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December 17, 1996

Mr. Timothy Regan
Senior Sanitary Engineer
Division of Site Remediation
Rhode Island DEM
291 Promenade Street
Providence, RI 02908-5767

RE: Results of Subsurface Site Investigation
Lincoln Lace and Braid Co. - Providence, RI
DEM Technical Assistance Contract.
Job No. 96454A1

Dear Mr. Regan:

The following is a summary of site investigations completed by Fuss & O'Neill, Inc. at the Lincoln Lace and Braid Site on behalf of the Rhode Island Department of Environmental Management, Division of Site Remediation (RIDEM). The site investigation was conducted as a Subsurface Site Assessment in support of the RIDEM/EPA Brownfields Initiative. The scope of investigation activities was developed based on a thorough site walkover inspection conducted on September 12, 1996, file reviews, aerial photograph inspections, and our experience with performing similar investigations. The work completed in this investigation was outlined in Fuss & O'Neill's October 2, 1996 proposed work scope for the referenced site.

The objective of Fuss & O'Neill's (F&O) investigation at this site was to rapidly and cost effectively evaluate the subsurface condition of soil, soil gas and groundwater across the 6 acre site with respect to potential contamination and to identify areas containing contamination and/or environmental hazards.

Based on Site inspections and review of file information, numerous areas on the parcel were identified which warranted investigation. These included the buried rail car fuel oil UST and underground piping network, the on-site landfill/dump, the boiler room where oil was used, loading docks where chemicals may have been spilled, outside doors which may have provided access to convenient disposal areas, an internal building drain system, and various piles of debris throughout the parcel. Contaminants which were suspected in the subsurface included petroleum hydrocarbons, solvents, septage, metals, semi-volatile organic compounds (semi-VOCs), and polychlorinated byphenols (PCBs). Also of concern was the heavily iron stained raceway channel which is typically associated



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with natural biodegradation of hydrocarbons or other organic substrates in the subsurface.

Based on these identified areas of concern, a number of areas across the site were selected for subsurface investigation. Due to the presence of extensive piles of debris, demolition material, and concrete foundations, a backhoe was used to excavate test pits. The investigation activities consisted of site reconnaissance, file review, a ground penetrating radar (GPR) survey of selected areas, metal detector scans, excavation of 21 test pits, soil sample collection at depths of 2 and 8 feet, collection of 13 groundwater samples (from test pits extended into groundwater), collection of 7 surficial soil samples, collection of 10 soil gas samples, and collection of 4 surface water samples.

Samples were analyzed on-site with Fuss & O'Neill's mobile laboratory for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) and semi-VOCs. Selected samples were also analyzed for RCRA 13 metals, drinking water scans (total coliform bacteria, nitrates, phosphates, TDS), and PCBs by DEM's fixed base contract laboratory. Contract laboratory data is included in Appendix A.

Investigation Results

Ground Penetrating Radar

The GPR survey was completed on October 16, 1996 in the vicinity of the former boiler room. The GPR survey area was extended to include the buried railcar fuel oil tank and the associated piping. The GPR work confirmed the location and orientation of the buried railcar fuel oil tank and the piping (labeled as "UST" on Figure 1) as well as the footprint of the boiler room. Confirming the locations of these features aided in locating test pits to investigate reported releases of oil in the boiler room areas. Additionally, a MetroTech pipe locating device was used which accurately located several pipes which extended from the boiler room to outfalls in the river. A copy of the GPR data output for transects completed over the buried railcar fuel oil tank are included in Appendix B.

Test Pit Excavations

A total of 21 test pits were excavated across the site to a maximum depth of 12 feet below grade on October 24 and 25, 1996. The location of all test pits are shown in Figure 1. A description of all sampling points including sampling depths, sampling dates, field observations, and field screening is presented in Table 1. Field logs of all test pits are included in Appendix C.



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Excavation of test pits within the footprint of the original buildings indicated that the foundation and concrete slabs remain in place and that demolition debris and rubble was used as fill. The debris in these locations consists mostly as concrete, brick, charred wood and metal piping. Excavations in the on-site dump indicate it was filled with miscellaneous rubbish, glass metal wood, cloth and tires to a depth exceeding 12 feet. At test pit TP-4 in the dump, numerous automotive battery casings were observed.

Visual evidence of oil contamination was observed at 3 locations. The first area was at test pit TP-6 where a strong petroleum odor was noted. Material excavated from this area consisted of a graded pea stone material which appeared to be constructed as a leaching pit. The second area was at test pit TP-11 which was advanced inside a concrete walled structure. The structure was filled with bricks and debris and appeared to be a dry well. Strong petroleum odor was also noted at this test pit. The third location where petroleum was observed was in the foundation for the former boiler room. Free phase floating product was observed at test pits 18, 19, 20, and 21.

Soil Gas Sampling and Analysis Results

A total of 10 shallow soil gas samples were collected from various locations throughout the site and analyzed by F&O's mobile lab for VOCs (EPA Method 8010/8020). Mobile lab soil gas sample analysis results are presented in Table 2. VOCs were not detected in any of the soil gas samples.

Test Pit Soil Sampling and Analysis Results

A total of 39 soil samples were collected from 21 test pits at depths between 2 and 8 feet below grade. The soil samples were analyzed by F&O's mobile lab for TPH (Petro Flag screening) and VOCs (EPA Method 8010/8020 by heated headspace). Soil samples were also analyzed by RIDEM's fixed based contract laboratory for PCBs and RCRA 13 metals; confirmatory analyses were also conducted for TPH.

Mobile lab soil sample analysis results are presented in Table 2. Analysis results for TPH ranged from less than 1.0 mg/kg (the minimum detection limit) to greater than 4,000 mg/kg (the upper concentration limit). The highest TPH concentrations were detected in the vicinity of the boiler room. Elevated TPH concentrations were also detected in test pits located along the lower reaches of the raceway, in the site dump areas, and near the northwest corner of the existing building. Mobile lab analysis for VOCs detected concentrations of trichloroethene (TCE), tetrachloroethene (PCE), ethylbenzene, and xylene. Analysis results for total VOCs ranged from less than 10.0 ug/kg (the minimum



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detection limit) to 215 ug/kg. The highest concentrations of ethylbenzene and xylene were detected in the northwest corner of the existing building (TP-6 and TP-7). Detectable concentrations of chlorinated VOCs were also found in the vicinity of the buried rail car UST.

Selected soil samples containing elevated concentrations of TPH were subsequently analyzed for semi-VOCs. Analysis results for semi-VOCs ranged from 0.14 mg/kg to 1.3 mg/kg.

Soil sample analysis results from RIDEM's contract lab are included in Appendix A. Laboratory analysis results for TPH ranged from non-detect to 19,000 mg/kg. The correlation between fixed base lab and mobile lab TPH data is generally good.

No detectable concentrations for PCBs were observed in the fixed based laboratory data.

Fixed base laboratory analysis of soils for metals indicate that test pit TP-3 and -15 (both located in the on-site dump) contain elevated concentrations of copper, lead and zinc.

Groundwater Sampling and Analysis Results

A total of 10 groundwater samples were collected from test pits where groundwater was encountered. Groundwater samples were analyzed by F&O's mobile lab for TPH (Method 418.1) and VOCs (EPA Method 8010/8020 heated headspace). Groundwater samples were also analyzed by RIDEM's fixed based contract laboratory for mass concentration of the RCRA 13 metals.

Mobile lab groundwater sample analysis results are presented in Table 2. Analysis results for TPH range from less than 1.0 mg/l (the minimum detection limit) to greater than 1,000 mg/l (the upper concentration limit). The highest TPH concentrations were detected in the vicinity of the UST and boiler room. Mobile lab analysis for VOCs detected concentrations of trichloroethene (TCE), ethylbenzene, and xylene. Analysis results for total VOCs ranged from less than 5.0 ug/l (the minimum detection limit) to 42 ug/l. The highest concentrations of ethylbenzene and xylene were detected in the vicinity of the buried rail car UST. Detectable concentrations of chlorinated VOCs in groundwater were only found at TP-9.

Groundwater sample analysis results from RIDEM's contract lab are included in Appendix A. Fixed base laboratory analysis of groundwater for metals indicate that



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groundwater samples did not contain concentrations of metals in excess of background concentrations..

Surficial Soil Sampling and Analysis Results

A total of 7 surficial soil samples were collected, mostly from debris piles at a depth of 0.5 feet below grade. The soil samples were analyzed by F&O's mobile lab for TPH (Petro Flag screening) and VOCs (EPA Method 8010/8020 by heated headspace). Surficial soil samples were also analyzed by RIDEM's fixed based contract laboratory for mass concentrations of the RCRA 13 metals.

Mobile lab surficial soil sample analysis results are also presented in Table 2. Analysis results for TPH ranged from 412 mg/kg to greater than 4,000 mg/kg (the upper concentration limit). The highest TPH concentrations were detected near the side door entrance to western side of the existing building. VOCs were not detected in any of the surface soil samples.

Soil sample analysis results from RIDEM's contract lab are included in Appendix A. Fixed base laboratory analysis of soils for metals indicate that all four surficial soil samples tested contain elevated concentrations of copper, lead and zinc. Three surficial soil samples contained lead levels which exceed the direct exposure criteria for industrial/commercial areas. Several samples also contained levels of chromium which appeared to be above background concentrations but were not above direct exposure criteria.

Surface Water Sampling Results

A total of 4 surface water samples were collected from the raceway. Surface water samples were analyzed by F&O's mobile lab for TPH (Method 418.1) and VOCs (EPA Method 8010/8020). Surface water samples were also analyzed by RIDEM's fixed based contract laboratory for total coliform bacteria, nitrates, total phosphates and total dissolved solids in order to determine whether the green algae growth observed in the open raceway was due to sewerage effluent.

Surface water sample mobile lab analysis results are presented in Table 2. Analysis results for TPH were all less than 1.0 mg/l (the minimum detection limit). Mobile lab analysis for VOCs detected low concentrations of cis 1,2 dichloroethene (cis DCE) and TCE.



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Surface water sample analysis results from RIDEM's contract lab are included in Appendix A. Fixed base laboratory analysis of surface water indicate elevated concentrations of coliform bacteria, but levels of nitrates, total phosphates and total dissolved solids did not exceed drinking water standards.

Conclusions

- Significant TPH contamination of soils was encountered at three areas of the site: in the vicinity of the former boiler room, near the northwest corner of the existing building, and near the abandoned dry well behind the south east corner of the existing building. Free phase No. 4 or 6 fuel oil was observed floating on the water table near the former boiler room.
- The elevated TPH levels noted behind the south east corner of the existing building appears to be the carbon substrate that is being metabolized by naturally occurring bacteria. This biological activity is utilizing available dissolved oxygen and, in turn, causing reducing conditions in nearby groundwater. Presumably, this process is causing the heavy iron staining in the lower reaches of the raceway.
- Low concentrations of chlorinated VOCs have been detected in soil in the vicinity of the former boiler room although not in excess of remediation standards. All other areas containing VOCs in soil or groundwater are associated with fuel oil and are at relatively low concentrations.
- No evidence of PCBs was detected in the limited samples collected.
- Concentrations of cooper, lead, and zinc were detected in soils in the on-site dump and in the piles of debris located along the lowest reaches of the raceway. Low concentrations of chromium were also detected in a few soil samples.
- A number of materials observed in the on-site dump are likely to contain hazardous constituents. Automotive batteries in the dump may be responsible for elevated levels of lead in the nearby soils.

