Underground Storage Tank Closure Report

Prepared for:
U.S. Army Corps of Engineers
New York District
1900 Hempstead Turnpike, Suite 316
East Meadow, New York 11554

Site:
Building No. 235
UST No. 235-1
Sievers-Sandberg United States Army Reserve Center
Pedricktown, New Jersey

Prepared by:
Earth Tech, Inc.
2229 Tomlynn Street
Richmond, Virginia 23230

July 28, 1997

Contract No. DACW31-95-D-0097
Delivery Order No. 0015

ET Job No. 21574
Client: United States Army Corps of Engineers
Project Name: Sievers-Sandberg United States Army Reserve Center, Building 235
ET Job No.: 21574

This document has been reviewed for technical content and quality, clarity, and style in accordance with the internal QA/QC procedures of Earth Tech, Inc.

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EXECUTIVE SUMMARY

This report details the clean closure of an underground storage tank (UST) and fulfills the requirements of site investigation reporting activities as detailed in the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for site remediation (NJAC 7:26E - 3.10).

Earth Tech, Inc. (Earth Tech) was contracted by the U.S. Army Corps of Engineers (USACE), Baltimore District, to remove a 1,000-gallon UST located southwest of Building No. 235 at the Sievers-Sandberg United States Army Reserve Center (USARC) in Pedricktown, New Jersey. The work was conducted under Contract No. DACW31-95-D-0097, Delivery Order No. 0015.

Prior to tank closure, Earth Tech removed 1,000 gallons of No. 2 heating fuel from the tank. Closure of the UST was conducted on May 13, 1997. The UST was excavated and removed by Earth Tech, a NJDEP-approved UST closure contractor (Registration No. US00537). Upon removal, the condition of the UST was examined by a NJDEP-licensed UST Subsurface Evaluator (License No. US00516). The UST was in good condition with no visible holes. No soil staining was observed beneath the former UST and groundwater was not encountered in the excavation. Earth Tech cut and cleaned the UST, which was then transported to Camden Iron for recycling as scrap. The tank contents were transported by Casie Ecology Oil Salvage, Inc., Vineland, New Jersey, for recycling. The waste generated during tank cleaning activities was drummed and stored on site pending analytical results for disposal.

No soil staining was observed beneath the former base of the UST. Photoionization detector (PID) field screening indicated no volatile organic vapor levels above background for the excavation or the excavated soils. The excavated soils were used as backfill material.

Earth Tech collected four confirmatory soil samples from the excavation base and sidewalls. One of the samples was split and submitted as a duplicate sample. Each sample was submitted for laboratory analysis for the presence and concentration of total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) Method 418.1, using a NJDEP-certified laboratory. Three of the samples and the duplicate sample indicated TPH concentrations below the method detection limit of 40.0 milligrams per kilogram (mg/Kg). One of the samples collected from the excavation sidewall had a TPH concentration of 55.6 mg/Kg, which is below the most stringent NJDEP Soil Cleanup Criteria of 10,000 mg/Kg for total organic compounds in soils. All sampling and analysis was performed in accordance with NJDEP Post-Remedial Action Requirements (NJAC 7:26E - 6.4).

Based on field observations and analytical data, Earth Tech recommends no further action relative to the former UST at Building 235.
1.0 INTRODUCTION

Earth Tech, Inc. (Earth Tech), a NJDEP-approved UST Closure Contractor (Certification No. US00537), was contracted by the United States Army Corps of Engineers (USACE), Baltimore District, to remove underground storage tanks (USTs) at the Sievers-Sandberg United States Army Reserve Center (USARC), Pedricktown, New Jersey, under Contract No. DACW31-95-D-0097, Delivery Order No. 0015. This report details the clean closure of an UST located at Building No. 235 of the Sievers-Sandberg USARC. A Site Location Map is included as Figure 1 in Appendix A. This report fulfills the requirements of site investigation reporting as detailed in the New Jersey Technical Requirements for Site Remediation (NJAC 7:26E-3.10), and provides an overview of the site investigation activities, analytical results, and recommendations.

The Sievers-Sandberg USARC property was acquired by the USACE in 1917, and the Delaware Ordinance Depot was established at Pedricktown in 1918. The depot became the backup storage facility for the Picatinny and Frankfort Arsenals and the Aberdeen Proving Ground. In 1960, the Pedricktown facility became the headquarters for the 42nd and 43rd Artillery, which commanded the Nike Missile Sites in the Philadelphia area. In 1965, the Salem County Technical Institute gained control of the site. In the late 1960s, the 79th Army Reserve Command and the 21st Corps were replaced by the 78th Division of the Army reserves, which is still stationed at the facility. The eastern portion of the property is currently leased by the Salem Community College.

Building No. 235 has been demolished with only the concrete pad remaining at the site. A 1,000-gallon steel UST at the site was formerly used to store diesel fuel (No. 2), for heating the building. The UST was a regulated tank (per NJAC 58:10); therefore, the UST was registered and an UST Closure Plan submitted to the New Jersey Department of Environmental Protection (NJDEP) prior to initiating closure activities. The NJDEP UST Closure Approval is included in Appendix B.

2.0 SITE ASSESSMENT

On May 13, 1997, Earth Tech removed one 1,000-gallon steel UST at the site. Figure 2 in Appendix A shows the general site layout and the location of the UST. Photographic documentation of site activities is included in Appendix C. The UST was oriented parallel to the north side of Building No. 235. No utility lines were located in the vicinity of the UST. Prior to removal, approximately 1,000 gallons of diesel fuel were removed by Casie Ecology Oil Salvage, Inc., Vineland, New Jersey for recycling. A copy of the disposal manifest is included in Appendix D.

