

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

BUILDING 114

**MAIN POST AREA
NJDEP UST REGISTRATION NO. 081533-1
NJDEP CLOSURE APPROVAL LETTER DATED
JUNE 7, 1994**

FEBRUARY 1996

**PROJECT NO.: 09-5004-07
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:

**SMITH ENVIRONMENTAL TECHNOLOGIES CORPORATION
BROMLEY CORPORATE CENTER
THREE TERRI LANE
BURLINGTON, NEW JERSEY 08016**

114.DOC





DEPARTMENT OF THE ARMY
Headquarters, U.S. Army Garrison Fort Monmouth
Fort Monmouth, New Jersey 07703 - 5101



12 FEB 1996

REPLY TO
ATTENTION OF

Directorate of Public Works

N.J. Dept of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Federal Case Management- CN029
401 East State Street - 5th Floor
Trenton, N.J. 08625-0028
Attn: Ian Curtis - Case Manager

Dear Mr. Curtis:

Enclosed please find UST Closure and Site Investigation Reports for the following Fort Monmouth Sites:

Building 108 - 0090010-7	Building 411 - 0090010-28	Building 682 - 0081533-106
Building 114 - 0081533-1	Building 423 - 0090010-39	Building 161 - 0090010-14
Building 443 - 0090010-49	Building 702 - 0081533-114	Building 167 - 0090010-18
Building 563 - 0081533-82	Building 789 - 0081533-126	Building 206 - 0081533-4
Building 608 - 0081533-86	Building 1106 - 0081533-166	Building 210 - 0081533-8
Building 620 - 0081533-93	Building 1122 - 0081533-199	Building 293 - 0081533-67
Building 625 - 0081533-96	Building 3027 - 0192486-28	Building 296 - 0081533-69
Building 659 - 0081533-101	Building 9002 - 0192468-1	Building 9017 - 0090029-6
Building 9049 - 0090029-20	Building 697 - 0081533-194	Building 2500 - 0081515-52
Building 9090 - 0090029-30	thru 196	thru 56

If the information provided in this enclosure is inadequate or you require further information with regard to these documents please contact Mr. Appleby at (908) 532-6224.

Sincerely,

James Ott
Director of Public Works



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EXECUTIVE SUMMARY

UST Closure

On June 22, 1994, a steel underground storage tank (UST) was closed by removal in accordance with the New Jersey Department of Environmental Protection (NJDEP) Closure Approval Letter dated June 7, 1994 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 081533-1, was located immediately adjacent to Building 114 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 081533-1 was an 8,000-gallon No. 2 diesel UST. The UST fill port was located directly above the tank. The tank closure was performed by Cleaning Up The Environment Inc. (CUTE).

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*. Soils surrounding the tank were screened visually and with air monitoring instruments for evidence of contamination. Following removal, the UST was inspected for holes. No holes were noted in the UST. Potentially contaminated soils were observed along the south wall of the excavation.

On June 22, 1994, following removal of the UST, approximately two cubic yards of potentially contaminated soil were removed along the south wall. Following removal of the soil, post-excavation soil samples were collected. Post-excavation samples A, B, C, D, E, F, G, H, DUP D, and DUP E, were collected from a total of eight (8) locations along the base and sidewalls of the excavation. Post-excavation soil samples K and L were also collected from the base of the piping portion of the excavation, which was less than 3 feet. All samples were analyzed for total petroleum hydrocarbons (TPHC).

On June 23, 1994, approximately 1 cubic yard of potentially contaminated soil was removed from sample location C, and the area was resampled. Sample C-2 was collected from the base of the soil removal area and was analyzed for TPHC.

Findings

All post-excavation soil samples collected on June 22, 1994 from the UST excavation and from below piping associated with the former UST at Building 114, 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. 7:26E and revisions dated February 3, 1994). The samples collected on June 22, 1994 (A, B, D, E, F, G, H, DUP D, DUP E, K, and L) contained TPHC concentrations ranging from 20.4 mg/kg to 86.6 mg/kg. Sample C had a TPHC concentration of 1,160.0 mg/kg. Due to the elevated TPHC concentration of 1,160.0 mg/kg



detected in sample C, additional soil was removed on June 23, 1994 and the area was resampled (sample C-2) . Sample C-2 contained a TPHC concentration of 108.0 mg/kg, which is in compliance with the NJDEP soil cleanup criteria.

Site Restoration

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.

Site Assessment Quality Assurance

The sampling and laboratory analysis conducted during the site assessment were performed in accordance with Section 7:26E-2.1 of the *Technical Requirements*.

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 remain 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. 081533-1 at Building 114.