Recommendations

Several areas were found on the site which contained hydrocarbon contamination. These areas should be remediated to a level consistent with the state remediation regulations.



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The level of cleanup required, however, should be consistent with the intended use of the property.

Of the various areas requiring cleanup, the free phase fuel oil in the vicinity of the boiler room should be the highest priority. This area was determined to be responsible for a release of oil to the Woonasquatucket River in 1994.

This report completes our scope of work on this project. If you have any further questions concerning this project or the Technical Assistance Contract in general, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in cursive script, appearing to read "David J. Hazebrouck".

David J. Hazebrouck P.G.
Associate

A handwritten signature in cursive script, appearing to read "John B. Hankins".

John B. Hankins, IEP, CPG
Assistant Director
Hydrogeologic Studies

Enclosures

TABLE 2

**Results of Mobile Laboratory Analysis
Lincoln Lace & Braid
Providence, RI**

Sample Location	Depth (ft.)	Media Type	Sample Date	TPH (1)	cis-1,2-					
					Total Semi-volatiles (2)	Dichloro-ethene (3)	Trichloro-ethene (3)	Tetrachloro-ethene (3)	Ethyl benzene (3)	Xylenes (3)
SW-01	0.00	WATER	10/25/96	< 1		< 5	8	< 5	< 5	< 5
SW-02	0.00	WATER	10/25/96	< 1		6	< 5	< 5	< 5	< 5
SW-03	0.00	WATER	10/25/96	< 1		< 5	< 5	< 5	< 5	< 5
SW-04	0.00	WATER	10/25/96	< 1		< 5	< 5	< 5	< 5	< 5
TP-05	2.00	WATER	10/24/96	< 1		< 5	< 5	< 5	< 5	< 5
TP-06	3.00	WATER	10/24/96	1000		< 5	< 5	< 5	16	26
TP-09	4.00	WATER	10/24/96	< 1		< 5	7	< 5	< 5	< 5
TP-10	3.00	WATER	10/24/96	< 1		< 5	< 5	< 5	< 5	< 5
TP-11	2.00	WATER	10/24/96	< 1		< 5	< 5	< 5	< 5	< 5
TP-17	4.50	WATER	10/25/96	1000		< 5	< 5	< 5	< 5	< 5
TP-18	3.50	WATER	10/25/96	1000		< 5	< 5	< 5	< 5	24
TP-19	4.00	WATER	10/25/96	1000		< 5	< 5	< 5	< 5	21
TP-20	3.50	WATER	10/25/96	1000		< 5	< 5	< 5	< 5	28
TP-21	4.00	WATER	10/25/96	1000		< 5	< 5	< 5	< 5	8
SG-01	2.75	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-02	0.75	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-03	1.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-04	1.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-05	1.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-06	2.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-07	1.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-08	2.75	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-09	2.75	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SG-10	1.25	SOIL GAS	10/24/96			< 1	< 1	< 1	< 1	< 1
SS-01	0.50	SOIL	10/25/96	4000	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-02	0.50	SOIL	10/25/96	1086	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-03	0.05	SOIL	10/25/96	413	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-04	0.50	SOIL	10/25/96	271	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-05	0.50	SOIL	10/25/96	412	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-06	0.50	SOIL	10/25/96	836	< 0.5	< 10	< 10	< 10	< 10	< 10
SS-07	0.50	SOIL	10/25/96	630	< 0.5	< 10	< 10	< 10	< 10	< 10
TP-01	2.00	SOIL	10/24/96	1198		< 10	< 10	< 10	< 10	< 10
TP-01	8.00	SOIL	10/24/96	2794		< 10	< 10	< 10	< 10	< 10
TP-02	2.00	SOIL	10/24/96	1168		< 10	< 10	< 10	< 10	< 10
TP-02	8.00	SOIL	10/24/96	637		< 10	< 10	< 10	< 10	< 10
TP-03	2.00	SOIL	10/24/96	1413		< 10	< 10	< 10	< 10	< 10
TP-03	8.00	SOIL	10/24/96	1242		< 10	< 10	< 10	< 10	< 10
TP-04	2.00	SOIL	10/24/96	1796		< 10	< 10	< 10	< 10	< 10
TP-04	8.00	SOIL	10/24/96	914		< 10	< 10	< 10	< 10	< 10
TP-05	2.00	SOIL	10/24/96	49		< 10	< 10	< 10	< 10	< 10
TP-06	2.00	SOIL	10/24/96	1804		< 10	< 10	< 10	45	71
TP-06	4.00	SOIL	10/24/96	4000	0.14	< 10	< 10	< 10	44	101
TP-07	2.00	SOIL	10/24/96	557		< 10	< 10	< 10	73	142
TP-08	2.00	SOIL	10/24/96	35		< 10	< 10	< 10	< 10	< 10
TP-08	8.00	SOIL	10/24/96	85		< 10	< 10	< 10	< 10	< 10
TP-09	2.00	SOIL	10/24/96	< 1		< 10	< 10	< 10	< 10	< 10
TP-09	8.00	SOIL	10/24/96	< 1		< 10	< 10	< 10	< 10	< 10
TP-10	2.00	SOIL	10/24/96	64		< 10	< 10	< 10	< 10	< 10
TP-10	4.00	SOIL	10/24/96	66		< 10	< 10	< 10	< 10	< 10
TP-11	4.00	SOIL	10/24/96	2906	1.3	< 10	< 10	< 10	< 10	< 10
TP-12	2.00	SOIL	10/24/96	< 1		< 10	< 10	< 10	< 10	< 10
TP-12	6.00	SOIL	10/24/96	3696		< 10	< 10	< 10	< 10	< 10
TP-13	2.00	SOIL	10/25/96	223		< 10	< 10	< 10	< 10	< 10
TP-13	8.00	SOIL	10/25/96	1802		< 10	< 10	< 10	< 10	< 10
TP-14	2.00	SOIL	10/25/96	207		< 10	< 10	< 10	< 10	< 10
TP-14	8.00	SOIL	10/25/96	158		< 10	< 10	< 10	< 10	< 10
TP-15	2.00	SOIL	10/25/96	379		< 10	< 10	< 10	< 10	< 10
TP-15	8.00	SOIL	10/25/96	780		< 10	< 10	< 10	< 10	< 10
TP-16	2.00	SOIL	10/25/96	119		< 10	< 10	< 10	< 10	16
TP-16	5.00	SOIL	10/25/96	< 1		< 10	< 10	< 10	< 10	< 10
TP-17	2.00	SOIL	10/25/96	916		< 10	< 10	< 10	< 10	< 10
TP-17	5.00	SOIL	10/25/96	< 1		< 10	< 10	< 10	< 10	< 10
TP-18	2.00	SOIL	10/25/96	4000		< 10	< 10	< 10	< 10	< 10
TP-18	4.00	SOIL	10/25/96	4000	1.3	< 10	13	34	< 10	51
TP-19	2.00	SOIL	10/25/96	584		< 10	< 10	< 10	< 10	< 10
TP-19	4.00	SOIL	10/25/96	378		< 10	< 10	< 10	< 10	< 10
TP-20	2.00	SOIL	10/25/96	540		< 10	< 10	< 10	< 10	< 10
TP-20	4.00	SOIL	10/25/96	4000		< 10	< 10	< 10	< 10	76
TP-21	2.00	SOIL	10/25/96	4000		< 10	< 10	< 10	< 10	< 10
TP-21	4.00	SOIL	10/25/96	4		< 10	19	12	< 10	< 10

(1) TPH units are mg/kg for soil (petro flag) and mg/l for water (418.1).
 (2) The units for total Semi-Volatiles are ug/kg for soil (Modified Method 8100).
 (3) The units for VOCs (8010/8020) are ug/kg for soil and ug/l for water.

TABLE 1
Sampling Location Summary
Lincoln Lace and Braid
Providence, RI

Sample Location	Depth (ft.)	Media Type	Sample Date	Media Description/Observations	pH	Specific Conductance (1)	Temperature (2)	Dissolved Oxygen (3)
SW-01	0.00	WATER	10/25/96		8.25	560	15.5	6.7
SW-02	0.00	WATER	10/25/96		7.89	630	15.0	4.2
SW-03	0.00	WATER	10/25/96		6.81	408	14.3	4.5
SW-04	0.00	WATER	10/25/96		6.50	480	14.5	5.0
TP-05	2.00	WATER	10/24/96		7.44	620	14.4	2.3
TP-06	3.00	WATER	10/24/96		6.71	321	14.4	2.0
TP-08	4.00	WATER	10/24/96		6.62	640	12.1	2.8
TP-09	4.00	WATER	10/24/96		7.33	710	14.5	6.4
TP-10	3.00	WATER	10/24/96		6.84	800	13.3	2.9
TP-11	2.00	WATER	10/24/96		7.27	790	13.0	2.2
TP-13	8.00	WATER	10/25/96		7.84	860	12.8	1.8
TP-14	8.00	WATER	10/25/96		7.59	630	15.2	4.6
TP-17	4.50	WATER	10/25/96		7.05	710	17.4	2.9
TP-18	3.50	WATER	10/25/96		6.83	810	15.7	2.8
TP-19	4.00	WATER	10/25/96		7.14	990	16.0	2.8
TP-20	3.50	WATER	10/25/96		7.05	1240	15.5	4.1
TP-21	4.00	WATER	10/25/96		6.84	1580	16.5	2.8
SG-01	2.75	SOIL GAS	10/24/96					
SG-02	0.75	SOIL GAS	10/24/96					
SG-03	1.25	SOIL GAS	10/24/96					
SG-04	1.25	SOIL GAS	10/24/96					
SG-05	1.25	SOIL GAS	10/24/96					
SG-06	2.25	SOIL GAS	10/24/96					
SG-07	1.25	SOIL GAS	10/24/96					
SG-08	2.75	SOIL GAS	10/24/96					
SG-09	2.75	SOIL GAS	10/24/96					
SG-10	1.25	SOIL GAS	10/24/96					
SS-01	0.50	SOIL	10/25/96					
SS-02	0.50	SOIL	10/25/96					
SS-03	0.05	SOIL	10/25/96					
SS-04	0.50	SOIL	10/25/96					
SS-05	0.50	SOIL	10/25/96					
SS-06	0.50	SOIL	10/25/96					
SS-07	0.50	SOIL	10/25/96					
TP-01	2.00	SOIL	10/24/96	SAND; ash; construction debris; black.				
TP-01	8.00	SOIL	10/24/96	SILT; some sand; some ashes; trace metal debris; construction debris; concrete slab; dark gray.				
TP-02	2.00	SOIL	10/24/96	Silt, sand and garbage (plastic, glass, metal, shoes and cans); dusky yellowish brown.				
TP-02	8.00	SOIL	10/24/96	SAND; silt; some garbage; dusky yellowish brown.				
TP-03	2.00	SOIL	10/24/96	Silt and sand; garbage; dusky yellowish brown.				
TP-03	8.00	SOIL	10/24/96	Silt and sand; garbage; dusky yellowish brown.				
TP-04	2.00	SOIL	10/24/96	SAND, F-C; some silt; dusky yellowish brown.				
TP-04	8.00	SOIL	10/24/96	SAND, F-M; little silt; battery casing, some glass and plastic material; dusky yellowish brown.				
TP-05	2.00	SOIL	10/24/96	SAND, F-M; little silt; moderate yellowish brown.				
TP-06	2.00	SOIL	10/24/96	Sand and silt; black. Oil stain and petroleum odor.				
TP-06	4.00	SOIL	10/24/96	Silt and sand; black. Petroleum stained and odor.				
TP-07	2.00	SOIL	10/24/96	SAND, F-M; some silt; black.				
TP-08	2.00	SOIL	10/24/96	Sand, F and silt; dark yellowish orange.				
TP-08	8.00	SOIL	10/24/96	SAND, F-C; some silt; dark yellowish orange.				
TP-09	2.00	SOIL	10/24/96	Sand, F-M and silt; some construction debris; wood/metal; moderate brown.				
TP-09	8.00	SOIL	10/24/96	Sand and silt; moderate yellowish brown.				
TP-10	2.00	SOIL	10/24/96	Sand and silt; medium gray.				
TP-10	4.00	SOIL	10/24/96	SAND, F-M; pale yellowish brown, wet.				
TP-11	4.00	SOIL	10/24/96	SILT; trace organics; black. Petroleum odor.				
TP-12	2.00	SOIL	10/24/96	SAND, F-C; some silt; moderate yellowish brown.				
TP-12	6.00	SOIL	10/24/96	SAND, F-C; dusky yellowish brown.				
TP-13	2.00	SOIL	10/25/96	SAND; silt; ash; black. Some oil staining (?).				
TP-13	8.00	SOIL	10/25/96	SAND, F-M; some silt; dusky yellowish brown.				
TP-14	2.00	SOIL	10/25/96	Silt and grass; medium gray.				
TP-14	8.00	SOIL	10/25/96	SAND, F-C; some silt; moderate yellowish brown.				
TP-15	2.00	SOIL	10/25/96	SAND, F-C; some silt; trace garbage; dusky yellowish brown.				
TP-15	8.00	SOIL	10/25/96	SAND, F-M; some silt; trace garbage; dusky yellowish brown.				
TP-16	2.00	SOIL	10/25/96	Sand, F and silt; light brown. (Fill).				
TP-16	5.00	SOIL	10/25/96	SAND, F-C; moderate yellowish brown.				
TP-17	2.00	SOIL	10/25/96	SILT; organics; trace sand and roots; black.				
TP-17	5.00	SOIL	10/25/96	SAND, F; trace silt; light gray.				
TP-18	2.00	SOIL	10/25/96	Silt and F sand; dusky yellowish brown.				
TP-18	4.00	SOIL	10/25/96	SAND, F-C; little silt; black. Oil saturated.				
TP-19	2.00	SOIL	10/25/96	SAND, F-M; light olive gray.				
TP-19	4.00	SOIL	10/25/96	SAND, F-C; oil; moderate yellowish brown to black. Oil stained.				
TP-20	2.00	SOIL	10/25/96	SAND, F-M; black.				
TP-20	4.00	SOIL	10/25/96	SAND, F-C; some silt; oil; moderate brown and light gray.				
TP-21	2.00	SOIL	10/25/96	SAND, F; light olive gray.				
TP-21	4.00	SOIL	10/25/96	Black to moderate yellowish brown.				

