



**Sediment Samples - 26 May 1999**

Sample Designation	SS-44	SS-45	SS-46	SS-47	SS-48	SS-49	SS-50	RIDEM	RIDEM
Sample Type	Grab	Grab	Grab	Grab	Grab	Grab	Composite	RDEC	UCDEC
TPH	461	825	1370	600	736	181	NA	500	2500
Arsenic	21.2	18.9	10.1	7.46	24.6	21.1	NA	7.00	7.00
Lead	373	427	527	436	31.4	86.1	NA	150.00	500.00
Benz(a)anthracene	NA	NA	NA	NA	NA	NA	0.0004	0.50	7.80
Benz(a)pyrene	NA	NA	NA	NA	NA	NA	0.0017	0.40	0.80
Benz(b)fluoranthene	NA	NA	NA	NA	NA	NA	0.0014	0.90	7.80
Benz(g,h)perylene	NA	NA	NA	NA	NA	NA	0.0025	0.80	10,000.00
Benz(k)fluoranthene	NA	NA	NA	NA	NA	NA	0.0028	0.90	78.00
Chrysene	NA	NA	NA	NA	NA	NA	0.0069	0.40	780.00
Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	0.0067	0.90	7.80
Pyrene	NA	NA	NA	NA	NA	NA	0.0380	13.00	10,000.00

Notes:  
 1. The sediment sampling results were compared to the RDEC and UCDEC for comparison purposes only. No sediment criteria exists at this time.  
 2. RDEC: Residential Direct Exposure Criteria  
 3. UCDEC: Industrial/Commercial Direct Exposure Criteria  
 4. All concentrations presented in milligrams per kilogram (mg/kg, part per million)  
 5. NA: Not analyzed  
 6. Bold: Concentration exceeds RIDEM RDEC  
 7. Italic: Concentration exceeds RIDEM UCDEC

**Soil Vapor Sampling - 15 February 2000**

Sample Designation	Depth of Sample (ft)	FID Reading (ppmv)	Oxygen Concentration (%)	Carbon Dioxide Concentration (ppm)
SG-01	3	0	20.7	0
SG-02	2	0	20.1	0
SG-03	3	0	18	11
SG-04	2.5	2.1	20.3	21
SG-05	2.5	0.1	20.3	8
SG-06	2.5	0	18.2	1
SG-07	2.5	0	20	0
SG-08	3	0	19.4	3
SG-09	3	0	19.2	1
SG-10	3	0	18.8	7
SG-11	3	0	18.8	0
SG-12	3	0	20.7	0
SG-13	3	0	19	3
SG-14	3	0	20.3	0
SG-15	2	0	18.6	5
SG-16	2.5	0	20.3	11
SG-17	2	0	20.1	11
SG-18	2.5	0	20.2	7

**Soil Samples - Test Pitting**

Sample Designation	TP-1	TP-2	TP-3	TP-4	TP-6	TP-7	TP-11	TP-12	TP-13	RIDEM	RIDEM	
Sampling Depth (ft below grade)	2	8	2	8	2	8	2	4	2	RDEC	UCDEC	
Arsenic	10/24/96	10/24/96	10/24/96	10/24/96	10/24/96	10/24/96	10/24/96	10/24/96	10/24/96	7.00	7.00	
Beryllium	-	-	-	-	-	-	-	-	-	0.40	1.30	
Lead	-	-	-	-	-	-	-	-	-	150.00	500.00	
TPH	1198	2794	1168	617	1413	1262	2300	924	1200	>2000	527	2368
Trichloroethene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13	520
Tetrahydroethene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	12	110
Ethylbenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	71	30,000
Xylenes	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	110	10,000

