN NJ
24 HOUR EMERGENCY# 201-427-2881
NJ DECAL# 55182
A) Bldg 80 009010-6
B) Bldg 166-009010-19

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

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

Printed/Typed Name: X DINKER M. DESAI — Signature: [signature] — Month Day Year: 06 20 94

Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: X David S. Smith — Signature: [signature] — Month Day Year: 06 20 94

Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

Discrepancy Indication Space: Pumped excavation

Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Signature: — Month Day Year:

NJA 1603243

UNDERGROUND STORAGE TANK REMOVAL (UST)

(Submit one form for each tank)

Building No. T-80 **NJDEPE UST Reg. No.** 0090010 - 06

IJO No. 91-0148 **Date Tank Removed** 6/16/94

ITEM NO.	ITEM OF WORK	UNIT	UNIT PRICE	QUANTITY	TOTAL PRICE
01100-1.1	Rmv ID#27 soil to stockpile	TN	$14.50	84.73	$ 1,228.59
01100-1.2	Supply, fill & relocate 55 Gal containers to storage	CT	$47.50	1	$ 47.50
01100-1.4	Rmv & dispose of #2 fuel mixed with water Manifest #:NJA	GL	$ 0.69	1024	$ 706.56
01100-1.5	Rmv & dispose of #2 fuel mixed with solvent Manifest #:NJA	GL	$ 4.50		$ N/A
01100-1.6	Rmv & dispose of diesel fuel	GL	$ 0.69		$ N/A
01100-1.7	Rmv & dispose of diesel fuel mixed with water Manifest #:NJA	GL	$ 0.69		$ N/A
02050-1 & 02050-4	Tank removal	GL	$ 0.975	1000	$ 975.00
02050-5.1	Sawcut blacktop *	TN	$27.50		$ N/A
02050-5.2	Sawcut concrete *	TN	$29.50		$ N/A
02050-5.3	Sawcut reinforced concrete	TN	$32.50		$ N/A
02222-1.1	Backfill cert. clean fill *	TN	$16.25	59.65	$ 969.31
02222-1.2	3/4" clean stone *	TN	$17.50	25.08	$ 438.90
02511-1.1	Concrete slab 4" thick	SY	$19.80		$ N/A
02511-1.2	Concrete slab 6" thick	SY	$21.80		$ N/A
02511-1.3	Concrete slab 8" thick	SY	$24.50		$ N/A
02511-1.4	6" Concrete curb	LF	$16.00		$ N/A
02551-1.1	6" Base course of 3/4" dirty blend stone	SY	$ 6.40		$ N/A
02551-1.2	4" stabilized base	SY	8.00		$ N/A
02551-1.3	2" top course	SY	$ 5.50		$ N/A
02935-1.1	4" top soil & sod	SY	$ 7.80		$ N/A
02935-1.2	4" top soil & hydroseed	SY	$ 5.40		$ N/A

* Supply certified weight tickets to Contracting Officer at time of request for payment. $4,365.86

I certify under penalty of law that tank decommissioning activities were performed in compliance with NJAC 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment.

NAME (Print or Type): John Lonergan SIGNATURE: [signature]

NJDEPE UST Closure Cert. #: 0003248 DATE: 7/18/94

COMPANY NAME: CUTE, Inc.
(Performer of Tank Decommissioning)

NJDEPE UST Closure Corp. Cert. #:

List of Abbreviations:

CT = 55 Gallon Container GL = Gallon TN = Tons

CALCULATION SHEET

Building No. T-80 NJDEPE Reg. No. 0090010-06

Tank Size 1000 gal Tank Void 7.5 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.1	Clean fill	22.85	18783
		22.25	18777
		22.05	18776

TOTAL 67.15

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.2	3/4 Stone	25.08	936798

TOTAL

ID#27 soil to stockpile (67.15 + 25.08) - 7.5 = 84.73 tons

Chargeable clean fill 67.15 - 7.5 = 59.65

Chargeable stone 25.08

Joseph Scarano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

18783

Order Date June / 3 / 14

Name Big A Trucking

Deliver Date / /

Address 216

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Clean Fill

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	G 71200		
	T 25500	22.85 T	
	N 45700		
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

KRISTEN M. HUGHES PUBLIC No. 25814 WEIGHER

Driver

Received

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

Joseph Scarano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

18777

Name ______________________ Order Date ____ / ____ / ____

Address ______________________ Deliver Date ____ / ____ / ____

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	70000		
	15500	22.25 tons	
	44500		
		Sub Total	
		Delivery	T-80
		N.J. Tax	TX
		Total	#166

KRISTEN W. HAUGE PUBLIC WEIGHER No. 25314

Driver ______________________

Received ______________________

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

Joseph Scarano Sand & Gravel Co.

1453 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3333

18776

Order Date ____ / ____ / ____

Name _____ Deliver Date ____ / ____ / ____

Address _____ Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☑

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	69650		
	25550	22.05T	
	44100		
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

Driver _____

Received _____

* Company not responsible for damage done off public roads. Color not guaranteed!

Have gravel will travel!
since 1925

CUSTOMER'S COPY

CONTROL NO.
A-936798

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. • 908/356-5700

X R. V. Brown
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X
CUSTOMER'S SIGNATURE

CRUSHED STONE • SAND • GRAVEL

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2328

ADDRESS REPLY TO
P.O. BOX 482
RED BANK, N.J. 07701

THIS COMPANY WILL NOT BE RESPONSIBLE FOR DAMAGE CAUSED BY VEHICLES DELIVERING MATERIALS OFF PUBLIC ROADS.

EXPLANATION OF DELIVERY CODES
1 - F.O.B.
2 - DELIVERED
3 - NET DELIVERED

DATE	CUST. NO.	JOB NO.	TICKET NO.

CUSTOMER

DELIVER TO
ZONE OFF MONMOUTH

GROSS

TARE

NET

TRUCKER	TRUCK NO.	DRIVER NO.	METHOD OF PAYMENT	DELIVERY CODE	ZONE
			CHARGE		

QUANTITY	PRODUCT CODE/DESCRIPTION	UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT	SALES TAX	TOTAL
		T					

COMMENTS

LOGO'S

WAIT TIME

GRAND TOTAL

APPENDIX D

UST DISPOSAL CERTIFICATE

P. 7

Bldg 767 - UST 0090010-18
√ " 80 - UST 0090010-06
√ " 277 - UST 008133-05
117 - TRENCH PIPE

MAZZA & SONS, INC.

Metal Recyclers
Auto and Truck
3230 Shafto Rd.
Tinton Falls, NJ
(908) 922-9292

NO. ____

DATE 28 Jul 94

Customer's Name Cute INC 103 Godwin Ave Midland PK NJ

Address Fort Monmouth, Eatontown, NJ

Make of Autos

45220 LB 6

39240 LB 6

5980

DAIT 28

BLDG 117 TRENCH

Tires
Tank
Price:

	Weight	Price
Cast Iron		
Steel		
Lt. Iron		
Copper #1		
Copper #2		
Lt. Copper		
Brass		
Alum Clean		
Lead		
Stainless		
Radiators		
Batery		
TOTAL AMOUNT:		

Weigher ____ Customer Dan Ellis

APPENDIX E

MONITORING WELL PERMIT AND CONSTRUCTION LOG

SERIAL # 41103

DWR-133M (10/93)

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
TRENTON, NJ

Permit No 29 31724

Mail to
NJDEPE
Bureau Water Allocation
CN426
, NJ 08625

MONITORING WELL PERMIT

T-80 MW-1

VALID ONLY AFTER APPROVAL BY THE D.E.P.E.

COORD # 29 13616

Owner US Army Fort Monmouth
Address SELFM DPW EV
Fort Monmouth NJ 07703

Driller Tyree Organization, Ltd
Address 1350 US Hwy 130
Burlington NJ 08016

Name of Facility T-80
Address Main Post
Fort Monmouth, NJ

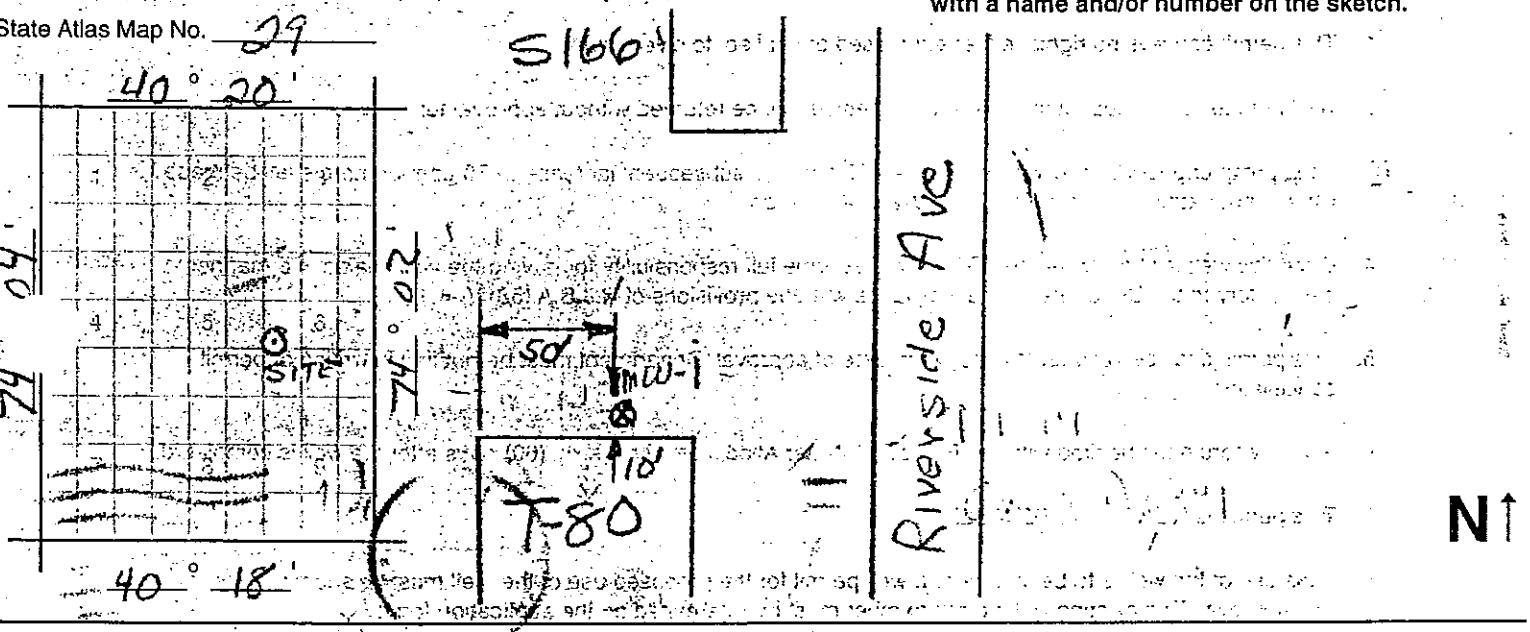
Diameter of Well(s) 4 Inches	Proposed Depth of Well(s) 15 Feet
# of Wells Applied for (max. 10) 1	Will pumping equipment be installed? YES ☐ NO ☒
Type of Well (see reverse) Monitoring	If Yes, give pump capacity N/A GPM

LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
		Fort Monmouth	Monmouth

State Atlas Map No. 29

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☒ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain)

CASE I.D. Number
~~N/A~~
94-6-16-1127-25
(Sit Bldg. T-80)

This Space for Approval Stamp

WELL PERMIT APPROVED
N J D E P
AUG 3 1994
BUREAU OF WATER ALLOCATION

FOR D.E.P.E. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☒ For monitoring purposes only
- ☐
- ☒ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

REVERSE SIDE FOR IMPORTANT PROVISIONS AND REGULATIONS PERTAINING TO THIS PERMIT.

In compliance with N.J.S.A. 58:4A-14, application is made for a permit to drill a well as described above.

Date 7-25-94 Signature of Driller [signature] License # 1421

Signature of Owner [signature] SELFM-PW-EV

COPIES: Water Allocation — White and Pink Health Dept. — Yellow Owner — Blue Driller — White

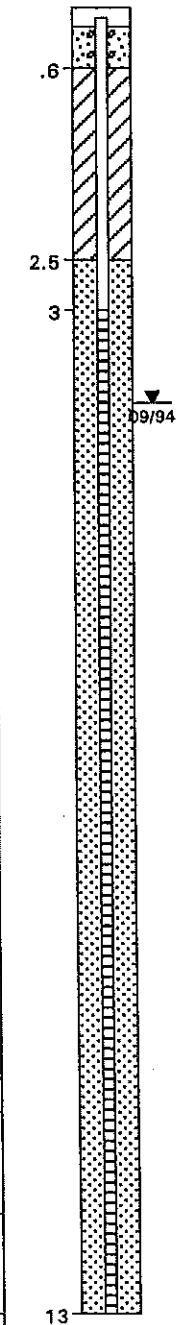
U.S. ARMY
FORT MONMOUTH
SELFM PW EV

LOG OF BORING T-80-MW1

Mainpost Well Logs

Project Name	: BLDG. T-80	Completion Date	: 09/15/94
NJDEP CASE #	: 94-6-16-1127-25	NORTHING	: N 541120.967
Logged By	: TYREE INC.	EASTING	: E 2177811.318
start date	: 09/15/94	Driller	: M. BECK

29-31774
ELEV: 6.91



Depth in Feet	DESCRIPTION	GRAPHIC	USCS	Samples	Blows/Ft
0	Asphalt/subbase		14		
.6	Black fine sand		SW		
2	Black silts and fine sands		SM		
2.5					
3	Olive gray silts and fine sands		SM		
4	Olive gray soft clay and black soft clay		CL		
6					
8					
10	Olive gray soft clay with pebbles		CL		
12	Yellowish organge, fine medium sand		SW		
13					
14					

Well Construction Information

WELL CONSTRUCTION

Date Compl.	: 9/15/94
Hole Diameter	: 8 in
Drill. Method	: HSA
Company Rep.	: M. BECK

WELL CASING

Material	: PVC
Diameter	: 4 in.
Joints	: threaded

WELL SCREEN

Material	: PVC
Diameter	: 4 in.
Joints	: threaded
Opening	: 20 slot
SAND PACK	: #2 MORIE SAND
ANNULUS SEAL	: Bentonite/Portland : TREMMIE

WELL SCREEN

Material	: PVC
Diameter	: 4 in.
Cap	:

NOTES

Well #1 is T-80 MW1
Flushmount
Water depth is 3'
.92 adjustment for elevation

3-4-1996 c:\mp1\geol\t80 mw.ge3

MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: U.S. ARMY
Name of Facility: FORT MONMOUTH
Location: MONMOUTH COUNTY, NJ
~~NJPDES~~ Number: 94-6-16-1127-25
Dear

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 29-31774-
This number must be permanently affixed to the well casing.

Longitude (to nearest second): West 74° 01' 44.54"

Latitude (to nearest second): North 40° 19' 01.84"

Elevation of Top of Inner Casing (cap off) (one-hundredth of a foot): 6.91

Elevation of ground level (1/100th ft.) 7.83

Source of elevation datum (benchmark, nail, etc.) and year. (If an alternate datum has been approved by the Department, identify here, assume datum of 100', and give approximated actual elevation.) Source: MON. FM-6

☒ 1927 ☐ 1983

Elev.:

Owners Well Number (As shown on application or plans): BLDG. T-80 MW-1

Elevations are to be determined by double run, three wire leveling methods using balanced sights, commencing from a well marked and described point. This beginning point shall either be derived from Federal or State benchmarks if not more than 1000 feet from the site or from an alternate datum approved by the Department. Tolerances should meet third order standards, which are 0.05 ft x $(\text{miles})^{1/2}$. For sections less than 0.1 mile, let miles = 0.1.

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Wayne W. Burgett
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

WAYNE W. BURGETT
PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

SEAL

31654
PROFESSIONAL LAND SURVEYOR'S LICENSE #

DWR-138 M
12/91

New Jersey Department of Environmental Protection and Energy
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 29 - 31774
Atlas Sheet Coordinates ____ : ____ : 664

OWNER IDENTIFICATION - Owner US ARMY FORT MONMOUTH
Address SELFM-IW-EV
City FORT MONMOUTH State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. Bldg. T-80 MW-1
County MONMOUTH Municipality OCEANPORT BORO Lot No. ____ Block No. ____
Address

TYPE OF WELL (as per Well Permit Categories) MONITORING Date well completed 9/15/94
Regulatory Program Requiring Well UST Case I.D. # 94-6-16-1127-25

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) ____ Tele. # ____

WELL CONSTRUCTION

Total depth drilled 13 ft.
Well finished to 13 ft.
Borehole diameter:
Top 8 in.
Bottom 8 in.
Well was finished: ☐ above grade ☒ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Was steel protective casing installed? ☐ Yes ☐ No

	Depth to Top (ft.) [From land surface]	Depth to Bottom (ft.) [From land surface]	Diameter (inches)	Type and Material
Inner Casing	6"	3'	4	PVC
Outer Casing (Not Protective Casing)				
Screen (Note slot size)	3'	13'	4	20 slot PVC
Tail Piece				
Gravel Pack	2½'	13'		#2 Morie Sand
Annular Seal/Grout	6"	2½'		Bentonite Portland
Method of Grouting	Tremmie			

Static water level after drilling 3 ft.
Water level was measured using Tape
Well was developed for 1 hours at 10 gpm
Method of development pump
Was permanent pumping equipment installed? ☐ Yes ☑ No
Pump capacity ____ gpm
Pump type: ____
Drilling Method Auger
Drilling Fluid ____ Type of Rig B80
Name of Driller Michael E. Beck
Health and Safety Plan submitted? ☒ Yes ☐ No
Level of Protection used on site (circle one) (None) D C B A
N.J. License No. 421
Name of Drilling Company PRIME ENVIRONMENTAL TECHNOLOGY

GEOLOGIC LOG (Copies of other geologic logs and/or geophysical logs should be attached.)

0-6' Asphalt/Subbase
6-1' Black f-c sand.
1'-3' Black silts & f-c sands
3'-4' Olive grey silts & f-c sands.
4'-9' Olive grey soft clay w/ black soft clay
9'-10' Olive grey soft clay w/ pebbles.
10'-13' Yellow-orange f-c sand.

I certify that I have drilled the above-referenced well in accordance with all well permit requirements and all applicable State rules and regulations.

Driller's Signature Michael E. Beck Date 12/22/94

COPIES: White & Green - DEPE Canary - Driller Pink - Owner Goldenrod - Health Dept.

APPENDIX F

SOIL ANALYTICAL DATA PACKAGE

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

Client: U.S. Army
DPW, SELFM-PW-EV
Bldg. 167
Ft. Monmouth, NJ 07703

Lab. ID #: 1526.1-.8
Sample Rec'd: 06/16/94
Analysis Start: 06/16/94
Analysis Comp: 06/16/94

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

NJDEPE UST Reg.#: **0090010-06**
Closure #: **C-93-4297**
DICAR #:
Location #: **Bldg. T-80**

Lab ID.	Description		%Solid	Result (mg/Kg)	MDL
1526.1	Site A, West	OVA= 25	83	ND	6.6
1526.2	Site B, South West	OVA= 40	86	ND	6.6
1526.3	Site C, North West	OVA= 10	86	11.7	6.6
1526.4	Site D, North East	OVA= 10	88	ND	6.6
1526.5	Site E, South East	OVA= 15	85	15.0	6.6
1526.6	Site F, East	OVA= 35	85	440.	6.6
1526.7	Site G, North East	OVA= 10	89	ND	6.6
1526.8	Site H, South West	OVA= 40	86	11.7	6.6
M. Bl.	Method Blank		100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1526.8 dup= 74% 1526.8 s= 124% 1526.8 sd= 117% RPD= 5.1%

Brian K. McKee
Laboratory Director