(1) Specific Conductance units in mhos.

(2) Temperature units in degrees centigrade.

(3) Dissolved Oxygen units in milligrams per liter (mg/L).

APPENDIX A



175 Metro Center Boulevard • Warwick, Rhode Island 02886-1755
 (401) 732-3409 • Fax (401) 732-3499
 1232 East Broadway Road, Suite 210 • Tempe, Arizona 85282
 (602) 303-9535 • Fax (602) 921-2883

CHAIN-OF-CUSTODY RECORD

Page 1 of

REPORT TO							INVOICE TO				LAB REFERENCE #:		
COMPANY RIDEM/WASTE MGT.			PHONE 277-3872		COMPANY Same			PHONE					
NAME TIM REGAN			FAX 277-3812		NAME			FAX					
ADDRESS 235 HOMENADE ST.					ADDRESS					TURNAROUND TIME			
CITY/ST/ZIP PROVIDENCE RI 02908					CITY/ST/ZIP								
CLIENT PROJECT NAME: LINCOLN LACE			CLIENT PROJECT #:		CLIENT P.O. #:		REQUESTED ANALYSES						
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES				COMMENTS
									TPH	PCBs	13 PESTICIDES	VOC	
TP6-2	10/24				X				✓	✓	✓	✓	
TP8-8	10/24				X				✓	✓	✓	✓	
TP7-2	10/24				X				✓	✓	✓	✓	
TP4-2	10/24				X				✓	✓	✓	✓	
TP3-8	10/24				X				✓	✓	✓	✓	
TP10	10/24			X					✓	✓	✓	✓	
TP9	10/24			X					✓	✓	✓	✓	
TP11	10/24			X					✓	✓	✓	✓	
TP	10/24			X					✓	✓	✓	✓	

TS#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP.
1st	<i>[Signature]</i>	10/24/06	K. Chi	10/24/06 16:10		
2nd		/		/		
3rd		/		/		

WHITE: LABORATORY COPY

YELLOW: REPORT COPY

PINK: CLIENTS COPY



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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

REPORT TO							INVOICE TO										
COMPANY RIDEM				PHONE 2773872			COMPANY same				PHONE			LAB REFERENCE #:			
NAME Garry Waldeck				FAX			NAME				FAX						
ADDRESS 235 Promenade St							ADDRESS							TURNAROUND TIME:			
CITY/ST/ZIP Providence RI 02908							CITY/ST/ZIP										
CLIENT PROJECT NAME: Lincoln Lacc + Brand			CLIENT PROJECT #:			CLIENT P.O.#:			REQUESTED ANALYSES								
SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	REQUESTED ANALYSES							COMMENTS	
									13 PP Metals	TPH 4/8/1	T. PHOS	NO3-NITR	T. Col				
SS01	10/28/10 15		X		X				X								
SS-02	10/28/10 1047		X		X				X								
SS-04	" 1100		X		X				X								
SS-07	" 1107		X		X				X								
TP15-8	" 900		X		X				X								
TP17-5	" 1000		X		X				X								
TP18-4	" 1030		X		X				X								
SW-01	" 1144			X						X	X	X					
SW-02	" 1200			X						X	X	X					
SW-03	" 1215			X						X	X	X					
TP-20	" 1145			X					X								

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP.
1st	<i>[Signature]</i>	10/28/10 11:15	<i>[Signature]</i>	10/28/10 12:45		
2nd		/		/		
3rd		/		/		

WHITE: LABORATORY COPY

YELLOW: REPORT COPY

PINK: CLIENT'S COPY



Wet Chemistry Analysis

Client: RI DFM
Concentration in: MPN per 100ml
Matrix: Aqueous

Analysis Date: 10/25/96

<u>Lab ID</u>	<u>Client ID</u>	<u>Total Coliform</u>
C1203-17	SW-01	300
C1203-18	SW-02	220
C1203-19	SW-03	110

Analysis Method:

9221B



Analysis Report: Wet Chemistry Parameters

Client: RI DEM
Client ID: SW-01
Lab ID: C1203-17

Matrix: Aqueous

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Analysis Date</u>
Nitrate	3.7	0.05	mg/L	SM 4500-NO3 E	10/26/96
Phosphate - total	0.41	0.06	mg/L	SM 4500-P B3 & E	11/7/96
Total Dissolved Solids	430	10	mg/l.	SM 2540-C	10/26/96

ND = Not detected



Analysis Report: Wet Chemistry Parameters

Client: RI DEM
Client ID: SW-02
Lab ID: C1203-18

Matrix: Aqueous

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Analysis Date</u>
Nitrate	2.7	0.05	mg/L	SM 4500-NO3 E	10/26/96
Phosphate - total	0.39	0.06	mg/L	SM 4500-P B3 & E	11/7/96
Total Dissolved Solids	ND	10	mg/L	SM 2540-C	10/26/96

ND = Not detected



Analysis Report: Wet Chemistry Parameters

Client: RI DEM
Client ID: SW-03
Lab ID: C1203-19

Matrix: Aqueous

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Analysis Date</u>
Nitrate	1.4	0.05	mg/L	SM 4500-NO3 E	10/26/96
Phosphate - total	0.36	0.06	mg/L	SM 4500-P B3 & E	11/7/96
Total Dissolved Solids	390	10	mg/L	SM 2540 C	10/26/96

ND = Not detected



Analysis Report: Wet Chemistry Parameters

Client: RI DEM
Client ID:
Lab ID: Method Blank

Matrix: Aqueous

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Analysis Date</u>
Nitrate	ND	0.05	mg/L	SM 4500-NO3 E	10/26/96
Phosphate - total	ND	0.06	mg/L	SM 4500-P B3 & E	11/7/96
Total Dissolved Solids	ND	10	mg/L	SM 2540-C	10/26/96

ND = Not detected



Analysis Report: Wet Chemistry Parameters

Client: RI DEM
Client ID:
Lab ID: Lab Control Sample

Matrix: Aqueous

Analyte

% Recovery

Nitrate
Phosphate - total
Total Dissolved Solids

105
108
102



Analysis Report: Total Petroleum Hydrocarbons

Client: RI DEM

Analysis: Method 418.1

Matrix: Soil

Concentration in: mg/kg, dry weight basis

Lab ID	Client ID	Result	% Solid	Reporting Limit	Analysis Date
C1203-01	TP6-2	1,200	73	410	10/28/96
C1203-02	TP8-8	ND	86	35	10/28/96
C1203-04	TP4-2	2,300	88	350	10/28/96

QA/QC

Method Blank

11025-B1

ND

30

10/28/96

Lab Control Spike (% Recovery)

11025-LCS1

87

10/28/96

ND = Not Detected



Analysis Report: Total Petroleum Hydrocarbons

Client: RI DEM

Analysis: Method 418.1

Matrix: Soil

Concentration in: mg/kg, dry weight basis

<u>Lab ID</u>	<u>Client ID</u>	<u>Result</u>	<u>% Solid</u>	<u>Reporting Limit</u>	<u>Analysis Date</u>
C1203-15	TP17-3	ND	77	40	11/7/96
C1203-16	TP18-4	19,000	80	5,800	11/7/96

QA/QC

Method Blank

11029-B1

ND

30

11/7/96

Lab Control Spike (% Recovery)

11029-LCS1

117

11/7/96

ND = Not Detected



Analysis Report: Volatile Organic Compounds

Client: RI DEM
Client ID:
Lab ID: Method Blank, V1B1026A
Analysis: Method 8260

Analysis Date: 10/28/96
Matrix: Aqueous
Concentration in: ug/L
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	ND	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethene	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	5
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5



Client ID:

Lab ID: Method Blank, V1B1028A

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3 Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5

QC Batch: V1B1028A

Surrogate Recovery:

1,2-Dichloroethane-d4	88%
Toluene-d8	100%
Bromofluorobenzene	96%

ND = Not detected



Analysis Report: Volatile Organic Compounds

Client: RI DEM
Client ID: Trip Blank
Lab ID: C1203-09
Analysis: Method 8260

Analysis Date: 10/28/06
Matrix: Aqueous
Concentration in: ug/L
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
Carbon disulfide	ND	5
Iodomethane	ND	5
Acetone	ND	5
Methylene chloride	33	5
trans-1,2-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
Vinyl acetate	ND	5
2,2-Dichloropropane	ND	5
cis-1,2-Dichloroethane	ND	5
Methyl ethyl ketone	ND	5
Bromochloromethane	ND	5
Chloroform	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
1,1-Dichloropropene	ND	5
Benzene	ND	6
1,2-Dichloroethane	ND	5
Trichloroethene	ND	5
1,2-Dichloropropane	ND	5
Dibromomethane	ND	5
Bromodichloromethane	ND	5
2-Chloroethyl vinyl ether	ND	5
cis-1,3-Dichloropropene	ND	5
4-Methyl-2-pentanone	ND	5
Toluene	ND	5



Client ID: Trip Blank

Lab ID: C1203-09

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
trans-1,3-Dichloropropene	ND	5
1,1,2-Trichloroethane	ND	5
Tetrachloroethene	ND	5
1,3-Dichloropropane	ND	5
2-Hexanone	ND	5
Dibromochloromethane	ND	5
1,2-Dibromoethane (EDB)	ND	5
Chlorobenzene	ND	5
1,1,1,2-Tetrachloroethane	ND	5
Ethylbenzene	ND	5
Xylenes, total	ND	5
Styrene	ND	5
Bromoform	ND	5
Isopropylbenzene	ND	5
Bromobenzene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
1,2,3-Trichloropropane	ND	5
n-Propylbenzene	ND	5
2-Chlorotoluene	ND	5
4-Chlorotoluene	ND	5
1,3,5-Trimethylbenzene	ND	5
tert-Butylbenzene	ND	5
1,2,4-Trimethylbenzene	ND	5
sec-Butylbenzene	ND	5
1,3-Dichlorobenzene	ND	5
4-Isopropyltoluene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5
n-Butylbenzene	ND	5
1,2-Dibromo-3-chloropropane	ND	5
1,2,4-Trichlorobenzene	ND	5
Hexachlorobutadiene	ND	5
1,2,3-Trichlorobenzene	ND	5
MTBE	ND	5

QC Batch: V1B1028A

Surrogate Recovery:	
1,2-Dichloroethane-d4	91%
Toluene-d8	100%
Bromofluorobenzene	98%

ND = Not detected



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: RI DEM
Client ID:
Lab ID: Method Blank, P1025-B1
Analysis: Method 8080

Analysis Date: 11/02/96
Matrix: Soil
Concentration in: ug/kg
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	33
Aroclor-1221	ND	66
Aroclor-1232	ND	33
Aroclor-1242	ND	33
Aroclor-1248	ND	33
Aroclor-1254	ND	33
Aroclor-1260	ND	33

Surrogate Recovery:

2,4,5,6-Tetrachloro-m-xylene 96%
Decachlorobiphenyl 83%

ND=Not Detected

QC Batch: P1025-B1



Analysis Report: Polychlorinated Biphenyls (PCB)

Client: RI DEM
Client ID: TP7-2
Lab ID: C1203-03
Analysis: Method 8080

Analysis Date: 11/02/96
Matrix: Soil, 76% solids
Concentration in: ug/kg, dry weight basis
Dilution: 1

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limits</u>
Aroclor-1016	ND	43
Aroclor-1221	ND	87
Aroclor-1232	ND	43
Aroclor-1242	ND	43
Aroclor-1248	ND	43
Aroclor-1254	ND	43
Aroclor-1260	ND	43

Surrogate Recovery:
2,4,5,6-Tetrachloro-m-xylene 96%
Decachlorobiphenyl 93%

ND=Not Detected

QC Batch: P1025-B1



Analysis Report: Polychlorinated Biphenyls (PCBs)

Lab Control Summary

Client: RI DEM
Lab ID for Blank Spike: P1025-LCS1
Analysis: Method 8080

Matrix: Soil
Analysis Date for Blank Spike: 11/2/96

<u>Analyte</u>	<u>% Recovery</u>
Aroclor 1260	89

QC Batch: P1025-B1



Analysis Report: Total Metals

Client: RI DEM
Client ID: SS-01
Lab ID: C1203-10
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 86% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	10	1
Beryllium	0.5	0.1
Cadmium	0.5	0.1
Chromium	7	1
Copper	120	0.5
Lead	300	0.5
Mercury	ND	0.1
Nickel	8.0	0.5
Selenium	3	2
Silver	ND	2
Thallium	ND	1
Zinc	260	1

ND = Not detected

QC Batch: 1026PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID: SS-02
Lab ID: C1203-11
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 73% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 11/4-11/6/98

Analyte	Results	Reporting Limit
Antimony	ND	5
Arsenic	6	1
Beryllium	0.3	0.1
Cadmium	ND	0.1
Chromium	18	1
Copper	52	0.5
Lead	540	0.5
Mercury	1.5	0.1
Nickel	12	0.5
Selenium	3	2
Silver	ND	2
Thallium	ND	1
Zinc	690	1

ND = Not detected

QC Batch: 1028PBS _____



Analysis Report: Total Metals

Client: RI DEM
Client ID: SS-04
Lab ID: C1203-12
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 95% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	7	1
Beryllium	0.3	0.1
Cadmium	5.3	0.1
Chromium	14	1
Copper	93	0.5
Lead	630	0.5
Mercury	0.8	0.1
Nickel	21	0.5
Selenium	ND	2
Silver	ND	2
Thallium	ND	1
Zinc	1,300	1

ND = Not detected

QC Batch: 1026PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID: SS-07
Lab ID: C1203-13
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 83% Solids
Concentration In: mg/kg, dry weight basis
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	6	5
Arsenic	12	1
Beryllium	0.3	0.1
Cadmium	8.4	0.1
Chromium	45	1
Copper	1,200	0.5
Lead	840	0.5
Mercury	29	0.1
Nickel	70	0.5
Selenium	3	2
Silver	12	2
Thallium	ND	1
Zinc	1,000	1

ND = Not detected

QC Batch: 1026PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP3-8
Lab ID: C1203-05
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 83% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	14	1
Beryllium	0.3	0.1
Cadmium	1.4	0.1
Chromium	24	1
Copper	320	0.5
Lead	980	0.5
Mercury	0.6	0.1
Nickel	29	0.5
Selenium	2	2
Silver	2	2
Thallium	ND	1
Zinc	610	1

ND = Not detected

QC Batch: 1025PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP15-8
Lab ID: C1203-14
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil, 80% Solids
Concentration in: mg/kg, dry weight basis
Analysis Date: 11/4-11/8/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	7	1
Beryllium	0.5	0.1
Cadmium	1.7	0.1
Chromium	150	1
Copper	830	0.5
Lead	580	0.5
Mercury	0.3	0.1
Nickel	81	0.5
Selenium	3	2
Silver	12	2
Thallium	ND	1
Zinc	650	1

ND = Not detected

QC Batch: 1106PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID:
Lab ID: Prep Blank, 1105PBS
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil
Concentration in: mg/kg
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	ND	1
Beryllium	ND	0.1
Cadmium	ND	0.1
Chromium	ND	1
Copper	ND	0.5
Lead	0.8	0.5
Mercury	ND	0.1
Nickel	ND	0.5
Selenium	ND	2
Silver	ND	2
Thallium	ND	1
Zinc	2	1

ND = Not detected

QC Batch: 1105PBS



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Prep Blank, 1026PBS

Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil

Concentration In: mg/kg

Analysis Date: 11/4-11/6/98

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	ND	1
Beryllium	ND	0.1
Cadmium	ND	0.1
Chromium	ND	1
Copper	ND	0.5
Lead	0.7	0.5
Mercury	ND	0.1
Nickel	ND	0.5
Selenium	ND	2
Silver	ND	2
Thallium	ND	1
Zinc	1	1

ND = Not detected

QC Batch: 1026PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID:
Lab ID: Prep Blank, 1025PBS
Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil
Concentration in: mg/kg
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	5
Arsenic	ND	1
Beryllium	ND	0.1
Cadmium	ND	0.1
Chromium	ND	1
Copper	ND	0.5
Lead	0.7	0.5
Mercury	ND	0.1
Nickel	ND	0.5
Selenium	ND	2
Silver	ND	2
Thallium	ND	1
Zinc	2	1

ND = Not detected

QC Batch: 1025PBS



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Lab Control Sample, 1105L66

Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil

Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>% Recovery</u>
Antimony	66
Arsenic	90
Beryllium	88
Cadmium	79
Chromium	81
Copper	80
Lead	80
Mercury	104
Nickel	89
Selenium	83
Silver	86
Thallium	90
Zinc	90

QC Batch: 1105PBS



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Lab Control Sample, 1026LCSS

Analysis Method: 7471A (Mercury)
6010A (Others)

Matrix: Soil

Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>% Recovery</u>
Antimony	80
Arsenic	98
Beryllium	97
Cadmium	100
Chromium	93
Copper	97
Lead	88
Mercury	148
Nickel	96
Selenium	97
Silver	115
Thallium	101
Zinc	91

QC Batch: 1026PBS



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Lab Control Sample, 1025LCSS

Analysis Method: 7471A (Mercury)

6010A (Others)

Matrix: Soil

Analysis Date: 11/4-11/6/86

<u>Analyte</u>	<u>% Recovery</u>
Antimony	103
Arsenic	100
Beryllium	97
Cadmium	100
Chromium	94
Copper	98
Lead	88
Mercury	142
Nickel	96
Selenium	99
Silver	115
Thallium	103
Zinc	95

QC Batch: 1025PBS



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP10
Lab ID: C1203-06
Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous
Concentration in: mg/L
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	0.04	0.01
Beryllium	0.002	0.001
Cadmium	ND	0.001
Chromium	0.02	0.01
Copper	0.14	0.005
Lead	0.31	0.005
Mercury	ND	0.0005
Nickel	0.02	0.005
Selenium	ND	0.02
Silver	ND	0.01
Thallium	ND	0.01
Zinc	0.15	0.02

ND = Not detected

QC Batch: 1025PBW



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP9
Lab ID: C1203-07
Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous
Concentration in: mg/L
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	0.01	0.01
Beryllium	0.06	0.001
Cadmium	0.16	0.001
Chromium	0.71	0.01
Copper	1.7	0.005
Lead	3.9	0.005
Mercury	0.01	0.0005
Nickel	0.65	0.005
Selenium	0.05	0.02
Silver	ND	0.01
Thallium	ND	0.01
Zinc	4.1	0.02

ND = Not detected

QC Batch: 1025PBW



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP11
Lab ID: C1203-08
Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous
Concentration in: mg/L
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	0.06	0.01
Beryllium	ND	0.001
Cadmium	0.01	0.001
Chromium	0.09	0.01
Copper	0.86	0.005
Lead	2.9	0.005
Mercury	0.003	0.0005
Nickel	0.05	0.005
Selenium	ND	0.02
Silver	0.02	0.01
Thallium	ND	0.01
Zinc	5.7	0.02

ND = Not detected

QC Batch: 1025PBW



Analysis Report: Total Metals

Client: RI DEM
Client ID: TP20
Lab ID: C1203-20
Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous
Concentration in: mg/L
Analysis Date: 11/4-11/6/86

