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**TRC Project Number:** 115058

October 7, 2010

Massachusetts Department of Environmental Protection
Southeast Regional Office
20 Riverside Drive
Lakeville, Massachusetts 02347

**RE: Immediate Response Action Plan (IRA) Completion Report and Imminent Hazard Evaluation – PCB Contaminated Wetland Sediments**
Wetland to Rear of Keith Middle School
225 Hathaway Boulevard, New Bedford, Massachusetts
Release Tracking Number (RTN) 4-21300

To Whom It May Concern:

Consistent with the requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000), specifically 310 CMR 40.0427, attached please find an Immediate Response Action (IRA) Completion Report for the above-referenced IRA condition in New Bedford, Massachusetts.

If you have any questions concerning the IRA Completion Report or transmittal forms, please do not hesitate to contact me at 978-656-3565 or via e-mail at dsullivan@trcsolutions.com.

Sincerely, L2010-447

David M. Sullivan, LSP, CHMM
Senior Project Manager

Attachment

cc. C. Henlin, S. Alfonse; Department of Environmental Stewardship
M. Cote; MassDEP Southeast Regional Office

# IMMEDIATE RESPONSE ACTION COMPLETION REPORT

## PCB Impacted Wetland Sediments

Release Tracking Number (RTN) 4-21300
Wetland to Rear of Keith Middle School
225 Hathaway Boulevard
New Bedford, Massachusetts

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*Prepared for:*

**Department of Environmental Stewardship**
City of New Bedford
133 William Street
New Bedford, Massachusetts 02740

*Prepared by:*

**TRC Environmental Corporation**
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650 Suffolk Street
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**October 2010**

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# Immediate Response Action Completion Report

## PCB Impacted Wetland Sediments

Wetland to Rear of Keith Middle School
225 Hathaway Boulevard
New Bedford, Massachusetts

Release Tracking Number (RTN) 4-21300

**TRC Project Number:** 115058

**October 7, 2010**

TRC Environmental Corporation (TRC) is submitting this Immediate Response Action Completion Report (IRA Completion Report) to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of the City of New Bedford (City). This IRA Completion Report addresses the detection of polychlorinated biphenyl (PCB) impacts in shallow wetland sediment located adjacent to the Keith Middle School (the "Site") in excess of a concentration indicating a condition that could pose an Imminent Hazard (IH) as defined in the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) in accordance with 310 CMR 40.0321(2)(b). The potential IH condition is associated with the sample's concentration, depth below surface, proximity to a school or residential dwelling, and accessibility. The potential IH condition triggered a 2-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0321(2) and 310 CMR 40.0311(7), and was reported to MassDEP via telephone on June 9, 2008. MassDEP orally approved IRA assessment activities and assigned Release Tracking Number (RTN) 4-21300.

This IRA Completion Report is organized as follows: Section I (Background) briefly summarizes information on TRC's involvement with the Site, the circumstances of the release, the initial response actions conducted at the Site under MassDEP oral approval, and the objectives of this IRA Completion Report. Section II (IRA Completion Report) provides the information required for an IRA Completion Report under the MCP, specifically 310 CMR 40.0427. Section III (References) lists information sources relied upon in the preparation of this IRA Completion Report.

Appendices are provided for supporting information including a correspondence with the United States Environmental Protection Agency (EPA) concerning impact delineation and fence installation (Appendix A), a correspondence with the EPA concerning Environmental Risk Characterization and associated sampling (Appendix B), soil boring logs associated with recent drilling activities (Appendix C), and a correspondence with the EPA regarding the mitigation fence installation (Appendix D).

## I. BACKGROUND

Under the direction of a prior consultant (BETA Group, Incorporated [BETA]) and following the approval by the EPA of the Risk-Based Wetland Cleanup Request (BETA, 2005), the remedy for the PCB-impacted wetland sediments at the McCoy Field/Keith Middle School Site (RTN 4-15685) included the removal of up to 6 inches of impacted sediments with residual PCB

concentrations greater than 1 mg/kg at locations within the Site wetlands. The 1 mg/kg total PCB EPA cleanup level approved for the wetland (and other site-related remedial activities) was contingent, in part, upon the preparation and implementation of a Long-Term Monitoring and Maintenance Implementation Plan (LTMMIP) describing the activities that will be conducted for the monitoring and maintenance of the remedy (BETA, 2006a).

### (a) Iterative Sediment Sampling

In accordance with provisions for wetland sediment monitoring at the KMS wetland site as set forth in the BETA-prepared and EPA-approved LTMMIP (dated October 20, 2006), TRC performed sampling of sediment in the wetland to the rear of the KMS Site located at 225 Hathaway Boulevard in New Bedford, Massachusetts (see Figure 1).

A TRC field scientist conducted the LTMMIP-required sediment sampling on May 27, 2008. For the annual sediment monitoring, the LTMMIP requires the collection of four randomly selected samples from locations abutting the slope consistent with the sediment sampling protocol in Appendix G of the LTMMIP. TRC used the 44 numbered wetland flag locations documented along the wetland/embankment edge on the December 11, 2006 As-Built Plan of Land prepared on behalf of BETA by Land Planning, Incorporated (Land Planning), of Hanson Massachusetts from the BETA-prepared December 2006 *Final Completion and Inspection Report* as approximate sampling station location identifiers for the random sample selection process (BETA, 2006b).

TRC randomly selected three of the four locations for sampling. TRC departed from the LTMMIP by collecting one of the four sediment samples from a biased sample location at the bottom of the slope beneath the KMS Site cap slope failure along the southern half of the wetland. The biased sample was collected to check on the potential for impacts to sediment associated with the 2007 slope failure[1]. Samples were collected using a hand auger and were collected from a depth of 0 to 6 inches below the top of the sediment surface. Samples were analyzed for PCB Aroclors via SW-846 Method 8082. The sampling locations, as well as all locations sampled between November 2007 and December 2008, are illustrated on Figure 2 and the samples were designated as follows (with approximate wetland flag or biased sample locations shown in parentheses):

- SD-01 (Biased sample from toe of slope below slope failure – collected in duplicate)
- SD-02 (Wetland Flag W-8)
- SD-03 (Wetland Flag W-19)
- SD-04-PRE (Wetland Flag W-38)

[1] In the spring of 2007, a slope failure occurred on the steep slope above the wetland near the southwestern corner of the Site. The area measured approximately 7 feet by 8 feet where the topsoil has slumped to the bottom of the slope. The black separation fabric that demarcates the underlying impacted fill from the clean imported fill was not exposed; however, a small (approximately 3 to 4 inch) piece of the orange warning layer was visible in the top left quadrant of the damaged area (when viewed from the wetland). TRC oversaw final repair of the failed slope on October 30, 2008. The repair consisted of lining the damaged area with an 8-ounce non-woven geotextile fabric and covering the fabric with stone (rip-rap) up to local grade to restore the protective cap thickness and allow flow of storm water through the slope in this area without pressure buildup. The rip-rap is intended to allow free drainage of water and be more resistant to the erosive force of storm water overland run off.

TRC received the preliminary results of analysis on June 9, 2008. Three (3) out of four (4) samples were non-detect (see Table 1). Sediment sample SD-03 contained total PCBs at a concentration of 16.56 milligrams per kilogram (mg/kg).

The 16.56 mg/kg total PCB concentration exceeds a 10 mg/kg total PCB concentration under the MCP that could pose an IH in accordance with 310 CMR 40.0321(2)(b) due to the sample's concentration, depth below ground surface, proximity to a school or residential dwelling, and accessibility. The potential IH condition triggered a 2-hour regulatory reporting obligation to MassDEP in accordance with 310 CMR 40.0321(2) and 310 CMR 40.0311(7). TRC immediately consulted with the laboratory (Northeast Analytical, Incorporated [NEA] of Schenectady, New York) to confirm the validity of the result. Robert Wagner, NEA's laboratory director, reviewed the work conducted by the laboratory and confirmed the result. TRC notified the City's Department of Environmental Stewardship and facilitated regulatory reporting of the potential IH condition to MassDEP via telephone within the regulatory reporting timeframe at approximately 3:15 P.M. on Monday June 9, 2008. MassDEP orally approved an "assessment only" Immediate Response Action and assigned Release Tracking Number 4-21300.

Further assessment initially implemented by TRC consisted of the following:

- Re-extraction and re-analysis of sample SD-03 by the laboratory to verify the original result.
- Collection of six (6) additional sediment samples on June 10, 2008, which were submitted to the laboratory for analysis on a rush turn-around basis to verify the original result and to help evaluate the extent of impacts.

The six (6) additional samples were collected as follows:

- SD-3R – A repeat sample from the approximate location of SD-03 (sediment). Note that a second SD-3R location was sampled on August 19, 2008 which, as detailed later in this section, is unrelated to the SD-3R location sampled on June 10, 2008 and discussed here.
- SD-3-1.5 – A sample collected at a depth of 1.5 feet at SD-3R/SD-03 (sediment).
- SD-3A – A sample collected 5 feet to the north of SD-03 (sediment).
- SD-3B – A sample collected 5 feet to the east of SD-03 (soil from the adjacent KMS cap).
- SD-3C – A sample collected 5 feet to the south of SD-03 (sediment).
- SD-3D – A sample collected 5 feet to the west of SD-03 (sediment).

All samples, with the exception of SD-3-1.5, were collected from a depth of 0 to 6 inches below the sediment or soil surface (sediment sample SD-3-1.5 was collected from a depth of 1.5 feet below surface). All sediment sample locations were under approximately 4 to 6 inches of water with the exception of SD-3C, which was wet, but not under water. Sample SD-3B is a soil sample collected from the adjacent KMS cap. As noted above, the SD-3R sample collected on June 10, 2008 was collected in duplicate for quality control (QC) purposes. This follow-up sampling was conducted consistent with the LTMMIP except that: 1) one additional sample (i.e., SD-3-1.5) was collected at the approximate location of sediment sample SD-03 at a depth of 1.5 feet below the sediment surface to evaluate the depth of potential impacts; and 2) a duplicate sample was collected from SD-3R (collected on June 10, 2008) for QC purposes.

The results of the analysis of the follow-up sediment and soil samples collected on June 10, 2008 are also presented in Table 1 and the locations are illustrated in Figure 2. The results indicate that a sediment sample collected 5 feet to the south of SD-03 (i.e., SD-3C) contained total PCBs at a concentration below the LTMMIP documented 1.0 mg/kg action level for PCBs in sediment. In addition, no PCBs were detected in cap soil sample SD-3B. However, the sediment samples collected 5 feet to the north and west of SD-03 (samples SD-3A and SD-3D, respectively) each contain total PCBs at concentrations greater than the 1.0 mg/kg action level set forth in the LTMMIP and at concentrations greater than the MassDEP 10 mg/kg potential IH reporting concentration under the MCP. Also, the analytical results from sediment sample SD-3-1.5 indicate that impacted sediment is also present deeper than the 0 to 6 inch monitoring depth suggested by the LTMMIP and at a concentration greater than the LTMMIP 1.0 mg/kg action level.

Supplemental assessment sampling planned in coordination with the City's Department of Environmental Stewardship and performed by TRC on June 19, 2008 consisted of the collection of additional sediment samples at additional 5-foot to 10-foot increments to the north and west of previous samples SD-3A and SD-3D, respectively (see Figure 2), with the laboratory directed to analyze the first 5-foot increment and to keep remaining incremental sediment samples on hold pending the results of the first increment analyses. All sediment samples were collected at a depth of 0 to 6 inches below sediment surface. The following summarizes the June 19, 2008 sediment sampling:

- SD-3E – A sample collected 10 feet to the north of SD-03 (sediment).
- SD-3F – A sample collected 15 feet to the north of SD-03 (sediment).
- SD-3G – A sample collected 25 feet to the north of SD-03 (sediment).
- SD-3H – A sample collected 10 feet to the west of SD-03 (sediment).
- SD-3I – A sample collected 15 feet to the west of SD-03 (sediment).
- SD-3J – A sample collected 20 feet to the west of SD-03 (sediment). Note that the SD-3J sample locations was collected 20 feet to the west of SD-03, rather than 25-feet to the west (consistent with the northern SD-3G step out location, to coincide with the approximate western edge of the original BETA sediment remedial excavation.

The results of the analysis of the next increment of sediment delineation sampling collected on June 19, 2008 are also presented in Table 1 and the locations are illustrated in Figure 2. The results indicate that all sediment samples collected on June 19, 2008 contain total PCBs at concentrations above the LTMMIP documented 1.0 mg/kg action level for PCBs in sediment. Two samples (SD-3F to the north and SD-3H to the west) also contain total PCBs at concentrations greater than the MassDEP 10 mg/kg potential IH reporting concentration under the MCP (no further IRA-related reporting is required since the condition appears to be consistent with that reported to MassDEP on June 9, 2008). The results indicated that further sampling was required to delineate the extent of the PCB sediment impacts.

On behalf of the City, TRC submitted an IRA Plan to MassDEP on August 7, 2008. The IRA Plan included an IH Evaluation and outlined supplemental assessment sampling planned in

coordination with the City's Department of Environmental Stewardship that consisted of the following:

- Evaluate the areal extent of shallow sediment (0 to 6 inches below the sediment surface) incrementally.
- Develop an efficient sampling plan to evaluate the depth of impacted sediment as the areal extent of PCB-impacted sediment is delineated.
- Adjust the incremental sampling plan as necessary based on sediment sampling results.

The results of TRC's June 19, 2008 sediment sampling indicated that the extent of PCB-impacted sediments proximate to SD-03 had not yet been found to the north and west of SD-03. In order to complete goals of TRC's August 7, 2008 IRA Plan, TRC conducted several iterative rounds of sediment sampling based on laboratory analytical results that continued to indicate concentrations of PCBs above the LTMMIP action level. All sediment samples were submitted for laboratory analysis for PCB Aroclors via SW-846 Method 8082. The following summarizes the samples collected during each effort. All TRC sampling locations were marked with a pin flag in the field and later surveyed in by Land Planning. Analytical results are contained in Table 1 and the progression and location of sediment sampling are indicated on Figure 2. Figures 3 and 4 presents total PCB concentrations for each sampling location.

On July 30, 2008 TRC collected 12 additional sediment samples from six locations (SD-3K, 3L, 3M, 3N, 3P, and 3Q). The July 30, 2008 sediment samples included the following:

| **July 30, 2008 KMS Wetland Sediment Sampling** | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-3K-0-0.5 | 0-0.5 | 35 feet to the north of SD-03 (toe of slope) |
| SD-3K-1-1.5 | 1-1.5 | 35 feet to the north of SD-03 (toe of slope) |
| SD-3L-0-0.5 | 0-0.5 | 50 feet to the north of SD-03 (toe of slope) |
| SD-3L-1-1.5 | 1-1.5 | 50 feet to the north of SD-03 (toe of slope) |
| SD-3M-0-0.5 | 0-0.5 | 80 feet to the north of SD-03 (toe of slope) |
| SD-3M-1-1.5 | 1-1.5 | 80 feet to the north of SD-03 (toe of slope) |
| SD-3N-0-0.5 | 0-0.5 | 25 feet to the west of SD-03 |
| SD-3N-1-1.5 | 1-1.5 | 25 feet to the west of SD-03 |
| SD-3P-0-0.5 | 0-0.5 | 30 feet to the west of SD-03 |
| SD-3P-0.7-1.2 | 0.7-1.2 | 30 feet to the west of SD-03 |
| SD-3Q-0-0.5 | 0-0.5 | 40 feet to the west of SD-03 |
| SD-3Q-0.8-1.3 | 0.8-1.3 | 40 feet to the west of SD-03 |

TRC's July 30, 2008 sampling indicated that PCB-impacted sediments (i.e., above the EPA unrestricted use standard of 1 mg/kg) were bounded to the north by SD-3M. TRC collected 12 additional sediment samples from the wetland area to the northwest of SD-03 on August 19, 2008 to refine potential remedial volumes. Samples were collected from six locations, SD-3R through 3W, as summarized in the following table.

| August 19, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-3R-0-0.5 | 0-0.5 | 25 feet north of SD-03, 25 feet west |
| SD-3R-1-1.5 | 1-1.5 | 25 feet north of SD-03, 25 feet west |
| SD-3S-0-0.5 | 0-0.5 | 25 feet north of SD-03, 40 feet west |
| SD-3S-1-1.5 | 1-1.5 | 25 feet north of SD-03, 40 feet west |
| SD-3T-0-0.5 | 0-0.5 | 50 feet north of SD-03, 25 feet west |
| SD-3T-1-1.5 | 1-1.5 | 50 feet north of SD-03, 25 feet west |
| SD-3U-0-0.5 | 0-0.5 | 50 feet north of SD-03, 35 feet west |
| SD-3U-1-1.5 | 1-1.5 | 50 feet north of SD-03, 35 feet west |
| SD-3V-0-0.5 | 0-0.5 | 75 feet north of SD-03, 25 feet west |
| SD-3V-1-1.5 | 1-1.5 | 75 feet north of SD-03, 25 feet west |
| SD-3W-0-0.5 | 0-0.5 | 75 feet north of SD-03, 30 feet west |
| SD-3W-1-1.5 | 1-1.5 | 75 feet north of SD-03, 30 feet west |

TRC's August 19, 2008 sampling results indicated that additional sampling was needed to assess lateral extent of PCB impacts in the wetlands and vertical extent in some locations (i.e., PCB detections extended down to 1.5 feet in 3 locations). TRC collected 28 additional sediment samples on September 17 and 18, 2008. These samples included the following:

| September 17 and 18, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-04 (0-0.5) | 0-0.5 | 40 feet north of SD-03, 55 feet west |
| SD-04 (1.5-2) | 1.5-2 | 40 feet north of SD-03, 55 feet west |
| SD-04 (2-2.5) | 2-2.5 | 40 feet north of SD-03, 55 feet west |
| SD-05 (0-0.5) | 0-0.5 | 60 feet north of SD-03, 55 feet west |
| SD-05 (1.5-2) | 1.5-2 | 60 feet north of SD-03, 55 feet west |
| SD-05 (2-2.5) | 2-2.5 | 60 feet north of SD-03, 55 feet west |
| SD-06 (0-0.5) | 0-0.5 | 105 feet north of SD-03 (toe of slope) |
| SD-06 (1-1.5) | 1-1.5 | 105 feet north of SD-03 (toe of slope) |
| SD-06 (2.5-3) | 2.5-3 | 105 feet north of SD-03 (toe of slope) |
| SD-07 (0-0.5) | 0-0.5 | 100 feet north of SD-03, 35 feet west |
| SD-07 (1.5-2) | 1.5-2 | 100 feet north of SD-03, 35 feet west |
| SD-07 (2.5-3) | 2.5-3 | 100 feet north of SD-03, 35 feet west |
| SD-08 (0-0.5) | 0-0.5 | 90 feet north of SD-03, 65 feet west |
| SD-08 (1.5-2) | 1.5-2 | 90 feet north of SD-03, 65 feet west |
| SD-09 (0-0.5) | 0-0.5 | 130 feet north of SD-03 (toe of slope) |
| SD-09 (1.5-2) | 1.5-2 | 130 feet north of SD-03 (toe of slope) |
| SD-09 (2.5-3) | 2.5-3 | 130 feet north of SD-03 (toe of slope) |

| September 17 and 18, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-10 (0-0.5) | 0-0.5 | 125 feet north of SD-03, 40 feet west |
| SD-10 (1.5-2) | 1.5-2 | 125 feet north of SD-03, 40 feet west |
| SD-10 (2.5-3) | 2.5-3 | 125 feet north of SD-03, 40 feet west |
| SD-11 (0-0.5) | 0-0.5 | 125 feet north of SD-03, 75 feet west |
| SD-11 (1.5-2) | 1.5-2 | 125 feet north of SD-03, 75 feet west |
| SD-11 (2.5-3) | 2.5-3 | 125 feet north of SD-03, 75 feet west |
| SD-12 (0-0.5) | 0-0.5 | 55 feet west of SD-03 |
| SD-12 (1.5-2) | 1.5-2 | 55 feet west of SD-03 |
| SD-3 (1.5-2) | 1.5-2 | At SD-03 |
| SD-3K (2.5-3) | 2.5-3 | 35 feet to the north of SD-3 (toe of slope) |
| SD-3V (2.5-3) | 2.5-3 | 75 feet north of SD-03, 25 feet west |

The above described sampling program improved the delineation of impacts to the west (all westernmost sample results were below 1 mg/kg, with a maximum of 0.984 mg/kg from SD-08-0-0.5, as shown on Figure 3). However, results to the north required further delineation, with two of the three northernmost sample points (SD-09-2.5-3 [2.09 mg/kg] and SD-10-0-0.5 [1.23 mg/kg]) containing total PCBs greater than 1 mg/kg.

TRC mobilized to the Site on October 3, 2008 to collect additional samples to the west to confirm the delineation boundary and to the north to attempt to locate the northern extent of PCB impacts and to investigate the vertical extent of PCB detections at SD-09. TRC collected 30 additional sediment samples on October 3 and 6, 2008. These samples included the following:

| October 3 and 6, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-09A-2.5-3 | 2.5-3 | 130 feet north of SD-03 (toe of slope) |
| SD-13-0-0.5 | 0-0.5 | 150 feet north of SD-03 (toe of slope) |
| SD-13-1.5-2 | 1.5-2 | 150 feet north of SD-03 (toe of slope) |
| SD-13-2.5-3 | 2.5-3 | 150 feet north of SD-03 (toe of slope) |
| SD-14-0-0.5 | 0-0.5 | 145 feet north of SD-03, 50 feet west |
| SD-14-1.5-2 | 1.5-2 | 145 feet north of SD-03, 50 feet west |
| SD-14-2.5-3 | 2.5-3 | 145 feet north of SD-03, 50 feet west |
| SD-15-0-0.5 | 0-0.5 | 145 feet north of SD-03, 80 feet west |
| SD-15-1.5-2 | 1.5-2 | 145 feet north of SD-03, 80 feet west |
| SD-15-2.5-3 | 2.5-3 | 145 feet north of SD-03, 80 feet west |
| SD-16-0-0.5 | 0-0.5 | 170 feet north of SD-03 (toe of slope) |
| SD-16-1.5-2 | 1.5-2 | 170 feet north of SD-03 (toe of slope) |
| SD-16-2.5-3 | 2.5-3 | 170 feet north of SD-03 (toe of slope) |
| SD-17-0-0.5 | 0-0.5 | 170 feet north of SD-03, 65 feet west |

| October 3 and 6, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-17-1.5-2 | 1.5-2 | 170 feet north of SD-03, 65 feet west |
| SD-17-2.5-3 | 2.5-3 | 170 feet north of SD-03, 65 feet west |
| SD-18-0-0.5 | 0-0.5 | 165 feet north of SD-03, 95 feet west |
| SD-18-1.5-2 | 1.5-2 | 165 feet north of SD-03, 95 feet west |
| SD-18-2.5-3 | 2.5-3 | 165 feet north of SD-03, 95 feet west |
| SD-19-0-0.5 | 0-0.5 | 200 feet north of SD-03 (toe of slope) |
| SD-19-1.5-2 | 1.5-2 | 200 feet north of SD-03 (toe of slope) |
| SD-19-2.5-3 | 2.5-3 | 200 feet north of SD-03 (toe of slope) |
| SD-20-0-0.5 | 0-0.5 | 195 feet north of SD-03, 70 feet west |
| SD-20-1.5-2 | 1.5-2 | 195 feet north of SD-03, 70 feet west |
| SD-20-2.5-3 | 2.5-3 | 195 feet north of SD-03, 70 feet west |
| SD-21-0-0.5 | 0-0.5 | 185 feet north of SD-03, 100 feet west |
| SD-21-1.5-2 | 1.5-2 | 185 feet north of SD-03, 100 feet west |
| SD-21-2.5-3 | 2.5-3 | 185 feet north of SD-03, 100 feet west |
| SD-22-0-0.5 | 0-0.5 | 120 feet north of SD-03, 100 feet west |
| SD-23-0-0.5 | 0-0.5 | 60 feet north of SD-03, 85 feet west |

TRC's October 3 and 6, 2008 sampling program indicated that the northern extent of total PCB concentrations in excess of the EPA cleanup level had not yet been fully assessed.

TRC mobilized to the site to collect 36 additional sediment samples on October 22 and 23, 2008 in order to assess the extent of impacts in the vicinity of detected concentrations of total PCBs at SD-16-0-0.5 (4.872 mg/kg), SD-17-0-0.5 (1.55 mg/kg), SD-18-0-0.5 (1.38 mg/kg), SD-19-0-0.5 (2.69 mg/kg), and SD-21-0-0.5 (1.63 mg/kg). These samples included the following:

| October 22 and 23, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-13A-2.5-3 | 2.5-3 | 150 feet north of SD-03 (toe of slope) |
| SD-24-0-0.5 | 0-0.5 | 225 feet north of SD-03 (toe of slope) |
| SD-24-1.5-2 | 1.5-2 | 225 feet north of SD-03 (toe of slope) |
| SD-24-2.5-3 | 2.5-3 | 225 feet north of SD-03 (toe of slope) |
| SD-25-0-0.5 | 0-0.5 | 220 feet north of SD-03, 70 feet west |
| SD-25-1.5-2 | 1.5-2 | 220 feet north of SD-03, 70 feet west |
| SD-25-2.5-3 | 2.5-3 | 220 feet north of SD-03, 70 feet west |
| SD-26-0-0.5 | 0-0.5 | 220 feet north of SD-03, 105 feet west |
| SD-26-1.5-2 | 1.5-2 | 220 feet north of SD-03, 105 feet west |
| SD-26-2.5-3 | 2.5-3 | 220 feet north of SD-03, 105 feet west |
| SD-27-0-0.5 | 0-0.5 | 250 feet north of SD-03 (toe of slope) |

| October 22 and 23, 2008 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Approximate Location** |
| SD-27-1.5-2 | 1.5-2 | 250 feet north of SD-03 (toe of slope) |
| SD-27-2.5-3 | 2.5-3 | 250 feet north of SD-03 (toe of slope) |
| SD-28-0-0.5 | 0-0.5 | 235 feet north of SD-03, 105 feet west |
| SD-28-1.5-2 | 1.5-2 | 235 feet north of SD-03, 105 feet west |
| SD-28-2.5-3 | 2.5-3 | 235 feet north of SD-03, 105 feet west |
| SD-29-0-0.5 | 0-0.5 | 245 feet north of SD-03, 75 feet west |
| SD-29-1.5-2 | 1.5-2 | 245 feet north of SD-03, 75 feet west |
| SD-29-2.5-3 | 2.5-3 | 245 feet north of SD-03, 75 feet west |
| SD-30-0-0.5 | 0-0.5 | 275 feet north of SD-03 (toe of slope) |
| SD-30-1.5-2 | 1.5-2 | 275 feet north of SD-03 (toe of slope) |
| SD-30-2.5-3 | 2.5-3 | 275 feet north of SD-03 (toe of slope) |
| SD-31-0-0.5 | 0-0.5 | 270 feet north of SD-03, 90 feet west |
| SD-31-1.5-2 | 1.5-2 | 270 feet north of SD-03, 90 feet west |
| SD-31-2.5-3 | 2.5-3 | 270 feet north of SD-03, 90 feet west |
| SD-32-0-0.5 | 0-0.5 | 260 feet north of SD-03, 105 feet west |
| SD-32-1.5-2 | 1.5-2 | 260 feet north of SD-03, 105 feet west |
| SD-32-2.5-3 | 2.5-3 | 260 feet north of SD-03, 105 feet west |
| SD-33-0-0.5 | 0-0.5 | 340 feet north of SD-03 (toe of slope) |
| SD-33-1.5-2 | 1.5-2 | 340 feet north of SD-03 (toe of slope) |
| SD-33-2.5-3 | 2.5-3 | 340 feet north of SD-03 (toe of slope) |
| SD-34-0-0.5 | 0-0.5 | 295 feet north of SD-03 (toe of slope) |
| SD-34-1.5-2 | 1.5-2 | 295 feet north of SD-03 (toe of slope) |
| SD-34-2.5-3 | 2.5-3 | 295 feet north of SD-03 (toe of slope) |
| SD-35-0-0.5 | 0-0.5 | 160 feet north of SD-03, 115 feet west |
| SD-36-0-0.5 | 0-0.5 | 195 feet north of SD-03, 135 feet west |

### (b) Delineation and Potential Source Sampling

Following TRC's October 22 and 23, 2008 sampling program, TRC's Licensed Site Professional (LSP), in consultation with the City and EPA, re-evaluated the iterative approach to delineating PCB sediment impacts employed to date. TRC initially proposed the additional sampling approach to EPA via electronic mail on November 26, 2008 (see Appendix A). EPA approved TRC's approach, which included the sampling of other media to identify potential sources of PCB sediment impacts.

TRC mobilized to the Site on December 3, 2008 to collect 84 additional sediment samples, five (5) samples of material accumulated within stormwater drain pipes (SDR-01 through SDR-05), five (5) samples of soils immediately adjacent to the discharges of stormwater drain pipes (OF-1 through OF-5), and ten (10) soil samples from the slope adjacent to the wetland (SLP-01 through SLP-10). One stormwater drain pipe sample (i.e., OF-DS-1) was also collected on November

25, 2008. This stormwater drain sample was collected from the same pipe as the SDR-04 sample noted above. Sediment samples were collected north of previously-collected samples to assess the entire northern extent of the wetland and to the south of the land bridge at the request of EPA to improve characterization of sediment in this portion of the Site. Samples of soil from adjacent to the end of stormwater drain pipes, samples of accumulated materials within the stormwater drain pipes, and soil samples collected from the slope adjacent to the wetland were also collected to evaluate potential lines of evidence for sources of PCB sediment impacts. Samples collected during this sampling event included:

| December 3-10, 2008 KMS Wetland-Related Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SD-37-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-37-2-2.5 | 2-2.5 | Sediment sample from the northern area of wetland |
| SD-38-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-38-2-2.5 | 2-2.5 | Sediment sample from the northern area of wetland |
| SD-39-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-39-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-40-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-40-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-41-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-41-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-42-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-42-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-43-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-43-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-44-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-44-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-45-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-45-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-46-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-46-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-47-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-47-4-4.5 | 4-4.5 | Sediment sample from the northern area of wetland |
| SD-48-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-48-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-49-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-49-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| D-50-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-50-3.5-4 | 3.5-4 | Sediment sample from the northern area of wetland |
| SD-51-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-51-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |

| December 3-10, 2008 KMS Wetland-Related Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SD-52-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-52-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-53-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-53-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-54-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-54-3.5-4 | 3.5-4 | Sediment sample from the northern area of wetland |
| SD-55-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-55-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-56-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-56-3.5-4 | 3.5-4 | Sediment sample from the northern area of wetland |
| SD-57-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-57-2-2.5 | 2-2.5 | Sediment sample from the northern area of wetland |
| SD-58-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-58-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-59-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-59-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-60-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-60-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-61-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-61-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-62-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-62-1-1.5 | 1-1.5 | Sediment sample from the northern area of wetland |
| SD-63-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-63-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-64-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-64-2-2.5 | 2-2.5 | Sediment sample from the northern area of wetland |
| SD-65-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-65-1-1.5 | 1-1.5 | Sediment sample from the northern area of wetland |
| SD-66-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-66-2-2.5 | 2-2.5 | Sediment sample from the northern area of wetland |
| SD-67-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-67-2.5-3 | 2.5-3 | Sediment sample from the northern area of wetland |
| SD-68-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-68-4-4.5 | 4-4.5 | Sediment sample from the northern area of wetland |
| SD-69-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-69-4-4.5 | 4-4.5 | Sediment sample from the northern area of wetland |
| SD-70-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |

| December 3-10, 2008 KMS Wetland-Related Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SD-70-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-71-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-71-3-3.5 | 3-3.5 | Sediment sample from the northern area of wetland |
| SD-72-0-0.5 | 0-0.5 | Sediment sample from the northern area of wetland |
| SD-72-1.5-2 | 1.5-2 | Sediment sample from the northern area of wetland |
| SD-73-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-74-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-75-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-76-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-77-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-78-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-79-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-80-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-81-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-82-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-83-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| SD-84-0-0.5 | 0-0.5 | Sediment sample from the area south of land bridge |
| OF-1 | 0-0.5 | Sample collected of soil near outfall of storm drain |
| OF-2 | 0-0.5 | Sample collected of soil near outfall of storm drain |
| OF-3 | 0-0.5 | Sample collected of soil near outfall of storm drain |
| OF-4 | 0-0.5 | Sample collected of soil near outfall of storm drain |
| OF-5 | 0-0.5 | Sample collected of soil near outfall of storm drain |
| SLP-01 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-02 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-03 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-04 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-05 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-06 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-07 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-08 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-09 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SLP-10 | 0-0.5 | Soil sample from slope on the east side of wetland |
| SDR-01 | 0-0.2 | Sample of material accumulated in storm drain |
| SDR-02 | 0-0.2 | Sample of material accumulated in storm drain |
| SDR-03 | 0-0.2 | Sample of material accumulated in storm drain |
| SDR-04 | 0-0.2 | Sample of material accumulated in storm drain |

| December 3-10, 2008 KMS Wetland-Related Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SDR-05 | 0-0.2 | Sample of material accumulated in storm drain |
| OF-DS-1 | 0-0.2 | Sample of material accumulated in storm drain |

Analytical results of samples collected in December 2008 indicate that concentrations of PCBs generally tended to be lower further north into the wetland, but also that total PCBs above the EPA cleanup level are present at various locations throughout the northern portion of the wetland (e.g., SD-34-0-0.5 [4.47 mg/kg], SD-40-0-0.5 [5.23 mg/kg], SD-42-0-0.5 [1.34 mg/kg], SD-45-0-0.5 [1.06 mg/kg], SD-48-0-0.5 [1.36 mg/kg], SD-50-0-0.5 [1.21 mg/kg], SD-58-0-0.5 [1.77 mg/kg], SD-59-0-0.5 [1.02 mg/kg], SD-57-0-0.5 [1.36 mg/kg], SD-70-1.5-2 [7.99 mg/kg], and SD-71-0-0.5 [1.15 mg/kg]). Sediment samples collected from the portion of the wetland south of the land bridge did not contain PCBs in excess of the EPA cleanup level. One of the outfall soil samples contained a concentration of total PCBs in excess of 1 mg/kg (OF-05 [1.07 mg/kg]).

Table 1 summarizes analytical sampling results. Total PCB concentrations are also summarized on Figures 3 and 4 for the southern and northern wetland areas, respectively. As described above sample data collected to date indicate that PCB concentrations in wetland sediment samples in excess of 1 mg/kg are present in the wetland to the north of the land bridge. Samples collected to the south of the land bridge indicate that total PCB concentrations in this area are below 1 mg/kg. Samples of slope soils, soils adjacent to storm drain outfalls, and material accumulated in storm drain pipes do not indicate runoff from these areas as likely sources of PCB sediment impacts, although one soil sample at an outfall contained PCBs at a concentration of 1.07 mg/kg (OF-05).

### (c) Ecological Risk Characterization Related Sampling

TRC proposed to the EPA an approach to evaluate ecological risks within the KMS wetland consistent with MCP Ecological Risk Characterization (ERC) guidance with the exception that Exposure Point Concentrations (EPCs) for receptor species will be represented by the 95-percent Upper Concentration Limit (UCL) of the arithmetic mean. Rick Sugat, an ecological risk specialist with EPA, concurred with the approach based on discussions with TRC's Ecological Risk Specialist, Scott Heim. The use of the 95-percent UCL was requested by EPA.

Based on a March 4, 2009 telephone discussion, EPA's PCB Coordinator (Kim Tisa) agreed to proceed with the ERC evaluation (see Appendix B), but requested that additional PCB sediment data (for Aroclors) be collected within 1.5 to 2 feet of each proposed location from 0 to 3 inches and 3 to 6 inches to supplement data proposed to be collected from 0 to 6 inches to evaluate near surface stratification. The results of the near surface stratification evaluation are discussed in detail below.

As summarized in TRC's previous IRA Status Report dated March 10, 2010, TRC initiated a Stage I Environmental Screening (ES) and a Stage II ERC for the Site in accordance with the MCP (310 CMR 40.0900) and consistent with related MassDEP guidance. Initially, the Stage I ES was conducted to determine potential ecological receptor exposure pathways. Following review of the results of the Stage I ES, including laboratory results in excess of Massachusetts

Water Quality Standards, the Stage II ERC was initiated to further evaluate those potential ecological exposure pathways.

The details of the Stage I ES and Stage II ERC will be presented in a future submittal. Currently TRC's *Stage I Environmental Screening & Stage II Environmental Risk Characterization* report for the Site is undergoing internal review at TRC. A summary of Stage I ES and Stage II ERC activities is presented here.

**Surface Water Data Collection -** A total of five (5) surface water samples were collected from the northern portion of the wetland to support the Stage I ES in March 2009. Surface water samples ERC-SW-7 and ERC-SW-9 were collected on March 5, 2009, samples ERC-SW-11A and ERC-SW-14 were collected on March 6, 2009 and sample ERC-SW-16 was collected on March 20, 2009. The locations of the Stage I ES surface water samples are presented in Figure 5.

Stage I ES surface water samples were analyzed for PCB homologues (EPA Method 680), the 14 MCP metals plus mercury (total and dissolved [filtered] using SW-846 Method 6010B/6020/7470A), hardness (SW-846 Method 6010B) and/or polynuclear aromatic hydrocarbons (PAHs; SW-846 Method 8270C with Selective Ion Monitoring) analyses. PCB homologue analyses were conducted by NEA. Alpha Analytical (Alpha) of Westborough, Massachusetts conducted the metals, hardness and PAHs analyses. The surface water analytical results are summarized in Table 2.

In addition, ten (10) additional surface water samples (i.e., ERC-SW-20 through ERC-SW-29) plus one duplicate sample were collected by TRC on July 17, 2009 and analyzed for calcium, magnesium and zinc, as well as water hardness by Con-Test (see Figure 5). All of the surface water samples targeted for metals analyses were field filtered.

A total of two (2) surface water samples were collected from the northern portion of the wetland to support the Stage II ERC in December 2009. Surface water samples ERC-SW-7 and ERC-SW-9 were collected on December 28, 2009. The locations of the Stage II ERC surface water samples are presented in Figure 6.

Stage II ERC surface water samples were analyzed for dissolved (filtered) zinc (using SW-846 Method 6010B) and hardness (SW-846 Method 6010B). Alpha of Westborough, Massachusetts conducted the zinc and hardness analyses. The surface water analytical results are summarized in Table 3.

In addition, surface water samples ERC-SW-7 and ERC-SW-9 were collected and initially held by Aquatec Biological Sciences (Aquatec) of Williston, Vermont for potential surface water toxicity testing pending the results of the dissolved zinc and hardness analyses. Based on the dissolved zinc and water hardness results, TRC's Ecological Risk Specialist determined that toxicity testing of these samples should not be authorized at this time and that representative samples to be submitted for toxicity testing would have to be collected at a later date.

On March 10, 2010, TRC installed three staff gauges within the northern portion of the wetland to periodically monitor the surface water elevation and aid in determining the timing of the collection of additional surface water samples for toxicity testing. The staff gauge locations were surveyed by Land Planning and are depicted in Figure 7.

Based on the December 28, 2009 surface sampling results and periodic staff gauge measurements, additional surface water samples were collected from location ERC-SW-7 on March 10, April 21, May 5, May 17 and August 23, 2010 in hopes of conducting additional toxicity testing. Additional surface water samples were also collected from location ERC-SW-9 and ERC-SW-11A on March 10, 2010 and August 23, 2010, respectively (see Figure 5). In each case, the surface samples were analyzed for total hardness (SW-846 Method 6010B) and dissolved (field filtered) zinc (SW-846 Method 6010B) by Alpha. The results are included in Table 3. Sample volume was also collected from the ERC-SW-7 location on each of the above referenced dates for potential aquatic life toxicity testing pending the results of the water hardness and dissolved zinc analysis. Due detected concentrations of dissolved zinc ranging from 6.3 to 11.9 µg/L in each of the samples, toxicity testing was not authorized on any of the samples and surface water sampling in support of toxicity testing was discontinued based on the professional judgment of TRC's Ecological Risk Specialist.

The results of the surface water sampling will be detailed in the future submittal of TRC's *Stage I Environmental Screening & Stage II Environmental Risk Characterization* report for the Site.

**Sediment Data Collection -** TRC collected an additional twelve (12) sediment samples to support the Stage I ES from the previously excavated northern wetland area. This included samples ERC-SED-6 through ERC-SED-10 collected on March 5, 2009, samples ERC-SED-11A through ERC-SED-15 collected on March 6, 2009 and ERC-SED-16 and ERC-SED-17 collected on March 20, 2009. The locations of these samples (0 to 6 inch depth interval) are depicted on Figure 5. Note that additional sediment samples were collected on March 5, 2008 (i.e., ERC-SED-6A and ERC-SED-9A) and March 6, 2008 (i.e., ERC-SED-11B and ERC-SED-14A) for the purposes of investigating PCB near surface stratification within the sediment column. These samples will be discussed in greater detail later in this section.

The samples were analyzed for total 14 MCP metals plus mercury (SW-846 Method 6010B/7471A) by Con-Test. PAHs (SW-846 Method 8270C with Selective Ion Monitoring) analyses were conducted by Alpha. In addition, a subset of the sediment samples (i.e., four samples) were analyzed for PCB congeners (co-planar congeners correlated with dioxin toxicity via EPA Method 1668 [Revision A]) by SGS Environmental Services (SGS) of Wilmington, North Carolina and PCB Aroclors (SW-846 Method 8082) by NEA to obtain congener/aroclor ratios. The same subset of samples were analyzed for total organic carbon (SM 5310C) by Con-Test. The analytical results for the Stage I ES sediment samples are presented in Table 4.

TRC collected an additional twenty (20) sediment samples to support the Stage II ERC for the northern wetland area. The sediment samples were collected on December 28 and 29, 2009 consistent with previously employed methods by TRC. All of the sediment sample locations corresponded to previous TRC (e.g., ERC-SED-7, SD-3T, SD-07, etc.) or BETA (i.e., WD.5-6.5 and WI-6) sample locations. With the exception of locations WD.5-6.5 and WI-6, each location was pre-marked by Land Planning prior to sample collection. The locations WD.5-6.5 and WI-6 were approximated in the field and surveyed following sample collection. Each of the sediment samples was collected from the 0 to 6 inch depth interval. The locations of the Stage II ERC sediment samples are depicted on Figure 6.

Sediment samples were analyzed for PCB Aroclors (SW-846 Method 8082), PAHs (SW-846 Method 8270C with Selective Ion Monitoring), lead, selenium and/or zinc. Sediment samples were analyzed for PCB Aroclors by NEA. PAHs, lead, selenium and zinc analyses were conducted by Alpha. The sediment sample analytical results are summarized in Table 5.

In addition, a subset of the sediment samples (i.e., SD-16, SD-40, SD-48, ERC-SED-7, ERC-SED-9, ERC-SED-11A-C and ERC-SED-14) were analyzed for sediment toxicity testing using *Chironomus tentans* and *Hyallela azteca* by Aquatic Biological Sciences of Williston, Vermont. The results of the sediment toxicity testing will be used to support Preliminary Remediation Goal (PRG) determinations based on benthic organism health. The results will be detailed in the future submittal of TRC's *Stage I Environmental Screening & Stage II Environmental Risk Characterization* report for the Site.

**Surface Soil Data Collection -** Because previous sampling by BETA detected the pesticide 4,4-DDT in the southern wetland (i.e., south of the land bridge), TRC collected five (5) surface soil samples from the southern wetland on March 5, 2009. Each of the samples was analyzed for select pesticides including 4,4-DDT and its derivatives 4,4-dichlorodiphenyldichloroethane [4,4-DDD] and 4,4-dichlorodiphenyldichloroethylene [4,4-DDE] via SW-846 Method 8081A. This included sample locations ERC-SED-1 through ERC-SED-5 as depicted in Figure 5. The pesticide analyses were conducted by Alpha, with analytical results presented in Table 6.

TRC collected seven (7) surface soil samples from the northern wetland on December 29, 2009. Each of the samples was collected from the 0 to 6 inch depth interval consistent with previously employed methods by TRC and analyzed for lead and/or zinc (SW-846 Method 6010B) by Alpha. The sample locations (SD-3Q, SD-04, SD-23, SD-35, SD-42, SD-93 and WSB-9) are depicted in Figure 6. Supplemental surface soil analytical results are presented in Table 7.

### (d) Additional Delineation Sampling

**Near Surface Stratification Sampling -** As previously noted, EPA's PCB Coordinator (Kim Tisa) agreed to proceed with the above detailed ERC evaluation, but requested that additional PCB sediment data (for Aroclors) be collected within 1.5 to 2 feet of each ERC sample location targeted for PCB congeners analysis (i.e., ERC-SED-6, ERC-SED-9, ERC-SED-11A and ERC-SED-14). Samples would be collected from 0 to 3 inches and 3 to 6 inches below the sediment surface to supplement data to be collected from 0 to 6 inches to evaluate near surface stratification. Four (4) additional locations (i.e., ERC-SED-6A, ERC-SED-9A, ERC-SED-11B and ERC-SED-14A) were selected to evaluate near surface stratification in close proximity to the four (4) locations selected for PCB congener/aroclor ratio. Samples collected during this sampling event include:

| March 4 & 5, 2009 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| ERC-SED-6A (0-0.25) | 0-0.25 | Approximately 1.5 feet west of ERC-SED-6 |
| ERC-SED-6A (0.25-0.5) | 0.25-0.5 | Approximately 1.5 feet west of ERC-SED-6 |
| ERC-SED-9A (0-0.25) | 0-0.25 | Approximately 1.5 feet north of ERC-SED-9 |
| ERC-SED-9A (0.25-0.5) | 0.25-0.5 | Approximately 1.5 feet north of ERC-SED-9 |

| | | |
|---|---|---|
| ERC-SED-11B (0-0.25) | 0-0.25 | Approximately 1.5 feet west of ERC-SED-11A |
| ERC-SED-11B (0.25-0.5) | 0.25-0.5 | Approximately 1.5 feet west of ERC-SED-11A |
| ERC-SED-14A (0-0.25) | 0-0.25 | Approximately 1.5 feet south of ERC-SED-14 |
| ERC-SED-14A (0.25-0.5) | 0.25-0.5 | Approximately 1.5 feet south of ERC-SED-14 |

The results of the near surface stratification sampling indicated that the concentrations of PCB Aroclors present in the upper 0 to 3 inch sample interval ranged from 0.139 to 66.9 mg/kg, while concentrations in the deeper 3 to 6 inch interval ranged from 0.305 to 16.5 mg/kg. Total PCB Aroclor concentrations in three of the four 0 to 3 inch samples (i.e., ERC-SED-9A, ERC-SED-11B and ERC-SED-14A; 5.07, 66.9 and 0.319 mg/kg, respectively) were greater than the corresponding 3 to 6 inch sample (i.e., 0.305, 0.797 mg/kg and non-detect, respectively). The only exceptions were the samples from ERC-SED-6A, which exhibited total PCB Aroclor concentrations of 9.21 mg/kg (0 to 3 inch sample) and 16.5 mg/kg (3 to 6 inch sample). These four additional locations are also depicted on Figure 5 with the associated analytical results presented in Table 4.