1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

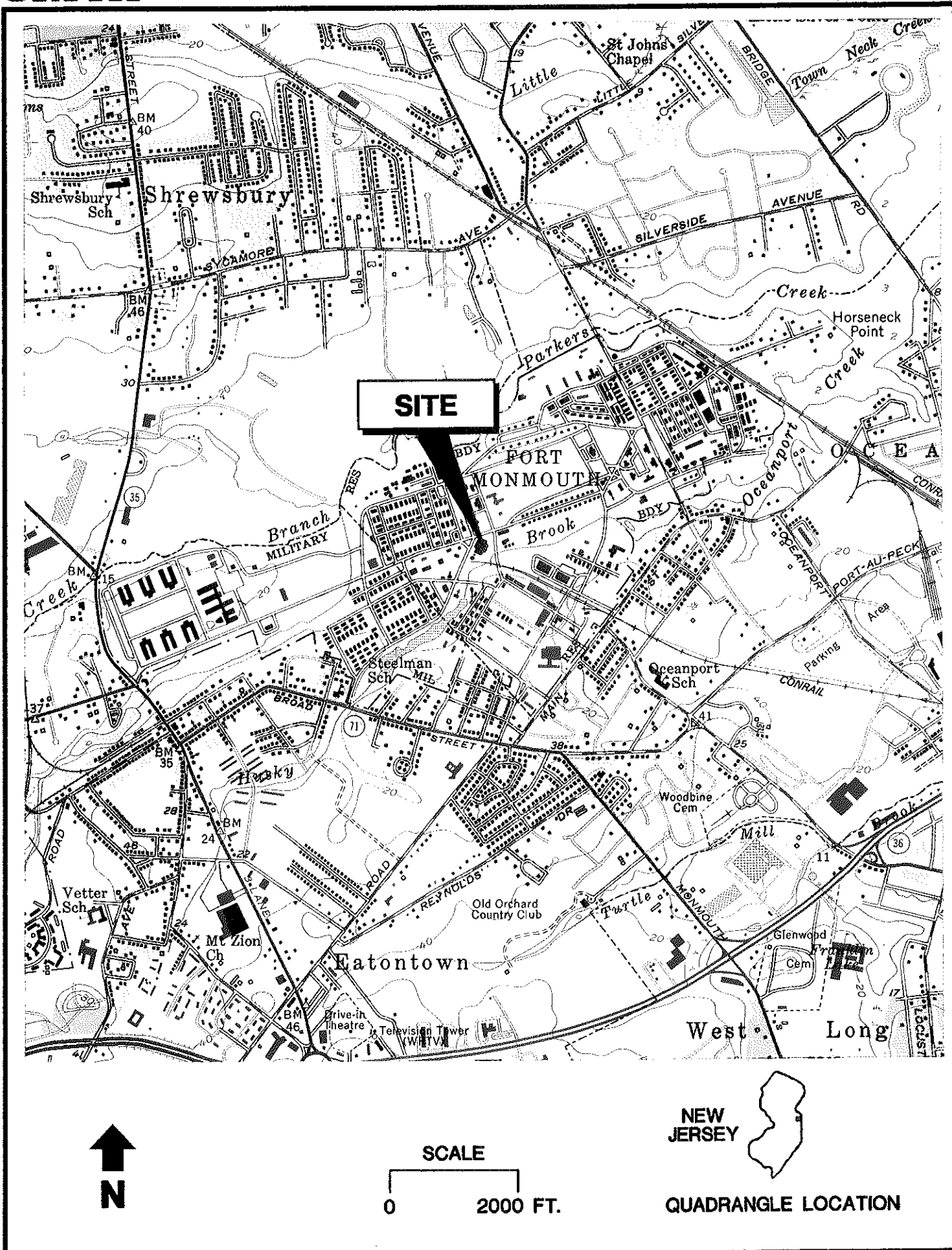
One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 081533-1, was closed at Building 114 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on June 22, 1994. Refer to site location map on Figure 1. This report presents the results of the DPW's implementation of the UST Decommissioning/Closure Plan submitted to the NJDEP on May 31, 1994. The plan was approved on June 7, 1994. The UST was a steel 8,000-gallon tank containing No. 2 diesel oil.

Decommissioning activities for UST No. 081533-1 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. CUTE Inc., the contractor that conducted the decommissioning activities, is registered and certified by the NJDEP for performing UST closure activities. Closure of UST No. 081533-1 proceeded under the approval of the NJDEP Bureau of Underground Storage Tanks (NJDEP-BUST). The NJDEP-BUST closure approval letter dated June 7, 1994, and the signed certifications for UST No. 081533-1 are included in Appendices A and B, respectively.

Based on an inspection of the UST, field screening of subsurface soils and 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 Smith Environmental Technologies 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. Where possible, information required by the *Technical Requirements for Site Remediation* (N.J.A.C. 7:26E) (*Technical Requirements*) was included. 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 114 is located in the central portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 081533-1 was located south of Building 114 and appurtenant piping ran less than 3 feet southwest to the fill port area. A site map is provided on Figure 2. The fill port area was located directly above the tank.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 114. Included is a description of the regional geology of the area surrounding Fort Monmouth as well as descriptions of the local geology and hydrogeology of the Main Post area.

Regional Geology

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

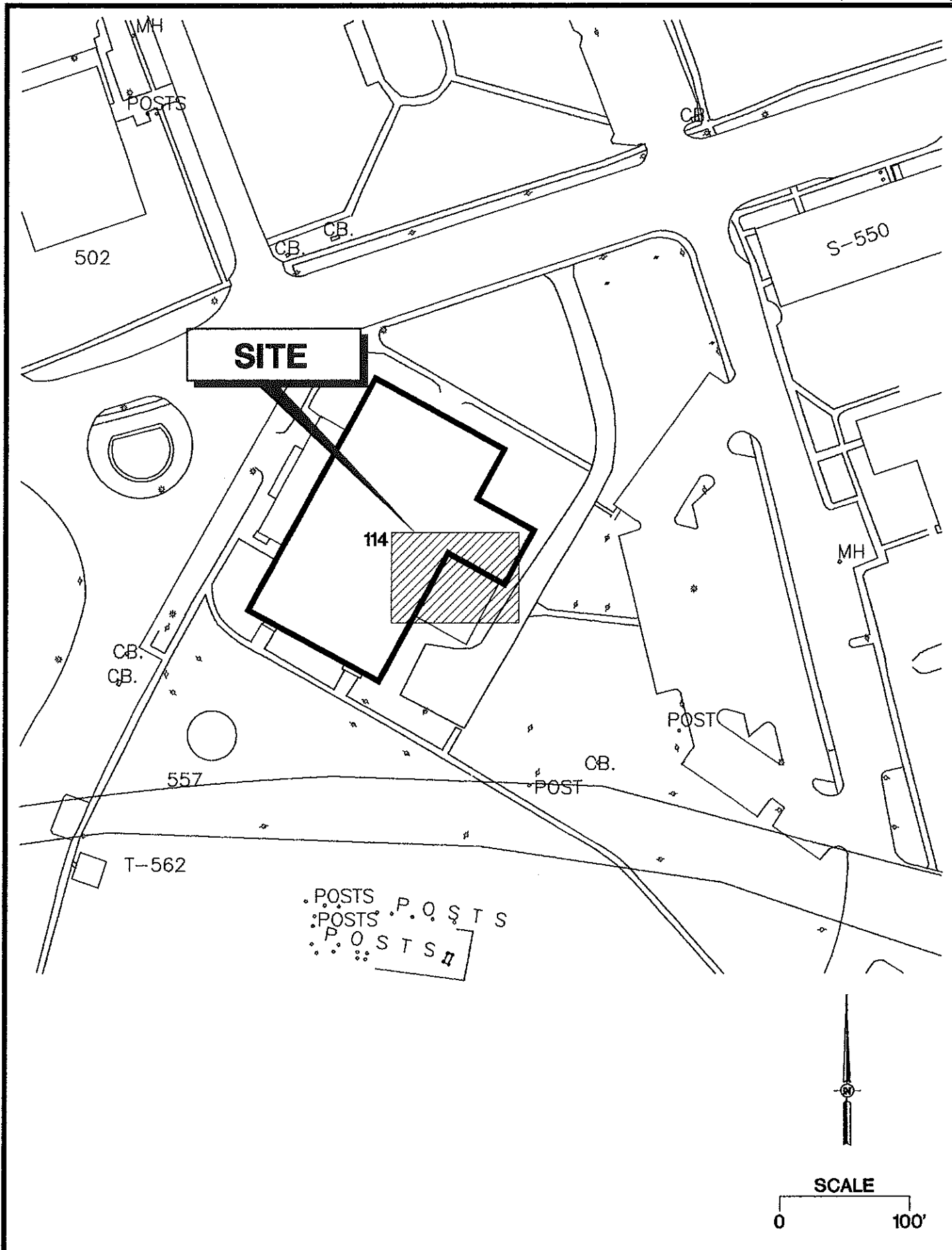
In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, and gravel. These formations typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapeczka,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