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	0.21	0.01
Beryllium	0.006	0.001
Cadmium	ND	0.001
Chromium	0.07	0.01
Copper	0.22	0.005
Lead	0.60	0.005
Mercury	0.0006	0.0005
Nickel	0.06	0.005
Selenium	0.06	0.02
Silver	ND	0.01
Thallium	ND	0.01
Zinc	1.5	0.02

ND = Not detected

QC Batch: 1026PBW



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Lab Control Sample, 1026LCSW

Analysis Method: 7470A (Mercury)
8010A (Others)

Matrix: Aqueous

Concentration in: mg/L

Analysis Date: 11/4-11/6/98

Analyte

Results

Antimony	114
Arsenic	116
Beryllium	112
Cadmium	123
Chromium	117
Copper	111
Lead	118
Mercury	105
Nickel	115
Selenium	112
Silver	113
Thallium	111
Zinc	121

QC Batch: 1026PBW



Analysis Report: Total Metals

Client: RI DCM

Client ID:

Lab ID: Lab Control Sample, 1025LCSW

Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous

Concentration in: mg/L

Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>
Antimony	107
Arsenic	108
Beryllium	104
Cadmium	113
Chromium	107
Copper	103
Lead	110
Mercury	107
Nickel	107
Selenium	106
Silver	107
Thallium	104
Zinc	116

QC Batch: 1025FBW



Analysis Report: Total Metals

Client: RI DEM

Client ID:

Lab ID: Prep Blank, 1026PBW

Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous

Concentration in: mg/L

Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	ND	0.01
Beryllium	ND	0.001
Cadmium	ND	0.001
Chromium	ND	0.01
Copper	0.01	0.005
Lead	0.02	0.005
Mercury	ND	0.0005
Nickel	ND	0.005
Selenium	ND	0.02
Silver	ND	0.01
Thallium	ND	0.01
Zinc	0.03	0.02

ND = Not detected

QC Batch: 1026PBW



Analysis Report: Total Metals

Client: RI DEM
Client ID:
Lab ID: Prep Blank, 1025PBW
Analysis Method: 7470A (Mercury)
6010A (Others)

Matrix: Aqueous
Concentration in: mg/L
Analysis Date: 11/4-11/6/96

<u>Analyte</u>	<u>Results</u>	<u>Reporting Limit</u>
Antimony	ND	0.05
Arsenic	ND	0.01
Beryllium	ND	0.001
Cadmium	ND	0.001
Chromium	ND	0.01
Copper	0.008	0.005
Lead	ND	0.005
Mercury	ND	0.0005
Nickel	ND	0.005
Selenium	ND	0.02
Silver	ND	0.01
Thallium	ND	0.01
Zinc	ND	0.02

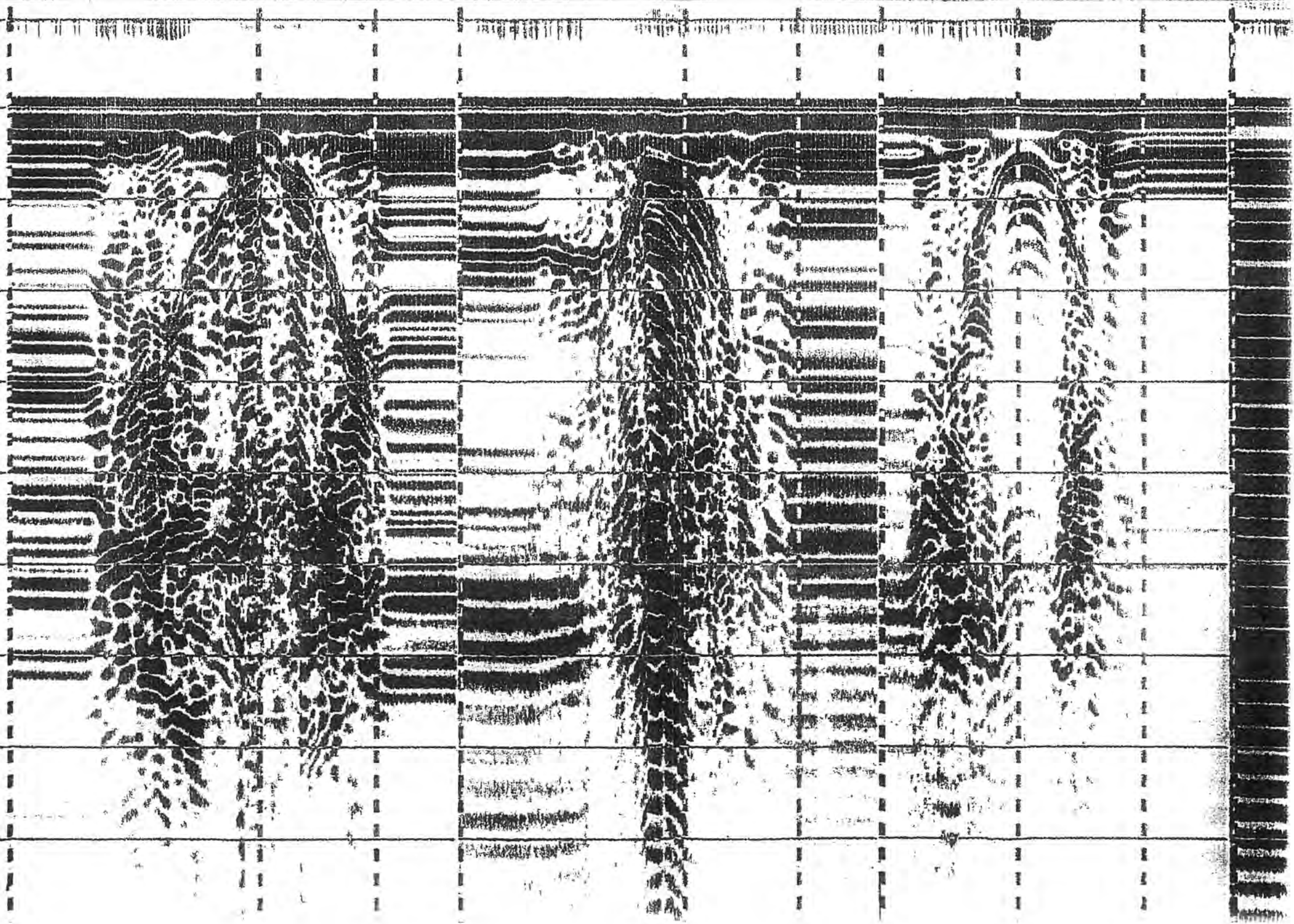
ND = Not detected

QC Batch: 1025PBW

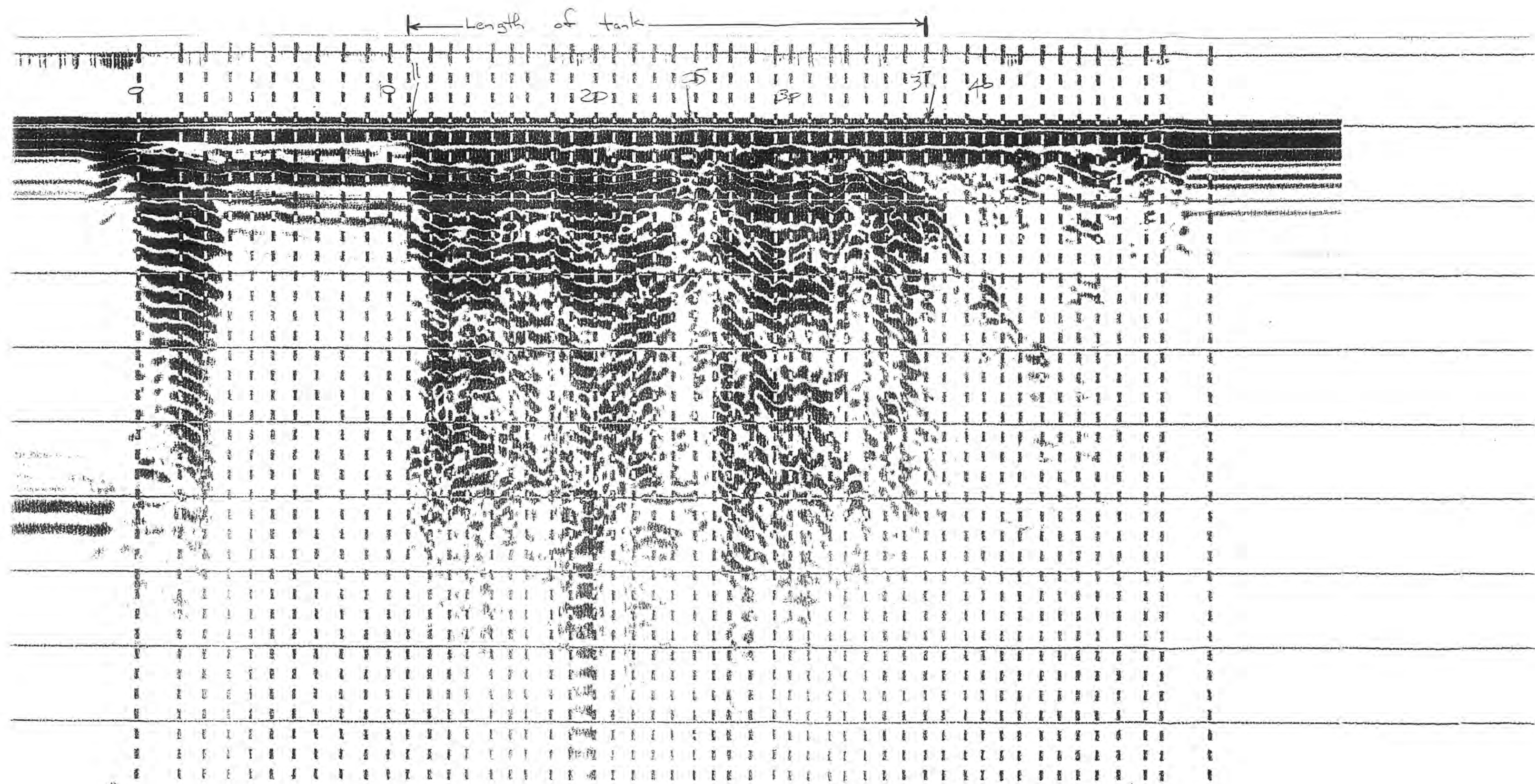
Last Page of Data Report

APPENDIX B

TANK
N-5
Range = 80
11:26



Lincoln Braid & Looe GPR transect across JST to determine center-line



can Braid & Lace EPR transect along centerline of UST (railcar)

APPENDIX C

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-H511-A1</u>
Project Location: <u>Lincoln Ave. site, Prec. dbnc</u>	Sampling Location: <u>TEST P.T. 2</u>
Sample #: <u>TP2-2</u>	

Environmental
Field Services

Sample Location Info

0. Soil
 1. Garbage - glass, metal, wood
 8. EOB

Sample Data

Date: 10.24.96 Time: 1010
 Sampler: JMB Weather: _____
 Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Backhoe
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite /
 Other _____

Container	Quantity	Preservative
202	1	—

Description Data

Organic Vapor Reading: — Instrument: —
 Sample Depth: 2 Core Length: _____
 Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Silt and sand and Garbage - plastic, glass, metal shoes - cans
 Munsell Color: Dusky Yellowish Brown Grain Size: _____
 Sample Description Foreign Material: Garbage
 Appearance: _____

Comments: Finish at 1030

Soil Sampling Field Data

Client/Project Name: <u>B.I. DEM</u>	Project #: <u>96-4511-A1</u>
Project Location: <u>Lincoln Ave. S.E., Prec. conc.</u>	Sampling Location: <u>Test Pit 2</u>
Sample #: <u>TPZ-8</u>	

Environmental
Field Services

Sample Location Info

Sample Data

Date: 10-24-96 Time: 1024
 Sampler: JMB Weather: _____
 Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Backhoe
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite /
 Other _____

Container	Quantity	Preservative
202	t	—

Description Data

Organic Vapor Reading: _____ Instrument: _____
 Sample Depth: 8' Core Length: _____
 Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Garbage, glass, plastic, bolts - some sand and silt, sand, silt, some garbage
 Munsell Color: Dusky Yellowish Brown Grain Size: _____
 Sample Description Foreign Material: Garbage
 Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP-3-2</u>	<u>TP-3</u>

Environmental
Field Services

Sample Location Info

0 - soil

1 - garbage - glass bottles, metal cans, plastic, clothes, tires, ect.