Furthermore, in each case, the total combined PCB Aroclor concentration of the stratification samples (e.g., 25.71 mg/kg in the case of samples ERC-SED-6A (0-0.25) and ERC-SED-6A (0.25-0.5)) correlated relatively well with the adjacent 0 to 6 inch depth interval sample (e.g., 27.8 mg/kg in the case of sample ERC-SED-6 (0-0.5)). This further supports the observation that PCB detections are generally within the shallowest sediments at the Site. However, due to the relatively small sample set (i.e., only four locations) and the fact that total concentrations of PCB Aroclors have been detected at select locations throughout the wetland at greater depths (e.g., SD-03 (1-1.5') and SD-72 (1.5-2') located at opposites ends of the northern wetland area with total PCB Aroclor concentrations of 20.37 mg/kg and 7.99 mg/kg, respectively) the potential for localized areas of deeper sediment impacts exists.

**Supplemental Sampling -** As noted in TRC's most recent IRA Status Report dated March 10, 2010 and in Section I above, with authorization from the City on March 20, 2009, TRC collected seven (7) additional sediment samples, including one duplicate, in the vicinity of sediment samples ERC-SED-11A (0-0.5) (434 mg/kg) and ERC-SED-11B (0-0.25) (66.9 mg/kg). The location and pattern of the additional samples (i.e., SED-11A-A through SED-11A-F) was designed to attempt to define the lateral extent of potential impacts in the vicinity of ERC-SED-11A (see Figure 7). The sediment samples were collected from the 0 to 6 inch depth interval in accordance with previously described TRC sampling methodology. Samples collected during this sampling event include:

| **March 20, 2009 KMS Wetland Sediment Sampling** | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SED-11A-A | 0-0.5 | Approximately 10 feet south of ERC-SED-11A |
| SED-11A-B | 0-0.5 | Approximately 5 feet south of ERC-SED-11A |
| SED-11A-C | 0-0.5 | Approximately 5 feet west of ERC-SED-11A |
| SED-11A-D | 0-0.5 | Approximately 5 feet east of ERC-SED-11A |

| | | |
|---|---|---|
| SED-11A-E | 0-0.5 | Approximately 5 feet north of ERC-SED-11A |
| SED-11A-F | 0-0.5 | Approximately 10 feet north of ERC-SED-11A |

The results of additional sediment sampling confirm total PCB concentrations in the vicinity of SED-ERC-11A (i.e., SED-11A-A [20.6 mg/kg], SED-11A-B and the associated duplicate sample SED-11A-BB [705 mg/kg and 805 mg/kg, respectively], SED-11A-D [838 mg/kg], and SED-11A-E [31.3 mg/kg]). In addition, the results from locations SED-11A-C [9.82 mg/kg] and SED-11A-F [5.50 mg/kg], located approximately 5-feet west and 10-feet north of ERC-SED-11A respectively, provided an initial indication that these concentrations were localized. The associated analytical results are presented in Table 8.

In conjunction with the collection of supplemental sediment samples, four (4) soil sampling locations were selected along the cap slope immediately adjacent to ERC-SED-11A to determine if the cap had been compromised in any way, resulting in the total PCB concentrations detected in sediments (see summary table below). On March 19, 2009 TRC collected the four shallow (0-6 inch depth interval) soil samples (i.e., SLP-11A-1 through SLP-11A-4) on the cap slope (see Figure 8). All four of the samples were analyzed for PCB Aroclors (EPA Method 8082) by NEA. Sample SLP-11A-1 was the only soil sample that exhibited a detectable concentration of PCBs (0.079 mg/kg). The analytical results are presented in Table 8.

| **March 19, 2009 KMS Wetland Cap Soil Sampling** | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SLP-11A -1 | 0-0.5 | Approximately 10 feet up slope from water |
| SLP-11A-2 | 0-0.5 | Approximately 2 feet up slope from water |
| SLP-11A-3 | 0-0.5 | Approximately 10 feet south of SLP-11A-1 & 2 |
| SLP-11A-4 | 0-0.5 | Approximately 10 feet north of SLP-11A-1 & 2 |

Based on the sediment PCB concentrations noted above, TRC proposed to EPA, MassDEP and the City a two-phase approach to further evaluate Site conditions.

The first phase of work would employ a sampling program consistent with what TRC had done in the past with the goal of further evaluating and delineating the lateral extents of potential impacts in the vicinity of the ERC-SED-11A sediment sample location and address other potential data gaps. Although a total of fourteen soil samples along the cap slope, five (5) samples of storm drain sediment material and five (5) samples of material beneath the storm drain outfall rip-rap had previously been collected, additional sampling, particularly of the soil along the cap slope, was necessary to determine if the cap was compromised in any way. TRC proposed the collection of sediment samples at eight (8) additional locations north, west or south of ERC-SED-11A. In addition, a total of sixteen (16) additional cap slope soil samples and two (2) outfall material samples were proposed.

Following approval from the EPA, MassDEP and the City, TRC conducted additional sediment sampling on August 12, 2009. Eight additional sediment locations (i.e., SED-11A-G through SED-11A-N) in the vicinity of ERC-SED-11A were sampled from the 0 to 6 inch depth interval and one deeper interval using hand augers. Consistent with previous sampling events by TRC,

the deeper interval corresponded to the depth that native sand was encountered or the maximum depth that could be reached with the hand auger if the sand layer was not encountered. This approach served to help determine the vertical extent of the PCB impacts as well as the thickness of organic material within this portion of the wetland. A total of seventeen (17) sediment samples including one duplicate were collected and analyzed for PCB Aroclors (EPA Method 8082) by NEA. The locations of the sediment samples are presented in Figure 8 and include the following:

| March 20, 2009 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SED-11A-G (0-0.5) | 0-0.5 | Approximately 40 feet north of SED-11A-F |
| SED-11A-G (36-42) | 3-3.5 | Approximately 40 feet north of SED-11A-F |
| SED-11A-H (0-0.5) | 0-0.5 | Approximately 20 feet west of SED-11A-C |
| SED-11A-H (30-36) | 3-3.5 | Approximately 20 feet west of SED-11A-C |
| SED-11A-I (0-0.5) | 0-0.5 | Approximately 15 feet south of SED-11A-A |
| SED-11A-I (48-54) | 4-4.5 | Approximately 15 feet south of SED-11A-A |
| SED-11A-J (0-0.5) | 0-0.5 | Approximately 20 feet north of SED-11A-G |
| SED-11A-J (40-44) | 3.33-3.66 | Approximately 20 feet north of SED-11A-G |
| SED-11A-K (0-0.5) | 0-0.5 | Approximately 20 feet south of SED-11A-I |
| SED-11A-K (54-60) | 4.5-5 | Approximately 20 feet south of SED-11A-I |
| SED-11A-L (0-0.5) | 0-0.5 | Approximately 20 feet north of SED-11A-J |
| SED-11A-L (40-44) | 3.33-3.66 | Approximately 20 feet north of SED-11A-J |
| SED-11A-M (0-0.5) | 0-0.5 | Approximately 25 feet south of SED-11A-K |
| SED-11A-M (36-42) | 3-3.5 | Approximately 25 feet south of SED-11A-K |
| SED-11A-N (0-0.5) | 0-0.5 | Approximately 25 feet south of SED-11A-M |
| SED-11A-N (62-68) | 5.16-5.66 | Approximately 25 feet south of SED-11A-M |

The analytical results of the shallow 0 to 6 inch depth interval samples were generally consistent with other total PCB concentrations detected in the wetland, ranging between non-detect (SED-11A-H) and 7.65 mg/kg (SED-11A-K duplicate analysis was 12.29 mg/kg). None of the sediment samples collected at depth exhibited detectable concentrations of PCBs (see Table 8). Furthermore, the analytical results confirmed a localized area both laterally and vertically surrounding ERC-SED-11A.

On August 13, 2009, TRC collected a total of sixteen (16) shallow soil samples (i.e., SLP-12 through SLP-27) plus one duplicate along the cap slope between the land bridge (separating the northern and southern portions of the wetland) and the northeast extent of the cap (see summary table below). The locations were approximately evenly distributed between previous cap slope samples collected by TRC to address potential data gaps (see Figure 7). In addition, two (2) shallow samples (i.e., OF-5A and OF-5B) were collected adjacent to rip-rap associated with the storm drain outfall immediately southeast of the ERC-SED-11A. Consistent with previously employed sampling methods, all of the soil samples were collected from the 0 to 6 inch depth interval and analyzed by NEA for PCB Aroclors (EPA Method 8082).

| March 19, 2009 KMS Wetland Cap Soil Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SLP-12 | 0-0.5 | Northern toe of land bridge |
| SLP-13 | 0-0.5 | Approximately 50 feet east of SLP-12 |
| SLP-14 | 0-0.5 | Approximately 25 feet north of OF-1 |
| SLP-15 | 0-0.5 | Approximately 25 feet north of OF-3 |
| SLP-16 | 0-0.5 | Approximately 25 feet south of OF-4 |
| SLP-17 | 0-0.5 | Approximately 25 feet north of OF-4 |
| SLP-18 | 0-0.5 | Approximately 25 feet south of OF-5 |
| SLP-19 | 0-0.5 | Approximately 5 feet south of OF-5 |
| SLP-20 | 0-0.5 | Approximately 10 feet east of OF-5 |
| SLP-21 | 0-0.5 | Approximately 20 feet south of SLP-8 |
| SLP-22 | 0-0.5 | Approximately 30 feet south of SLP-23 |
| SLP-23 | 0-0.5 | Approximately 10 feet east of ERC-SED-12 |
| SLP-24 | 0-0.5 | Approximately 50 feet east of SLP-23 |
| SLP-25 | 0-0.5 | Approximately 90 feet east of SLP-24 |
| SLP-26 | 0-0.5 | Approximately 50 feet northeast of SLP-25 |
| SLP-27 | 0-0.5 | Approximately 90 feet north of SLP-26 |
| OF-5A | 0-0.5 | Immediately south of OF-5 stormwater drain |
| OF-5B | 0-0.5 | Immediately north of OF-5 stormwater drain |

Detected total PCB concentrations in the additional soil samples were less than 1 mg/kg or non-detect, with the exception of sample SLP-12 [3.34 mg/kg] collected on the north side of the land bridge (see Table 8). This sample was collected approximately two feet above the water level in the northern portion of the wetland.

TRC field personnel observed the orange snow fence warning layer associated with the cap at shallow depths (i.e., less than 6-inches below surface) along the northwest corner of the cap at sample locations SLP-22, SLP-23 and SLP-24 and at the cap surface in the vicinity of sample location SLP-22 (see Figure 8). In response, a TRC engineer familiar with the Site was mobilized to conduct an inspection of the cap. Based on the inspection, it was determined that the integrity of the cap was not compromised. Furthermore, it is likely that the warning layer is in close proximity to the surface as a result of being near the limit of the lateral extent of fill material and/or near the end of a select snow fence roll(s) that was not weighted properly during cap installation (i.e., the snow fence may have curled somewhat during installation, resulting in the near surface exposures).

The second phase of the investigation focuses on the collection of continuous samples at depth (i.e., approximately 4 to 5-feet below grade) along the toe of the cap using direct push methods. Given the logistical issues with conducting this phase of the investigation (e.g., wet conditions, limited access point for equipment, the steepness of the cap slope, desire not to adversely impact the cap slope, etc.) a limited number of potential approaches were presented to the EPA,

MassDEP and City. Furthermore, TRC proposed that this phase of the investigation be conducted in the winter, under frozen conditions, to minimize the number of logistical concerns.

### (e) Western Delineation Sampling in Northern Portion of Wetland

Following detection of concentrations of total PCBs greater than 1 mg/kg) in two sediment samples collected within the northwestern portion of the wetland in December 2008 (i.e., SD-70-1.5-2 [7.99 mg/kg] and SD-71-0-0.5 [1.15 mg/kg]), additional investigation was conducted along the western boundary of the northern wetland. In order to facilitate additional sampling, the precise limits of the City-owned right-of-way (ROW) extending from the intersection of Summit Street and Hapwell Street north to Durfee Street (hereafter referred to as the Summit Street ROW) were evaluated. Land Planning was mobilized in June 2009 to survey the western boundary of the Summit Street ROW, including the corners of the bordering properties, based on current information from the City of New Bedford Assessor's Office (see Figure 9).

Following completion of the Summit Street ROW survey, a site-walk was conducted by representatives from TRC, the City, the City of New Bedford Conservation Commission (ConComm) and New England Geotech, LLC (New England Geotech; TRC's subcontractor for drilling services) of Jamestown, Rhode Island to determine an efficient sampling approach that would minimize disturbance of the wetland buffer zone/upland area. TRC submitted a scope of work to the City and Conservation Commission for review on June 19, 2009. Approval was received on June 22, 2009 and TRC mobilized to the Site on June 24, 2009.

A total of ten (10) soil borings were advanced along the western boundary of the Summit Street ROW in order to assess the western extent of wetland-related impacts, as well as investigate potential impacted soil in the buffer zone and/or upland area bordering the northwestern portion of the wetland. TRC's environmental investigation consisted of direct push soil borings using a Geoprobe® 6620 DT track-mounted drill rig to sample soil and observe subsurface soil conditions. In select locations (i.e., WSB-7 through WSB-10), where drill rig access was infeasible without undue damage to the wetland buffer zone, soil borings were advanced using hand tools (i.e., Bosch hammer drill). Drilling services and equipment were provided by New England Geotech. TRC collected a total of forty-two (42) soil samples (plus one laboratory duplicate) on June 24, 2009. Details of TRC's soil borings are summarized below and boring logs are included as Appendix C:

**Soil Boring Summary – Summit Street Right-of-Way**
**June 2009**

| Soil Boring | Date Advanced | Total Depth (ft bgs) | Depths Submitted for Laboratory Analysis[1] (ft bgs) | Drill Rig |
|---|---|---|---|---|
| WSB-1 | 6/24/2009 | 10 | 0-1, 3-4, 5-6, (9-10) | 6620 DT Track-Mounted Rig |
| WSB-2 | 6/24/2009 | 10 | 0-1, 3-4, 5-6, (9-10) | 6620 DT Track-Mounted Rig |
| WSB-3 | 6/24/2009 | 10 | 0-1, 2-3, 5-6, (9-10) | 6620 DT Track-Mounted Rig |
| WSB-4 | 6/24/2009 | 10 | 0-1, 2-3, 5-6, (9-10) | 6620 DT Track-Mounted Rig |
| WSB-5 | 6/24/2009 | 14 | 0-1, 2-3, 5-6, (9-10) | 6620 DT Track-Mounted Rig |
| WSB-6 | 6/24/2009 | 10 | 0-1[2], 2-3, 5-6, (9-10) | 6620 DT Track-Mounted Rig |

| Soil Boring Summary – Summit Street Right-of-Way<br>June 2009 | | | | |
|---|---|---|---|---|
| **Soil Boring** | **Date Advanced** | **Total Depth (ft bgs)** | **Depths Submitted for Laboratory Analysis[1] (ft bgs)** | **Drill Rig** |
| WSB-7 | 6/24/2009 | 5 | 0-1, 1-2, 3-4, 4-5 | Bosch Hammer Drill |
| WSB-8 | 6/24/2009 | 5 | 0-1, 1-2, 3-4, 4-5 | Bosch Hammer Drill |
| WSB-9 | 6/24/2009 | 8 | 0-1, 1-2, 2-3, 3.5-5, (6-7) | Bosch Hammer Drill |
| WSB-10 | 6/24/2009 | 8 | 0-1, 1-2, 2-3, 3.5-5, (7-8) | Bosch Hammer Drill |

**Notes:**
[1] Depth in parentheses submitted to laboratory but placed on hold for contingency.
[2] Duplicate sample collected.
ft bgs – feet below ground surface.

The soil borings were intended to evaluate the presence or absence of fill, the vertical extent of impacts (if any), and the potential for impacts in soil and/or fill material that may be present based on documentation available to TRC and past sampling in the area. Soil borings were advanced and samples were collected until native overburden was encountered and/or an elevation less than or equal to the approximate elevation of the wetland sediment surface was reached, unless refusal was encountered first. Where native material was submitted for laboratory analysis, a minimum of 2 samples of native material were collected in borings selected to characterize the native horizon. The lower native sample was retained for as-needed analysis contingent upon the results of the upper native horizon analysis in an attempt to delineate the vertical extent of impacts, where warranted. The contingent native material was not analyzed if the native material interval above it was found to be below cleanup criteria based on laboratory analysis or as directed by the TRC LSP.

Figure 9 illustrates the locations investigated by TRC within the Summit Street ROW using the above-described techniques. The soil boring locations were surveyed by Land Planning following TRC's sampling activities.

TRC conducted field screening of soil samples consisting of visual and olfactory observations, jar headspace readings using an appropriately calibrated photoionization detector (PID), and professional judgment, consistent with TRC Standard Operating Procedures (SOPs) and general industry practice. TRC employed the MassDEP jar headspace technique to screen for the presence of volatile organic compounds (VOCs) in soil. TRC also evaluated and logged the geologic character of the soil samples, consistent with the Burmeister (1958) method. A subset of soil samples was subjected to chemical analysis at an off-site environmental laboratory based on professional judgment consistent with the goals of the approved scope of work. The following table summarizes soil samples collected by TRC from Summit Street ROW for laboratory analysis:

| Summary of Soil Investigation Activities – Summit Street Right-of-Way June 2009 | | | | | |
|---|---|---|---|---|---|
| Location | Soil Borings | Number of Soil Samples Submitted for Laboratory Analysis | Analyses[1] | | |
| | | | PCBs[2] | PAHs[3] | MCP Metals/Hg[4] |
| Summit Street ROW | 10 | 34 | 30 | 29 | 29 |

**Notes:**
[1] Does not include quality control (QC) samples.
[2] Polychlorinated biphenyls (PCBs) as Aroclors by SW-846 Method 8082.
[3] Polynuclear aromatic hydrocarbons (PAHs) by SW-846 Method 8270C.
[4] MCP Metals/Hg - antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, thallium, vanadium, zinc and mercury by SW-846 Methods 6010B/7471A.

Samples were analyzed for PCB Aroclors (EPA Method 8082) by NEA, polynuclear aromatics (PAHs; EPA Method 8270C) and/or total 14 MCP metals plus mercury (SW-846 Method 6010B/7471A) by Con-Test Analytical Laboratory (Con-Test) of East Longmeadow, Massachusetts.

Analytical results associated with the above-referenced sampling event no detections in excess of S-1 Method 1 soil cleanup standards or, in the case of PCBs, 1 mg/kg. The maximum detected concentration of total PCBs was 0.587 mg/kg in sample WSB-9 (1-2'). Table 9 summarizes soil boring sampling analytical results. Total concentrations of select detections are also summarized on Figure 9.

TRC's June 24, 2009 soil sampling program indicated that the Summit Street ROW buffer zone/upland area had been adequately assessed. There were no signs of fill material in the ten (10) soil borings based on visual observations, no VOC headspace readings above background were noted and, as previously mentioned, no concentrations in excess of S-1 Method 1 soil cleanup standards were detected.

Since portions of the Summit Street ROW intersect areas of the wetland with current or intermittent water, a total of seven (7) sediment locations were sampled along the western property boundary of the Summit Street ROW concurrent with the soil boring investigation on June 25, 2009. Consistent with previously described TRC sampling protocols, sediment samples were collected northwest of previously-collected sample SD-70 and west of previously collected samples SD-71 and SD-72 to assess the northern extent of the wetland impacts. Samples collected during this sampling event include:

| June 25, 2009 KMS Wetland Sediment Sampling | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SD-85 (0-0.5) | 0-0.5 | 25 feet west of SD-72 |
| SD-85 (1.5-2) | 1.5-2 | 25 feet west of SD-72 |

| | | |
|---|---|---|
| SD-86 (0-0.5) | 0-0.5 | 25 feet west of SD-71, 40 feet south |
| SD-86 (2-2.5) | 2-2.5 | 25 feet west of SD-71, 40 feet south |
| SD-87 (0-0.5) | 0-0.5 | 25 feet west of SD-71, 30 feet south |
| SD-87 (0.5-1) | 0.5-1 | 25 feet west of SD-71, 30 feet south |
| SD-88 (0-0.5) | 0-0.5 | 25 feet west of SD-71, 20 feet south |
| SD-88 (1-1.5) | 1-1.5 | 25 feet west of SD-71, 20 feet south |
| SD-89 (0-0.5) | 0-0.5 | 25 feet west of SD-71, 10 feet south |
| SD-90 (0-0.5) | 0-0.5 | 25 feet west of SD-71 |
| SD-90 (1.5-2) | 1.5-2 | 25 feet west of SD-71 |
| SD-91 (0-0.5) | 0-0.5 | Northwestern of SD-70 |
| SD-91 (1.5-2) | 1.5-2 | Northwestern of SD-70 |

All of the sediment samples were analyzed for PCB Aroclors (EPA Method 8082). Table 9 summarizes the sediment sampling analytical results. Total concentrations of PCBs are also summarized on Figure 9. Only one sample (i.e., SD-91 (0-0.5) [2.1 mg/kg]) indicated a concentration in excess of 1 mg/kg and the associated MCP Reportable Concentration (RC) S-1 standard.

Figure 9 illustrates the sediment sample locations investigated by TRC within the Summit Street ROW using the above-described techniques. The sample locations were surveyed by Land Planning following TRC's sampling activities.

TRC's June 25, 2009 sediment sampling program indicated that concentrations of PCBs generally above 1 mg/kg and the associated MCP RC S-1 standard, were only detected in sample SD-91 (0-0.5) at a concentration of 2.1 mg/kg. This sample was collected from the northwestern-most portion of the Site, from an area of intermittent water near the northern extent of the Summit Street ROW and immediately southwest of the Durfee Street culvert.

TRC mobilized to the site to collect six (6) additional sediment samples on July 17, 2009 in order to assess the extent of potential impacts in the vicinity of detected concentrations of total PCBs at SD-91. Consistent with previously described TRC sampling protocol, the following samples were collected:

| **July 17, 2009 KMS Wetland Sediment Sampling** | | |
|---|---|---|
| **Sample I. D.** | **Depth (feet)** | **Description** |
| SD-92 (0-0.5) | 0-0.5 | 2 feet west of SD-91 |
| SD-92 (1.5-2) | 1.5-2 | 2 feet west of SD-91 |
| SD-93 (0-0.5) | 0-0.5 | 10 feet south of SD-91 |
| SD-93 (2.5-3) | 2.5-3 | 10 feet south of SD-91 |
| SD-94 (0-0.5) | 0-0.5 | 15 feet east-northeast of SD-91 |
| SD-94 (1.5-2) | 1.5-2 | 15 feet east-northeast of SD-91 |

All of the sediment samples were analyzed for PCB Aroclors (EPA Method 8082). Table 3 summarizes the sediment sampling analytical results. Sample locations and total concentrations

of PCBs are also summarized on Figure 5. Sediment sample analytical results indicated concentrations of PCBs above 1 mg/kg in only one of the sediment samples. Sample SD-92 (0-0.5) exhibited a total PCB concentration of 1.34 mg/kg. This concentration was confirmed by a field duplicate sample with a total PCB concentration of 1.06 mg/kg.

### (f) Monitoring Well Installation

A total of eleven (11) supplemental soil borings (WSB-11 through WSB-19) were advanced adjacent to the KMS wetland within the City rights-of-way (ROWs) on Durfee Street and Summit Street on December 17 and 18, 2009 (see Figure 6). These soil borings served to address potential analytical data gaps expressed by EPA to determine the disposal site boundary for the PSWS. The investigative approach was intended to evaluate the presence or absence of fill, the vertical extent of impacts (if any), and the potential presence of impacts in soil and fill material that may be present north (along Durfee Street) and west (along Summit Street) of the KMS wetland.

This soil boring investigation was unrelated to the IRA activities described herein and occurred outside of the KMS wetland. Therefore, the details of this subsurface investigation and associated analytical results will be summarized in a future regulatory submittal.

However, due to concentrations of zinc above the Massachusetts Water Quality Standards detected in ecological risk characterization surface water samples in the northern portion of the wetland, two monitoring wells were installed within the City-owned Summit Street ROW. Soil borings WSB-16 and WSB-19 were completed as permanent groundwater monitoring wells to evaluate "background" groundwater conditions adjacent to the Site. The monitoring well locations were surveyed by Land Planning following TRC's installation activities.

The monitoring wells (MW-9 and MW-10) were installed on December 18, 2009 at soil boring locations WSB-16 and WSB-19, respectively. Well construction logs are included in Appendix C. The monitoring wells were subsequently developed on December 21, 2009 using a Whale Mini Purge Pump and dedicated tubing. A LaMotte 2020 turbidity meter was used throughout development to monitor turbidity levels.

Following a stabilization period, TRC collected groundwater samples from the newly installed monitoring wells, as well as the three monitoring wells within the KMS property (MW-1 through MW-3), on January 7, 2010. Groundwater samples were collected following EPA Region I low stress (low flow) sampling guidelines. During purging activities, water quality parameters were monitored using a YSI 600XL Sonde and 650 MDS datalogger and a LaMotte 2020 turbidity meter. Water quality parameters were recorded on groundwater sampling log forms. Groundwater samples were collected after water quality parameters had stabilized in accordance with the low flow guidance. Groundwater sampling field forms are included in Appendix C.

Groundwater samples were collected for PCB Aroclor (SW-846 Method 8082) and total and dissolved (field filtered) 14 MCP metals plus mercury (SW-846 Methods 6010B/7471A) to determine if groundwater (particularly with regard to zinc) has potentially impacted the wetland surface water. Groundwater samples for PCB Aroclor analyses were submitted to NEA of Schenectady, New York. Groundwater samples for total and dissolved MCP metals and mercury

were submitted to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts. All samples were submitted under chain-of-custody.

The results of the groundwater sample analysis from MW-9 and MW-10 are summarized in Table 10.

### (g) Toe-of-Slope Investigation

As noted in TRC's previous IRA Status Report dated March 10, 2010 and in Section I above, at the request of the EPA the City conducted two phases of supplemental sampling within the KMS wetland to further evaluate the potential for the capped area to impact wetland sediments. As detailed in Section I of this report, the first phase of the work was conducted in August 2009 and included supplemental wetland sediment sampling to further delineate areas of impact, cap slope soil sampling and outfall sediment sampling.

The second phase of the investigation focused on the collection of continuous samples at depth (i.e., approximately 4 to 5-feet below grade) along the toe of the cap using direct push Geoprobe® methods. Given the logistical issues with conducting this phase of the investigation (e.g., wet conditions, limited access point for equipment, the steepness of the cap slope, desire not to adversely impact the cap slope, etc.) this phase of the investigation was conducted in the winter, under frozen conditions, to facilitate access to the areas targeted for investigation.

TRC advanced a total of twelve (12) borings along the toe of the cap slope within the northern portion of the KMS wetland. TRC's environmental investigation consisted of direct push soil borings using a Geoprobe® 540M dolly rig to sample sediment and observe subsurface conditions. Drilling services and equipment were provided by New England Geotech. TRC collected a total of forty-one (41) sediment samples (plus two laboratory duplicates) on February 8 and 9, 2010. Details of TRC's soil borings are summarized below:

**Boring Summary – Toe-of-Slope**
**February 2010**

| Soil Boring | Date Advanced | Total Depth (ft bgs) | Depths Submitted for Laboratory Analysis (ft bgs) | Drill Rig |
|---|---|---|---|---|
| TSB-1 | 2/9/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |
| TSB-2 | 2/9/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |
| TSB-3 | 2/9/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |
| TSB-4 | 2/9/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |
| TSB-5 | 2/8/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |
| TSB-6 | 2/8/2010 | 4 | 0-2, 2-4 | 540M Dolly Rig |
| TSB-7 | 2/8/2010 | 4 | 0-2, 2-4 | 540M Dolly Rig |
| TSB-8 | 2/8/2010 | 4 | 0-1, 1-2.5, 2.5-4[1] | 540M Dolly Rig |
| TSB-9 | 2/8/2010 | 4 | 0-1, 1-2.5, 2.5-4 | 540M Dolly Rig |
| TSB-10 | 2/8/2010 | 4 | 0-1, 1-2.5, 2.5-4 | 540M Dolly Rig |
| TSB-11 | 2/9/2010 | 4 | 0-1[1], 1-2, 2-3, 3-4 | 540M Dolly Rig |

| Boring Summary – Toe-of-Slope<br>February 2010 | | | | |
|---|---|---|---|---|
| **Soil Boring** | **Date Advanced** | **Total Depth (ft bgs)** | **Depths Submitted for Laboratory Analysis (ft bgs)** | **Drill Rig** |
| TSB-12 | 2/8/2010 | 4 | 0-1, 1-2, 2-3, 3-4 | 540M Dolly Rig |

**Notes:**
[1] Duplicate sample collected.
ft bgs – feet below ground surface.

The borings were intended to evaluate the presence or absence of fill, the vertical extent of potential impacts, and the potential for sediment impacts and/or fill material that may be present along the toe of the cap slope. Care was taken to advance the borings outside the limits of the engineered cap (within areas of standing water) to avoid potentially compromising any portion of the cap. Borings were advanced and discreet samples were collected to a depth of approximately four feet below the sediment surface. Where refusal or insufficient sample recovery was encountered (i.e., TSB-6, TSB-7, TSB-8, TSB-9 and TSB-10) the boring location was modified slightly (approximately one foot from the original boring location) and additional attempts were made to reach a depth of four feet.

Figure 10 illustrates the locations investigated by TRC along the toe of the cap slope using the above-described techniques. The soil boring locations were surveyed by Land Planning following TRC's sampling activities.

TRC conducted field screening of soil samples consisting of visual and olfactory observations, jar headspace readings using an appropriately calibrated PID, and professional judgment, consistent with TRC SOPs and general industry practice. TRC employed the MassDEP jar headspace technique to screen for the presence of VOCs. TRC also evaluated and logged the geologic character of the sediment material, consistent with the Burmeister (1958) method. A subset of sediment samples was subjected to chemical analysis at an off-site environmental laboratory based on professional judgment consistent with the goals of the scope of work. The following table summarizes sediment samples collected by TRC for laboratory analysis:

| Summary of Toe-of-Slope Boring Investigation Activities<br>February 2010 | | | | |
|---|---|---|---|---|
| **Location** | **Soil Borings** | **Number of Samples Submitted for Laboratory Analysis** | **Analyses[1]** | |
| | | | **PCBs[2]** | **MCP Metals/Hg[3]** |
| Toe of KMS Cap Slope | 12 | 41 | 41 | 41 |

**Notes:**
[1] Does not include quality control (QC) samples.
[2] Polychlorinated biphenyls (PCBs) as Aroclors by SW-846 Method 8082.
[3] MCP Metals/Hg - antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, silver, thallium, vanadium, zinc and mercury by SW-846 Methods 6010B/7471A.

Samples were analyzed for PCB Aroclors (EPA Method 8082) by NEA. Samples were analyzed for total 14 MCP metals plus mercury (SW-846 Method 6010B/7471A) by Con-Test Analytical Laboratory of East Longmeadow, Massachusetts.

Several analytes including total PCB Aroclors, cadmium, chromium, lead and nickel were detected at concentrations in excess of S-1 Method 1 soil cleanup standards or, in the case of PCBs, 1 mg/kg. The maximum detected concentration of total PCBs was 23.8 mg/kg in sample TSB-2 (0-1'). The maximum concentration of cadmium (12 mg/kg), chromium (100 mg/kg), lead (760 mg/kg) and nickel (41 mg/kg) were detected in TSB-12 (1-2'), TSB-3 (0-1'), TSB-3 (0-1') and TSB-6 (2-4'), respectively. Table 11 summarizes sediment sampling analytical results.

Subsurface material generally consisted of dark brown organic silt (i.e., peaty) material. At several of the locations (TSB-2, TSB-3, TSB-11 and TSB-12) various sized sands were encountered below the organic silt, consistent with previous sampling within the wetland. There were no obvious signs of potential fill material in the twelve (12) borings. Trace amounts of glass were observed in three of the borings (TSB-6, TSB-7 and TSB-12). No VOC headspace readings above background were noted and boring logs are included in Appendix C.

**(h) Fence Installation**

To address the City's need to mitigate the IH condition within the northern portion of the KMS wetland in accordance with the MCP, the City elected to install a chain-link perimeter fence enclosing the entire northern portion of the wetland. The fence is 8 feet in height and constructed of black materials to match the existing fencing at the KMS and was installed by Southeast Fence Company, Incorporated of Lakeville, Massachusetts.

Fence post installation began between November 10, 2009 and November 13, 2009. Consistent with the City's letter to EPA dated October 1, 2009 (see Appendix D), in areas with the potential to encounter impacted soils fence posts were installed using direct-push techniques. This was done to eliminate the need to disturb subsurface soil for post installation. These lengths of fence are indicated with a bold red line on Figure 11. Select data associated with properties adjacent to the proposed fence along Durfee Street (i.e., 288 Durfee Street and the "Durfee Street West Lot") are presented in Table 12.

The remaining posts were drilled using fence post auger equipment (i.e., Toro Dingo TX 425). At auger locations, cement footings were poured at the base of the post and soil was backfilled over the cement once it had set. The chain link fence material was hung between November 24 and December 9, 2009. Two gates were installed completing the perimeter fence on December 11, 2009, with locks installed by the City of New Bedford School Department on December 14, 2009.

Fill material was found at an augured hole adjacent to 288 Durfee Street and near to the road. Soil removed from this location was stored in buckets pending results of testing. Results indicated a detection of lead above MCP-S1 soil cleanup standards (see Table 13). Due to the small volume, this sediment was combined, treated and disposed of with the sediment associated with remedial action occurring at Walsh Athletic Field in New Bedford, which was coordinated with representatives of MassDEP (please see *Release Abatement Measure Plan - Contaminated*

*Soil Removal at the Walsh Field Athletic Complex* (TRC, 2009) for additional information concerning the Walsh Field remedial action).

As shown on Figure 11, the fence ties into the existing KMS fence at the land bridge, runs west to Summit Street, north to enclose the corner of Summit Street and Hapwell Street, then north along the western boundary of the Summit Street ROW and ultimately ties into the existing fence along Durfee Street. The purpose of the fence installation is to mitigate the existing IH condition and close-out IRA activities as an interim step toward the implementation of a permanent remedy.

The City worked with ConCom and the MassDEP (who issued the Superseding Order of Conditions for the wetland) to engineer a fence that would both mitigate the IH condition and meet ConCom's ecological requirements. As a result, the fence fabric was hung an average of approximately 9 to 12-inches above the ground surface in order to allow wildlife migration to and from the wetland. However, upon completion of fence construction and review by the LSP, some portions of the fence included gaps between the fence fabric and ground surface large enough for people (particularly children) to pass through.

The City subsequently had Southeast Fence Company adjust select sections of the fence fabric. The City review the final fence construction with MassDEP during a Site walk on August 30, 2010. MassDEP approved the fence construction, confirming that the existing IH condition has been mitigated.

Following completion and inspection of the perimeter fence, the IRA is considered complete as the release and/or site conditions have been assessed and the IH condition has been mitigated. Additional evaluation and remedial action, which are currently under evaluation, will be completed as part of comprehensive response action activities. Section II summarizes the information required for an IRA Completion Report under the MCP, specifically 310 CMR 40.427.

## II. IMMEDIATE RESPONSE ACTION COMPLETION REPORT (310 CMR 40.0427)

This IRA Completion Report is organized according to the minimum information needs set forth under 310 CMR 40.0427(4) (a) through (f) of the MCP.

### (a) Description of Release, Threat of Release, Site Conditions, and Surrounding Receptors

*Description of Release/Threat of Release*

The MCP RTN associated with the IRA at this Site is 4-21300 and is IH-related release condition that was identified during annual sediment sampling conducted as required by the LTMMIP for the KMS Site and wetland remediation. The potential IH condition triggered a 2-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0321(2) and 310 CMR 40.0311(7), and was reported to MassDEP via telephone on June 9, 2008. MassDEP orally approved IRA assessment activities and assigned Release Tracking Number (RTN) 4-21300.

*Site Conditions*

The potential IH release condition was initially identified from sediment analysis from a sample (SD-03) collected near wetland flag W-19 where the KMS Site cap slope meets the wetland to the rear (west) of the middle school building. The deciduous wood swamp at this location was characterized by standing water when the initial sediment samples were collected on May 27, 2008. The sample SD-03 had approximately 4 to 6 inches of standing water and was collected from a depth of 0 to 6 inches below the sediment surface.

The sample was collected from an area that was previously remedied and was therefore, presumably, an area where PCBs were not present at a concentration above 1 mg/kg. Based on available documentation, prior remedial actions consisted of the excavation and off-site management of PCB-impacted sediment and the stabilization of the embankment bordering the middle school, and wetland restoration with imported soil and vegetation suitable for wetland settings.

At the time of notification, the area of the potential IH was only partially encompassed by a chain link fence (fencing was present on the north, south and west sides of the KMS property) as illustrated on Figure 2, but the area was still accessible from the residential area to the west (e.g., Summit Avenue). As described herein, the City has recently completed the installation of a perimeter fence for the northern wetland as a mitigation measure.

*Surrounding Receptors*

The location where the potential IH condition was detected lies within 500 feet of residential dwellings and a school.

Groundwater categories at this KMS Site include GW-1 (a private water supply well is located within 500 feet at 249 Summit Avenue), actual or potential GW-2 depending upon proximity to occupied structures (groundwater is less than 15 feet below ground surface), and GW-3 (applies to all groundwater throughout the state). However, there are no known impacts to groundwater

from PCBs associated with the KMS Site. Recent groundwater monitoring conducted at the KMS site in 2009 (two rounds from three monitoring wells) did not detect PCBs above MCP groundwater cleanup criteria. The laboratory reporting limit for non-detect PCB results ranged from 0.05 to 0.0556 micrograms per liter [μg/L]).

Based on review of on-line MassDEP Priority Resource Map data available from Massachusetts Geographic Information System (MassGIS), the site is not located with a Current or Potential Drinking Water Source Area (MassGIS, 2008).

The release Site is located in a wetland resource area. No other documented sensitive ecological receptor areas (e.g., Areas of Critical Environmental Concern [ACECs]) are known to be located at or near the release Site.

### (b) Description of any Immediate Response Actions Undertaken to Date at the Site

Descriptions of Immediate Response Actions conducted to date prior to the publication of this IRA Completion Report are provided in Section I (Background) and in the following previously submitted documents, which are included herein by reference:

- *Immediate Response Action Plan and Imminent Hazard Evaluation. PCB Contaminated Wetland Sediments. Release Tracking Number (RTN) 4-21300, Wetland to Rear of Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts.* August 2008.

- *Immediate Response Action Status Report. PCB Contaminated Wetland Sediments. Release Tracking Number (RTN) 4-21300, Wetland to Rear of Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts.* October 2008.

- *Immediate Response Action Status Report. PCB Contaminated Wetland Sediments. Release Tracking Number (RTN) 4-21300, Wetland to Rear of Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts.* April 2009.

- *Immediate Response Action Status Report. PCB Contaminated Wetland Sediments. Release Tracking Number (RTN) 4-21300, Wetland to Rear of Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts.* September 2009.

- *Immediate Response Action Status Report. PCB Contaminated Wetland Sediments. Release Tracking Number (RTN) 4-21300, Wetland to Rear of Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts.* March 2010.

To address the City's need to mitigate the IH condition within the northern portion of the wetland in accordance with the MCP, a perimeter fence was installed enclosing the entire northern portion of the wetland. Fence post installation began between November 10, 2009 and November 13. Consistent with the City's letter to EPA dated October 1, 2009 (see Appendix C), in areas with the potential to encounter impacted soils fence posts were installed using direct-push techniques. This was done to eliminate the need to disturb to soil for post installation. These lengths of fence are indicated with a bold red line on Figure 11. The remaining posts were drilled using fence post augering equipment. At auger locations, cement footings were poured at the base of the post and sediment was backfilled over the cement once it had set. The chain link

fence material was hung between November 24 and December 9, 2009. Two gates were installed completing the perimeter fence on December 11, 2009, with locks installed by the City of New Bedford School Department on December 14, 2009.

As shown on Figure 11, the fence ties into the existing KMS fence at the land bridge, runs west to Summit Street, north to enclose the corner of Summit Street and Hapwell Street, then north along the western boundary of the Summit Street ROW and ultimately ties into the existing fence along Durfee Street. The purpose of the fence installation is to mitigate the existing IH condition and close-out IRA activities as an interim step toward the implementation of a permanent remedy.

**(c) All Investigatory and Monitoring Data Obtained During Implementation of the IRA**

The data tables provided herein provide all the investigatory and monitoring data obtained by TRC as part of this IRA.

**(d) A Succinct Statement of the Findings and Conclusions of the IRA**

The installation of the perimeter fence was intended to mitigate the IH condition in accordance with the MCP to complete IRA activities conducted to date.

**(e) Details and Documentation on the Management of any Remediation Waste, Remedial Wastewater, and/or Remedial Additives Managed at the Site as part of the IRA.**

IRA activities have included assessment of the presence of PCBs in wetland sediment and other media as well as the installation of a perimeter fence. The results of soil sampling and analysis completed by TRC and the review of prior work conducted by others along the planned fence line indicated that there are no impacts in areas where posts were installed with the exception of sample locations SD-03, SD-91, and 92 and an area adjacent to 288 Durfee Street. In the areas with no indication of impacts, the soil displaced by post installation was used as backfill above the cement footings. As indicated in Figure 11 posts were directly driven in the areas of known or potential impacts to avoid disturbance of impacted soil.

Unexpected evidence of fill was found at an augured hole adjacent to 288 Durfee Street and near to the road. Soil removed from this location was stored in buckets pending results of testing. Results indicated a detection of lead above MCP-S1 soil cleanup standards (see Table 13). Due to the small volume, this sediment was combined, treated and disposed of with the sediment associated with remedial action occurring at Walsh Athletic Field in New Bedford, which was coordinated with representatives of MassDEP (please see *Release Abatement Measure Plan - Contaminated Soil Removal at the Walsh Field Athletic Complex* (TRC, 2009) for additional information concerning the Walsh Field remedial action.

No other remediation waste has been generated.

**(f) Description of Ongoing Activities Related to the IRA that will be Conducted at the Site**

***Monitoring Activities***

No other IRA related sampling and analysis is required.

*Security Measures*

Gates installed in the perimeter fence have been locked and are under the control of the KMS Engineering Staff.

An inspection of the integrity of the fence will be integrated into the periodic engineering inspections of the KMS cap (currently scheduled for three times per year).

*Maintenance*

The fence will be maintained as needed based on the results of periodic inspections, or other observations regarding fence integrity.

**(g) LSP Opinion**

The objective of this IRA was to assess and delineate sediment impacts as a follow-up to MassDEP orally-approved IRA activities initiated June 9, 2008. The areal extent of impacted sediment in the northern wetland has been delineated and physical access limitations (e.g. fencing) have been installed to mitigate the IH condition, with pending diagnosis, remedy, and closure of the release condition to be incorporated into comprehensive response actions. Additional sampling and analysis in support of further assessment and/or remedial planning will be reported in appropriate regulatory submittals. The pending diagnosis, remedy, and closure release condition will then be addressed as part of the comprehensive response actions for the KMS Site under Special Project status and linked under RTN 4-15685.

This IRA Completion Report has been prepared in accordance with 310 CMR 40.0427 as set forth in the MCP.

**David M. Sullivan, LSP, CHMM**
**TRC Environmental Corporation**
**Licensed Site Professional No. 1488**

10/8/10
**Date**

**Stamp**

## III. III. REFERENCES


BETA 2005 — *Risk Based Cleanup Request*, School Site at McCoy Field, New Bedford, Massachusetts, Revision 2. BETA Group, Inc., May 2005.

BETA 2006a — *Long-Term Monitoring and Maintenance Implementation Plan*, New Keith Middle School Property, 225 Hathaway Boulevard, New Bedford, Massachusetts, Revision 4, BETA Group, Inc., October 2006.

BETA 2006b — *Final Completion and Inspection Report*, McCoy Field / Keith Middle School, 225 Hathaway Boulevard, New Bedford, Massachusetts, BETA Group, Inc., December 2006.

Burmeister, 1958 — *Suggested Methods of Tests for Identification of Soils.* In: Procedures for Testing Soils. American Society for Testing and Materials, Philadelphia, PA, 1958.

MassGIS 2008 — Massachusetts Geographic Information System (MassGIS), On-line MassDEP Priority Resource Map. Accessed July 28, 2008. http://maps.massgis.state.ma.us/21e/viewer.htm

TRC 2008 — Letter to David Fredette, PE, City of New Bedford Department of Environmental Stewardship from David M. Sullivan, LSP, CHMM, TRC Environmental Corporation, Lowell, Massachusetts. Re: Groundwater Monitoring Results, Keith Middle School, New Bedford, Massachusetts. June 11, 2008.

TRC, 2009 — *Release Abatement Measure Plan: Contaminated Soil Removal at the Walsh Field Athletic Complex.* Parker Street Waste Site, New Bedford, Massachusetts. Prepared for: City of New Bedford Department of Environmental Stewardship, 133 Williams Street, New Bedford, Massachusetts. Prepared by; TRC, 650 Suffolk Street, Lowell, Massachusetts. October 2009.