**Soil Samples - Test Pitting**

Sample Designation	TP-15	TP-17	TP-18	TP-19	TP-20	TP-21	TP-24	TP-27	TP-28	TP-35	TP-37	RIDEM	RIDEM
Sampling Date	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	10/25/96	RDEC	UCDEC
Arsenic	2	NA	NA	NA	NA	NA	NA	NA	NA	242	333	4.1	8.7
Beryllium	0.5	NA	NA	NA	NA	NA	NA	NA	NA	0.255	0.343	0.789	0.467
Lead	580	NA	NA	NA	NA	NA	NA	NA	NA	488	130	136	207
TPH	780	916	>2000	>2000	884	540	>2000	>2000	4	285	69	72	130
Trichloroethene	<10	<10	<10	13	<10	<10	<10	<10	39	NA	NA	NA	13
Tetrahydroethene	<10	<10	<10	31	<10	<10	<10	<10	19	NA	NA	NA	12
Ethylbenzene	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	NA	NA	71
Xylenes	<10	<10	<10	51	<10	<10	<10	<10	NA	NA	NA	NA	110

**Surface Water Samples - 25 October 1996**

Sample Designation	SW-01	SW-02	SW-08	SW-04
Sample Type	Grab	Grab	Grab	Grab
pH	8.25	7.89	6.81	6.5
Specific Conductance (uS/cm)	560	630	408	480
Temperature (°F)	60.4	59.1	58.8	58.8
Dissolved Oxygen (%)	6.7	4.2	4.5	5
cis-1,2-Dichloroethene (ug/L)	<5	6	<5	<5
Trichloroethene (ug/L)	8	<5	<5	<5

**Surficial Soil Samples**

Sample Designation	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21	RIDEM	RIDEM
Date	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	8/16/99	RDEC	UCDEC
Depth (ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1.5	1	1	1	1	1.5	1	1.5	1	1.5	1	1	1	1	1
Arsenic	30	6	-	7	-	-	12	8.76	6.19	21	4.11	4.01	6.83	2.2	6.02	1.76	10.5	5.71	ND	4.2	6.29	7.0	7.0
Beryllium	0.5	-	-	-	-	-	-	0.385	0.386	0.366	0.212	0.281	0.28	0.225	0.491	0.218	0.239	0.34	0.264	0.236	0.492	0.4	1.3
Lead	300	540	-	630	-	-	940	430	117	15.8	30.1	856	246	ND	93.3	60.4	911	303	ND	42.9	58.8	150	500
Mercury	-	-	-	-	-	-	29	-	-	0.326	0.0812	ND	ND	0.139	0.14	ND	ND	0.48	ND	ND	ND	23	610
TPH *	4000	1086	413	-	412	836	836	630	630	NA	NA	NA	NA	NA	591	NA	NA	NA	NA	NA	NA	150	2500

**Notes:**

- RDEC: Residential Direct Exposure Criteria
- UCDEC: Industrial/Commercial Direct Exposure Criteria
- All concentrations presented in milligrams per kilogram (mg/kg, part per million)
- NA: Not analyzed
- Bold: Concentration exceeds RIDEM RDEC
- Italic: Concentration exceeds RIDEM UCDEC
- TPH analyzed via EPA method 418.1

**Legend:**

- Property Boundary
- 100-YEAR FLOOD PLAIN LINE
- TAILTRACE EXTENT
- 10-FOOT ELEVATION CONTOUR
- 2-FOOT ELEVATION CONTOUR
- EXTENT OF VEGETATION
- EXTENT OF FORMER PETROLEUM EXCAVATIONS

**Sample Legend:**

- TEST PIT LOCATION
- SURFICIAL SOIL SAMPLE LOCATION
- SOIL GAS SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- MONITORING WELL LOCATION

**General Notes**

- TOPOGRAPHY BASED ON ADDITIONAL FIELD WORK AND DATA COMPILATION PERFORMED BY DIPRETE ENGINEERING ASSOCIATES, INC. (DEA) ON SITE IN APRIL OF 2007. NO PROPERTY LINE SURVEY WAS PERFORMED BY DEA. THE FORMER RACEWAY WAS PERFORMED BY DEA IN DECEMBER, 2004 AND MAY, 2005.
- ADDITIONAL INFORMATION & BASEMAPS PROVIDED TO DEA BY EA ENGINEERING, SCIENCE & TECHNOLOGY IN THE FORM OF THE FOLLOWING PLAN: "THE TRUST FOR PUBLIC LAND PONAGANSETT AVENUE REMEDIATION PROJECT, 67 MELISSA STREET, PROVIDENCE, RHODE ISLAND, FIGURE 2, EXISTING CONDITIONS PLAN, DATE: September 2005, PROJECT NO: 6184601"
- BENCHMARKS PROVIDED BY EA ENGINEERING VIA PLAN REFERENCE IN NOTE #2, VERTICAL DATUM CONFIRMED BY DIPRETE ENGINEERING ASSOCIATES, INC. VIA GPS OBSERVATIONS IN APRIL 2007. THE VERTICAL DATUM IS NGVD'29. HORIZONTAL DATUM IS R.I. STATE PLANE, NAD-83.
- WATER ELEVATIONS OBTAINED BY DIPRETE ENGINEERING ASSOCIATES, INC. ON MARCH 30 AND APRIL 3, 2007
- THERE IS A 100 YEAR FLOOD PLAIN LOCATED ON SITE. REFERENCE FEMA FLOOD INSURANCE RATE MAP 445406 1004 F - MAP REVISED JUNE 8, 2000. THE FLOOD ELEVATION RANGES BETWEEN ELEVATION 43 AND 41.7. OBSERVED ELEVATIONS ON SITE INDICATE MINIMAL FLOODING ON SITE (LESS THAN 1 FOOT ON AVERAGE).
- THIS SURVEY AND PLAN CONFORM TO A CLASS III STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS (VERTICAL). THIS PLAN IS SUBSTANTIALLY CORRECT IN ACCORDANCE WITH CLASS IV STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS. THIS PLAN IS NOT TO BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY AND IS SUBJECT TO SUCH CHANGES AS AN ACCURATE BOUNDARY SURVEY MAY DISCLOSE. (BOUNDARY)
- WETLAND BUFFER EXCAVATION WILL OCCUR ONLY TO DEPTH OF 1 FOOT OR TO SATURATED SOIL AND FILLED ACCORDINGLY. NO NET FILL WILL OCCUR.
- ONLY SAMPLES OF SOIL OR SEDIMENT WITH CONCENTRATIONS OF ONE OR MORE ANALYTE ABOVE REFERENCED RIDEM STANDARDS ARE PROVIDED.
- ANALYTICAL DATA OBTAINED FROM CONDUCTING RIDEM FILE REVIEW OF THE FOLLOWING REPORTS:
  - RESULTS OF SUBSURFACE INVESTIGATION, FUSS & O'NEILL, 17 DECEMBER 1996
  - REMEDIATION EVALUATION REPORT, RIDEM OFFICE OF WASTE MANAGEMENT, DECEMBER 1999
  - PRE-DESIGN INVESTIGATION REPORT, RIDEM OFFICE OF WASTE MANAGEMENT, AUGUST 2000
- SAMPLE LOCATIONS OF ALL SAMPLES SUMMARIZED IN AUGUST 2000 REPORT PREPARED BY RIDEM WERE NOT AVAILABLE, AND THEREFORE ARE NOT SHOWN
- SOME SAMPLES TABULATED AND NOT SHOWN MAY HAVE BEEN COLLECTED ON THE ADJACENT PROPERTY, WHICH IS NO LONGER ASSOCIATED WITH THIS SITE.

NO.	DATE	BY	DESCRIPTION

LINCOLN LACE AND BRAID REMEDIATION PROJECT PROVIDENCE, RI

HISTORICAL CHARACTERIZATION SITE PLAN

DEPARTMENT OF MARINE RESOURCES STATE OF MAINE

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

2350 Post Road Warwick, Rhode Island 02886 (401) 736-3440

DATE: JULY 2009

DESIGNED BY: RGM

DRAWN BY: DPA

CHECKED BY: MKS

PROJECT MANAGER: MKS

PROJECT NUMBER: 61891.05

SCALE: 1"=40'

FILE NAME: HISTORICAL SAMPLING

DRAWING NUMBER: C-1

SHEET NUMBER: 1 OF 1

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