8 - EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-24-96</u> Time: <u>1045</u> Sampler: <u>TMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Bachhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <input checked="" type="radio"/> Grab / Composite / Other _____	<u>202</u>	-	-

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Silt and sand, garbage, glass-metal-tires

Munsell Color: Dusky Yellowish Brown Grain Size: _____

Sample Description Foreign Material: Garbage

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E m</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location
Sample #: <u>TP3-8</u>	<u>TP-3</u>

Environmental
Field Services

Sample Location Info

Sample Data	Container	Quantity	Preservative
Date: <u>10-21-96</u> Time: <u>10:15</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	<u>202</u>	<u>1</u>	<u>—</u>

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 8 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Brittand sand and garbage - plastic, metal, glass bottle

Munsell Color: Dusky Yellowish Brown Grain Size: _____

Sample Description Foreign Material: Garbage

Appearance: _____

Comments: Finished at 1100 - dug down to 12 feet and hit no water, Garbage material continued to 12 feet. I collected a PPM PCB & metal sample from 8 FT because there was no water

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TPH-2</u>	<u>TP-4</u>

Environmental
Field Services

Sample Location Info

0 - Soil

1 - Garbage, metal, glass bottles, Battery casings, wires, clothes.

8 - EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/24/96</u> Time: <u>1110</u> Sampler: <u>YmB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	<u>202</u> <u>802</u>	<u>+</u> <u>1</u>	_____ <u>For DEM</u>

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 2' Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand, F-C, some silt, ~~Garbage plastic, glass metal~~

Munsell Color: Dusty Yellowish Brown Grain Size: _____

Sample Description Foreign Material: Garbage

Appearance: _____

Comments: Also collected a TPT for DEM Suez
2 feet

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E M</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TPH-8</u>	<u>Test P. + W</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-24-96</u> Time: <u>1115</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	20 z	1	—

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 8 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand F-m little silt

Munsell Color: Dosky Yellowish Brown Grain Size: _____

Sample Description Foreign Material: Battery casing, some glass and plastic material
Molded / glued together.

Appearance: _____

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DE m</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave site, Providence</u>	Sampling Location
Sample #: <u>TP5-2</u>	<u>TP, + 5</u>

Environmental
Field Services

Sample Location Info

TP5-2

0 - Sand, some silt

1 - Water

2 - Sand and Gravel

3 - EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-24-90</u> Time: <u>1135</u>	207	1	—
Sampler: <u>JMB</u> Weather: _____	204	3	—
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Rock hammer</u>			
Field decon: Yes / No / Dedicated			
Type of Sample: <u>Grab</u> / Composite / Other _____			

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, F-m, 1.6% silt, moderate

Munsell Color: moderate yell. Brown Grain Size: _____

Sample Description Foreign Material: None

Appearance:

Comments:

Water at 2-3 feet at this location. NO

8 FT. soil sample will be collected, water is brown and silt

ph = 7.44 SC = 620

Temp 14.4 DO = 2.3

Conductivity 500

Temp 0 - 1.26

calibration 1.01

Fms 1150

adfldsvclefslsoilfds

revised 07/14/93

TP5 - water, 2 Feet, 1140

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E M</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location: <u>Test Pit-6</u>
Sample #: <u>TP6-2</u>	

Environmental
Field Services

Sample Location Info

0 - Top soil
 0.5 - sand and silt
 2 - water / sand and gravel
 4 - EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-24-96</u> Time: <u>1150</u>	202 VOA	1 2	- -
Sampler: <u>JMB</u> Weather: _____			
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u>			
Field decon: Yes / No / Dedicated			
Type of Sample: <u>Grab</u> Composite / Other _____			

Description Data

Organic Vapor Reading: - Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand and silt. oil staining

Munsell Color: black/1 Grain Size: _____

Sample Description Foreign Material: _____

Appearance: petroleum odor

TP6 - water, 3 feet, 1200

Comments:

Water at 2 feet,
 4 foot sample will be collected instead of
 6 foot.

pH - 6.71
 Temp - 14.4
 Cond - 250
 Tem. Corr - 1.26
 Colibret - 1.02

SC - 321
 DO - 2.0

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP6-4</u>	<u>Test P 16</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/24/96</u> Time: <u>1200</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	<u>202</u> <u>807</u>	<u>1</u> <u>1</u>	_____ <u>For DEM</u> <u>418.1</u>

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 4 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Silt and Sand

Munsell Color: Black 10YR Grain Size: _____

Sample Description Foreign Material: _____

Appearance: petroleum, stained and color

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location
Sample #: <u>TP7-2</u>	<u>Test p. 7</u>

Environmental
Field Services

Sample Location Info

0 - Top soil
0.5 - sand and silt
2.5 - water
3 - sand and gravel
H - EOB

Sample Data

Date: <u>10-21-96</u> Time: <u>12:25</u>	Container	Quantity	Preservative
Sampler: <u>JM</u> Weather: _____	<u>202</u>	<u>1</u>	<u>-</u>
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	<u>802</u>	<u>-</u>	<u>Per DEM</u>
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand F.M, some silt

Munsell Color: Black M1 Grain Size: _____

Sample Description Foreign Material: _____

Appearance: _____

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TPB-L</u>	<u>Test P. + 8</u>

Environmental
Field Services

Sample Location Info

0 - Asphalt
025 - sand
2 - sand and gravel
H - water
6 - EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-21-96</u> Time: <u>1240</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / <u>No</u> / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	<u>202</u>	<u>1</u>	—

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand and silt

Munsell Color: Dark yellowish orange Grain Size: _____

Sample Description Foreign Material: none

Appearance: _____

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TPB-8</u>	Test pt <u>8</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10.26.96</u> Time: <u>1250</u> Sampler: <u>IM3</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Backhoe</u> Field decon: Yes / No / Dedicated Type of Sample: <u>Grab</u> / Composite / Other _____	<u>202</u>	<u>1</u>	<u>-</u>

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 8 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand F4, coarse silt, Fluorite

Munsell Color: Dark yellowish orange Grain Size: _____

Sample Description Foreign Material: none

Appearance: clean

Comments:

Water Sample for Field per, also collected
 a HIR for DEM

DO - 2.8
 Ph - 6.62
 Temp - 12.1
 cond - 470
 col 1.02
 Temp cor. - 1.33
 SC - ~~633~~ 640

TPB-Water, 4 FT, 1300

Soil Sampling Field Data

Client/Project Name: <u>B.I. DEM</u>	Project #: <u>96-4511-41</u>
Project Location: <u>Lincoln base site, Prec. cont.</u>	Sampling Location: <u>TEST P. + 9</u>
Sample #: <u>V P9-2</u>	

Environmental
Field Services

Sample Location Info

0 - Asphalt
 25 - Soil and demolition debris - wood, metal.
 5 - Water, sand and Gravel
 8 - EOB

Sample Data

Date: 10-24-96 Time: 1400
 Sampler: JMB Weather: _____
 Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Backhoe
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite / Other _____

Container	Quantity	Preservative
202	1	-

Description Data

Organic Vapor Reading: 0 Instrument: MT 01M 2
 Sample Depth: 2 Core Length: _____
 Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand f.m and silty some construction debris in excavation wood-metal
 Munsell Color: moderate Brown 5Y R 4/1 Grain Size: _____
 Sample Description Foreign Material: _____
 Appearance: _____

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location: <u>Test Pit 9</u>
Sample #: <u>TP9-8</u>	

Environmental
Field Services

Sample Location Info

Sample Data

Date: 10/24/96 Time: 1410
 Sampler: IMB Weather: _____
 Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Backhoe
 Field decon: Yes / No / Dedicated _____
 Type of Sample: Grab / Composite /
 Other _____

Container	Quantity	Preservative
202	1	-
100A	3	-
250mLp	1	None
↑ For DEM		

Description Data

Organic Vapor Reading: _____ Instrument: _____
 Sample Depth: 8 Core Length: _____
 Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand and silt,
 Munsell Color: moderate yellowish brown Grain Size: _____
 Sample Description Foreign Material: _____
 Appearance: _____

Comments: Water sample collected from H&B, water has a slight petroleum sheen

DO - 6.4
 cond. - 550
 col. - 1.02
 Temp - 14.5
 pH - 7.33
 TSS - 1.26
 SC - 710

TP9-Water, 4 feet, 1415

revised 07/14/93

Soil Sampling Field Data

Client/Project Name: <u>B.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Prec. conc.</u>	Sampling Location
Sample #: <u>TP10-H</u>	<u>Test Pit 10</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-21-96</u> Time: <u>1440</u>	<u>202</u>	<u>1</u>	<u>—</u>
Sampler: <u>JMB</u> Weather: <u> </u>	<u>10A</u>	<u>3</u>	<u>—</u>
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Bachhoe / hand</u>	<u>250mL</u>	<u>1</u>	<u>HNO3</u>
Field decon: Yes / No / Dedicated	<u>For DEM</u>		
Type of Sample: <u>Grab</u> / Composite / Other <u> </u>			

Description Data

Organic Vapor Reading: — Instrument: —

Sample Depth: 4 Core Length:

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand-F-m, wet

Munsell Color: Polyclench Brown Grain Size:

Sample Description Foreign Material: —

Appearance:

Comments: water is at 3 feet here, water sample collected at

ph - 6.84

3 feet

Temp - 13.3

DO - 2.9

cond - 600

colib 1.07

Temp Cor - 1.30

SC - 800

TP10 - water, 3 FT, 1445

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-4541-41</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location: <u>Test Pit 11</u>
Sample #: <u>TP11-4</u>	

Environmental
Field Services

Sample Location Info

O - Bricks and soil
 I - water
 B -
 K - soil, silt, sand - only

Sample Data

Date: 10-21-86 Time: 1500
 Sampler: JM Weather: _____
 Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Backhoe / hand
 Field decon: Yes / No / Dedicated
 Type of Sample: Grab / Composite /
 Other _____

Container	Quantity	Preservative
202	1	—
VOA	3	—
250 mL	1	HNO ₃ Fluorom

Description Data

Organic Vapor Reading: — Instrument: _____
 Sample Depth: 4 Core Length: _____
 Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Silt, Tr. organics
 Munsell Color: Black w, Grain Size: _____
 Sample Description Foreign Material: _____
 Appearance: petroleum odor, this too

Comments: only one soil sample was collected at this location
This location appears to be in a dry well.
Water was at 18 foot from the surface. The next
couple of feet was bricks and garbage.
the next soil appeared at @ 11 feet soil
collected the soil sample here

adfldsvoleifslsoilfds

revised 07/14/93

P.B. cord - 600 Cal - 1.01
 11/1/86 pit - 13 ← temp - 7.27
 00-2.2 SC = 790
TP11 - water, 2 FT, 1500

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-4511-41</u>
Project Location: <u>Lincoln Trace S.E. Prec. Cont.</u>	Sampling Location: <u>Test p. 12</u>
Sample #: <u>TP12-6</u>	

Environmental
Field Services

Sample Location Info

Sample Data

Date: 10-24-96 Time: 1530
 Sampler: IMB Weather: _____

Sampling Device: Auger / Core Sampler / Shovel / Split Spoon
 Trowel / Other Bachhoe / hand

Field decon: Yes / No / Dedicated

Type of Sample: Grab / Composite /
 Other _____

Container	Quantity	Preservative
<u>202</u>	<u>1</u>	<u>—</u>

Description Data

Organic Vapor Reading: — Instrument: —
 Sample Depth: 6 Core Length: —

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, FC,

Munsell Color: Dark Yellowish Brown Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments: water at 12

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave site, Providence</u>	Sampling Location
Sample #: <u>TP13-8</u>	Test P. # <u>13</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0721^h</u> Sampler: <u>SM</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	—

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 8 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, silt, Ash? some oil staining (?)