# TABLES

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-01 | | SD-02 | SD-03 | | | | | | SD-3A | SD-3B | SD-3C | SD-3D | SD-3E | SD-3F | SD-3G |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 1-1.5 | 1.5-2 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 5/27/2008 | 5/27/2008 | 5/27/2008 | 5/27/2008 | 5/27/2008 | 6/10/2008 | 6/10/2008 | 6/10/2008 | 9/18/2008 | 6/10/2008 | 6/10/2008 | 6/10/2008 | 6/10/2008 | 6/19/2008 | 6/19/2008 | 6/19/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | Field Dup | | | (a) | | Field Dup | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | 0.485 U | 0.302 U | 0.424 UJ | 0.355 UJ | 0.483 UJ | 0.0551 U | 0.264 U | 0.0576 U | 0.0588 U | 0.761 U | 0.0736 U | 0.605 UJ | 0.311 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | 0.485 U | 0.302 U | 0.424 UJ | 0.355 UJ | 0.483 UJ | 0.0551 U | 0.264 U | 0.0576 U | 0.0588 U | 0.761 U | 0.0736 U | 0.605 UJ | 0.311 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | 0.485 U | 0.302 U | 0.424 UJ | 0.355 UJ | 0.483 UJ | 0.0551 U | 0.264 U | 0.0576 U | 0.0588 U | 0.761 U | 0.0736 U | 0.605 UJ | 0.311 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | 0.485 U | 0.302 U | 0.424 UJ | 0.355 UJ | 0.483 UJ | 0.0551 U | 0.264 U | 0.0576 U | 0.0588 U | 0.761 U | 0.0736 U | 0.605 UJ | 0.311 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | 0.485 U | 0.302 U | 0.424 UJ | 0.355 UJ | 0.483 UJ | 0.0551 U | 0.264 U | 0.0576 U | 0.0588 U | 0.761 U | 0.0736 U | 0.605 UJ | 0.311 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | **15.0 J** | **10.6 J** | **11.8 J** | **13.9 J** | **18.0 J** | **0.933 J** | **12.9 J** | 0.0576 U | **0.143 J** | **29.9 J** | **3.64 J** | **20.2 J** | **7.41 J** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | **1.56 J** | **1.28 J** | **1.48 J** | **1.76 J** | **2.37 J** | 0.0551 U | **1.68 J** | 0.0576 U | 0.0588 U | **3.57 J** | 0.0736 U | **2.57 J** | **0.951 J** |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 UJ | 0.298 UJ | 0.218 UJ | **16.56 J** | **11.88 J** | **13.28 J** | **15.66 J** | **20.37 J** | **0.933 J** | **14.58 J** | 0.0576 U | **0.143 J** | **33.47 J** | **3.64 J** | **22.77 J** | **8.361 J** |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-3H | SD-3I | SD-3J | SD-3K | | | SD-3L | | | SD-3M | | SD-3N | | SD-3P | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 1-1.5 | 2.5-3 | 0-0.5 | 1-1.5 | 1-1.5 | 0-0.5 | 1-1.5 | 0-0.5 | 1-1.5 | 0-0.5 | 0.7-1.2 |
| | | | | | | | Sample Date: | 6/19/2008 | 6/19/2008 | 6/19/2008 | 7/30/2008 | 7/30/2008 | 9/18/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 | 7/30/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | Field Dup | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | 0.221 U | 0.231 U | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | 0.221 U | 0.231 U | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | 0.221 U | 0.231 U | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | 0.221 U | 0.231 U | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | 0.221 U | 0.231 U | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **11.7 J** | **6.12 J** | **5.05 J** | **18.3 J** | **5.84 J** | 0.0652 U | **5.00 J** | **0.219 J** | 0.165 UJ | **0.812 J** | **0.765 J** | **21.5 J** | **0.430 J** | **3.17 J** | **0.329 J** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.288 U | **0.673 J** | **0.735 J** | 0.552 U | 0.272 U | 0.0652 U | 0.172 U | 0.161 U | 0.165 UJ | 0.158 U | 0.259 UJ | 0.779 U | 0.0550 U | 0.132 U | 0.0627 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **11.7 J** | **6.793 J** | **5.785 J** | **18.3 J** | **5.84 J** | 0.0652 U | **5.00 J** | **0.219 J** | 0.165 UJ | **0.812 J** | **0.765 J** | **21.5 J** | **0.430 J** | **3.17 J** | **0.329 J** |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-3Q | | SD-3R | | SD-3S | | SD-3T | | SD-3U | | | SD-3V | | | SD-3W | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0.8-1.3 | 0-0.5 | 1-1.5 | 0-0.5 | 1-1.5 | 0-0.5 | 1-1.5 | 0-0.5 | 0-0.5 | 1-1.5 | 0-0.5 | 1-1.5 | 2.5-3 | 0-0.5 | 1-1.5 |
| | | | | | | | Sample Date: | 7/30/2008 | 7/30/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 8/19/2008 | 9/17/2008 | 8/19/2008 | 8/19/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | Field Dup | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.61 J** | **0.195 J** | **0.470 J** | **0.267 J** | **0.805 J** | 0.0530 U | **0.872 J** | 0.291 UJ | **1.70 J** | **1.85 J** | **0.353 J** | **5.64 J** | **3.49 J** | 0.0600 U | **1.86 J** | 0.240 UJ |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0593 U | 0.102 U | 0.175 UJ | 0.192 UJ | 0.104 U | 0.0530 U | 0.0790 U | 0.291 UJ | 0.216 UJ | 0.245 UJ | 0.239 UJ | 0.116 U | 0.148 U | 0.0600 U | 0.147 U | 0.240 UJ |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.61 J** | **0.195 J** | **0.470 J** | **0.267 J** | **0.805 J** | 0.0530 U | **0.872 J** | 0.291 UJ | **1.70 J** | **1.85 J** | **0.353 J** | **5.64 J** | **3.49 J** | 0.0600 U | **1.86 J** | 0.240 UJ |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-04-PRE | SD-04 | | | | SD-05 | | | SD-06 | | | SD-07 | | | SD-08 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 1.5-2 | 2-2.5 | 0-0.5 | 1.5-2 | 2-2.5 | 0-0.5 | 1-1.5 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 |
| | | | | | | | Sample Date: | 5/27/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/18/2008 | 9/18/2008 | 9/18/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | Field Dup | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | **0.552 J** | **0.730 J** | 0.0576 U | 0.0567 U | **0.263 J** | 0.0562 U | 0.0581 U | **2.49 J** | **0.320 J** | 0.0529 U | **1.84 J** | 0.0702 U | 0.0611 U | **0.984 J** | 0.183 UJ |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | 0.179 UJ | 0.188 UJ | 0.0576 U | 0.0567 U | 0.180 UJ | 0.0562 U | 0.0581 U | 0.152 U | 0.271 UJ | 0.0529 U | 0.237 UJ | 0.0702 U | 0.0611 U | 0.158 UJ | 0.183 UJ |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0594 U | **0.552 J** | **0.730 J** | 0.0576 U | 0.0567 U | **0.263 J** | 0.0562 U | 0.0581 U | **2.49 J** | **0.320 J** | 0.0529 U | **1.84 J** | 0.0702 U | 0.0611 U | **0.984 J** | 0.183 UJ |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-09 | | | SD-09A | SD-10 | | | SD-11 | | | SD-12 | | SD-13 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1.5-2 | 2.5-3 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 0-0.5 | 0-0.5 | 1.5-2 | 2.5-3 |
| | | | | | | | Sample Date: | 9/18/2008 | 9/18/2008 | 9/18/2008 | 10/6/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 9/17/2008 | 10/6/2008 | 10/6/2008 | 10/6/2008 | 10/6/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | Field Dup | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | 0.125 U | 0.112 U | 0.0581 U | 0.0540 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | 0.125 U | 0.112 U | 0.0581 U | 0.0540 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | 0.125 U | 0.112 U | 0.0581 U | 0.0540 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | 0.125 U | 0.112 U | 0.0581 U | 0.0540 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | 0.125 U | 0.112 U | 0.0581 U | 0.0540 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.236 J** | 0.0575 U | **2.09 J** | 0.0606 U | **1.23 J** | 0.0765 U | 0.0630 U | **0.909 J** | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | **3.66 J** | 0.112 UJ | 0.0581 U | **1.49 J** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.134 U | 0.0575 U | 0.138 U | 0.0606 U | 0.188 UJ | 0.0765 U | 0.0630 U | 0.238 UJ | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | **0.453 J** | 0.112 U | 0.0581 U | **0.205 J** |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.236 J** | 0.0575 U | **2.09 J** | 0.0606 U | **1.23 J** | 0.0765 U | 0.0630 U | **0.909 J** | 0.0598 U | 0.0567 U | 0.0612 U | 0.0924 U | **4.113 J** | 0.112 U | 0.0581 U | **1.695 J** |

**Notes:**
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Values in **Bold** indicate the compound was detected.
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RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | | SD-13A | SD-14 | | | | SD-15 | | | SD-16 | | | SD-17 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | SD-13A | SD-14 | | | | SD-15 | | | SD-16 | | | SD-17 | | |
| | | | | | | | Sample Depth (ft.): | 2.5-3 | 0-0.5 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 |
| | | | | | | | Sample Date: | 10/23/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | Field Dup | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | 0.168 U | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | 0.168 U | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | 0.168 U | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | 0.168 U | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | 0.168 U | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.193 J** | **1.88 J** | **1.75 J** | 0.0591 U | 0.0573 U | **0.771 J** | 0.0589 U | 0.0540 U | **4.30 J** | 0.0574 U | 0.0568 U | **1.55 J** | 0.0547 U | 0.0574 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0603 U | 0.277 UJ | 0.271 UJ | 0.0591 U | 0.0573 U | 0.225 UJ | 0.0589 U | 0.0540 U | **0.572 J** | 0.0574 U | 0.0568 U | 0.212 UJ | 0.0547 U | 0.0574 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.193 J** | **1.88 J** | **1.75 J** | 0.0591 U | 0.0573 U | **0.771 J** | 0.0589 U | 0.0540 U | **4.872 J** | 0.0574 U | 0.0568 U | **1.55 J** | 0.0547 U | 0.0574 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
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**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-18 | | | SD-19 | | | SD-20 | | | SD-21 | | | SD-22 | SD-23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1-1.5 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/3/2008 | 10/6/2008 | 10/6/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.38 J** | 0.0566 U | 0.0579 U | **2.69 J** | 0.0582 U | 0.0577 U | **0.331 J** | 0.0583 U | 0.0588 U | **1.63 J** | 0.117 U | 0.0583 U | **0.633 J** | 0.0758 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.208 UJ | 0.0566 U | 0.0579 U | 0.163 UJ | 0.0582 U | 0.0577 U | 0.221 UJ | 0.0583 U | 0.0588 U | 0.190 UJ | 0.117 U | 0.0583 U | 0.179 UJ | 0.0758 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.38 J** | 0.0566 U | 0.0579 U | **2.69 J** | 0.0582 U | 0.0577 U | **0.331 J** | 0.0583 U | 0.0588 U | **1.63 J** | 0.117 U | 0.0583 U | **0.633 J** | 0.0758 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-24 | | | | SD-25 | | | SD-26 | | | SD-27 | | | SD-28 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 |
| | | | | | | | Sample Date: | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | Field Dup | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.60 J** | **1.30 J** | 0.0588 U | 0.0569 U | **0.600 J** | 0.0604 U | 0.0579 U | **1.39 J** | 0.156 U | 0.0612 U | **0.390 J** | 0.0620 U | 0.0557 U | **0.0708 J** | 0.0592 U | 0.0550 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.172 UJ | 0.182 UJ | 0.0588 U | 0.0569 U | 0.220 UJ | 0.0604 U | 0.0579 U | 0.184 UJ | 0.156 U | 0.0612 U | 0.102 U | 0.0620 U | 0.0557 U | 0.0699 U | 0.0592 U | 0.0550 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.60 J** | **1.30 J** | 0.0588 U | 0.0569 U | **0.600 J** | 0.0604 U | 0.0579 U | **1.39 J** | 0.156 U | 0.0612 U | **0.390 J** | 0.0620 U | 0.0557 U | **0.0708 J** | 0.0592 U | 0.0550 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-29 | | | SD-30 | | | SD-31 | | | SD-32 | | | SD-33 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 1.5-2 | 2.5-3 |
| | | | | | | | Sample Date: | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/22/2008 | 10/23/2008 | 10/23/2008 | 10/23/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.39 J** | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | **0.747 J** | 0.0750 U | **0.510 J** | **0.690 J** | 0.0637 U | 0.0582 U | **0.835 J** | 0.288 UJ | 0.0620 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.247 UJ | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | 0.254 UJ | 0.0750 U | 0.0633 U | 0.327 UJ | 0.0637 U | 0.0582 U | 0.0787 U | 0.288 UJ | 0.0620 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.39 J** | 0.0585 U | 0.0560 U | 0.0845 U | 0.285 UJ | 0.0627 U | **0.747 J** | 0.0750 U | **0.510 J** | **0.690 J** | 0.0637 U | 0.0582 U | **0.835 J** | 0.288 UJ | 0.0620 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-34 | | | | SD-35 | SD-36 | SD-37 | | SD-38 | | SD-39 | | SD-40 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 1.5-2 | 2.5-3 | 0-0.5 | 0-0.5 | 0-0.5 | 2-2.5 | 0-0.5 | 2-2.5 | 0-0.5 | 3-3.5 | 0-0.5 | 0-0.5 | 3-3.5 |
| | | | | | | | Sample Date: | 10/23/2008 | 10/23/2008 | 10/23/2008 | 10/23/2008 | 10/23/2008 | 10/23/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | Field Dup | | | | | | | | | | | | Field Dup | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **4.47 J** | 0.198 UJ | 0.276 UJ | 0.313 UJ | **6.81 J** | **0.152 J** | **0.593 J** | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | **4.90 J** | **5.23 J** | 0.345 UJ |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.376 UJ | 0.198 UJ | 0.276 UJ | 0.313 UJ | 0.249 UJ | 0.0983 U | 0.175 UJ | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | 0.185 UJ | 0.284 U | 0.345 UJ |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **4.47 J** | 0.198 UJ | 0.276 UJ | 0.313 UJ | **6.81 J** | **0.152 J** | **0.593 J** | 0.0584 U | 0.135 U | 0.0596 U | 0.355 UJ | 0.0577 U | **4.90 J** | **5.23 J** | 0.345 UJ |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | | SD-41 | | SD-42 | | SD-43 | | SD-44 | | SD-45 | | SD-46 | | SD-47 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 3-3.5 | 0-0.5 | 2.5-3 | 0-0.5 | 2.5-3 | 0-0.5 | 2.5-3 | 0-0.5 | 1.5-2 | 0-0.5 | 2.5-3 | 0-0.5 | 4-4.5 |
| | | | | | | | Sample Date: | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/3/2008 | 12/4/2008 | 12/4/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.692 J** | 0.406 UJ | **1.34 J** | 0.0588 U | **1.22 J** | 0.297 UJ | 0.317 UJ | 0.315 UJ | **1.06 J** | **0.505 J** | **0.399 J** | 0.366 UJ | **0.381 J** | 0.347 UJ |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.226 UJ | 0.406 UJ | 0.263 UJ | 0.0588 U | 0.155 U | 0.297 UJ | 0.317 UJ | 0.315 UJ | 0.283 UJ | 0.345 UJ | 0.0739 U | 0.366 UJ | 0.263 UJ | 0.347 UJ |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.692 J** | 0.406 UJ | **1.34 J** | 0.0588 U | **1.22 J** | 0.297 UJ | 0.317 UJ | 0.315 UJ | **1.06 J** | **0.505 J** | **0.399 J** | 0.366 UJ | **0.381 J** | 0.347 UJ |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

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Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

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TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-48 | | SD-49 | | SD-50 | | SD-51 | | SD-52 | | SD-53 | | SD-54 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 3-3.5 | 0-0.5 | 2.5-3 | 0-0.5 | 3.5-4 | 0-0.5 | 3-3.5 | 0-0.5 | 3-3.5 | 0-0.5 | 3-3.5 | 0-0.5 | 0-0.5 | 3.5-4 |
| | | | | | | | Sample Date: | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/5/2008 | 12/5/2008 | 12/4/2008 | 12/4/2008 Field Dup | 12/4/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | |
| **PCBs** (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.36 J** | 0.0595 U | **0.837 J** | **0.341 J** | **1.21 J** | 0.197 UJ | 0.365 UJ | 0.385 UJ | **1.0 J** | 0.383 UJ | **0.343 J** | 0.267 UJ | **0.507 J** | **0.435 J** | 0.0685 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.156 U | 0.0595 U | 0.104 U | 0.320 UJ | 0.209 UJ | 0.197 UJ | 0.365 UJ | 0.385 UJ | 0.215 UJ | 0.383 UJ | 0.0809 U | 0.267 UJ | 0.245 UJ | 0.245 UJ | 0.0685 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.36 J** | 0.0595 U | **0.837 J** | **0.341 J** | **1.21 J** | 0.197 UJ | 0.365 UJ | 0.385 UJ | **1.0 J** | 0.383 UJ | **0.343 J** | 0.267 UJ | **0.507 J** | **0.435 J** | 0.0685 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-55 | | SD-56 | | SD-57 | | SD-58 | | SD-59 | | SD-60 | | SD-61 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1.5-2 | 0-0.5 | 3.5-4 | 0-0.5 | 2-2.5 | 0-0.5 | 2.5-3 | 0-0.5 | 2.5-3 | 0-0.5 | 1.5-2 | 0-0.5 | 2.5-3 |
| | | | | | | | Sample Date: | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/8/2008 | 12/8/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/4/2008 | 12/8/2008 | 12/8/2008 | 12/4/2008 | 12/4/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | **0.470 J** | 0.0668 U | **1.36 J** | 0.0629 U | **1.77 J** | 0.0578 U | **1.02 J** | 0.0581 U | **0.820 J** | 0.0610 U | **0.264 J** | 0.0550 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | 0.178 UJ | 0.0668 U | 0.351 UJ | 0.0629 U | 0.197 UJ | 0.0578 U | 0.301 UJ | 0.0581 U | 0.132 U | 0.0610 U | 0.0626 U | 0.0550 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.235 UJ | 0.227 UJ | **0.470 J** | 0.0668 U | **1.36 J** | 0.0629 U | **1.77 J** | 0.0578 U | **1.02 J** | 0.0581 U | **0.820 J** | 0.0610 U | **0.264 J** | 0.0550 U |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | | SD-62 | | SD-63 | | SD-64 | | SD-65 | | SD-66 | | SD-67 | | SD-68 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1-1.5 | 0-0.5 | 1.5-2 | 0-0.5 | 2-2.5 | 0-0.5 | 1-1.5 | 0-0.5 | 2-2.5 | 0-0.5 | 2.5-3 | 0-0.5 | 4-4.5 |
| | | | | | | | Sample Date: | 12/8/2008 | 12/8/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | **0.332 J** | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | **0.244 J** | **0.236 J** | **0.982 J** | 0.436 UJ | **0.961 J** | 0.387 UJ |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | 0.0624 U | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | 0.129 U | 0.0700 U | 0.209 UJ | 0.436 UJ | 0.279 UJ | 0.387 UJ |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0605 U | 0.0615 U | 0.0598 U | **0.332 J** | 0.340 UJ | 0.359 UJ | 0.454 UJ | 0.477 UJ | **0.244 J** | **0.236 J** | **0.982 J** | 0.436 UJ | **0.961 J** | 0.387 UJ |

**Notes:**
All units in mg/kg.
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
J - Estimated value.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**
**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**
PCBs - Polychlorinated Biphenyls.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.
RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-69 | | SD-70 | | | SD-71 | | SD-72 | | SD-73 | | SD-74 | SD-75 | SD-76 | SD-77 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 4-4.5 | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 3-3.5 | 0-0.5 | 1.5-2 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/5/2008 | 12/8/2008 | 12/8/2008 | 12/8/2008 | 12/8/2008 | 12/8/2008 | 12/8/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | Field Dup | | | | | | | Field Dup | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | 0.107 U | 0.260 UJ | 0.0685 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | 0.107 U | 0.260 UJ | 0.0685 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | 0.107 U | 0.260 UJ | 0.0685 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | 0.107 U | 0.260 UJ | 0.0685 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | 0.107 U | 0.260 UJ | 0.0685 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.368 J** | 0.397 UJ | 0.0759 U | **0.0899 J** | **7.99 J** | **1.15 J** | 0.336 UJ | **0.526 J** | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | **0.612 J** | 0.260 UJ | **0.386 J** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.165 UJ | 0.397 UJ | 0.0759 U | 0.0675 U | 0.349 UJ | 0.359 UJ | 0.336 UJ | 0.416 UJ | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | **0.204 J** | 0.260 UJ | **0.134 J** |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.368 J** | 0.397 UJ | 0.0759 U | **0.0899 J** | **7.99 J** | **1.15 J** | 0.336 UJ | **0.526 J** | 0.151 U | 0.213 UJ | 0.210 UJ | 0.253 UJ | **0.816 J** | 0.260 UJ | **0.520 J** |

**Notes:**
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RC S-1 is listed for reference purposes only.
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.
(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-78 | SD-79 | SD-80 | SD-81 | SD-82 | SD-83 | SD-84 | OF-1 | OF-2 | OF-3 | OF-4 | OF-5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/8/2008 | 12/8/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/10/2008 | 12/10/2008 | 12/10/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | Field Dup |
| **PCBs** | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | **0.183 J** | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | **0.0819 J** | **0.117 J** | 0.0553 U | **1.07 J** | **0.963 J** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | 0.167 UJ | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | 0.0638 U | 0.0666 U | 0.0553 U | 0.0595 U | 0.0641 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.238 UJ | 0.206 UJ | 0.297 UJ | **0.183 J** | 0.369 UJ | 0.232 UJ | 0.324 UJ | 0.0558 U | **0.0819 J** | **0.117 J** | 0.0553 U | **1.07 J** | **0.963 J** |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

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Values in **Bold** indicate the compound was detected.

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PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SB-01 | | SB-02 | | SB-03 | | SB-04 | | SB-05 | | SB-06 | | SB-07 | | SB-08 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 5.5-6 | 0.5-1 | 9.5-10 | 0.5-1 | 9.5-10 | 0.5-1 | 4.5-5 | 0.5-1 | 7.5-8 | 0.5-1 | 8.5-9 | 0.5-1 | 8.5-9 | 0.5-1 | 9.5-10 |
| | | | | | | | Sample Date: | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 | 11/7/2007 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | 0.0591 U | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | 0.0591 U | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | 0.0591 U | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | 0.0591 U | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | 0.0591 U | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.177** * | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | **0.149** * | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0561 U | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | **0.109** * | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.177** | 0.0560 U | 0.0543 U | 0.0561 U | 0.0519 U | 0.0516 U | 0.0514 U | 0.0538 U | 0.0562 U | 0.0557 U | **0.258** | 0.0500 U | 0.0538 U | 0.0516 U | 0.0564 U | 0.0539 U |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

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Values in **Bold** indicate the compound was detected.

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PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

(b) - The sample was collected at the same location as the sample SDR-4.

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SB-09 | | SB-10 | | SB-11 | | SB-12 | | SB-13 | | SB-14 | | | SB-15 | | SDR-1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0.5-1 | 6.5-7 | 0.5-1 | 8.5-9 | 0.5-1 | 6.5-7 | 0.5-1 | 5.5-6 | 0.5-1 | 9.5-10 | 0.5-1 | 9-9.5 | 12.5-13 | 0.5-1 | 7.5-8 | 0-0.2 |
| | | | | | | | Sample Date: | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 12/9/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | **0.782** * | 0.0565 U | **0.557** * | **0.112** * | 0.0519 U | 0.0512 U | 0.0553 U | 0.0801 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | 0.0520 U | 0.0565 U | 0.0503 U | **0.238** * | 0.0519 U | **0.137** * | 0.0553 U | 0.0801 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0602 U | 0.0500 U | 0.0553 U | 0.0583 U | 0.0527 U | 0.0550 U | 0.0591 U | 0.0501 U | **0.782** | 0.0565 U | **0.557** | **0.350** | 0.0519 U | **0.137** | 0.0553 U | 0.0801 U |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

(b) - The sample was collected at the same location as the sample SDR-4.

**Table 1**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2007 and 2008**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SDR-2 | SDR-3 | SDR-4 | OF-DS-1 | SDR-5 | SLP-01 | SLP-02 | SLP-03 | SLP-04 | SLP-05 | SLP-06 | | SLP-07 | SLP-08 | SLP-09 | SLP-10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.2 | 0-0.2 | 0-0.2 | 0-0.2 | 0-0.2 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/9/2008 | 12/9/2008 | 12/10/2008 | 11/25/2008 | 12/10/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/9/2008 | 12/10/2008 | 12/10/2008 | 12/10/2008 | 12/10/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | (b) | | | | | | | | Field Dup | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0658 U | 0.0953 U | 0.149 U | 0.257 UJ | 0.0700 U | 0.0568 U | 0.0572 U | 0.0582 U | 0.0576 U | 0.0550 U | 0.0583 U | 0.0591 U | 0.0587 U | 0.0556 U | 0.0575 U | 0.0575 U |

**Notes:**

All units in mg/kg.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

J - Estimated value.

U - Compound was not detected at specified quantitation limit.

UJ - Estimated non-detect.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

RC S-1 is listed for reference purposes only.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

(a) - The sample was reextracted and reanalyzed to confirm the results

(b) - The sample was collected at the same location as the sample SDR-4.

**Table 2**
**Summary of Analytical Results for Ecological Risk Characterization Surface Water Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | Sample ID: | ERC-SW-7 | ERC-SW-9 | | ERC-SW-11A | ERC-SW-14 | ERC-SW-16 | ERC-SW-20 | ERC-SW-21 | ERC-SW-22 | ERC-SW-23 | ERC-SW-24 | ERC-SW-25 | ERC-SW-26 | ERC-SW-27 | ERC-SW-28 | | ERC-SW-29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Date: | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/6/2009 | 3/6/2009 | 3/20/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 |
| | | Criteria* | | | Field Dup | | | | | | | | | | | | | Field Dup | |
| **PAHs** | | | | | | | | | | | | | | | | | | | |
| (ug/L) | Acenaphthene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 2-Chloronaphthalene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluoranthene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Naphthalene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(a)anthracene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(a)pyrene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(b)fluoranthene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(k)fluoranthene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chrysene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthylene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Anthracene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(ghi)perylene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluorene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Phenanthrene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dibenzo(a,h)anthracene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Indeno(1,2,3-cd)Pyrene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pyrene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 2-Methylnaphthalene | NS | 0.20 U | 0.20 U | 0.20 U | 0.19 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB Homologues** | | | | | | | | | | | | | | | | | | | |
| (ug/L) | Monochlorobiphenyl | NS | 0.027 U | 0.027 U | 0.029 U | 0.025 U | 0.025 U | 0.025 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dichlorobiphenyl | NS | 0.027 U | 0.027 U | 0.029 U | 0.025 U | 0.025 U | 0.025 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Trichlorobiphenyl | NS | 0.027 U | 0.027 U | 0.029 U | 0.025 U | 0.025 U | 0.025 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Tetrachlorobiphenyl | NS | 0.054 U | 0.053 U | 0.059 U | 0.051 U | 0.050 U | 0.050 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pentachlorobiphenyl | NS | 0.054 U | 0.053 U | 0.059 U | 0.051 U | 0.050 U | 0.050 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Hexachlorobiphenyl | NS | 0.054 U | 0.053 U | 0.059 U | 0.051 U | 0.050 U | 0.050 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Heptachlorobiphenyl | NS | 0.082 U | 0.080 U | 0.088 U | 0.076 U | 0.075 U | 0.075 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Octachlorobiphenyl | NS | 0.082 U | 0.080 U | 0.088 U | 0.076 U | 0.075 U | 0.075 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nonachlorobiphenyl | NS | 0.14 U | 0.13 U | 0.15 U | 0.13 U | 0.13 U | 0.13 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Decachlorobiphenyl | NS | 0.14 U | 0.13 U | 0.15 U | 0.13 U | 0.13 U | 0.13 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Total PCB | 0.014 | 0.14 U | 0.13 U | 0.15 U | 0.13 U | 0.13 U | 0.13 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 2**
**Summary of Analytical Results for Ecological Risk Characterization Surface Water Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | Sample ID: | ERC-SW-7 | ERC-SW-9 | | ERC-SW-11A | ERC-SW-14 | ERC-SW-16 | ERC-SW-20 | ERC-SW-21 | ERC-SW-22 | ERC-SW-23 | ERC-SW-24 | ERC-SW-25 | ERC-SW-26 | ERC-SW-27 | ERC-SW-28 | | ERC-SW-29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Date: | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/6/2009 | 3/6/2009 | 3/20/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 |
| | | Criteria* | | | Field Dup | | | | | | | | | | | | | Field Dup | |
| **Metals, total** | | | | | | | | | | | | | | | | | | | |
| (ug/L) | Antimony | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 50 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 5.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | NS | **11.8** | **9.4** | **9.7** | **27.1** | **5.5** | **28** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 5.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 4.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Calcium | NS | NA | NA | NA | NA | NA | NA | **3,100** | **4,900** | **4,600** | **3,500** | **1,700** | **1,900** | **1,600** | **5,300** | **16,000** | **3,700** | **4,800** |
| | Chromium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | **0.60** | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | NS | 0.50 U | **0.60** | **0.70** | 0.50 U | 0.50 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Magnesium | NS | NA | NA | NA | NA | NA | NA | **470** | **590** | **750** | **390** | **280** | **320** | **270** | **620** | **1,800** | **380** | **610** |
| | Nickel | NS | **0.50** | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | 5.0 | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 7.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | NS | **32.1** | **29.8** | **33.0** | **23.4** | **22.5** | 50 U | **35** | **38** | **63** | **44** | **42** | 20 U | **30** | **27** | **40** | 20 U | 20 U |
| | Mercury | NS | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals, dissolved** | | | | | | | | | | | | | | | | | | | |
| (ug/L) | Antimony | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 50 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | 150 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 5.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | NS | **12.2** | **8.6** | **8.3** | **26.9** | **1.7** | **25** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 5.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | 0.25 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 4.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chromium | 74 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | 2.5 | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nickel | 52 | **0.70** | 0.50 U | 0.50 U | **0.50** | 0.50 U | 25 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | NS | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 7.0 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | NS | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 0.50 U | 10 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 120 | **35.0** | **30.4** | **29.2** | **21.9** | **18.2** | 50 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Mercury | 0.77 | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | 0.20 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Hardness** (ug/L) | Hardness | NS | **9,400** | **6,800** | **6,600** | **12,000** | **8,200** | **27,000** | **9,200** | **16,000** | **18,000** | **9,500** | **6,300** | **6,800** | **5,300** | **18,000** | **44,000** | **11,000** | **15,000** |

**Notes:**
All units in ug/L unless otherwise specified.
ug/L - micrograms per liter.
NA - Sample not analyzed for the listed analyte.
NS - No MADEP standards exist for this compound.
U - Compound was not detected at specified quantitation limit.
Values in **Bold** indicate the compound was detected.
PAHs - Polynuclear Aromatic Hydrocarbons.
PCBs - Polychlorinated Biphenyls.
* - EPA National Recommended Water Quality Criteria, Freshwater CCC, 2006.

**Table 3**
**Summary of Analytical Results for Supplemental Ecological Risk Characterization Surface Water Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | Sample ID: | ERC-SW-7 | | | | | | ERC-SW-9 | | ERC-SW-11A |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Date: | 12/28/2009 | 3/10/2010 | 4/21/2010 | 5/5/2010 | 5/17/2010 | 8/23/2010 | 12/28/2009 | 3/10/2010 | 8/23/2010 |
| | | Criteria* | | | | | | | | | |
| **Metals, dissolved** (ug/L) | Zinc | 120 | 50 U | **9.30** | **8.50** | **11.90** | **6.30** | 5.0 U | 50 U | **23.7** | **6.0** |
| **Hardness** (ug/L) | Hardness | NS | **8,700** | **16,000** | **21,000** | **18,000** | **17,000** | **18,000** | **5,700** | **9,600** | **31,000** |

**Notes:**
All units in ug/L unless otherwise specified.
ug/L - micrograms per liter.
NA - Sample not analyzed for the listed analyte.
NS - No MADEP standards exist for this compound.
U - Compound was not detected at specified quantitation limit.
Values in **Bold** indicate the compound was detected.
* - EPA National Recommended Water Quality Criteria, Freshwater CCC, 2006.

**Table 4**
**Summary of Analytical Results for Ecological Risk Characterization and Near Surface Stratification Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | Sample ID: | ERC-SED-6 | ERC-SED-6A | | ERC-SED-7 | | ERC-SED-8 | ERC-SED-9 | | ERC-SED-9A | | ERC-SED-10 | ERC-SED-11A | ERC-SED-11B | | ERC-SED-12 | ERC-SED-13 | ERC-SED-14 | ERC-SED-14A | | ERC-SED-15 | ERC-SED-16 | ERC-SED-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sample Depth (ft.): | 0-0.5 | 0-0.25 | 0.25-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.25 | 0.25-0.5 | 0-0.5 | 0-0.5 | 0-0.25 | 0.25-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.25 | 0.25-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | Sample Date: | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/6/2009 | 3/20/2009 | 3/20/2009 |
| | | TECs | | | | | Field Dup | | | Field Dup | | | | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Chloronaphthalene | NS | 0.0114 U | NA | NA | 0.0331 U | 0.0279 U | 0.0219 U | 0.0135 U | NA | NA | NA | 0.040 U | 0.0280 U | NA | NA | 0.0358 U | 0.0306 U | 0.0127 U | NA | NA | 0.0221 U | 0.0616 U | 0.0401 U |
| | 2-Methylnaphthalene | NS | **0.0553** | NA | NA | 0.0331 U | 0.0279 U | **2.15** | 0.0135 U | NA | NA | NA | 0.040 U | **0.270** | NA | NA | 0.0358 U | **0.0314** | 0.0127 U | NA | NA | 0.0221 U | 0.0616 U | 0.0401 U |
| | Acenaphthene | NS | **0.156** | NA | NA | 0.0331 U | 0.0279 U | **7.54** | **0.0175** | NA | NA | NA | 0.040 U | **1.58** | NA | NA | 0.0358 U | **0.0876** | 0.0127 U | NA | NA | 0.0221 U | 0.0616 U | 0.0401 U |
| | Acenaphthylene | NS | **0.320** | NA | NA | 0.0331 U | 0.0279 U | **0.837** | **0.0298** | NA | NA | NA | 0.040 U | **0.268** | NA | NA | **0.106** | **0.183** | **0.0127** | NA | NA | 0.0221 U | 0.0616 U | 0.0401 U |
| | Anthracene | 0.057 | **0.594** | NA | NA | **0.0343** | 0.0279 U | **21.4** | **0.0591** | NA | NA | NA | 0.040 U | **1.32** | NA | NA | **0.131** | **0.252** | **0.0251** | NA | NA | **0.0394** | 0.0616 U | **0.0610** |
| | Benz[a]anthracene | 0.11 | **1.75** | NA | NA | **0.106** | **0.0606** | **74.7** | **0.172** | NA | NA | NA | **0.0682** | **3.48** | NA | NA | **0.460** | **0.593** | **0.0660** | NA | NA | **0.0951** | 0.0616 U | **0.173** |
| | Benzo[a]pyrene | 0.15 | **1.47** | NA | NA | **0.0904** | **0.0551** | **69.5** | **0.148** | NA | NA | NA | **0.0561** | **3.31** | NA | NA | **0.433** | **0.563** | **0.0577** | NA | NA | **0.0896** | 0.0616 U | **0.176** |
| | Benzo[b]fluoranthene | NS | **1.20** | NA | NA | **0.105** | **0.0720** | **80.8** | **0.168** | NA | NA | NA | **0.0698** | **3.07** | NA | NA | **0.432** | **0.534** | **0.0634** | NA | NA | **0.110** | 0.0616 U | **0.266** |
| | Benzo[g,h,i]perylene | NS | **1.04** | NA | NA | **0.0835** | **0.0442** | **45.1** | **0.105** | NA | NA | NA | **0.0437** | **2.69** | NA | NA | **0.339** | **0.443** | **0.0453** | NA | NA | **0.0690** | 0.0616 U | **0.146** |
| | Benzo[k]fluoranthene | NS | **1.32** | NA | NA | **0.0748** | **0.0405** | **38.1** | **0.0985** | NA | NA | NA | **0.0490** | **2.18** | NA | NA | **0.412** | **0.434** | **0.0392** | NA | NA | **0.0741** | 0.0616 U | **0.198** |
| | Chrysene | 0.17 | **1.47** | NA | NA | **0.115** | **0.0716** | **72.7** | **0.162** | NA | NA | NA | **0.079** | **3.07** | NA | NA | **0.507** | **0.578** | **0.0645** | NA | NA | **0.110** | **0.065** | **0.260** |
| | Dibenz[a,h]anthracene | 0.033 | **0.40** | NA | NA | **0.106** | 0.0279 U | **20.0** | **0.0404** | NA | NA | NA | 0.040 U | **0.766** | NA | NA | **0.117** | **0.133** | **0.0142** | NA | NA | **0.0239** | 0.0616 U | **0.0428** |
| | Fluoranthene | 0.42 | **3.02** | NA | NA | **0.235** | **0.141** | **153** | **0.348** | NA | NA | NA | **0.163** | **5.70** | NA | NA | **1.02** | **1.21** | **0.127** | NA | NA | **0.231** | **0.143** | **0.462** |
| | Fluorene | 0.077 | **0.204** | NA | NA | 0.0331 U | 0.0279 U | **8.18** | **0.0450** | NA | NA | NA | **0.0710** | **0.959** | NA | NA | **0.0921** | **0.214** | 0.0127 U | NA | NA | 0.0221 U | 0.0616 U | **0.174** |
| | Indeno[1,2,3-cd]pyrene | NS | **0.976** | NA | NA | **0.104** | **0.0424** | **45.6** | **0.102** | NA | NA | NA | **0.0418** | **2.30** | NA | NA | **0.316** | **0.382** | **0.0412** | NA | NA | **0.0634** | 0.0616 U | **0.132** |
| | Naphthalene | 0.18 | **0.108** | NA | NA | 0.0331 U | 0.0279 U | **6.19** | 0.0135 U | NA | NA | NA | 0.040 U | **0.396** | NA | NA | **0.0418** | **0.0537** | 0.0127 U | NA | NA | 0.0221 U | 0.0616 U | 0.0401 U |
| | Phenanthrene | 0.2 | **1.84** | NA | NA | **0.158** | **0.080** | **62.3** | **0.219** | NA | NA | NA | **0.0974** | **4.74** | NA | NA | **0.564** | **0.855** | **0.0888** | NA | NA | **0.156** | 0.0616 U | **0.248** |
| | Pyrene | 0.2 | **2.59** | NA | NA | **0.224** | **0.122** | **120** | **0.302** | NA | NA | NA | **0.126** | **6.91** | NA | NA | **0.865** | **1.12** | **0.118** | NA | NA | **0.196** | **0.101** | **0.383** |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Aroclor 1221 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Aroclor 1232 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Aroclor 1242 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Aroclor 1248 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Aroclor 1254 | NS | **27.8 J** | **9.21 J** | **16.5 J** | NA | NA | NA | **3.43 J** | **0.870 J** | **5.07 J** | **0.305 J** | NA | **434 J** | **66.9 J** | **0.797 J** | NA | NA | **0.25 J** | **0.319 J** | 0.0584 U | NA | NA | NA |
| | Aroclor 1260 | NS | 1.47 U | 0.692 U | 0.794 U | NA | NA | NA | 0.216 U | 0.112 U | 0.360 U | 0.0845 U | NA | 20.6 UJ | 3.37 UJ | 0.0812 U | NA | NA | 0.176 UJ | 0.0603 U | 0.0584 U | NA | NA | NA |
| | Total PCBs | 0.06 | **27.8 J** | **9.21 J** | **16.5 J** | NA | NA | NA | **3.43 J** | **0.870 J** | **5.07 J** | **0.305 J** | NA | **434 J** | **66.9 J** | **0.797 J** | NA | NA | **0.25 J** | **0.319 J** | 0.0584 U | NA | NA | NA |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | | | | | | | |
| (pg/g) | 81-TeCB | NS | 20.6 U | NA | NA | NA | NA | NA | 8.37 U | 14.2 U | NA | NA | NA | 51.2 U | NA | NA | NA | NA | 6.65 U | NA | NA | NA | NA | NA |
| | 77-TeCB | NS | 21.2 U | NA | NA | NA | NA | NA | **251** | **433** | NA | NA | NA | 52.8 U | NA | NA | NA | NA | **134** | NA | NA | NA | NA | NA |
| | 123-PeCB | NS | **39.3** | NA | NA | NA | NA | NA | **470** | **783** | NA | NA | NA | **292** | NA | NA | NA | NA | **113** | NA | NA | NA | NA | NA |
| | 118-PeCB | NS | **3130** | NA | NA | NA | NA | NA | **38,200 E** | **64,000 E** | NA | NA | NA | **24,300** | NA | NA | NA | NA | **7,580** | NA | NA | NA | NA | NA |
| | 114-PeCB | NS | **50.7** | NA | NA | NA | NA | NA | **417** | **806** | NA | NA | NA | **517** | NA | NA | NA | NA | **108** | NA | NA | NA | NA | NA |
| | 105-PeCB | NS | **883** | NA | NA | NA | NA | NA | **12,700 E** | **20,700 E** | NA | NA | NA | **7,860** | NA | NA | NA | NA | **2,550** | NA | NA | NA | NA | NA |
| | 126-PeCB | NS | 42.2 U | NA | NA | NA | NA | NA | 14.9 U | 24.5 U | NA | NA | NA | 149 U | NA | NA | NA | NA | 10.0 U | NA | NA | NA | NA | NA |
| | 167-HxCB | NS | **147** | NA | NA | NA | NA | NA | **1,820** | **3,190** | NA | NA | NA | **1,080** | NA | NA | NA | NA | **432** | NA | NA | NA | NA | NA |
| | 156,157-HxCB | NS | **433** | NA | NA | NA | NA | NA | **5,840** | **10,100** | NA | NA | NA | **3,730** | NA | NA | NA | NA | **1,280** | NA | NA | NA | NA | NA |
| | 169-HxCB | NS | 19.7 U | NA | NA | NA | NA | NA | 7.69 U | 12.1 U | NA | NA | NA | 47.8 U | NA | NA | NA | NA | 8.95 U | NA | NA | NA | NA | NA |
| | 189-HpCB | NS | **25.9** | NA | NA | NA | NA | NA | **197** | **336** | NA | NA | NA | **124** | NA | NA | NA | NA | **35.3** | NA | NA | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | NS | 6.83 U | NA | NA | 21.0 U | 15.6 U | 14.5 U | 8.78 U | NA | NA | NA | 20.7 U | 15.9 U | NA | NA | 18.8 U | 16.7 U | 10.2 U | NA | NA | 11.8 U | 32.0 U | 21.2 U |
| | Arsenic | 33(a) | **9.05** | NA | NA | 13.1 U | 9.69 U | 9.06 U | 5.49 U | NA | NA | NA | 12.9 U | 9.89 U | NA | NA | 11.8 U | 10.5 U | 6.33 U | NA | NA | 7.38 U | 20.0 U | 13.3 U |
| | Barium | NS | **583** | NA | NA | **217** | **163** | **906** | **141** | NA | NA | NA | **175** | **647** | NA | NA | **194** | **166** | **66.9** | NA | NA | **72.3** | **50.1** | **66.7** |
| | Beryllium | NS | 0.43 U | NA | NA | 1.31 U | 0.97 U | 0.91 U | 0.55 U | NA | NA | NA | 1.29 U | 0.99 U | NA | NA | 1.18 U | 1.05 U | 0.64 U | NA | NA | 0.74 U | 2.00 U | 1.33 U |
| | Cadmium | 5.0(a) | **2.81** | NA | NA | 1.31 U | 0.97 U | **2.65** | **0.91** | NA | NA | NA | 1.29 U | **7.19** | NA | NA | **1.77** | 1.05 U | 0.64 U | NA | NA | 0.74 U | 2.00 U | 1.33 U |
| | Chromium | 110(a) | **59.0** | NA | NA | **12.7** | **13.3** | **32.8** | **26.9** | NA | NA | NA | **8.79** | **31.1** | NA | NA | **18.6** | **18.2** | **15.7** | NA | NA | **9.74** | **5.99** | **9.87** |
| | Lead | 130a(a) | **977** | NA | NA | **222** | **180** | **685** | **184** | NA | NA | NA | **74.2** | **1,020** | NA | NA | **328** | **143** | **26.6** | NA | NA | **59.7** | **13.2** | **104** |
| | Nickel | 49(a) | **21.5** | NA | NA | **11.3** | **9.95** | **19.8** | **7.75** | NA | NA | NA | **7.64** | **62.2** | NA | NA | **14.7** | **9.38** | **6.79** | NA | NA | **5.77** | 4.00 U | **5.63** |
| | Selenium | NS | 8.54 U | NA | NA | 26.2 U | 19.4 U | 18.2 U | 11.0 U | NA | NA | NA | 25.8 U | 19.8 U | NA | NA | 23.5 U | 20.9 U | 12.7 U | NA | NA | 14.8 U | 40.0 U | 26.5 U |
| | Silver | NS | 0.86 U | NA | NA | 2.62 U | 1.94 U | 1.82 U | 1.10 U | NA | NA | NA | 2.58 U | **1.98** | NA | NA | 2.35 U | 2.09 U | 1.27 U | NA | NA | 1.48 U | 4.00 U | 2.65 U |
| | Thallium | NS | 5.12 U | NA | NA | 15.8 U | 11.7 U | 10.9 U | 6.58 U | NA | NA | NA | 15.5 U | 11.9 U | NA | NA | 14.1 U | 12.5 U | 7.60 U | NA | NA | 8.85 U | 24.0 U | 15.9 U |
| | Vanadium | NS | **41.7** | NA | NA | 26.2 U | 19.4 U | **41.4** | **18.7** | NA | NA | NA | 25.8 U | **31.2** | NA | NA | **33.7** | **23.9** | **15.6** | NA | NA | **19.2** | 40.0 U | 26.5 U |
| | Zinc | 460(a) | **615** | NA | NA | **108** | **88.4** | **543** | **167** | NA | NA | NA | **84.3** | **1,180** | NA | NA | **358** | **158** | **91.8** | NA | NA | **50.8** | **40.3** | **58.3** |
| | Mercury | 0.18 | **0.651** | NA | NA | **0.282** | **0.201** | **0.690** | **0.191** | NA | NA | NA | **0.164** | **0.370** | NA | NA | **0.340** | **0.217** | **0.096** | NA | NA | **0.133** | **0.089** | **0.235** |
| **Total Organic Carbon** | | | | | | | | | | | | | | | | | | | | | | | | |
| (%) | Rep1 | N/A | **3.4** | NA | NA | NA | NA | NA | **8.3** | **3.8** | NA | NA | NA | **14** | NA | NA | NA | NA | **1.6** | NA | NA | NA | NA | NA |
| | Rep2 | N/A | **3.1** | NA | NA | NA | NA | NA | **6.8** | **4.9** | NA | NA | NA | **10** | NA | NA | NA | NA | **2.5** | NA | NA | NA | NA | NA |

**Notes:**
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
pg/g - picograms per gram (dry weight).
E - Esitmated value; exceeds upper limit of calibration.
J - Estimated value.
NA - Sample not analyzed for the listed analyte.
N/A - Not applicable.
U - Compound was not detected at specified quantitation limit.
UJ - Estimated non-detect.
Values in **Bold** indicate the compound was detected.
**Values shown in Bold and shaded type exceed the listed criteria.**
PAHs - Polynuclear Aromatic Hydrocarbons.
PCB - Polychlorinated Biphenyl.
TECs - Threshold Effect Concentrations, MassDEP Freshwater Sediment Screening Criteria (January 2006).
(a) - Probable Effect Concentrations, MassDEP Freshwater Sediment Screening Criteria (January 2006).
* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 5**
**Summary of Analytical Results for Supplemental Ecological Risk Characterization Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | ERC-SED7 | ERC-SED9 | ERC-SED11A-C | ERC-SED12 | ERC-SED13 | ERC-SED14 | ERC-SED15 | SD-3T | SD-07 | SD-16 | SD-27 | | SD-40 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/28/2009 | 12/28/2009 | 12/28/2009 | 12/28/2009 | 12/28/2009 | 12/28/2009 | 12/28/2009 | 12/29/2009 | 12/29/2009 | 12/28/2009 | 12/29/2009 | 12/29/2009 | 12/28/2009 | 12/28/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | | | | | | | | | | | Field Dup | | Field Dup |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | **0.341** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | 0.31 U | 0.486 U | 0.41 U | 0.29 U | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | **0.252** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | 0.31 U | 0.486 U | 0.41 U | 0.29 U | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | **0.233** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | 0.31 U | 0.486 U | 0.41 U | **0.34** | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | **0.471** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | 0.31 U | 0.486 U | 0.41 U | 0.29 U | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **0.615** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | 0.31 U | 0.486 U | 0.41 U | **0.46** | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | **5.39** | **0.45** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.707** | NA | **1.5** | 0.486 U | **0.683** | **3.5** | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **1.24** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.173** | NA | **0.5** | 0.486 U | 0.41 U | **1.1** | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **5** | **0.656** | 0.432 U | **0.594** | 0.326 U | 0.107 U | 0.131 U | **0.964** | NA | **2.6** | 0.486 U | **0.505** | **4.9** | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **5.79** | **0.713** | **0.453** | **0.697** | **0.348** | 0.107 U | 0.131 U | **1.15** | NA | **2.6** | 0.486 U | **0.733** | **4.6** | NA |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | **2.53** | **0.348** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.506** | NA | **1.3** | 0.486 U | 0.41 U | **2.3** | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | **2.51** | **0.374** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.488** | NA | **1.3** | 0.486 U | 0.41 U | **2.1** | NA |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | **1.72** | **0.289** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.494** | NA | **1.4** | 0.486 U | 0.41 U | **2.5** | NA |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | **1.38** | **0.236** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.337** | NA | **0.58** | 0.486 U | 0.41 U | **1** | NA |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | **1.8** | **0.294** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.426** | NA | **1.1** | 0.486 U | 0.41 U | **2.1** | NA |
| | Indeno(1,2,3-cd)Pyrene | 7 | 7 | 40 | 40 | 7 | N/A | **0.955** | **0.174** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.308** | NA | **0.77** | 0.486 U | 0.41 U | **1.4** | NA |
| | Dibenzo(a,h)anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | **0.378** | 0.128 U | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | 0.15 U | NA | **0.44** | 0.486 U | 0.41 U | **0.55** | NA |
| | Benzo(ghi)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **1.03** | **0.203** | 0.432 U | 0.445 U | 0.326 U | 0.107 U | 0.131 U | **0.332** | NA | **0.78** | 0.486 U | 0.41 U | **1.6** | NA |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.52 *** | **0.77 *** | **5.44 *** | **0.594 *** | **0.276 *** | 0.0613 U | **0.15 *** | NA | NA | **3.57 *** | NA | NA | **4.57 *** | **4.71 *** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.180 U | 0.0663 U | 0.289 U | 0.263 U | 0.228 U | 0.0613 U | 0.0832 U | NA | NA | 0.101 U | NA | NA | 0.0924 U | 0.161 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.52** | **0.77** | **5.44** | **0.594** | **0.276** | 0.0613 U | **0.15** | NA | NA | **3.57** | NA | NA | **4.57** | **4.71** |
| **Metals, total** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **345** | **106** | **59.3** | **140** | **39.5** | **7.84** | **15.3** | **262** | **102** | **630** | **55.2** | **45.3** | **650** | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | **4.24** | NA | NA | NA | NA | **3.56** | **10.6** | NA | **7.33** | **5.52** | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **398** | **105** | **180** | **191** | **67.2** | **26.6** | **15.0** | **253** | **175** | **390** | **96.2** | **76.5** | **380** | NA |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

U - Compound was not detected at specified quantitation limit.

Values in Bold indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purposes only.

**Table 5**
**Summary of Analytical Results for Supplemental Ecological Risk Characterization Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-43 | | SD-44 | SD-48 | SD-51 | SD-68 | SD-71 | WD .5-6.5 | WI-6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/29/2009 | 12/29/2009 | 12/29/2009 | 12/28/2009 | 12/29/2009 | 12/29/2009 | 12/28/2009 | 12/29/2009 | 12/29/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | Field Dup | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | |
| (mg/kg) | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | **0.799** | 0.381 U | 0.717 U | **0.55** | NA | 0.325 U | 0.09 U | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **1.34** | **0.624** | 0.717 U | **1.4** | NA | **0.432** | **0.12** | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **1.51** | **0.717** | 0.717 U | **1.2** | NA | **0.506** | **0.099** | NA | NA |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | **0.703** | 0.381 U | 0.717 U | **0.57** | NA | 0.325 U | 0.09 U | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | **0.657** | 0.381 U | 0.717 U | **0.88** | NA | 0.325 U | 0.09 U | NA | NA |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | **0.566** | 0.381 U | 0.717 U | **1.2** | NA | 0.325 U | **0.09** | NA | NA |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | **0.407** | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | **0.482** | 0.381 U | 0.717 U | **0.87** | NA | 0.325 U | 0.09 U | NA | NA |
| | Indeno(1,2,3-cd)Pyrene | 7 | 7 | 40 | 40 | 7 | N/A | 0.385 U | 0.381 U | 0.717 U | **0.81** | NA | 0.325 U | 0.09 U | NA | NA |
| | Dibenzo(a,h)anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | 0.385 U | 0.381 U | 0.717 U | 0.49 U | NA | 0.325 U | 0.09 U | NA | NA |
| | Benzo(ghi)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.385 U | 0.381 U | 0.717 U | **0.76** | NA | 0.325 U | 0.09 U | NA | NA |
| **PCBs** | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | **4.08 *** | NA | NA | 0.368 U | NA | NA |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | 0.190 U | NA | NA | 0.368 U | NA | NA |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | NA | NA | NA | **4.08** | NA | NA | 0.368 U | NA | NA |
| **Metals, total** | | | | | | | | | | | | | | | | |
| (mg/kg) | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **205** | **160** | **5.93** | **600** | **38.1** | **115** | **49** | **67.8** | **38.3** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | **4.39** | NA | **4.08** | NA | **6.28** | **3.74** | NA | **3.91** | **5.63** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **292** | **280** | **25.1** | **180** | **84.3** | **118** | **110** | **109** | **64.9** |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

U - Compound was not detected at specified quantitation limit.

Values in Bold indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purposes only.

**Table 6**
**Summary of Analytical Results for Ecological Risk Characterization Surface Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | Sample ID: | ERC-SED-1 | | ERC-SED-2 | ERC-SED-3 | ERC-SED-4 | ERC-SED-5 |
|---|---|---|---|---|---|---|---|---|
| | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | Sample Date | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 | 3/5/2009 |
| | | TECs | | Field Dup | | | | |
| **Pesticides** | | | | | | | | |
| (mg/kg) | 4,4'-DDE | 0.0032* | 0.076 U | 0.0615 U | 0.0875 U | **0.106** | 0.0725 U | 0.0238 U |
| | 4,4'-DDD | 0.0049* | 0.076 U | 0.0615 U | 0.0875 U | 0.0333 U | 0.0725 U | 0.0238 U |
| | 4,4'-DDT | 0.0042* | 0.076 U | 0.0615 U | 0.0875 U | **0.0837** | 0.0725 U | 0.0238 U |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed TECs.**

TECs - Threshold Effect Concentrations, MassDEP Freshwater Sediment Screening Criteria (January 2006).

* - Criteria listed are for the sum of the isomers in this group.

**Table 7**
**Summary of Analytical Results for Supplemental Ecological Risk Characterization Surface Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | SD-3Q | SD-04 | SD-23 | SD-35 | SD-42 | SD-93 | WSB-9 |
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 12/29/2009 | 12/29/2009 | 12/29/2009 | 12/29/2009 | 12/29/2009 | 12/29/2009 | 12/29/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | | | | | | |
| **Metals, total** | | | | | | | | | | | | | | |
| (mg/kg) | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **48.4** | **115** | **21.2** | **36** | **116** | **36.3** | **77** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **61.1** | **37** | **44.6** | **18.3** | **112** | NA | NA |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

U - Compound was not detected at specified quantitation limit.

Values in Bold indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

** - For reference purposes only.

**Table 8**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2009**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SED-11A-A | SED-11A-B | | SED-11A-C | SED-11A-D | SED-11A-E | SED-11A-F | SED-11A-G | | SED-11A-H | | SED-11A-I | | SED-11A-J | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 3-3.5 | 0-0.5 | 2.5-3 | 0-0.5 | 4-4.5 | 0-0.5 | 3.33-3.67 |
| | | | | | | | Sample Date: | 3/20/2009 | 3/20/2009 | 3/20/2009 | 3/20/2009 | 3/20/2009 | 3/20/2009 | 3/20/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | | Field Dup | | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Chloronaphthalene | NS | NS | NS | NS | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benz[a]anthracene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[a]pyrene | 2 | 2 | 4 | 4 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[b]fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[g,h,i]perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[k]fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dibenz[a,h]anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Indeno[1,2,3-cd]pyrene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **20.6 J** | **705 J** | **805 J** | **9.82 J** | **838 J** | **31.3 J** | **5.50 J** | **0.616 *** | 0.125 U | 0.307 U | 0.251 U | **4.71 *** | 0.245 U | **0.854 *** | 0.243 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.812 U | 19.3 UJ | 42.0 UJ | 0.669 UJ | 30.9 UJ | 1.70 UJ | 0.485 UJ | 0.275 U | 0.125 U | 0.307 U | 0.251 U | 0.233 U | 0.245 U | 0.162 U | 0.243 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **20.6 J** | **705 J** | **805 J** | **9.82 J** | **838 J** | **31.3 J** | **5.50 J** | **0.616** | 0.125 U | 0.307 U | 0.251 U | **4.71** | 0.245 U | **0.854** | 0.243 U |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | | | | | |
| (pg/g) | 81-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 77-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 123-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 118-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 114-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 105-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 126-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 167-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 156,157-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 169-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 189-HpCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total Organic Carbon** | | | | | | | | | | | | | | | | | | | | | | |
| (%) | Rep1 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Rep2 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 8**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2009**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SED-11A-K | | | SED-11A-L | | SED-11A-M | | SED-11A-N | | SLP-11A-1 | SLP-11A-2 | SLP-11A-3 | SLP-11A-4 | SLP-12 | SLP-13 | SLP-14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 4.5-5 | 0-0.5 | 3.33-3.67 | 0-0.5 | 3-3.5 | 0-0.5 | 5.16-5.67 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 8/12/2009 | 3/19/2009 | 3/19/2009 | 3/19/2009 | 3/19/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | Field Dup | | | | | | | | | | | | | | | Field Dup |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Chloronaphthalene | NS | NS | NS | NS | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benz[a]anthracene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[a]pyrene | 2 | 2 | 4 | 4 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[b]fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[g,h,i]perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[k]fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dibenz[a,h]anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Indeno[1,2,3-cd]pyrene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | 0.411 U | 0.333 U | 0.145 U | 0.165 U | 0.145 U | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | 0.411 U | 0.333 U | 0.145 U | 0.165 U | 0.145 U | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | 0.411 U | 0.333 U | 0.145 U | 0.165 U | 0.145 U | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | 0.411 U | 0.333 U | 0.145 U | 0.165 U | 0.145 U | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | **2.51 *** | 0.333 U | 0.145 U | 0.165 U | 0.145 U | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **7.65 *** | **9.78 *** | 0.333 U | **1.62 *** | 0.165 U | **3.11 *** | 0.362 U | **0.654 *** | 0.175 U | **0.0790 J** | 0.0610 U | 0.0593 U | 0.0586 U | **3.34 *** | **0.394 *** | 0.0568 U | 0.0571 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.314 U | 0.411 U | 0.333 U | **0.207 *** | 0.165 U | **0.431 *** | 0.362 U | 0.225 U | 0.175 U | 0.0615 U | 0.0610 U | 0.0593 U | 0.0586 U | 0.147 U | 0.0548 U | 0.0568 U | 0.0571 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **7.65** | **12.29** | 0.333 U | **1.827** | 0.165 U | **3.541** | 0.362 U | **0.654** | 0.175 U | **0.0790 J** | 0.0610 U | 0.0593 U | 0.0586 U | **3.34** | **0.394** | 0.0568 U | 0.0571 U |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | | | | | | | |
| (pg/g) | 81-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 77-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 123-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 118-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 114-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 105-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 126-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 167-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 156,157-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 169-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 189-HpCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total Organic Carbon** | | | | | | | | | | | | | | | | | | | | | | | | |
| (%) | Rep1 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Rep2 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 8**
**Summary of Analytical Results for Wetland Sediment and Soil Samples - 2009**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SLP-15 | SLP-16 | SLP-17 | SLP-18 | SLP-19 | SLP-20 | SLP-21 | SLP-22 | SLP-23 | SLP-24 | SLP-25 | SLP-26 | SLP-27 | OF-5A | OF-5B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 | 0-0.5 |
| | | | | | | | Sample Date: | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 | 8/13/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | | | | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Chloronaphthalene | NS | NS | NS | NS | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benz[a]anthracene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[a]pyrene | 2 | 2 | 4 | 4 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[b]fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[g,h,i]perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo[k]fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dibenz[a,h]anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Indeno[1,2,3-cd]pyrene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | 0.111 U | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | 0.0643 U | 0.0613 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | 0.111 U | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | 0.0643 U | 0.0613 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | 0.111 U | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | 0.0643 U | 0.0613 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | 0.111 U | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | 0.0643 U | 0.0613 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | **0.184** * | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | **0.0882** * | 0.0613 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | **0.314** * | **0.389** * | **0.132** * | 0.0554 U | 0.0553 U | 0.0515 U | **0.0747** * | 0.0585 U | 0.0573 U | 0.0564 U | **0.306** * | 0.0613 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | 0.114 U | 0.111 U | 0.0531 U | 0.0554 U | 0.0553 U | 0.0515 U | 0.0579 U | 0.0585 U | 0.0573 U | 0.0564 U | 0.0643 U | 0.0613 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0557 U | 0.0533 U | 0.0547 U | **0.314** | **0.573** | **0.132** | 0.0554 U | 0.0553 U | 0.0515 U | **0.0747** | 0.0585 U | 0.0573 U | 0.0564 U | **0.3942** * | 0.0613 U |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | | | | | |
| (pg/g) | 81-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 77-TeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 123-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 118-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 114-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 105-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 126-PeCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 167-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 156,157-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 169-HxCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | 189-HpCB | NS | NS | NS | NS | NS | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Total Organic Carbon** | | | | | | | | | | | | | | | | | | | | | | |
| (%) | Rep1 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Rep2 | N/A | N/A | N/A | N/A | N/A | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Table 9**
**Summary of Analytical Rsults for Summit Street Right-of-Way Sediment and Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-85 | | SD-86 | | SD-87 | | SD-88 | | | SD-89 | SD-90 | | SD-91 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 1.5-2 | 0-0.5 | 2-2.5 | 0-0.5 | 0.5-1 | 0-0.5 | 0-0.5 | 1-1.5 | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 1.5-2 |
| | | | | | | | Sample Date: | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | Field Dup | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(g,h,i)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dibenz(a,h)anthracene | 1 | 1 | 4 | 4 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Indeno(1,2,3-cd)pyrene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | **0.294** * | 0.245 U | 0.232 U | 0.275 U | **0.553** * | 0.275 U | **2.1** * | 0.0558 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | **0.294** | 0.245 U | 0.232 U | 0.275 U | **0.553** | 0.275 U | **2.1** | 0.0558 U |
| **Metals** | | | | | | | | | | | | | | | | | | | | | |
| | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

PAHs - Polynuclear Aromatic Hydrocarbons.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

**Table 9**
**Summary of Analytical Rsults for Summit Street Right-of-Way Sediment and Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SD-92 | | | SD-93 | | SD-94 | | WSB-1 | | | WSB-2 | | | WSB-3 | | | WSB-4 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 2.5-3 | 0-0.5 | 1.5-2 | 0-1 | 3-4 | 5-6 | 0-1 | 3-4 | 5-6 | 0-1 | 2-3 | 5-6 | 0-1 | 2-3 | 5-6 |
| | | | | | | | Sample Date: | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | Field Dup | | | | | | | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Benzo(g,h,i)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Dibenz(a,h)anthracene | 1 | 1 | 4 | 4 | 1 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Indeno(1,2,3-cd)pyrene | 7 | 7 | 40 | 40 | 7 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.19 U | 0.19 U | 0.18 U | 0.22 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.18 U | 0.23 U | 0.19 U | 0.18 U |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **1.34 *** | **1.06 *** | 0.0568 U | **0.140 *** | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **1.34** | **1.06** | 0.0568 U | **0.140** | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | 4.6 U | 4.5 U | 4.3 U | 5.3 U | 4.6 U | 4.5 U | 4.9 U | 4.5 U | 4.3 U | 5.5 U | 4.5 U | 4.4 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | **3.9** | **3.0** | 2.7 U | 3.3 U | **3.5** | **4.8** | **3.7** | 2.8 U | 2.7 U | 3.4 U | **3.2** | **3.1** |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | NA | NA | NA | NA | NA | NA | NA | **13** | **18** | **16** | **22** | **13** | **63** | **20** | **9.4** | **19** | **26** | **17** | **20** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.29 U | 0.28 U | 0.27 U | 0.33 U | 0.29 U | 0.28 U | 0.30 U | 0.28 U | 0.27 U | 0.34 U | 0.28 U | 0.27 U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.29 U | 0.28 U | 0.27 U | 0.33 U | 0.29 U | 0.28 U | 0.30 U | 0.28 U | 0.27 U | 0.34 U | 0.28 U | 0.27 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | NA | NA | NA | NA | NA | NA | NA | **11** | **8.0** | **7.3** | **9.7** | **8.1** | **16** | **12** | **7.8** | **11** | **15** | **11** | **9.9** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | NA | NA | NA | NA | NA | NA | NA | **14** | **2.9** | **2.9** | **36** | **5.5** | **4.6** | **19** | **1.9** | **2.7** | **26** | **3.2** | **2.7** |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | **4.1** | **4.7** | **4.6** | **4.6** | **3.9** | **9.4** | **4.9** | **4.3** | **5.4** | **5.3** | **6.1** | **3.5** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | NA | NA | NA | NA | NA | NA | NA | 5.7 U | 5.6 U | 5.4 U | 6.6 U | 5.7 U | 5.7 U | 6.1 U | 5.6 U | 5.4 U | 6.9 U | 5.6 U | 5.4 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | NA | NA | NA | NA | NA | NA | NA | 0.57 U | 0.56 U | 0.54 U | 0.66 U | 0.57 U | 0.57 U | 0.61 U | 0.56 U | 0.54 U | 0.69 U | 0.56 U | 0.54 U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | NA | NA | NA | NA | NA | NA | NA | 3.4 U | 3.4 U | 3.2 U | 3.9 U | 3.4 U | 3.4 U | 3.6 U | 3.4 U | 3.3 U | 4.1 U | 3.4 U | 3.3 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | NA | NA | NA | NA | NA | NA | NA | **16** | **10** | **8.5** | **16** | **12** | **20** | **17** | **9.9** | **10** | **20** | **12** | **11** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | NA | NA | NA | NA | NA | NA | NA | **17** | **17** | **15** | **19** | **13** | **31** | **24** | **14** | **17** | **21** | **15** | **22** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | NA | NA | NA | NA | NA | NA | NA | **0.032** | 0.019 U | 0.014 U | **0.23** | 0.021 U | 0.018 U | **0.041** | 0.017 U | 0.010 U | **0.098** | 0.020 U | 0.015 U |

**Notes:**
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Compound was not detected at specified quantitation limit.
Values in **Bold** indicate the compound was detected.
PAHs - Polynuclear Aromatic Hydrocarbons.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.

**Table 9**
**Summary of Analytical Rsults for Summit Street Right-of-Way Sediment and Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | WSB-5 | | | WSB-6 | | | | WSB-7 | | | | WSB-8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-1 | 2-3 | 5-6 | 0-1 | 0-1 | 2-3 | 5-6 | 0-1 | 1-2 | 3-4 | 4-5 | 0-1 | 1-2 | 3-4 | 4-5 | 0-1 |
| | | | | | | | Sample Date: | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | Field Dup | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Benzo(g,h,i)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Dibenz(a,h)anthracene | 1 | 1 | 4 | 4 | 1 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Indeno(1,2,3-cd)pyrene | 7 | 7 | 40 | 40 | 7 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 U | 0.18 U | 0.19 U | 0.25 U | 0.24 U | 0.20 U | 0.18 U | 0.26 U | 0.19 U | 0.19 U | NA | 0.25 U | 0.21 U | 0.19 U | NA | NA |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | **0.114** * | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | **0.586** * |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | 0.0632 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | **0.114** | 0.0611 U | NA | 0.0553 U | 0.0775 U | 0.0609 U | NA | 0.0536 U | **0.586** |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | |
| | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 5.0 U | 4.3 U | 4.5 U | 5.9 U | 5.8 U | 4.7 U | 4.4 U | 6.2 U | 4.5 U | 4.4 U | NA | 5.8 U | 4.9 U | 4.4 U | NA | NA |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | **3.6** | 2.7 U | 2.8 U | 3.7 U | 3.6 U | 2.9 U | 2.7 U | 3.9 U | **4.1** | **3.4** | NA | 3.6 U | **3.4** | **2.8** | NA | NA |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **16** | **10** | **11** | **19** | **23** | **12** | **15** | **11** | **9.6** | **17** | NA | **12** | **13** | **22** | NA | NA |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.32 U | 0.27 U | 0.28 U | 0.37 U | 0.36 U | 0.29 U | 0.27 U | 0.39 U | 0.28 U | 0.28 U | NA | 0.36 U | 0.31 U | 0.28 U | NA | NA |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | 0.32 U | 0.27 U | 0.28 U | 0.37 U | 0.36 U | 0.29 U | 0.27 U | 0.39 U | 0.28 U | 0.28 U | NA | 0.36 U | 0.31 U | 0.28 U | NA | NA |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **12** | **4.8** | **7.4** | **7.9** | **6.7** | **10** | **5.5** | **4.9** | **11** | **11** | NA | **6.1** | **11** | **8.9** | NA | NA |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **16** | **1.8** | **4.1** | **45** | **48** | **5.7** | **1.8** | **21** | **4.0** | **2.6** | NA | **6.1** | **4.8** | **3.2** | NA | NA |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **4.5** | **2.3** | **2.7** | **3.4** | **3.5** | **4.9** | **3.1** | **2.2** | **4.2** | **3.9** | NA | **2.2** | **3.3** | **4.0** | NA | NA |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 6.3 U | 5.3 U | 5.7 U | 7.4 U | 7.2 U | 5.8 U | 5.4 U | 7.7 U | 5.7 U | 5.5 U | NA | 7.3 U | 6.2 U | 5.5 U | NA | NA |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.63 U | 0.53 U | 0.57 U | 0.74 U | 0.72 U | 0.58 U | 0.54 U | 0.77 U | 0.57 U | 0.55 U | NA | 0.73 U | 0.62 U | 0.55 U | NA | NA |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 3.8 U | 3.2 U | 3.4 U | 4.4 U | 4.3 U | 3.5 U | 3.3 U | 4.6 U | 3.4 U | 3.3 U | NA | 4.4 U | 3.7 U | 3.3 U | NA | NA |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **15** | **6.8** | **7.0** | **21** | **17** | **13** | **6.9** | **20** | **17** | **13** | NA | **8.2** | **14** | **11** | NA | NA |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **18** | **13** | **12** | **24** | **28** | **13** | **9.8** | **11** | **16** | **18** | NA | **13** | **14** | **13** | NA | NA |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.072** | 0.020 U | 0.014 U | **0.11** | **0.068** | 0.020 U | 0.012 U | **0.077** | 0.016 U | 0.018 U | NA | 0.020 U | 0.015 U | 0.021 U | NA | NA |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

PAHs - Polynuclear Aromatic Hydrocarbons.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

**Table 9**
**Summary of Analytical Rsults for Summit Street Right-of-Way Sediment and Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | WSB-9 | | | WSB-10 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 1-2 | 2-3 | 3.5-5 | 0-1 | 1-2 | 2-3 | 3.5-5 |
| | | | | | | | Sample Date: | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | |
| (mg/kg) | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Benzo(g,h,i)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Dibenz(a,h)anthracene | 1 | 1 | 4 | 4 | 1 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.51 U | NA | **0.52** | 0.24 U | 0.53 U | NA | 0.39 U |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Indeno(1,2,3-cd)pyrene | 7 | 7 | 40 | 40 | 7 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | 0.51 U | NA | 0.43 U | 0.24 U | 0.53 U | NA | 0.39 U |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | 0.51 U | NA | **0.53** | 0.24 U | 0.53 U | NA | 0.39 U |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.51 U | NA | **0.54** | 0.24 U | 0.53 U | NA | 0.39 U |
| **PCBs** | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.587 *** | **0.585 *** | NA | **0.445 *** | **0.0845 *** | **0.296 *** | NA |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | NA | 0.0905 U | 0.0694 U | 0.0796 U | NA |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.587** | **0.585** | NA | **0.445** | **0.0845** | **0.296** | NA |
| **Metals** | | | | | | | | | | | | | | |
| | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 5.9 U | NA | 5.0 U | 5.6 U | 6.2 U | NA | 9.1 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | **3.7** | NA | **3.9** | 3.5 U | 3.9 U | NA | **6.4** |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **48** | NA | **41** | **21** | **20** | NA | **66** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.37 U | NA | 0.31 U | 0.35 U | 0.39 U | NA | 0.57 U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | 0.37 U | NA | 0.31 U | 0.35 U | 0.39 U | NA | 0.57 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **8.3** | NA | **7.8** | **6.1** | **4.9** | NA | **7.8** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **61** | NA | **68** | **55** | **17** | NA | **39** |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **6.6** | NA | **4.8** | **4.1** | **3.8** | NA | **5.1** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 7.4 U | NA | 6.3 U | 6.9 U | 7.7 U | NA | 11 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.74 U | NA | 0.63 U | 0.69 U | 0.77 U | NA | 1.1 U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 4.4 U | NA | 3.8 U | 4.2 U | 4.6 U | NA | 6.8 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **14** | NA | **12** | **10** | **8.7** | NA | **13** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **45** | NA | **39** | **29** | **31** | NA | **45** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.064** | NA | **0.052** | **0.061** | 0.022 U | NA | **0.10** |

**Notes:**
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
U - Compound was not detected at specified quantitation limit.
Values in **Bold** indicate the compound was detected.
PAHs - Polynuclear Aromatic Hydrocarbons.
RC - Reportable Concentration.
TSCA - Toxic Substances Control Act criteria.

**Table 10**
**Summary of Analytical Results for Groundwater Samples -- January 2010**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | Sample ID: | MW-1 | MW-2 | MW-3 | MW-9 | | MW-10 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date: | 1/6/2010 | 1/6/2010 | 1/6/2010 | 1/7/2010 | 1/7/2010 | 1/7/2010 |
| | | GW-2 | GW-3 | | | | | Field Dup | |
| **PCBs** | | | | | | | | | |
| (ug/L) | Aroclor 1016 | 5 | 10 | NA | NA | NA | 0.0510 U | 0.0505 U | 0.0500 U |
| | Aroclor 1221 | 5 | 10 | NA | NA | NA | 0.0510 U | 0.0505 U | 0.0500 U |
| | Aroclor 1232 | 5 | 10 | NA | NA | NA | 0.0510 U | 0.0505 U | 0.0500 U |
| | Aroclor 1242 | 5 | 10 | NA | NA | NA | **0.0495 J** | **0.0500 J** | 0.0500 U |
| | Aroclor 1248 | 5 | 10 | NA | NA | NA | 0.0510 U | 0.0505 U | 0.0500 U |
| | Aroclor 1254 | 5 | 10 | NA | NA | NA | **0.0235 J** | **0.0311 J** | 0.0500 U |
| | Aroclor 1260 | 5 | 10 | NA | NA | NA | 0.0510 U | 0.0505 U | 0.0500 U |
| | Total PCBs | 5 | 10 | NA | NA | NA | **0.0730 J** | **0.0811 J** | 0.0500 U |
| **Metals, dissolved** | | | | | | | | | |
| (ug/L) | Antimony | NS | 8,000 | 40 U | 40 U | 40 U | 40 U | 40 U | 40 U |
| | Arsenic | NS | 900 | **8.6** | **7.4** | **7.0** | **8.2** | **10** | 5.0 U |
| | Barium | NS | 50,000 | **98** | **300** | **420** | **330** | **340** | 50 U |
| | Beryllium | NS | 200 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Cadmium | NS | 4 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Chromium | NS | 300 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| | Lead | NS | 10 | 7.5 U | 7.5 U | 7.5 U | 7.5 U | 7.5 U | 7.5 U |
| | Mercury | NS | 20 | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| | Nickel | NS | 200 | 5.0 U | 5.0 U | 5.0 U | **6.7** | **6.8** | 5.0 U |
| | Selenium | NS | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| | Silver | NS | 7 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Thallium | NS | 3,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| | Vanadium | NS | 4,000 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| | Zinc | NS | 900 | **18.0** | **97** | **41** | **99** | **94** | **17** |
| | Antimony | NS | 8,000 | 40 U | 40 U | 40 U | 40 U | 40 U | 40 U |
| **Metals, total** | | | | | | | | | |
| (ug/L) | Arsenic | NS | 900 | **7.8** | **11.0** | **7.5** | **8.9** | **9.1** | 5.0 U |
| | Barium | NS | 50,000 | **100** | **450** | **470** | **360** | **360** | 50 U |
| | Beryllium | NS | 200 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Cadmium | NS | 4 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Chromium | NS | 300 | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U | 5.0 U |
| | Lead | NS | 10 | 7.5 U | 7.5 U | **34** | 7.5 U | 7.5 U | 7.5 U |
| | Mercury | NS | 20 | 0.10 U | **0.14** | 0.10 U | 0.10 U | 0.10 U | 0.10 U |

**Table 10**
**Summary of Analytical Results for Groundwater Samples -- January 2010**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | Sample ID: | MW-1 | MW-2 | MW-3 | MW-9 | | MW-10 |
|---|---|---|---|---|---|---|---|---|---|
| | | | Sample Date: | 1/6/2010 | 1/6/2010 | 1/6/2010 | 1/7/2010 | 1/7/2010 | 1/7/2010 |
| | | GW-2 | GW-3 | | | | | Field Dup | |
| | Nickel | NS | 200 | 5.0 U | 5.0 U | 5.0 U | **7.1** | **6.8** | 5.0 U |
| | Selenium | NS | 100 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| | Silver | NS | 7 | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U | 2.5 U |
| | Thallium | NS | 3,000 | 30 U | 30 U | 30 U | 30 U | 30 U | 30 U |
| | Vanadium | NS | 4,000 | 25 U | 25 U | 25 U | 25 U | 25 U | 25 U |
| | Zinc | NS | 900 | **86** | **160** | **38** | **100** | **130** | **16** |

**Notes:**

ug/L - micrograms per liter.

J - Estimated value.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this compound.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

**Table 11**
**Summary of Analytical Results for Toe-of-Slope Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | TSB-1 | | | | TSB-2 | | | | TSB-3 | | | | TSB-4 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 |
| | | | | | | | Sample Date: | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1* | TSCA | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | **23.8** | **0.366** | 0.0539 U | 0.0552 U | **18.5** | **3.01** | 0.0529 U | 0.0517 U | **0.634** | **0.295** | 0.272 U | 0.156 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | 0.826 U | 0.0536 U | 0.0539 U | 0.0552 U | 0.564 U | 0.132 U | 0.0529 U | 0.0517 U | 0.195 U | 0.226 U | 0.272 U | 0.156 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0572 U | 0.0551 U | 0.0517 U | 0.0529 U | **23.8** | **0.366** | 0.0539 U | 0.0552 U | **18.5** | **3.01** | 0.0529 U | 0.0517 U | **0.634** | **0.295** | 0.272 U | 0.156 U |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 4.6 U | 4.3 U | 4.3 U | 4.4 U | 6.0 U | 4.4 U | 4.4 U | 4.6 U | 7.1 U | 11 U | 4.5 U | 4.5 U | 16 U | 19 U | 23 U | 12 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | **3.3** | **3.4** | 2.7 U | 2.7 U | **7.8** | **3.6** | 2.7 U | **4.5** | **9.5** | 7.0 U | **4.0** | 2.8 U | 10 U | **12** | 15 U | 7.7 U |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **45** | **47** | **15** | **14** | **770** | **42** | **14** | **15** | **440** | **300** | **28** | **12** | **180** | **240** | **100** | **40** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.29 U | 0.27 U | 0.27 U | 0.27 U | 0.38 U | 0.27 U | 0.27 U | 0.29 U | **0.54** | **2.2** | 0.28 U | 0.28 U | 1.0 U | **2.8** | **1.7** | 0.77 U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | 0.29 U | 0.27 U | 0.27 U | 0.27 U | **2.4** | 0.27 U | 0.27 U | 0.29 U | **2.5** | **1.9** | 0.28 U | 0.28 U | **3.0** | 1.2 U | 1.5 U | 0.77 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **13** | **8.1** | **5.6** | **8.2** | **68** | **11** | **8.1** | **13** | **100** | **75** | **14** | **5.5** | **14** | **47** | **20** | **20** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **13** | **4.3** | **1.8** | **2.3** | **710** | **6.6** | **2.8** | **3.1** | **760** | **350** | **3.6** | **1.8** | **71** | **42** | **27** | **7.3** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | 0.016 U | 0.025 U | 0.021 U | 0.020 U | **0.74** | **0.050** | 0.024 U | 0.019 U | **0.74** | **0.54** | 0.021 U | 0.014 U | **0.097** | **0.34** | 0.10 U | 0.040 U |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **3.8** | **3.5** | **3.3** | **3.2** | **24** | **3.4** | **2.9** | **3.3** | **17** | **13** | **7.8** | **2.4** | **19** | **12** | **9.5** | **10** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 5.7 U | 5.4 U | 5.3 U | 5.5 U | 7.5 U | 5.4 U | 5.5 U | 5.7 U | 8.9 U | 14 U | 5.6 U | 5.6 U | 20 U | 23 U | 29 U | 15 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.57 U | 0.54 U | 0.53 U | 0.55 U | 0.75 U | 0.54 U | 0.55 U | 0.57 U | 0.89 U | 1.4 U | 0.56 U | 0.56 U | 2.0 U | 2.3 U | 2.9 U | 1.5 U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 3.4 U | 3.2 U | 3.2 U | 3.3 U | 4.5 U | 3.3 U | 3.3 U | 3.4 U | 5.3 U | 8.4 U | 3.4 U | 3.3 U | 12 U | 14 U | 17 U | 9.3 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **16** | **16** | **8.4** | **13** | **62** | **15** | **10** | **21** | **58** | **25** | **16** | **6.4** | 20 U | 23 U | **30** | **19** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **35** | **30** | **12** | **13** | **480** | **22** | **12** | **17** | **320** | **320** | **28** | **9.8** | **610** | **340** | **140** | **32** |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - For reference purposes only.

**Table 11**
**Summary of Analytical Results for Toe-of-Slope Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | TSB-5 | | | | TSB-6 | | TSB-7 | | TSB-8 | | | | TSB-9 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-1 | 1-2 | 2-3 | 3-4 | 0-2 | 2-4 | 0-2 | 2-4 | 0-1 | 1-2.5 | 2.5-4 | 2.5-4 | 0-1 | 1-2.5 | 2.5-4 |
| | | | | | | | Sample Date: | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 Field Dup | 2/8/2010 | 2/8/2010 | 2/8/2010 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1* | TSCA | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.190 U | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.190 U | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.190 U | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.190 U | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.190 U | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **3.68** | 0.219 U | 0.339 U | 0.299 U | **4.58** | **3.65** | **5.04** | 0.220 U | **2.28** | **2.86** | **0.436** | 0.339 U | **17.6** | **8.29** | 0.358 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | **0.569** | 0.219 U | 0.339 U | 0.299 U | 0.200 U | 0.109 U | 0.216 U | 0.220 U | 0.284 U | 0.378 U | 0.324 U | 0.339 U | 0.669 U | 0.282 U | 0.358 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **4.249** | 0.219 U | 0.339 U | 0.299 U | **4.58** | **3.65** | **5.04** | 0.220 U | **2.28** | **2.86** | **0.436** | 0.339 U | **17.6** | **8.29** | 0.358 U |
| **Metals** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 7.0 U | 19 U | 29 U | 25 U | 5.5 U | 9.8 U | 5.9 U | 21 U | **40** | 28 U | 25 U | 22 U | 15 U | 23 U | 31 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | **6.1** | 12 U | 18 U | 16 U | **12** | **9.7** | **7.9** | 13 U | 14 U | 18 U | 16 U | 14 U | 9.3 U | 14 U | 19 U |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **560** | **440** | **200** | **100** | **340** | **670** | **750** | **250** | **200** | **45** | **56** | **60** | **460** | **280** | **65** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.43 U | 1.2 U | 1.8 U | 1.6 U | 0.34 U | 0.61 U | 0.37 U | 1.3 U | 1.4 U | 1.8 U | 1.6 U | 1.4 U | 0.93 U | 1.4 U | 1.9 U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | **2.2** | 1.2 U | 1.8 U | 1.6 U | **1.5** | **3.3** | **1.7** | 1.3 U | **1.9** | 1.8 U | 1.6 U | 1.4 U | **1.5** | 1.4 U | 1.9 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **28** | **5.2** | **7.2** | **11** | **32** | **38** | **47** | **4.4** | **11** | **4.1** | **12** | **15** | **7.3** | **7.2** | **6.5** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **390** | **35** | **44** | **31** | **420** | **460** | **570** | **20** | **350** | **9.4** | **8.1** | **5.3** | **130** | **23** | 5.8 U |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.098** | 0.087 U | 0.17 U | **0.35** | **0.37** | **0.33** | **0.45** | 0.061 U | 0.13 U | 0.15 U | **0.12** | 0.081 U | **0.16** | 0.11 U | 0.14 U |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **17** | **6.5** | 3.6 U | 3.2 U | **21** | **41** | **29** | 2.7 U | **9.7** | 3.5 U | **3.3** | **4.2** | **15** | **9.5** | 3.9 U |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 8.7 U | 23 U | 36 U | 32 U | 6.9 U | 12 U | 7.4 U | 27 U | 29 U | 35 U | 31 U | 27 U | 19 U | 29 U | 39 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.87 U | 2.3 U | 3.6 U | 3.2 U | 0.69 U | 1.2 U | 0.74 U | 2.7 U | 2.9 U | 3.5 U | 3.1 U | 2.7 U | 1.9 U | 2.9 U | 3.9 U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 5.2 U | 14 U | 21 U | 19 U | 4.1 U | 7.3 U | 4.4 U | 16 U | 17 U | 21 U | 19 U | 16 U | 11 U | 17 U | 23 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **26** | 23 U | 36 U | 32 U | **40** | **34** | **33** | 27 U | 29 U | 35 U | 31 U | 27 U | 19 U | 29 U | 39 U |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **370** | **170** | **59** | **30** | **400** | **720** | **630** | **26** | **190** | **15** | **9.9** | **5.6** | **440** | **270** | **33** |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - For reference purposes only.

**Table 11**
**Summary of Analytical Results for Toe-of-Slope Sediment Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | TSB-10 | | | TSB-11 | | | | | TSB-12 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-1 | 1-2.5 | 2.5-4 | 0-1 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 |
| | | | | | | | Sample Date: | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/9/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 | 2/8/2010 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1* | TSCA | | | | | Field Dup | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.812** | 0.190 U | 0.359 U | **1.05** | **1.55** | **0.257** | 0.0837 U | 0.0584 U | **3.02** | **0.399** | 0.224 U | 0.0566 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.136 U | 0.190 U | 0.359 U | 0.181 U | 0.183 U | 0.146 U | 0.0837 U | 0.0584 U | 0.163 U | 0.227 U | 0.224 U | 0.0566 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.812** | 0.190 U | 0.359 U | **1.05** | **1.55** | **0.257** | 0.0837 U | 0.0584 U | **3.02** | **0.399** | 0.224 U | 0.0566 U |
| **Metals** | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 6.3 U | 16 U | 29 U | 7.2 U | 14 U | 13 U | 6.1 U | 4.9 U | 19 U | 7.5 U | 17 U | 4.2 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | **6.8** | 10 U | 18 U | **5.3** | 9.0 U | 8.1 U | 3.8 U | 3.0 U | 12 U | **6.2** | 11 U | 2.6 U |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **76** | **180** | **61** | **120** | **320** | **110** | **45** | **21** | **390** | **200** | **93** | **11** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.39 U | 1.0 U | 1.8 U | 0.45 U | **1.1** | **1.5** | 0.38 U | 0.30 U | 1.2 U | 0.47 U | **2.0** | 0.26 U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | **1.1** | 1.0 U | 1.8 U | **0.52** | **1.1** | 0.81 U | 0.38 U | 0.30 U | **1.8** | **12** | 1.1 U | 0.26 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **13** | **8.3** | **6.7** | **17** | **27** | **36** | **19** | **11** | **36** | **15** | **22** | **3.7** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **110** | **56** | **6.1** | **120** | **220** | **75** | **13** | **5.0** | **450** | **230** | **10** | **2.3** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.097** | **0.16** | 0.16 U | **0.055** | **0.26** | **0.076** | 0.019 U | 0.014 U | **0.35** | **0.29** | 0.095 U | 0.011 U |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **12** | **8.9** | 3.6 U | **9.2** | **12** | **12** | **8.5** | **4.5** | **19** | **10** | **13** | **1.9** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 7.9 U | 21 U | 36 U | 9.0 U | 18 U | 16 U | 7.6 U | 6.1 U | 24 U | 9.3 U | 21 U | 5.3 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.79 U | 2.1 U | 3.6 U | 0.90 U | 1.8 U | 1.6 U | 0.76 U | 0.61 U | 2.4 U | 0.93 U | 2.1 U | 0.53 U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 4.7 U | 12 U | 21 U | 5.4 U | 11 U | 9.7 U | 4.6 U | 3.6 U | 14 U | 5.6 U | 13 U | 3.2 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **17** | 21 U | 36 U | **13** | **24** | **29** | **20** | **10** | **44** | **18** | **40** | 5.3 U |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **270** | **170** | **17** | **140** | **250** | **86** | **27** | **15** | **320** | **230** | **16** | **7.0** |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

**Values shown in Bold and outlined exceed TSCA but are less than the listed Method 1 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - For reference purposes only.