Earth Tech personnel screened the UST with a lower explosive limit (LEL) meter. Readings were taken before excavating and cutting the tank for cleaning. The LEL level registered 2 percent prior to excavating and cleaning the UST. Oxygen levels both before excavation and before cleaning were 19.2 percent. The tank was not purged prior to initiating tank closure activities based on the low vapor readings.

Upon tank removal, the UST condition was examined by Mr. Julian Canuso, Jr., a NJDEP-licensed UST Subsurface Evaluator (License No. US00516). The tank was observed in good condition with no visible holes. Product staining was observed on the tank’s exterior, but no soil staining was observed in the excavation or along the excavation sidewalls. The UST measured approximately 6 feet long by 5 feet 4 inches in diameter. Earth Tech personnel cut the UST at both ends to provide ventilation and access for
tank cleaning. The tank was then cleaned using dry methods. The absorbent waste material generated
during tank cleaning was drummed on site for disposal pending analytical results. The tank disposal
certificate is included in Appendix E.

Earth Tech personnel examined the UST excavation after removing the tank. No piping existed and it is
believed to have been removed when the building was demolished. No soil staining was observed
beneath the former UST. Groundwater was not encountered in the excavation. No vapor readings were
detected with the PID. Based on the PID field screening, no soils were deemed contaminated (i.e., no
PID readings greater than 100 parts per million, or ppm).

Confirmatory soil samples were collected in accordance with NJAC 7:26E-6.4. Earth Tech personnel
collected a total of four soil samples, two from the bottom of the excavation (PED-B235-1-SS-01 and
PED-B235-1-SS-02) and two from the excavation sidewalls (PED-B235-1-SS-03 and PED-B235-1-SS-
04). Earth Tech submitted a split sample of PED-B234-1-SS-04 as a duplicate (identified as PED-B235-
1-SS-04-D) for quality control purposes. Field screening of each soil sample using the PID indicated no
volatile organic vapors. Figure 2 in Appendix A depicts the soil sample locations. Each sample was
submitted for laboratory analysis for the presence and concentration of total petroleum hydrocarbons
(TPH) by Environmental Protection Agency (EPA) Method 418.1. The samples were analyzed by
Toxikon Corporation, a NJDEP-certified laboratory.

Three of the samples and the duplicate sample indicated TPH concentrations below the method detection
limit of 40.0 milligrams per kilogram (mg/Kg). One of the samples collected from the excavation
sidewall had a TPH concentration of 55.6 mg/Kg. These concentrations are below the most stringent
NJDEP Soil Cleanup Criteria of 10,000 mg/Kg for total organic compounds in soil. Soil analytical
results are summarized in Table 1. Certificates of analysis and chain-of-custody forms are included as
Appendix F. An executed NJDEP Site Inspection Report Checklist is included in Appendix G.

Table 1 Soil Analytical Results

<table>
<thead>
<tr>
<th>Sample Designation and Location</th>
<th>Date Sampled</th>
<th>Depth (feet)</th>
<th>TPH 418.1 (mg/Kg)</th>
<th>PID (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PED-B235-1-SS-01 bottom of excavation, eastern end</td>
<td>5/13/97</td>
<td>6</td>
<td>BDL</td>
<td>0.0</td>
</tr>
<tr>
<td>PED-B235-1-SS-02 bottom of excavation, western end</td>
<td>5/13/97</td>
<td>6</td>
<td>BDL</td>
<td>0.0</td>
</tr>
<tr>
<td>PED-B235-1-SS-03 north sidewall</td>
<td>5/13/97</td>
<td>---</td>
<td>55.6</td>
<td>0.0</td>
</tr>
<tr>
<td>PED-B235-1-SS-04 south sidewall</td>
<td>5/13/97</td>
<td>---</td>
<td>BDL</td>
<td>0.0</td>
</tr>
<tr>
<td>PED-B235-1-SS-04-D duplicate</td>
<td>5/13/97</td>
<td>--</td>
<td>BDL</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Notes:
BDL below detection limit
(detection limit = 40.0 mg/Kg)
mg/Kg milligrams per kilogram
PID photoionization detector
ppm parts per million
NA not applicable
ND not detected
The stockpiled soil generated during UST removal, along with imported clean backfill was used to backfill the excavation. No soils associated with the UST closure were removed from the site.

3.0 CONCLUSIONS

The following is a summary of Earth Tech's site investigation, findings, and tank closure activities for UST No. 235-1 at Building No. 235 on the Sievers-Sandberg USARC:

- Earth Tech removed one 1,000-gallon, steel UST used to store diesel fuel for Building No. 235 at the site on May 13, 1997.
- Approximately 1,000 gallons of product was removed from the tank and transported by Casie Oil Salvage, Inc., Vineland, New Jersey for recycling.
- No visible holes were observed in the tank.
- The cleaned UST was transported to Camden Iron and recycled as scrap.
- Product staining was observed on the tank's exterior, but no stained soils were observed in the tank excavation.
- PID field screening was performed for excavated soils and soil remaining in the excavation. No vapor readings above background were detected.
- Four confirmatory soil samples were collected from the base and walls of the UST excavation. The analytical result of one soil sample collected from the excavation sidewall indicated a TPH concentration of 55.6 mg/Kg, which is below the NJDEP criteria of 10,000 mg/Kg for total organic compounds in soils. The remaining three confirmatory samples, and one duplicate sample, had TPH concentrations below the detection limit of 40.0 mg/Kg.