Munsell Color: Black M1 Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

pH - 7.84
 Temp - 12.8
 PC - 1.8
 Cal. ~~#01~~ 1.01
 Tenc. - 1.30
 Cond 650
 SC - 860

TP13- Water @ 0750.
 8FT

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E M</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP13-2</u>	<u>Test Pit 13</u>

Environmental
Field Services

Sample Location Info

0.2 FT- Sand and Gravel

2 - 8 stones and Demolition Debris, plastic drums, metal tubing, Ashes,
Burned wood,

8 - Water Block,

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-05-96</u> Time: <u>0730</u> Sampler: _____ Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	<u>202</u>	<u>1</u>	—

Description Data

Organic Vapor Reading: 0 Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand F.m, some silt.

Munsell Color: Dusty Yellowish Brown Grain Size: _____

Sample Description Foreign Material: _____

Appearance: clean

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TPH-2</u>	<u>Test P. # 14</u>

Environmental
Field Services

Sample Location Info

0-2 Bricks and stones and ash, Burned demolition debris
 2-2.5 - Asphalt surface
 2.5-8 Sand and Gravel
 6- Native soil
 8- Water - Brown

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0800</u> Sampler: <u>TMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated _____ Type of Sample: Grab / Composite / Other _____	202	-	-

Description Data

Organic Vapor Reading: 0 Instrument: OWM 2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Silt and ash

Munsell Color: medium Gray Grain Size: _____

Sample Description Foreign Material: _____

Appearance: _____

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-4511-A1</u>
Project Location: <u>Lincoln Ave site, Providence</u>	Sampling Location
Sample #: <u>TP111-8</u>	<u>Test Pit 14</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0815</u>	<u>202</u>	-	-
Sampler: <u>IMB</u> Weather: _____			
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	<u>No water sample</u>		
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: <u>0</u>	Instrument: <u>OVUM 2</u>
Sample Depth: <u>8</u>	Core Length: _____
Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.) <u>Sand, F.C. some silt</u>	
Munsell Color: <u>moderate y. Brown</u>	Grain Size: _____
Sample Description Foreign Material: _____	
Appearance: _____	

Comments:

PH - 7.59 1 No water sample collecting

Temp - 15.2

Cond - 500

DO - 4.6

calib - 1.01

Temp C - 1.24

SC - 630

TP111-Water, ~~0820~~
8FT 0820

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>Test P. TP15-2</u>	<u>Test P. T115</u>

Environmental
Field Services

Sample Location Info

0 - Topsoil

1 - Garbage. glass, metal, glass bottles, plastic, washing machine
Tin Cans, Tires, ect....

7 - some garbage mixed with soil

9 - Native Soil - sand and silt

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0840</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	—

Description Data

Organic Vapor Reading: 0 Instrument: GOM 2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, F.C. some silt. T& Garbage

Munsell Color: Dusky Yellowish Brown Grain Size: _____

Sample Description Foreign Material: Garbage

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E m</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP15-8</u>	<u>Test Pit 15</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0850</u> Sampler: <u>TMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	<u>202</u>	<u>1</u>	<u>—</u>

Description Data

Organic Vapor Reading: 0 Instrument: DUM 2

Sample Depth: 5 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, some silt, Tr-Garbage
F-h

Munsell Color: Dosky yellowish Brown Grain Size: _____

Sample Description Foreign Material: _____

Appearance: _____

Comments: No water was encountered down to 10 Feet
I will collect a RCRA 8 soil sample instead
of the RCRA 8 water.

Soil Sampling Field Data

Client/Project Name: <u>B.I. DEM</u>	Project #: <u>96-4511-41</u>
Project Location: <u>Lincoln Lake site, Providence</u>	Sampling Location
Sample #: <u>TP16-2</u>	<u>Test Pit 16</u>

Environmental
Field Services

Sample Location Info

0 - Asphalt
 .5 - Sand and Silt - Fill
 2 - concrete pad. - extends part ~~of~~ into excavation - maybe over tank
~~#~~ ~~water~~,
 2.5 - sand + gravel, 1/4" to 1/2" size
 4 - water

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0920</u>	<u>202</u>	<u>1</u>	—
Sampler: <u>JMB</u> Weather: _____			
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	<u>No water sample</u>		
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: 0 Instrument: QUM #2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, Fine and silt (Fill)

Munsell Color: Light Brown 5Y 12/6 Grain Size: _____

Sample Description Foreign Material: _____

Appearance: _____

Comments: Could not see any part of the adjacent UST

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP16-5</u>	<u>Test Pit 16</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>0930</u> Sampler: <u>TMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	<u>20 z</u>	<u>1</u>	<u>—</u>

Description Data

Organic Vapor Reading: 0 Instrument: oum 2

Sample Depth: 5 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand, FC

Munsell Color: mod. yellowish Brown Grain Size: _____

Sample Description Foreign Material: —

Appearance: clean

Comments: soil sample was collected at 5 feet, just below the water, because we could not dig to 8 feet

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>YP17-2</u>	<u>Test Pit 17</u>

Environmental
Field Services

Sample Location Info

<p>0 - Asphalt 0.25 - Sand and Gravel, 1.46 silt. 2 - Concrete pad 1 light gray ^{fine sand} silt layer 2 organic silt layer 2.5 sand and gravel 3. Silt layer with roots H. Sand and gravel. H.5-water</p>	
--	--

Sample Data

Date: <u>10-25-96</u> Time: <u>0910</u>	Container	Quantity	Preservative
Sampler: <u>JMB</u> Weather: _____	<u>202</u>	<u>1</u>	—
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	202	<u>1</u>	—
Field decon: Yes / No / Dedicated	<u>For DEM 2419-1</u> <u>JMB</u>		
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: <u>0</u>	Instrument: <u>oym # 2</u>
Sample Depth: <u>2</u>	Core Length: _____
Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.) <u>Silt-organic w/ sand and roots.</u>	
Munsell Color: <u>Black W1</u>	Grain Size: _____
Sample Description Foreign Material: _____	
Appearance: _____	

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location
Sample #: <u>TP17-5</u>	<u>Test P. # 17</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1000</u>	202	1	—
Sampler: <u>JMB</u> Weather: _____	802	1	For DEM HIS-1
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	00A	3	—
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: 0 Instrument: _____

Sample Depth: 5 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, Fine, to silt

Munsell Color: Light Grey Grain Size: _____

Sample Description Foreign Material: _____

Appearance: clean

Comments:

pH — 7.05
 Temp — 17.4
 Core — 600
 DO — 2.9
 Colib — 1.0
 Temp_{er} — 116
 SC = 710

TP17-Water, H=5 FT, 1000

Soil Sampling Field Data

Client/Project Name: <u>B.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location: <u>Test P. #18</u>
Sample #: <u>TP18-2</u>	

Environmental
Field Services

Sample Location Info

0 - sand and silt - black
 0.5 - Railroad ties
 1 - sand and silt black
 2 - sand, brown
 3 - sand, silt and gravel
 3.5 - water and oil, floating product
 5 - FOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1050</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated _____ Type of Sample: Grab / Composite / Other _____	<u>202</u>	<u>1</u>	<u>-</u>

Description Data

Organic Vapor Reading: 0 Instrument: 0 cm #2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
silt and f. sand

Munsell Color: Dusky yellowish brown Grain Size: _____

Sample Description Foreign Material: _____

Appearance: clean?

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP18-4</u>	<u>TEST P. 118</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/90</u> Time: <u>1030</u>	<u>207</u>	<u>1</u>	<u>-</u>
Sampler: <u>JM3</u> Weather: _____	<u>802</u>	<u>1</u>	<u>For DEM</u>
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	<u>U0A</u>	<u>3</u>	<u>-</u>
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: 22 Instrument: oom 2

Sample Depth: 4 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, F.C. little silt - oil saturated

Munsell Color: Black 1/1 Grain Size: _____

Sample Description Foreign Material: _____

Appearance: Waters black with Floccing product

Comments:

ph - 6.83
 cond - 650
 Temp - 15.7
 DO - 2.8
 calib - 1.01
 Tem C - 1.22
 SC - 810

TP18 - Water, 3.5 FT, 1030

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP19-2</u>	<u>Test P. + 19</u>

Environmental
Field Services

Sample Location Info

0 - silt, Ash, sand, Black.

1. sand - Brown

3. sand and gravel

4. water with floating black oil

5 - EOB.

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1100</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	

Description Data

Organic Vapor Reading: 0 Instrument: _____

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, Fm.

Munsell Color: light^{plive} Grey Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments: We hit a concrete pad down at 1 foot at the staked location, we moved/followed the pad 15 feet towards the river (north), found the edge of the pad and began dig down.

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location: <u>Test P. # 19</u>
Sample #: <u>TP19-4</u>	

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1105</u>	<u>202</u>	<u>1</u>	<u>—</u>
Sampler: <u>IM3</u> Weather: _____	<u>VOA</u>	<u>3</u>	<u>—</u>
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____			
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: 5 Instrument: OUM #2

Sample Depth: 4 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, F-C, oil stained

Munsell Color: moderate yellowish brown Grain Size: _____
Black M1

Sample Description Foreign Material: oil

Appearance: oil, the oil appears to floating on the water. soil below the water level is not oily.