**Table 12**
**Summary of Analytical Results for Fenceline Soil Samples - Durfee Street Properties**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | SB-27 | | | SB-95 | | | SB-100 | | SB-101 | | | SB-105 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.)*: | 1.0 | 3.5 | 7.0 | 1 | 4 | 8 | 1 | 5 | 1 | 3.5 | 7 | 1 | 4 | 7 | 10 |
| | | | | | | | Sample Date: | 11/29/2007 | 11/29/2007 | 11/29/2007 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/6/2008 | 5/6/2008 | 5/6/2008 | 5/6/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | | | | | | | | | | | | | | |
| **PAHs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | 0.20 U | **0.32** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **34.5** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | 0.20 U | 0.24 U | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | 1.11 U | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.20 U | **0.94** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **61.8** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Benzo(a)anthracene | 7 | 7 | 40 | 40 | 7 | N/A | 0.20 U | **3.12** | 0.19 U | **0.19** | **0.34** | 0.19 U | **0.35** | 0.19 U | **0.24** | **77.9** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Benzo(a)pyrene | 2 | 2 | 4 | 4 | 2 | N/A | 0.20 U | **2.73** | 0.19 U | **0.20** | **0.33** | 0.19 U | **0.38** | 0.19 U | **0.25** | **59.5** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Benzo(b)fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | 0.20 U | **3.63** | 0.19 U | **0.23** | **0.46** | 0.19 U | **0.63** | 0.19 U | **0.39** | **79.0** | 0.18 U | **0.25** | 0.19 U | 0.19 U | NA |
| | Benzo(g,h,i)perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.20 U | **1.08** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **20.3** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Benzo(k)fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | 0.20 U | **1.22** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | **0.20** | 0.19 U | 0.20 U | **31.2** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | 0.20 U | **2.98** | 0.19 U | **0.21** | **0.31** | 0.19 U | **0.43** | 0.19 U | **0.26** | **71.9** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Dibenz(a,h)anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | 0.20 U | **0.31** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **6.84** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.20 U | **3.73** | 0.19 U | **0.32** | **0.62** | 0.19 U | **0.76** | 0.19 U | **0.47** | **228** | 0.18 U | **0.28** | 0.19 U | 0.19 U | NA |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.20 U | **0.34** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **42.5** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Indeno(1,2,3-cd)pyrene | 7 | 7 | 40 | 40 | 7 | N/A | 0.20 U | **1.34** | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **28.6** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 1 | N/A | 0.20 U | 0.24 U | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **16.6** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | 0.20 U | 0.24 U | 0.19 U | 0.19 U | 0.20 U | 0.19 U | 0.21 U | 0.19 U | 0.20 U | **46.5** | 0.18 U | 0.21 U | 0.19 U | 0.19 U | NA |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | 0.20 U | **4.32** | 0.19 U | **0.25** | **0.39** | 0.19 U | **0.47** | 0.19 U | **0.32** | **288** | 0.18 U | **0.23** | 0.19 U | 0.19 U | NA |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **0.22** | **4.26** | 0.19 U | **0.39** | **0.45** | 0.19 U | **0.48** | 0.19 U | **0.31** | **163** | 0.18 U | **0.39** | 0.19 U | 0.19 U | NA |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.0845 *** | **1.19 *** | 0.0526 U | **0.0865 J** | **1.27 J** | 0.0536 U | **0.270 J** | 0.0525 U | **0.0789 J** | **0.515 J** | 0.0532 U | **0.155 J** | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | **0.182 J** | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.051 U | 0.0529 U | 0.0505 U | NA |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.0845** | **1.19** | 0.0526 U | **0.0865 J** | **1.452 J** | 0.0536 U | **0.270 J** | 0.0525 U | **0.0789 J** | **0.515 J** | 0.0532 U | **0.155 J** | 0.0529 U | 0.0505 U | NA |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Monochlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.016 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Dichlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.016 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Trichlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.016 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Tetrachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.032 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Pentachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | **0.11** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Hexachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | **0.046** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Heptachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.049 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Octachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.049 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Nonachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.081 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Decachlorobiphenyls | N/A | N/A | N/A | N/A | N/A | N/A | NA | 0.081 U | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | NA | **0.156** | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **Metals, total** | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 4.65 U | 5.61 U | 4.48 U | 4.50 U | 4.74 U | 4.50 U | 4.91 U | 4.47 U | 4.61 U | 5.32 U | 4.31 U | 4.90 U | 4.35 U | 4.35 U | 4.48 U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | 2.91 U | 3.51 U | 2.80 U | 2.81 U | 2.96 U | 2.82 U | **4.42** | 2.80 U | 2.88 U | **7.22** | 2.69 U | 3.06 U | 2.72 U | 2.72 U | **3.25** |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **31.1** | **135** | **6.78** | **41.7** | **135** | **24.8** | **128** | **15.4** | **60.4** | **314** | **22.2** | **31.2** | **132** | **58.3** | **24.3** |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.30 U | 0.36 U | 0.28 U | 0.29 U | **0.67** | 0.29 U | 0.31 U | 0.28 U | 0.29 U | 0.34 U | 0.27 U | 0.31 U | 0.28 U | 0.28 U | **0.38** |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | 0.30 U | **1.12** | 0.28 U | 0.29 U | **0.92** | 0.29 U | **5.17** | 0.28 U | **0.50** | **4.52** | 0.27 U | 0.31 U | **0.72** | 0.28 U | 0.28 U |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **10.4** | **10.4** | **6.18** | **9.75** | **11.2** | **22.4** | **25.7** | **8.96** | **61.7** | **31.5** | **11.0** | **19.9** | **11.5** | **39.8** | **11.9** |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **60.9** | **366** | **3.25** | **95.8** | **443** | **3.60** | **816** | **9.18** | **150** | **749** | **3.36** | **3.39** | **587** | **5.53** | **3.07** |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **6.10** | **6.70** | **5.59** | **5.20** | **5.15** | **10.3** | **15.1** | **5.90** | **5.96** | **78.9** | **6.38** | **13.3** | **5.30** | **17.0** | **5.11** |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 5.81 U | 7.01 U | 5.60 U | 5.62 U | 5.92 U | 5.63 U | 6.13 U | 5.59 U | 5.76 U | 6.65 U | 5.38 U | 6.12 U | 5.43 U | 5.43 U | 5.60 U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.59 U | 0.71 U | 0.56 U | 0.57 U | **1.57** | **0.60** | **1.22** | 0.56 U | **0.69** | **3.99** | 0.54 U | **0.67** | **0.61** | **0.68** | **1.02** |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 3.49 U | 4.21 U | 3.36 U | 3.38 U | 3.56 U | 3.38 U | 3.68 U | 3.35 U | 3.46 U | 3.99 U | 3.23 U | 3.68 U | 3.26 U | 3.26 U | 3.36 U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **14.1** | **18.6** | **9.44** | **13.6** | **21.5** | **21.9** | **17.5** | **12.7** | **19.1** | **21.9** | **17.8** | **24.2** | **14.1** | **27.8** | **13.3** |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **41.2** | **254** | **23.0** | **64.9** | **168** | **27.9** | **497** | **26.6** | **131** | **1050** | **35.6** | **41.6** | **204** | **34.5** | **26.3** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.046** | **0.174** | **0.017** | **0.120** | **0.432** | 0.011 U | **0.557** | **0.013** | **0.201** | **0.557** | 0.022 U | **0.112** | **0.019** | 0.010 U | 0.010 U |

**Table 13**
**Summary of Analytical Results for Fence Installation Soil Samples**
**Keith Middle School**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Sample ID: | Durfee-Post | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample Depth (ft.): | 0-1 | |
| | | | | | | | Sample Date: | 11/13/2009 | |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1** | TSCA | | |
| **PAHs** | | | | | | | | | |
| (mg/kg) | 2-Methylnaphthalene | 80 | 300 | 80 | 500 | 0.7 | N/A | 0.21 | U |
| | Acenaphthene | 1,000 | 1,000 | 3,000 | 3,000 | 4 | N/A | 0.21 | U |
| | Acenaphthylene | 600 | 10 | 600 | 10 | 1 | N/A | 0.21 | U |
| | Anthracene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 | U |
| | Benz[a]anthracene | 7 | 7 | 40 | 40 | 7 | N/A | **0.45** | |
| | Benzo[a]pyrene | 2 | 2 | 4 | 4 | 2 | N/A | **0.49** | |
| | Benzo[b]fluoranthene | 7 | 7 | 40 | 40 | 7 | N/A | **0.69** | |
| | Benzo[g,h,i]perylene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **0.21** | |
| | Benzo[k]fluoranthene | 70 | 70 | 400 | 400 | 70 | N/A | **0.25** | |
| | Chrysene | 70 | 70 | 400 | 400 | 70 | N/A | **0.59** | |
| | Dibenz[a,h]anthracene | 0.7 | 0.7 | 4 | 4 | 0.7 | N/A | 0.21 | U |
| | Fluoranthene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **1.1** | |
| | Fluorene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | 0.21 | U |
| | Indeno[1,2,3-cd]pyrene | 7 | 7 | 40 | 40 | 7 | N/A | **0.26** | |
| | Naphthalene | 40 | 500 | 40 | 1,000 | 4 | N/A | 0.21 | U |
| | Phenanthrene | 500 | 500 | 1,000 | 1,000 | 10 | N/A | **1.2** | |
| | Pyrene | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **0.77** | |
| **PCB Aroclors** | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.211** | * |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0623 | U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.211** | |
| **Metals** | | | | | | | | | |
| (mg/kg) | Antimony | 20 | 20 | 30 | 30 | 20 | N/A | 4.9 | U |
| | Arsenic | 20 | 20 | 20 | 20 | 20 | N/A | 3.1 | U |
| | Barium | 1,000 | 1,000 | 3,000 | 3,000 | 1,000 | N/A | **110** | |
| | Beryllium | 100 | 100 | 200 | 200 | 100 | N/A | 0.31 | U |
| | Cadmium | 2 | 2 | 30 | 30 | 2 | N/A | **0.88** | |
| | Chromium | 30 | 30 | 200 | 200 | 30 | N/A | **18** | |
| | Lead | 300 | 300 | 300 | 300 | 300 | N/A | **380** | |
| | Nickel | 20 | 20 | 700 | 700 | 20 | N/A | **6.0** | |
| | Selenium | 400 | 400 | 800 | 800 | 400 | N/A | 6.2 | U |
| | Silver | 100 | 100 | 200 | 200 | 100 | N/A | 0.62 | U |
| | Thallium | 8 | 8 | 60 | 60 | 8 | N/A | 3.7 | U |
| | Vanadium | 600 | 600 | 1,000 | 1,000 | 600 | N/A | **18** | |
| | Zinc | 2,500 | 2,500 | 3,000 | 3,000 | 2,500 | N/A | **190** | **B** |
| | Mercury | 20 | 20 | 30 | 30 | 20 | N/A | **0.14** | |

**Notes:**

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

B - Compound detected in associated method blank

N/A - Not applicable.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed MassDEP Method 1 standards.**

PAHs - Polynuclear Aromatic Hydrocarbons.

PCB - Polychlorinated Biphenyl.

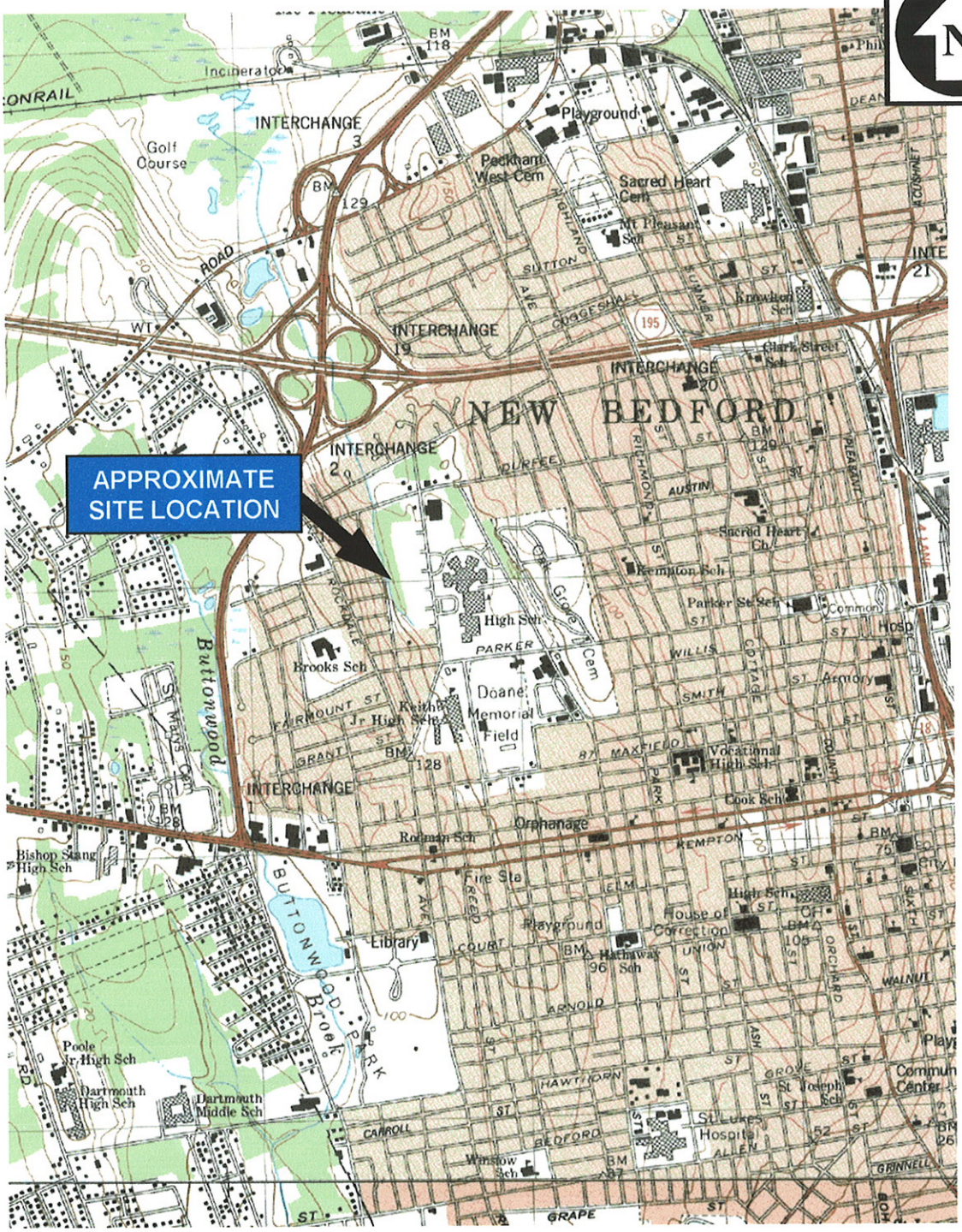
RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

** - For reference purpose only.

# FIGURES




**BASE MAP IS A PORTION OF THE FOLLOWING 7.5' X 15' USGS TOPOGRAPHIC QUADRANGLES: NEW BEDFORD NORTH, MA, 1979; NEW BEDFORD SOUTH, MA 1977**

0 1000 2000 3000

scale in feet

QUADRANGLE LOCATION

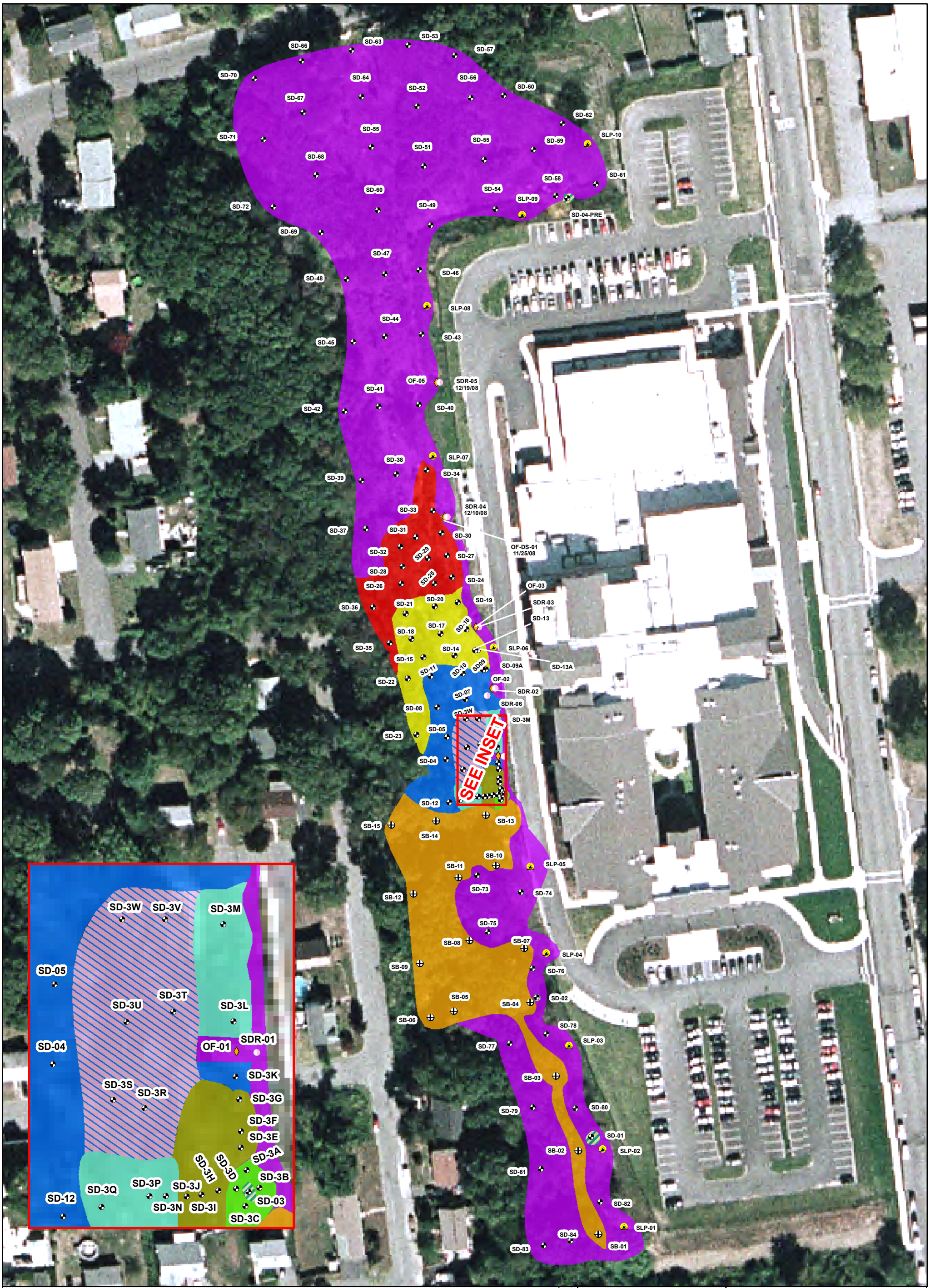
**KEITH MIDDLE SCHOOL WETLAND**
**PCB CONTAMINATED SEDIMENTS**
**NEW BEDFORD, MASSACHUSETTS**

**SITE LOCATION MAP**

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
978-970-5600

| | | |
|---|---|---|
| Drawn: HWB | SCALE: AS SHOWN | FIGURE 1 |
| Checked: DS | Date: JULY 2008 | |

T:\E_CAD\115058\TOPO KEITH MIDDLE SCHOOL.ppt




**Sampling Date Identification Colors**

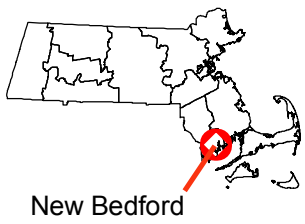
11/07/07 -11/08/07
5/27/08
6/10/08
6/19/08
7/30/08
8/19/08
9/18/08
10/03/08 - 10/06/08
10/22/08 - 10/23/08
12/03/08 - 12/10/08

- Sediment Sample
- Soil Borings
- Soil Sample collected from adjacent slope
- Sample collected of soil at outfall of storm drain
- Sample collected of material within storm drain

0 25 50 75 100 125 150 175 200 Feet
0 12 24 36 48 60 Meters

Basemap: 2007 Aerialphoto

Site Location
Massachusetts



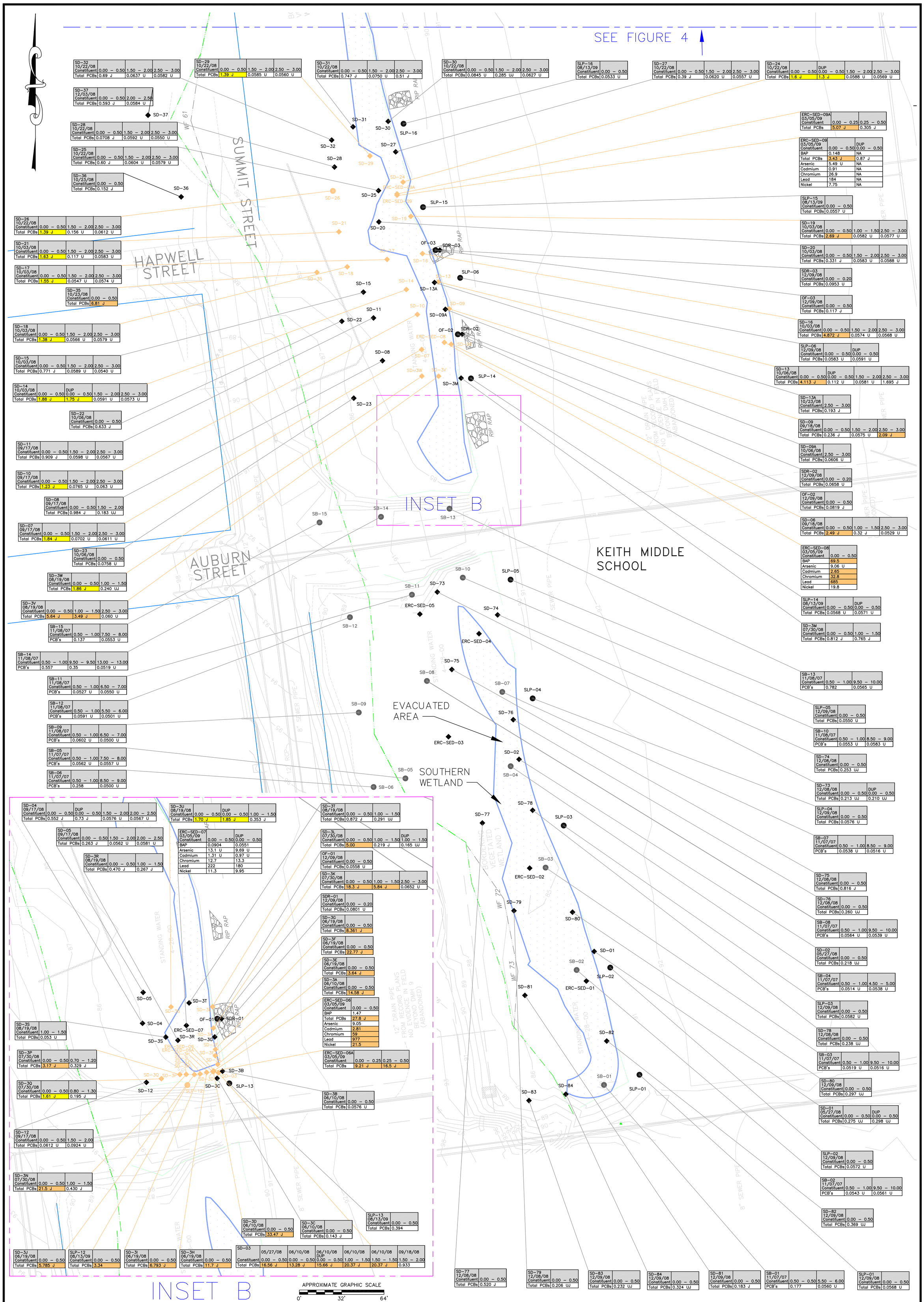

TRC
650 Suffolk St.
Wannalancit Mills
Lowell, MA 01854

SAMPLING LOCATION PLAN

NEW BEDFORD, MA

FIGURE 2 | MARCH 2009

R:\Projects\GIS_2007\54634_NBedford\MXDS_PRESENTATION_012109\DATE-LOGGING-BORING.mxd




NOTES:
ALL UNITS IN MG/KG UNLESS OTHERWISE SPECIFIED.
MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
DUP - FIELD DUPLICATE SAMPLE.
J - ESTIMATED VALUE.
NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE.
N/A - NOT APPLICABLE.
PCBS - POLYCHLORINATED BIPHENYLS.
RCS - REPORTABLE CONCENTRATIONS.
TSCA - TOXIC SUBSTANCES CONTROL ACT.
U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.
UJ - ESTIMATED NON-DETECT.

● SOIL SAMPLE LOCATION
◆ SEDIMENT SAMPLE LOCATION
◆ SAMPLE LOCATION WITH EXCEEDANCE(S)
WETLAND BOUNDARY

SAMPLE LOCATION SD-35
SAMPLE DATE 10/23/08
Constituent 0.00 – 0.50 SAMPLE DEPTH RANGE IN FEET
Total PCBs 6.81 J

**Summary of Regulatory Comparison Criteria for Soil (mg/kg)**

| Contaminant Names | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene (BAP)* | 2 | 2 | 4 | 4 | 2 | N/A |
| *Total PCBs* | 2 | 2 | 2 | 2 | 2 | 1 |
| *Arsenic* | 20 | 20 | 20 | 20 | 20 | N/A |
| *Barium* | 1000 | 1000 | 3000 | 3000 | 1000 | N/A |
| *Cadmium* | 2 | 2 | 30 | 30 | 2 | N/A |
| *Chromium* | 30 | 30 | 200 | 200 | 30 | N/A |
| *Lead* | 300 | 300 | 300 | 300 | 300 | N/A |

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS

VALUES SHOWN IN YELLOW BACKGROUND EXCEED TSCA BUT ARE LESS THAN THE LISTED MASSDEP METHOD 1 STANDARDS

APPROXIMATE GRAPHIC SCALE
0' 32' 64'

KEITH MIDDLE SCHOOL
NEW BEDFORD, MASSACHUSETTS

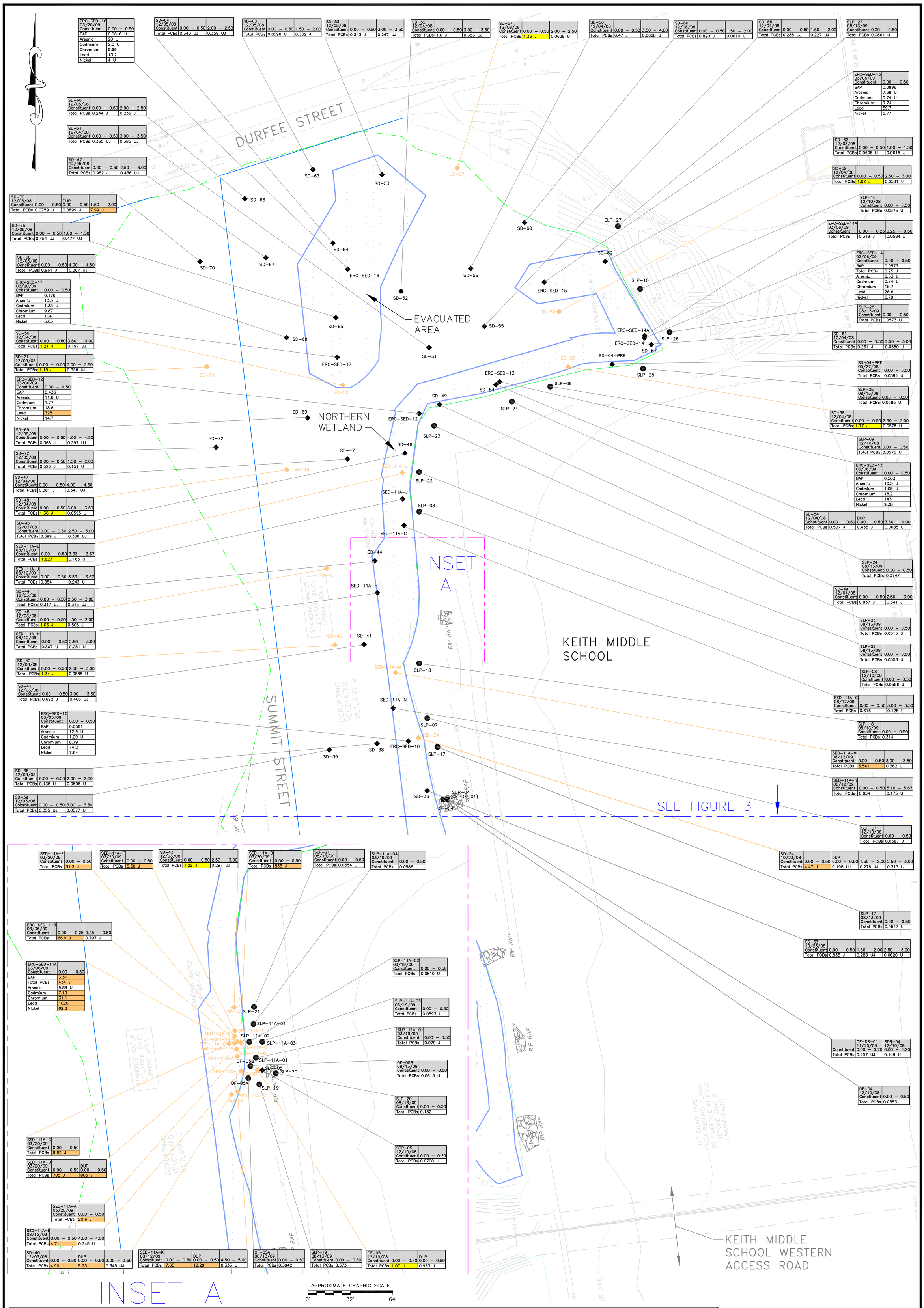
ANALYTICAL RESULTS SUMMARY MAP
Southern Portion of Wetland TRC Data

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE 3

DRAWN BY: PZ
CHECKED BY: JS
DATE: SEPTEMBER 2009

FILE: Q:\GEOSCI\GIS\KEYProjects\NewBedford\KMS_Sep-24-2009.DWG




NOTES:
ALL UNITS IN MG/KG UNLESS OTHERWISE SPECIFIED.
MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
DUP - FIELD DUPLICATE SAMPLE.
J - ESTIMATED VALUE.
NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE.
N/A - NOT APPLICABLE.
PCBS - POLYCHLORINATED BIPHENYLS.
RCS - REPORTABLE CONCENTRATIONS.
TSCA - TOXIC SUBSTANCES CONTROL ACT.
U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.
UJ - ESTIMATED NON-DETECT.

● SOIL SAMPLE LOCATION
◆ SEDIMENT SAMPLE LOCATION
◆ SAMPLE LOCATION WITH EXCEEDANCE(S)
WETLAND BOUNDARY

SAMPLE LOCATION SD-35
SAMPLE DATE 10/23/08
Constituent 0.00 – 0.50
Total PCBs 6.81 J
SAMPLE DEPTH RANGE IN FEET

**Summary of Regulatory Comparison Criteria for Soil (mg/kg)**

| Contaminant Names | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene (BAP)* | 2 | 2 | 4 | 4 | 2 | N/A |
| *Total PCBs* | 2 | 2 | 2 | 2 | 2 | 1 |
| *Arsenic* | 20 | 20 | 20 | 20 | 20 | N/A |
| *Barium* | 1000 | 1000 | 3000 | 3000 | 1000 | N/A |
| *Cadmium* | 2 | 2 | 30 | 30 | 2 | N/A |
| *Chromium* | 30 | 30 | 200 | 200 | 30 | N/A |
| *Lead* | 300 | 300 | 300 | 300 | 300 | N/A |

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS

VALUES SHOWN IN YELLOW BACKGROUND EXCEED TSCA BUT ARE LESS THAN THE LISTED MASSDEP METHOD 1 STANDARDS

APPROXIMATE GRAPHIC SCALE
0' 32' 64'

KEITH MIDDLE SCHOOL
NEW BEDFORD, MASSACHUSETTS

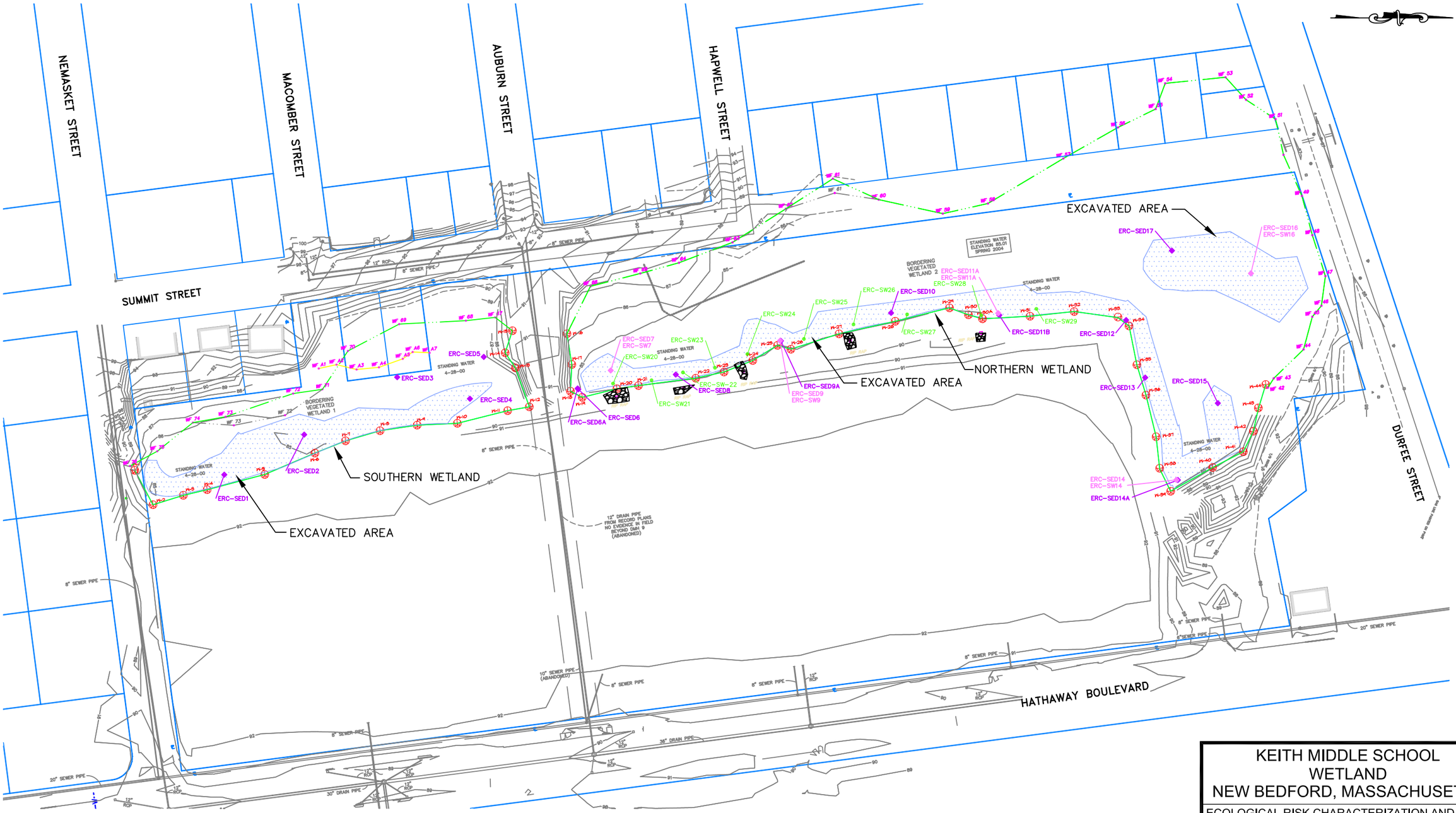
ANALYTICAL RESULTS SUMMARY MAP
Northern Portion of Wetland TRC Data

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE 4

DRAWN BY: PZ
CHECKED BY: JS
DATE: SEPTEMBER 2009

FILE: Q:\GEOSCI\GISKEYProjects\NewBedford\KMS_Sep-24-2009.DWG




NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND

- ERC-SED7 ◆ SEDIMENT SAMPLE (MARCH 2009)
- ERC-SW7 ◆ SURFACE WATER AND SEDIMENT SAMPLE (MARCH 2009)
- ERC-SW21 ● SURFACE WATER SAMPLE (JULY 2009)

APPROXIMATE GRAPHIC SCALE

0' 50' 100' 200'

KEITH MIDDLE SCHOOL
WETLAND
NEW BEDFORD, MASSACHUSETTS

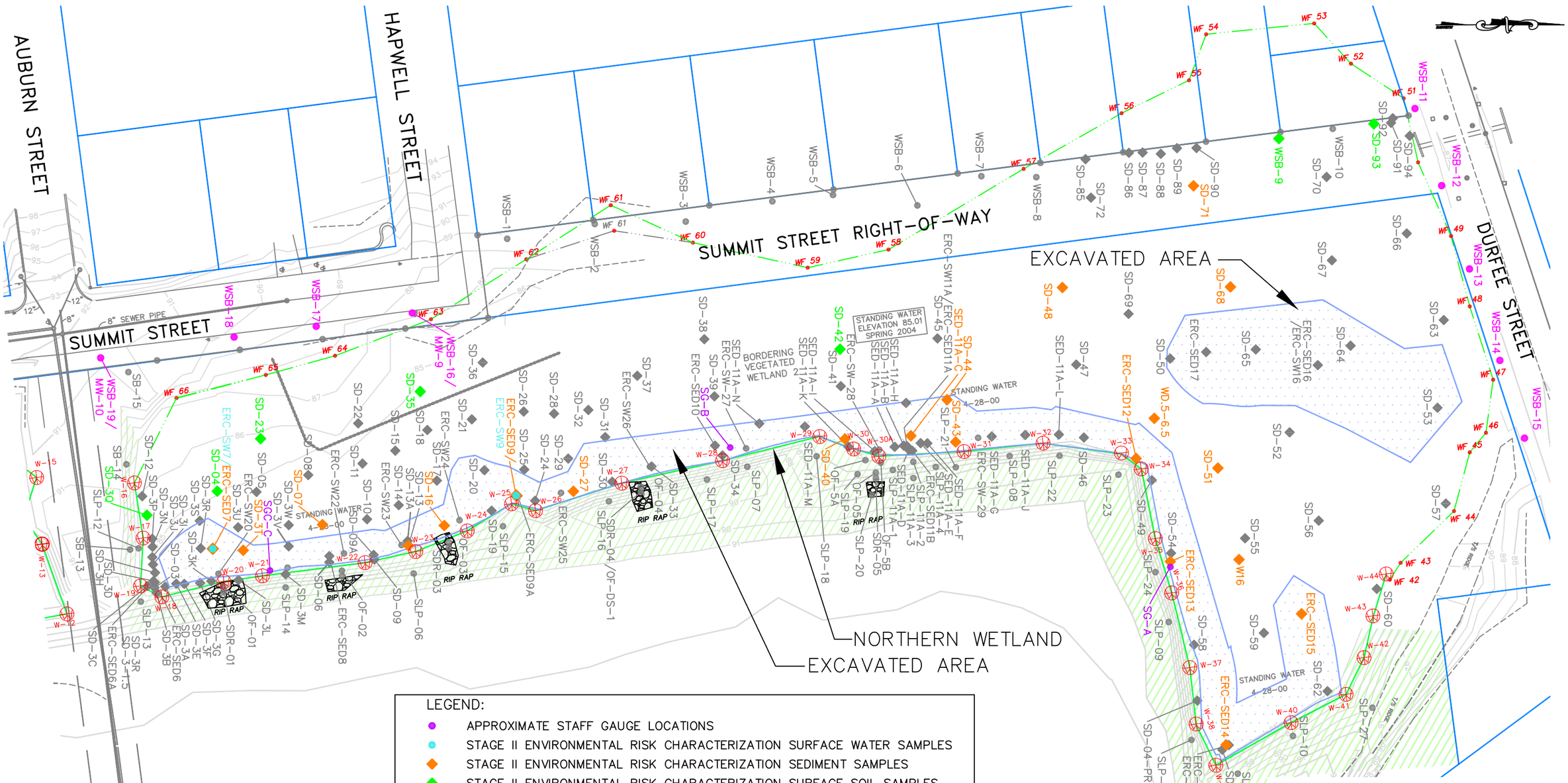
ECOLOGICAL RISK CHARACTERIZATION AND NEAR SURFACE STRATIFICATION SAMPLE LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: HWB
CHECKED BY: JBS
DATE: SEPT 2009

FIGURE 5

FILE: T:\E_CAD\115058\KMS ECO RISK - SURF STRAT.dwg




LEGEND:

- APPROXIMATE STAFF GAUGE LOCATIONS
- STAGE II ENVIRONMENTAL RISK CHARACTERIZATION SURFACE WATER SAMPLES
- STAGE II ENVIRONMENTAL RISK CHARACTERIZATION SEDIMENT SAMPLES
- STAGE II ENVIRONMENTAL RISK CHARACTERIZATION SURFACE SOIL SAMPLES
- SUPPLEMENTAL SOIL BORING/MONITORING WELL LOCATIONS

PREVIOUS SAMPLE LOCATIONS:

- CAP SLOPE SAMPLE LOCATIONS (DECEMBER 2008 AND MARCH 2009)
- SUPPLEMENTAL CAP SLOPE SAMPLES (AUGUST 2009)
- SUPPLEMENTAL OUTFALL SAMPLES (AUGUST 2009)
- SUPPLEMENTAL SEDIMENT SAMPLES (MARCH AND AUGUST 2009)
- APPROXIMATE CAP SLOPE (INCLUDING LAND BRIDGE)
- AREA OF BETA GROUP EXCAVATION

NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

APPROXIMATE GRAPHIC SCALE

0' 30' 60' 120'

# KEITH MIDDLE SCHOOL WETLAND NEW BEDFORD, MASSACHUSETTS

SUPPLEMENTAL ECOLOGICAL RISK CHARACTERIZATION

SEDIMENT, SOIL & GROUNDWATER SAMPLING LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE 6

DRAWN BY: HWB

CHECKED BY: JBS

DATE: OCT 2010

FILE: T:\E_CAD\115058\KMS ECO RISK CHAR SOIL GW.dwg

AUBURN STREET

HAPWELL STREET

SUMMIT STREET RIGHT-OF-WAY

SUMMIT STREET

DURFEE STREET

EXCAVATED AREA

8" SEWER PIPE

STANDING WATER ELEVATION 85.01 SPRING 2004

BORDERING VEGETATED WETLAND 2

STANDING WATER 4-28-00

STANDING WATER 4-28-00

STANDING WATER 4-28-00

SG-A

SG-B

SG-C

RIP RAP

NORTHERN WETLAND

EXCAVATED AREA

12" DRAIN PIPE FROM RECORD PLANS NO EVIDENCE IN FIELD BEYOND DMH 9 (ABANDONED)

NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND:

- STAFF GAUGE LOCATIONS
- AREA OF BETA GROUP EXCAVATION

APPROXIMATE GRAPHIC SCALE

0' 30' 60' 120'

KEITH MIDDLE SCHOOL
WETLAND
NEW BEDFORD, MASSACHUSETTS

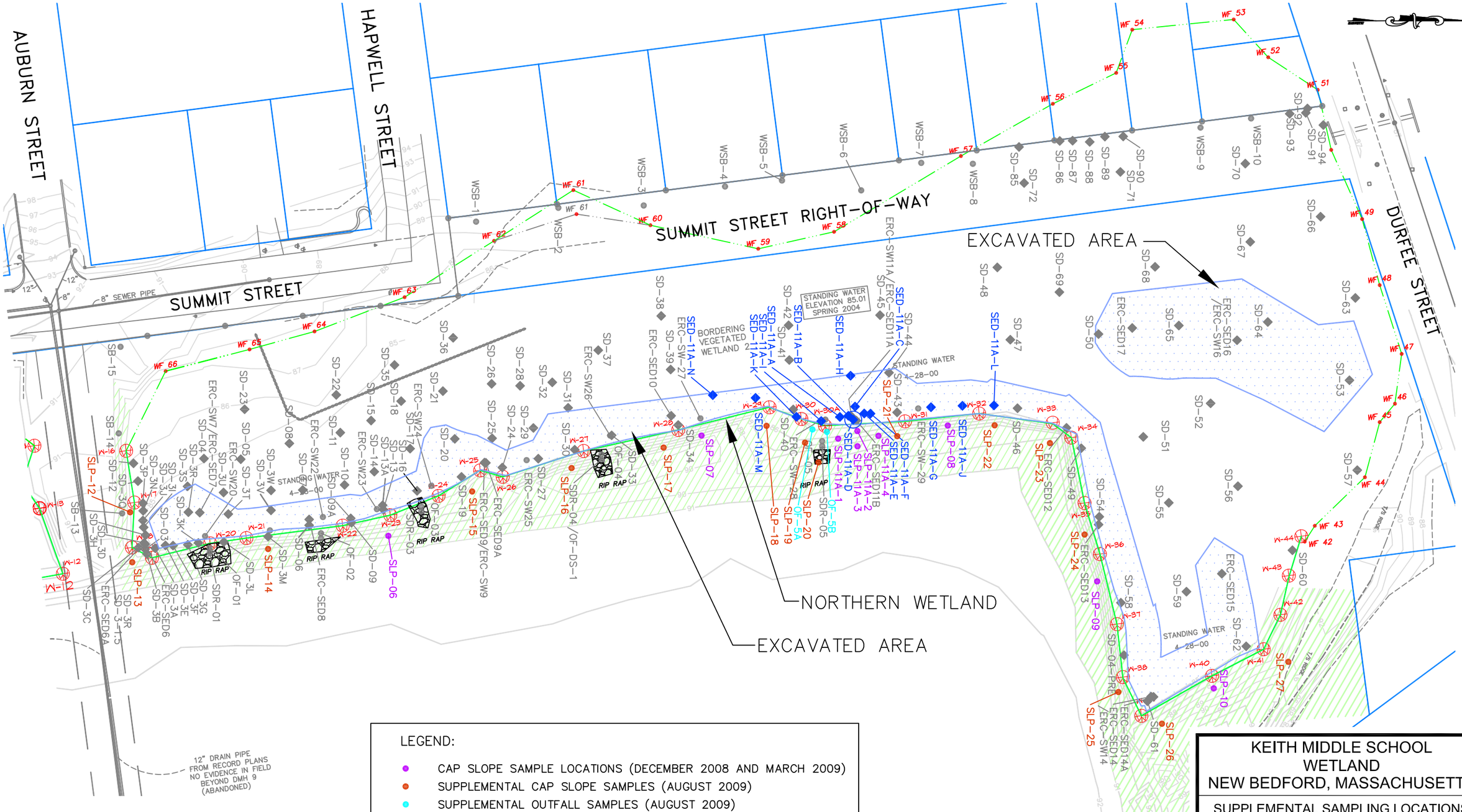
STAFF GAUGE LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: HWB
CHECKED BY: JBS
DATE: OCT 2010

FIGURE 7

FILE: T:\E_CAD\115058\KMS STAFF GAUGE LOCS.dwg




NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND:

- CAP SLOPE SAMPLE LOCATIONS (DECEMBER 2008 AND MARCH 2009)
- SUPPLEMENTAL CAP SLOPE SAMPLES (AUGUST 2009)
- SUPPLEMENTAL OUTFALL SAMPLES (AUGUST 2009)
- SUPPLEMENTAL SEDIMENT SAMPLES (MARCH AND AUGUST 2009)
- APPROXIMATE CAP SLOPE (INCLUDING LAND BRIDGE)
- AREA OF BETA GROUP EXCAVATION

APPROXIMATE GRAPHIC SCALE

0' 30' 60' 120'

KEITH MIDDLE SCHOOL
WETLAND
NEW BEDFORD, MASSACHUSETTS

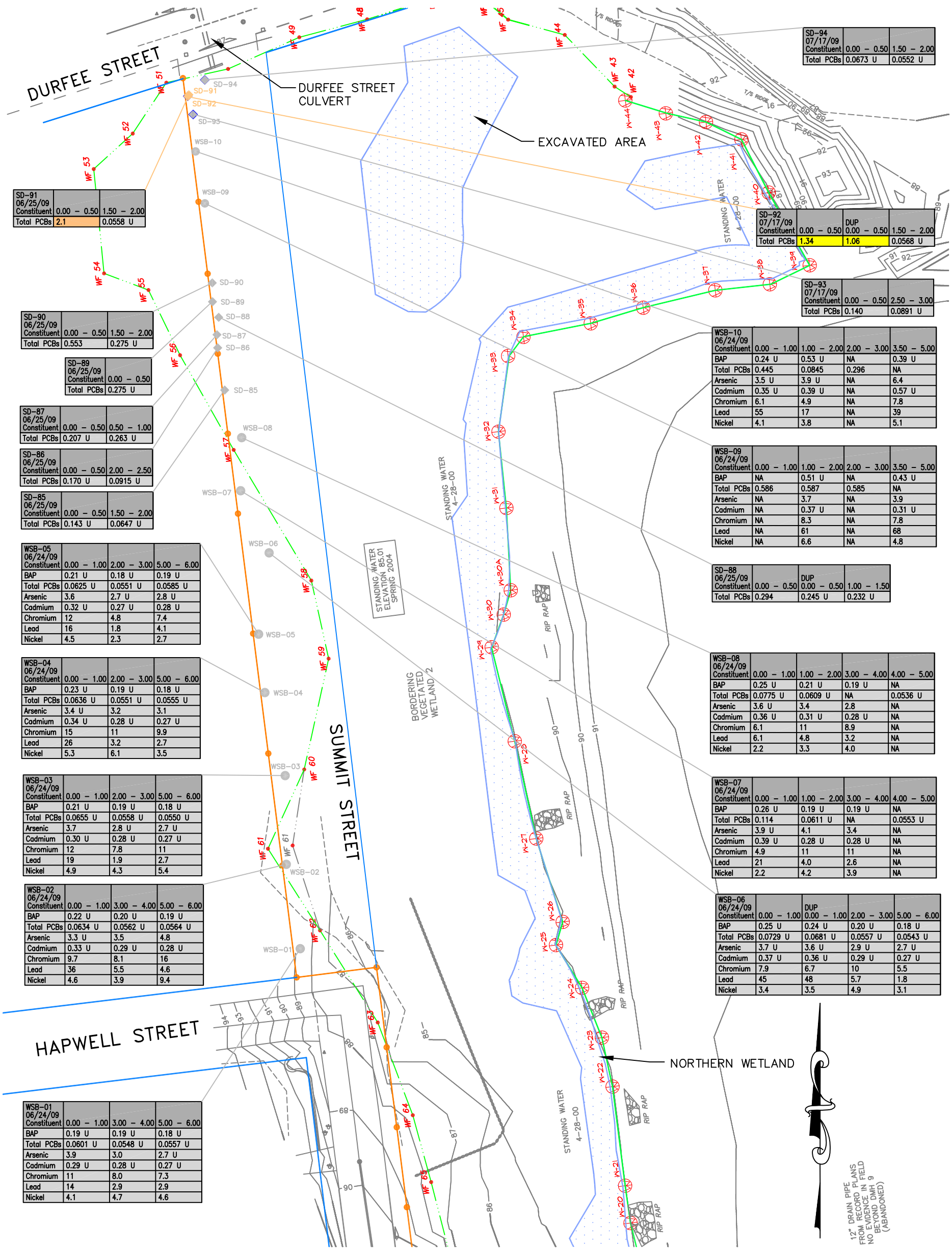
SUPPLEMENTAL SAMPLING LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: HWB
CHECKED BY: JBS
DATE: OCT 2010

FIGURE 8

FILE: T:\E_CAD\115058\KMS SUPPLEMENTAL SAMP LOC.dwg




| SD-91 06/25/09 Constituent | 0.00 – 0.50 | 1.50 – 2.00 |
|---|---|---|
| Total PCBs | 2.1 | 0.0558 U |

| SD-90 06/25/09 Constituent | 0.00 – 0.50 | 1.50 – 2.00 |
|---|---|---|
| Total PCBs | 0.553 | 0.275 U |

| SD-89 06/25/09 Constituent | 0.00 – 0.50 |
|---|---|
| Total PCBs | 0.275 U |

| SD-87 06/25/09 Constituent | 0.00 – 0.50 | 0.50 – 1.00 |
|---|---|---|
| Total PCBs | 0.207 U | 0.263 U |

| SD-86 06/25/09 Constituent | 0.00 – 0.50 | 2.00 – 2.50 |
|---|---|---|
| Total PCBs | 0.170 U | 0.0915 U |

| SD-85 06/25/09 Constituent | 0.00 – 0.50 | 1.50 – 2.00 |
|---|---|---|
| Total PCBs | 0.143 U | 0.0647 U |

| WSB-05 06/24/09 Constituent | 0.00 – 1.00 | 2.00 – 3.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.21 U | 0.18 U | 0.19 U |
| Total PCBs | 0.0625 U | 0.0551 U | 0.0585 U |
| Arsenic | 3.6 | 2.7 U | 2.8 U |
| Cadmium | 0.32 U | 0.27 U | 0.28 U |
| Chromium | 12 | 4.8 | 7.4 |
| Lead | 16 | 1.8 | 4.1 |
| Nickel | 4.5 | 2.3 | 2.7 |

| WSB-04 06/24/09 Constituent | 0.00 – 1.00 | 2.00 – 3.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.23 U | 0.19 U | 0.18 U |
| Total PCBs | 0.0636 U | 0.0551 U | 0.0555 U |
| Arsenic | 3.4 U | 3.2 | 3.1 |
| Cadmium | 0.34 U | 0.28 U | 0.27 U |
| Chromium | 15 | 11 | 9.9 |
| Lead | 26 | 3.2 | 2.7 |
| Nickel | 5.3 | 6.1 | 3.5 |

| WSB-03 06/24/09 Constituent | 0.00 – 1.00 | 2.00 – 3.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.21 U | 0.19 U | 0.18 U |
| Total PCBs | 0.0655 U | 0.0558 U | 0.0550 U |
| Arsenic | 3.7 | 2.8 U | 2.7 U |
| Cadmium | 0.30 U | 0.28 U | 0.27 U |
| Chromium | 12 | 7.8 | 11 |
| Lead | 19 | 1.9 | 2.7 |
| Nickel | 4.9 | 4.3 | 5.4 |

| WSB-02 06/24/09 Constituent | 0.00 – 1.00 | 3.00 – 4.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.22 U | 0.20 U | 0.19 U |
| Total PCBs | 0.0634 U | 0.0562 U | 0.0564 U |
| Arsenic | 3.3 U | 3.5 | 4.8 |
| Cadmium | 0.33 U | 0.29 U | 0.28 U |
| Chromium | 9.7 | 8.1 | 16 |
| Lead | 36 | 5.5 | 4.6 |
| Nickel | 4.6 | 3.9 | 9.4 |

| WSB-01 06/24/09 Constituent | 0.00 – 1.00 | 3.00 – 4.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.19 U | 0.19 U | 0.18 U |
| Total PCBs | 0.0601 U | 0.0548 U | 0.0557 U |
| Arsenic | 3.9 | 3.0 | 2.7 U |
| Cadmium | 0.29 U | 0.28 U | 0.27 U |
| Chromium | 11 | 8.0 | 7.3 |
| Lead | 14 | 2.9 | 2.9 |
| Nickel | 4.1 | 4.7 | 4.6 |

| SD-94 07/17/09 Constituent | 0.00 – 0.50 | 1.50 – 2.00 |
|---|---|---|
| Total PCBs | 0.0673 U | 0.0552 U |

| SD-92 07/17/09 Constituent | 0.00 – 0.50 | DUP 0.00 – 0.50 | 1.50 – 2.00 |
|---|---|---|---|
| Total PCBs | 1.34 | 1.06 | 0.0568 U |

| SD-93 07/17/09 Constituent | 0.00 – 0.50 | 2.50 – 3.00 |
|---|---|---|
| Total PCBs | 0.140 | 0.0891 U |

| WSB-10 06/24/09 Constituent | 0.00 – 1.00 | 1.00 – 2.00 | 2.00 – 3.00 | 3.50 – 5.00 |
|---|---|---|---|---|
| BAP | 0.24 U | 0.53 U | NA | 0.39 U |
| Total PCBs | 0.445 | 0.0845 | 0.296 | NA |
| Arsenic | 3.5 U | 3.9 U | NA | 6.4 |
| Cadmium | 0.35 U | 0.39 U | NA | 0.57 U |
| Chromium | 6.1 | 4.9 | NA | 7.8 |
| Lead | 55 | 17 | NA | 39 |
| Nickel | 4.1 | 3.8 | NA | 5.1 |

| WSB-09 06/24/09 Constituent | 0.00 – 1.00 | 1.00 – 2.00 | 2.00 – 3.00 | 3.50 – 5.00 |
|---|---|---|---|---|
| BAP | NA | 0.51 U | NA | 0.43 U |
| Total PCBs | 0.586 | 0.587 | 0.585 | NA |
| Arsenic | NA | 3.7 | NA | 3.9 |
| Cadmium | NA | 0.37 U | NA | 0.31 U |
| Chromium | NA | 8.3 | NA | 7.8 |
| Lead | NA | 61 | NA | 68 |
| Nickel | NA | 6.6 | NA | 4.8 |

| SD-88 06/25/09 Constituent | 0.00 – 0.50 | DUP 0.00 – 0.50 | 1.00 – 1.50 |
|---|---|---|---|
| Total PCBs | 0.294 | 0.245 U | 0.232 U |

| WSB-08 06/24/09 Constituent | 0.00 – 1.00 | 1.00 – 2.00 | 3.00 – 4.00 | 4.00 – 5.00 |
|---|---|---|---|---|
| BAP | 0.25 U | 0.21 U | 0.19 U | NA |
| Total PCBs | 0.0775 U | 0.0609 U | NA | 0.0536 U |
| Arsenic | 3.6 U | 3.4 | 2.8 | NA |
| Cadmium | 0.36 U | 0.31 U | 0.28 U | NA |
| Chromium | 6.1 | 11 | 8.9 | NA |
| Lead | 6.1 | 4.8 | 3.2 | NA |
| Nickel | 2.2 | 3.3 | 4.0 | NA |

| WSB-07 06/24/09 Constituent | 0.00 – 1.00 | 1.00 – 2.00 | 3.00 – 4.00 | 4.00 – 5.00 |
|---|---|---|---|---|
| BAP | 0.26 U | 0.19 U | 0.19 U | NA |
| Total PCBs | 0.114 | 0.0611 U | NA | 0.0553 U |
| Arsenic | 3.9 U | 4.1 | 3.4 | NA |
| Cadmium | 0.39 U | 0.28 U | 0.28 U | NA |
| Chromium | 4.9 | 11 | 11 | NA |
| Lead | 21 | 4.0 | 2.6 | NA |
| Nickel | 2.2 | 4.2 | 3.9 | NA |

| WSB-06 06/24/09 Constituent | 0.00 – 1.00 | DUP 0.00 – 1.00 | 2.00 – 3.00 | 5.00 – 6.00 |
|---|---|---|---|---|
| BAP | 0.25 U | 0.24 U | 0.20 U | 0.18 U |
| Total PCBs | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U |
| Arsenic | 3.7 U | 3.6 U | 2.9 U | 2.7 U |
| Cadmium | 0.37 U | 0.36 U | 0.29 U | 0.27 U |
| Chromium | 7.9 | 6.7 | 10 | 5.5 |
| Lead | 45 | 48 | 5.7 | 1.8 |
| Nickel | 3.4 | 3.5 | 4.9 | 3.1 |

**Summary of Regulatory Comparison Criteria for Soil (mg/kg)**

| Contaminant Names | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA |
|---|---|---|---|---|---|---|
| *Benzo(a)pyrene (BAP)* | 2 | 2 | 4 | 4 | 2 | N/A |
| *Total PCBs* | 2 | 2 | 3 | 3 | 2 | 1 |
| *Arsenic* | 20 | 20 | 20 | 20 | 20 | N/A |
| *Cadmium* | 2 | 2 | 30 | 30 | 2 | N/A |
| *Chromium* | 30 | 30 | 200 | 200 | 30 | N/A |
| *Lead* | 300 | 300 | 300 | 300 | 300 | N/A |
| *Nickel* | 20 | 20 | 700 | 700 | 20 | N/A |

NOTES:
ALL UNITS IN MG/KG UNLESS OTHERWISE SPECIFIED.
MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT).
NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE.
N/A - NOT APPLICABLE.
PCBS - POLYCHLORINATED BIPHENYLS.
RCS - REPORTABLE CONCENTRATIONS.
TSCA - TOXIC SUBSTANCES CONTROL ACT.
U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTITATION LIMIT.

SAMPLE LOCATION
SAMPLE DATE

| WSB-03 06/24/09 Constituent | 0.00 – 1.00 | 2.00 – 3.00 | 5.00 – 6.00 |
|---|---|---|---|
| BAP | 0.21 U | 0.19 U | 0.18 U |
| Total PCBs | 0.0655 U | 0.0558 U | 0.0550 U |
| Arsenic | 3.7 | 2.8 U | 2.7 U |
| Cadmium | 0.30 U | 0.28 U | 0.27 U |
| Chromium | 12 | 7.8 | 11 |
| Lead | 19 | 1.9 | 2.7 |
| Nickel | 4.9 | 4.3 | 5.4 |

SAMPLE DEPTH RANGE IN FEET

CONTAMINANT NAME /ABBREVIATION

● SOIL SAMPLE ◆ SEDIMENT SAMPLE ● SOIL SAMPLE THAT HAS CONCENTRATION WITH EXCEEDANCE

VALUES SHOWN IN PEACH BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASSDEP METHOD 1 STANDARDS.

VALUES SHOWN IN YELLOW BACKGROUND EXCEED TSCA BUT ARE LESS THAN THE LISTED MASSDEP METHOD 1 STANDARDS AND RCS.

NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6–04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8–06.

APPROXIMATE GRAPHIC SCALE

0' 30' 60' 120'

# KEITH MIDDLE SCHOOL WETLAND
# NEW BEDFORD, MASSACHUSETTS

## ANALYTICAL RESULTS SUMMARY MAP

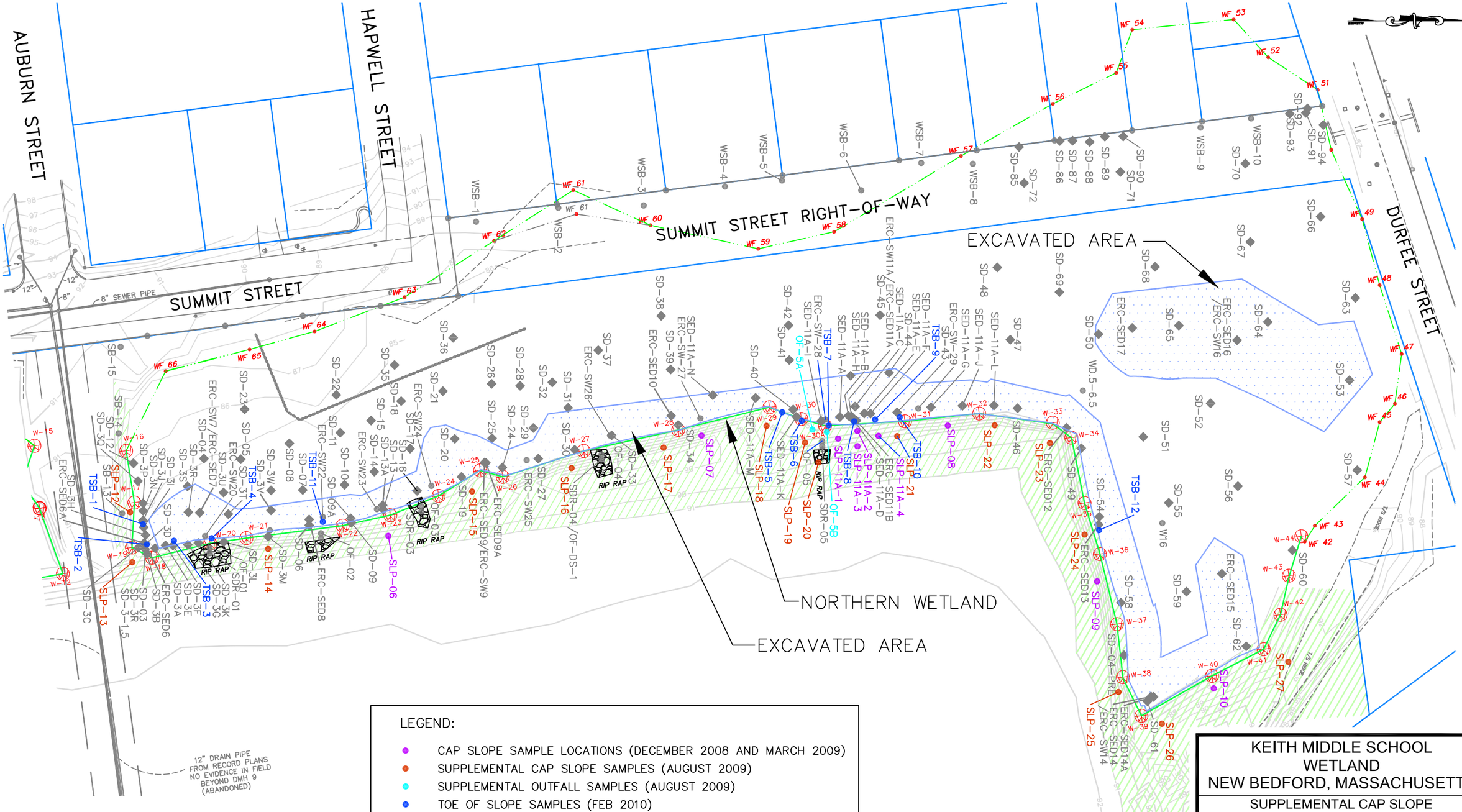
Summit Street Right-of-Way Portion of Wetland TRC Data

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970–5600

FIGURE 9

DRAWN BY: PZ
CHECKED BY: JS
DATE: OCT 2010

FILE: Q:\GEOSCI\GISKEYProjects\NewBedford\KMS Summit St Soil Data.dwg




NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND:

- CAP SLOPE SAMPLE LOCATIONS (DECEMBER 2008 AND MARCH 2009)
- SUPPLEMENTAL CAP SLOPE SAMPLES (AUGUST 2009)
- SUPPLEMENTAL OUTFALL SAMPLES (AUGUST 2009)
- TOE OF SLOPE SAMPLES (FEB 2010)
- SEDIMENT SAMPLES (MARCH AND AUGUST 2009)
- APPROXIMATE CAP SLOPE (INCLUDING LAND BRIDGE)
- AREA OF BETA GROUP EXCAVATION

APPROXIMATE GRAPHIC SCALE

0' 30' 60' 120'

KEITH MIDDLE SCHOOL
WETLAND
NEW BEDFORD, MASSACHUSETTS

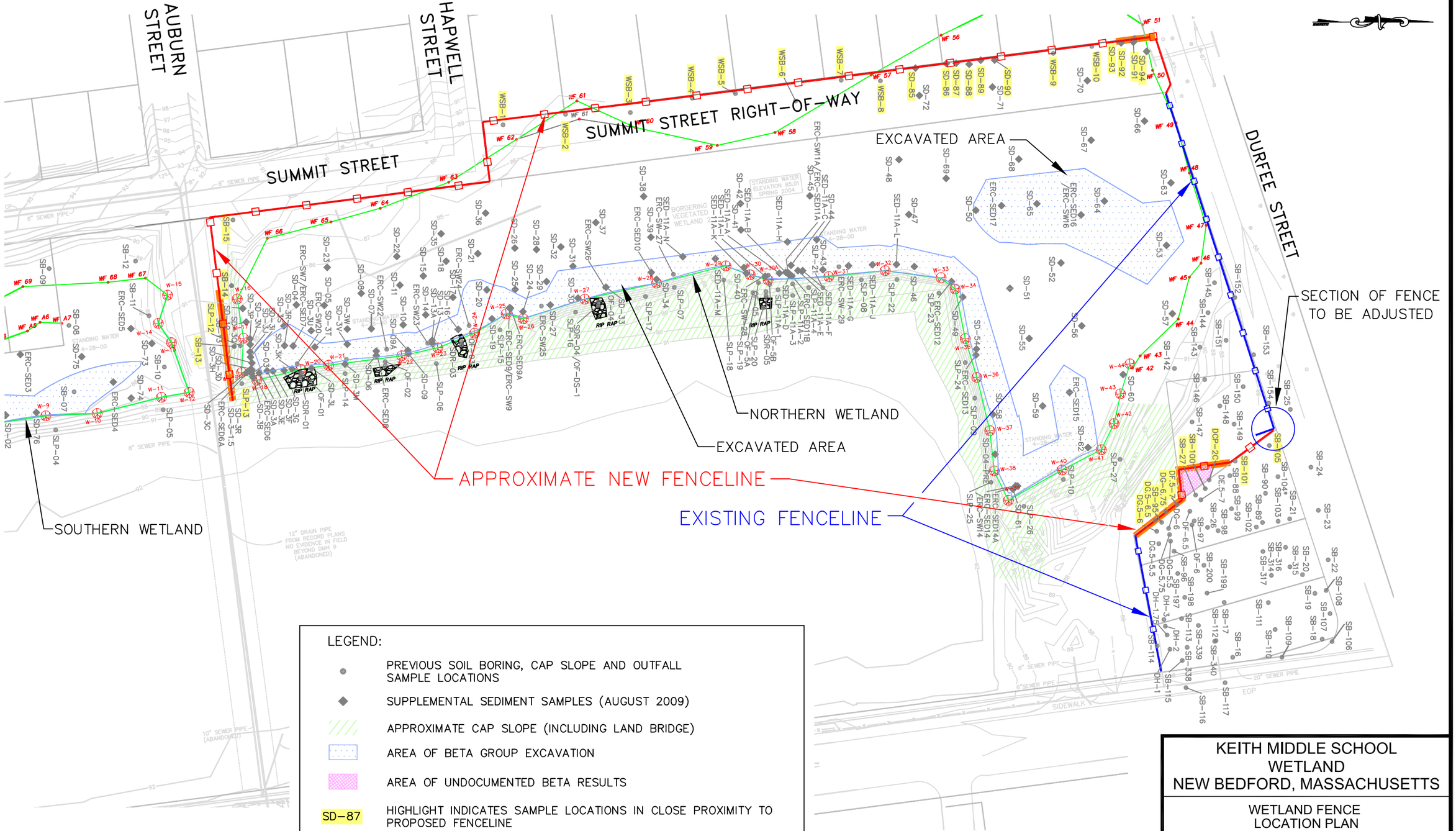
SUPPLEMENTAL CAP SLOPE
SAMPLING LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE
10

DRAWN BY: HWB
CHECKED BY: JBS
DATE: OCT 2010

FILE: T:\E_CAD\115058\KMS SUPPLEMENTAL SAMP LOC-2.dwg




LEGEND:

- PREVIOUS SOIL BORING, CAP SLOPE AND OUTFALL SAMPLE LOCATIONS
- SUPPLEMENTAL SEDIMENT SAMPLES (AUGUST 2009)
- APPROXIMATE CAP SLOPE (INCLUDING LAND BRIDGE)
- AREA OF BETA GROUP EXCAVATION
- AREA OF UNDOCUMENTED BETA RESULTS
- SD-87 — HIGHLIGHT INDICATES SAMPLE LOCATIONS IN CLOSE PROXIMITY TO PROPOSED FENCELINE
- EXISTING FENCELINE (APPROXIMATE)
- PROPOSED CONVENTIALLY INSTALLED FENCELINE (APPROXIMATE)
- PROPOSED DIRECT DRIVE FENCELINE (APPROXIMATE)

NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

APPROXIMATE GRAPHIC SCALE

0' 40' 80' 160'

KEITH MIDDLE SCHOOL
WETLAND
NEW BEDFORD, MASSACHUSETTS

WETLAND FENCE
LOCATION PLAN

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

DRAWN BY: MAN
CHECKED BY: JBS
DATE: OCT 2010

FIGURE 11

FILE: T:\E_CAD\115058\KMS WETLAND FENCE LOC PLAN.dwg

# APPENDIX A

# TRC CORRESPONDENCE WITH EPA REGARDING DELINEATION SAMPLING AND FENCE INSTALLATION

From: Sullivan, Dave (Lowell,MA-US)
Sent: Monday, December 01, 2008 8:54 AM
To: tisa.kimberly@epamail.epa.gov
Cc: David Fredette; Saunders, Jeffry (Lowell,MA-US); Plumb, Mike (Lowell,MA-US); Scott Alfonse
Subject: RE: KMS Wetland Related Sampling

Kim:

Thanks for taking the time to review this proposed sampling plan so quickly, and for the follow up conversation.

With regard to the slope samples, our rationale was to rule out the slope material over and above any documentation that we can find from BETA as to the presumed quality of the slope soil imported to complete the cap. All wetland sampling we propose to the north and the south of the bridge includes samples collected from the toe of the slope, which should gather data to address your concern about this potentially critical location.

With regard to the 0-3" and 3-6" sampling, we understand that this would be a future (follow-up) sampling endeavor to home in on the depth of contamination, perhaps by targeting areas of high concentration. Such a program would be developed in consultation with you after we receive the results and analyze the data.

With those clarifications, I believe we are "on the same page" and will look to schedule this sampling as soon as practicable.

Thanks,

-Dave

David M. Sullivan, LSP, CHMM
Senior Project Manager

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, Massachusetts 01854

978-656-3565 phone
978-453-1995 fax
978-758-2809 cell
dsullivan@trcsolutions.com

-----Original Message-----
From: tisa.kimberly@epamail.epa.gov [mailto:tisa.kimberly@epamail.epa.gov]
Sent: Monday, December 01, 2008 8:19 AM
To: Sullivan, Dave (Lowell,MA-US)
Cc: David Fredette; Saunders, Jeffry (Lowell,MA-US); Plumb, Mike (Lowell,MA-US); Scott Alfonse

Subject: Re: KMS Wetland Related Sampling

See comments below.

Kimberly N. Tisa (CPT)
U.S. Environmental Protection Agency
1 Congress Street, Suite 1100
Boston, MA 02114

617.918.1527 (phone)
617.918.0527 (fax)

"Sullivan, Dave \(Lowell,MA-US \)" <DSullivan@TRCSOLUTIONS.com>

11/26/2008 03:06 PM

To
Kimberly Tisa/R1/USEPA/US@EPA

cc
"David Fredette" <David.Fredette@newbedford-ma.gov>, "Scott Alfonse" <Scott.Alfonse@newbedford-ma.gov>, "Plumb, Mike \(Lowell,MA-US\)" <MPlumb@trcsolutions.com>, "Saunders, Jeffry \(Lowell,MA-US \)" <JSaunders@trcsolutions.com>

Subject
KMS Wetland Related Sampling

Kim:

Thanks for taking the time to visit the KMS site this past Tuesday (November 25, 2008) regarding the PCB sediment contamination issue.
Please see below for a proposed sampling approach and other information gathering follow-up that with your concurrence we will initiate as soon as practicable.

§ Roof Material. Since the storm drains discharging to the wetland are primarily roof runoff, we will attempt to collect representative samples of the different roofing materials at KMS. There is a white membrane material and an asphalt shingle material that I am aware of on the roof. We will target these materials. We will work closely with Gary Gomes the Facility Engineer that we do not compromise the roofing. We will plan on two samples (one of each material type). Good. Let's also see what if any information we can get about the manufacturer of these products.

§ Storm Drains. We will inspect for and sample sediment or residues that may have accumulated in the storm water discharge pipes to evaluate the potential for these conduits to convey PCB contamination to the wetland. In addition, TRC will review as-built plans to attempt to verify that the storm drain pipes were installed in "clean corridors." Good.

§ Slope Samples. As we discussed yesterday, we did collect one sample from the slope above the original PCB hit and it was non-detect, but to further rule out the slope as a source we will collect 10 samples from the slope (5 to the south of the bridge and 5 to the north) to help rule this out. We will collect them from 0 to 6 inches unless you specify otherwise. In addition, at the base of each of the storm drain outfalls (i.e., the soil under the rip-rap where the storm water flows out), we will collect one shallow surface soil sample (0-6 inches). There are 5 outfalls total, therefore we will collect 5 samples. Where are the slope are you proposing to collect these samples? I believe we had discussed collecting as close to the bottom of the toe as we could. You may have answered this below for the south side, but not necessarily for the north side.

§ North Side Sampling. To the north of the bridge, we will extend our sampling grid out further (about 36 locations, assuming reasonable accessibility). We will use a wider grid than previously employed to more quickly achieve coverage of the remainder of the northern area. We will collect from 0-6 inches and into the underlying grey sand to get a handle on depth. If we detect anything, we can make decisions based on that date for further sampling, if needed, or for other follow-up actions. If possible, I would really like to do smaller intervals than 0-6". At some point, would it be possible to do 0-3" and then 3-6", etc. just to get a better idea of what we really are seeing surfically? We may want to target select locations for more detailed profiling for future work.

§ South Side Sampling. To the south of the bridge, we will collect approximately 12 samples targeting the toe of slope, the area of remediation (see attached scanned map from BETA's Risk Based Approval document) and the area of the berm near the Bethel AME property. For this effort, we will focus on sediment in the 0-6 inch depth zone. As mentioned above, if we look at the 0-6" depth interval, we really are focussed on the presence of PCBs at this point. As you point out, further eval. may be necessary for future decisionmaking.

§ Land Bridge Area. We are also considering collecting samples at the land bridge where the frac tank was placed during the wetland remediation to rule out the notion that PCB's at the surface could possibly have run off from that area into the north wetlands. Perhaps 3 to 4 surface soil samples in that location would help. Also, if there any chance that contaminated soil was used to backfill at the land bridge area when the stone drainage vein crossing the land bridge was installed, we might consider mobilizing a drill rig to collect samples from depth. If you find it worthwhile, we will schedule this based on driller availability. Let's first see what information we have on the soil that was used as backfill at the site. Hopefully all the "imported soil" information should be readily available.

On the attached scanned figure which shows the BETA proposed remediation areas and TRCs proposed sampling points, you will see TRC soil boring (SB) sample locations from November of 2007. During that sampling event, our field team took an inadvertent turn through the wetland on the southern side of the land bridge. While this caused some measure of consternation with the Conservation Agent (Sarah Porter), it had the collateral benefit of providing us PCB data from the top 0.5 to 1 foot interval that we can share with you. These data are included in the TRC March 2008 City Properties/Rights-of-Way report, of which you have been provided a copy. For your convenience, a scan of the relevant portion of the data table is attached. While PCBs were detected, they are all below 1 mg/kg.

Please also see the scanned BETA post-excavation PCB data. Unfortunately, the BETA "Final Completion and Inspection Report" does not show the post-ex locations. However, the post-ex data are all below 1 mg/kg. I do believe, however, that the final verification sampling grid interval should have been no more than a 20x20 foot grid. I believe I final the Completion Report so can't verify my recollection on this one. The majority of the data was ND and for those detected the PCB concentrations were well below 1 ppm. That's why it's hard for me to believe that we missed anything originally based on the # of verification samples collected and the PCB concentrations. At this point, I would say that we just have to do the work and see what the data tells us. I think what's currently proposed is reasonable and we really have to do this is a systematic approach, which includes full delineation as well as getting sufficient information to document that PCBs are not migrating from the site into the wetlands. Hopefully the slope samples, along with the earlier wetland depth samples, will confirm the later.

I should be available most of the data should you wish to discuss further.

I look forward to speaking with you on Monday on this issue. Please call at your convenience.

Thanks,

-Dave

David M. Sullivan, LSP, CHMM
Senior Project Manager
(Embedded image moved to file: pic23045.gif)TRC ESP

TRC
Wannalancit Mills,
650 Suffolk Street
Lowell, Massachusetts 01854

978-656-3565 phone
978-453-1995 fax
978-758-2809 cell
dsullivan@trcsolutions.com

(See attached file: beta wetland post ex.pdf)(See attached file: DRAFT Proposed Supp. KMS Wetland Locations.pdf)(See attached file: TRC PCB sed and soil boring data.pdf)

LEGEND

PROPERTY LINE

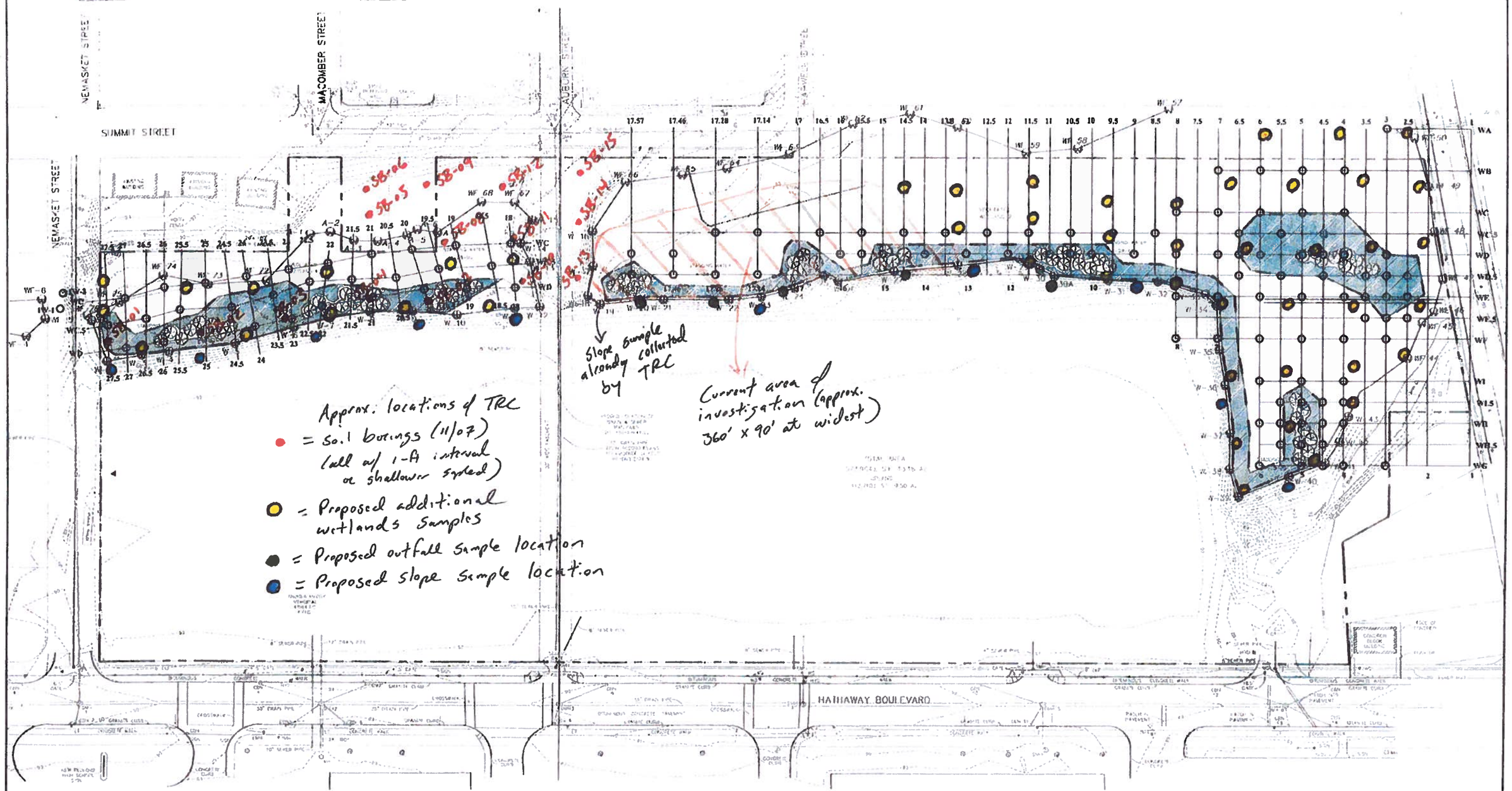
WETLANDS LINE

WETLANDS AREA SAMPLE < 1 PPM PCBs

WETLANDS AREA SAMPLE >= 1 PPM PCBs

BOUNDARY OF INITIAL WETLANDS SEDIMENT REMOVAL (0-6")

NOTE: Alpha-numeric grid corresponds to wetlands area samples. For example, sample WA3-0-6" coincides with grid intersection (WA, 3).




| MARKER | DATE | MADE BY | CHECKED BY | DESCRIPTION |
|---|---|---|---|---|

REVISIONS

DRAWN BY:
DEPT. CHECK:
PROJ. CHECK:

**Permitting Plans**
**Not for Construction**

BETA Group, Inc.
Engineers · Scientists · Planners

SCALE: 1"=40' ~0.4" = 40'

**Risk-Based Cleanup Request**
**Figure 2**
**Wetlands Remediation Area**
**McCoy Field**
**New Bedford, Massachusetts**

JOB: 02685.00
FILE NO: Figures 2 thru 3REVISED.dwg
PLOT DATE: June 2008
SHEET: Figure 2

# APPENDIX B

# TRC CORRESPONDENCE WITH EPA REGARDING ENVIRONMENTAL RISK CHARACTERIZATION AND ASSOCIATED SAMPLING

**From:** Sullivan, Dave (Lowell,MA-US)
**Sent:** Monday, February 23, 2009 1:00 PM
**To:** 'tisa.kimberly@epamail.epa.gov'
**Cc:** Heim, Scott (Lowell,MA-US); Silverman, Diane (Lowell,MA-US); Donna J Vorhees; David Fredette; Beeler, Malcolm (Windsor,CT-US)
**Subject:** KMS Wetland - Risk Based Approach

Kim,

As a follow-up to our recent telephone conference regarding the Keith Middle School (KMS) wetland, TRC's proposed approach to evaluating ecological risks within the Keith Middle School (KMS) wetland is to follow Massachusetts Contingency Plan (MCP) Environmental Risk Characterization (ERC) guidance with the exception that Exposure Point Concentrations (EPCs) for receptor species will be represented by the 95% Upper Concentration Limit (UCL) of the mean. Rick Sugat of EPA is on board with this approach based on a conversation with Scott Heim, our Eco-Risk specialist.

The ERC has two components – a Stage I (Screening) ERC and a Stage II ERC. Initially, the proposed sampling will address the requirements for conducting the Stage I ERC. Depending upon the results of the Stage I ERC, additional sampling/testing may be required to support the Stage II ERC. The additional sampling that may be required is briefly discussed below but is dependent on the Stage I ERC results, and will be integrated with some additional needs noted by our human health risk assessment specialists.

**Stage I ERC** - The proposed approach is to compare maximum surface water and sediments (SW/SED) concentrations of contaminants to benchmarks protective of aquatic/benthic organisms and to model estimated exposure doses of contaminants to higher trophic level receptors (likely receptors include mallard, great blue heron and raccoon – possibly more).

- **Supplemental data collection – surface water** - The data proposed to be collected from the KMS wetland to support the Stage I ERC include surface water samples that will be analyzed for polychlorinated biphenyl (PCB) homologues (EPA Method 680), the 14 MCP metals (total and dissolved using SW846 Method 6010B/6020/7470A), hardness (SW846 Method 6010B) and polyaromatic hydrocarbons (PAHs; SW846 Method 8270C with Selective Ion Monitoring). A total of five samples are proposed as detailed on the attached figure. Note that to our knowledge no surface water samples have previously been collected from the KMS wetland for these parameters.

- **Supplemental data collection – sediment** - In addition to the over 100 sediment samples collected by TRC from the KMS wetland to date (primarily PCB Aroclor analysis) and the previously collected sediment/soil data from unexcavated areas of the KMS wetland by The BETA Group (BETA), which includes 61 samples with primarily PCB aroclor and PAH analyses with RCRA-8 metals and pesticides also available, an additional 12 sediment samples are proposed to be collected by TRC using either a stainless steel spoon or handheld auger from the northern wetland area that was previously excavated. The locations of these proposed samples (0 to 6" in depth) are depicted on the attached figure. These 12 samples will be analyzed for MCP metals (SW846 Method 6010B/7471A) and PAHs (SW846 Method 8270C with Selective Ion Monitoring). In addition, a subset of these samples (4 samples) will be analyzed for PCB congeners (co-planar congeners correlated with dioxin toxicity via EPA Method 1668 (Revision

A) and PCB aroclors (SW846 Method 8082) to obtain congener/aroclor ratios. In addition, 5 sediment samples will be collected from the southern wetland and analyzed for 4,4-DDT (and its derivatives 4,4-DDD and 4,4-DDE) via SW846 Method 8081A as previous sampling by BETA detected this pesticide in the southern wetland. The locations of these 5 samples are depicted on the attached figure.

- **How the data will be used -** If maximum SW/SED concentrations exceed benchmarks and indicate a potential risk to aquatic invertebrates or modeling estimated exposure doses to higher trophic level indicates a potential risk to these receptors, a Stage II ERC will be conducted.

**Stage II ERC** - The components of the Stage II ERC are dependent upon the results of the Stage I ERC. Possible sampling/studies to be conducted for the Stage II ERC include toxicity testing (if risk to aquatic invertebrates as predicted) and/or sampling of biota (e.g., frogs, tadpoles, invertebrates) to determine body burdens of contaminants to eliminate uncertainties associated with the modeling conducted in Stage I ERC (if risk was predicted from the modeling). The number of samples for toxicity testing and/or body burdens would be approximately 4 to 6 each. Chemical analyses would depend on what contaminants were predicted to result in risk in the Stage I ERC.

**Integration with human health risk assessment (HHRA) and statistical basis needs** – TRC's human health risk assessors can use much of the data collected for the ERC to support the HHRA. However, some supplemental data needs will also be addressed:

- **Surface water analyses** – Surface water samples collected for the ERC for PCB homologues will also be collected for PCB aroclors to establish as basis for comparability between the surface water data and the sediment data (for which homologue data have not be collected/required).

- **Surface water sample number** – The collection of an additional 3 to 4 surface water samples may be targeted to support UCL calculations. Locations are to be determined (TBD).

- **Supplemental southern wetland sampling** – We are currently evaluating the available data from the southern portion of the wetland to determine if compounds other than pesticides and herbicides warrant sampling and analysis. We will keep you apprised of this evaluation and update you with our determination.

Note that since the southern wetland is typically dry (no or infrequent standing/flowing surface water), we have not targeted surface water data collection from that area.

In addition, the above-proposed sampling approach assumes that BETA will provide all laboratory back-up to allow TRC to evaluate data usability (or in the case of PCBs, perform validation).

Let us know what you think.

Thanks again for your time and attention on this complicated project.

-Dave

David M. Sullivan, LSP, CHMM
Senior Project Manager

TRC

**TRC**
Wannalancit Mills
650 Suffolk Street
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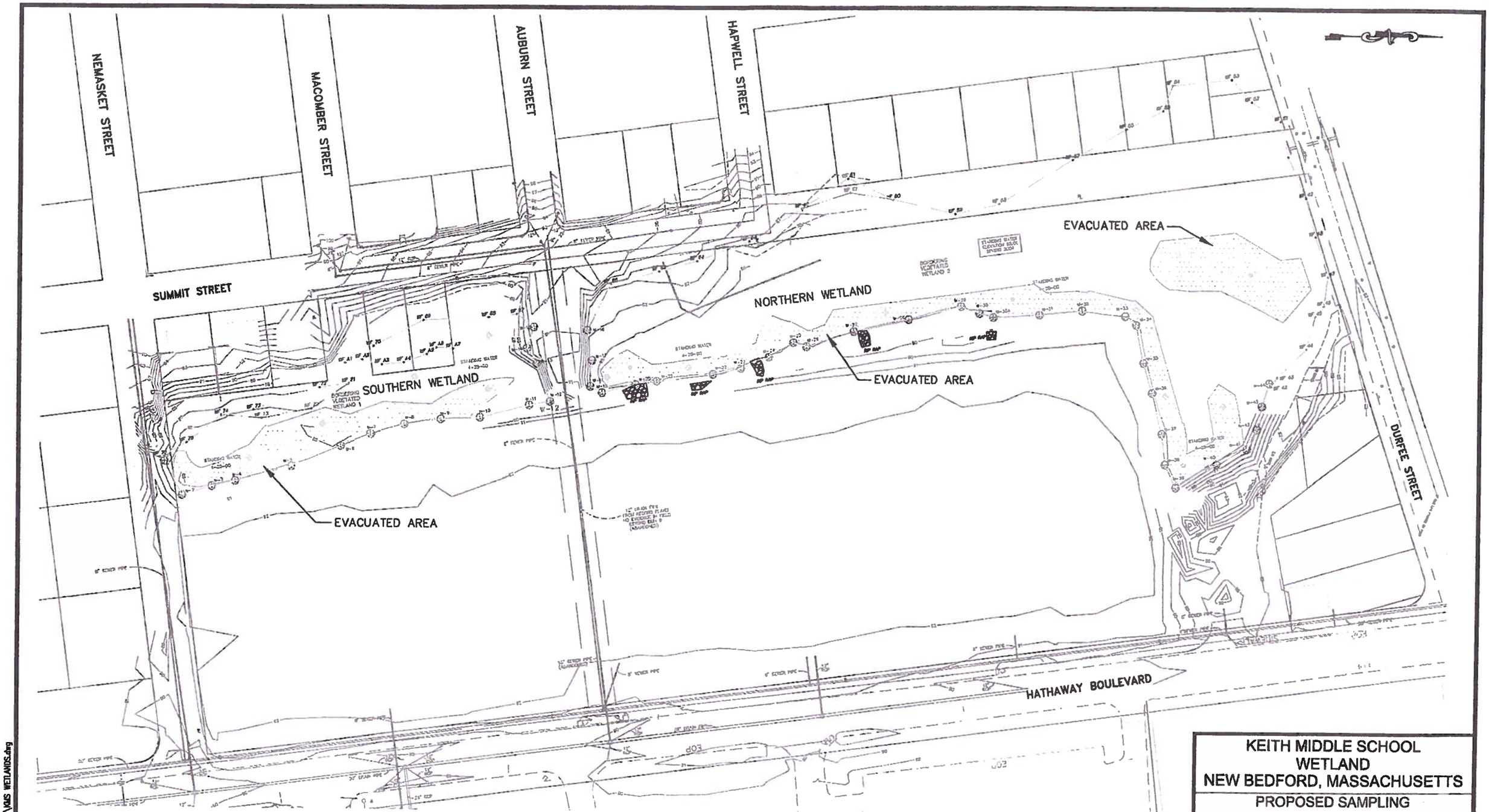
dsullivan@trcsolutions.com




NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

LEGEND

- PROPOSED SEDIMENT SAMPLE
- PROPOSED SURFACE WATER AND SEDIMENT SAMPLE

APPROXIMATE GRAPHIC SCALE

0' 50' 100' 200'

# KEITH MIDDLE SCHOOL WETLAND NEW BEDFORD, MASSACHUSETTS

## PROPOSED SAMPLING LOCATIONS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

| | | |
|---|---|---|
| DRAWN BY: HWB | DATE: | FIGURE 1 |
| CHECKED BY: SH | 2-13-09 | |

FILE: T:\E_CAD\115060\KMS WETLANDS.dwg

# APPENDIX C

# SOIL BORING AND GROUNDWATER SAMPLING LOGS

TRC
Wannalancit Mills
650 Suffolk Street
Lowell MA
Telephone: 978-970-5600
Fax: 978-453-1995

# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-1
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Hayes Remblias & Steve Perry
**DATE DRILLED** 6/24/09
**LOCATION** KMS - 8' North of corner lot stake adjacent to Summit St.
**SAMPLING METHOD** 60" Macrocore
**DRILLING METHOD** Direct Push - 6620 DT Track Rig
**NOTES** Sampled for PCBs, PAHs, Metals & Hg

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 4
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet, NAVD 88)** 88.92
**REFERENCE ELEVATION (Feet, NAVD 88)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/40" | | S-1 | | 0-6" Dark-brown fine organic material | 0.0 | | |
| 1 | | | | | | 6-18" Tan fine-medium SAND, trace gravel. | | WSB-1 (0-1) 0900 Plus MS/MSD | |
| 2 | | | | | | | | | |
| 3 | | | | | | 18-40" Tan to gray fine-medium SAND, some gravel, moist. | | | |
| 4 | | | | | | | | WSB-1 (3-4) 0905 | ▽ |
| 5 | | 60/40" | | S-2 | | 0-6" Tan to gray SILT and CLAY, wet | 0.0 | | No monitoring well installed |
| 6 | | | | | | 6-12" Tan to gray fine SAND and SILT, trace gravel, wet. | | WSB-1 (6-6) 0910 | |
| 7 | | | | | | 12-14" Tan medium-coarse SAND, wet. 14-40" Tan fine-coarse SAND and some gravel, wet. | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | WSB-1 (9-10) 0915 | |
| | | | | | | End of Boring @ 10 feet | | | |

TRC
Wannalancit Mills
650 Suffolk Street
Lowell MA
Telephone: 978-970-5600
Fax: 978-453-1995

# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-2
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Hayes Remblias & Steve Perry
**DATE DRILLED** 6/24/09
**LOCATION** KMS - Approximately 54' North of WSB-1
**SAMPLING METHOD** 60" Macrocore
**DRILLING METHOD** Direct Push - 6620 DT Track Rig
**NOTES** Sampled for PCBs, PAHs, Metals & Hg

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 3.5
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet, NAVD 88)** 88.26
**REFERENCE ELEVATION (Feet, NAVD 88)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/30" | | S-1 | | 0-12" Dark-brown fine organic material, moist | 0.0 | WSB-2 (0-1) 1050 | |
| 1 | | | | | | | | | |
| 2 | | | | | | 12-16" Brown to tan fine SAND, moist. | | | |
| 3 | | | | | | 16-22" Tan fine-medium SAND, moist to wet. | | | |
| 4 | | | | | | 22-24" Crushed gray STONE | | WSB-2 (3-4) 1055 | ▽ |
| | | | | | | 24-30" Gray to tan fine-coarse SAND, some gravel, very dense. | | | |
| 5 | | 60/44" | | S-2 | | 0-12" Tan fine-coarse SAND, trace gravel, saturated. | 0.0 | WSB-3 (5-6) 1100 | No monitoring well installed |
| 6 | | | | | | | | | |
| 7 | | | | | | 12-30" Tan fine SAND, SILT and CLAY, trace gravel, dense, moist. | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | 30-34" Tan coarse SAND, some fine-medium sand, trace gravel, wet. | | | |
| | | | | | | 34-44" Tan fine SAND, saturated. | | WSB-4 (9-10) 1105 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

TRC
Wannalancit Mills
650 Suffolk Street
Lowell MA
Telephone: 978-970-5600
Fax: 978-453-1995

# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-3
TRC GEOLOGIST E. Wachtel
DRILLING CONTRACTOR/FOREMAN NEG/Hayes Rembijas & Steve Perry
DATE DRILLED 6/24/09
LOCATION KMS - Approximately 51' North of WSB-2
SAMPLING METHOD 60" Macrocore
DRILLING METHOD Direct Push - 6620 DT Track Rig
NOTES Sampled for PCBs, PAHs, Metals & Hg

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 3
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 88.33
REFERENCE ELEVATION (Feet, NAVD 88) NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/28" | | S-1 | | 0-5" Dark-brown fine organic material. | 0.0 | | |
| 1 | | | | | | 5-24" Tan fine-medium SAND, some coarse sand and gravel, moist. | | WSB-3 (0-1) 1110 | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | WSB-3 (2-3) 1115 | ▽ |
| 4 | | | | | | | | | |
| | | | | | | 24-28" Tan fine-coarse SAND and GRAVEL, moist. | | | |
| 5 | | 60/32" | | S-2 | | 0-6" Tan fine SAND, some medium-coarse sand, saturated. | 0.0 | | No monitoring well installed |
| 6 | | | | | | 6-32" Tan fine-medium SAND, some silt, coarse sand and gravel, dense, moist. | | WSB-3 (5-6) 1120 | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | WSB-3 (9-10) 1125 | |
| | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-4
TRC GEOLOGIST E. Wachtel
DRILLING CONTRACTOR/FOREMAN NEG/Hayes Rembijas & Steve Perry
DATE DRILLED 6/24/09
LOCATION KMS - Approximately 45' North of WSB-3
SAMPLING METHOD 60" Macrocore
DRILLING METHOD Direct Push - 6620 DT Track Rig
NOTES Sampled for PCBs, PAHs, Metals & Hg

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 3.5
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 88.49
REFERENCE ELEVATION (Feet, NAVD 88) NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/38" | | S-1 | | 0-6" Dark-brown fine organic material. | 0.0 | | |
| 1 | | | | | | 6-26" Tan fine SAND, trace gravel, moist. | | WSB-4 (0-1) 1135 | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | WSB-4 (2-3) 1140 | |
| 4 | | | | | | 26-38" Tan to gray fine SAND, some medium sand and gravel, moist. | | | ▽ |
| 5 | | 60/40" | | S-2 | | 0-40" Tan fine SAND and SILT, some medium-coarse sand and gravel, very dense, moist. | 0.0 | | No monitoring well installed |
| 6 | | | | | | | | WSB-4 (5-6) 1145 | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | WSB-4 (9-10) 1160 | |
| | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-5
TRC GEOLOGIST E. Wachtel
DRILLING CONTRACTOR/FOREMAN NEG/Hayes Rembijas & Steve Perry
DATE DRILLED 6/24/09
LOCATION KMS - Approximately 48' North of WSB-4
SAMPLING METHOD 60" Macrocore
DRILLING METHOD Direct Push - 6620 DT Track Rig
NOTES Sampled for PCBs, PAHs, Metals & Hg

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) NA
TOTAL DEPTH (Feet) 15
GROUND ELEVATION (Feet, NAVD 88) 88.58
REFERENCE ELEVATION (Feet, NAVD 88) NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/21" | | S-1 | | 0-4" Dark-brown fine organic material. | 0.0 | WSB-5 (0-1) 1205 | No monitoring well installed |
| 1 | | | | | | 4-10" Tan fine SAND, trace gravel, moist. | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | 10-15" White crushed STONE. | | WSB-5 (2-3) 1210 | |
| 4 | | | | | | 15-21" Tan fine-coarse SAND, some gravel. | | | |
| 5 | | 60/26" | | S-2 | | 0-14" Tan fine-coarse SAND, some gravel, saturated. | 0.0 | WSB-5 (5-6) 1215 | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | 14-26" Tan fine SAND and SILT, some gravel, very dense. | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | WSB-5 (9-10) 1220 | |
| | | 60/45 | | S-3 | | 0-10" Tan fine SAND, saturated. | 0.0 | | |
| 11 | | | | | | 10-30" Tan fine-coarse SAND and GRAVEL, saturated. | | | |
| 12 | | | | | | | | | |
| 13 | | | | | | | | | |
| 14 | | | | | | 30-45" Tan fine SAND, some medium-coarse sand and gravel, saturated. | | | |
| 15 | | | | | | End of Boring @ 15 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-6
TRC GEOLOGIST E. Wachtel
DRILLING CONTRACTOR/FOREMAN NEG/Hayes Rembijas & Steve Perry
DATE DRILLED 6/24/09
LOCATION KMS - Approximately 48' North of WSB-5
SAMPLING METHOD 60" Macrocore
DRILLING METHOD Direct Push - 6620 DT Track Rig
NOTES Sampled for PCBs, PAHs, Metals & Hg

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 3
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet, NAVD 88) 88.32
REFERENCE ELEVATION (Feet, NAVD 88) NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/28" | | S-1 | | 0-8" Dark-brown fine organic material, moist. | 0.0 | WSB-6 (0-1) 1230<br>WSB-6-D (0-1) 1330 | |
| 1 | | | | | | | | | |
| 2 | | | | | | 8-20" Tan fine SAND, some medium-coarse sand, trace gravel, moist. | | | |
| 3 | | | | | | | | WSB-6 (2-3) 1235 | ▽ |
| 4 | | | | | | 20-28" Tan to gray fine SAND, some medium-coarse sand and gravel. | | | |
| 5 | | 60/25" | | S-2 | | 0-25" Tan fine-coarse SAND and GRAVEL, very dense, saturated. | 0.0 | WSB-6 (5-6) 1240 | No monitoring well installed |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | WSB-3 (9-10) 1245 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-7
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Hayes Rembijas
DATE DRILLED 6/24/09
LOCATION KMS - Approximately 30' South of WSB-8
SAMPLING METHOD 24" Large Bore Sampler
DRILLING METHOD Bosch Hammer Drill

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 1.25
TOTAL DEPTH (Feet) 5
GROUND ELEVATION (Feet, NAVD 88) 87.66
REFERENCE ELEVATION (Feet, NAVD 88) NA

NOTES Sampled for PCBs, PAHs and/or Metals (WSB-7 (3-4) for Metals and PAHs only, WSB-7 (4-5) for PCBs only)

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 24/20" | | S-1 | | 0-10" Dark-brown organic SILT and fine SAND, trace fine gravel and roots, moist, no odor, no staining. | 0.0 | WSB-7 (0-1) 1240 | |
| 1 | | | | | | 10-20" Dark-brown-tan fine SAND, little to some silt, moist to wet, no odor, no staining. | | WSB-7 (1-2) 1245 | ▽ |
| 2 | | 36/18" | | S-2 | | 0-18" Tan to gray-brown fine SAND, little silt, trace fine gravel, wet, no odor, no staining. | 0.0 | | No monitoring well installed |
| 3 | | | | | | | | | |
| 4 | | | | | | | | WSB-7 (3-4) 1250 | |
| 5 | | | | | | | | WSB-7 (4-5) 1255 | |
| | | | | | | End of Boring @ 5 feet (Note: Overdrilled second macrocore to increase sample recovery) | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-8
**TRC GEOLOGIST** J. Saunders
**DRILLING CONTRACTOR/FOREMAN** NEG/Hayes Remblias & D. Regan
**DATE DRILLED** 6/24/09
**LOCATION** KMS - ~342' North of South Summit St. lot corner
**SAMPLING METHOD** 24" Large Bore Sampler
**DRILLING METHOD** Bosch Hammer Drill
**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 1
**TOTAL DEPTH (Feet)** 5
**GROUND ELEVATION (Feet, NAVD 88)** 85.93
**REFERENCE ELEVATION (Feet, NAVD 88)** NA
**NOTES** Sampled for PCBs, PAHs and/or Metals (WSB-8 (3-4) for Metals and PAHs only, WSB-8 (4-5) for PCBs only)

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 24/18" | | S-1 | | 0-4" Dark-brown to black organic SILT, moist, no odor, no staining. | 0.0 | | |
| 1 | | | | | | 4-18" Tan to gray-brown fine SAND, some silt, wet, no odor, no staining. | | WSB-8 (0-1) 1155 ▽ | |
| 2 | | | | | | | | WSB-8 (1-2) 1200 | |
| | | 36/20" | | S-2 | | 0-6" Tan to gray-brown fine SAND, some silt, trace fine gravel, wet, no odor, no staining. | 0.0 | | No monitoring well installed |
| 3 | | | | | | 6-20" Tan to brown SILT and fine SAND, trace fine gravel, clay from 14-16", wet, no odor, no staining. | | | |
| 4 | | | | | | | | WSB-8 (3-4) 1205 | |
| 5 | | | | | | | | WSB-8 (4-5) 1210 | |
| | | | | | | End of Boring @ 5 feet (Note: Overdrilled second macrocore to increase sample recovery.) | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-9
**TRC GEOLOGIST** J. Saunders
**DRILLING CONTRACTOR/FOREMAN** NEG/Hayes Remblias & Steve Perry
**DATE DRILLED** 6/24/09
**LOCATION** KMS - Approximately 65' South of Durfee St. property corner
**SAMPLING METHOD** 24" Large Bore Sampler
**DRILLING METHOD** Bosch Hammer Drill
**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 2
**TOTAL DEPTH (Feet)** 8
**GROUND ELEVATION (Feet, NAVD 88)** 87.43
**REFERENCE ELEVATION (Feet, NAVD 88)** NA
**NOTES** Sampled for PCBs, PAHs and/or Metals (WSB-9 (3.5-5) for Metals and PAHs only, WSB-9 (0-1), (2-3) & (6-9) for PCBs only, Hold (6-9))

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 24/14" | | S-1 | | 0-14" Dark-brown to dark-gray-brown SILT and fine SAND (organic rich), trace fine gravel and roots, moist to very moist, no odor, no staining. | 0.0 | WSB-9 (0-1) 1020 | No monitoring well installed |
| 1 | | | | | | | | | |
| 2 | | | | | | | | WSB-9 (1-2) 1025 | |
| | | 36/18" | | S-2 | | 0-18" Dark-brown to black SILT, trace fine sand and gravel, wet, no odor, no staining. | 0.0 | WSB-9 (2-3) 1040 | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | WSB-9 (3.5-5) 1042 | |
| 5 | | 36/18" | | S-3 | | 0-6" Black organic SILT, wet, no odor, no staining. | 0.0 | | |
| 6 | | | | | | 6-18" Dark-brown organic SILT, trace roots, wet, no odor, no staining. | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | WSB-9 (6-7) 1045 (Hold) | |
| | | | | | | End of Boring @ 8 feet (Note: Overdrilled second and third macrocores to increase sample recovery.) | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-10
**TRC GEOLOGIST** J. Saunders
**DRILLING CONTRACTOR/FOREMAN** NEG/Hayes Rembijas & D. Regan
**DATE DRILLED** 6/24/09
**LOCATION** KMS - Approximately 40' South of Durfee St. property corner
**SAMPLING METHOD** 24" Large Bore Sampler
**DRILLING METHOD** Bosch Hammer Drill
**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 2
**TOTAL DEPTH (Feet)** 8
**GROUND ELEVATION (Feet, NAVD 88)** 86.29
**REFERENCE ELEVATION (Feet, NAVD 88)** NA
**NOTES** Sampled for PCBs, PAHs and/or Metals (WSB-10-(3.5-5) for PAHs & Metals only, WSB-10 (2-3) & (7-8) for PCBs only)

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 24/18" | | S-1 | | 0-18" Dark-brown with some dark-gray-brown SILT and fine SAND, trace roots and fine gravel, moist, no odor, no staining. | 0.0 | WSB-10 (0-1) 1055 | |
| 1 | | | | | | | | | |
| 2 | | | | | | | | WSB-10 (1-2) 1100 | ▽ |
| | | 36/20" | | S-2 | | 0-6" Dark-brown SILT and fine SAND, wet, no odor, no staining. | 0.0 | | |
| 3 | | | | | | 6-20" Dark-brown to black organic SILT, wet, slight organic odor, no staining. | | WSB-10-(2-3) 1105 | |
| 4 | | | | | | | | WSB-10 (3.5-5) 1110 | No monitoring well installed |
| 5 | | | | | | | | | |
| | | 36/12" | | S-3 | | 0-12" Dark-brown organic SILT, wet, slight organic odor, no staining. | 0.0 | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | WSB-10 (7-8) 1112 (Hold) | |
| | | | | | | End of Boring @ 8 feet (Note: Overdrilled second and third macrocore to increase sample recovery.) | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-11
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Bill Meadows
**DATE DRILLED** 12/17/2009
**LOCATION** KMS - Adjacent to culvert along Durfee St.
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 5400 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-11 (9-10))

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 4
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet)** 87.51
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/34" | | S-1 | | 0-1" TOPSOIL | 0.0 | | |
| 1 | | | | | | 1-24" Tan fine to medium SAND, little gravel. | | WSB-11 (0.5-1) 1115 | |
| 2 | | | | | | | | WSB-11 (1-3) 1128 | |
| 3 | | | | | | 24-34" Tan to light-tan medium SAND, trace gravel, moist. | | WSB-111 (1-3) 1220 DUP | |
| 4 | | | | | | | | | ▽ |
| | | 48/30" | | S-2 | | 0-30" Tan medium to coarse SAND, trace gravel, moist. | 0.0 | | |
| 5 | | | | | | | | WSB-11 (4-5) 1125 Plus MS/DUP | No Monitoring Well Installed |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | WSB-11 (7-8) 1130 | |
| | | 24/21" | | S-3 | | 0-9" Dark-brown medium to coarse SAND, wet. | 0.0 | | |
| 9 | | | | | | 9-11" Tan to brown fine SAND, some silt, wet. | | | |
| | | | | | | 11-21" Gray medium to coarse SAND, wet. | | WSB-11 (9-10) 1140 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER New Bedford / 115058
BORING/WELL NUMBER WSB-12
TRC GEOLOGIST H. Rizza
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 12/17/2009
LOCATION KMS - 50' East of WSB-11
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push - 5400 Truck Rig
NOTES Sampled for MCP metals, PAHs & PCBs. (Hold WSB-12 (9-10))

SCREEN TYPE/SLOT NA
FILTER PACK TYPE NA
SEAL TYPE NA
DEPTH TO WATER (Approximate Feet) 4
TOTAL DEPTH (Feet) 10
GROUND ELEVATION (Feet) 87.52
REFERENCE ELEVATION (Feet) NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/30" | | S-1 | | 0-1" Brown TOPSOIL, grass at surface. | 0.0 | | |
| 1 | | | | | | 1-20" Tan medium SAND, little gravel, trace coal, moist. | | WSB-12 (0.5-1) 1045 | |
| 2 | | | | | | | | WSB-12 (1-3) 1050 | |
| 3 | | | | | | 20-30" Tan to gray fine to medium SAND, trace cobbles (rock), moist. | | | |
| 4 | | 48/38" | | S-2 | | 0-38" Tan to gray fine to medium SAND, trace gravel, wet. | 0.0 | | ▽ |
| 5 | | | | | | | | WSB-12 (4-5) 1055 | No Monitoring Well Installed |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | WSB-12 (7-8) 1100 | |
| | | 24/24" | | S-3 | | 0-24" Gray to tan fine to medium SAND, wet. | 0.0 | | |
| 9 | | | | | | | | WSB-12 (9-10) 1105 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-13
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Bill Meadows
**DATE DRILLED** 12/17/2009
**LOCATION** KMS - 50' East of WSB-12
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 5400 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-13 (9-10))

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 5
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet)** 87.94
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/36" | | S-1 | | 0-3" TOPSOIL, grass at surface. | 0.0 | | |
| | | | | | | 3-9" Brown to tan fine to medium SAND, rock at 9-feet. | | WSB-13 (0.5-1) 1010 | |
| 1 | | | | | | 9-17" Tan medium to coarse SAND, moist. | | | |
| 2 | | | | | | 17-19" Crushed ROCK. | | WSB-13 (1-3) 1015 | |
| | | | | | | 19-36" Tan to gray fine to medium SAND, little fine gravel. | | | |
| 3 | | | | | | | | | |
| 4 | | 48/48" | | S-2 | | 0-19" Tan fine to medium SAND. | 0.0 | | |
| 5 | | | | | | | | | No Monitoring Well Installed |
| | | | | | | 19-48" Gray medium SAND, some fine gravel, moist. | | WSB-13 (5-6) 1020 | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | WSB-13 (7-8) 1025 | |
| 8 | | 24/20" | | S-3 | | 0-20" Tan to brown fine to medium SAND, little fine gravel, | 0.0 | | |
| 9 | | | | | | | | WSB-13 (9-10) 1030 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-14
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Bill Meadows
**DATE DRILLED** 12/17/2009
**LOCATION** KMS - 50' East of WSB-13
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 5400 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs.

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 5
**TOTAL DEPTH (Feet)** 8
**GROUND ELEVATION (Feet)** 88.04
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/30 | | S-1 | | 0-1" ASPHALT and ROCKS at surface. | 0.0 | | |
| 1 | | | | | | 1-7" Tan medium SAND, some fine gravel. | | | |
| | | | | | | 7-12" Tan fine SAND, some fine gravel, rock in middle. | | | |
| 2 | | | | | | 12-30" Reddish-tan medium SAND, some fine gravel, | | WSB-14 (1-3) 0945 | |
| 3 | | | | | | | | | |
| 4 | | 48/48" | | S-2 | | 0-30" Tan fine SAND, some coarse sand, moist to wet. | 0.0 | WSB-14 (4-5) 0950 | No Monitoring Well Installed |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| | | | | | | 30-36" Tan to gray fine SAND, trace fine gravel, wet. | | | |
| 7 | | | | | | 36-48" Gray medium to coarse SAND, trace gravel. | | | |
| 8 | | | | | | | | WSB-14 (7-8) 0955 | |
| | | | | | | End of Boring @ 8 feet<br>(Note: material was very tight at 8-feet; had to stop to avoid jamming core barrel.) | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-15
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Bill Meadows
**DATE DRILLED** 12/17/2009
**LOCATION** KMS - 50' East of WSB-14
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 5400 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-15 (9-10))

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 5
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet)** 88.34
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/33" | | S-1 | | 0-5" Brown medium SAND and fine GRAVEL, some roots, grass at surface. | 0.0 | | |
| 1 | | | | | | 5-7" Crushed ROCK. | | WSB-15 (0.5-1) 0900 | |
| | | | | | | 7-33" Tan fine to medium SAND, trace gravel. | | | |
| 2 | | | | | | | | WSB-15 (1-3) 0905 | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| | | 48/48" | | S-2 | | 0-2" Tan fine SAND, trace fine gravel. | 0.0 | | |
| 5 | | | | | | 2-36" Tan fine to medium SAND, moist, no odor, no staining. | | WSB-15 (4-5) 0915 | No Monitoring Well Installed |
| 6 | | | | | | | | | |
| 7 | | | | | | 36-48" Brown medium SAND, trace gravel, moist, no odor, no staining. | | | |
| 8 | | | | | | | | WSB-15 (7-8) 0920 | |
| | | 24/24" | | S-3 | | 0-12" Tan to brown fine to medium SAND. | 0.0 | | |
| 9 | | | | | | 12-18" Brown medium SAND. | | | |
| 10 | | | | | | 18-24" Brown to gray coarse SAND, some gravel, weathered bedrock in tip, wet. | | WSB-15 (9-10) 0930 | |
| | | | | | | End of Boring @ 10 feet | | | |

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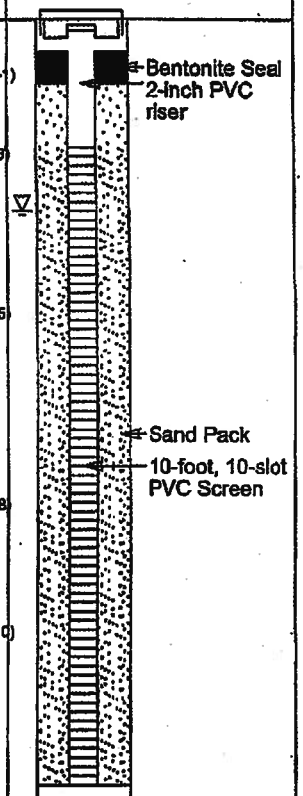
# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-16/MW-9
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Hayes Remblias
**DATE DRILLED** 12/18/2009
**LOCATION** KMS - Intersection of Summit and Hapwell Street
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 6600 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-16 (9-10))

**SCREEN TYPE/SLOT** Slotted
**FILTER PACK TYPE** Sand
**SEAL TYPE** Bentonite
**DEPTH TO WATER (Approximate Feet)** 3
**TOTAL DEPTH (Feet)** 12
**GROUND ELEVATION (Feet)** 87.88
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME |
|---|---|---|---|---|---|---|---|---|
| | | 60/36" | | S-1 | | 0-2" Tan to brown medium to coarse SAND, leaves at surface. | 0.0 | |
| 1 | | | | | | 2-3" Gray fine to medium SAND, little gravel. | | WSB-16 (0.5-1) 0915 |
| | | | | | | 3-5" Brown fine to medium SAND, some gravel, trace pieces of coal and slag. | | |
| 2 | | | | | | 5-6" ASPHALT. | | WSB-16 (1-3) 0920 |
| | | | | | | 6-7" Crushed ROCK. | | |
| 3 | | | | | | 7-14" Brown to tan fine SAND, little gravel, moist to wet. | | |
| | | | | | | 14-16" Crushed ROCK. | | |
| 4 | | | | | | 16-36" Gray fine SAND and SILT, some gravel, moist. | | |
| 5 | | | | | | | | WSB-16 (4-5) 0935 |
| | | 60/50" | | S-2 | | 0-50" Tan to gray fine to medium SAND, some gravel, fining toward bottom. | 0.0 | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | WSB-16 (7-8) 0940 |
| 9 | | | | | | | | |
| 10 | | | | | | | | WSB-16 (9-10) 0945 |
| | | | | | | End of Boring @ 10 feet | | |
| 11 | | | | | | (Note: Drove casing to 12 feet to set well.) | | |
| 12 | | | | | | | | |

WELL DIAGRAM



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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-17
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Hayes Remblias
**DATE DRILLED** 12/18/2009
**LOCATION** KMS - 50' North of WSB-16
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 6600 Truck Rig
**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 3.5
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet)** 89.08
**REFERENCE ELEVATION (Feet)** NA
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-17 (9-10)) (0.5-1 and 1-3 samples collected 12/17/2009 on first attempt)

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 60/48" | | S-1 | | 0-2" TOPSOIL. | 0.0 | | |
| 1 | | | | | | 2-12" Brown to gray fine to medium SAND, some gravel. | | WSB-17 (0.5-1) 1315 | |
| 2 | | | | | | 12-24" Brown fine SAND, some silt, trace fine gravel, moist to wet. | | WSB-17 (1-3) 1320 | |
| 3 | | | | | | 24-36" Gray crushed GRANITE. | | | ▽ |
| 4 | | | | | | 36-48" Tan to orange fine SAND and GRAVEL. | | WSB-17 (4-5) 1130 | |
| 5 | | 60/60" | | S-2 | | 0-10" Brown fine SAND, saturated. | 0.0 | | No Monitoring Well Installed |
| 6 | | | | | | 10-22" Brown medium to coarse SAND and GRAVEL. | | | |
| 7 | | | | | | 22-26" Crushed gray ROCK. | | | |
| 8 | | | | | | 26-46" Brown medium to coarse SAND, some fine sand and gravel. | | WSB-17 (7-8) 1135 | |
| 9 | | | | | | 46-60" Tan to brown fine to coarse SAND. | | WSB-17 (9-10) 1140 | |
| 10 | | | | | | End of Boring @ 10 feet | | | |

(Note: Hit refusal at this location at 4-feet on 12/17/2009. Attempted again on 12/18/2009 with a different drill rig.)

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-18
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Bill Meadows
**DATE DRILLED** 12/17/2009
**LOCATION** KMS - 50' North of WSB-17
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 5400 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs.

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** 4
**TOTAL DEPTH (Feet)** 8
**GROUND ELEVATION (Feet)** 90.14
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|
| | | 48/29" | | S-1 | | 0-2" Brown TOPSOIL with roots and leaves. | 0.0 | | |
| 1 | | | | | | 2-8" Brown to gray fine SAND, some coarse sand and gravel. | | WSB-18 (0.5-1) 1350 | |
| | | | | | | 8-18" Gray to brown fine SAND, little gravel. | | | |
| 2 | | | | | | | | WSB-18 (1-3) 1400 | |
| 3 | | | | | | 18-29" Reddish-tan fine SAND, some gravel, crushed rock at bottom. | | WSB-118 (1-3) 1500 DUP | |
| 4 | | | | | | | | | ▽ No Monitoring Well Installed |
| | | 48/35" | | S-2 | | 0-28" Tan medium to coarse SAND, little gravel, fining towards bottom, wet. | 0.0 | | |
| 5 | | | | | | | | WSB-18 (4-5) 1415 Plus MS/DUP | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| | | | | | | 28-35" Tan to gray fine to medium SAND, some crushed rock. | | WSB-18 (7-8) 1420 | |
| 8 | | | | | | End of Boring @ 8 feet (refusal) | | | |

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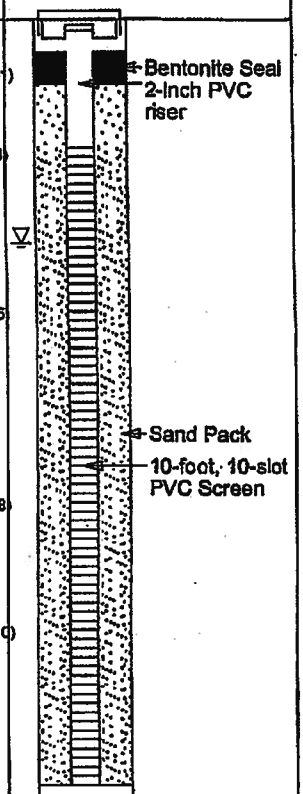
# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** WSB-19/MW-10
**TRC GEOLOGIST** H. Rizza
**DRILLING CONTRACTOR/FOREMAN** New England Geotech/Hayes Rembijas
**DATE DRILLED** 12/18/2009
**LOCATION** KMS - 50' North of WSB-18
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** Direct Push - 6600 Truck Rig
**NOTES** Sampled for MCP metals, PAHs & PCBs. (Hold WSB-19 (9-10))

**SCREEN TYPE/SLOT** Slotted
**FILTER PACK TYPE** Sand
**SEAL TYPE** Bentonite
**DEPTH TO WATER (Approximate Feet)** 3.5
**TOTAL DEPTH (Feet)** 10
**GROUND ELEVATION (Feet)** 91.75
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | TRC ID | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME |
|---|---|---|---|---|---|---|---|---|
| | | 60/31" | | S-1 | | 0-2" Brown TOPSOIL, some grass and leaves at surface. 2-10" Dark-brown fine SAND, some fill (coal and slag). | 0.0 | WSB-19 (0.5-1) 1040 |
| 1 | | | | | | | | |
| 2 | | | | | | 10-31" Tan to brown fine SAND, some medium SAND, little gravel, moist to wet. | | WSB-19 (1-3) 1045 |
| 3 | | | | | | | | |
| 4 | | 60/35" | | S-2 | | | 0.0 | WSB-19 (4-5) 1050 |
| 5 | | | | | | 0-10" Brown tan fine SAND and SILT. | | |
| 6 | | | | | | | | |
| 7 | | | | | | 10-35" Tan to gray fine to medium SAND, some silt and gravel, wet. | | WSB-19 (7-8) 1055 |
| 8 | | | | | | | | |
| 9 | | | | | | | | WSB-19 (9-10) 1100 |
| 10 | | | | | | End of Boring @ 10 feet (Note: Drove casing to 12-feet to set well.) | | |

WELL DIAGRAM



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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-1
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/9/2010
**LOCATION** KMS - 5' East of SLP-12, approx. 3' from water's edge
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 84.25
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| | | 48/30" | S-1 | | 0-15" Brown fine SAND and GRAVEL, some silt, trace medium to coarse sand. | 0.0 | TSB-1 (0-1) 1110 | |
| 1 | | | | | | | | |
| | | | | | | | TSB-1 (1-2) 1115 | |
| 2 | | | | | 15-16" GRAVEL. | | | No Monitoring Well Installed |
| | | | | | 16-30" Brown fine to coarse SAND and GRAVEL, moist to wet. | | TSB-1 (2-3) 1120 | |
| 3 | | | | | | | | |
| | | | | | | | TSB-1 (3-4) 1125 | |
| 4 | | | | | End of Boring @ 4 feet | | | |

Note: 12-Inches of ice and water at surface.

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-10
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 15' North of TSB-9
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.76
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/30" | S-1 | | 0-30" Dark-brown organic SILT (peat), some roots and wood fragments, moist to wet. | 1.3 | TSB-10 (0-1) 1250 | No Monitoring Well Installed |
| 2 | | | | | | | TSB-10 (1-2.5) 1300 | |
| 3 | | | | | | | TSB-10 (2.5-4) 1310 | |
| 4 | | | | | End of Boring @ 4 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-11
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/9/2010
**LOCATION** KMS - 5' North of ERC-SED8, approx. 3' from water's edge
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.22
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1<br>2<br>3 | | 48/31" | S-1 | | 0-26" Dark-brown organic SILT (peat), trace gravel in top 2-inches, moist to wet. | 0.0 | TSB-11 (0-1) 0935<br>TSB-11D (0-1) 0835 DUP<br>TSB-11 (1-2) 0940<br>TSB-11 (2-3) 0945 | No Monitoring Well Installed |
| 4 | | | | | 26-31" Gray fine to coarse SAND, wet. | | TSB-11 (3-4) 0950 | |
| | | | | | End of Boring @ 4 feet | | | |

Note: 24-inches of ice and water at surface.

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-12
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 10' East of ERC-SED13
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.79
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/35" | S-1 | | 0-28" Dark-brown organic PEAT, trace glass at 1-foot bgs, moist to wet. | 1.0 | TSB-12 (0-1) 1340 Plus MS/MSD<br>TSB-12 (1-2) 1350<br>TSB-12 (2-3) 1400<br>TSB-12 (3-4) 1410 | No Monitoring Well Installed |
| 2 | | | | | | | | |
| 3 | | | | | 28-36" Gray medium to coarse SAND, wet. | | | |
| 4 | | | | | End of Boring @ 4 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-2
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/9/2010
**LOCATION** KMS - Southeast corner of wetland, ~3' from water's edge
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 84.16
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| | | 48/30" | S-1 | | 0-10" Dark-brown organic SILT (peat), trace gravel. | 0.0 | TSB-2 (0-1) 1130 | |
| 1 | | | | | | | | |
| | | | | | 10-20" Tan fine to coarse SAND, some gravel, moist to wet. | | TSB-2 (1-2) 1135 | No Monitoring Well Installed |
| 2 | | | | | | | | |
| | | | | | | | TSB-2 (2-3) 1140 | |
| 3 | | | | | | | | |
| | | | | | | | TSB-2 (3-4) 1145 | |
| 4 | | | | | End of Boring @ 4 feet | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-3
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/9/2010
**LOCATION** KMS - Adjacent to SD-3F
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 84.06
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| | | 48/40" | S-1 | | 0-20" Dark-brown organic SILT (peat), leaf pieces and wood fragments, moist to wet. | 0.0 | TSB-3 (0-1) 1040 Plus MS/MSD<br>TSB-3 (1-2) 1045 | No Monitoring Well Installed |
| 1 | | | | | | | | |
| 2 | | | | | 20-40" Gray fine to coarse SAND and GRAVEL. | | TSB-3 (2-3) 1050 | |
| 3 | | | | | | | TSB-3 (3-4) 1055 | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 24-inches of Ice and water at surface. | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-4
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Remblias
**DATE DRILLED** 2/9/2010
**LOCATION** KMS - 20' North of TSB-3, approx. 3' from water's edge
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.04
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/30" | S-1 | | 0-20" Dark-brown organic SILT (peat), some leaf pieces, wood fragments and roots. | 0.0 | TSB-4 (0-1) 1010<br>TSB-4 (1-2) 1015 | No Monitoring Well Installed |
| 2 | | | | | | | | |
| 3 | | | | | 20-30" Dark-brown organic SILT (peat). | | TSB-4 (2-3) 1020<br>TSB-4 (3-4) 1025 | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 24-Inches of ice and water at surface. | | | |

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Lowell MA
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Fax: 978-453-1995

# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-5
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 10' South of SED-11A-K, 4' from water's edge.
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.49
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/36" | S-1 | | 0-36" Dark-brown organic SILT (peat), some roots, wood fragments, coarse sand and gravel in the top 3-inches, moist to wet. | 0.0 | TSB-5 (0-1) 0900<br>TSB-5 (1-2) 0905<br>TSB-5 (2-3) 0910<br>TSB-5 (3-4) 0915 | No Monitoring Well Installed |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 18-Inches of ice and water at surface. | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-6
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 15' North of TSB-5
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 84.32
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| | | 48/24" | S-1 | | 0-4" Tan to gray wood fragments. | 0.0 | | |
| 1 | | | | | 4-24" Dark-brown organic SILT (peat), some roots and wood fragments, trace glass from 2-3-feet, moist to wet. | | TSB-6 (0-2) 0935 | |
| 2 | | | | | | | | No Monitoring Well Installed |
| 3 | | | | | | | TSB-6 (2-4) 0945 | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 6-inches of ice and water at surface. | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-7
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 15' North of TSB-6
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 84.06
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| | | 48/24" | S-1 | | 0-10" Dark-brown SILT (peat), some fine to coarse sand, trace glass, moist to wet. | 1.0 | | |
| 1 | | | | | | | TSB-7 (0-2) 1030 | |
| 2 | | | | | 10-24" Dark-brown SILT (peat), some roots and wood fragments, moist. | | | No Monitoring Well Installed |
| 3 | | | | | | | TSB-7 (2-4) 1040 | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 12-inches of ice and water at surface. | | | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-8
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 15' North of TSB-7
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.77
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/24" | S-1 | | 0-24" Dark-brown organic SILT (peat), some gravel in the top 2-inches. | 1.2 | TSB-8 (0-1) 1100 | No Monitoring Well Installed |
| 2 | | | | | | | TSB-8 (1-2.5) 1110 | |
| 3 | | | | | | | TSB-8 (2.5-4) 1120 | |
| 4 | | | | | End of Boring @ 4 feet<br>Note: 12-inches of water and ice at surface. | | TSB-8D (2.5-4) 1020 DUP | |

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# BORING/WELL CONSTRUCTION LOG

**CLIENT/PROJECT NUMBER** New Bedford / 115058
**BORING/WELL NUMBER** TSB-9
**TRC GEOLOGIST** E. Wachtel
**DRILLING CONTRACTOR/FOREMAN** NEG/Keith Precious & Hayes Rembijas
**DATE DRILLED** 2/8/2010
**LOCATION** KMS - 15' North of TSB-8
**SAMPLING METHOD** 48" Macrocore
**DRILLING METHOD** 540 Dolly Rig
**NOTES** Sampled for MCP metals, Hg & PCBs

**SCREEN TYPE/SLOT** NA
**FILTER PACK TYPE** NA
**SEAL TYPE** NA
**DEPTH TO WATER (Approximate Feet)** NA
**TOTAL DEPTH (Feet)** 4
**GROUND ELEVATION (Feet)** 83.89
**REFERENCE ELEVATION (Feet)** NA

| DEPTH (ft. BGL) | BLOW COUNTS | PEN/REC (INCHES) | CORE # | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | Field Testing (ppm) | SAMPLE ID/ TIME | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|
| 1 | | 48/30" | S-1 | | 0-30" Dark-brown organic SILT (peat), trace to some fine to coarse sand and gravel in top 3-inches, moist to wet. | 1.2 | TSB-9 (0-1) 1320 | |
| 2 | | | | | | | TSB-9 (1-2.5) 1330 | No Monitoring Well Installed |
| 3 | | | | | | | TSB-9 (2.5-4) 1335 | |
| 4 | | | | | End of Boring @ 4 feet | | | |

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time: | Sheet 1 of 1 |
|---|---|---|---|
| 115058 | City of NB | 11/6/09 0915 10/26 | |

TRC Personnel: Allison Weiss

Well Identification: MW-1

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | X | |
| Concrete Collar Intact | X | |
| PVC Stick-up Intact | X | |
| Well Cap Present | X | |
| Security Lock Present | | |

Protective Casing Stick-up (from ground): NA ft.

Riser Stick-up (from ground): NA ft.

WELL DIAMETER: [X] 2 inch [ ] 4 inch [ ] 6 inch

WELL MATERIAL: [X] PVC [ ] SS [ ] ___

Well Depth 16.50 ft. [X] top of riser [ ] top of casing [ ] ___ [X] measured [ ] historical

Water Depth 9.73 ft. Intake = 13'

Height of Water Column 6.77 ft. x [X] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (___ in.)

Volume of Water in Well = 1.08 gallon(s)

___ Total gallons purged

[Vol. = $r^2$ h(0.163)]

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| Time | 0920 | 0925 | 0930 | 0935 | 0940 | 0945 | 0950 | 0953 | 0956 | 0959 |
|---|---|---|---|---|---|---|---|---|---|---|
| pH (Std. Units) +/- .1 | 6.95 | 6.62 | 6.57 | 6.47 | 6.44 | 6.42 | 6.40 | 6.39 | 6.39 | 6.38 |
| Eh (millivolts) +/- 10 | 5.0 | 14.0 | 16.9 | 23.6 | 26.6 | 29.9 | 33.3 | 37.6 | 39.8 | 43 |
| Conduct. (µmhos/cm) | 0.491 | 0.536 | 0.538 | 0.567 | 0.583 | 0.585 | 0.587 | 0.591 | 0.588 | 0.592 |
| Temp. (C) +/- 3% | 9.46 | 8.81 | 8.88 | 9.86 | 9.71 | 9.94 | 9.96 | 10.27 | 10.07 | 10.22 |
| Turb. (NTU) +/- 10% | 20.7 | 15.8 | 15.3 | 10.39 | 6.94 | 5.76 | 5.18 | 3.35 | 3.45 | 2.92 |
| DO (mg/l) +/- 3% | 17.34 | 30.3 | 33.21 | 49.16 | 56.93 | 58.69 | 61.4 | 62.52 | 63.26 | 62.73 |
| Flow (ml/min) | 100 | | 125 | 150 | | 200 | | | | |
| Depth To Water (ft) +/- 0.01 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 |
| Time | 1002 | 1005 | 1008 | 1011 | 1015 | 1018 | 1021 | 1024 | 1027 | 1030 |
| pH (Std. Units) | 6.37 | 6.36 | 6.37 | 6.36 | 6.36 | 6.36 | 6.36 | 6.36 | 6.36 | 6.36 |
| Eh (millivolts) | 47.5 | 48.7 | 50.2 | 52.3 | 54.0 | 54.7 | 55.9 | 56.3 | 57.3 | 57.5 |
| Conduct. (µmhos/cm) | 0.588 | 0.587 | ~~0.585~~ 0.586 | 0.586 | 0.586 | 0.587 | 0.589 | 0.590 | 0.592 | 0.594 |
| Temp. (C) | 10.23 | 10.20 | 10.11 | 10.01 | 10.18 | 10.19 | 10.34 | 10.44 | 10.73 | 10.62 |
| Turb. (NTU) | ~~60.92~~ 2.5 | 1.99 | 1.79 | 1.77 | 1.78 | 1.68 | 1.36 | 1.46 | 1.42 | 1.32 |
| DO (mg/l) | 60.92 | 60.53 | 59.6 | 58.72 | 57.57 | 56.8 | 55.6 | 55.51 | 54.6 | 59.9 |
| Flow (ml/min) | 200 | | | 200 | | | | | | 200 |
| Depth To Water (ft) | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 | 9.78 |

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | X | X |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: ___ | | |

Description of Sampling Equipment and Flow Rate:

YSI XL, 650 MDS Display, Lamotte 2020, Geopump, Solinst Water level meter.

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| Total Metals | N | Nitric | 1 250ML poly | 1035 | MW-1 | |
| Dissolved Metals | Y | Nitric | 1 250 poly | 1035 | ↓ | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

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Signed: Allison Weiss

Rev: 1 Oct 2002

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time: | Sheet 1 of 1 |
|---|---|---|---|
| City of NB | 115058 | 1/6/09 1100 | |

TRC Personnel: Allison Weiss

Well Identification: MW-2

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | X | |
| Concrete Collar Intact | X | |
| PVC Stick-up Intact | X | |
| Well Cap Present | X | |
| Security Lock Present | | |

Protective Casing Stick-up (from ground): NA ft.

Riser Stick-up (from ground): NA ft.

WELL DIAMETER: [X] 2 inch [ ] 4 inch [ ] 6 inch [ ] ___

WELL MATERIAL: [X] PVC [ ] SS [ ] ___

Well Depth 16.52 ft. [X] top of riser [ ] top of casing [ ] ___ [X] measured [ ] historical

Water Depth 9.29 ft. Intake: 13'

Height of Water Column 7.23 ft. x [X] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (___ in.)

Volume of Water in Well = 1.16 gallon(s)

[Vol. = $r^2$ h(0.163)]

___ Total gallons purged

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | 1115 | 1118 | 1121 | 1124 | 1127 | 1130 | 1133 | 1136 | 1139 | |
| pH (Std. Units) | 6.72 | 6.58 | | | | 6.38 | 6.33 | 6.29 | | |
| Eh (millivolts) | 13.3 | 7.2 | | | | -17.3 | -14.7 | -8.2 | | |
| Conduct. (µmhos/cm) | 0.354 | 0.369 | | | | 0.363 | 0.356 | 0.363 | | |
| Temp. (C) | 8.89 | 9.19 | | | | 6.85 | 8.36 | 9.17 | | |
| Turb. (NTU) | 33.3 | ~~52.44~~ | | | | 17.4 | 16.7 | | | |
| DO (mg/l) | 49.71 | 52.44 | | | | 54.94 | 52.17 | 50.71 | | |
| Flow (ml/min) | 125 | | | | | 100 | | <100 | | |
| Depth To Water (ft) | 10.54 | 11.01 | 11.21 | | | 10.98 | 11.72 | 12.14 | 12.65 | |
| Time | | | | | | | | | | |
| pH (Std. Units) | | | | | | | | | | |
| Eh (millivolts) | | | | | | | | | | |
| Conduct. (µmhos/cm) | | | | | | | | | | |
| Temp. (C) | | | | | | | | | | |
| Turb. (NTU) | | | | | | | | | | |
| DO (mg/l) | | | | | | | | | | |
| Flow (ml/min) | | | | | | | | | | |
| Depth To Water (ft) | | | | | | | | | | |

Not stabilizing. Some problem lost event w/ water level. Sampled before stable

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | X | X |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: ___ | | |

Description of Sampling Equipment and Flow Rate: YSI XL, 650 Display, Geopump, Lamotte 2020 Solinst Waterlevel Meter.

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| Total Metals | N | Nitric | 1 250 poly | 1145 | MW-2 | |
| Dissolved Metals | Y | Nitric | 1 250 poly | 1145 | MW-2 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time: | Sheet 1 of 2 |
|---|---|---|---|
| CNYgal NB-KMS | 115058 | 11/6/09 1215 | |

TRC Personnel: Allison Weiss

Well Identification: MW-3

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | X | |
| Concrete Collar Intact | X | |
| PVC Stick-up Intact | X | |
| Well Cap Present | X | |
| Security Lock Present | | |

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

Protective Casing Stick-up (from ground): NA ft.

Riser Stick-up (from ground): NA ft.

WELL DIAMETER: [X] 2 inch [ ] 4 inch [ ] 6 inch

WELL MATERIAL: [X] PVC [ ] SS [ ] ___

Well Depth: 16.11 ft. [X] top of riser [ ] top of casing [ ] ___ [X] measured [ ] historical

Water Depth: 9.33 ft. Intake=12.5-13'

Height of Water Column: 6.78 ft. x [X] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (___ in.)

Volume of Water in Well = 1.08 gallon(s)

[Vol. = $r^2$ h(0.163)] ___ Total gallons purged

**FIELD WATER QUALITY MEASUREMENTS**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | 1235 | 1240 | 1245 | 1248 | 1251 | 1254 | 1257 | 1300 | 1303 | 1306 |
| pH (Std. Units) | 7.72 | 7.39 | 7.22 | 7.16 | 7.07 | 6.98 | 6.92 | 6.88 | 6.78 | 6.73 |
| Eh (millivolts) | 13.2 | 20.8 | 6.7 | 8.1 | 6.0 | -2.3 | -1.1 | -0.9 | -1.7 | -2.4 |
| Conduct. (µmhos/cm) | 0.075 | 0.122 | 0.126 | 0.128 | 0.183 | 0.142 | 0.151 | 0.158 | 0.182 | 0.202 |
| Temp. (C) | 9.47 | 9.36 | 10.42 | 10.69 | 10.62 | 11.09 | 11.01 | 10.85 | 10.56 | 10.81 |
| Turb. (NTU) | 17.4 | 22.3 | 77.0 | 54.7 | 71.7 | 124 | 72.2 | 46.2 | 29.5 | 27.4 |
| DO (mg/l) | 8.24 | 13.29 | 13.87 | 14.83 | 16.24 | 17.25 | 19.64 | 21.42 | 28.19 | 32.02 |
| Flow (ml/min) | | 125 | | 100 | | | | | 80 | |
| Depth To Water (ft) | 10.02 | 10.54 | 10.72 | 10.7 | 10.74 | 10.80 | 10.81 | 10.75 | 10.62 | 10.62 |
| Time | 1309 | 1312 | 1315 | 1318 | 1321 | 1324 | 1327 | 1330 | 1333 | 1336 |
| pH (Std. Units) | 6.71 | 6.70 | 6.68 | 6.66 | 6.60 | 6.59 | 6.59 | 6.58 | 6.57 | 6.56 |
| Eh (millivolts) | -3.5 | -4.8 | -3.1 | -4.4 | -5.6 | -5.8 | -5.5 | -5.1 | -5.5 | -6.5 |
| Conduct. (µmhos/cm) | 0.211 | 0.221 | 0.232 | 0.248 | 0.292 | 0.296 | 0.298 | 0.306 | 0.314 | 0.325 |
| Temp. (C) | 10.91 | 10.77 | 10.89 | 10.93 | 10.03 | 9.88 | 9.83 | 9.95 | 10.08 | ~~10.33~~ 7.83 |
| Turb. (NTU) | 22.5 | 18.6 | 19.7 | 16.3 | 12.0 | 11.3 | 10.42 | ~~10.11~~ | 9.27 | 10.33 |
| DO (mg/l) | 34.37 | 35.96 | 36.64 | 36.47 | 33.25 | 32.89 | 32.63 | 31.68 | 31.12 | 30.23 |
| Flow (ml/min) | | | | | | | | | | |
| Depth To Water (ft) | 10.64 | 10.66 | 10.7 | 10.68 | 10.48 | 10.48 | 10.47 | 10.45 | 10.42 | 10.48 |

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | X | X |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: ___ | | |

Description of Sampling Equipment and Flow Rate: YSI XL, 650 Display, Lamotte 2020 Solinst water level meter, geopump

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| Total Metals | N | Nitric | 1,250 poly | 1355 | MW-3 | |
| Dissolved Metals | Y | Nitric | 1,250 poly | 1355 | MW-3 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



Signed: Allison Weiss

**TRC**

**Low-flow Groundwater Sampling Data Record**

Project: | Project No.: 115058 | Date/Time: 1/6/02 10 | Sheet 1 of 1

TRC Personnel: Allison Weiss

Well Identification: MW-3

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | | |
| Concrete Collar Intact | | |
| PVC Stick-up Intact | | |
| Well Cap Present | | |
| Security Lock Present | | |

Protective Casing Stick-up _____ ft. (from ground)

Riser Stick-up (from ground) _____ ft.

WELL DIAMETER ☐ 2 inch ☐ 4 inch ☐ 6 inch

WELL MATERIAL ☐ PVC ☐ SS ☐ ___

Well Depth _____ ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☐ historical

Water Depth _____ ft.

Height of Water Column _____ ft. x ☐ .16 gal/ft (2 in.) ☐ .65 gal/ft (4 in.) ☐ 1.5 gal/ft (6 in.) ☐ ___ gal/ft (__ in.)

Volume of Water in Well = _____ gallon(s)

[Vol. = $r^2$ h(0.163)] _____ Total gallons purged

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | 1339 | 1342 | 1345 | 1348 | 1351 | | | | | |
| pH (Std. Units) | 6.57 | 6.55 | 6.56 | 6.57 | 6.56 | | | | | |
| Eh (millivolts) | -7.4 | -7.5 | -7.7 | -7.7 | -7.7 | | | | | |
| Conduct. (µmhos/cm) | 0.329 | 0.342 | 0.347 | 0.348 | 0.349 | | | | | |
| Temp. (C) | 10.37 | 10.26 | 10.10 | 10.09 | 9.99 | | | | | |
| Turb. (NTU) | 6.75 | 13.4 | 10.33 | 10.01 | 10.71 | | | | | |
| DO (mg/l) | 29.52 | 30.24 | 29.46 | 28.68 | 27.98 | | | | | |
| Flow (ml/min) | | | | | | | | | | |
| Depth To Water (ft) | 10.53 | 10.50 | 10.48 | 10.48 | 10.44 | | | | | |
| Time | | | | | | | | | | |
| pH (Std. Units) | | | | | | | | | | |
| Eh (millivolts) | | | | | | | | | | |
| Conduct. (µmhos/cm) | | | | | | | | | | |
| Temp. (C) | | | | | | | | | | |
| Turb. (NTU) | | | | | | | | | | |
| DO (mg/l) | | | | | | | | | | |
| Flow (ml/min) | | | | | | | | | | |
| Depth To Water (ft) | | | | | | | | | | |

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | | |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: _____ | | |

Description of Sampling Equipment and Flow Rate:

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | See page 1 | | | | |
| | | | | | | |
| | | | | | | |

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Signed: Allie Weiss

Rev: 1 Oct 2002

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time: | Sheet 1 of 2 |
|---|---|---|---|
| City of NB | 115058 | 1/7/10 1040 | |

TRC Personnel: Allison Weiss

Well Identification: MW-9

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | X | |
| Concrete Collar Intact | X | |
| PVC Stick-up Intact | X | |
| Well Cap Present | X | |
| Security Lock Present | | |

Protective Casing Stick-up (from ground) NA ft.

Riser Stick-up (from ground) NA ft.

WELL DIAMETER: [X] 2 inch [ ] 4 inch [ ] 6 inch [ ] ___

WELL MATERIAL: [X] PVC [ ] SS [ ] ___

Well Depth 11.3 ft. [X] top of riser [ ] top of casing [ ] ___ [X] measured [ ] historical

Water Depth 2.32 ft. Intake = 8'

Height of Water Column 8.98 ft. x [X] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (___ in.)

Volume of Water in Well = 1.44 gallon(s)

[Vol. = $r^2h(0.163)$] ___ Total gallons purged

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | 1045 | 1048 | 1051 | 1054 | 1057 | 1100 | 1103 | 1106 | 1109 | 1112 |
| pH (Std. Units) | 5.45 | 5.51 | 5.54 | 5.55 | 5.57 | 5.59 | 5.61 | 5.62 | 5.62 | 5.63 |
| Eh (millivolts) | 130.4 | 129.5 | 128.6 | 128.1 | 124.9 | 113.8 | 104.3 | 100.6 | 91.5 | 86.7 |
| Conduct. (µmhos/cm) | 9.627 | 9.659 | 9.670 | 9.686 | 9.728 | 9.648 | 9.185 | 9.010 | 8.791 | 8.643 |
| Temp. (C) | 6.80 | 6.66 | 6.67 | 6.72 | 6.63 | 6.65 | 6.97 | 7.03 | 7.05 | 6.99 |
| Turb. (NTU) | 23.3 | 19.0 | 16.1 | 19.2 | 15.2 | 13.8 | 11.5 | 10.41 | 10.92 | 9.86 |
| DO (mg/l) | 2.56 | 3.04 | 3.36 | 3.41 | 3.60 | 3.88 | 3.28 | 3.13 | 3.14 | 3.12 |
| Flow (ml/min) | 125 | | | | 125 | | | | | |
| Depth To Water (ft) | 3.18 | 3.35 | 3.43 | 3.47 | 3.35 | 3.52 | 3.62 | 3.75 | 3.71 | 3.70 |
| Time | 1115 | 1118 | 1121 | 1124 | 1127 | 1130 | 1133 | 1136 | 1139 | 1142 |
| pH (Std. Units) | 5.63 | 5.62 | 5.63 | 5.63 | 5.62 | 5.62 | 5.61 | 5.61 | 5.60 | 5.59 |
| Eh (millivolts) | 83.9 | 76.5 | 71.2 | 69.6 | 65.4 | 64.4 | 59.6 | 58.7 | 56.6 | 55.6 |
| Conduct. (µmhos/cm) | 8.498 | 8.087 | 7.737 | 7.634 | 7.397 | 7.158 | 6.995 | 6.919 | 6.896 | 6.760 |
| Temp. (C) | 6.89 | 6.87 | 6.92 | 7.02 | 7.18 | 7.17 | 7.25 | 7.27 | 7.50 | 7.46 |
| Turb. (NTU) | 9.45 | 7.29 | 6.76 | 6.22 | 5.27 | 4.88 | 4.84 | 4.22 | 3.93 | 3.82 |
| DO (mg/l) | 3.05 | 2.90 | 2.37 | 2.25 | 2.05 | 1.69 | 1.46 | 1.41 | 1.36 | 1.32 |
| Flow (ml/min) | 125 | | | | | 125 | | | | |
| Depth To Water (ft) | 3.71 | 3.72 | 3.76 | 3.79 | 3.71 | 3.72 | 3.71 | 3.71 | 3.71 | 3.71 |

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | X | X |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: ___ | | |

Description of Sampling Equipment and Flow Rate: YSI XL, 650 Display, Lamotte 2020 Solinst Water level meter, geopump

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| Total Metals | N | Nitric | 1 250 poly | 1210 | MW9/MW19 | + DUP @ 1210 |
| Dissolved Metals | Y | Nitric | 1 250 poly | ↓ | MW9/MW19 | + DUP |
| PCBs | N | ICE | 2 1L Amber | ↓ | MW9/MW19 | + DUP |
| | | | | | | |
| | | | | | | |

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Signed: Allison Weiss

Rev: 1 Oct 2002

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time | Sheet 2 of 2 |
|---|---|---|---|
| City of NB | 115058 | 1/7/2010 (AM) | |

TRC Personnel: Allison Weiss

Well Identification: MW-9

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | | |
| Concrete Collar Intact | | |
| PVC Stick-up Intact | | |
| Well Cap Present | | |
| Security Lock Present | | |

Protective Casing Stick-up (from ground) NA ft.

Riser Stick-up (from ground) NA ft.

WELL DIAMETER [X] 2 inch [ ] 4 inch [ ] 6 inch [ ] ___

WELL MATERIAL [X] PVC [ ] SS [ ] ___

Well Depth ____ ft. [ ] top of riser [ ] top of casing [ ] ____ [ ] measured [ ] historical

Water Depth ____ ft.

Height of Water Column ____ ft. x [ ] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (__ in.)

Volume of Water in Well = ____ gallon(s)

[Vol. = $r^2$ h(0.163)]

____ Total gallons purged

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Time | 1145 | 1148 | 1151 | 1154 | 1157 | 1200 | 1203 | | | |
| pH (Std. Units) | 5.59 | 5.56 | 5.56 | 5.56 | 5.53 | 5.52 | 5.53 | | | |
| Eh (millivolts) | 54.4 | 52.7 | 52.2 | 51.8 | 50.1 | 49.1 | 49.0 | | | |
| Conduct. (µmhos/cm) | 6.636 | 6.574 | 6.473 | 6.406 | 6.251 | 6.174 | 6.148 | | | |
| Temp. (C) | 7.53 | 8.10 | 8.01 | 7.96 | 7.78 | 7.84 | 7.84 | | | |
| Turb. (NTU) | 4.06 | 3.76 | 3.91 | 3.62 | 3.58 | 2.95 | 2.48 | | | |
| DO (mg/l) | 1.34 | 1.26 | 1.25 | 1.24 | 1.20 | 1.10 | 1.09 | | | |
| Flow (ml/min) | | | | 125 | | | | | | |
| Depth To Water (ft) | 3.78 | 3.76 | 3.75 | 3.73 | 3.70 | 3.70 | 3.70 | | | |
| Time | | | | | | | | | | |
| pH (Std. Units) | | | | | | | | | | |
| Eh (millivolts) | | | | | | | | | | |
| Conduct. (µmhos/cm) | | | | | | | | | | |
| Temp. (C) | | | | | | | | | | |
| Turb. (NTU) | | | | | | | | | | |
| DO (mg/l) | | | | | | | | | | |
| Flow (ml/min) | | | | | | | | | | |
| Depth To Water (ft) | | | | | | | | | | |

STABLE

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | [ ] | [ ] |
| Submersible Pump | [ ] | [ ] |
| Bladder Pump | [ ] | [ ] |
| Other: ____ | [ ] | [ ] |

Description of Sampling Equipment and Flow Rate:

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |
| | | See page 1 | | | | |
| | | | | | | |
| | | | | | | |

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Signed: Allison Weiss

Rev: 1 Oct 2002

**TRC**

**Low-flow Groundwater Sampling Data Record**

| Project: | Project No.: | Date/Time: | Sheet 1 of 1 |
|---|---|---|---|
| City of NB | 115058 | 1/7/10 0830 | |

TRC Personnel: Allison Weiss

Well Identification: MW-10

**WELL INTEGRITY**

| | YES | NO |
|---|---|---|
| Protect. Casing Secure | X | |
| Concrete Collar Intact | X | |
| PVC Stick-up Intact | X | |
| Well Cap Present | Y | |
| Security Lock Present | | |

Protective Casing Stick-up (from ground) NA ft.

Riser Stick-up (from ground) NA ft.

WELL DIAMETER: [X] 2 inch [ ] 4 inch [ ] 6 inch [ ]

WELL MATERIAL: [X] PVC [ ] SS [ ]

Well Depth 11.05 ft. [✓] top of riser [ ] top of casing [X] measured [ ] historical

Water Depth 6.60 ft. Intake = 9'

Height of Water Column 4.45 ft. x [X] .16 gal/ft (2 in.) [ ] .65 gal/ft (4 in.) [ ] 1.5 gal/ft (6 in.) [ ] ___ gal/ft (__ in.)

Volume of Water in Well = 0.712 gallon(s)

[Vol. = $r^2$ h(0.163)]

_____ Total gallons purged

**PID SCREENING MEAS.**

| | |
|---|---|
| Background | |
| Well Mouth | |

**FIELD WATER QUALITY MEASUREMENTS**

| Time | 0840 | 0845 | 0850 | 0855 | 0900 | 0905 | 0910 | 0915 | 0920 | 0925 |
|---|---|---|---|---|---|---|---|---|---|---|
| pH (Std. Units) +/- 0.1 | 7.36 | 6.57 | 6.15 | 6.06 | 5.95 | 5.89 | 5.79 | 5.74 | 5.73 | 5.68 |
| Eh (millivolts) +/- 10 | 17.3 | 43.1 | 51.0 | 53.5 | 56.4 | 58.7 | 60.8 | 63.2 | 64.3 | 67.4 |
| 35% Conduct. (µmhos/cm) | 0.710 | 0.711 | 0.690 | 0.687 | 0.675 | 0.669 | 0.667 | 0.646 | 0.637 | 0.619 |
| Temp. (C) | 8.65 | 8.91 | 8.73 | 8.68 | 8.84 | 8.76 | 8.94 | 8.69 | 8.72 | 8.90 |
| Turb. (NTU) +/- 10% | 19.6 | 16.7 | 13.3 | 11.6 | 10.07 | 8.20 | 7.12 | 5.95 | 5.63 | 4.31 |
| DO (mg/l) +/- 10% | 14.92 | 14.26 | 10.60 | 9.46 | 7.54 | 6.47 | 4.90 | 4.20 | 3.87 | 2.67 |
| Flow (ml/min) | 125 | | | | 150 | | | | | |
| Depth To Water (ft) | 7.23 | 7.14 | 07.13 | 7.13 | 7.13 | 7.14 | 7.14 | 7.15 | 7.15 | 7.14 |
| Time | 0930 | 0933 | 0936 | 0939 | 0942 | 0945 | | | | |
| pH (Std. Units) | 5.66 | 5.65 | 5.64 | 5.62 | 5.61 | 5.60 | | | | |
| Eh (millivolts) | 68.6 | 69.2 | 70.4 | 72.3 | 73.1 | 74.2 | | | | |
| Conduct. (µmhos/cm) | 0.610 | 0.605 | 0.599 | 0.578 | 0.576 | 0.572 | | | | |
| Temp. (C) | 8.89 | 8.91 | 8.89 | 9.05 | 9.02 | 9.08 | | | | |
| Turb. (NTU) 3.67 | ~~2.35~~ | 3.40 | 3.20 | 2.93 | 2.93 | 2.19 | | | | |
| DO (mg/l) | 2.35 | 2.15 | 1.93 | 1.50 | 1.48 | 1.44 | | | | |
| Flow (ml/min) | | 150 | | | | | | | | |
| Depth To Water (ft) | 7.14 | 7.14 | 7.14 | 7.15 | 7.15 | 7.15 | | | | |

| Pump Type | Purge | Sample |
|---|---|---|
| Peristaltic Pump | X | X |
| Submersible Pump | | |
| Bladder Pump | | |
| Other: | | |

Description of Sampling Equipment and Flow Rate: YSI XL, 650 Display, Lamotte 2020, Solinst water level meter, Geopump

| Analytical Parameter | Filtered (Y/N) | Preservation | Volume | Time Collected | Sample # | Case # |
|---|---|---|---|---|---|---|
| Total Metals | N | Nitric | 1 250 poly | 0950 | MW-10 | 1 MS/DUP for Metals only |
| Dissolved Metals | Y | Nitric | 1 250 poly | | | |
| PCBs (Total) | N | ICE | 2.1 L Amb. | | | |
| ~~PCBs (Diss)~~ | ~~Y~~ | ~~ICE~~ | ~~2.1 L Amb~~ | | | |
| | | | | | | |

AW 25/10

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Signed: Allison Weiss

Rev: 1 Oct 2002

# APPENDIX D

# CORRESPONDENCE WITH EPA REGARDING IMMINENT HAZARD MITIGATION FENCE INSTALLATION

ENVIRONMENTAL STEWARDSHIP DEPARTMENT/

NEW BEDFORD CONSERVATION COMMISSION

CITY OF NEW BEDFORD
SCOTT W. LANG, MAYOR

October 1, 2009

Kimberly N. Tisa, PCB Coordinator
United States Environmental Protection Agency
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

**RE: Information Regarding Imminent Hazard Mitigation Fence Installation**
Keith Middle School
225 Hathaway Boulevard
New Bedford, Massachusetts

Dear Ms. Tisa:

The purpose of this letter is to provide the United States Environmental Protection Agency (USEPA) that the City of New Bedford (City) is prepared to commence activities related the installation of a perimeter fence enclosing the northern portion of the Keith Middle School (KMS) wetland (the "Site"). The purpose of the fence installation is to mitigate an Imminent Hazard (IH) condition presented by concentrations of total polychlorinated biphenyls (PCBs) in wetland sediments pursuant to 310 CMR 40.0311(7) and 310 CMR 40.0321(2) of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). The City views the proposed fence installation as an interim step toward the implementation of a full remedy, currently in the planning stage, which will be subject to USEPA and Massachusetts Department of Environmental Protection (MassDEP) review and approval.

## Background

Under the direction of a prior consultant (BETA Group, Incorporated [BETA]) and following the approval by the USEPA of the Risk-Based Wetland Cleanup Request, the remedy for the PCB-contaminated wetland sediments at the McCoy Field/Keith Middle School Site (MassDEP Release Tracking Number 4-15685) included the removal of up to 6 inches of impacted sediments with residual PCB concentrations greater than 1 mg/kg at locations within the Site wetlands. The 1 mg/kg total PCB cleanup level was approved by the USEPA for the wetland under the provisions set forth in 40 CFR Part 761.61(c) without further conditions, such as capping. EPA approval for the wetland and other site-related remedial activities was contingent, in part, upon the preparation and implementation of a Long-Term Monitoring and Maintenance Implementation Plan (LTMMIP) describing the activities that will be conducted for the monitoring and maintenance of the remedy.

As detailed in TRC Environmental Corporation's (TRC's) Immediate Response Action (IRA) Plan submitted to the MassDEP on behalf of the City on August 7, 2008, in accordance with provisions for wetland sediment monitoring at the KMS wetland site as set forth in the BETA-prepared and USEPA-approved LTMMIP (dated October 20, 2006), TRC first performed sampling of sediments in the wetland to the rear of the KMS in May 2008. One of the sediment samples (i.e., SD-03) exhibited

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TEL. (508) 991-6188 • FAX (508) 961-3045 • TYY (508) 979-1661

a total PCB concentration of 16.56 mg/kg, which exceeded a 10 mg/kg total PCB concentration under the MCP that could pose an IH in accordance with 310 CMR 40.0321(2)(b) due to the sample's concentration, depth below ground surface, proximity to a school or residential dwelling, and accessibility. The potential IH condition triggered a 2-hour regulatory reporting obligation to MassDEP in accordance with 310 CMR 40.0321(2) and 310 CMR 40.0311(7). The release was reported to MassDEP via telephone on June 9, 2008, assessment activities were approved and an iterative sampling approach was undertaken between June and October 2008.

Following TRC's October 2008 sampling event, TRC's Licensed Site Professional (LSP), in consultation with the City and USEPA, re-evaluated the iterative approach to delineating PCB sediment contamination employed to date and initially proposed a modified sampling approach to USEPA via electronic mail on November 26, 2008. USEPA approved TRC's approach, which included a wider scale delineation approach as well as the sampling of other media to identify potential sources of PCB sediment contamination, the results of which are detailed in TRC's IRA Status Report to the MassDEP dated April 3, 2009.

TRC also proposed to USEPA an approach to evaluating ecological risks within the KMS wetland consistent with MCP Ecological Risk Characterization (ERC) guidance with the exception that Exposure Point Concentrations (EPCs) for receptor species will be represented by the 95-percent Upper Concentration Limit (UCL) of the mean. Rick Sugat, an ecological risk specialist with USEPA, concurred with the approach based on discussions with TRC's Ecological Risk Specialist, Scott Heim. Based on a March 4, 2009 telephone discussion, USEPA's PCB Coordinator (Kimberly Tisa) agreed to go forward with the ERC evaluation, but requested that additional PCB sediment data also be collected to evaluate near surface contaminant stratification. The results of these investigations are also detailed in TRC's April 2009 IRA Status Report.

In general, the results of the ERC-related sampling, near surface stratification sampling and supplemental delineation and data gap sampling indicate that elevated concentrations (i.e., concentrations in excess of the USEPA cleanup level) of total PCBs are not localized to the vicinity of location SD-03. Recent analytical results have indicated that the highest concentrations of PCBs detected to date in wetland sediments (i.e., locations SED-11A-B and SED-11A-D) are located approximately 700 feet north of sample location SD-03. In addition, elevated concentrations of PCBs in excess of the USEPA cleanup level have been detected near the northwestern limit of the wetland. As a result of the widespread distribution of localized areas of elevated PCBs, the City initiated plans for fencing the entire northern portion of the wetland.

TRC had previously recommended that the City erect a fence to mitigate areas of PCB sediment contamination that present an IH in the vicinity of SB-03 near the land bridge. Given the recent analytical results indicating that additional areas of elevated PCB contamination within the northern portion of the wetland exist, the City began evaluating potential mitigation options, including the cost for fencing the entire northern portion of the wetland until a permanent remedy can be implemented.

To facilitate the option of fencing the entire northern portion of the wetland and to further investigate the western boundary of the wetland following detection of elevated concentrations of total PCBs in two sediment samples collected within the northwestern portion of the wetland (i.e., SD-70-1.5-2 [7.99 mg/kg], and SD-71-0-0.5 [1.15 mg/kg]), TRC submitted a scope of work to the City and the New Bedford Conservation Commission (ConComm) for review on June 19, 2009. Following

approval, additional soil and sediment samples were collected within the City-owned right-of-way (ROW) extending along the northwestern extent of the wetland. The results of the ROW-related sampling indicated that total concentrations were generally low (i.e., less than 1 mg/kg) with the exception of two locations near the northwestern extent of the wetland. Total PCB were detected in sample SD-91 (0-0.5) and SD-92 (0-0.5) at a concentrations of 2.1 mg/kg and 1.34 mg/kg, respectively.

**Proposed Fence Installation**

Given the recent analytical results and the City's need to mitigate the IH condition within the northern portion of the KMS wetland in accordance with the MCP, the City has decided to initiate activities related the installation of a perimeter fence enclosing the entire northern portion of the wetland. As indicated in Figure 1, the proposed fence would tie into the existing KMS perimeter fence at the land bridge, run west to Summit Street, north to enclose the corner of Summit Street and Hapwell Street, then north along the western boundary of the Summit Street ROW and ultimately tie into the existing fence along Durfee Street. The purpose of the fence installation is only to mitigate the existing IH condition as an interim step toward the implementation of a full remedy.

The City is proposing the installation of a chain link fence, consistent other fencing within the KMS property, that can be seamlessly tied into the existing fence. Conventional fence installation practices require the City to excavate small holes to allow for installation of each fence post with an appropriate concrete footing. However, the City understands that some of the activities related to the above-mentioned fence installation activities may be jurisdictional under the USEPA's PCB regulations 40 CFR Part 761. As a result, the City plans to use alternative fence installation method (i.e., direct drive) in select areas along the proposed fence route.

Figure 1 presents the approximate location of the existing fence, as well as the approximate path of the proposed fence that the City is proposing to install. In addition, Figure 1 indicates the associated TRC and select BETA sampling locations in close proximity to the proposed fenceline. As indicated in Table 1, the majority of these sample locations have exhibited low or non-detect concentrations of total PCBs. However, total concentrations of PCBs were detected at select sampling locations in excess of the USEPA cleanup level of 1 mg/kg. This includes TRC location SLP-12 (along the Summit Street land bridge), TRC locations SD-91 and SD-92 (near the northern extent of the Summit Street ROW) and TRC and BETA locations DCP-2C, DG-.5-6.5, DG-6.75, SB-27 and SB-95 (along the boundary between 288 Durfee Street and the adjacent vacant Durfee Street West Lot). It should be noted that at the time of submittal of this letter TRC was not in possession of the small amount of additional BETA analytical data associated with the Durfee Street West Lot in close proximity to the proposed fenceline. As detailed in an electronic message to Kimberly Tisa and the City dated September 17, 2009, BETA-prepared figures indicate that a portion of this data exhibited total PCB concentrations in excess of the 1 mg/kg cleanup criteria, with data in surrounding soil sampling locations ranging from 1.19 mg/kg to 2.60 mg/kg total PCBs.

In an effort to avoid displacement of soil in those portions of the proposed fenceline with the potential to contact soils and/or sediments with total PCB concentrations in 1 mg/kg, as indicated in Figure 1, the City is proposing the use of alternative fence installation methods. Specifically, the City is proposing to directly drive fence posts in these areas. The direct drive method would be employed in all areas that have historically exhibited concentrations of total PCBs in excess of 1 mg/kg and, at a

minimum, extend to the nearest sample location exhibiting a total concentration less than 1 mg/kg or the nearest tie into an existing fence post. For example, because sediment sample SD-91 (0-0.5') exhibited a total PCB concentration of 2.1 mg/kg, the direct push methods will be employed in the southern direction at least to the SD-93 (0-0.5') sample location, which exhibited a total PCB concentration of 0.140 mg/kg.

In those areas in which the proposed fenceline will be in close proximity to previous sample locations that have exhibited total concentrations of PCBs less than 1 mg/kg, conventional installation methods will be employed (i.e., excavation of a small post hole for the installation of a concrete footing for each fence post). This will allow the City to install a more structurally secure fence around a large portion of the wetland, consistent with previous practices. It is not anticipated that any PCB Remediation Waste would be generated employing this process in these areas. Should any portion of the directly driven fence require reinforcement, no excavation will take place. Any reinforcement will consist of the installation of additional angled bracing posts. As a result, it is not anticipated any PCB Remediation Waste would be generated employing this process in these areas.

**Conclusion**

It is anticipated that the fence installation will begin as soon as possible following your concurrence on this installation plan and no construction will start prior to that acknowledgement. Currently the City has a contract ready for execution with the work expected to be completed within sixty days of commencement. Furthermore, the installation of the fence is only an interim measure to mitigate the current IH condition in accordance with the MCP and in no way acts as a remedy for addressing sediment and/or soil contamination at the Site. A final remedy is currently in the planning stages and will be the subject of future regulatory submittals to the USEPA and MassDEP and subject to all necessary approvals.

If you have any questions concerning this letter, please do not hesitate to contact me at 508-991-6188.

Sincerely,

DAVID FREDETTE
FOR SCOTT ALFONSE
10/1/09

Scott Alfonse
Director

cc. Molly Cote, Massachusetts Department of Environmental Protection (by electronic PDF)
David J. Fredette, P.E., City of New Bedford (by electronic PDF)
David M. Sullivan, LSP, CHMM, TRC (by electronic PDF)

Attachments

- Figure 1 – Proposed Wetland Fence Plan
- Table 1 – Fenceline-Related Summary of Analytical Results

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Street Address: | KMS Land Bridge | | KMS Land Bridge | | | KMS Land Bridge | | KMS Land Bridge | KMS Land Bridge | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | SB-13 | | SB-14 | | | SB-15 | | SLP-12 | SLP-13 | SD-85 | | SD-86 | | SD-87 | | SD-88 | | |
| | | | | | | | Sample Depth (ft.)*: | 1.0 | 10.0 | 1.0 | 9.5 | 13.0 | 1.0 | 9.0 | 0-0.5 | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 2-2.5 | 0-0.5 | 0.5-1 | 0-0.5 | 0-0.5 | 1-1.5 |
| | | | | | | | Sample Date: | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 11/8/2007 | 8/13/2009 | 8/13/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | | | Field Dup | |
| **PCBs** (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | 0.0505 U | 0.0519 U | 0.0512 U | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.782** * | 0.0565 U | **0.557** * | **0.112** * | 0.0519 U | 0.0512 U | 0.0553 U | **3.34** * | **0.394** * | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | **0.294** * | 0.245 U | 0.232 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0520 U | 0.0565 U | 0.0503 U | **0.238** * | 0.0519 U | **0.137** * | 0.0553 U | 0.147 U | 0.0548 U | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | 0.159 U | 0.245 U | 0.232 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.782** | 0.0565 U | **0.557** | **0.350** | 0.0519 U | **0.137** | 0.0553 U | **3.34** | **0.394** | 0.143 U | 0.0647 U | 0.170 U | 0.0915 U | 0.207 U | 0.263 U | **0.294** | 0.245 U | 0.232 U |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed S-1 and S-2 standards.**

**Values shown in Bold and shaded type exceed TSCA but less than the listed S-1 and S-2 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Street Address: | | | | | | | | | | | | | | | | | | | | Summit Street Right-of-Way | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | SD-89 | SD-90 | | SD-91 | | SD-92 | | | SD-93 | | SD-94 | | WSB-1 | | | WSB-2 | | | |
| | | | | | | | Sample Depth (ft.)*: | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 1.5-2 | 0-0.5 | 0-0.5 | 1.5-2 | 0-0.5 | 2.5-3 | 0-0.5 | 1.5-2 | 0-1 | 3-4 | 5-6 | 0-1 | 3-4 | 5-6 | 0-1 |
| | | | | | | | Sample Date: | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 6/25/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 7/17/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | Field Dup | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | **0.553** * | 0.275 U | **2.1** * | 0.0558 U | **1.34** * | **1.06** * | 0.0568 U | **0.140** * | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | 0.0777 U | 0.275 U | 0.141 U | 0.0558 U | 0.0802 U | 0.0748 U | 0.0568 U | 0.0704 U | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.275 U | **0.553** | 0.275 U | **2.1** | 0.0558 U | **1.34** | **1.06** | 0.0568 U | **0.140** | 0.0891 U | 0.0673 U | 0.0552 U | 0.0601 U | 0.0548 U | 0.0557 U | 0.0634 U | 0.0562 U | 0.0564 U | 0.0655 U |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed S-1 and S-2 standards.**

**Values shown in Bold and shaded type exceed TSCA but less than the listed S-1 and S-2 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Street Address: | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | WSB-3 | | WSB-4 | | | WSB-5 | | | WSB-6 | | | | WSB-7 | | | WSB-8 | | | |
| | | | | | | | Sample Depth (ft.)*: | 2-3 | 5-6 | 0-1 | 2-3 | 5-6 | 0-1 | 2-3 | 5-6 | 0-1 | 0-1 | 2-3 | 5-6 | 0-1 | 1-2 | 4-5 | 0-1 | 1-2 | 4-5 | 0-1 |
| | | | | | | | Sample Date: | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | Field Dup | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | **0.114** * | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | **0.586** * |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | 0.0733 U | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | 0.0632 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.0558 U | 0.0550 U | 0.0636 U | 0.0551 U | 0.0555 U | 0.0625 U | 0.0551 U | 0.0585 U | 0.0729 U | 0.0681 U | 0.0557 U | 0.0543 U | **0.114** | 0.0611 U | 0.0553 U | 0.0775 U | 0.0609 U | 0.0536 U | **0.586** |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed S-1 and S-2 standards.**

**Values shown in Bold and shaded type exceed TSCA but less than the listed S-1 and S-2 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Street Address: | 288 Durfee Street | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | WSB-9 | | WSB-10 | | | SB-27 | | | SB-95 | | | SB-100 | | SB-101 | | | SB-105 | | | |
| | | | | | | | Sample Depth (ft.)*: | 1-2 | 2-3 | 0-1 | 1-2 | 2-3 | 1.0 | 3.5 | 7.0 | 1 | 4 | 8 | 1 | 5 | 1 | 3.5 | 7 | 1 | 4 | 7 | 10 |
| | | | | | | | Sample Date: | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 6/24/2009 | 11/29/2007 | 11/29/2007 | 11/29/2007 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/5/2008 | 5/6/2008 | 5/6/2008 | 5/6/2008 | 5/6/2008 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | | | | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | 0.0638 U | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.0510 U | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **0.587 *** | **0.585 *** | **0.445 *** | **0.0845 *** | **0.296 *** | **0.0845 *** | **1.19 *** | 0.0526 U | **0.0865 J** | **1.27 J** | 0.0536 U | **0.270 J** | 0.0525 U | **0.0789 J** | **0.515 J** | 0.0532 U | **0.155 J** | 0.0529 U | 0.0505 U | NA |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.0677 U | 0.0739 U | 0.0905 U | 0.0694 U | 0.0796 U | 0.0576 U | 0.0648 U | 0.0526 U | 0.0580 U | **0.182 J** | 0.0536 U | 0.0595 U | 0.0525 U | 0.0580 U | 0.0667 U | 0.0532 U | 0.051 U | 0.0529 U | 0.0505 U | NA |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **0.587** | **0.585** | **0.445** | **0.0845** | **0.296** | **0.0845** | **1.19** | 0.0526 U | **0.0865 J** | **1.452 J** | 0.0536 U | **0.270 J** | 0.0525 U | **0.0789 J** | **0.515 J** | 0.0532 U | **0.155 J** | 0.0529 U | 0.0505 U | NA |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed S-1 and S-2 standards.**

**Values shown in Bold and shaded type exceed TSCA but less than the listed S-1 and S-2 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | Street Address: | 288 Durfee Street | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Sample ID: | DCP-2C | | | | DF.5-7 | | | | DG.5-6 | | | | | | DG.5-6.5 | | | |
| | | | | | | | Sample Depth (ft.)*: | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 | 12/21/2005 |
| | | | | | | | Sample Date: | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 | 0-1 | 1-2 | 2-3 | 3-4 | 4-5 | 4-5 | 0-1 | 1-2 | 2-3 | 3-4 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | | | | | | | | | | | | Field Dup | | | | |
| **PCBs** | | | | | | | | | | | | | | | | | | | | | | | | | |
| (mg/kg) | Aroclor 1016/1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.011 U | 0.012 U | 0.011 U | 0.010 U | 0.011 U | 0.01 U | 0.011 U | 0.012 U | 0.009 U | 0.011 U | 0.012 U | 0.011 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.025 U | 0.023 U | 0.024 U | 0.022 U | 0.025 U | 0.021 U | 0.022 U | 0.023 U | 0.022 U | 0.02 U | 0.022 U | 0.02 U | 0.025 U | 0.024 U | 0.018 U | 0.022 U | 0.024 U | 0.022 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.011 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | 0.012 U | 0.012 U | 0.009 U | 0.011 U | 0.012 U | 0.011 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.011 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | 0.012 U | 0.012 U | 0.009 U | 0.011 U | 0.012 U | 0.011 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | **2.22** | 0.011 U | 0.012 U | **0.041** | **0.034** | **0.047** | **0.63** | 0.01 U | 0.011 U | 0.01 U | 0.012 U | 0.012 U | **2.6** | 0.011 U | 0.012 U | 0.011 U |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | **0.023** | 0.011 U | 0.011 U | 0.012 U | **0.6** | **0.42** | **0.23** | **0.048** | 0.012 U | **0.029** | 0.009 U | **0.19** | **0.112** | **0.053** |
| | Aroclor 1262 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.011 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | 0.012 U | 0.012 U | 0.009 U | 0.011 U | 0.012 U | 0.011 U |
| | Aroclor 1268 | 2 | 2 | 3 | 3 | 2 | 1 | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.012 U | 0.011 U | 0.011 U | 0.012 U | 0.011 U | 0.01 U | 0.011 U | 0.01 U | 0.012 U | 0.012 U | 0.009 U | 0.011 U | 0.012 U | 0.011 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | 0.025 U | 0.023 U | **2.22** | 0.022 U | **0.023** | **0.041** | **0.034** | **0.047** | **1.23** | **0.42** | **0.23** | **0.048** | 0.025 U | **0.029** | **2.6** | **0.19** | **0.112** | **0.053** |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

U - Compound was not detected at specified quantitation limit.

Values in **Bold** indicate the compound was detected.

**Values shown in Bold and shaded type exceed one or more of the listed S-1 and S-2 standards.**

**Values shown in Bold and shaded type exceed TSCA but less than the listed S-1 and S-2 standards.**

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.

**Table 1**
**Fenceline-Related Summary of Analytical Results**
**New Bedford, Massachusetts**

| Analysis | Analyte | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Street Address: | | | |
| | | | | | | | Sample ID: | DG-6.75 | | |
| | | | | | | | Sample Depth (ft.)*: | 12/21/2005 | 12/21/2005 | 12/21/2005 |
| | | | | | | | Sample Date: | 0-1 | 1-2 | 2-3 |
| | | S-1/GW-2 | S-1/GW-3 | S-2/GW-2 | S-2/GW-3 | RC S-1 | TSCA | | | |
| **PCBs** | | | | | | | | | | |
| (mg/kg) | Aroclor 1016/1242 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Aroclor 1221 | 2 | 2 | 3 | 3 | 2 | 1 | 0.027 U | 0.024 U | 0.027 U |
| | Aroclor 1232 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Aroclor 1248 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Aroclor 1254 | 2 | 2 | 3 | 3 | 2 | 1 | **2.4** | **0.471** | **0.892** |
| | Aroclor 1260 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Aroclor 1262 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Aroclor 1268 | 2 | 2 | 3 | 3 | 2 | 1 | 0.013 U | 0.012 U | 0.013 U |
| | Total PCBs | 2 | 2 | 3 | 3 | 2 | 1 | **2.4** | **0.471** | **0.892** |

**Notes:**

All units in mg/kg unless otherwise specified.

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

NA - Sample not analyzed for the listed analyte.

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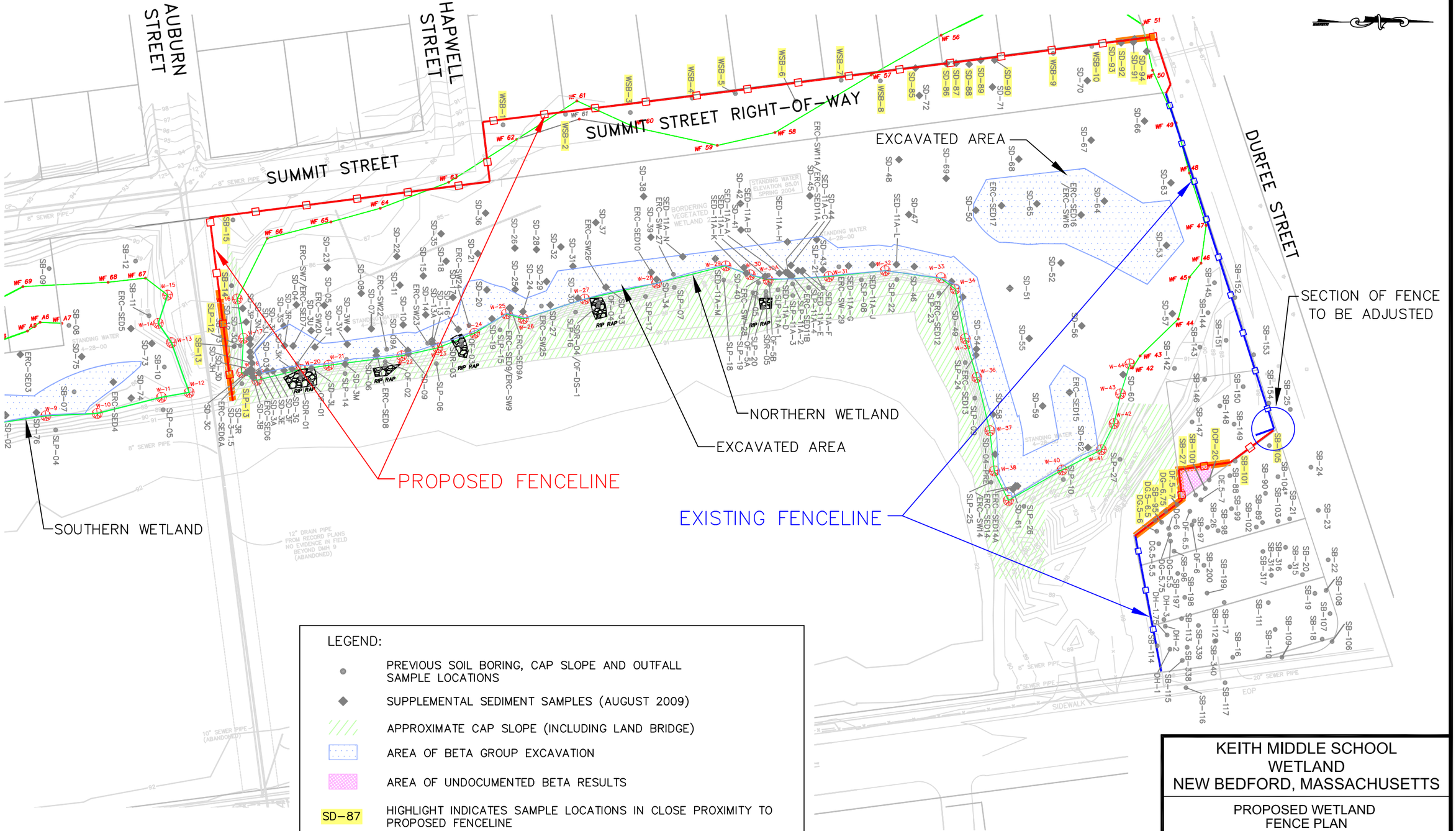
PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

* - The sample exhibits altered PCB pattern; best possible Aroclor match reported.




LEGEND:

- PREVIOUS SOIL BORING, CAP SLOPE AND OUTFALL SAMPLE LOCATIONS
- SUPPLEMENTAL SEDIMENT SAMPLES (AUGUST 2009)
- APPROXIMATE CAP SLOPE (INCLUDING LAND BRIDGE)
- AREA OF BETA GROUP EXCAVATION
- AREA OF UNDOCUMENTED BETA RESULTS
- SD-87 — HIGHLIGHT INDICATES SAMPLE LOCATIONS IN CLOSE PROXIMITY TO PROPOSED FENCELINE
- EXISTING FENCELINE (APPROXIMATE)
- PROPOSED CONVENTIALLY INSTALLED FENCELINE (APPROXIMATE)
- PROPOSED DIRECT DRIVE FENCELINE (APPROXIMATE)

NOTE: DRAWING BASED ON "McCOY FIELD SITE PLAN" FROM BETA GROUP, NORWOOD, MA DATED 6-04 AND "NEW BEDFORD PROGRESS DRAWING" FROM BETA GROUP, NORWOOD, MA DATED 8-06.

APPROXIMATE GRAPHIC SCALE

0' 40' 80' 160'

# KEITH MIDDLE SCHOOL WETLAND NEW BEDFORD, MASSACHUSETTS

## PROPOSED WETLAND FENCE PLAN

TRC
Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854
(978) 970-5600

FIGURE 1

DRAWN BY: MAN
CHECKED BY: JBS
DATE: SEPT 2009

FILE: T:\E_CAD\115058\WETLAND FENCE 9-09.dwg