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

Local Geology

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

Source: BCM/Smith Environmental Technologies Corporation (060)



(Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

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

Hydrogeology

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

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

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

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

- tidal influence (based on proximity to the Atlantic Ocean, rivers and tributaries)
- topography
- nature of the fill material within the Main Post area
- presence of clay and silt lenses in the natural overburden deposits
- local groundwater recharge areas (e.g., streams, lakes)

Due to the fluvial nature of the overburden deposits (e.g., sand and clay lenses), shallow groundwater flow direction is best determined on a case-by-case basis. This is consistent with lithologies observed in borings installed within the Main Post area, which primarily consisted of fine-to-medium grained sands, with occasional lenses or laminations of gravel silt and/or clay.

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

- 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 closure 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 1,000 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co. Inc., a NJDEP-approved petroleum recycling and disposal facility located in Old Bridge, New Jersey. Refer to Appendix C for waste manifest (No. NJA-1603184).

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 corrosion 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. All sites appeared to be clean except for possible contamination in sample location C.

Soil screening was also performed along the USTs piping. No contamination was noted anywhere along the piping length.

1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL

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

The Subsurface Evaluator 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, two cubic yards of potentially contaminated soils were excavated from sample location area C on June 22, 1994. On June 23, 1994, one additional cubic yard of potentially contaminated soil was removed from the same location. All potentially contaminated soils were stockpiled separately from other excavated material and were placed on and covered with polyethylene sheets. Potentially contaminated soils were transported to the Main Post ID-27 Soil Staging Area (T-80) 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.

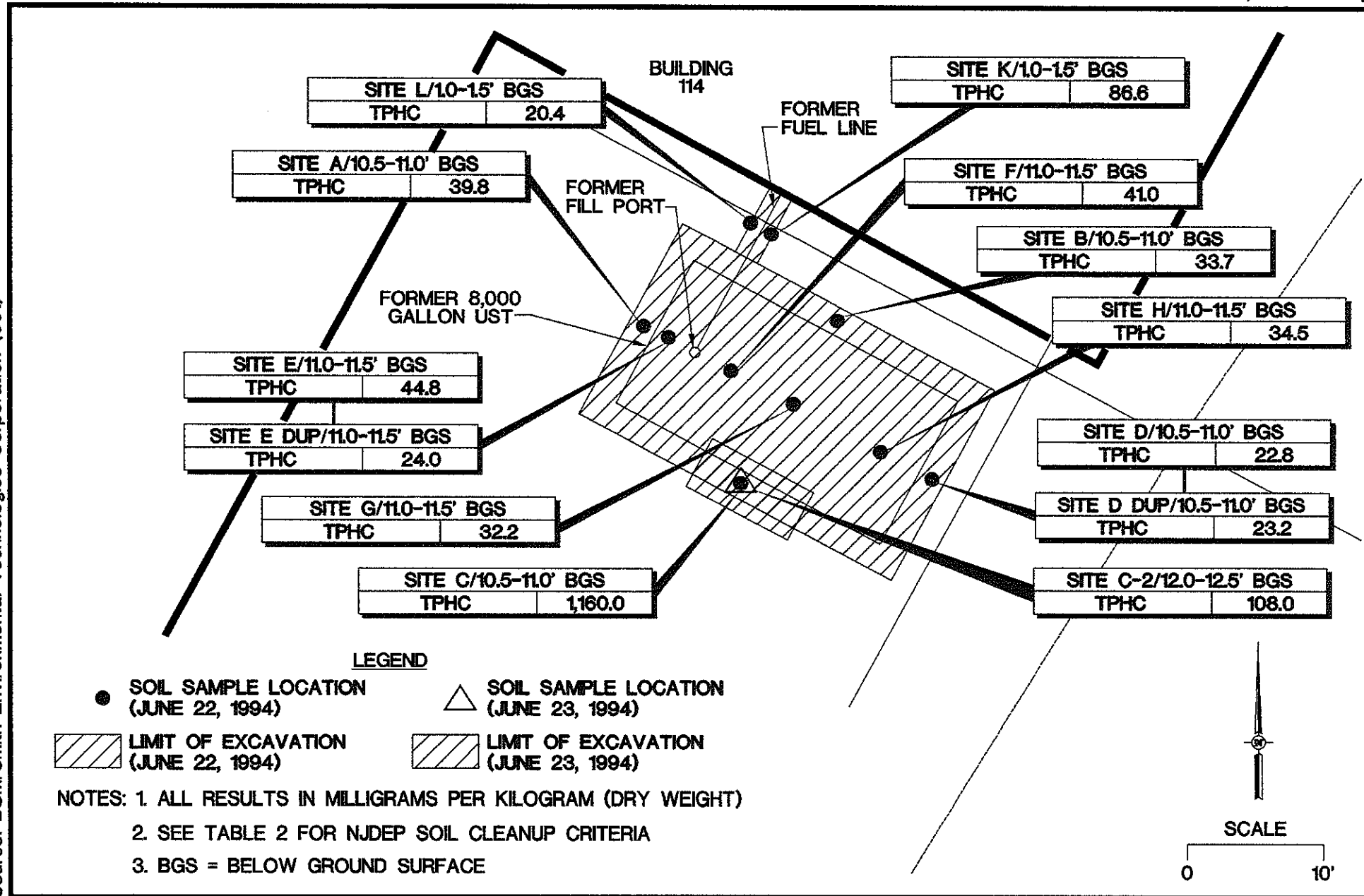


TABLE 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 114, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP E	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
DUP D	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
K	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
L	06-22-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C-2	06-23-94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
*Note: TPHC Total Petroleum Hydrocarbons (Method 418.1 / soil and aqueous)					



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* (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)
Contact Person: Nancy Williams
Phone Number: (201)427-2881
NJDEP Company Certification No.: 0200128
- Subsurface Evaluator: Dinkerria 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 Company Certification No.: 13461
- Hazardous Waste Hauler: Freehold Cartage, Inc.
Contact Person: Barry Olsen
Phone Number: (908)462-1001
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. Soils were removed from the south wall of the excavation until no evidence of contamination remained.

2.3 SOIL SAMPLING

On June 22, 1994, following removal of two cubic yards of potentially contaminated soil, post-excavation soil samples A, B, C, D, E, F, G, H, DUP E, and DUP G were collected from a total of eight (8) locations along the base and sidewalls of the UST excavation. Two (2) post-excavation soil samples (K and L) were also collected immediately below the former location of piping associated with the UST. Refer to soil sampling location map on Figure 3. All samples were analyzed for TPHC.

On June 23, 1994, soils from sampling location area C were excavated due to a TPHC concentration over 1,000 mg/kg. Following removal of one additional cubic yard of potentially contaminated soil, area C was resampled (sample C-2) and was analyzed for TPHC. Refer to soil sampling location map on Figure 3.

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 on 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 216.0 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.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 114
FT. MONMOUTH, NEW JERSEY

PAGE 1 OF 2

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/10.5-11.0'	1536.1	06-22-94	06-22-94	Total Solid	--	--	88 %	--	--
				TPHC	6.6	yes	39.8	10,000	--
B/10.5-11.0'	1536.2	06-22-94	06-22-94	Total Solid	--	--	88 %	--	--
				TPHC	6.6	yes	33.7	10,000	--
C/10.5-11.0'	1536.3	06-22-94	06-22-94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	1,160.0	10,000	--
D/10.5-11.0'	1536.4	06-22-94	06-22-94	Total Solid	--	--	95 %	--	--
				TPHC	6.6	yes	22.8	10,000	--
E/11.0-11.5'	1536.5	06-22-94	06-22-94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	44.8	10,000	--
F/11.0-11.5'	1536.6	06-22-94	06-22-94	Total Solid	--	--	92 %	--	--
				TPHC	6.6	yes	41.0	10,000	--
G/11.0-11.5'	1536.7	06-22-94	06-22-94	Total Solid	--	--	92 %	--	--
				TPHC	6.6	yes	32.2	10,000	--
H/11.0-11.5'	1536.8	06-22-94	06-22-94	Total Solid	--	--	86 %	--	--
				TPHC	6.6	yes	34.5	10,000	--
DUP E/11.0-11.5'	1536.9	06-22-94	06-22-94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	24.0	10,000	--

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1 SOIL SAMPLING RESULTS

To evaluate soil conditions following removal of the UST and associated piping, post-excavation soil samples were collected from a total of ten (10) locations on June 22, 1994 and from one location on June 23, 1994. All samples were analyzed for TPHC. The post-excavation soil sample 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 on Table 2 and the soil sampling results are shown on Figure 3. The analytical data package is provided in Appendix E. The full data package, including associated quality control data, is on file at the U.S. Army Fort Monmouth, DPW.

All post-excavation soil samples collected on June 22, 1994, from the UST excavation and from below piping associated with the UST contained concentrations of TPHC below the NJDEP soil cleanup criteria. Post-excavation samples A, B, D, E, F, G, H, DUP D, and DUP E contained TPHC concentrations ranging from 20.4 mg/kg to 86.6 mg/kg. Sample C contained an elevated TPHC concentration of 1,160.0 mg/kg.

All post-excavation soil samples collected on June 23, 1994 from the UST excavation contained concentrations of contaminants below the NJDEP soil cleanup criteria. Post-excavation soil sample C-2 contained a TPHC concentration of 108.0 mg/kg.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all of post-excavation soil samples collected from the UST closure excavation at Building 114 were below the NJDEP soil cleanup criteria for total organic contaminants.

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 remain 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. 081533-1 at Building 114.

TABLE 2

POST-EXCAVATION SOIL SAMPLING RESULTS
 BUILDING 114
 FT. MONMOUTH, NEW JERSEY

PAGE 2 OF 2

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
DUP D/10.5-11.0'	1536.10	06-22-94	06-22-94	Total Solid	--	--	93 %	--	--
				TPHC	6.6	yes	23.2	10,000	--
K/1.0-1.5'	1536.11	06-22-94	06-22-94	Total Solid	--	--	93 %	--	--
				TPHC	6.6	yes	86.6	10,000	--
L/1.0-1.5'	1536.12	06-22-94	06-22-94	Total Solid	--	--	93 %	--	--
				TPHC	6.6	yes	20.4	10,000	--
C-2/12.0-12.5'	1537.1	06-23-94	06-23-94	Total Solid	--	--	84 %	--	--
				TPHC	6.6	yes	108.0	10,000	--

Notes:

- * Cleanup criteria for total organics
 -- Not applicable / does not exceed criteria
 TPHC Total Petroleum Hydrocarbons

 Smith Environmental Technologies Corporation (Project No. 09-5004-07)

 soil114.doc

SMTH

APPENDIX A
NJDEP BUST CLOSURE APPROVAL



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL
PROTECTION AND ENERGY

CHRISTINE TODD WHITMAN
Governor

ROBERT C. SHINN, JR.
Commissioner

Mr. Joseph Fallon
SELFM-EH-EV
Department of the Army
Headquarters CECOM Fort Monmouth
Fort Monmouth, NJ 077703-5000

SEP 7 1994

Dear Mr. Fallon:

Re: UST Closures - Fort Monmouth
Fort Monmouth Army Base
Tinton Falls, Monmouth County

The NJDEPE has reviewed the four underground storage tank closure plans for UST number 0081533 tanks 1 and 171 and for UST number 0090010 tanks 17 and 18 submitted on May 31, 1994 for NJDEPE review and approval. The NJDEPE has determined that the closure plans for these tanks are consistent with the Technical Requirements for Site Remediation.

The remedial efforts associated with the closures of these tanks may commence as scheduled in each of the associated closure plans. This letter must be made available to any authorized personnel responsible for review and oversight of UST removals. This approval does not relinquish Fort Monmouth from fulfilling any Federal, County or Municipal requirement associated with the removal of underground storage tanks.

If you should have any questions or require additional information, please do not hesitate to contact me at (609) 633-1455.

Sincerely,

Ian R. Curtis, Case Manager
Bureau of Federal Case Management

RPCE\BFCM\FTMMTH12.IRC

SMITH

APPENDIX B
CERTIFICATIONS



FOR STATE USE ONLY

UST# _____
Date Rec'd _____
TMS # _____
Staff _____

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation

CN 029
Trenton, NJ 08625-0029
Tel. # 609-984-3156
Fax. # 609-292-5604

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

UNDERGROUND STORAGE TANK
SITE ASSESSMENT SUMMARY

*Under the provisions of the Underground Storage
of Hazardous Substances Act
in accordance with N.J.A.C. 7:14B*

This Summary form shall be used by all owners and operators of Underground Storage Tank Systems (USTS) who have either reported a release and are subject to the site assessment requirements of N.J.A.C. 7:14B-8.2 or who have closed USTS pursuant to N.J.A.C. 7:14B-9.1 et seq. and are subject to the site assessment requirements of N.J.A.C. 7:14B-9.2 and 9.3.

INSTRUCTIONS:

- Please print legibly or type.
- Fill in all applicable blanks. This form will require various attachments in order to complete the Summary. The technical guidance document, Interim Closure Requirements for USTs, explains the regulatory (and technical) requirements for closure and the Scope of Work, Investigation and Corrective Action Requirements for Discharges from Underground Storage Tanks and Piping Systems explains the regulatory (and technical) requirements for corrective action.
- Return one original of the form and all required attachments to the above address.
- Attach a scaled site diagram of the subject facility which shows the information specified in Item IV B of this form.
- Explain any "No" or "N/A" response on a separate sheet.

Date of Submission _____

Bldg. 114

081533-1
FACILITY REGISTRATION #

I. FACILITY NAME AND ADDRESS

U.S. Army, Fort Monmouth, New Jersey
Directorate of Engineering and Housing, Building 167
Fort Monmouth, New Jersey County Monmouth
Telephone No. (908) 532-1475

OWNER'S NAME AND ADDRESS, if different from above

Telephone No. _____

II. DISCHARGE REPORTING REQUIREMENTS

A. Was contamination found? ☐ Yes ☒ No If Yes, Case No. _____
(Note: All discharges must be reported to the Environmental Action Hotline (609) 292-7172)

B. The substance(s) discharged was(were) N/A

C. Have any vapor hazards been mitigated? ☐ Yes ☐ No ☒ N/A

III. DECOMMISSIONING OF TANK SYSTEMS

Closure Approval No. June 7, 1994 letter

The site assessment requirements associated with tank decommissioning are explained in the Technical Guidance Document, Interim Closure Requirements for UST's, Section V. A-D. Attach complete documentation of the methods used and the results obtained for each of the steps of tank decommissioning used. Please include a site map which shows the locations of all samples and borings, the location of all tanks and piping runs at the facility at the beginning of the tank closure operation and annotated to differentiate the status of all tanks and piping (e.g., removed, abandoned, temporarily closed, etc.). The same site map can be used to document other parts of the site assessment requirements, if it is properly and legibly annotated.

IV. SITE ASSESSMENT REQUIREMENTS

A. Excavated Soil

Any evidence of contamination in excavated soil will require that the soil be classified as either Hazardous Waste or Non-Hazardous Waste. Please include all required documentation of compliance with the requirements for handling contaminated excavated soil (if any was present) as explained in the technical guidance documents for closure and corrective action. Describe amount of soil removed, its classification, and disposal location.

B. Scaled Site Diagrams

1. Scaled site diagrams must be attached which include the following information:

- North arrow and scale
- The locations of the ground water monitoring wells
- Location and depth of each soil sample and boring
- All major surface and sub-surface structures and utilities
- Approximate property boundaries
- All existing or closed underground storage tank systems, including appurtenant piping
- A cross-sectional view indicating depth of tank, stratigraphy and location of water table
- Locations of surface water bodies

C. Soil samples and borings (check appropriate answer)

- Were soil samples taken from the excavation as prescribed? ☒ Yes ☐ No ☐ N/A
- Were soil borings taken at the tank system closure site as prescribed? ☐ Yes ☐ No ☒ N/A
- Attach the analytical results in tabular form and include the following information about each sample:
 - Customer sample number (keyed to the site map)
 - The depth of the soil sample
 - Soil boring logs
 - Method detection limit of the method used
 - QA/QC Information as required

D. Ground Water Monitoring

1. Number of ground water monitoring wells installed 0
2. Attach the analytical results of the ground water samples in tabular form. Include the following information for each sample from each well:
 - a. Site diagram number for each well installed
 - b. Depth of ground water surface
 - c. Depth of screened interval
 - d. Method detection limit of the method used
 - e. Well logs
 - f. Well permit numbers
 - g. QA/QC information as required

V. SOIL CONTAMINATION

- A. Was soil contamination found? Yes ☒ No ☒
If "Yes", please answer Question B-E
If "No", please answer Question B
- B. The highest soil contamination still remaining in the ground has been determined to be:
1. N/A ppb total BTEX, N/A ppb total non-targeted VOC
 2. N/A ppb total B/N, N/A ppb total non-targeted B/N
 3. 108 ppm TPHC
 4. N/A ppb (for non-petroleum substance)
- C. Remediation of free product contaminated soils
1. All free product contaminated soil on the property boundaries and above the water table are believed to have been removed from the subsurface Yes ☒ No ☒
 2. Free product contaminated soils are suspected to exist below the water table Yes ☒ No ☒
 3. Free product contaminated soils are suspected to exist off the property boundaries. Yes ☒ No ☒
- D. Was the vertical and horizontal extent of contamination determined? Yes ☒ No ☒ N/A ☒
- E. Does soil contamination intersect ground water? Yes ☒ No ☒ N/A ☒

VI. GROUND WATER CONTAMINATION N/A

- A. Was ground water contamination found? Yes ☒ No ☒
If "Yes", please answer Questions B-G.
If "No", please answer only Question B.
- B. The highest ground water contamination at any 1 sampling location and at any 1 sampling event to date has been determined to be:
1. _____ ppb total BTEX, _____ ppb total non-targeted VOC
 2. _____ ppb total B/N, _____ ppb total non-targeted B/N
 3. _____ ppb total MTBE, _____ ppb total TBA
 4. _____ ppb (for non-petroleum substance)
 5. greatest thickness of separate phase product found _____
 6. separate phase product has been delineated Yes ☒ No ☒ N/A ☒
- C. Result(s) of well search
1. A well search (including a review of manual well records) indicates that private, municipal or commercial wells do exist within the distances specified in the Scope of Work. Yes ☒ No ☒ N/A ☒
 2. The number of these wells identified is _____

D. Proximity of wells and contaminant plume

1. The shallowest depth of any well noted in the well search which may be in the horizontal or vertical potential path(s) of the contaminant plume(s) is _____ feet below grade (consideration has been given for the effects of pumping, subsurface structures, etc. on the direction(s) of contaminant migration). This well is _____ feet from the source and its screening begins at a depth of _____ feet.
2. The shallowest depth to the top of the well screen for any well in the potential path of the plume(s) (as described in D1 above) is _____ feet below grade. This well is located _____ feet from the source.
3. The closest horizontal distance of a private, commercial or municipal well in the potential path of the plume (as determined in D1) is _____ feet from the source. This well is _____ feet deep and screening begins at a depth of _____ feet.

E. A plan for separate phase product recovery has been included. ____ Yes ____ No ____ N/A

F. A ground water contour map has been submitted which includes the ground water elevations for each well.
____ Yes ____ No ____ N/A

G. Delineation of contamination

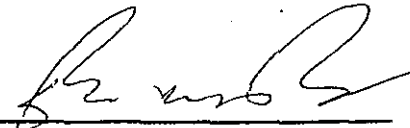
1. The ground water contaminants have been delineated to MCLs or lower values at the property boundaries. ____ Yes ____ No
2. The plume is suspected to continue off the property at concentrations greater than MCLs.
____ Yes ____ No
3. Off property access (circle one): is being sought has been approved has been denied

VII. SITE ASSESSMENT CERTIFICATION [preparer of site assessment plan - N.J.A.C. 7:14B-8.3(b) & 9.5(a)3]

The person signing this certification as the "Qualified Ground Water Consultant" (as defined in N.J.A.C. 7:14B-1.6) responsible for the design and implementation of the site assessment plan as specified in N.J.A.C. 7:14B-8.3(a) & 9.2(b)2, must supply the name of the certifying organization and certification number.

"I certify under penalty of law that the information provided in this document is true, accurate, and complete and was obtained by procedures in compliance with N.J.A.C. 7:14B-8 and 9. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) Dinkerrai M. Desai

SIGNATURE 

COMPANY NAME U.S. Army, Fort Monmouth
(Preparer of Site Assessment Plan)

DATE 11/1/95

CERTIFYING
ORGANIZATION NJDEP

CERTIFICATION
NUMBER E0002266

VIII. TANK DECOMMISSIONING CERTIFICATION [person performing tank decommissioning portion of closure plan - N.J.A.C. 7:14B-9.5(a)4]

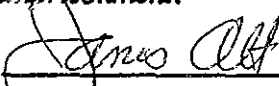
"I certify under penalty of law that tank decommissioning activities were performed in compliance with N.J.A.C. 7:14B-9.2(b)3. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____
(Performer of Tank Decommissioning)

IX. CERTIFICATIONS BY THE RESPONSIBLE PARTY(IES) OF THE FACILITY

A. The following certification shall be signed by the highest ranking individual with overall responsibility for that facility [N.J.A.C. 7:14B-2.3(c)1].

"I certify under penalty of law that the information provided in this document is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) James Ott SIGNATURE 
COMPANY NAME U.S. Army, Fort Monmouth DATE 2/14/96

B. The following certification shall be signed as follows [according to the requirements of N.J.A.C. 7:14B-2.3(C)2]:

1. For a corporation, by a principal executive officer of at least the level of vice president.
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 the principal executive officer or ranking elected official.
4. In cases where the highest ranking corporate partnership, governmental officer or official at the facility as required in A above is the same person as the official required to certify in B, only the certification in A need to be made. In all other cases, the certifications of A and B shall be made.

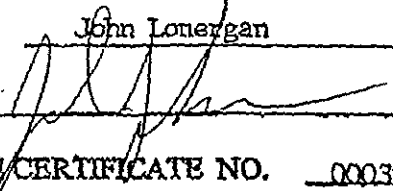
"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false, inaccurate, or incomplete information, including fines and/or imprisonment."

NAME (Print or Type) _____ SIGNATURE _____
COMPANY NAME _____ DATE _____

UNDERGROUND STORAGE TANK (UST)
CLOSURE CERTIFICATION

BUILDING NO. 114NJDEP UST REGISTRATION NO. 81533-1DATE TANK REMOVED 6/22/94UO / 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 LoneyganSIGNATURE NJDEP UST CLOSURE CERTIFICATE NO. 0003248COMPANY PERFORMING TANK DECOMMISSIONING CUTE IncNJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128DATE OF SUBMITTAL 7/19/94

SMITH

APPENDIX C
WASTE MANIFEST



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

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

Form Approved OMB No. 2050-0029 Expires 9-30-94

UNIFORM HAZARDOUS
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest

2. Page 1

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

NJ 32110101201591703184

3. Shipper's Name and Mailing Address

US Army Communications Electronic Command

NJA 1603184

Main Post, c/o James Shirghio, Bldg 2504

ATTN: SELEM-DL-EM-MS, Fort Monmouth, NJ 07703
908 532-6224

Main Post

Freehold Cartage Inc.

NJ D 01 05' 41.2' 6.1' 6.4'

Et. Monmouth
NJ DEPS 2265

4. Shipper's Phone Number

US EPA ID Number

908 462-1001

5. Recipient's Name and Mailing Address

Lionetti Oil Recovery CO. INC.

Runyon & Cheesequake Rds.

Old Bridge, NJ 08857

NJ D 0 8 4 0 4 4 0 6 4

908 721-0900

X Petroleum Oil N.O.S. Class 3 (Petroleum Oil)
Combustible Liquid UN 1270 PG III

001TT000676 X 7 2 2 ✓

X Petroleum oil Nos class 3 (Petroleum oil)

combustible liquid UN 1270 PG III

001TT002576 X 7 2 2

X Petroleum oil Nos class 3 (Petroleum oil)

combustible liquid UN 1270 PG III

001TT009896 X 7 2 2 ✓

X Petroleum oil Nos class 3 (Petroleum oil)

combustible liquid UN 1270 PG III

001TT002596 X 7 2 2 ✓

6. Additional Descriptions for Materials Listed Above

T,L Petroleum Oil 80%
Water 20%

T,L Petroleum oil 80%
water 20%

7. Hazardous Waste Codes Listed Above

T04 Filtration

T04 Filtration

T,L Petroleum oil 80%
water 20%

T,L Petroleum oil 80%
water 20%

T04 Filtration

T04 Filtration

NOT REGULATED BY EPA. REGULATED AS HAZARDOUS WASTE IN NJ

24 HOUR EMERGENCY PHONE: 201-427-28810. B125167 0090010-18

U DECAL# 55182

ERG# 27

B125197-0090010-20

B125114 0081533-18

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

As a small 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 necessary, and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future impacts on 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 a good waste management method that is available to me and that I can afford.

Printed Name: DIN KAL M. DESAI

Signature

Month Day Year

06/20/94

8. Recipient's Name and Mailing Address

Signature

Month Day Year

06/20/94

9. Recipient's Signature

Signature

Month Day Year

06/20/94

10. Recipient's Phone Number

Signature

Month Day Year

NJA 1603184

CALCULATION SHEET

Building No. 114

NJDEPE Reg. No. 0681533-1

Tank Size 8000 gal

Tank Void 60.0 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.1	Clean fill	21.63	18803
		21.75	18804
		22.25	18784

TOTAL 65.63

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
	<u>N/A</u>		

TOTAL

ID#27 soil to stockpile $(65.63 + \cancel{60.0}) - 60.0 = 5.63$ tons

Chargeable clean fill 5.63 tons

Chargeable stone N/A



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

18803

Order Date 11/11/11

Deliver Date _____ / _____ / _____

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☒

Item(s)

Quantity / Measure
(tons, lbs., yds., ea.)

Unit Price

Total

68250

25000

21.63 T

4/3 250

Sub Total

Delivery

N.J. Tax

Total

Have gravel will travel!
since 1925



Joseph Sciarano Sand & Gravel Co.

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

18804

Order Date 7/21/11

Deliver Date

Delivered ☐

C.O.D. ☐

F.O.B./P.U. ☐

Charge ☒

Item(s)

Quantity / Measure
(tons, lbs., yds., ea.)

Unit
Price

Total

68500

25000

21.75 T

43500

Sub Total

Delivery

N.J. Tax

Total

*Have gravel will travel!
since 1925*

No. 2531

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



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

18784

Order Date June / 18 / 77

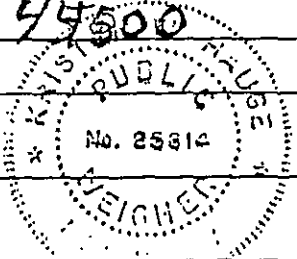
Deliver Date / /

Delivered ☐ C.O.D. ☐

F.O.B./P.U. ☐ Charge ☒

Address 291

Clean Fill

Item(s)	Quantity / Measure (tons, lbs., yds., ea.)	Unit Price	Total
	G 70 000		
	T 25 500	22.25T	
	N 44500		
		Sub Total	
		Delivery	
		N.J. Tax	
		Total	

Order _____

Received _____

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

*Have gravel will travel!
since 1925*

Have gravel will travel!
since 1925

SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

East Marmouth
Building 114
EXT 0081533-1

MAZZA & SONS, INC.

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

NO. _____

DATE 22 June 94

Customer's Name

Cute Inc

Address

Make of
Autos

B125114

451 # 0081533-1

47780 LB G

39180 LB G

86.00

Tires

Tank

Price

Weight

Price

Cast Iron

Steel

Lt. Iron

Copper #1

Copper #2

Lt. Copper

Brass

Alum Clean

Lead

Stainless

Radiators

Battery

TOTAL AMOUNT:

2

Put on Acct
on 6/22/94

1103300

Don Ellis

Weigher

Customer

SMITH

APPENDIX E
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 #: 1536.1-.12
Sample Rec'd: 06/22/94
Analysis Start: 06/22/94
Analysis Comp: 06/22/94

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

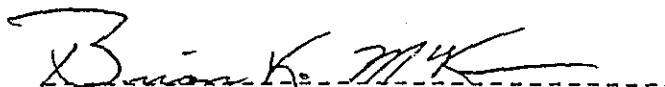
NJDEPE UST Reg.#: 0081533-1
Closure #: 07-June-94 Letter
DICAR #:
Location #: Bldg. 114

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1536.1	Site A, West Side OVA= ND	88	39.8	6.6
1536.2	Site B, North Side OVA= ND	88	33.7	6.6
1536.3	Site C, South Side OVA= ND	84	1160.	6.6
1536.4	Site D, East Side OVA= ND	95	22.8	6.6
1536.5	Site E, West Bottom OVA= ND	90	44.8	6.6
1536.6	Site F, E/West Bottom OVA= ND	92	41.0	6.6
1536.7	Site G, W/East Bottom OVA= ND	92	32.2	6.6
1536.8	Site H, East Bottom OVA= ND	86	34.5	6.6
1536.9	Site I, Dupe of E OVA= ND	90	24.0	6.6
1536.10	Site J, Dupe of D OVA= ND	93	23.2	6.6
1536.11	Site K, Pipe Hole OVA= ND	93	86.6	6.6
1536.12	Site L, Pipe Bldg. OVA= ND	93	20.4	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit

* = Silica Gel Added, NA = Not Applicable

1536.12dup= 86% 1536.12s= 86% 1536.12sd= 89% RPD= 6.6%


Brian K. McKee
Laboratory Director

U.S. ARMY FORT MONMOUTH

P.O. #: PWS-07

Chain of Custody

Project #:		Sampler: CUTE INC		Date / Time: 6-21-94		Analysis Parameters		Start:	
Customer: SELM-PW-EV D. DESAI		Site Name: BLDG 114 VST 0081533-1 CLOSURE LTR 7 JUN 94						Finish:	
Phone: X 21475								Preservation Method	
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	Analysis Parameters				Remarks
1536.1	6-21-94 1207	SITE A - WEST SIDE SOIL	SOIL	1	TPHC	TO SOLID	MUNSEL	OVA	
.2	1210	B - NORTH SIDE		1					ND
.3	1213	C - SOUTH SIDE		1					ND
.4	1225	D - EAST SIDE		1					ND
.5	1218	E - WEST BOTTOM		1					ND
.6	1215	F - E/WEST BOTTOM		1					ND
.7	1222	G - W/EAST BOTTOM		1					ND
.8	1228	H - EAST BOTTOM		1					ND
.9	1218	I - DUPE OF E		1					ND
.10	1225	J - DUPE OF D		1					ND
.11	1230	K - PIPE HOLE		1					ND
Relinquished By (signature)		Date / Time		Received By (signature)		Shipped By:			
<i>[Signature]</i>		6/21/94 1207		<i>[Signature]</i>					
Relinquished By (signature)		Date / Time		Received for Lab by (signature):		Date / Time			
				<i>[Signature]</i>		6/21/94 1300			
Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody.									

U.S. ARMY FORT MONMOUTH, N.J.

P.O. #:

Chain of Custody

[illegible]

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 #: 1536.1-12
Sample Rec'd: 06/22/94
Analysis Start: 06/22/94
Analysis Comp: 06/22/94

Analysis: Munsel

[illegible]


Brian K. McKee
Laboratory Director

June 22, 1994

Sarah Hubbard

1450

BLANK 0 MV

40.75 103 MV

81.5 204 MV

163 406 MV

1536.1 14 MV

1536.2 12 MV

1536.3 365 MV

1536.4 9 MV

1536.5 16 MV

1536.6 15 MV

1536.7 12 MV

1536.8 12 MV

1536.9 9 MV

1536.10 9 MV

1536.11 314 MV

1536.12 8 MV

1536.12 7 MV Dup.

1536.12 364 MV Spk.

1536.12 38 MV Dup Spk.

193-6270-00

PRINT

PHC Conformance/Non-conformance Summary Report

No Yes

1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank

✓ —

2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)

— ✓

3. IR Spectra submitted for standards, blanks, & samples

— ✓

4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.

— N/A

5. Extraction holding time met.

(If not met, list number of days exceeded for each sample)

— ✓

6. Analysis holding time met.

(If not met, list number of days exceeded for each sample)

— ✓

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.

Project #1536


Brian K. McKee
Laboratory Manager

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

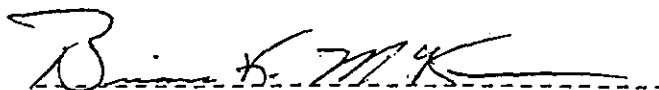
Lab. ID #: 1537.1
Sample Rec'd: 06/23/94
Analysis Start: 06/23/94
Analysis Comp: 06/23/94

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

NJDEPE UST Reg.#: 0081533-1
Closure #: 07-June-94 Letter
DICAR #:
Location #: Bldg. 114

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1537.1	Site C-2 OVA= NA	84	108.	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable


Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #:

Chain of Custody

Project #:		Sampler: <i>Cste</i>		Date / Time: <i>4/22/94 0900</i>		Analysis Parameters				Start:		
Customer: <i>DPW</i>		Site Name: <i>Blog 114</i> <i>Tank # 0081533-1</i> <i>Class = Letter</i>		TPHC Solid Munsell DVA				Finish:				
Phone:								Preservation Method				
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles	Remarks							
<i>1537.1</i>	<i>4/22/94 0900</i>	<i>Site C-2</i>	<i>Soil</i>	<i>1</i>	<i>X</i>	<i>X</i>	<i>X</i>				<i>N/A</i>	<i>4°C</i>
Relinquished By (signature)		Date / Time		Received By (signature)		Shipped By:						
Relinquished By (signature)		Date / Time		Received for Lab by (signature):				Date / Time				
				<i>B. MK</i>								
Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody.												

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

Analysis: Munsel

B. K. M. K.

Brian K. McKee
Laboratory Director

1994-09-00

June 23, 1994 Thursday
0930

Blank

40.75

81.5

163

1537.1 264V

0 10 20 30 40 50 60 70 80 90 100

PHC Conformance/Non-conformance Summary Report

No Yes

1. Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank

✓ —

2. Matrix Spike/Matrix Sp Dup. Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)

— ✓

3. IR Spectra submitted for standards, blanks, & samples

— ✓

4. Chromatograms submitted for standards, blanks, and samples if GC fingerprinting was conducted.

— N/A

5. Extraction holding time met.

(If not met, list number of days exceeded for each sample)

— ✓

6. Analysis holding time met.

(If not met, list number of days exceeded for each sample)

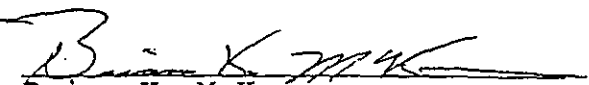
— ✓

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.

Project #1537


Brian K. McKee

Laboratory Manager