Comments:

ph - 7.14
 cond - 800
 Temp - 16.0
 D.O. - 2.8
 Col.b - 1.01
 Temp C - 1.21
 SC = 990

TP19-water, 4 FT, 1115

Soil Sampling Field Data

Client/Project Name: <u>R.I. DE M</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP20-2</u>	<u>Test Pt 20</u>

Environmental
Field Services

Sample Location Info

0 - sand, Astes, Railroad ties, - Black
Bricks,

2 - sand and silt. Brown

3 - sand and gravel

3.5 Water, with floating product

EOB - 5 Feet

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1130</u> Sampler: <u>JMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	-

Description Data

Organic Vapor Reading: 0 Instrument: OVm2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand, F-m

Munsell Color: Black 4/1 Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Place site, Providence</u>	Sampling Location
Sample #: <u>TP20-4</u>	Test <u>P+20</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10.25.96</u> Time: <u>1200</u>	20 Z	1	-
Sampler: <u>IM</u> Weather: _____	VO4	3	-
Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____	250ml P	1	For DEM <u>PPM</u>
Field decon: Yes / No / Dedicated			
Type of Sample: Grab / Composite / Other _____			

Description Data

Organic Vapor Reading: 0 Instrument: 00M#2

Sample Depth: 4 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
sand, FC, some silt.

Munsell Color: moderate Brown and light Gray Grain Size: _____

Sample Description Foreign Material: oil

Appearance: oily - 1" floating product

Comments:

Ph - 7.05
 Temp - 15.5
 D.O - 4.1
 Cond - 1000
 Temp - 1.22
 eahh - 1.01
 SC - 1240

TP20-water, 3.5 FT, 1210

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave site, Providence</u>	Sampling Location
Sample #: <u>YAZI-2</u>	<u>TEST D. + 21</u>

Environmental
Field Services

Sample Location Info

0' - Bricks, stone, wood, Demolition debris, metal tubing,
4' - Water, with floating product

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-25-96</u> Time: <u>1215</u> Sampler: <u>TMB</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	—

Description Data

Organic Vapor Reading: 0 Instrument: OUM 2

Sample Depth: 2 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)
Sand, fine

Munsell Color: 1.0 white grey Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. D E M</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>TP21-4</u>	<u>Test Pit 21</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-26-96</u> Time: <u>1220</u> Sampler: <u>JW</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other _____ Field decon: Yes / No / Dedicated Type of Sample: Grab / Composite / Other _____	<u>202</u> <u>104</u>	<u>1</u> <u>3</u>	- -

Description Data

Organic Vapor Reading: 0 Instrument: 02m 2

Sample Depth: H Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)

Munsell Color: Black bl, med. yellowish Br Grain Size: _____

Sample Description Foreign Material: _____

Appearance: water sample collected at 11 feet, had 1" floating product

Comments:

pH - 6.84
 Temp - 16.5
 D.O - 2.8
 cond - 1300
 calh - 1.01
 Temp C - 1.19
 Se = 1580

TP21-Water, 4 FT, 1240

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln base site, Providence</u>	Sampling Location
Sample #: <u>SS-d-1.5</u>	<u>SS-01</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/96</u> Time: <u>10:15</u>	<u>20z</u>	1	<u>none</u>
Sampler: <u>RO</u> Weather: <u>sunny 60°</u>			
Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Split Spoon Trowel / Other _____	<u>80z</u>	1	<u>none</u>
Field decon: Yes / No / <u>Dedicated</u>			
Type of Sample: <u>Grab</u> / Composite / Other _____			

Description Data

Organic Vapor Reading: NA Instrument: _____

Sample Depth: 1.5 feet Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)

Munsell Color: _____ Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave site, Providence</u>	Sampling Location
Sample #: <u>SS-02-1.5</u>	<u>SS-02</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/96</u> Time: <u>10:47</u>	<u>20z</u>	<u>1</u>	
Sampler: <u>KO</u> Weather: <u>Sunny 60°</u>	<u>80z</u>	<u>1</u>	
Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Split Spoon Trowel / Other _____			
Field decon: Yes / No / <u>Dedicated</u>			
Type of Sample: <u>Grab</u> / Composite / Other _____			

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: _____ Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)

Munsell Color: _____ Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln base site, Providence</u>	Sampling Location: <u>SS-03</u>
Sample #: <u>SS-03-1.5</u>	

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/96</u> Time: <u>10:54</u> Sampler: <u>VD</u> Weather: <u>Sunny 60</u> Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Split Spoon Trowel / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: <u>Grab</u> / Composite / Other _____	<u>207</u>	<u>1</u>	

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: 1.5 Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)

Munsell Color: _____ Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln Ave. site, Providence</u>	Sampling Location
Sample #: <u>SS-07-1.5</u>	<u>SS-07</u>

Environmental
Field Services

Sample Location Info

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/96</u> Time: <u>1112</u> Sampler: <u>K0</u> Weather: <u>Sunny 60°</u> Sampling Device: Auger / Core Sampler / <u>Shovel</u> / Split Spoon Trowel / Other _____ Field decon: Yes / No / <u>Dedicated</u> Type of Sample: <u>Grab</u> / Composite / Other _____	<u>20Z</u>	<u>1</u>	

Description Data

Organic Vapor Reading: _____ Instrument: _____

Sample Depth: _____ Core Length: _____

Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.)

Munsell Color: _____ Grain Size: _____

Sample Description Foreign Material: _____

Appearance:

Comments:

Surface Water Field Data



FUSS & O'NEILL
Environmental
Field Services

Client/Project Name: <u>R.S. DEM</u>	Project #:
Project Location: <u>Lined In Lace + Braid</u>	<u>Well ID</u>
Sample #:	<u>SW-1</u>

Sample Location Info

Special Instructions:

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/06</u> Time: <u>11:44</u> Sampler: _____ Weather: _____ Estimated Flow Rate (GPM): _____ Stagnant / Dry / Other: _____ Filtered in Field?: No / @Vehicle Method of Filtration: Pressure / Vacuum / Syringe Pump ID # [] Filter ID # [] Field Decon: Filter / Tubing / Other _____ Appearance: _____ Comments: _____	<u>UO2</u>	<u>3</u>	<u>-</u>

Field Parameters

Parameter	Instrument ID#	Value	Note: SC calculation based on (temp) at time of SC measurement.
pH	<u>2</u>	<u>8.25</u>	
Temp	xxxxxxxxxxxx	<u>15.5</u>	(Temp)Corr Factor x Calib Factor x Conductivity = Spec. Cond.
Spec. Cond.	<u>2</u>	xxxxxxxxxxxx	(-) - x <u>1002</u> x <u>550</u> = <u>560</u>
Dissolved Oxy	<u>2</u>	<u>6.7</u>	

Comments:

Surface Water Field Data



FUSS & O'NEILL
Environmental
Field Services

Client/Project Name: <u>R.I.D.E.M.</u>	Project #:
Project Location: <u>Lincoln Acres Blvd</u>	<u>Well ID</u>
Sample #:	<u>SW-4</u>

Sample Location Info

Special Instructions:

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/10</u> Time: <u>12:30</u> Sampler: _____ Weather: _____ Estimated Flow Rate (GPM): _____ Stagnant / Dry / Other: _____ Filtered in Field?: No / @Vehicle Method of Filtration: Pressure / Vacuum / Syringe Pump ID # _____ Filter ID # _____ Field Decon: Filter / Tubing / Other _____ Appearance: _____ Comments: _____	<u>VOA</u>	<u>3</u>	<u>-</u>

Field Parameters

Parameter	Instrument ID#	Value	Note: SC calculation based on (temp) at time of SC measurement.
pH	<u>2</u>	<u>6.5</u>	
Temp	xxxxxxxxxxxx	<u>14.5</u>	(Temp)Corr Factor x Calib Factor x Conductivity = Spec. Cond.
Spec. Cond.	<u>2</u>	xxxxxxxxxxxx	(<u>-</u>) - x <u>1.02</u> x <u>470</u> = <u>480</u>
Dissolved Oxy	<u>2</u>	<u>5.0</u>	

Comments:

Surface Water Field Data



FUSS & O'NEILL
Environmental
Field Services

Client/Project Name: <u>D-I. DIEM</u>	Project #:
Project Location: <u>hnednface + B road</u>	Well ID
Sample #:	<u>SW-3</u>

Sample Location Info

Special Instructions:

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/16</u> Time: <u>12:15</u> Sampler: _____ Weather: _____ Estimated Flow Rate (GPM) _____ Stagnant / Dry / Other _____ Filtered in Field?: No / @Vehicle Method of Filtration: Pressure / Vacuum / Syringe Pump ID # [] Filter ID # [] Field Decon: Filter / Tubing / Other _____ Appearance: Comments:	<u>VOA</u>	<u>3</u>	<u>-</u>

Field Parameters

Parameter	Instrument ID#	Value	Note: SC calculation based on (temp) at time of SC measurement.
pH	<u>2</u>	<u>6.81</u>	
Temp	xxxxxxxxxxxx	<u>14.3</u>	(Temp)Corr Factor x Calib Factor x Conductivity = Spec. Cond.
Spec. Cond.	<u>2</u>	xxxxxxxxxxxx	(-) - x 1.02 x 100 = <u>108</u>
Dissolved Oxy	<u>2</u>	<u>4.5</u>	

Comments:

Surface Water Field Data



FUSS & O'NEILL
Environmental
Field Services

Client/Project Name: <u>Lincoln Lake and brook</u>	Project #:
Project Location: <u>Providence R-T</u>	Well ID
Sample #:	<u>SW-2</u>

Sample Location Info

Special Instructions:

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10/25/94</u> Time: <u>12:00</u> Sampler: _____ Weather: _____ Estimated Flow Rate (GPM) _____ Stagnant / Dry / Other: _____ Filtered in Field?: No / @Vehicle Method of Filtration: Pressure / Vacuum / Syringe Pump ID # [] Filter ID # [] Field Decon: Filter / Tubing / Other _____ Appearance: Comments:	<u>VOA</u>	<u>3</u>	—

Field Parameters

Parameter	Instrument ID#	Value	Note: SC calculation based on (temp) at time of SC measurement.
pH	<u>2</u>	<u>7.89</u>	
Temp	xxxxxxxxxxxx	<u>15.6</u>	(Temp)Corr Factor x Calib Factor x Conductivity = Spec. Cond.
Spec. Cond.	<u>2</u>	xxxxxxxxxxxx	(-) - x 1.02 x 620 = <u>630</u>
Dissolved Oxy	<u>2</u>	<u>4.2</u>	

Comments:

Soil Sampling Field Data

Client/Project Name: <u>R.I. DEM</u>	Project #: <u>96-454-A1</u>
Project Location: <u>Lincoln base site, Providence</u>	Sampling Location
Sample #: <u>TP 1-22</u>	<u>Test P. + E / 1</u>

Environmental
Field Services

Sample Location Info

+P1

2' Demolition debris, brick stone concrete, wood
 8' Ash wood & debris 1 1/4", 2" pipe / EOB

Sample Data

Sample Data	Container	Quantity	Preservative
Date: <u>10-24-96</u> Time: <u>0915</u> Sampler: <u>D.H.</u> Weather: _____ Sampling Device: Auger / Core Sampler / Shovel / Split Spoon Trowel / Other <u>Hand</u> Field decon: Yes / <u>No</u> / Dedicated Type of Sample: Grab / Composite / Other _____	202	1	—

Description Data

Organic Vapor Reading: _____	Instrument: _____
Sample Depth: <u>2</u>	Core Length: _____
Sample Description: Sediment / Soil Type (ex. Lacustrine, Wetland, B Horizon, Outwash, Etc.) <u>Sand, ash.</u>	
Munsell Color: <u>Black w/</u>	Grain Size: _____
Sample Description Foreign Material: <u>construction debris</u>	
Appearance:	

Comments: