

United States Army

Fort Monmouth, New Jersey

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

***Building 361
Main Post***

**NJDEP UST Registration No. 0081533-71
NJDEP Closure Approval No. C-93-3915
Residential Non-Regulated UST**

February 1997

SMITH
TECHNOLOGY CORPORATION



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

BUILDING 361

MAIN POST

**NJDEP UST REGISTRATION NO. 0081533-71
NJDEP CLOSURE APPROVAL NO. C-93-3915
RESIDENTIAL NON-REGULATED UST**

FEBRUARY 1997

**PROJECT NO. 09-5004-08
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 TECHNOLOGY CORPORATION
BROMLEY CORPORATE CENTER
THREE TERRI LANE
BURLINGTON, NEW JERSEY 08016**



TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES	1
1.1 OVERVIEW	1
1.2 SITE DESCRIPTION	2
1.2.1 Geological/Hydrogeological Setting	2
1.3 HEALTH AND SAFETY	3
1.4 REMOVAL OF UNDERGROUND STORAGE TANK	4
1.4.1 General Procedures	4
1.4.2 Underground Storage Tank Excavation and Cleaning	4
1.5 UNDERGROUND STORAGE TANK TRANSPORTATION AND DISPOSAL	5
1.6 MANAGEMENT OF EXCAVATED SOILS	5
2.0 SITE INVESTIGATION ACTIVITIES	6
2.1 OVERVIEW	6
2.2 FIELD SCREENING/MONITORING	6
2.3 SOIL SAMPLING	7
3.0 CONCLUSIONS AND RECOMMENDATIONS	8
3.1 SOIL SAMPLING RESULTS	8
3.2 CONCLUSIONS AND RECOMMENDATIONS	8

Following Page No.

TABLES

Table 1 Summary of Post-Excavation Sampling Activities	7
Table 2 Post-Excavation Soil Sampling Results	8



TABLE OF CONTENTS (CONTINUED)

Following Page No.

FIGURES

Figure 1	Site Location Map	1
Figure 2	Site Map	2
Figure 3	Soil Sampling Results	8

APPENDICES

Appendix A	NJDEP-BUST Closure Approval
Appendix B	Certifications
Appendix C	Waste Manifest
Appendix D	UST Disposal Certificate
Appendix E	Soil Analytical Data Package



EXECUTIVE SUMMARY

UST Closure

On May 27, 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-93-3915 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey. The UST, NJDEP Registration No. 0081533-71, was non-regulated and was located immediately adjacent to Building 361 in the Main Post area of U.S. Army, Fort Monmouth. UST No. 0081533-71 was an 8,000-gallon No. 2 fuel oil UST. The UST fill port was located approximately 13 feet west of 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 equipment for evidence of contamination. Following removal, the UST was inspected for corrosion holes. No holes were noted in the UST and no evidence of potentially contaminated soils was observed surrounding the tank.

On May 27, 1994, following the removal of the UST, post-excavation soil samples C and D, were collected from two (2) locations along the sidewalls of the excavation. The sidewall samples were collected at a depth of 6.0 feet below ground surface (bgs). Samples E and F were collected from two (2) locations along the base of the excavation, at a depth of 7.0 feet bgs.

Following removal of the UST fuel lines, samples A and B were collected along the former piping length of the excavation, which was approximately 15 feet in length. The fuel lines ran in a southern direction from the UST to Building 361. Samples G and H were collected along the former piping excavation which ran approximately 13 feet west of the UST to the remote fill port area. The samples from both piping locations were collected at a depth of 2.0 feet bgs. All samples were analyzed for total petroleum hydrocarbons (TPHC).

Findings

All post-excavation soil samples collected from the UST excavation and from below piping associated with the former UST at Building 361 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). Samples A, B, C, F, G, and H, collected on May 27, 1994, contained TPHC concentrations ranging from 11.0 mg/kg to 82.0 mg/kg. Samples D and E contained non-detectable concentrations of TPHC.



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 for Site Remediation*.

Discrepancies

The removal contractor collected soil samples using polystyrene scoops instead of NJDEP approved stainless steel scoops. The results of the soil samples were therefore evaluated at 50% of the actual value to compensate for any potential loss due to absorbency of the polystyrene scoop.

Conclusions and Recommendations

Based on the post-excavation soil sampling results, soils with TPHC concentrations exceeding the NJDEP soil cleanup criteria for total organic contaminants of 10,000 mg/kg, do not exist in the former location of the UST or associated piping.

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-71 at Building 361. Since the UST is non-regulated, this report and data will be kept on-file at Fort Monmouth. No submission to the NJDEP shall be made.



1.0 UNDERGROUND STORAGE TANK DECOMMISSIONING ACTIVITIES

1.1 OVERVIEW

One underground storage tank (UST), New Jersey Department of Environmental Protection (NJDEP) Registration No. 0081533-71, was closed at Building 361 at U.S. Army Fort Monmouth, Fort Monmouth, New Jersey on May 27, 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 July 28, 1993. The plan was approved on September 7, 1993 and assigned TMS No. C-93-3915. The UST was a steel 8,000-gallon tank containing No. 2 fuel oil.

Decommissioning activities for UST No. 0081533-71 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. 0081533-71 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. 0081533-71 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 Technology Corporation. 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.

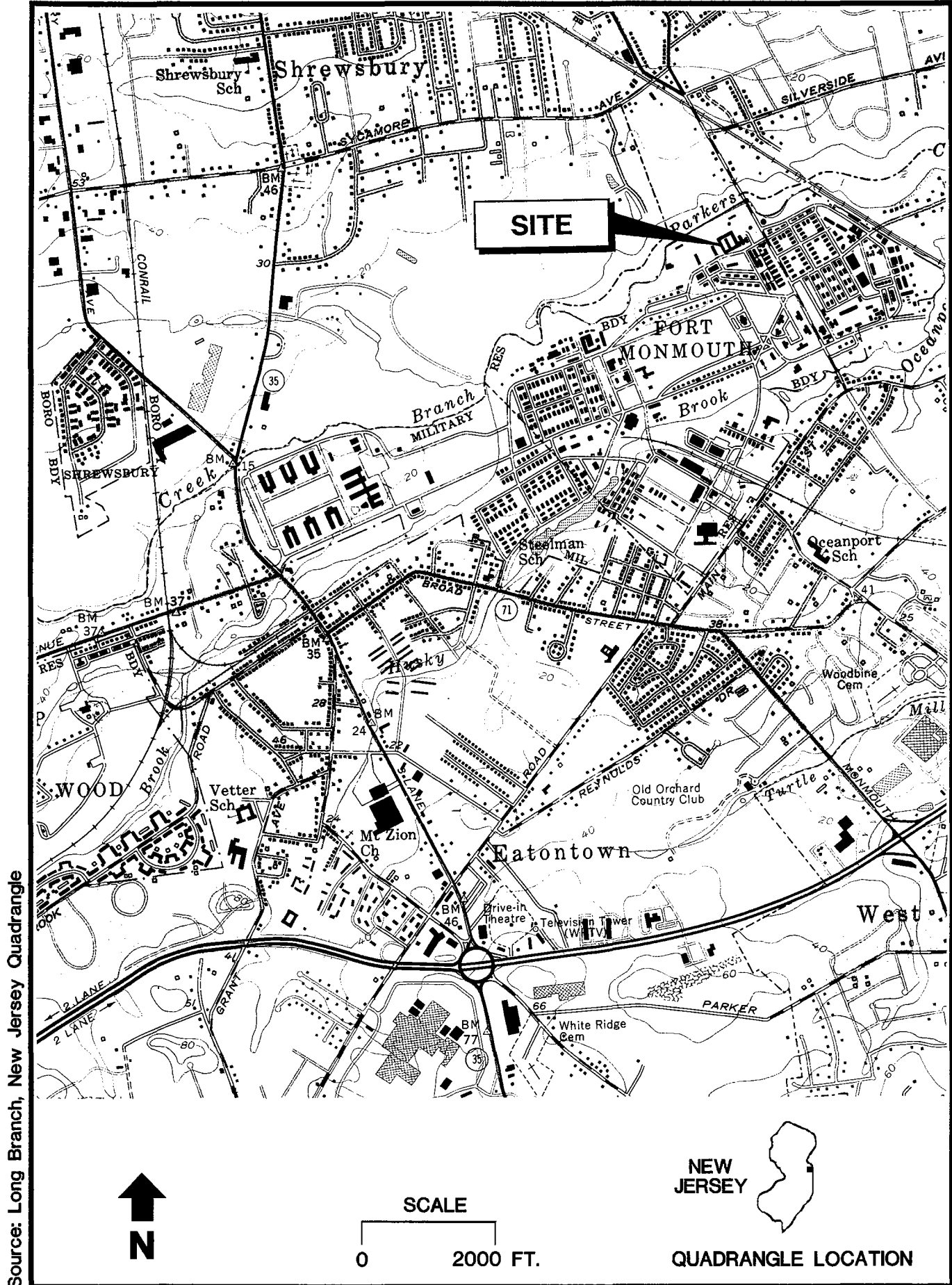


Figure 1
Site Location Map
Building 361



1.2 SITE DESCRIPTION

Building 361 is located in the northeastern portion of the Main Post area of Fort Monmouth, as shown on Figure 1. UST No. 0081533-71 was located north of Building 361 and appurtenant piping ran approximately 15 feet south from the UST to Building 361. The UST's remote fill port was located approximately 13 feet southwest of the UST. A site map is provided on Figure 2.

1.2.1 Geological/Hydrogeological Setting

The following is a description of the geological/hydrogeological setting of the area surrounding Building 361. 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.

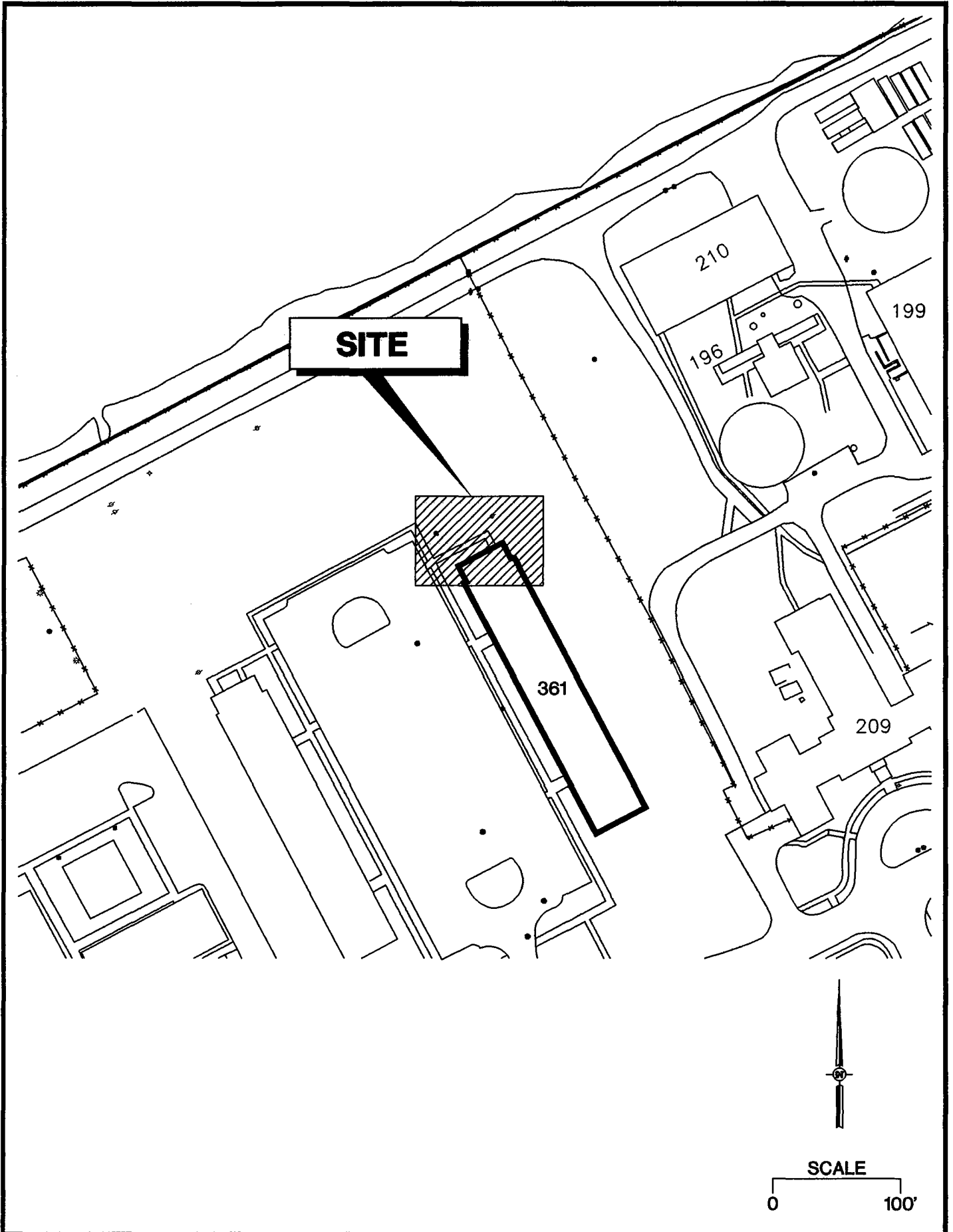
In general, New Jersey Coastal Plain formations consist of a seaward-dipping wedge of unconsolidated deposits of clay, silt, and gravel. These formations typically strike northeast-southwest with a dip ranging from 10 to 60 feet per mile and were deposited on Precambrian and lower Paleozoic rocks (Zapeczka, 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

Source: Smith Environmental Technologies Corporation (104)



Project No. 09-5004-08

Figure 2
Building 361
Site Map



Navesink Formation and dips to the southeast at 35 feet per mile. The upper member (Shrewsbury) of the Red Bank sand is a yellowish-gray to reddish brown clayey, medium-to-coarse-grained sand that contains abundant rock fragments, minor mica and glauconite (Jablonski). The lower member (Sandy Hook) is a dark gray to black, medium-to-fine grained sand with abundant clay, mica, and glauconite.

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

Hydrogeology

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

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

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

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 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 627 gallons of liquid were transported by Freehold Cartage Inc. to Lionetti Oil Recovery Co., a NJDEP-approved petroleum recycling and disposal company located in Old Bridge, New Jersey. Refer to Appendix C for the waste manifest (NJA-1603199).

The UST was cleaned prior to removal from the excavation in accordance with the NJDEP-BUST regulations. After the UST was removed from the excavation, it was staged on polyethylene sheeting and examined for holes. No holes or punctures were observed during the inspection by the Sub-Surface Evaluator. Soils surrounding the UST were screened visually and with an OVA for evidence of contamination. No evidence of contamination was observed.

Soil screening was also performed along the piping associated with the UST. 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. 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 OVA air monitoring and TPHC analysis results from the post-excavation soil samples, no soils exhibited signs of contamination. Therefore, the excavated soils were used as backfill following removal of the UST.



2.0 SITE INVESTIGATION ACTIVITIES

2.1 OVERVIEW

The Site Investigation was managed and carried out by U.S. Army DPW personnel. All analyses were performed and reported by U.S. Army Fort Monmouth Environmental Laboratory, a NJDEP-certified testing laboratory. All sampling was performed under the direct supervision of a NJDEP Certified Sub-Surface Evaluator according to the methods described in the NJDEP *Field Sampling Procedures Manual* (1992). Sampling frequency and parameters analyzed complied with the NJDEP-BUST document *Interim Closure Requirements for Underground Storage Tank Systems* (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 Certification No.: 3248
- Subsurface Evaluator: Charles Appleby
Employer: U.S. Army, Fort Monmouth
Phone Number: (908) 532-6224
NJDEP Certification No.: 2056
- 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) 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. Soil excavated from around the tank and appurtenant piping, as well as the UST excavation sidewalls and bottom, did not exhibit any evidence of potential contamination.



2.3 SOIL SAMPLING

On May 27, 1994, post-excavation soil samples C and D, were collected along the southern and eastern sidewalls of the excavation, at a depth of 6.0 feet below ground surface (bgs). Samples E and F were collected from the base of the excavation, at a depth of 7.0 feet bgs. Samples A and B were collected along the former piping portion of the excavation which ran approximately 15 feet from the UST to Building 361. Samples G and H were collected along the former piping portion of the excavation which ran approximately 13 feet west of the UST to the remote fill port area. All piping samples were collected at a depth of 2.0 feet bgs. All 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 percent, the highest soil contaminant would have been 164.0 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 1
PAGE 1 OF 1

SUMMARY OF SAMPLING ACTIVITIES
BUILDING 361, MAIN POST
FORT MONMOUTH, NEW JERSEY

Sample ID	Date of Collection	Matrix	Sample Type	Analytical Parameters (and USEPA Methods) *	Sampling Method
A	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
B	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
C	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
D	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
E	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
F	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
G	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop
H	5/27/94	Soil	Post-Excavation	TPHC	Polystyrene Scoop

* Note:

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

Smith Technology Corporation (Project No. 09-5004-08)

soil361.doc



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 eight (8) locations on May 27, 1994. 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 collected on May 27, 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 soil samples A, B, C, F, G, and H contained TPHC concentrations ranging from 11.0 mg/kg to 82.0 mg/kg. Post-excavation soil samples D and E contained non-detectable concentrations of TPHC.

3.2 CONCLUSIONS AND RECOMMENDATIONS

The analytical results for all post-excavation soil samples collected from the UST closure excavation at Building 361 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.

The existing discrepancy as listed in the Executive Summary is believed to be acceptable as explained and does not warrant further investigation or explanation. Procedures have been corrected to eliminate recurrences in the future.

No further action is proposed in regard to the closure and site assessment of UST No. 0081533-71 at Building 361. Since the UST is non-regulated, this report and data will be kept on-file at Fort Monmouth. No submission to the NJDEP shall be made.

TABLE 2
PAGE 1 OF 1

POST-EXCAVATION SOIL SAMPLING RESULTS
BUILDING 361
FT. 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/2.0-2.5'	1507.1	5/27/94	5/31/94	Total Solid	--	--	91 %	--	--
				TPHC	6.6	yes	11.0	10,000	--
B/2.0-2.5'	1507.2	5/27/94	5/31/94	Total Solid	--	--	90 %	--	--
				TPHC	6.6	yes	20.0	10,000	--
C/6.0-6.5'	1507.3	5/27/94	5/31/94	Total Solid	--	--	91 %	--	--
				TPHC	6.6	yes	11.0	10,000	--
D/6.0-6.5'	1507.4	5/27/94	5/31/94	Total Solid	--	--	91 %	--	--
				TPHC	6.6	yes	ND	10,000	--
E/7.0-7.5'	1507.5	5/27/94	5/31/94	Total Solid	--	--	83 %	--	--
				TPHC	6.6	yes	ND	10,000	--
F/7.0-7.5'	1507.6	5/27/94	5/31/94	Total Solid	--	--	87 %	--	--
				TPHC	6.6	yes	82.0	10,000	--
G/2.0-2.5'	1507.7	5/27/94	5/31/94	Total Solid	--	--	94 %	--	--
				TPHC	6.6	yes	53.0	10,000	--
H/2.0-2.5'	1507.8	5/27/94	5/31/94	Total Solid	--	--	92 %	--	--
				TPHC	6.6	yes	22.0	10,000	--

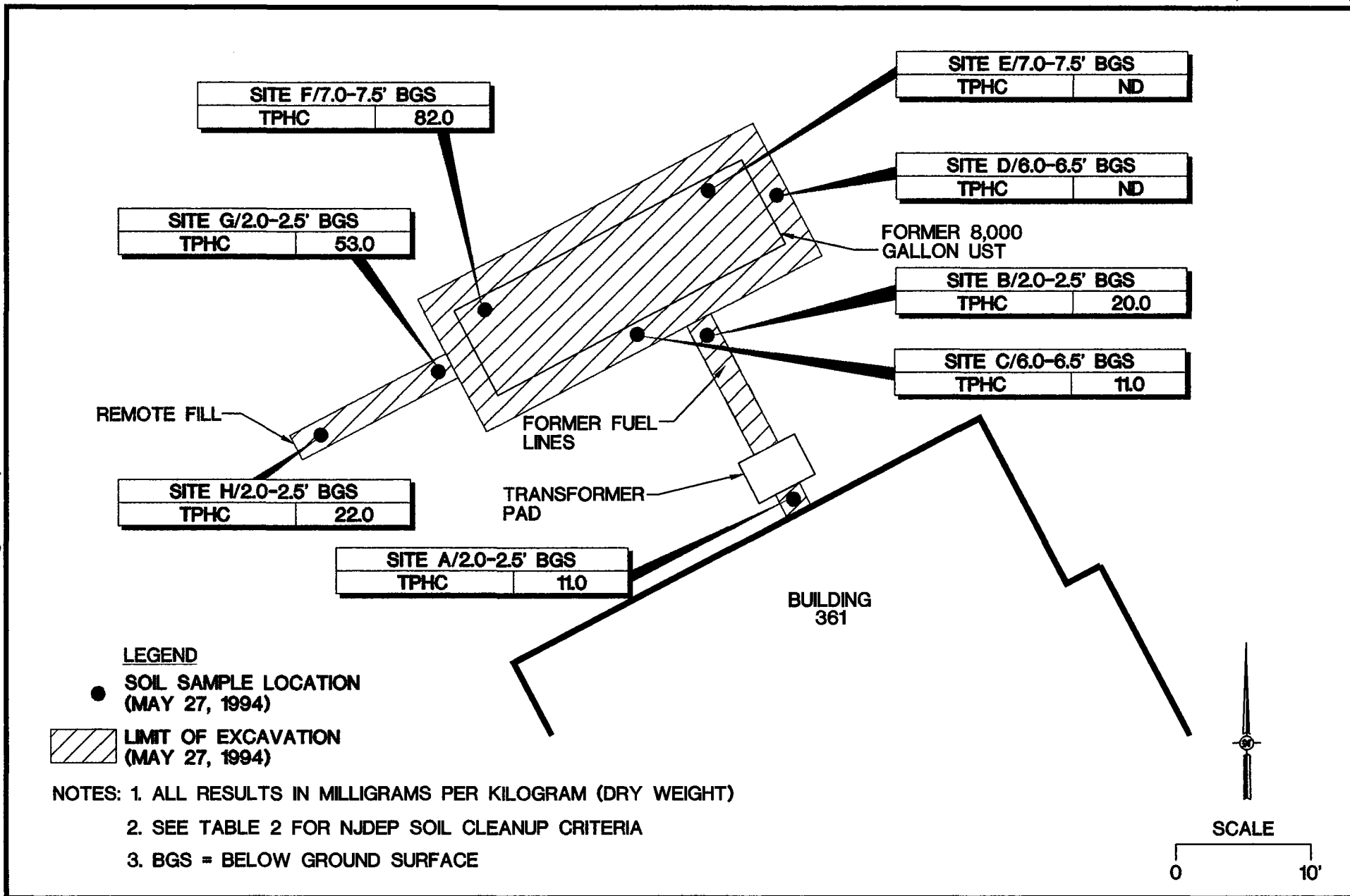
Notes:

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

Actual soil TPHC values may be higher than reported due to absorbency by polystyrene scoops. If absorbency resulted in reducing the actual soil TPHC concentration by 50%, the highest soil contaminant would be 164.0 mg/kg.

Smith Technology Corporation (Project No. 09-5004-08)

Source: Smith Environmental Technologies Corporation (105)



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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 #

UST #

C-93-3915

0081533

US Army
BLDG. 361
Ft. 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 8,000 gallon #2 diesel 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 from around the tank and biased to the areas
of highest field screened readings. Samples will be analyzed for
TPHC. If sample results are greater than 1,000ppm than 25% of the
samples will be analyzed for VO+10.

ON-SITE MANAGER: C. Appleby

TELEPHONE: 908-532-1475

OWNER:

TELEPHONE:

EFFECTIVE DATE: **SEP 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

SMITH

APPENDIX B
CERTIFICATIONS

**UNDERGROUND STORAGE TANK (UST)
CLOSURE CERTIFICATION**

BUILDING NO. 361

NJDEP UST REGISTRATION NO. 81533-71

DATE TANK REMOVED 5/26/94

JO / 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 Monaghan

SIGNATURE 

NJDEP UST CLOSURE CERTIFICATE NO. 0003248

COMPANY PERFORMING TANK DECOMMISSIONING CUTE Inc

NJDEP UST CLOSURE CORPORATE CERTIFICATE NO. 0200128

DATE OF SUBMITTAL 6/10/94

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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

UST File Copy
 Bldg. 361

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-

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NJ3211002059703199	Manifest Document No. 03199	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 Electronics Command Main Post, c/o James Shirghio, Bldg 2504, ATTN: SELFM-DL-EM-MS Fort Monmouth, NJ 07703				A. State Manifest Document Number NJA 1603199		
4. Generator's Phone (908) 532-6223		5. Transporter 1 Company Name Freehold Cartage Inc.		B. State Generator's ID Same		
6. US EPA ID Number NJ1D054126164		7. Transporter 2 Company Name		C. State Trans. ID NJDEPES1476		
8. US EPA ID Number		9. Designated Facility Name and Site Address Lionetti Oil Recovery Co., Inc. Runyon & Cheesequake Rds. Old Bridge, NJ 08857		D. Transporter's Phone (908) 462-1001		
10. US EPA ID Number NJ1D0840440164		11. DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		E. State Trans. ID		
12. Containers		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.
a. X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III		0 0 1 T T		00125 G		X 17 12 12
b. X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III		0 0 1 T T		00525 G		X 17 12 12
c. X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil) combustible liquid UN 1270 PG III		0 0 1 T T		00627 G		X 17 12 12
d. X Petroleum Oil, N.O.S. Class 3 (Petroleum Oil) Combustible Liquid UN 1270 PG III		0 0 1 T T		00022 G		X 17 12 12
J. Additional Descriptions for Materials Listed Above				K. Handing Codes for Wastes Listed Above		
petroleum oil 90%		petroleum oil 90%		T04 Filtration		
water X % 10 T,L		water 10% T,L		T04 Filtration		
petroleum oil 90%		petroleum oil %		T04 Filtration		
water % 10 T,L		PX water % T,L		T04 Filtration		
15. Special Handling Instructions and Additional Information NOT EPA REGULATED. REGULATED AS HAZARDOUS WASTE IN NJ. 11a. ERG# 27 24 HOUR EMERGENCY PHONE: 201-427-2881 A. UST 0081533-70 C. UST 0081533-71 NJ DECAL# 56897 B. 0081533-72 D. UST 0081533-73						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and a 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 or 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 Joseph M. Fallon			Signature Joseph M. Fallon		Month Day Year 10 5 26 91	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name David S. Smith			Signature David S. Smith		Month Day Year 10 5 26 91	
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			

In case of an emergency or spill immediately call the state the emergency occurred in and the N.J. Dept. of Environmental Protection and Energy. (609) 292-7172

GENERATOR
TRANSPORTER
FACILITY

CALCULATION SHEET

Building No. 361

NJDEPE Reg. No. 0081533 - 71

Tank Size 8000 gal

Tank Void 60.0 tons

CLEAN FILL

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.1	clean fill	22.55	18710
"	"	22.5	18714

TOTAL 45.05

STONE

ITEM NO.	DESCRIPTION	QUANTITY	TICKET #
02222-1.2	3/4" stone	14.95	936031

TOTAL 14.95

ID#27 soil to stockpile $(45.05 + 14.95) - 60.0 = \phi$ tons

Chargeable clean fill $45.05 - 60.0 = \phi$

Chargeable stone 14.95 (Cute used to cover void)

JUN- 7-94 TUE 13:58

C.U.T.E.

FAX NO. 201 423 8050

P. 16



S. C. M. I. · SOUND BROOK



CUSTOMER'S COPY

CONTROL NO.
A-930031

Stavola Construction Materials, Inc.

PLANT: CHIMNEY ROCK ROAD, BOUND BROOK, N.J. · 908/368-8700

Bldg 361 - 14,95T
Bldg 362 - 5,66T

X JOK
DRIVER'S SIGNATURE

RECEIVED & ACCEPTED BY:
X Don Ellis CUTE
CUSTOMER'S SIGNATURE

**CRUSHED STONE · SAND
· GRAVEL**

EXECUTIVE OFFICE
HAMILTON ROAD
TINTON FALLS, N.J.
908/542-2329

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	05/20/94	CUST. NO.	08888	JOB NO.	09:31	TICKET NO.	930031
CUSTOMER				DELIVER TO		GROSS	
CLEANING UP THE ENVIRONMENT 103 GODWIN AVE. P.O. BOX 237 MIDLAND PARK NJ 07432				ZONE FT MONMOUTH ***** GIBBS HALL *****		36.31	
TRUCKER				METHOD OF PAYMENT		TARE	
61428		TRUCK NO.	1	CHARGE		15.70	
DRIVER NO.				DELIVERY CODE		NET	
				2		20.61	
QUANTITY		PRODUCT CODE/DESCRIPTION		UNIT OF MEASURE	UNIT PRICE	EXTENDED	FREIGHT
20.61		13 3/4 INCH CLEAN S		1			4.35
COMMENTS						SALES TAX	
						TOTAL	
						WAIT TIME	
						GRAND TOTAL	
				LOADS		ACCU. TONS	
				1		20.61	

5-11-94
248



1459 W. Park Ave., Wayside
Asbury Park, N.J. 07712
908-493-3933

18710

Name Big A Trucking

Order Date 6/1/94

Address Edison Hill

Deliver Date 1/1

Delivered C.O.D.

F.O.B./P.U. Charge

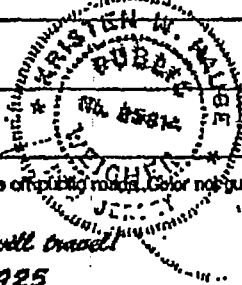
Item(s)	Quantity / Measure (tons, lbs., yds, ea.)	Unit Price	Total
		711.00	
		260.00	
		451.00	22.55 tons
Sub Total			
Delivery			
N.J. Tax			
Total			

Driver _____

Received _____

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

*Have gravel will travel
since 1925*





1453 W. Park Ave., Wayakda
Asbury Park, N.J. 07712
908-498-3333

18714

Order Date May, 27, 94

Name Bay A Trucking

Deliver Date / /

Address C/O N. F. H. H. H. H.

Delivered G.O.D.

F.O.B./P.U. Charge

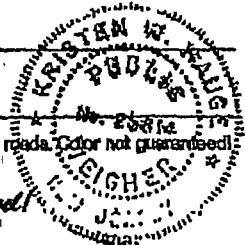
Item(s)	Quantity / Measure (ton, 105 cu yd, ea.)	Unit Price	Total
	G 71000		
	T 26000		
	N 45000	22.5 tons	
Sub Total			
Delivery			
N.J. Tax			
Total			

Driver _____

Received Don Allen

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

*Have gravel well traveled
since 1925*



SMITH

APPENDIX D

UST DISPOSAL CERTIFICATE

JUN- 7-94 TUE 14:00

C. U. T. E.

FAX NO. 201 423 8050

P. 19

Fert Mammouth
Bldg 361-0081533-71

MAZZA & SONS, INC.

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

NO. _____

DATE 27 July 94

Customer's Name Cate Inc.

Address _____

Bldg 361 45T 0081533-71

Make of
Auto

Tires

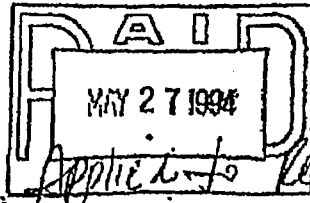
Tank

Price

45480 LB G

38640 LB G

6810



Weight Price

Weight	Price
Cast Iron	
<u>Steel</u>	<u>136.00</u>
L. Iron	
Copper #1	
Copper #2	
L. Copper	
Brass	
Atom Clean	
Lead	
Shelfless	
Red Iron	
Battery	
TOTAL AMOUNT:	

Weight

Customer

Don Ellis

SMITH

APPENDIX E

SOIL ANALYTICAL DATA PACKAGE

Copy Made of 490-5144 Ct.

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

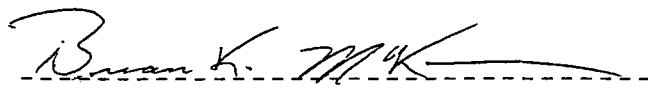
Lab. ID #: 1507.1-.8
Sample Rec'd: 05/27/94
Analysis Start: 05/31/94
Analysis Comp: 05/31/94

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

NJDEPE UST Reg.#: 0081533-71
Closure #: C-93-3915
DICAR #:
Location #: Bldg. 361

Lab ID.	Description	%Solid	Result (mg/Kg)	MDL
1507.1	Site A, pipes @ Bldg 2' OVA= ND	91	11.0	6.6
1507.2	Site B, pipes @ UST 2' OVA= ND	90	20.0	6.6
1507.3	Site C, Ctr. S. Wall 6' OVA= 3.0	91	11.0	6.6
1507.4	Site D, Ctr. E. Wall 6' OVA= ND	91	ND	6.6
1507.5	Site E, N.E. Bottom 7' OVA= ND	83	ND	6.6
1507.6	Site F, N.W. Bottom 7' OVA= 10.	87	82.0	6.6
1507.7	Site G, remotefill @UST 2' OVA=ND	94	53.0	6.6
1507.8	Site H, remotefill @St. 2' OVA=ND	92	22.0	6.6
M. Bl.	Method Blank	100	ND	3.3

Notes: ND = Not Detected, MDL = Method Detection Limit
* = Silica Gel Added, NA = Not Applicable
1507.4 dup= 100% 1507.4 s= 90% 1507.4 sd= 93% RPD= 3.3%


Brian K. McKee
Laboratory Director

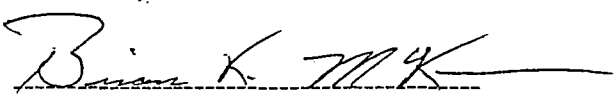
Report of Analysis
U.S. Army, Fort Monmouth Environmental Laboratory
NJDEPE Certification # 13461

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

Lab. ID #: 1507.1-.8
Sample Rec'd: 05/27/94
Analysis Start: 05/31/94
Analysis Comp: 05/31/94

Analysis: Munsel

Lab ID#	Soil Color
1507.1	10YR 3/4 Dark Yellowish Brown
1507.2	10YR 4/4 Dark Yellowish Brown
1507.3	10YR 4/3 Brown
1507.4	10YR 3/4 Dark Yellowish Brown
1507.5	2.5Y 4/4 Olive Brown
1507.6	2.5Y 4/2 Dark Grayish Brown
1507.7	10YR 3/4 Dark Yellowish Brown
1507.8	10YR 3/3 Dark Brown



Brian K. McKee
Laboratory Director

SERV-AIR, INC.

P.O. #: PWS-007

Chain of Custody

Project #: C93-3915		Sampler: C. Appleby / cute Inc.		Date / Time: 5-27-94 1315		Analysis Parameters			Start:	
Customer: C. Appleby SELFM- PW- EV		Site Name: Bldg 361 ust # 0081533-71				<div style="display: flex; justify-content: space-around;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPHC</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">% Solids</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Manganese</div> </div>			Finish:	
Phone: X 26224		Closure # C93-3915							Preservation Method	
Lab Sample ID Number	Date/Time	Customer Sample Location/ID Number	Sample Matrix	# of Bottles				Remarks		
1507.1	5/27/94 1451	Site A - Plops at Bldg 2'	Soil	1	X	X	X	NO Samples kept. <4°C		
.2	1446	Site B Plops at ust 2'		1	X	X	X	NO - Samples collected by		
.3	1446	Site C Center S wall 6'		1	X	X	X	3 hand w/out front - track		
.4	1447	Site D Center E wall 6'		1	X	X	X	NO Available on-site - J. Longan		
.5	1450	Site E NE Bottom 7'		1	X	X	X	NO Refused to use them.		
.6	1451	Site F NW Bottom 7'		1	X	X	X	10 over-1286C Sr-A52114		
.7	1501	Site G Remote Fill at ust 2'		1	X	X	X	NO Collected 5/27/94 - C. Appleby w/		
.8	1500	Site H Remote Fill at St. 2'		1	X	X	X	NO Zero Air, 95 ppm nothone @ 1000 Select 300 - read 94 ppm bond Copy. 1420hrs		
Relinquished By (signature)		Date / Time		Received By (signature)		Shipped By:				
Relinquished By (signature)		Date / Time		Received for Lab by (signature):		Date / Time				
<i>C. Appleby</i>		5-27-94 1515		<i>Sarah J. Hubbard</i>		5-27-94 1525				
<p>Note: A drawing depicting sample location should be attached or drawn on the reverse side of this chain of custody.</p> <p style="text-align: center;"><i>Attached</i></p>										

May 31, 1994 Tuesday 0917
Sarah J. Hubbard

BLANK	0 MV	
40.75	105 MV	
80.1	207 MV	
163	407 MV	
1507.1	6 MV	
1507.2	9 MV	
1507.3	6 MV	
1507.4	3 MV	
1507.4	3 MV	Dup.
1507.4	33 MV	Spk.
1507.4	34 MV	Dup Spk.
1507.5	4 MV	
1507.6	29 MV	
1507.7	21 MV	
1507.8	10 MV	

PRINTED IN U.S.A.

195-6970-

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.

5. Extraction holding time met. (If not met, list number of days exceeded for each sample)

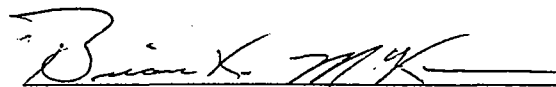
6. Analysis holding time met. (If not met, list number of days exceeded for each sample)

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 #1507


Brian K. McKee
Laboratory Manager