Based on the site investigation results, Earth Tech recommends no further action relative to the former UST at Building No. 235.
Appendix A

Figures
BUILDING 235

(BUILDING RAZED
CONCRETE PAD REMAINS)
Appendix B

NJDEP UST Closure Approval
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:

SITE ASSESSMENT: Conduct a site investigation for the UST(s) and appurtenant piping specified in this approval in accordance with the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

The management of any excavated soils must follow the requirements listed in the Attachment enclosed within.

Note: The UNDERGROUND STORAGE TANK SERVICES CERTIFICATION ACT, N.J.S.A. 58:10A-24, requires all services performed on an UST system for the purpose of complying with P.L.1986, c.102 to be performed by or under the immediate on-site supervision of a person certified by the Department for that service. The certified person providing that service must be employed by a business that is also certified by the Department for that service.

CONTACT PERSON: TELEPHONE:

JANIS CROWDER 804-358-5400

EFFECTIVE DATE: 04/03/97

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

Joshua Gradwohl, SUPERVISOR
BUREAU OF FIELD OPERATIONS
<table>
<thead>
<tr>
<th>Tank Identification</th>
<th>Tank Size (gallons)</th>
<th>Assumed Tank Length (feet)</th>
<th>Contents</th>
<th>Excavation Sample IDs</th>
<th>Petroleum-Contaminated Stockpile Sample IDs</th>
<th>Analysis</th>
<th>Method</th>
<th>Turnaround Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>413NW</td>
<td>14,000</td>
<td>25</td>
<td>unleaded gasoline</td>
<td>PED-413NW-SS-01 through PED-413NW-SS-07</td>
<td>PED-413NW-SP-01</td>
<td>V0+10°*</td>
<td></td>
<td>8260</td>
</tr>
<tr>
<td>413SW</td>
<td>10,000</td>
<td>17</td>
<td>diesel</td>
<td>PED-413SW-SS-01 through PED-413SW-SS-08</td>
<td>PED-413SW-SP-01</td>
<td>TPHC **</td>
<td>418.1</td>
<td></td>
</tr>
<tr>
<td>413W</td>
<td>1,000</td>
<td>10</td>
<td>waste oil</td>
<td>PED-413W-SS-01 through PED-413W-SS-04</td>
<td>PED-413W-SP-01</td>
<td>TPHC ***</td>
<td>418.1</td>
<td></td>
</tr>
<tr>
<td>413NE</td>
<td>5,000</td>
<td>24</td>
<td>unleaded gasoline</td>
<td>PED-413NE-SS-01 through PED-413NE-SS-07</td>
<td>PED-413NE-SP-01</td>
<td>V0+10°*</td>
<td></td>
<td>8260</td>
</tr>
<tr>
<td>413E</td>
<td>5,000</td>
<td>24</td>
<td>unleaded gasoline</td>
<td>PED-413E-SS-01 through PED-413E-SS-07</td>
<td>PED-413E-SP-01</td>
<td>V0+10°*</td>
<td></td>
<td>8260</td>
</tr>
<tr>
<td>404.1</td>
<td>550</td>
<td>6</td>
<td>unleaded gasoline</td>
<td>PED-404.1-SS-01 through PED-404.1-SS-03</td>
<td>PED-404.1-SP-01</td>
<td>V0+10°*</td>
<td></td>
<td>8260</td>
</tr>
</tbody>
</table>

- Analyze sample for lead if UST formerly contained unleaded gasoline.
- Analyze sample for V0+10 if TPHC > 1000 ppm.
- Analyze sample for V0+10, BTEX+15, PCBs, and PP-metals if TPHC is detected in the sample.

V0+10 - volatile organic compounds plus 10 peaks including xylenes, target compound list or priority pollutant VOC with library search: EPA Method 8260

TPHC - total petroleum hydrocarbons: EPA Method 418.1

BTEX+15 - detected neutral compounds plus 15 peaks by target compound list or priority pollutant list with library search: EPA Method 8270

PCB - polychlorinated biphenyls: EPA Method 8080

PP-metals - priority pollutants

For each tank, collect two soil samples from the bottom of the sidewalls of the excavation, and one soil sample every 5 feet along the center line of the excavation.

Italicized tank sizes are approximate.
Appendix C

Photographic Documentation
Photograph No.: 1  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Excavation of UST No. 235-1 at Building No. 235.  Direction: North.

Photograph No.: 2  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: View of 1,000-gallon UST and excavation at Building No. 235.  Direction: West.
Photograph No.: 3  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Removal of UST No. 235-1 (1,000-gallons) at Building No. 235.  Direction: Northwest.

Photograph No.: 4  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Excavation after removal of UST No. 235-1 at Building No. 235.  Direction: North.
Photograph No.: 5  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Screening of excavated soil at Building No. 235.  Direction: Northwest.

Photograph No.: 6  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Backfilling of tank excavation at Building No. 235.  Direction: North.
Photograph No.: 7  Contract No.: DACW31-95-D-0097  Earth Tech Job No.: 21574
Project Name: Pedricktown U.S. Army Reserve Center  D.O. 0015
Photographer: D. Mothershead  Date: 5/13/97
Description: Site after backfilling completed at Building No. 235,  Direction: North.
Appendix D

Liquid Disposal Manifest
CASIE ECOLOGY OIL SALVAGE, INC.

FACILITY PERMIT NUMBER (0614D1HP05)
CERTIFICATE OF RECYCLING / DISPOSAL

Generator: U.S. Army Corps Engineers
EPA ID#: Not Required

Site: 273 Garrison Road
Address: Pedricktown, NJ 08067

Casie Ecology Oil Salvage, Inc. has accepted petroleum material for recycling, in accordance with all applicable Federal and State regulations.

Waste Manifest Number: NHZ0200 5037
Number of Gallons: 1,097
Date Accepted: 05/12/97

Gary Johnstone, Compliance Officer

SEAL
<table>
<thead>
<tr>
<th>Case: Ecology Oil Salvage, Inc. T/A Casie Protank, 3209 N. Mill Rd / Casie Protank, Vineland NJ 08360</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Hazardous Manifest</strong></td>
</tr>
<tr>
<td>2. Page 1 of 2</td>
</tr>
<tr>
<td>3. Generator's Name and Mailing Address: U.S. Army Corps of Engineers 273 Garrison Road Pedricktown NJ 08067</td>
</tr>
<tr>
<td>4. Generator's Phone: (609) 299-2879</td>
</tr>
<tr>
<td>5. Transporter 1 Company Name: Casie Ecology Oil Salvage, Inc.</td>
</tr>
<tr>
<td>6. US EPA ID Number: 9164P</td>
</tr>
<tr>
<td>7. Transporter 2 Company Name:</td>
</tr>
<tr>
<td>8. US EPA ID Number:</td>
</tr>
<tr>
<td>9. Designated Facility Name and Site Address: Casie Ecology Oil Salvage, Inc. T/A Casie Protank 3209 N. Mill Rd / Casie Protank, Vineland NJ 08360</td>
</tr>
<tr>
<td>10. US EPA ID Number:</td>
</tr>
<tr>
<td>11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number):</td>
</tr>
<tr>
<td>a. Flammable liquids, n.o.s. (Gasoline) 3, UN1993, PIGII</td>
</tr>
<tr>
<td>b. Combustible Liquid NOS (Waste Fuels) NA1993, PIGII</td>
</tr>
<tr>
<td>c.</td>
</tr>
<tr>
<td>d.</td>
</tr>
<tr>
<td>e.</td>
</tr>
<tr>
<td>f.</td>
</tr>
<tr>
<td>12. Containers No. Type Total Quantity</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>13. Unit Wt/Vol.</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>L.</td>
</tr>
<tr>
<td>15. Special Handling Instructions and Additional Information</td>
</tr>
<tr>
<td>a. 24 Hr. Emergency Response: (609) 296-4401 X Ambrosia NAERC# 128</td>
</tr>
<tr>
<td>b. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above and are properly shipped, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I hereby certify that the above-named material is not hazardous waste as defined by 40 CFR Parts 261, 264 and 266 or any applicable state law.</td>
</tr>
<tr>
<td>Printed/Typed Name: Jim Kiley</td>
</tr>
<tr>
<td>Signature:</td>
</tr>
<tr>
<td>Month Day Year: 05/11/2017</td>
</tr>
<tr>
<td>17. Transporter 1 Acknowledgement of Receipt of Materials</td>
</tr>
<tr>
<td>Printed/Typed Name: Jim Kiley</td>
</tr>
<tr>
<td>Signature:</td>
</tr>
<tr>
<td>Month Day Year: 05/11/2017</td>
</tr>
<tr>
<td>18. Transporter 2 Acknowledgement of Receipt of Materials</td>
</tr>
<tr>
<td>Printed/Typed Name:</td>
</tr>
<tr>
<td>Signature:</td>
</tr>
<tr>
<td>Month Day Year:</td>
</tr>
<tr>
<td>19. Discrepancy Indication Space</td>
</tr>
</tbody>
</table>

**NOTE:** In case of an emergency call immediately and provide as much information as possible. **SIGNATURE AND INFORMATION MUST BE LEGIBLE ON ALL COPIES**
Appendix E

Tank Disposal Certificate
Environmental Technology Incorporated
Certification of Tank Disposal
(In accordance with American Petroleum Institute recommended practice)

<table>
<thead>
<tr>
<th>Client</th>
<th>Job No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>US ARMY CORPS OF ENGINEERS</td>
<td></td>
<td>15 MAY 97</td>
</tr>
</tbody>
</table>

Tank Description

<table>
<thead>
<tr>
<th>Size</th>
<th>Type (steel, fiberglass, etc.)</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 GAL</td>
<td>STEEL</td>
<td>GOOD</td>
</tr>
</tbody>
</table>

Cleaning Certification

This is to certify that the above described tank has been cleaned in accordance with API methods and procedures and has been rendered suitable for disposal as scrap. All product residues were removed and the interior of the tank was tested and found to be free of harmful vapors.

Signed

EARTH TECH
15 MAY 97

Company
Environmental Technology Incorporated

Transportation

This is to certify that the above described tank has been received and will be transported to the disposal site as specified above.

Signed

All Pro
5-15-97

Shipment or Hauler

Received for Disposal

This is to certify that the above described tank has been received for disposal and will be disposed of in accordance with applicable regulatory requirements.

Signed

Disposal Facility

Comments

* Please sign and fax back to (804) 358-6468

THANKS
Appendix F

Laboratory Certificates and Chain-of-Custody
REPORT EARTH TECH REMEDIATION
TO 2229 TOMLYNN ST.
RICHMOND, VA 23230
904-358-5400 FAX: 358-6868
ATTEN JANIS CRODMER

CLIENT EARTH TECH REMEDIATION
COMPANY EARTH TECH REMEDIATION
FACILITY 2229 TOMLYNN ST.
RICHMOND, VA 23230

WORK ID PEDRICK TOWN, NJ
TAKEN 5/13/97
TRANS
TYPE SOIL
P.O. # 21574

SAMPLE IDENTIFICATION
01 PED-B255-1-SS-01
02 PED-B255-1-SS-02
03 PED-B255-1-SS-03
04 PED-B255-1-SS-04
05 PED-B255-1-SS-05
06 PED-B413SW-SS-01
07 PED-B413SW-SS-02
08 PED-B413SW-SS-03
09 PED-B413SW-SS-04
10 PED-B413SW-SS-05
11 PED-B413SW-SS-06
12 PED-B413SW-SS-07
13 PED-B413SW-SS-08
14 PED-B413SW-SS-09

PREPARED TOXIKON CORPORATION
BY 15 WIGGINS AVE
BEDFORD, MA 01730
CERTIFIED BY
ATTEN PAUL LEZBERG
PHONE 1617275-3330

INVOICE under separate cover

CERT # M-MA064: TRACE METALS, SULFATE, CYANIDE, BOD, FREE
CHLORINE, Ca, TOTAL ALK., TDS, PH, THM, VCM, PEST, NUTRIENTS,
DEMAND, BOD, PHENOLICS, PCB's, CT DHS #PH-0563, NY #10776,
FL HRS E87413, NJ DEP 59353, NC DNR26, SC 88002, NH 204921-C.

VERIFIED BY: [signature]

TEST CODES and NAMES used on this workorder
TPM 18 TPM BY 18
<table>
<thead>
<tr>
<th>Sample ID</th>
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<th>Fractions</th>
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</table>
TEST CODE TPH IR  NAME TPH BV IR

EPA METHOD: 418.1 for water sample.

Reference: Methods for Chemical Analysis of Water and Wastes.
EPA 600/4-79-020 (Revised, March 1983). EPA/EMSL, Cincinnati, OH.

EPA METHOD: 9071/9073

LABORATORY CHRONICLE

All samples were chilled to 4°C at the time of receipt at Toxikon.

Toxikon Work Order #: 9705218

Date of Sample Collection: 05/13/97

Sample ID: As per Chain of Custody

ANALYSIS:

TPH by IR

| Extraction | 05/19/97 |
| Analysis   | 05/20/97 |

Holding times were met for all sample analyses.
CONFORMANCE/NON-CONFORMANCE SUMMARY

Work Order #: 9705218

I certify that the reported laboratory results were prepared under my direction or supervision in accordance with a system designed to assure qualified personnel evaluate the information submitted. I certify that the information submitted is true, accurate, and complete to the best of my knowledge and belief. The analyses were conducted without deviation from accepted practices, and were reviewed by the Quality Assurance Department.

Douglas V. Sheeley
Laboratory Manager

[Signature]

[Date: 7/18/97]
All samples were analyzed within the method holding times.
No target compounds were detected in the method blanks.
**TOXIKON**

**QA/QC REPORT**

**WORK ORDER:** 9705218  
**MATRIX:** SOIL

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DUPLICATE PERCENT RPD</th>
<th>CONTROL LIMITS</th>
<th>CONTROL SPIKE PERCENT RECOVERY</th>
<th>MATRIX SPIKE PERCENT RECOVERY</th>
<th>CONTROL LIMITS</th>
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<tr>
<td>TPH by IR</td>
<td>0</td>
<td>&lt;25</td>
<td>101</td>
<td>NA</td>
<td>80 - 120</td>
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**CHAINS OF CUSTODY RECORD**

**COMPANY:** Earth Tech

**ADDRESS:** 2229 Tomlinson Street

**PHONE #:** (804) 358-5400 FAX #: (804) 358-6869

**P.O. #:** 21514

**PROJECT MANAGER:** Janis Crowder

**PROJECT ID/LOCATION:** Pedricktown, NJ

**TOXIKON**

<table>
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<tr>
<th>SAMPLE IDENTIFICATION</th>
<th>SAMPLE TYPE</th>
<th>CONTAINER TYPE</th>
<th>SAMPLING</th>
<th>PRESERVATIVE</th>
<th>COMMENTS</th>
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<td>P - PLASTIC</td>
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<td>NOSENC</td>
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<tr>
<td>PEN-8325-1</td>
<td>WASTEWATER</td>
<td>P - PLASTIC</td>
<td></td>
<td>NOSENC</td>
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</tr>
<tr>
<td>PEN-8325-1</td>
<td>WASTEWATER</td>
<td>P - PLASTIC</td>
<td></td>
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</tr>
<tr>
<td>PEN-8325-1</td>
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<td>PEN-8325-1</td>
<td>WASTEWATER</td>
<td>P - PLASTIC</td>
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<tr>
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<td>P - PLASTIC</td>
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<td>WASTEWATER</td>
<td>P - PLASTIC</td>
<td></td>
<td>NOSENC</td>
<td></td>
</tr>
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</table>

**SPECIAL INSTRUCTIONS:**

**Comments:**

**SAMPLE DISPOSAL INFORMATION:**

Are there any other known or suspected contaminants in these samples other than those listed above?

Yes [ ] No [ ] If Yes, 1st Known [ ]
Appendix G

NJDEP Tank Facility Questionnaire
and Site Investigation Report Checklist
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
BUREAU OF STATE CASE MANAGEMENT
Registration and Billing Unit
CN 028, Trenton, N.J. 08625-0028
1-609-633-0719

UNDERGROUND STORAGE TANK
FACILITY QUESTIONNAIRE

Facility UST # 0071994

Completion of this Registration Questionnaire will satisfy the registration requirements of the Underground Storage of

[Check appropriate box(es)]:
A. Is this a registration of a proposed or newly installed underground storage tank? (This form must be filed at least 30 days prior to operation)
B. Is this a registration of an existing underground storage tank not presently registered?
C. X Is this a correction or amendment to an existing facility registration? UST # 0071994
D. There have been no changes to the facility registration since last submittal. UST # (Go to certification page for
   signatures)

If "C" is checked above, please check the appropriate type of change(s) below

- Facility Name and/or Address Change
- Owner Name and/or Address Change
- Facility Operator and/or Address Change
- Owner Contact Person Change
- Type of Product(s) Stored
- Spills, Leaks, Releases
- Tank(s) and/or Piping Changes
- Financial Responsibility Change
- Substantial Modification(s)
- Sale or Transfer (Complete Questions 4, 5, 6 & 13D)
- Spills, Leaks, Releases
- Tank(s) and/or Piping Changes
- Closure (Complete Question #13)
- Other (please specify)
- register unregistered tanks

SECTION A - GENERAL FACILITY INFORMATION

1. Facility Name
2. Facility Location
3. Facility Operator
4. Tank Owner
5. Tank Owner Address
6. Contact Person
7. EPA ID # N 16210100900
8. Total number of regulated underground storage tanks at facility

(Complete Section B for each tank)
1. **Tank Identification Number**

<table>
<thead>
<tr>
<th>No. 1</th>
<th>No. 2</th>
<th>No. 3</th>
<th>No. 4</th>
<th>No. 5</th>
</tr>
</thead>
</table>

2. **CAS Number** (hazardous substances only)

3. **Date Tank Installed (Month/Day/Year)**

4. **Tank Size (gallons)**

5. **Tank Contents** (Mark one "X" for each tank)
   - A. Lead fuel
   - B. Altered gasoline
   - C. Alcoholic fuel
   - D. Light diesel fuel (No. 2-D)
   - E. Medium diesel fuel (No. 2-D)
   - F. Waste Oil
   - G. Kerosene, No. 1
   - H. Home heating oil (No. 2)
   - J. Heating oil (No. 4)
   - K. Heavy heating oil (No. 5)
   - L. Aviation fuel
   - M. Motor oil
   - N. Lubricating oil
   - P. Sewage
   - Q. Sewage sludge
   - R. Other hazardous substances (specify)
   - S. Hazardous waste (specify D number)
   - T. Mixtures, please specify
   - U. Emergency spill tank, specify substance
   - V. Other petroleum products (please specify)
   - W. Other, please specify

6. **Tank & Piping Construction**
   - (Mark one each for both tank & piping)
     A. Sane Steel
     B. Galvanically coated steel
     C. Fiber glass coated steel
     D. Fiber glass reinforced plastic
     E. Internally lined steel
     F. Other, please specify

7. **Tank & Piping Structure**
   - (Mark one each for both tank & piping)
     A. Single wall
     B. Double wall
     C. Other, please specify

8. **Type of Monitoring Detection System**
   - (Mark all that apply for both tank & piping)
     A. Statics, inventory reconciliation
     B. Manual tank gauging
     C. Inventory control
     D. Mass balance
     E. Precision test
     F. Ground water observation wells
     G. Vapor observation wells
     H. In-tank automatic monitoring gauge
     I. Periodic test

9. **Total government storage tank capacity at facility (gallons)**

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

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

**SECTION B - SPECIFIC TANK INFORMATION**

ALL underground tanks, including those taken out of operation (UNLESS THE TANK WAS REMOVED FROM THE GROUND PRIOR TO 9/30/86) must be registered. Report all tank piping status changes unless previously submitted.
<table>
<thead>
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<th>Section</th>
<th>Topic</th>
<th>TANK NO. 2 3 5</th>
<th>TANK NO. 1</th>
<th>TANK NO. 1</th>
<th>TANK NO. 1</th>
<th>TANK NO. 1</th>
<th>TANK NO. 1</th>
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<tr>
<td>8. Type of Monitoring/Detection System</td>
<td>Tank Identification Number</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
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<td>Tank Piping</td>
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<tr>
<td></td>
<td>K. None</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>L. Other (please specify)</td>
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<tr>
<td>9. Overfill Protection (tank only)</td>
<td>Mark one X for each tank</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td>B. No</td>
<td></td>
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<td></td>
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<tr>
<td>10. Spill Containment Around Fill Pipe</td>
<td>Mark one X for each tank</td>
<td>A. Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. No</td>
<td></td>
<td></td>
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<tr>
<td>11. Tank Status (Mark one X for each tank)</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
<td>Tank Piping</td>
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<tr>
<td></td>
<td>A. In-use</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>B. Empty less than 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C. Empty 12 months or more</td>
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<td></td>
<td>D. Emergency spill tank (sump)</td>
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<td>E. Emergency backup generator tank</td>
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<td></td>
<td>F. Abandoned in Place</td>
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<td>G. Removed</td>
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<td></td>
<td>H. Other (please specify)</td>
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<td>12. If box 11B, C, or D above has been marked, indicate the estimated date last used (month/day/year)</td>
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<td>Mo. Day Year</td>
<td>Mo. Day Year</td>
<td>Mo. Day Year</td>
<td>Mo. Day Year</td>
<td>Mo. Day Year</td>
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<td>13. Closure Information - Tank ID No.</td>
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<tr>
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<td>A. Date abandoned in place</td>
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<tr>
<td></td>
<td>B. Date taken temporarily out of service</td>
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<tr>
<td></td>
<td>C. Date removed</td>
<td>05 13 19 97</td>
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<tr>
<td></td>
<td>D. Date of Sale or Transfer</td>
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<td></td>
<td>E. TMS # (if applicable)</td>
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<tr>
<td></td>
<td>F. ISRA # (if applicable)</td>
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</table>

**SECTION C - FINANCIAL RESPONSIBILITY**

Does this facility have a Financial Responsibility Assurance Mechanism as required in 40 CFR 280? YES NO

Please list the appropriate financial information below:

<table>
<thead>
<tr>
<th>Type</th>
<th>Carrier / Issuing Agency</th>
<th>Effective Date</th>
<th>Expiration Date</th>
<th>Policy Number</th>
<th>Amount</th>
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</thead>
</table>

**SECTION D - MONITORING SYSTEMS**

Does this facility have a release detection monitoring system which is in compliance with N.J.A.C. 7:14B-6? YES NO

If "No", please be aware that the facility must meet the appropriate deadline. (See "Dates to Know" on Page 4)

**SECTION E - RECORDKEEPING/COMPLIANCE**

Please answer all the questions in this section on a facility basis. Any one tank not in compliance requires a "NO" answer for the entire facility.

1. Does this facility have cathodic protection systems for all steel tanks and piping? YES NO

   If "Yes", are the systems properly operated and maintained pursuant to N.J.A.C. 7:14B-5? YES NO

2. Are the performance claims and documentation of monitoring systems maintained by the owner or operator pursuant to N.J.A.C. 7:14B-5? YES NO

3. Are the proper monitoring, testing, sampling, repair and inventory records kept on-site pursuant to N.J.A.C. 7:14B-5 and 6? YES NO

4. Is the proper Release Response Plan kept on-site pursuant to N.J.A.C. 7:14B-5? YES NO

5. Does the facility have spill and over fill protection systems pursuant to N.J.A.C. 7:14B-4? YES NO

6. Have all Fill Ports been permanently marked as per API #1637 pursuant to N.J.A.C. 7:14B-5? YES NO
IMPORTANT INFORMATION

FEE: Please make checks payable to “Treasurer, State of New Jersey”. Use of the enclosed return envelope will expedite processing. Registration and Billing Schedule can be found in N.J.A.C. 7:14B. All initial registration fees are $100 per facility.

PENALTY: Failure by owner or operator of a regulated underground storage tank to comply with any requirement of the State UST Act or regulations may result in the penalties set forth in N.J.S.A. 58:10A-10.

EMERGENCY: If a discharge or spill occurs, the NJDEP Hotline at (609) 292-7111 must be called IMMEDIATELY - 24 hours a day.

UPGRADE EXEMPTION: Residential heating oil underground storage tanks are exempt from all upgrade requirements.

DATES TO KNOW (critical deadlines):

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

CERTIFICATIONS

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

CERTIFICATION NO. 1:

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

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

(Typed / Printed Name) (Signature) (Date)

CERTIFICATION NO. 2:

Must be signed as follows:
- For a corporation, by a principal executive officer of at least the level of vice president
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively
- For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official
- For persons other than indicated above, by the person with legal responsibility for the site

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil and criminal penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

(Typed / Printed Name) (Signature) (Date)

CERTIFICATION NO. 3:

If applicable, must be signed by the individual who is certified to perform services.

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

Julian T. Casse, Jr. (Typed / Printed Name) Project Engineer (Signature) (Date)

(Name of Firm, if applicable) (N.J. Certification Number)

UST-021 (10/96)
### A. Case Name (and AKA):
Sievers-Sandberg US Army Reserve Center

### Address:
Building 273, Route 130

### Municipality/County:
Pedricktown

### B. (Check as appropriate)

- [ ] Site Investigation (SI) Report
- [ ] Remedial Investigation (RI) Report

### C. (Complete all that apply)

- Assigned Case Manager _______________________
- ISRA Case Number ______________________ (5 digits)
- UST Registration Number 0071994 (7 digits)
- Incident Report Number ______________________ (10 or 12 digits)
- Tank Closure Number C9_ C9_ C9_ C9_ C9_ C9_ C9_ (7 characters)
- EPA ID Number NJ ______________________ (12 characters)

### D. (Circle "Yes" or "No" as applicable for each statement. If the statement is not applicable, indicate "N/A")

1) All "Areas of Concern", as defined in N.J.A.C. 7:26E-1.8 or 40 CFR 300.5, noted in the attached report were sampled pursuant to N.J.A.C. 7:26E-3 and 4, and analyzed pursuant to Table 2-3, as applicable. **Yes** **No**

   - A) Did the Department grant a variance from any of the requirements of N.J.A.C. 7:26E-2 through 6, pursuant to N.J.A.C. 7:26E-1.6(d) and 2? **Yes** **No**
   - B) If alternative sampling and/or investigatory methods were utilized without Department pre-approval, is the documentation required by N.J.A.C. 7:26E-1.6(c) provided? **Yes** **No**

2) The attached report documents all individual contaminants below most recently published residential and impact to ground water soil cleanup criteria contained in the "Site Remediation Newsletter". **Yes** **No**

3) The attached report includes results from a ground water investigation conducted pursuant to N.J.A.C. 7:26E-3.7 or 4.4. (If "No", go to question 5, if "Yes", answer question 4). **Yes** **No**

4) The attached report documents all individual contaminants below applicable Ground Water Quality Standards as contained in N.J.A.C. 7:9-6. **Yes** **No**

5) The attached report was submitted in response to a discharge of any contaminants as defined at N.J.A.C. 7:26E-1.8. **Yes** **No**

   - A) Was the discharge associated with a substance with a solubility greater than 100 milligrams per liter (i.e. gasoline, #2 heating oil etc.)? **Yes** **No**
   - B) Does all the soil between the discharge (last depth of contamination above remediation standard) and ground water/bedrock contain less than 15% silt and clay? **Yes** **No**
C) If a soil sample was collected 2 feet from the saturated zone or bedrock, does it contain a contaminant above the impact to ground water remediation criteria?  
D) Are any of the soil sampling results above the impact to ground water remediation criteria anywhere in the soil column and the contaminant is not going to be actively remediated?  
E) Was a sheen or product noted on the ground water?  

6) Were any wastes generated for disposal during the SI or RI?  

A) The attached contains a "soil reuse" proposal or report, including characterization sampling, as requested in the May 14, 1993, "Management of Excavated Soils" guidance document  
B) The attached report contains a request for a Waste Flow Exemption  
C) The attached report contains documentation of the quantity, waste classification and status of all excavated soil/waste disposal (including drum contents, tank sludge/insate, overburden soils, etc.) remediation or reuse and cleanup documentation  

Site Investigation (SI) and Remedial Investigation (RI) Report Submittal Checklist

E. SI Reporting Requirements  

1) Historical Information (including maps and air photos)  
   2) Physical Setting  
   3) Technical Overview of investigation execution and results including reliability of lab data, summary of contamination, information on waste characterization and any other significant events  
   4) Findings and recommendations by Area of Concern (AOC)  
      A) Description of each AOC including size (i.e. size of drum pad, volume of impoundment or area, length of UST and piping), suspected and actual contamination (presence of discoloration, stressed vegetation, corrosion holes in USTs, description of the excavation, if any), source or potential source of discharge and field measurements  
      B) Results of Analyses  
      C) Fully supported Recommendation for additional remedial activities or "No Further Action"  
   5) Summary Table of analytical methods and quality assurance indicators pursuant to N.J.A.C. 7:26E-2.2 (a1)1v  
   6) Laboratory Quality Assurance and Quality Control Deliverables pursuant to N.J.A.C. 7:26E-2.1 and Appendix A (include lab deliverable checklist)  
      A) Nonconformance Summary signed by the Laboratory  
      B) Chain of Custody  
   7) Discussion of why the analytical methods chosen for each sample matrix accurately represent all of the contaminants of concern at the facility  
   8) Table summarizing sampling results, including media, sampling depth, field and laboratory identification numbers, date and time of sampling, analytical results, and comparison to applicable remediation standards (ARS). Identify all samples exceeding ARS and all samples with MDLs or PQLs exceeding ARS. Solid results on dry weight basis (in mg/Kg) and aqueous samples in ug/l  
   9) Scaled Site map and AOC base map(s) with sample locations, sample depth and contaminant levels. (see N.J.A.C. 7:26E-3.10 (d1) or 4.9 (d)2 for map details)  
   10) Boring/Stratigraphic logs including instrument readings and physical characteristics  
   11) Boring/Stratigraphic cross sections  
   12) Boring, piezometer and monitoring well records with applicable permit numbers
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Winter 1995 _Pi:

F. RI Reporting Requirements (Include all items above plus the following.)

13) Additional information collected pursuant to N.J.A.C. 7:26E-4.1 and any work plan approved per N.J.A.C. 7:26E-4.8 (i.e. well search information results/summary, subsurface gas threats, investigation of sediment, surface water, wetlands), as applicable

14) Well Search Results (pursuant to 7:26E-4.4(h) and Appendix B)

15) Description of treatability bench scale or pilot studies as well as data to develop permit limits for air, surface water and/or ground water discharges

16) Average contaminant concentrations for each AOC (see N.J.A.C. 7:26E-4.9 (c)(1)), and a description of the procedures used for averaging

17) Well casing and ground water elevations (include well Certifications A and B)

18) Ground water temperature, pH and conductivity measurements

19) Review of inventory control records to identify product loss

20) Results of an Ecological Assessment, if conducted

21) Summary of Landfill records, if site is a landfill

22) Site base maps with sampling locations* and diagrams shall include:

A) ground water elevation contour maps with flow direction, and tidal studies, if applicable
B) top of bedrock contour map, if bedrock was encountered
C) contaminant isopleth maps for ground water showing horizontal/vertical extent of contamination above applicable standards, and free product
D) isopleth maps for soil contaminants (required if more than 25 soil samples collected; suggested for fewer than 25 samples)
E) horizontal and vertical distribution of contaminants in soil and sediment with sample numbers* and contaminant concentrations
F) all ground water sampling points* including open hole and screened intervals
G) if applicable, a map of surface water, structure and airborne contaminants
H) photos may be submitted of sample locations (identify photo location on site map)
I) other data collected (e.g. soil gas), specify type

*NOTE: The same alphanumeric sample label used in the RI workplan shall be used in the RI Report

G. Report Completeness and Two Part Certification:

23) The attached report conforms to the specific reporting requirements listed at N.J.A.C. 7:26E-3.10 for a SI Report or N.J.A.C. 7:26E-4.9 for a RI Report.

Name: Julian T. Caruso Jr. Signature: Julian T. Caruso Jr. UST Cert. No. U500576

Firm: Firm's UST Certification Number:

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

24) Two part certification signed and completed pursuant to one of the following requirements (indicate the page number next to the appropriate regulatory citation):

A) N.J.A.C. 7:26C-1.2
B) N.J.A.C. 7:14B-2.3
C) N.J.A.C. 7:26B-1.13