



## **RELEASE ABATEMENT MEASURE PLAN**

### **Varsity Diamond Portion of Walsh Field - Soil Removal and Grading in Support of Construction Activity**

**Parker and Hunter Streets  
New Bedford, Massachusetts  
Release Tracking Number 4-15685**

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## **1.0 INTRODUCTION**

On behalf of the City of New Bedford, Massachusetts (the “City”), TRC Environmental Corporation (TRC) has prepared this Release Abatement Measure (RAM) Plan in accordance with 310 CMR 40.0440 of the Massachusetts Contingency Plan (MCP). The purpose of this RAM Plan is to outline the anticipated construction activities (field refurbishment and upgrades) that will be undertaken by the City at the Varsity Diamond. The portion of Walsh Field (the “Site”) is located to the southeast of the intersection of Hunter Street and Parker Street in New Bedford, Massachusetts. The construction activities are anticipated to include the installation of fence posts and installation of new paving in potentially contaminated areas, removal of existing asphalt, and grading activities. The Site is a portion of the Parker Street Waste Site (PSWS) that is tracked by the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 4-15685.

### **1.1 Work Summary**

Work to be performed under this RAM includes:

- Excavation of soil during site construction activities to include installation of fence posts, and paving;
- Excavation of existing asphalt;
- Grading of warning tracks, bullpens and coaches boxes;
- Sampling and analysis of areas to be excavated for paving in order to pre-characterize the soils for disposal purposes;
- Temporary soil stockpiling and stockpile management (or equivalent use of roll-offs);
- Offsite reuse, recycling or disposal of potentially contaminated soils and asphalt excavated during Site construction activities;
- Replacing the removed soil where necessary with appropriately documented contaminant-free fill material screened in advance for the presence of regulated contaminants; and

The remaining sections of this RAM Plan document include information pertaining to the following:

- Party assuming responsibility for the RAM (Section 2);
- Release description, site conditions and surrounding receptors (Section 3);
- Objective, plan and implementation schedule of the RAM (Section 4);
- Information pertaining to remediation waste management (Section 5);
- Environmental monitoring (Section 6);
- Federal, State, and Local permits (Section 7);
- Seal and signature of the Licensed Site Professional (Section 8);
- Certification of financial resources (Section 9);
- Relevant information (Section 10); and

- References (Section 11).

Supporting appendices include soil boring logs (Appendix A), RAM fee documentation (Appendix B), municipal notification letters (Appendix C), and the Soil Management Plan (Appendix D).

## **1.2 Regulatory Status**

### ***1.2.1 Release Reporting***

The RTN that affects the proposed fence installation, paving and grading activity at the Varsity Diamond at the Walsh Field portion of the Site is RTN 4-15685. MCP RTN 4-15685 is associated with contaminated fill related to the PSWS. Special Project status has been established for RTN 4-15685.

This RAM Plan does not affect RTN 4-21407, which was issued to address the detection of arsenic in surface soils (0 to 0.5 feet in depth) in the infield base path portion of Varsity Field at concentrations that could pose an Imminent Hazard (IH). In July and August 2008 an Immediate Response Action (IRA) was initiated to evaluate and delineate the potential IH condition. In November 2008, additional IRA activities were conducted that included the removal of exposed surface soils within the infield base paths to a depth of at least 6 inches. The removed soils were replaced with clean fill, and a post-removal risk analysis demonstrated that an IH does not exist. The preparation of an IRA completion statement is currently planned for RTN 4-21407, with remaining response actions to be addressed as part of the RTN 4-15685 response actions. In addition, none of the activities proposed herein will impact the area of IRA condition managed under RTN 4-21407.

## **2.0 PARTY ASSUMING RESPONSIBILITY FOR THE RAM**

The party undertaking this RAM is:

City of New Bedford  
133 William Street  
New Bedford, MA 02740  
Contact: Mr. Scott Alfonse  
(508) 979-1487

## **3.0 RELEASE DESCRIPTION, SITE CONDITIONS & SURROUNDING RECEPTORS**

### **3.1 Site Description**

The Site is located southeast of the intersection of Hunter Street and Parker Street in New Bedford, Massachusetts (Figure 1). The Site is bordered on the western and northern sides by Hunter Street and Parker Street, respectively. The school department maintenance facility and soccer field border the eastern side of the Site, and the practice and softball fields border the southern side of the Site.

The Site is currently used as a baseball field, consisting of grass areas, exposed soil areas in the infield base paths, restrooms, a field house, and a maintenance building. The Site is relatively level. Historically the Site consisted of wetlands, which were filled by ash-laden waste materials sometime prior to development as an athletic complex. A Site location map is provided as Figure 1.

### **3.2 Surrounding Receptors**

The Site lies within 500 feet of the New Bedford High School (NBHS), residential dwellings, a church, and various outdoor athletic fields. The Varsity Field portion of Walsh Field is used for practices and games during the spring and summer baseball season (i.e., high school, local leagues, and Cape Cod League). Soccer, softball, baseball, football as well as track and field events/practices also take place at other locations on Walsh Field.

Groundwater categories at the Site include actual or potential GW-2, depending upon proximity to occupied structures (groundwater is encountered at approximately 5 feet below ground surface based on recent groundwater monitoring well installations at Walsh Field by TRC), and GW-3, which applies to all groundwater throughout the Commonwealth. However, groundwater impacts from contaminants associated with the Site are not expected based on the laboratory results of groundwater samples taken from groundwater monitoring wells located at the NBHS portion of the site in August and September 2008. TRC groundwater monitoring results recently obtained for Walsh Field also indicate no contaminants above the applicable Method 1 groundwater cleanup criteria.

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

The Site is not 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 site. No municipal or residential wells are known to be in the area.

### 3.3 Release Description

As described previously, MassDEP tracks the release at the Site under RTN 4-15685 that is associated with historical fill related to the PSWS.

#### 3.3.1 *Varsity Diamond Portion of Walsh Field Investigation History*

In February 2006, The Beta Group, Incorporated of Norwood, Massachusetts (BETA) conducted subsurface investigations at the Walsh Field portion of the Site to determine the horizontal and vertical extent of fill and to determine contaminants of concern. A total of 80 soil borings were advanced and twelve surface soil samples (0–6”) were collected. Soil samples were collected at boring locations where fill was observed at depths less than 2.5 feet below grade. Soil samples were collected and analyzed for polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) 8 metals, polyaromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), pesticides and herbicides. Several of the samples indicated detections of contaminants that exceeded their applicable MCP Method 1 S-1 Soil Standards. Contaminants that exceeded the S-1 Soil Standard include arsenic, barium, cadmium, lead, and various PAHs.

TRC conducted additional soil testing in July, August, and September 2008. The objective of TRC’s additional soil testing was to address data gaps in the delineation of the contamination from the former PSWS including the Walsh Field property. The follow-up work was conducted with the concurrence of the City.

At Walsh Field, TRC’s investigative approach was largely focused on addressing apparent data gaps in the BETA data set in shallow soil. A subset of deeper soil borings was also conducted to evaluate the presence or absence of fill, the vertical extent of contamination, and the potential presence of contaminants of concern in soil and fill material that may be present based on documentation available to TRC and past sampling in the area. The deeper soil borings were advanced and samples were collected until native overburden was encountered unless refusal was encountered first. Where native material was submitted for laboratory analysis, 2 samples of native material were typically collected in borings selected to characterize the native horizon. The lower native samples were retained for analysis contingent upon the results of the upper native horizon analysis in an attempt to delineate the vertical extent of contamination exceeding applicable standards, if present. The contingent native material was not analyzed if the laboratory results of the native material interval above it did not indicate contamination above cleanup criteria. Samples were also taken of white line chalk and stockpiled soil in order to investigate their potential as a source of arsenic contamination.

TRC contracted New England Geotech of Jamestown, Rhode Island, to perform drilling activities at the Site under TRC field supervision. The borings were advanced using Geoprobe® direct push methods. The samples were visually examined in the field for evidence of petroleum contamination and field screened using the MassDEP jar headspace methodology and a photoionization detector (PID). Samples were collected from each boring at various depths to delineate the extent of contamination.

As of December, 2008, TRC advanced a total of 86 soil borings (including 35 surface samples, two stockpile samples and one sample of white line chalk) to various depths at Walsh Field. A total of 137 samples were submitted for laboratory analysis of PCBs, PAHs, and/or MCP metals and mercury. The laboratory results indicated the exceedence of the applicable MCP regulatory criteria for PAHs and several heavy metals. PCB concentrations were below the applicable MCP regulatory criteria for all soil samples submitted, and below laboratory detection limits for many of the samples. The highest PCB concentration was detected in sample SB-264 at 0.237 mg/kg. A summary of the data was submitted in TRC's *Data Summary Report, Walsh Field, New Bedford, Massachusetts* dated October 2008.

A summary of TRC and BETA laboratory analytical results potentially applicable to the area of work around the Varsity Diamond is included in Table 1. For samples taken from the 0 to 1 foot below ground surface horizon, outside of the diamond area, the laboratory results did not indicate any exceedances of the applicable MCP regulatory criteria. For samples taken below the 0 to 1 foot horizon, the laboratory results indicated the exceedance of the applicable MCP regulatory criteria for the following: six samples for PAHs (including anthracene benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene) with the highest levels detected at sample location WFB-4; two samples for arsenic at sampling locations WFC-2 (26 mg/kg) and WFD-5 (22 mg/kg); one sample for barium at sample location WFC-2 (1,060 mg/kg); nine samples for lead with concentrations ranging from 311 mg/kg at sample location WFE-1 to 4,590 mg/kg at sample location WFC-2; two samples for nickel at sample locations SB-265 (44.2 mg/kg) and SB-268 (24.2 mg/kg); three samples for chromium at sample locations WFC-2 (62 mg/kg), WFD-3 (56 mg/kg) and SB-268 (51.9 mg/kg); three samples for cadmium at sample locations WFC-2 (5.61 mg/kg), WFD-5 (5.96 mg/kg) and SB-265 (2.9 mg/kg); and one sample for mercury at sample location SB-268 (38.4 mg/kg). An analytical data summary map is included on Figure 2.

A review of boring logs for borings taken in the vicinity of the Varsity Diamond portion of Walsh Field indicate fill at depths greater than 2.5 feet below ground surface. The relevant boring logs are included in Appendix A.

On March 19, 2009, TRC submitted 17 (sixteen samples and one field duplicate) soil samples for laboratory analysis of PAHs and 14 MCP Metals to determine the presence or absence of contaminants of concern in the warning track, bullpen areas and coachs boxes slated for regrading. All samples were collected from the 0 to 0.5-foot interval using hand tools. Sampling locations are identified in Figure 4. The results of laboratory analyses are provided in Table 2.

Analysis of soil for total PAHs, MCP metals and mercury was conducted on samples in accordance with MassDEP Compendium of Analytical Methods. The analytical results did not indicate the detection of any PAHs at concentrations exceeding their applicable MCP Method 1 cleanup standards. The analytical results did not indicate the detection of MCP metals and mercury at concentrations exceeding their applicable MCP Method 1 cleanup standards with the following exceptions: arsenic was detected at a concentration of 59.3 mg/kg at sample location WTR-SS-15; nickel was detected at four sample locations (WTR-SS-09, WTR-SS-10, WTR-SS-11, and WTR-SS-13) at concentrations ranging from 23.3 mg/kg to 38.5 mg/kg; chromium was detected in nine sample locations (WTR-SS-01, WTR-SS-05, WTR-SS-06, WTR-SS-08, WTR-

SS-09, WTR-SS-10, WTR-SS-11, WTR-SS-13, and WTR-SS-14) at concentrations ranging from 30.6 mg/kg to 85.0 mg/kg. Given that the less toxic chromium(III) is far more prevalent in the environment than chromium(VI), as chromium(VI) requires extreme pH and Eh conditions that rarely exist in the natural environment in order for chromium(VI) to predominate over chromium(III), it is likely that the chromium detected is predominantly in the chromium(III) oxidation state and therefore below the chromium (III) MCP Method 1S-1 criterion of 1,000 mg/kg.

## 4.0 OBJECTIVE, PLAN & IMPLEMENTATION SCHEDULE

### 4.1 Objective

Work to be performed under this RAM includes:

- Excavation of soil during site construction activities to include installation of fence posts, and paving;
- Excavation of existing asphalt;
- Grading of warning tracks, bullpens and coaches boxes;
- Sampling and analysis of areas to be excavated for paving in order to pre-characterize the soils for disposal purposes;
- Temporary stockpiling and stockpile management (or equivalent use of roll-offs);
- Offsite reuse, recycling or disposal of potentially contaminated soils and asphalt excavated during Site construction activities; and
- Replacing the removed soil where necessary with appropriately documented contaminant-free fill material screened in advance for the presence of regulated contaminants.

The City of New Bedford is anticipating that this work will begin on or about the week April 6, 2009 and will be finished by June 4, 2009.

### 4.2 Plan

#### 4.2.1 *Soil Excavation/Removal*

Soil will be excavated during site construction activities to include installation of fence posts, paving, expansion of the bullpens, and refurbishment of the warning track areas and coaches boxes, as described below:

- **Fence Post Installations** - Fence posts will be installed in order to support the relocation of the backstop, increasing the size of the bullpens, and may be required to support the installation of dugout safety fencing work at the varsity diamond. Areas where fence posts are anticipated to be installed are included on Figure 3. It is anticipated that for each fence post installed a hole approximately 2-feet in diameter and 4-feet deep will be dug. Excavated soil will be live-loaded into a roll-off container, or, if required, temporarily placed on polyethylene sheeting (6-mil minimum) pending placement in a roll-off container. Following the installation of the fence post in the hole, the fence post holes will then be filled with concrete to anchor the posts. Based on the analytical results and observed depth of fill in the areas where fence posts are to be installed, it is anticipated that contaminated fill material will be encountered during excavation of soils for the fence posts.

- **Pavement Installation** - Excavation of soils will also be required to create new pavement areas. The new pavement areas are anticipated to include the following and are included on Figure 3:
  - An area located on the west side of the Varsity diamond between the diamond perimeter fence and the arborvitae strip along Hunter Street extending from the bathroom building located near the softball field to the existing bleachers;
  - An area located on the north side of the Varsity diamond between the diamond perimeter fence and the arborvitae strip along Parker Street extending from the bullpen to the existing bleachers;
  - An area located behind the new backstop to the corner of Hunter Street and Parker Street.

For the aforementioned new pavement areas TRC anticipates that the areas will be excavated to a depth of 12-inches to allow for appropriate grading and runoff control (to be established by others). TRC further anticipates that approximately 1,490 tons of soil (based on an estimated in-place soil volume of 993 cubic yards and a typical conversion factor of 1.5 tons per cubic yard) will be excavated soil in order to create the new pavement areas. This displaced soil will be transported offsite for reuse, recycling or disposal.

- **Warning Track Refurbishment** - In addition, the refurbishment of the warning tracks will involve the scraping off of the top 2 to 3 inches of soil to remove weeds and volunteer grasses (including roots), and regrading of the warning tracks, bullpens and coaches boxes with new imported material.

The location of the planned excavation areas are shown on Figure 3. Based on the analytical results and observed depth of fill in the areas where excavation in support of paving is to occur, it is not anticipated that contaminated material will be encountered during these construction activities.

TRC personnel will observe the excavation of the soil from fence post, pavement installation and warning track refurbishment for visual and olfactory evidence of contamination during excavation. The soil will also be monitored with a PID. Soil will be screened for volatile organic compounds (VOCs) using the MassDEP jar headspace method. Additional air monitoring may also be required during excavation activities to ensure worker's safety while in the work zone.

All soil excavation activities will be required to be conducted in accordance with a site specific Health & Safety Plan (HASP), which includes potential hazards and outlines how to respond to emergencies. The Contractor will submit a separate HASP prior to initiating work and must adhere to the requirements of that HASP during performance of the work.

#### 4.2.2 *Soil Characterization*

Soil will be characterized through a combination of pre-construction and post-soil removal sampling and analysis as discussed below. This plan may be modified to accommodate logistical and scheduling issues in consultation with the Licensed Site Professional (LSP) since the activities outlined in this plan may or may not be conducted in a single mobilization.

- **Soil Displaced by Fence Post Installations** – This is a relatively small volume of soil that will be stockpiled or placed in a roll-off as set forth in the Soil Management Plan (see Appendix D). This soil will be characterized from the stockpile/roll-off to evaluate reuse, recycling and/or disposal options. One soil sample will be collected and submitted for laboratory analysis for the following:
  - Total VOCs
  - Total SVOCs
  - Total petroleum hydrocarbons (TPHs)
  - Total PCBs
  - Total RCRA eight metals
  - TCLP RCRA eight metals as required
  
- **Soil Displaced by Pavement Installation** - Soil samples will be taken prior to excavation of the areas to be paved in order to pre-characterize the soils for disposal purposes. A total of four samples will be taken of the 0 to 1 foot horizon utilizing hand tools in the areas to be excavated and submitted for laboratory analysis for the following:
  - Total VOCs
  - Total SVOCs
  - Total petroleum hydrocarbons (TPHs)
  - Total PCBs
  - Total RCRA eight metals
  - TCLP RCRA eight metals as required

The excavated soil will either be live loaded, or will be stockpiled in a designated on-site location pending off-site reuse, recycling and/or disposal determinations. If stockpiled, excavated soils will be placed on polyethylene sheeting (6-mil minimum) or similar pending off-site disposal. If roll-offs will be used, they will be lined with polyethylene and covered to prevent leakage and storm water accumulation. Soil will be managed as described in the *Soil Management Plan* in Appendix D.

- **Warning Track Refurbishment** – Associated with the refurbishment of the warning track area, bullpens and coaches boxes, surficial soil materials were sampled on March 19, 2009 and analyzed to determine the presence or absence of contaminants of concern. TRC collected 17 (sixteen samples and one field duplicate) soil samples for laboratory analysis of PAHs and 14 MCP Metals from the warning track, bullpens and coaches boxes. Sample locations are identified on Figure 4. All samples were collected from the 0 to 0.5-foot interval using hand tools. The results of the laboratory analysis indicated

the presence of arsenic, cadmium and chromium at levels that exceed the MCP Method 1 S-1 criteria at some locations which are discussed in detail in section 3.3.1. A summary of the data is provided in Table 2.

- In addition, soil displaced by warning track refurbishment activities will be characterized from the stockpile/roll-off to evaluate reuse, recycling and/or disposal options. One soil sample will be collected and submitted for laboratory analysis for the following:
  - Total VOCs
  - Total SVOCs
  - Total petroleum hydrocarbons (TPHs)
  - Total PCBs
  - Total RCRA eight metals
  - TCLP RCRA eight metals as required

#### **4.2.3 Asphalt Excavation/Removal**

TRC understands that asphalt will be excavated prior to the installation of new paving in the area between the current location of the backstop and the corner of Hunter Street and Parker Street. This area is identified on Figure 3. TRC anticipates that approximately 52 cubic yards of asphalt will be removed, and transported offsite for recycling. It is anticipated that the asphalt will be loaded directly into a truck for recycling.

If required, the excavated asphalt will be stockpiled in a designated on-site location pending off-site recycling. Excavated asphalt will be placed on polyethylene sheeting (6-mil minimum) or similar pending off-site disposal. Asphalt will be managed as described in the *Soil Management Plan* in Appendix D.

All asphalt excavation activities will be conducted in accordance with a site specific HASP, which includes potential hazards and outlines how to respond to emergencies.

#### **4.2.4 Site Reconstruction/Backfill Borrow Material**

Imported backfill will be considered contaminant-free soil if the source has documentation that the following analyses were performed and any detections encountered were below the current MCP Method 1, S-1 standards:

- Volatile Organic Compounds via SW-846 Method 8260B;
- Semivolatile Organic Compounds via SW-846 Method 8270C;
- Volatile Petroleum Hydrocarbons/Extractable Petroleum Hydrocarbons via MassDEP methodologies;
- Polychlorinated Biphenyls via SW-846 Method 8082;
- RCRA-8 Metals (via SW-846 Methods 6010B/7471A); and
- Pesticides/Herbicides via SW-846 Methods 8081<sup>a</sup>/8151<sup>a</sup>.

Lacking such documentation, the City may undertake appropriate sampling and analysis to guard against importation of contaminated soil and evaluate the suitability of the soil for its intended use.

### **4.3 Implementation Schedule**

The RAM activities associated with the excavation and/or removal of contaminated soil are scheduled to begin on or about the week April 6, 2009 and will be finished by June 4, 2009. TRC anticipates submittal of a RAM Completion Report within 60 days of the completion of all RAM activities, or a RAM status report if the outcomes of activities do not warrant a RAM completion report.

## 5.0 REMEDIATION WASTE MANAGEMENT STATEMENT

This section describes procedures for the on-site management and off-site reuse, recycling, and/or disposal of remediation waste generated during this RAM. Remediation waste management will be conducted in accordance with the applicable sections of the MCP, MassDEP *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*, WSC-94-400 and MassDEP Policy COMM#97-001 *Reuse and Disposal of Contaminated Soils and Sediments at Massachusetts Landfills*, where applicable.

The estimated mass of excavated soil to be transported from the Site as part of this RAM is approximately 1,600 tons. The estimated volume of asphalt to be transported from the Site as part of this RAM is approximately 52 cubic yards. The *Soil Management Plan* provided in Appendix D outlines the plan for soil management at the Site.

### 5.1 On-Site Soil Management

Potentially contaminated soil excavation will take place with qualified field oversight personnel. Contractors will be required to implement means to prevent fugitive dust generation.

Excavated soils associated with the RAM may be temporarily stored as needed on or adjacent to the Site and segregated into the following soil types by the degree of impact and proposed disposal facility:

- Type A – Pre-characterized soils for reuse on-site; excess Type-A soil also suitable for off-site reuse as cover material at a lined or unlined landfill facility. On-site reuse is restricted to the location from which the soils were excavated. Any other placement requires prior approval of the LSP;
- Type B – Suitable for unlined or lined landfill re-use (chemically unsuited for reuse on-site);
- Type C – Suitable for asphalt batch recycling (geotechnically unsuited for reuse on-site and/or chemically unsuited for reuse on-site or off-site);
- Type D – Non-hazardous waste landfill disposal (chemically unsuited for on or off-site reuse, and off-site recycling); and
- Type E – Soil requiring segregation and off-site treatment prior to disposal as a hazardous waste.

Soils types are further discussed in *Soil Management Plan* provided in Appendix D. The soil will be stockpiled on a minimum of 6-mil-thick polyethylene. Stockpiled materials will also be securely covered at the end of each work day or during periods of prolonged inactivity with a minimum of 6-mil-thick polyethylene overlapped and weighted to form a continuous waterproof barrier over the material. The cover will be maintained throughout the stockpile period to control water entering the stockpiled materials and to limit fugitive dust generation. The Site will be secured by a temporary fence around the perimeter that limits unauthorized entry and contact with stored materials by trespassers. Lined and covered roll-offs may also be utilized.

## **5.2 Off-Site Re-use, Recycling, and/or Disposal**

Excavated soil that will be transported from the Site will be characterized as appropriate for off-site reuse, recycling, and/or disposal at a suitable facility. Several suitable off-site facilities are being considered, but the facility locations have not been finalized. As identified in Section 4.2.1, soil samples will be taken and submitted for laboratory analysis in order to pre-characterize the soil to be excavated. The laboratory results will then be compared against Massachusetts reuse, recycling, and disposal criteria in accordance to MassDEP Policy# COMM-97-001 and Interim Policy #WSC-94-400.

Use of MassDEP COMM-97-001 and WSC-94-4000 tabulated acceptance criteria values does not preclude the use of out-of-state facilities that offer similar reuse (e.g., landfill daily cover) or recycling (e.g., asphalt batch) opportunities. Such opportunities may be evaluated and/or utilized on a case-by-case basis assuming facility acceptance criteria can be met and the facility is currently permitted within its regulatory jurisdiction for the reuse and/or recycling service provided.

Transportation of all materials from the site will be performed using a MassDEP Bill of Lading (BOL), Material Shipping Record (MSR) or Hazardous Waste Manifest, as appropriate, and will be performed within 120 days of stockpiling in accordance with 310 CMR 40.0030 of the MCP.

The transport of contaminated materials from the Site to the disposal facility will be in accordance with all United States Department of Transportation (DOT), United States Environmental Protection Agency (EPA), and MassDEP regulations, as appropriate. The hauler(s) will be licensed in all states affected by the transport of Site soil.

## **6.0 ENVIRONMENTAL MONITORING PLAN**

TRC personnel will be onsite during the excavation and off-site transport for reuse, recycling and/or disposal of contaminated soil and will conduct environmental monitoring activities as described herein.

### **6.1 Field Screening Associated with Soil Removal**

Field screening of soil will be conducted as part of the RAM to monitor soil conditions and excavation progress.

#### ***6.1.1 Jar-Headspace Field Screening of Soils***

VOCs are not a contaminant of concern at the Site. As a precaution, soil samples will be periodically screened via the MassDEP jar-headspace method for the potential presence of VOCs based on professional judgment.

### **6.2 Air Monitoring**

On-site air monitoring will be conducted to evaluate Site working conditions to minimize exposures to workers and nearby residents.

#### ***6.2.1 Air Monitoring***

Air monitoring will be performed using a combination of real-time dust monitoring upwind and downwind of the work area.

##### ***6.2.1.1 Real-Time Dust Monitoring***

Based on the analytical results and observed depth of fill in the areas where excavation in support of paving is to occur, it is not anticipated that contaminated material will be encountered during these construction activities. During the excavation required for the installation of fence posts, a minimum amount of soil disturbance is anticipated and may not require dust monitoring. When potentially contaminated soils are encountered during RAM-related contaminated soil excavation and management activities, real-time field screening of breathing zone dust levels will be conducted using direct reading instruments that are designed to monitor air quality on a real-time basis. A second instrument will be used to monitor dust levels downwind of the excavation.

The dust monitoring units will be TSI Dustrak™ units, or equivalent, equipment with size-selective inlet for particles of 10 micrometers in diameter or less (PM<sub>10</sub>). Background samples will be collected for at least 15 minutes at each location prior to the start of site activities. The continuous dust monitor uses a light scattering photometer to quantify particles and converts the counts to a concentration in units of milligrams per cubic meter (mg/m<sup>3</sup>). This instrumentation has an accuracy of 0.001 mg/m<sup>3</sup>. The dust monitoring instruments will be placed in weatherproof cases with an omni-directional probe to minimize wind interference. The dust

monitoring instruments will be zeroed daily before use and at the end of the day. Data will be logged at 60-second intervals and will be monitored periodically by field personnel during RAM-related excavation activities. Data will be downloaded daily.

If sustained ambient dust levels exceed the EPA National Ambient Air Quality Standard (NAAQS) of  $150 \mu\text{g}/\text{m}^3$  at downwind sampling locations (a sustained reading would consist of a reading lasting 15 minutes or longer), dust suppression activities will be increased with a greater usage of water sprays. Monitoring levels are subject to change as additional soil data are obtained and evaluated.

### **6.2.2 VOC Air Monitoring**

VOC air monitoring will be performed using a photo-ionization detector (PID) to monitor for the presence of VOCs within the work area breathing zone. Based on previously existing site data, significant VOC emissions are not expected during construction, but field monitoring of the breathing zone for VOCs will be conducted as a precaution.

### **6.3 Action Levels**

Instrument readings from breathing zones within the work zone will be used to help evaluate the need for instituting additional safety measures or upgrading personal protective equipment (PPE) levels.

The ambient Action Level for dust is based on the EPA 24 hour NAAQS for  $\text{PM}_{10}$  particulate of  $150 \mu\text{g}/\text{m}^3$  (subject to change as noted in section 6.2.1.1).

## **7.0 FEDERAL, STATE & LOCAL PERMITS**

### **7.1 Federal Permit Requirements**

There are no known Federal environmental permit requirements.

### **7.2 State Permit Requirements**

There are no known State environmental permit requirements.

### **7.3 Local Permit Requirements**

There are no known Local environmental permit requirements.

### **7.4 Miscellaneous Fees, Notices, and Transportation Documentation**

Because the Site is not Tier Classified under the MCP, an \$800 RAM Plan fee must be submitted to MassDEP concurrent with this RAM Plan. The \$800 fee has been submitted to the MassDEP lock box at DEP, P.O. Box 4062, Boston, MA, 02211-4062. Appendix B contains a copy of the check for the RAM Plan fee for documentation purposes.

Massachusetts Dig-Safe must be notified at least 72 hours prior to commencing the excavation activities described in this RAM Plan. The City or City's contractor will be responsible for construction/refurbishment related Digsafe notifications.

All soil material that is transported from the site must be transported under a MassDEP BOL that contains the signature and seal of the LSP of record for the site, or under a MSR or hazardous waste manifest as appropriate.

## 8.0 SEAL & SIGNATURE OF LICENSED SITE PROFESSIONAL

The Licensed Site Professional (LSP) overseeing this RAM is:

David M. Sullivan, LSP, CHMM  
LSP License Number: 1488  
TRC Environmental Corporation  
Wannalancit Mills  
650 Suffolk Street  
Lowell, Massachusetts 01854  
(978) 656-3565

This RAM Plan has been prepared in accordance with 310 CMR 40.0444 as set forth in the MCP.



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

4/3/2009

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**Date**



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**Stamp**

## **9.0 CERTIFICATION OF FINANCIAL RESOURCES**

In accordance with 310 CMR 40.0442(5) of the MCP, the City of New Bedford attests to the availability of sufficient financial resources for the transportation and recycling or disposal of excess and unsuitable soils.

## **10.0 OTHER RELEVANT INFORMATION**

### **10.1 Public Involvement**

As required by 310 CMR 40.1403(3)(d), the Mayor and the Board of Health for the City of New Bedford were notified in writing of the proposed RAM activities. Copies of the notification letters that were sent to the Mayor and Board of Health are provided in Appendix C.

## 11.0 REFERENCES

- 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>
- MassDEP, 2002 *Technical Update – Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil*. Prepared by the Massachusetts Department of Environmental Protection (MassDEP) Office of Research and Standards. May 2002.
- MassDEP, 1994 *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*, WSC-94-400,
- MassDEP, 1997 COMM#97-001 *Reuse and Disposal of Contaminated Soils and Sediments at Massachusetts Landfills*.

# TABLES

**TABLE 1**  
**Summary of Analytical Detected Results for Soil Samples - Historical**  
**Walsh Field Varsity Diamond RAM**  
**New Bedford, Massachusetts**

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:						WFA-2	WFA-4		WFB-4	WFB-5	WFC-2	WFD-1	WFD-2		WFD-3	WFD-4	
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA	2-2.5 2/23/2006	0-1 2/23/2006	1-2.5 2/23/2006	1-2.5 2/23/2006	2-2.5 2/23/2006	2-2.5 2/23/2006	1.25-2.5 2/23/2006	0-0.5 2/23/2006	0.75-2.5 2/23/2006	1-2.5 2/23/2006	0-0.5 2/23/2006	2-2.5 2/23/2006
VOCs (mg/kg)	Chloromethane	NS	NS	NS	NS	100	N/A	NA	NA	0.11	0.096	NA	NA	NA	NA	NA	0.170	NA	NA
	Bromomethane	0.5	30	0.5	30	0.5	N/A	NA	NA	0.36	0.45	NA	NA	NA	NA	NA	0.65	NA	NA
	Methylene chloride	20	200	20	900	0.1	N/A	NA	NA	0.041 U	0.035	NA	NA	NA	NA	NA	0.061 U	NA	NA
PAHs / Dibenzofuran (mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	0.550 U	NA	0.059	28.0	NA	0.095 U	0.084	NA	0.059	0.850 U	NA	0.550 U
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.550 U	NA	0.056 U	7.40	NA	0.095 U	0.058 U	NA	0.057 U	0.850 U	NA	0.550 U
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.550 U	NA	0.098	16.0	NA	0.095 U	0.140	NA	0.078	0.850 U	NA	0.550 U
	Acenaphthylene	600	10	600	10	1	N/A	0.670	NA	0.240	47.0	NA	0.095 U	0.230	NA	0.460	0.850 U	NA	3.20
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	2.0	NA	0.490	100	NA	0.095 U	0.410	NA	0.680	0.850 U	NA	5.20
	Benzo(a)anthracene	7	7	40	40	7	N/A	3.20	NA	1.10	160	NA	0.095 U	0.940	NA	1.80	0.850 U	NA	7.20
	Benzo(a)pyrene	2	2	4	4	2	N/A	3.0	NA	1.0	95.0	NA	0.095 U	0.970	NA	1.50	0.850 U	NA	3.90
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	2.0	NA	0.790	76.0	NA	0.095 U	0.820	NA	1.20	0.850 U	NA	2.40
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	1.20	NA	0.400	27.0	NA	0.095 U	0.490	NA	0.600	0.850 U	NA	0.910
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	3.80	NA	1.10	110	NA	0.095 U	0.830	NA	1.70	0.850 U	NA	3.70
	Chrysene	70	70	400	400	70	N/A	2.60	NA	0.930	170	NA	0.095 U	0.920	NA	1.10	0.850 U	NA	5.50
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	0.570	NA	0.200	17.0	NA	0.095 U	0.230	NA	0.290	0.850 U	NA	0.830
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	7.0	NA	1.90	310	NA	0.096	1.90	NA	2.70	1.50	NA	7.90
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.550 U	NA	0.120	50.0	NA	0.095 U	0.150	NA	0.120	0.850 U	NA	0.550 U
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	1.10	NA	0.350	28.0	NA	0.095 U	0.440	NA	0.540	0.850 U	NA	0.920
	Naphthalene	40	500	40	1,000	4	N/A	0.550 U	NA	0.056 U	540 U	NA	0.095 U	0.067	NA	0.071	0.850 U	NA	0.550 U
	Phenanthrene	500	500	1,000	1,000	10	N/A	6.0	NA	1.40	430	NA	0.095 U	1.60	NA	1.80	0.850 U	NA	6.20
Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	7.60	NA	2.20	330	NA	0.140	2.0	NA	3.20	1.0	NA	16.0	
PCBs	Aroclor 1254	2	2	3	3	2	1	0.13	0.1 U	0.1 U	0.1 U	0.1 U	0.18 U	0.1 U	0.11 U	0.11 U	0.17 U	0.12 U	0.11 U
	Aroclor 1260	2	2	3	3	2	1	0.11 U	0.1 U	0.1 U	0.1 U	0.1 U	0.18 U	0.1 U	0.11 U	0.11 U	0.17 U	0.12 U	0.11 U
	Total PCBs	2	2	3	3	2	1	0.13	0.2 U	0.2 U	0.21 U	0.2 U	0.37 U	0.2 U	0.22 U	0.22 U	0.34 U	0.23 U	0.21 U
Metals, total (mg/kg)	Mercury	20	20	30	30	20	N/A	0.064 U	NA	0.259	0.069 U	NA	1.31	0.231	NA	0.187	0.737	NA	0.077
	Arsenic	20	20	20	20	20	N/A	2.10	NA	4.94	1.21	NA	26	5.11	NA	2.66	5.95	NA	1.65
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	30	NA	271	36	NA	1,060	91	NA	182	237	NA	21
	Beryllium	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Cadmium	2	2	30	30	2	N/A	0.32	NA	0.72	0.34 U	NA	5.61	0.47	NA	0.40	1.27	NA	0.41
	Chromium	30	30	200	200	30	N/A	7.26	NA	7.31	4.17	NA	62	8.60	NA	8.52	56	NA	4.81
	Lead	300	300	300	300	300	N/A	90	NA	319	58	NA	4,590	184	NA	294	882	NA	24
	Nickel	20	20	700	700	20	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Selenium	400	400	800	800	400	N/A	0.64 U	NA	0.72 U	0.67 U	NA	2.03	0.77 U	NA	0.67 U	1.06 U	NA	0.69 U
	Silver	100	100	200	200	100	N/A	0.32 U	NA	0.36 U	0.34 U	NA	7.40	0.39 U	NA	0.33 U	0.53 U	NA	0.34 U
	Vanadium	600	600	1,000	1,000	600	N/A	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
	Total Petroleum Hydrocarbons (mg/kg)	Diesel Range Organics	1,000	1,000	3,000	3,000	1,000	N/A	NA	NA	112	6,063	NA	NA	73	NA	NA	984	NA
Gasoline Range Organics		1,000	1,000	3,000	3,000	1,000	N/A	NA	NA	5.3	5.4	NA	NA	NA	NA	NA	7.7 U	NA	NA
Metals, TCLP	Lead, TCLP	NS	NS	NS	NS	NS	5.0"	NA	NA	1.8	NA	NA	NA	0.2	NA	NA	1.1	NA	NA
Reactivity (mg/kg)	Reactive Cyanide	NS	NS	NS	NS	NS	N/A	NA	NA	0.26 U	0.48	NA	NA	0.26 U	NA	NA	0.3 U	NA	NA
Flashpoint (°F)	Flashpoint	NS	NS	NS	NS	NS	N/A	NA	NA	>200	>200	NA	NA	>200	NA	NA	>200	NA	NA

Notes:  
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).  
mg/L - milligrams per liter  
NA - Sample not analyzed for the listed analyte.  
N/A - Not applicable.  
NS - No MassDEP standards exist for this compound.  
R - Rejected data point during data review.  
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 Method 1 standards or TCLP standard, as applicable.  
VOCs - Volatile Organic Compounds.  
PAHs - Polynuclear Aromatic Hydrocarbons.  
PCBs - Polychlorinated Biphenyls.  
RC - Reportable Concentration.  
TSCA - Toxic Substances Control Act criteria.  
TCLP - Toxicity Characteristic Leaching Procedure.  
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.  
(2) - MassDEP RC for Dichloropropane used.  
(3) - MassDEP RC for Dichloropropene used.  
(4) - MassDEP RC for 1,3-Dichloropropene used.  
(5) - SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

TABLE 1  
Summary of Analytical Detected Results for Soil Samples - Historical  
Walsh Field Varsity Diamond RAM  
New Bedford, Massachusetts

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:						WFD-5		WFE-1		WFE-2	SB-254		SB-255		SB-265			SB-266								
		S-1/GW-2		S-1/GW-3		S-2/GW-2		S-2/GW-3		RC S-1	TSCA	2/23/2006 0-1	2/23/2006 1-2.5	2/23/2006 0.75-2.5	2/23/2006 0.75-2.5	2/23/2006 1.75-2.5	0.5 7/15/2008	2 7/15/2008	0.5 7/15/2008	2 7/15/2008	1 7/14/2008	4 7/14/2008	7.5 7/14/2008	1 7/15/2008	4 7/15/2008	9 7/15/2008		
		S-1/GW-2		S-1/GW-3		S-2/GW-2		S-2/GW-3		RC S-1	TSCA	Field Dup																
VOCs (mg/kg)	Chloromethane	NS	NS	NS	NS	100	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Bromomethane	0.5	30	0.5	30	0.5	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Methylene chloride	20	200	20	900	0.1	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
PAHs / Dibenzofuran (mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	NA	0.710 U	0.230	NA	0.130	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	0.710 U	0.077	NA	0.130	0.180 U	0.175 U	0.183 U	0.177 U	0.175 U	0.232 U	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	NA	0.710 U	0.370	NA	0.220	0.180 U	0.259	0.183 U	0.177 U	0.175 U	0.232	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Acenaphthylene	600	10	600	10	1	N/A	NA	0.710 U	0.560	NA	0.810	0.180 U	0.510	0.183 U	0.177 U	0.175 U	0.232 U	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	NA	0.710 U	1.10	NA	1.70	0.180 U	0.995	0.183 U	0.177 U	0.175 U	0.797	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Benzo(a)anthracene	7	7	40	40	7	N/A	NA	0.710 U	2.70	NA	3.30	0.654	3.30	0.325	0.480	0.175 U	1.87	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Benzo(a)pyrene	2	2	4	4	2	N/A	NA	0.710 U	3.0	NA	2.40	0.667	2.98	0.349	0.510	0.175 U	1.66	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	NA	0.710 U	2.40	NA	2.10	0.870	3.48	0.411	0.540	0.175 U	1.96	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	NA	0.710 U	1.60	NA	1.30	0.778	2.76	0.294	0.409	0.349 U	1.15	0.399 U	0.351 U	0.595	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	NA	0.710 U	2.30	NA	2.70	0.270	1.29	0.183 U	0.197	0.175 U	0.721	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Chrysene	70	70	400	400	70	N/A	NA	0.710 U	2.40	NA	3.0	0.738	3.56	0.355	0.504	0.175 U	1.91	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	NA	0.710 U	0.650	NA	0.670	0.360 U	0.711	0.366 U	0.177 U	0.349 U	0.464 U	0.399 U	0.351 U	0.401 U	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	NA	0.710 U	5.80	NA	5.50	1.08	4.37	0.599	0.714	0.175 U	2.86	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	NA	0.710 U	0.370	NA	0.460	0.180 U	0.395	0.183 U	0.177 U	0.175 U	0.327	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	NA	0.710 U	1.40	NA	1.0	0.762	3.12	0.312	0.469	0.349 U	1.36	0.399 U	0.351 U	0.653	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	0.408 U	
	Naphthalene	40	500	40	1,000	4	N/A	NA	0.710 U	0.150	NA	0.220	0.180 U	0.246	0.183 U	0.177 U	0.175 U	0.265	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Phenanthrene	500	500	1,000	1,000	10	N/A	NA	0.710 U	4.50	NA	5.70	0.820	3.77	0.344	0.453	0.175 U	3.16	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	NA	0.710 U	5.40	NA	6.40	1.63	5.07	0.608	0.990	0.175 U	3.57	0.200 U	0.176 U	0.201 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	
	PCBs	Aroclor 1254	2	2	3	3	2	1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0524 U	0.0501 U	0.0506 U	0.126 J	0.153 J	0.0632 U	0.0570 U	0.0502 U	0.0571 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U	
		Aroclor 1260	2	2	3	3	2	1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.0524 U	0.0501 U	0.0506 U	0.0523 U	0.084 J	0.0632 U	0.0570 U	0.0502 U	0.0571 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U	
Total PCBs		2	2	3	3	2	1	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.0524 U	0.0501 U	0.0506 U	0.126 J	0.237 J	0.0632 U	0.0570 U	0.0502 U	0.0571 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U	0.0593 U		
Metals, total (mg/kg)	Mercury	20	20	30	30	20	N/A	NA	0.553	0.577	0.585	0.108	0.295	0.730	0.238	0.198	0.068	0.276	0.028 U	0.017 U	0.406	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U		
	Arsenic	20	20	20	20	20	N/A	NA	22	3.37	4.92	8.29	11.0	8.98	7.41	5.41	2.66	16.3	3.00 U	5.64	9.94	3.06 U	3.06 U	3.06 U	3.06 U	3.06 U		
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	NA	973	58	278	46	34.3	98.9	40.3	366	10.8	270	5.99 U	25.5	202	6.12 U	6.12 U	6.12 U	6.12 U	6.12 U		
	Beryllium	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	0.27 U	0.27 U	0.28 U	0.42	0.27 U	0.35 U	0.30 U	0.27 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U		
	Cadmium	2	2	30	30	2	N/A	NA	5.97	0.79	0.83	0.46	0.27 U	0.27 U	0.40	0.51	0.27 U	2.90	0.30 U	0.27 U	0.34	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U		
	Chromium	30	30	200	200	30	N/A	NA	19	9.02	9.32	5.14	8.70	14.0	10.4	7.60	4.76	18.0	1.95	22.1	12.4	1.44	1.44	1.44	1.44	1.44		
	Lead	300	300	300	300	300	N/A	NA	772	311	1,160	244	109	532	79.6	131	43.2	872	2.28	3.15	286	1.74	1.74	1.74	1.74	1.74		
	Nickel	20	20	700	700	20	N/A	NA	NA	NA	NA	NA	5.29	6.37	5.08	5.27	4.00	44.2	1.33	12.1	9.44	1.58	1.58	1.58	1.58	1.58		
	Selenium	400	400	800	800	400	N/A	NA	2.98	0.78 U	0.76 U	0.77 U	5.39 U	5.25 U	5.48 U	5.30 U	5.24 U	6.96 U	5.99 U	5.26 U	6.01 U	6.12 U	6.12 U	6.12 U	6.12 U	6.12 U		
	Silver	100	100	200	200	100	N/A	NA	0.48 U	0.39 U	0.38 U	0.38 U	2.89	4.31	2.70	1.31	1.64	17.4	0.60 U	3.52	5.95	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U		
	Vanadium	600	600	1,000	1,000	600	N/A	NA	NA	NA	NA	NA	17.6	13.0	16.8	14.8	9.68	22.6	5.99 U	23.3	26.1	6.12 U	6.12 U	6.12 U	6.12 U	6.12 U		
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	NA	NA	NA	NA	NA	33.6	24.7	52.2	118	34.7	603	14.3	25.5	70.0	10.6	10.6	10.6	10.6	10.6	10.6	
	Total Petroleum Hydrocarbons (mg/kg)	Diesel Range Organics	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	NA	NA	NA
		Gasoline Range Organics	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	NA	NA	NA
Metals, TCLP	Lead, TCLP	NS	NS	NS	NS	NS	5.0"	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Reactivity (mg/kg)	NS	NS	NS	NS	NS	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Flashpoint (°F)	Flashpoint	NS	NS	NS	NS	NS	N/A	NA	NA	NA	NA	NA	NA	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).  
mg/L - milligrams per liter  
NA - Sample not analyzed for the listed analyte.  
N/A - Not applicable.  
NS - No MassDEP standards exist for this compound.  
R - Rejected data point during data review.  
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 Method 1 standards or TCLP standard, as applicable.  
VOCs - Volatile Organic Compounds.  
PAHs - Polynuclear Aromatic Hydrocarbons.  
PCBs - Polychlorinated Biphenyls.  
RC - Reportable Concentration.  
TSCA - Toxic Substances Control Act criteria.  
TCLP - Toxicity Characteristic Leaching Procedure.  
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.  
(2) - MassDEP RC for Dichloropropane used.  
(3) - MassDEP RC for Dichloropropene used.  
(4) - MassDEP RC for 1,3-Dichloropropene used.  
(5) - SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

TABLE 1  
Summary of Analytical Detected Results for Soil Samples - Historical  
Walsh Field Varsity Diamond RAM  
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:						SB-267			SB-268			SB-269			WF-1	WF-2	WF-3	WF-5
		Sample Depth (ft.):						1	3.5	9	1	4.5	9	1	4	9.5	0-0.5	0-0.5	0-0.5	0-0.5
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA	7/14/2008	7/14/2008	7/14/2008	7/15/2008	7/15/2008	7/15/2008	7/15/2008	7/15/2008	7/15/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008
VOCs (mg/kg)	Chloromethane	NS	NS	NS	NS	100	N/A	NA												
	Bromomethane	0.5	30	0.5	30	0.5	N/A	NA												
	Methylene chloride	20	200	20	900	0.1	N/A	NA												
PAHs / Dibenzofuran (mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	NA												
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.210 U	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.210 U	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Acenaphthylene	600	10	600	10	1	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.210 U	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.269	0.677	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Benzo(a)anthracene	7	7	40	40	7	N/A	0.260	0.207 U	0.199 U	0.187 U	0.360	0.903	0.171 U	0.231	0.194 U	NA	NA	NA	NA
	Benzo(a)pyrene	2	2	4	4	2	N/A	0.271	0.207 U	0.199 U	0.187 U	0.292	0.677	0.171 U	0.231	0.194 U	NA	NA	NA	NA
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	0.343	0.275	0.199 U	0.187 U	0.311	0.615	0.171 U	0.259	0.194 U	NA	NA	NA	NA
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.338 U	0.413 U	0.397 U	0.373 U	0.446	0.342 U	0.400 U	0.388 U	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.225	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Chrysene	70	70	400	400	70	N/A	0.325	0.682	0.199 U	0.187 U	0.359	0.873	0.171 U	0.251	0.194 U	NA	NA	NA	NA
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	0.338 U	0.413 U	0.397 U	0.373 U	0.489 U	0.420 U	0.342 U	0.400 U	0.388 U	NA	NA	NA	NA
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.523	0.207 U	0.199 U	0.324	0.722	1.65	0.171 U	0.463	0.194 U	NA	NA	NA	NA
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.299	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	0.338 U	0.413 U	0.397 U	0.373 U	0.489 U	0.435	0.342 U	0.400 U	0.388 U	NA	NA	NA	NA
	Naphthalene	40	500	40	1,000	4	N/A	0.169 U	0.207 U	0.199 U	0.187 U	0.245 U	0.210 U	0.171 U	0.200 U	0.194 U	NA	NA	NA	NA
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.230	0.846	0.199 U	0.259	1.25	3.19	0.171 U	0.507	0.194 U	NA	NA	NA	NA
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	0.585	0.289	0.199 U	0.320	0.840	2.38	0.192	0.565	0.194 U	NA	NA	NA	NA
PCBs	Aroclor 1254	2	2	3	3	2	1	0.0500 U	0.0586 U	0.0584 U	0.0727 J	0.0760 U	0.0581 U	0.0507 U	0.0612 U	0.0538 U	NA	NA	NA	NA
	Aroclor 1260	2	2	3	3	2	1	0.0500 U	0.0586 U	0.0584 U	0.0550 U	0.0760 U	0.0581 U	0.0507 U	0.0612 U	0.0538 U	NA	NA	NA	NA
	Total PCBs	2	2	3	3	2	1	0.0500 U	0.0586 U	0.0584 U	0.0727 J	0.0760 U	0.0581 U	0.0507 U	0.0612 U	0.0538 U	NA	NA	NA	NA
Metals, total (mg/kg)	Mercury	20	20	30	30	20	N/A	0.079	0.078	0.012 U	0.183	38.4	0.017 U	0.222	0.122	0.014 U	NA	NA	NA	NA
	Arsenic	20	20	20	20	20	N/A	3.19	14.3	4.84	5.53	27.8	3.15 U	6.51	11.7	3.48	7.84	14.4	12.0	9.89
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	14.0	200	7.59	21.5	575	6.40	25.0	185	12.5	NA	NA	NA	NA
	Beryllium	100	100	200	200	100	N/A	0.26 U	0.31 U	0.30 U	0.28 U	0.43	0.32 U	0.26 U	0.30 U	0.30 U	NA	NA	NA	NA
	Cadmium	2	2	30	30	2	N/A	0.26 U	0.31 U	0.30 U	0.28 U	1.23	0.32 U	0.29	0.50	0.30 U	NA	NA	NA	NA
	Chromium	30	30	200	200	30	N/A	5.14	5.30	3.81	7.97	51.9	1.90	8.12	12.3	5.13	NA	NA	NA	NA
	Lead	300	300	300	300	300	N/A	47.9	209	3.13	39.0	1,320	2.82	43.8	1,790	4.51	NA	NA	NA	NA
	Nickel	20	20	700	700	20	N/A	3.98	11.7	4.02	4.51	24.2	2.04	5.14	7.56	4.81	NA	NA	NA	NA
	Selenium	400	400	800	800	400	N/A	5.06 U	6.19 U	5.95 U	5.59 U	7.34 U	6.30 U	5.13 U	6.00 U	5.81 U	NA	NA	NA	NA
	Silver	100	100	200	200	100	N/A	2.22	3.94	1.17	2.52	15.8	0.63 U	2.99	4.23	1.24	NA	NA	NA	NA
	Vanadium	600	600	1,000	1,000	600	N/A	10.6	18.3	5.95 U	14.9	41.6	6.30 U	15.3	18.9	8.91	NA	NA	NA	NA
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	33.8	25.3	14.1	43.1	834	11.1	32.9	125	18.3	NA	NA	NA	NA
	Total Petroleum Hydrocarbons (mg/kg)	Diesel Range Organics	1,000	1,000	3,000	3,000	1,000	N/A	NA											
Gasoline Range Organics		1,000	1,000	3,000	3,000	1,000	N/A	NA												
Metals, TCLP	Lead, TCLP	NS	NS	NS	NS	NS	5.0"	NA												
Reactivity (mg/kg)	Reactive Cyanide	NS	NS	NS	NS	NS	N/A	NA												
Flashpoint (°F)	Flashpoint	NS	NS	NS	NS	NS	N/A	NA												

Notes:  
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).  
mg/L - milligrams per liter.  
NA - Sample not analyzed for the listed analyte.  
N/A - Not applicable.  
NS - No MassDEP standards exist for this compound.  
R - Rejected data point during data review.  
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 Method 1 standards or TCLP standard, as applicable.  
VOCs - Volatile Organic Compounds.  
PAHs - Polynuclear Aromatic Hydrocarbons.  
PCBs - Polychlorinated Biphenyls.  
RC - Reportable Concentration.  
TSCA - Toxic Substances Control Act criteria.  
TCLP - Toxicity Characteristic Leaching Procedure.  
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.  
(2) - MassDEP RC for Dichloropropane used.  
(3) - MassDEP RC for Dichloropropene used.  
(4) - MassDEP RC for 1,3-Dichloropropene used.  
(5) - SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

**TABLE 1**  
**Summary of Analytical Detected Results for Soil Samples - Historical**  
**Walsh Field Varsity Diamond RAM**  
**New Bedford, Massachusetts**

Analysis	Analyte	Sample Location: Sample Depth (ft.): Sample Date:						WF-6	WF-7	WF-8	WF-9	WF-10	WF-11	WF-12	WF-13	WF-14	WF-15	WF-16	WF-17	WF-18	
		S-1/GW-2		S-1/GW-3		S-2/GW-2		S-2/GW-3		RC S-1	TSCA	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
		9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008	9/30/2008
VOCs (mg/kg)	Chloromethane	NS	NS	NS	NS	100	N/A	NA													
	Bromomethane	0.5	30	0.5	30	0.5	N/A	NA													
	Methylene chloride	20	200	20	900	0.1	N/A	NA													
PAHs / Dibenzofuran (mg/kg)	Dibenzofuran	NS	NS	NS	NS	100	N/A	NA													
	2-Methylnaphthalene	80	300	80	500	0.7	N/A	NA													
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	NA													
	Acenaphthylene	600	10	600	10	1	N/A	NA													
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Benzo(a)anthracene	7	7	40	40	7	N/A	NA													
	Benzo(a)pyrene	2	2	4	4	2	N/A	NA													
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	NA													
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	NA													
	Chrysene	70	70	400	400	70	N/A	NA													
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	NA													
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	NA													
	Naphthalene	40	500	40	1,000	4	N/A	NA													
	Phenanthrene	500	500	1,000	1,000	10	N/A	NA													
Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	NA														
PCBs	Aroclor 1254	2	2	3	3	2	1	NA													
	Aroclor 1260	2	2	3	3	2	1	NA													
	Total PCBs	2	2	3	3	2	1	NA													
Metals, total (mg/kg)	Mercury	20	20	30	30	20	N/A	NA													
	Arsenic	20	20	20	20	20	N/A	5.82	7.86	6.50	10.7	6.96	7.86	6.53	7.25	9.51	6.27	5.46	5.75	6.05	
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Beryllium	100	100	200	200	100	N/A	NA													
	Cadmium	2	2	30	30	2	N/A	NA													
	Chromium	30	30	200	200	30	N/A	NA													
	Lead	300	300	300	300	300	N/A	NA													
	Nickel	20	20	700	700	20	N/A	NA													
	Selenium	400	400	800	800	400	N/A	NA													
	Silver	100	100	200	200	100	N/A	NA													
	Vanadium	600	600	1,000	1,000	600	N/A	NA													
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	NA													
Total Petroleum Hydrocarbons (mg/kg)	Diesel Range Organics	1,000	1,000	3,000	3,000	1,000	N/A	NA													
	Gasoline Range Organics	1,000	1,000	3,000	3,000	1,000	N/A	NA													
Metals, TCLP	Lead, TCLP	NS	NS	NS	NS	NS	5.0"	NA													
Reactivity (mg/kg)	Reactive Cyanide	NS	NS	NS	NS	NS	N/A	NA													
Flashpoint (°F)	Flashpoint	NS	NS	NS	NS	NS	N/A	NA													

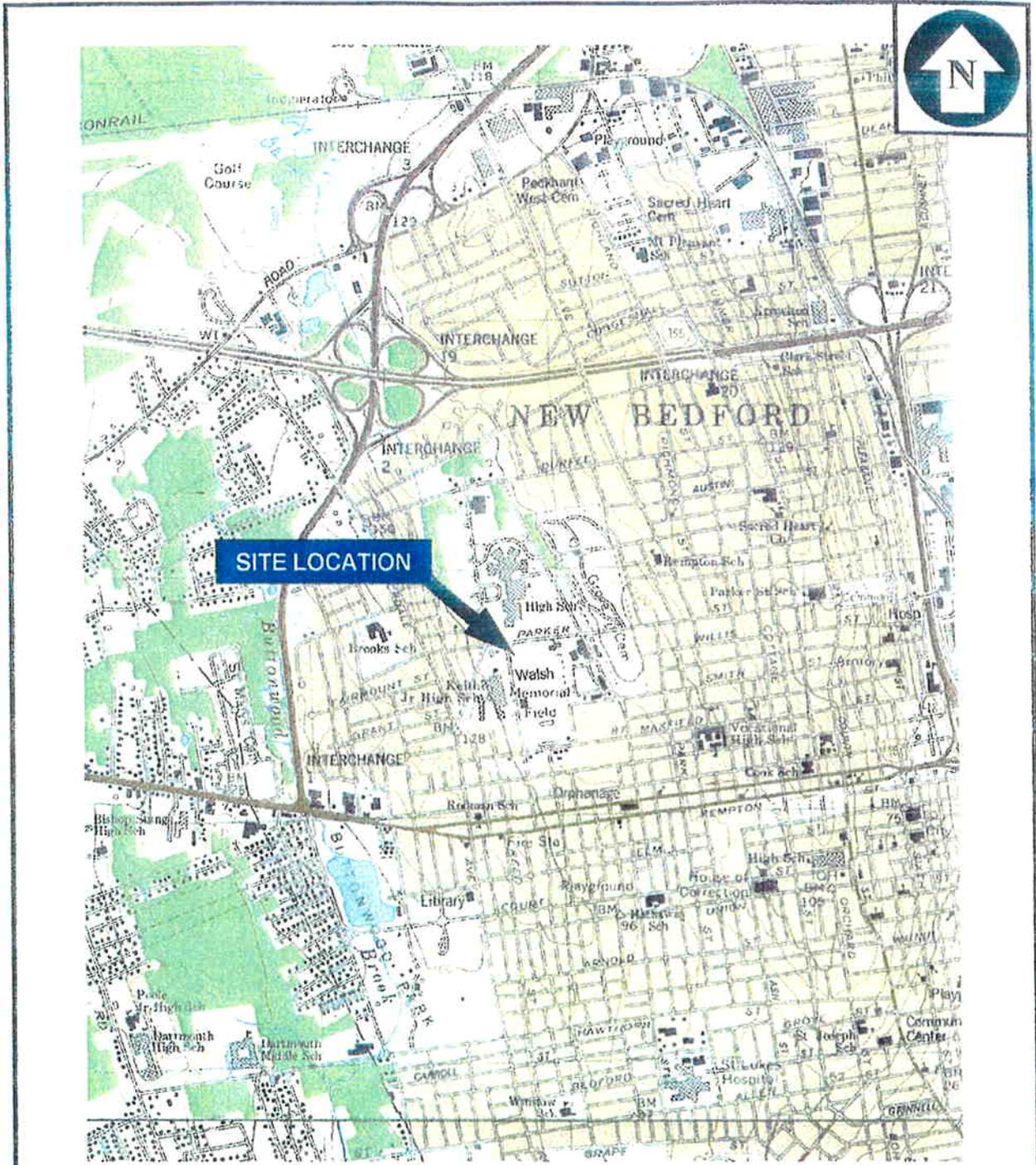
Notes:  
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).  
mg/L - milligrams per liter.  
NA - Sample not analyzed for the listed analyte.  
N/A - Not applicable.  
NS - No MassDEP standards exist for this compound.  
R - Rejected data point during data review.  
U - Compound 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 Method 1 standards or TCLP standard, as applicable.**  
VOCs - Volatile Organic Compounds.  
PAHs - Polynuclear Aromatic Hydrocarbons.  
PCBs - Polychlorinated Biphenyls.  
RC - Reportable Concentration.  
TSCA - Toxic Substances Control Act criteria.  
TCLP - Toxicity Characteristic Leaching Procedure.  
(1) - MassDEP Method 1 standards and RC for C9-C10 aromatics used.  
(2) - MassDEP RC for Dichloropropane used.  
(3) - MassDEP RC for Dichloropropene used.  
(4) - MassDEP RC for 1,3-Dichloropropene used.  
(5) - SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

**TABLE 2**  
**Summary of Analytical Results for Warning Track and Bullpen - March 2009**  
**Walsh Field**  
**New Bedford, Massachusetts**

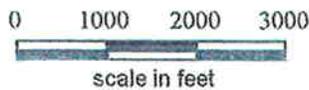
Analysis	Analyte	Sample Location:						WTR-SS-01	WTR-SS-02	WTR-SS-03	WTR-SS-04		WTR-SS-05	WTR-SS-06	WTR-SS-07	WTR-SS-08	WTR-SS-09	WTR-SS-10	WTR-SS-11	WTR-SS-12	WTR-SS-13	WTR-SS-14	WTR-SS-15	WTR-SS-16
		Sample Depth (ft.):						0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5	0-0.5
		Sample Date:						3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009	3/19/2009
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1*	TSCA																	
<b>PAHs</b> (mg/kg)	2-Methylnaphthalene	80	300	80	500	0.7	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Acenaphthene	1,000	1,000	3,000	3,000	4	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Acenaphthylene	600	10	600	10	1	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Anthracene	1,000	1,000	3,000	3,000	1,000	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.406</b>	0.178 U	0.187 U	0.195 U	0.177 U
	Benzo(a)anthracene	7	7	40	40	7	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	<b>0.197</b>	0.176 U	<b>0.38</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.913</b>	0.178 U	<b>0.279</b>	0.195 U	0.177 U
	Benzo(a)pyrene	2	2	4	4	2	N/A	0.194 U	0.204 U	<b>0.185</b>	0.184 U	0.183 U	<b>0.236</b>	0.176 U	<b>0.349</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.818</b>	0.178 U	<b>0.296</b>	0.195 U	0.177 U
	Benzo(b)fluoranthene	7	7	40	40	7	N/A	0.194 U	0.204 U	<b>0.215</b>	0.184 U	0.183 U	<b>0.248</b>	0.176 U	<b>0.408</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.92</b>	0.178 U	<b>0.336</b>	0.195 U	0.177 U
	Benzo(g,h,i)perylene	1,000	1,000	3,000	3,000	1,000	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	<b>0.217</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.474</b>	0.178 U	<b>0.191</b>	0.195 U	0.177 U
	Benzo(k)fluoranthene	70	70	400	400	70	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.365</b>	0.178 U	0.187 U	0.195 U	0.177 U
	Chrysene	70	70	400	400	70	N/A	0.194 U	0.204 U	<b>0.193</b>	0.184 U	0.183 U	<b>0.234</b>	0.176 U	<b>0.421</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.945</b>	0.178 U	<b>0.31</b>	0.195 U	0.177 U
	Dibenz(a,h)anthracene	0.7	0.7	4	4	0.7	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Fluoranthene	1,000	1,000	3,000	3,000	1,000	N/A	0.194 U	0.204 U	<b>0.274</b>	0.184 U	0.183 U	<b>0.272</b>	0.176 U	<b>0.59</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>1.39</b>	0.178 U	<b>0.421</b>	0.195 U	0.177 U
	Fluorene	1,000	1,000	3,000	3,000	1,000	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Indeno(1,2,3-cd)pyrene	7	7	40	40	7	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	<b>0.247</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>0.65</b>	0.178 U	<b>0.235</b>	0.195 U	0.177 U
	Naphthalene	40	500	40	1,000	4	N/A	0.194 U	0.204 U	0.183 U	0.184 U	0.183 U	0.191 U	0.176 U	0.199 U	0.193 U	0.181 U	0.186 U	0.173 U	0.206 U	0.178 U	0.187 U	0.195 U	0.177 U
	Phenanthrene	500	500	1,000	1,000	10	N/A	0.194 U	0.204 U	<b>0.206</b>	0.184 U	0.183 U	0.191 U	0.176 U	<b>0.674</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>1.88</b>	0.178 U	<b>0.308</b>	0.195 U	0.177 U
	Pyrene	1,000	1,000	3,000	3,000	1,000	N/A	<b>0.202</b>	0.204 U	<b>0.412</b>	0.184 U	0.183 U	<b>0.424</b>	0.176 U	<b>1.03</b>	0.193 U	0.181 U	0.186 U	0.173 U	<b>1.87</b>	0.178 U	<b>0.612</b>	0.195 U	<b>0.209</b>
<b>Metals, total</b> (mg/kg)	Mercury	20	20	30	30	20	N/A	<b>0.093</b>	<b>0.127</b>	<b>0.074</b>	<b>0.059</b>	<b>0.060</b>	<b>0.117</b>	<b>0.031</b>	<b>0.169</b>	<b>0.062</b>	0.014 U	0.016 U	0.014 U	<b>0.172</b>	<b>0.034</b>	<b>0.114</b>	<b>0.057</b>	<b>0.026</b>
	Antimony	20	20	30	30	20	N/A	4.66 U	4.89 U	4.38 U	4.41 U	4.39 U	4.59 U	4.22 U	4.77 U	4.63 U	4.35 U	4.45 U	4.15 U	4.93 U	4.27 U	4.48 U	4.67 U	4.25 U
	Arsenic	20	20	20	20	20	N/A	<b>8.18</b>	<b>7.59</b>	<b>5.23</b>	<b>16.3</b>	<b>13.5</b>	<b>4.95</b>	<b>4.51</b>	<b>4.34</b>	<b>3.20</b>	<b>4.49</b>	<b>5.86</b>	<b>3.44</b>	<b>5.47</b>	<b>4.16</b>	<b>10.1</b>	<b>59.3</b>	<b>6.60</b>
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	<b>75.5</b>	<b>35.1</b>	<b>55.7</b>	<b>50.9</b>	<b>47.3</b>	<b>71.2</b>	<b>107</b>	<b>215</b>	<b>64.5</b>	<b>126</b>	<b>157</b>	<b>112</b>	<b>29.4</b>	<b>108</b>	<b>80.8</b>	<b>54.5</b>	<b>35.6</b>
	Beryllium	100	100	200	200	100	N/A	0.30 U	0.31 U	0.28 U	0.28 U	0.28 U	0.29 U	0.27 U	0.30 U	0.29 U	0.28 U	0.28 U	0.26 U	0.31 U	0.27 U	0.28 U	0.30 U	0.27 U
	Cadmium	2	2	30	30	2	N/A	<b>0.34</b>	0.31 U	0.28 U	0.28 U	0.28 U	<b>0.33</b>	0.27 U	<b>0.38</b>	0.29 U	0.28 U	0.28 U	0.26 U	0.31 U	0.27 U	<b>0.29</b>	<b>0.29</b>	0.27 U
	Chromium	30	30	200	200	30	N/A	<b>34.5</b>	<b>11.4</b>	<b>26.2</b>	<b>12.9</b>	<b>11.3</b>	<b>30.6</b>	<b>39.8</b>	<b>10.6</b>	<b>36.1</b>	<b>85.0</b>	<b>76.6</b>	<b>71.4</b>	<b>9.55</b>	<b>48.9</b>	<b>33.6</b>	<b>18.2</b>	<b>15.0</b>
	Lead	300	300	300	300	300	N/A	<b>31.7</b>	<b>60.5</b>	<b>10.5</b>	<b>44.3</b>	<b>45.6</b>	<b>85.7</b>	<b>30.2</b>	<b>197</b>	<b>28.5</b>	<b>4.10</b>	<b>5.68</b>	<b>4.58</b>	55.7	<b>10.9</b>	<b>82.8</b>	<b>36.5</b>	<b>19.3</b>
	Nickel	20	20	700	700	20	N/A	<b>15.7</b>	<b>5.31</b>	<b>13.1</b>	<b>7.94</b>	<b>7.30</b>	<b>13.1</b>	<b>19.2</b>	<b>4.72</b>	<b>16.6</b>	<b>38.5</b>	<b>36.6</b>	<b>33.7</b>	4.66	<b>23.3</b>	<b>17.1</b>	<b>9.69</b>	<b>8.77</b>
	Selenium	400	400	800	800	400	N/A	5.82 U	6.12 U	5.47 U	5.51 U	5.49 U	5.73 U	5.27 U	5.96 U	5.79 U	5.43 U	5.57 U	5.19 U	6.16 U	5.34 U	5.60 U	5.84 U	5.31 U
	Silver	100	100	200	200	100	N/A	0.59 U	0.62 U	0.55 U	0.56 U	0.55 U	0.58 U	0.53 U	0.60 U	0.58 U	0.55 U	0.56 U	0.52 U	0.62 U	0.54 U	0.56 U	0.59 U	0.54 U
	Thallium	8	8	60	60	8	N/A	3.49 U	3.67 U	3.28 U	3.31 U	3.29 U	3.44 U	3.16 U	3.58 U	3.47 U	3.26 U	3.34 U	3.12 U	3.70 U	3.20 U	3.36 U	3.51 U	3.19 U
	Vanadium	600	600	1,000	1,000	600	N/A	<b>26.5</b>	<b>17.7</b>	<b>20.9</b>	<b>18.9</b>	<b>17.6</b>	<b>22.6</b>	<b>33.0</b>	<b>13.9</b>	<b>21.7</b>	<b>35.5</b>	<b>47.8</b>	<b>32.7</b>	<b>15.7</b>	<b>33.5</b>	<b>21.8</b>	<b>20.0</b>	<b>17.1</b>
	Zinc	2,500	2,500	3,000	3,000	2,500	N/A	<b>187</b>	<b>55.3</b>	<b>30.6</b>	<b>28.7</b>	<b>26.5</b>	<b>63.4</b>	<b>42.7</b>	<b>81.5</b>	<b>46.6</b>	<b>39.7</b>	<b>40.4</b>	<b>38.0</b>	<b>36.5</b>	<b>36.8</b>	<b>82.9</b>	<b>29.9</b>	<b>31.1</b>

Notes:  
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).  
NA - Sample not analyzed for the listed analyte.  
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 Method 1 standards.  
PAHs - Polynuclear Aromatic Hydrocarbons.  
RC - Reportable Concentration.  
TSCA - Toxic Substances Control Act criteria.  
\* - 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



QUADRANGLE  
 LOCATION

**WALSH FIELD  
 NEW BEDFORD, MASSACHUSETTS**

**SITE LOCATION MAP**



Wannalancit Mills  
 850 Suffolk Street  
 Lowell, MA 01854  
 978-970-5800

**FIGURE  
 1**

Drawn: HWB

SCALE: AS SHOWN

Checked: DS

Date: SEPT 2008



SB-267	07/14/08	1.00 - 1.00	3.50 - 3.50	0.00 - 0.00	0.00 - 0.00
BAP	0.271	0.207 U	0.199 U	0.199 U	0.199 U
Total PCBs	0.0586 U	0.0586 U	0.0584 U	0.0584 U	0.0584 U
Arsenic	3.19	14.3	4.84	4.84	4.84
Cadmium	0.28 U	0.31 U	0.3 U	0.3 U	0.3 U
Chromium	5.14	5.3	3.81	3.81	3.81
Lead	47.9	209	3.13	3.13	3.13
Nickel	3.08	11.7	4.02	4.02	4.02

SB-268	07/15/08	1.00 - 1.00	4.00 - 4.00	0.00 - 0.00	0.00 - 0.00
BAP	0.176 U	0.609	0.609	0.604 U	0.604 U
Total PCBs	0.0502 U	0.0571 U	0.0571 U	0.0563 U	0.0563 U
Arsenic	5.84	9.84	3.06 U	3.06 U	3.06 U
Cadmium	0.27 U	0.34	0.34	0.32 U	0.32 U
Chromium	12.1	12.4	1.44	1.44	1.44
Lead	3.15	286	1.74	1.74	1.74
Nickel	12.1	9.44	1.58	1.58	1.58

SB-269	07/15/08	1.00 - 1.00	4.00 - 4.00	0.00 - 0.00	0.00 - 0.00
BAP	0.187 U	0.292	0.292	0.292	0.292
Total PCBs	0.0727 U	0.0760 U	0.0581 U	0.0581 U	0.0581 U
Arsenic	6.51	11.7	3.48	3.48	3.48
Cadmium	0.29 U	0.5	0.3 U	0.3 U	0.3 U
Chromium	8.12	12.3	6.13	6.13	6.13
Lead	43.8	1790	4.51	4.51	4.51
Nickel	5.14	7.56	4.61	4.61	4.61

WF-01	02/23/06	0.75 - 2.50	0.75 - 2.50	0.00 - 0.50	0.00 - 0.50
BAP	0.97	0.97	0.97	0.97	0.97
Total PCBs	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Arsenic	5.11	5.11	5.11	5.11	5.11
Cadmium	0.47	0.47	0.47	0.47	0.47
Chromium	16.4	16.4	16.4	16.4	16.4
Lead	11.60	11.60	11.60	11.60	11.60

PARKER STREET

VARSITY DIAMOND

WALSH FIELD

HUNTER ST

NOTE:  
 ALL BORINGS, WELLS, AND SOIL GAS LOCATIONS ARE PRELIMINARY AND SUBJECT TO CHANGE AND ARE PAVED TO BEST CONDITIONS AND BEST PROFESSIONAL JUDGEMENT

Contaminant	S-1 (GW-2)	S-1 (GW-3)	S-2 (GW-3)	S-2 (GW-3)	RC S-1	TSCA
Benz(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:  
 MS/MS IN MICROGRAMS UNLESS OTHERWISE SPECIFIED  
 MG/KG - MILLIGRAMS PER KILOGRAM (DRY WEIGHT)  
 NA - SAMPLE NOT ANALYZED FOR THE LISTED ANALYTE  
 PCBs - POLYCHLORINATED BIPHENYLS  
 TSCA - TOXIC SUBSTANCES CONTROL ACT  
 U - COMPOUND WAS NOT DETECTED AT SPECIFIED QUANTIFICATION LIMIT  
 VALUES SHOWN IN YELLOW BACKGROUND EXCEED ONE OR MORE OF THE LISTED MASS/MS/MS STANDARDS

WF-04	02/23/06	1.00 - 2.50	1.00 - 2.50	0.00 - 0.50	0.00 - 0.50
BAP	95	95	95	95	95
Total PCBs	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Arsenic	1.21	1.21	1.21	1.21	1.21
Cadmium	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U
Chromium	4.17	4.17	4.17	4.17	4.17
Lead	5.46	5.46	5.46	5.46	5.46

APPROXIMATE GRAPHIC SCALE  
 0' 10' 20' 30' 100'

WALSH FIELD  
 NEW BEDFORD, MASSACHUSETTS

SOIL ANALYTICAL RESULTS SUMMARY MAP

RAM  
 VARSITY DIAMOND AREA - RAM

TRC  
 650 Surfside Blvd  
 (978) 970-8600

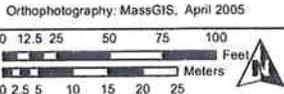
FIGURE 2

DATE: 03/12/2009  
 DRAWN BY: PZ  
 CHECKED BY: DP

DRAFT



- Legend**  
**Baseball Diamond Improvements**
- Arborvitae Strip
  - Asphalt Removal
  - Double Wide Bullpen
  - New Area of Paving
  - New Dugout Safety Fencing
  - Re-located Backstop (within 40' of home plate)
  - Regraded Warning Track
  - Supplemental Paving Behind Backstop



**NOTE:**  
 Phone, Electricity, PA, and Video assumed to be overhead wires

**CTRC** 650 Suffolk St.  
 Wannalancit Mills  
 Lowell, MA 01854

**FIGURE 3**  
 CONSTRUCTION ACTIVITY  
 LOCATIONS  
 WALSH FIELD VARSITY DIAMOND  
 NEW BEDFORD, MASSACHUSETTS

R:\projects\GIS\_2007\4624\4624\_1808\4624\_1808\_PRESENTATION\_012109\VARSIITY\_DIAMOND\_IMPROVEMENTS2.mxd



**APPENDIX A**  
**SOIL BORING LOGS**



**Geoprobe Soil Log**

**Client/Project**  
City of New Bedford

**Project No.**  
115058

**Boring No.** SB-254  
**Well No.** NA

**Sheet**  
1 of 1

**Soil Gas Screening Number and AOC Location:**  
Left field of Walsh baseball field

**TRC Geologist**  
Charles Foster

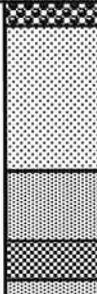
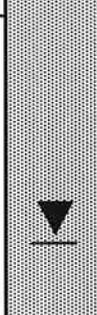
<b>Geoprobe Contractor/Foreman</b> NEG / Bill Meadows	<b>Geoprobe Make/Model</b> 5400 Truck Rig	<b>Sampling Description</b> Continuous	
<b>Sampler Description:</b> 48" Macrocore	<b>Sampling Method</b> Direct Push	<b>Coordinates</b> X=                  Y=	
<b>Temporary piezometer or screen point:</b> NA	<b>Auger Diameter (if used):</b> NA	<b>Ref. El.:</b>	
<b>Depth</b> NA	<b>Sampler Diameter:</b> 2"	<b>Riser Stick-up:</b> NA	
<b>Screen Length/Type:</b> NA	<b>Water Table Depth:</b> Unknown	<b>Surface Elevation:</b>	
<b>Riser Length/Type:</b> NA	<b>Total Depth:</b> 4 feet	<b>Date Start:</b> 7/15/08	<b>Date Finish:</b> 7/15/08

Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing
1	S-1	48"/32"	2" GRASS and ROOTS, some silt and topsoil		OS =Bkg HS =Bkg
			10" Light brown SILT some fine sand, trace roots		
2			16" Brown to dark brown fine to medium SAND, trace fine gravel		
3			4" Rusty, wet SILT, some fine sand, trace glass (possibly wet from sprinklers)		
4	S-2		End of Boring 4 ft.		
5					
6					
7					
8					
9	S-3				
10					
11					
12					
13					

<p><b>Granular Soils</b></p> <p><b>Blows/ft    Density</b></p> <p>0-4            v. loose</p> <p>4-10          loose</p> <p>10-30        m. dense</p> <p>30-50        dense</p> <p>&gt;50          v. dense</p> <p><b>Proportions</b></p> <p>trace 0-10%    some 20-35%</p> <p>little 10-20%    and 35-50%</p>	<p><b>Cohesive Soils</b></p> <p><b>Blows/ft    Density</b></p> <p>&gt;2            v. soft</p> <p>2-4            soft</p> <p>4-8            m. stiff</p> <p>8-15          stiff</p> <p>15-30        v. stiff</p> <p>&gt;30          hard</p>	<p><b>Grain Size (USCS)</b></p> <p>silt/clay    &lt;0.08 mm</p> <p>f. sand      0.43-0.08 mm</p> <p>m. sand     2.0-0.43 mm</p> <p>c. sand      4.8-2.0 mm</p> <p>f. gravel     19-4.8 mm</p> <p>c. gravel     75-19 mm</p> <p>cobble      300-75 mm</p> <p>boulder     &gt;300 mm</p>	<p><b>Notes/Sample details</b></p> <p>1) SB-254-0.5 @ 1340 for PCBs, Metals &amp; PAHs</p> <p>2) SB-254-2 @ 1345 for PCBs, Metals &amp; PAHs (HOLD)</p> <p>3)</p> <p>4)</p> <p>5)</p>
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		Client/Project	Project No.	Boring No. SB-255	Sheet		
		City of New Bedford	115058	Well No. NA	1 of 1		
<b>Geoprobe Soil Log</b>		Soil Gas Screening Number and AOC Location: In right field of Walsh baseball field		TRC Geologist Charles Foster			
Geoprobe Contractor/Foreman NEG / Bill Meadows		Geoprobe Make/Model 5400 Truck Rig		Sampling Description Continuous			
Sampler Description: 48" Macrocore		Sampling Method Direct Push		Coordinates X=                  Y=			
Temporary piezometer or screen point: NA		Auger Diameter (if used): NA		Ref. El.:			
Depth NA		Sampler Diameter: 2"		Riser Stick-up: NA			
Screen Length/Type: NA		Water Table Depth: Unknown		Surface Elevation:			
Riser Length/Type: NA		Total Depth: 4 feet		Date Start: 7/15/08	Date Finish: 7/15/08		
Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing		
1	S-1	48"/34"	2" GRASS and ROOTS, SILT and TOP SOIL 12" Brown SILT and fine SAND, trace fine gravel 4" BRICK and fine to medium SAND, some silt, trace fine gravel		OS =Bkg HS =Bkg		
2			10" Tan fine to medium SAND, some fine gravel				
3			2" Dark brown to blackish fine to course SAND, trace coal and slag				
4			4" Tan fine to medium SAND, trace fine gravel				
5	S-2		End of Boring 4 ft.				
6							
7							
8							
9	S-3						
10							
11							
12							
13							
<b>Granular Soils</b> Blows/ft    Density 0-4        v. loose 4-10       loose 10-30      m. dense 30-50      dense >50        v. dense <b>Proportions</b> trace 0-10%    some 20-35% little 10-20%    and    35-50%		<b>Cohesive Soils</b> Blows/ft    Density >2        v. soft 2-4        soft 4-8        m. stiff 8-15      stiff 15-30     v. stiff >30        hard		<b>Grain Size (USCS)</b> silt/clay    <0.08 mm f. sand      0.43-0.08 mm m. sand     2.0-0.43 mm c. sand      4.8-2.0 mm f. gravel    19-4.8 mm c. gravel    75-19 mm cobble      300-75 mm boulder     >300 mm		<b>Notes/Sample details</b> 1) SB-255-0.5 @ 1330 for PCBs, Metals & PAHs 2) SB-255-2 @ 1335 for PCBs, Metals & PAHs (HOLD) 3) 4) 5)	

 <b>Geoprobe Soil Log</b>	Client/Project City of New Bedford	Project No. 115058	Boring No. SB-265	Sheet 1 of 1			
	Soil Gas Screening Number and AOC Location: Approximately 200 feet north of SB-264 (within Hunter Street)		TRC Geologist Charles Foster				
	Geoprobe Contractor/Foreman NEG / Bill Meadows	Geoprobe Make/Model 5400 Truck Rig	Sampling Description Continuous				
Sampler Description: 48" Macrocore		Sampling Method Direct Push		Coordinates X=          Y=			
Temporary piezometer or screen point: NA		Auger Diameter (if used): NA		Ref. El.:			
Depth NA		Sampler Diameter: 2"		Riser Stick-up: NA			
Screen Length/Type: NA		Water Table Depth: ~6 feet		Surface Elevation:			
Riser Length/Type: NA		Total Depth: 12 feet		Date Start: 7/14/08    Date Finish: 7/14/08			
Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing		
1	S-1	48"/34"	4" ASPHALT 20" Tan to brown fine to course SAND, some fine gravel		OS = Bkg HS = Bkg		
2			10" Dark brown to blackish gray FILL (coal, ash, cinders, slag, glass, possibly fragments of shells)				
3							
4	S-2	48"/42"	4" Brown to gray SILT, some clay 28" Dark brown PEAT and organic SILT, some clay		OS = Bkg HS = Bkg		
5			10" Gray fine to medium SAND some silt, saturated				
6							
7							
8	S-3	48"/NM	Gray fine to medium SAND, saturated		OS =Bkg HS =Bkg		
9							
10							
11							
12			End of Boring 12 ft.				
13							
<b>Granular Soils</b> Blows/ft    Density 0-4          v. loose 4-10        loose 10-30      m. dense 30-50      dense >50        v. dense <b>Proportions</b> trace 0-10%    some 20-35% little 10-20%    and 35-50%		<b>Cohesive Soils</b> Blows/ft    Density >2          v. soft 2-4         soft 4-8         m. stiff 8-15        stiff 15-30      v. stiff >30         hard		<b>Grain Size (USCS)</b> silt/clay    <0.08 mm f. sand     0.43-0.08 mm m. sand    2.0-0.43 mm c. sand     4.8-2.0 mm f. gravel   19-4.8 mm c. gravel   75-19 mm cobble     300-75 mm boulder    >300 mm		<b>Notes/Sample details</b> 1) SB-265-1 @ 1405 for PCBs, Metals & PAHs 2) SB-265-4 @ 1415 for PCBs, Metals & PAHs 3) SB-265-7.5 @ 1425 for PCBs, Metals & PAH 4) SB-265-11 @ 1435 for PCBs, Metals & PAHs (HOLD) 5)	

 <b>Geoprobe Soil Log</b>	Client/Project City of New Bedford		Project No. 115058		Boring No. SB-266		Sheet 1 of 1		
	Soil Gas Screening Number and AOC Location: Inside entrance to Walsh baseball field (NW corner / gate)		TRC Geologist Charles Foster						
	Geoprobe Contractor/Foreman NEG / Bill Meadows		Geoprobe Make/Model 5400 Truck Rig		Sampling Description Continuous				
Sampler Description: 48" Macrocore			Sampling Method Direct Push			Coordinates X=                  Y=			
Temporary piezometer or screen point: NA			Auger Diameter (if used): NA			Ref. El.:			
Depth NA			Sampler Diameter: 2"			Riser Stick-up: NA			
Screen Length/Type: NA			Water Table Depth: ~7 feet			Surface Elevation:			
Riser Length/Type: NA			Total Depth: 12 feet			Date Start: 7/15/08		Date Finish: 7/15/08	
Depth	Sample Number	PEN/REC	Sample Description		Strati-graphic Description	Field Testing			
1	S-1	48"/30"	4" ASPHALT			OS = bkg HS = bkg			
2			14" Tan fine to course SAND						
3			6" Dark brown SILT some fine sand						
4			4" Tan FILL (ash, trace coal and slag), some fine to course sand						
5			2" Organic PEAT						
5	S-2	48"/46"	46" Dark brown organic PEAT, more fibrous at 8', bottom moist, thin lense of gray fine sand at base, wet			OS = bkg HS = bkg			
6									
7									
8									
9	S-3	48"/42"	42" Gray fine SAND, some silt, saturated			OS =Bkg HS =Bkg			
10									
11									
12									
13									
			End of Boring 12'						
<b>Granular Soils</b> Blows/ft    Density 0-4        v. loose 4-10       loose 10-30      m. dense 30-50      dense >50        v. dense <b>Proportions</b> trace    0-10%    some    20-35% little    10-20%    and     35-50%		<b>Cohesive Soils</b> Blows/ft    Density >2        v. soft 2-4        soft 4-8        m. stiff 8-15      stiff 15-30     v. stiff >30        hard		<b>Grain Size (USCS)</b> silt/clay    <0.08 mm f. sand      0.43-0.08 mm m. sand     2.0-0.43 mm c. sand      4.8-2.0 mm f. gravel    19-4.8 mm c. gravel    75-19 mm cobble      300-75 mm boulder     >300 mm		<b>Notes/Sample details</b> 1) SB-266-1 @ 1005 for PCBs, Metals & PAHs 2) SB-266-4 @ 1010 for PCBs, Metals & PAHs 3) SB-266-9 @ 1020 for PCBs, Metals & PAH 4) SB-266-11 @ 1030 for PCBs, Metals & PAHs (HOLD) 5)			



**Geoprobe Soil Log**

**Client/Project**  
City of New Bedford

**Project No.**  
115058

**Boring No.** SB-267  
**Well No.** NA

**Sheet**  
1 of 1

**Soil Gas Screening Number and AOC Location:**  
North side of Parker St. adjacent to Walsh Field (in grass strip)

**TRC Geologist**  
Charles Foster

**Geoprobe Contractor/Foreman**  
NEG / Bill Meadows

**Geoprobe Make/Model**  
5400 Truck Rig

**Sampling Description**  
Continuous

**Sampler Description:**  
48" Macrocore

**Sampling Method**  
Direct Push

**Coordinates**  
X= Y=

**Temporary piezometer or screen point:** NA

**Auger Diameter (if used):** NA

**Ref. EL.:**

**Depth** NA

**Sampler Diameter:** 2"

**Riser Stick-up:** NA

**Screen Length/Type:** NA

**Water Table Depth:** ~7 feet

**Surface Elevation:**

**Riser Length/Type:** NA

**Total Depth:** 12 feet

**Date Start:** 7/14/08

**Date Finish:** 7/14/08

Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing
1	S-1	48"/36"	2" GRASS and organic TOP SOIL		OS = Bkg HS = Bkg
			8" Tan to brown fine SAND, some silt and angular gravel		
2			4" Brown fine to medium SAND, some fine gravel		
3			14" Blackish FILL (coal, slag, possible ash) some fine to medium sand		
4			8" Gray SILT, some fine sand, trace clay, moist		
5	S-2	48"/46"	2" Gray CLAY, some silt, moist		OS = Bkg HS = Bkg
6			44" Dark brown PEAT and organic SILT, some wood debris, wet at bottom		
7					
8					
9	S-3	48"/44"	2" Dark Brown PEAT		OS = Bkg HS = Bkg
10			42" Gray to trace rusty at top fine to medium SAND some silt, saturated		
11					
12					
13					
			End of Boring 12 ft.		

Granular Soils		Cohesive Soils		Grain Size (USCS)		Notes/Sample details
<b>Blows/ft</b>	<b>Density</b>	<b>Blows/ft</b>	<b>Density</b>	silt/clay	<0.08 mm	
0-4	v. loose	>2	v. soft	f. sand	0.43-0.08 mm	
4-10	loose	2-4	soft	m. sand	2.0-0.43 mm	
10-30	m. dense	4-8	m. stiff	c. sand	4.8-2.0 mm	
30-50	dense	8-15	stiff	f. gravel	19-4.8 mm	
>50	v. dense	15-30	v. stiff	c. gravel	75-19 mm	
<b>Proportions</b>		>30	hard	cobble	300-75 mm	
trace	0-10%	some	20-35%	boulder	>300 mm	
little	10-20%	and	35-50%			

- 1) SB-267-1 @ 1530 for PCBs, Metals & PAHs
- 2) SB-267-3.5 @ 1540 for PCBs, Metals & PAHs
- 3) SB-267-9 @ 1545 for PCBs, Metals & PAH
- 4) SB-267-12 @ 1550 for PCBs, Metals & PAHs (HOLD)
- 5)



Client/Project  
City of New Bedford

Project No.  
115058

Boring No. SB-268  
Well No. NA

Sheet  
1 of 1

**Geoprobe Soil Log**

Soil Gas Screening Number and AOC Location:  
Approximately 50-feet east of SB-266 (north of Walsh bleachers)

TRC Geologist  
Charles Foster

Geoprobe Contractor/Foreman  
NEG / Bill Meadows

Geoprobe Make/Model  
5400 Truck Rig

Sampling Description  
Continuous

Sampler Description:  
48" Macrocore

Sampling Method  
Direct Push

Coordinates  
X= Y=

Temporary piezometer or screen point: NA

Auger Diameter (if used): NA

Ref. El.:

Depth NA

Sampler Diameter: 2"

Riser Stick-up: NA

Screen Length/Type: NA

Water Table Depth: ~7 feet

Surface Elevation:

Riser Length/Type: NA

Total Depth: 12 feet

Date Start: 7/15/08

Date Finish: 7/15/08

Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing
1	S-1	48"/36"	2" Silty TOPSOIL, some grass and roots		OS = bkg HS = bkg
2			18" Tan fine to medium SAND, trace fine gravel		
3			6" Dark gray fine to medium SAND, trace fine gravel		
4			6" Brown fine to course SAND, trace gravel, trace silt		
5	S-2	48"/36"	4" FILL (ash, coal, slag and cinders)		OS = bkg HS = bkg
6			6" FILL (ash, coal, slag and cinders)		
7			30" Organic PEAT / SILT (musty swampy odor), some clay, fibrous to 8', moist		
8					
9	S-3	48"/40"	4" Organic PEAT, SILT (musty swampy odor), some clay, moist		OS =Bkg HS =Bkg
10			36" Gray fine to medium SAND, some silt, saturated		
11					
12					
13			End of Boring 12'		

Granular Soils		Cohesive Soils		Grain Size (USCS)		Notes/Sample details
Blows/ft	Density	Blows/ft	Density			
0-4	v. loose	>2	v. soft	silt/clay	<0.08 mm	1) SB-268-1 @ 1045 for PCBs, Metals & PAHs 2) SB-268-4.5 @ 1055 for PCBs, Metals & PAHs (plus MS/MSD) 3) SB-268-9 @ 1105 for PCBs, Metals & PAH 4) SB-268-12 @ 1110 for PCBs, Metals & PAHs 5)
4-10	loose	2-4	soft	f. sand	0.43-0.08 mm	
10-30	m. dense	4-8	m. stiff	m. sand	2.0-0.43 mm	
30-50	dense	8-15	stiff	c. sand	4.8-2.0 mm	
>50	v. dense	15-30	v. stiff	f. gravel	19-4.8 mm	
Proportions		>30	hard	c. gravel	75-19 mm	
trace	0-10%	some	20-35%	cobble	300-75 mm	
little	10-20%	and	35-50%	boulder	>300 mm	



Client/Project  
City of New Bedford

Project No.  
115058

Boring No. SB-269  
Well No. NA

Sheet  
1 of 1

**Geoprobe Soil Log**

Soil Gas Screening Number and AOC Location:  
Approximately 50-feet east of SB-268 (north of Walsh bleachers)

TRC Geologist  
Charles Foster

Geoprobe Contractor/Foreman NEG / Bill Meadows	Geoprobe Make/Model 5400 Truck Rig	Sampling Description Continuous
Sampler Description: 48" Macrocore	Sampling Method Direct Push	Coordinates X=            Y=
Temporary piezometer or screen point: NA	Auger Diameter (if used): NA	Ref. EL:
Depth NA	Sampler Diameter: 2"	Riser Stick-up: NA
Screen Length/Type: NA	Water Table Depth: ~7 feet	Surface Elevation:
Riser Length/Type: NA	Total Depth: 12 feet	Date Start: 7/15/08    Date Finish: 7/15/08

Depth	Sample Number	PEN/REC	Sample Description	Strati-graphic Description	Field Testing
1	S-1	48"/30"	2" Organic SILT and TOP SOIL, trace roots and grass		OS = bkg HS = bkg
2		18" Tan fine SAND, some silt			
3		12" Dark brown to black FILL (tan and whitish ash, slag, cinders, coal and glass)			
4	S-2	48"/46"	2" Dark brown to black FILL with tan and whitish ash, slag, cinders, coal and glass)		
5			42" Dark brown organic PEAT, fibrous at 7.8-feet, moist		OS = bkg HS = bkg
6			2" Gray fine to medium SAND, saturated		
7					
8	S-3	48"/38"	38" Gray fine to medium SAND, some silt, trace rusty areas, saturated		
9					OS =Bkg HS =Bkg
10					
11					
12			End of Boring 12'		
13					

<p><b>Granular Soils</b></p> <p>Blows/ft    Density</p> <p>0-4          v. loose</p> <p>4-10        loose</p> <p>10-30      m. dense</p> <p>30-50      dense</p> <p>&gt;50        v. dense</p> <p><b>Proportions</b></p> <p>trace 0-10%    some 20-35%</p> <p>little 10-20%    and 35-50%</p>	<p><b>Cohesive Soils</b></p> <p>Blows/ft    Density</p> <p>&gt;2          v. soft</p> <p>2-4         soft</p> <p>4-8         m. stiff</p> <p>8-15        stiff</p> <p>15-30      v. stiff</p> <p>&gt;30         hard</p>	<p><b>Grain Size (USCS)</b></p> <p>silt/clay &lt;0.08 mm</p> <p>f. sand 0.43-0.08 mm</p> <p>m. sand 2.0-0.43 mm</p> <p>c. sand 4.8-2.0 mm</p> <p>f. gravel 19-4.8 mm</p> <p>c. gravel 75-19 mm</p> <p>cobble 300-75 mm</p> <p>boulder &gt;300 mm</p>	<p><b>Notes/Sample details</b></p> <p>1) SB-269-1 @ 1130 for PCBs, Metals &amp; PAHs</p> <p>2) SB-269-4 @ 1135 for PCBs, Metals &amp; PAHs</p> <p>3) SB-269-9.5 @ 1145 for PCBs, Metals &amp; PAH</p> <p>4) SB-269-12 @ 1150 for PCBs, Metals &amp; PAHs (HOLD)</p> <p>5)</p>
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**APPENDIX B**

**COPY OF CHECK FOR MASSDEP RAM PLAN  
FEE**



21 Griffin Road North  
Windsor, CT 06095

WACHOVIA BANK, N.A.  
Wilmington, DE  
62-22/311

621594

CHECK DATE

April 2, 2009

PAY **AMOUNT**  
Eight Hundred and 00/100 Dollars

TO **\$800.00**  
Commonwealth Of Massachusetts  
P.O. Box 3982  
Department of Environmental Protection  
Commonwealth Master Lockbox  
Boston MA 02441-3982

By  AUTHORIZED SIGNATURE  
VOID AFTER 90 DAYS

Security Check features included. Details on back.

⑈621594⑈ ⑆031100225⑆ 2079950091538⑈

EMILY BUSINESS FORMS 800 392 6018 VISION



21 Griffin Road North  
Windsor, CT 06095

621594

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
RAM PLAN FEE-AP09	4/1/09	000000361570	800.00	0.00	0.00	800.00
Commonwealth Of Massachusetts						
3BANK 5	030812	Totals	800.00	0.00	0.00	800.00

**APPENDIX C**

**MUNICIPAL NOTIFICATION LETTERS**



Wannalancit Mills  
650 Suffolk Street  
Lowell, MA 01854

978.970.5600 PHONE  
978.453.1995 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

April 3, 2009

TRC Reference Number: 115058.0000.0000

Mayor Scott W. Lang  
Office of the Mayor  
City Hall, Room 311  
New Bedford, Massachusetts 02740

**RE: Notice of Implementation of Release Abatement Measures Under the Massachusetts Contingency Plan – Varsity Diamond Portion of Walsh Field – Soil Removal and Grading in Support of Construction Activities, MassDEP RTNs 4-15685.**

Dear Mayor Lang:

On behalf of the City of New Bedford (the "City"), and pursuant to 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP), TRC Environmental Corporation (TRC) has prepared this letter to inform you of implementation of a Release Abatement Measure (RAM) at the Varsity Diamond Portion of Walsh Field located at the corner of Parker and Hunter Streets in New Bedford, Massachusetts.

The RAM that will be performed at this location involves soil excavation and regrading and off-site reuse, recycling, and/or disposal of contaminated soil and may include on-site reuse of soils below Massachusetts Department of Environmental Protection (MassDEP) regulatory criteria. Excavation and disposal activities are anticipated to be initiated April 6, 2009 and to conclude on or before June 4, 2009.

If you have any questions concerning the RAM activities planned by the City, please do not hesitate to contact David Sullivan at TRC at (978) 656-3565 or David Fredette with the Department of Environmental Stewardship, at (508) 961-4576.

Sincerely,

TRC Environmental Corporation

A handwritten signature in blue ink that reads "David M. Sullivan". The signature is written in a cursive style with a large initial "D".

David M. Sullivan, LSP, CHMM  
Sr. Project Manager



Wannalancit Mills  
650 Suffolk Street  
Lowell, MA 01854

978.970.5600 PHONE  
978.453.1995 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

April 3, 2009

TRC Reference Number: 115058.0000.0000

Marianne B. De Souza  
Health Department  
1213 Purchase Street, First Floor  
New Bedford, Massachusetts 02740

**RE: Notice of Implementation of Release Abatement Measures Under the Massachusetts Contingency Plan – Varsity Diamond Portion of Walsh Field – Soil Removal and Grading in Support of Construction Activities, MassDEP RTNs 4-15685.**

Dear Mayor Lang:

On behalf of the City of New Bedford (the “City”), and pursuant to 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP), TRC Environmental Corporation (TRC) has prepared this letter to inform you of implementation of a Release Abatement Measure (RAM) at the Varsity Diamond Portion of Walsh Field located at the corner of Parker and Hunter Streets in New Bedford, Massachusetts.

The RAM that will be performed at this location involves soil excavation and regrading and off-site reuse, recycling, and/or disposal of contaminated soil and may include on-site reuse of soils below Massachusetts Department of Environmental Protection (MassDEP) regulatory criteria. Excavation and disposal activities are anticipated to be initiated April 6, 2009 and to conclude on or before June 4, 2009.

If you have any questions concerning the RAM activities planned by the City, please do not hesitate to contact David Sullivan at TRC at (978) 656-3565 or David Fredette with the Department of Environmental Stewardship, at (508) 961-4576.

Sincerely,

TRC Environmental Corporation

A handwritten signature in blue ink that reads "David M. Sullivan". The signature is written in a cursive, flowing style.

David M. Sullivan, LSP, CHMM  
Sr. Project Manager

**APPENDIX D**

**SOIL MANAGEMENT PLAN**

# **SOIL MANAGEMENT PLAN**

## **Varsity Diamond Portion of Walsh Field Soil Removal and Grading in Support of Construction Activity**

*Prepared for:*

**City of New Bedford**  
133 William Street  
New Bedford, Massachusetts 02740

*Prepared by:*

**TRC**  
Wannalancit Mills  
650 Suffolk Street  
Lowell, Massachusetts 01854

**April 2009**

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## **1.0 INTRODUCTION**

The City of New Bedford Massachusetts (City) intends to procure the services of a Contractor (the “Contractor”) to perform construction activities to upgrade the Varsity Diamond portion of Walsh Field located to the southeast of the intersection of Hunter Street and Parker Street in New Bedford, Massachusetts. (the “Site”). The construction activities will be conducted pursuant to the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000) and will include, but may not be limited to, excavation, on-site stockpiling, grading and replacement of soil at the Site. The soil associated with excavation activities may contain concentrations of polynuclear aromatic hydrocarbons (PAHs) and heavy metals above MCP Method 1 S-1 soil cleanup levels. The Release Abatement Measure (RAM) Plan in which this Soil Management Plan (SMP) document is contained provides a summary of soil analytical data collected during investigative work and figures summarizing the soil quality on a map and illustrating the areas of excavation and grading. Available soil borings can also be reviewed in appendices to the RAM Plan.

This SMP is intended to provide the Contractor with information regarding the requisite soil management requirements. These procedures are also designed to ensure that soil that is encountered at the Site is managed in a manner that is protective of human health, safety, public welfare and the environment, as required by the MCP. Due to the depth of most of the excavations and proximity to site groundwater it is anticipated that ground water management needs for this work are relatively limited. A Commonwealth of Massachusetts Licensed Site Professional (LSP) has been retained by the City to oversee the soil management activities during Site construction to ensure compliance with the applicable provisions of the MCP and related Massachusetts Department of Environmental Protection (MassDEP) policies and guidance.

### **1.1 Contact Information**

The owner (the “Owner”) of the project is:

City of New Bedford  
133 William Street  
New Bedford, Massachusetts 02740  
Contact: Mr. Scott Alfonse  
(508) 979-1487

The Owner’s LSP for this project is:

David M. Sullivan, LSP, CHMM  
LSP License Number: 1488  
TRC Environmental Corporation  
Wannalancit Mills  
650 Suffolk Street  
Lowell, Massachusetts 01854  
(978) 656-3565

## 1.2 Roles and Responsibilities

The Owner will procure the services of a Contractor to complete the construction activities necessary for the upgrade of the Varsity Diamond portion of Walsh Field. Specifically, the Contractor will furnish all labor, equipment and materials required to complete the work in accordance with the contract documents including soil excavation, stockpiling, dust control, and off-Site transportation of soil from the Site. The Contractor will also be responsible for obtaining all necessary Federal, state and local permits required for this work (e.g., Dig-Safe and other necessary permits that may be required by the City).

The Contractor will not be responsible for obtaining approval from MassDEP Bureau of Waste Site Cleanup (BWSC), as required by the MCP at 310 CMR 40.0443, to implement this work. Such approval will be obtained by the LSP by submitting a Release Abatement Measure (RAM) to MassDEP describing the planned construction activities.

Under a separate contract/authorization, the LSP and/or the LSP's designee (hereafter referred to collectively as "the LSP") will be responsible for obtaining regulatory approval under the MCP to implement the proposed construction activities. The LSP will periodically inspect the construction activities to ensure consistency with the RAM, this SMP document and applicable MCP and MassDEP policies. Specifically, the LSP's role will include, but may not be limited to, inspection and oversight of the following activities:

- Soil excavation and grading
- Soil sampling
- Stockpiling/temporary roll-off containment
- Loading
- Off-Site transportation
- MCP related decontamination activities

The LSP will also collect any samples required to pre-characterize excavation area soils and characterize soil for off-Site disposal, and will provide the required laboratory analyses of these samples.

The LSP will prepare and sign MCP Bills of Lading (BOLs) and/or Material Shipping Records (MSR) required for the off-Site shipment of excavated soil from the Site. The Contractor will be responsible for preparing any Hazardous Waste Manifests, if needed, for the off-Site transportation and disposal of any soil that meets the regulatory criteria for classification as a Hazardous Waste.

In addition, in accordance with the Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) standard (29 CFR 1910.120 and 1926.65), the LSP will prepare a Site-specific Health and Safety Plan (HASP) for this project for the protection of TRC personnel. The HASP will specify proper health and safety procedures to be implemented, and the necessary personal protective equipment to be used to protect workers from exposure to contaminated soil and groundwater during excavation. The Contractor will submit a separate HASP prior to initiating work and must adhere to the

requirements of that HASP during performance of the work. The Contractor's employees assigned to the Site should have, at a minimum, 40-hour OSHA HAZWOPER training, and current 8-hour OSHA HAZWOPER refresher training as appropriate. The Contractor's on-Site foreman responsible for hazardous material should also have OSHA Site Supervisor Training. The Owner and/or LSP may request copies of training certificates for each of the Contractor's employees assigned to the Site.

### **1.3 Existing Site Conditions**

The Site is currently used as a baseball field, consisting of grass areas, exposed soil areas in the infield base paths, and restrooms, a field house, and a maintenance building. The Site is relatively level. Historically the Site consisted of wetlands which were filled by ash containing waste materials.

In Massachusetts, the excavation and management of contaminated soil at disposal sites is regulated by the MCP. The purpose of the MCP is "to provide for the protection of health, safety, public welfare and the environment" by instituting a uniform mechanism for identifying contaminated soils and implementing appropriate response actions.

#### ***1.3.1 Release Abatement Measure (310 CMR 40.0440)***

Certain construction and/or remediation related excavation activities at the Site will be performed as a RAM in accordance with the provisions of the MCP at 310 CMR 40.0440. A RAM Plan will be prepared by the LSP and will be submitted to MassDEP prior to initiating excavation activities. The RAM Plan will specify the planned soil excavation activities, identify the threat of release conditions and describe response actions. The soil management procedures outlined in Section 2.0 of this document will form the basis of the RAM. Throughout the course of the construction activities, the LSP may also prepare RAM Status Reports for submission to MassDEP as required by the MCP.

#### ***1.3.2 Management Procedures for Remediation Waste (310 CMR 40.0030)***

The MCP establishes requirements and procedures for the management of remediation waste including contaminated media and debris and non-containerized waste. This section of the MCP also outlines procedures for documenting and tracking any off-Site transportation and disposal of regulated soil from a disposal site using a MCP Bill of Lading (BOL). The BOL requirements and procedures will apply to any contaminated soils transported from the Site, provided the soils are not otherwise characterized as hazardous waste pursuant to 310 CMR 30.000, the *Massachusetts Hazardous Waste Regulations*.

#### ***1.3.3 Interim Waste Management Policy for Petroleum-Contaminated Soils (WSC-94-400)***

This policy outlines management practices for reuse, recycling, disposal, storage and transport of petroleum-contaminated soils, and presents related guidance. The policy's goals include encouraging management practices that provide for the destruction of volatile organic compounds (VOCs) or minimize the potential for migration/release of contaminants, and encouraging recycling of contaminated soils (e.g., asphalt batch recycling). The policies include

guidelines for testing, storage, reuse/recycling, and establish acceptance criteria at recycling facilities.

#### ***1.3.4 Construction of Buildings in Contaminated Areas – January 2000 (WSC-00-425)***

This policy clarifies existing regulatory requirements applicable to building construction areas that have been contaminated by a release of oil and/or hazardous material (“contaminated areas”). This clarification concerns, and is limited to, the jurisdiction and application of 310 CMR 40.0000 (MCP) to construction projects in contaminated areas.

#### ***1.3.5 Reuse and Disposal of Contaminated Soil at Massachusetts Landfills (COMM-97-001)***

This policy outlines procedures for reuse or disposal of contaminated soils at Massachusetts-permitted landfills. The policy includes guidelines for testing, transport, record keeping, reporting, and establishes acceptance criteria for lined and unlined landfills.

#### ***1.3.6 Bill of Lading (BWSC Forms 012A, 012B and 012C)***

The BOL tracks the transportation and final disposition of Remediation Wastes generated during the performance of response actions under the MCP. BOLs may be used to record the shipment of contaminated soil from the Site to a reuse, recycle and/or disposal facility approved by the Owner and LSP. BOLs will be stamped and signed by the LSP.

#### ***1.3.7 Hazardous Waste Manifest***

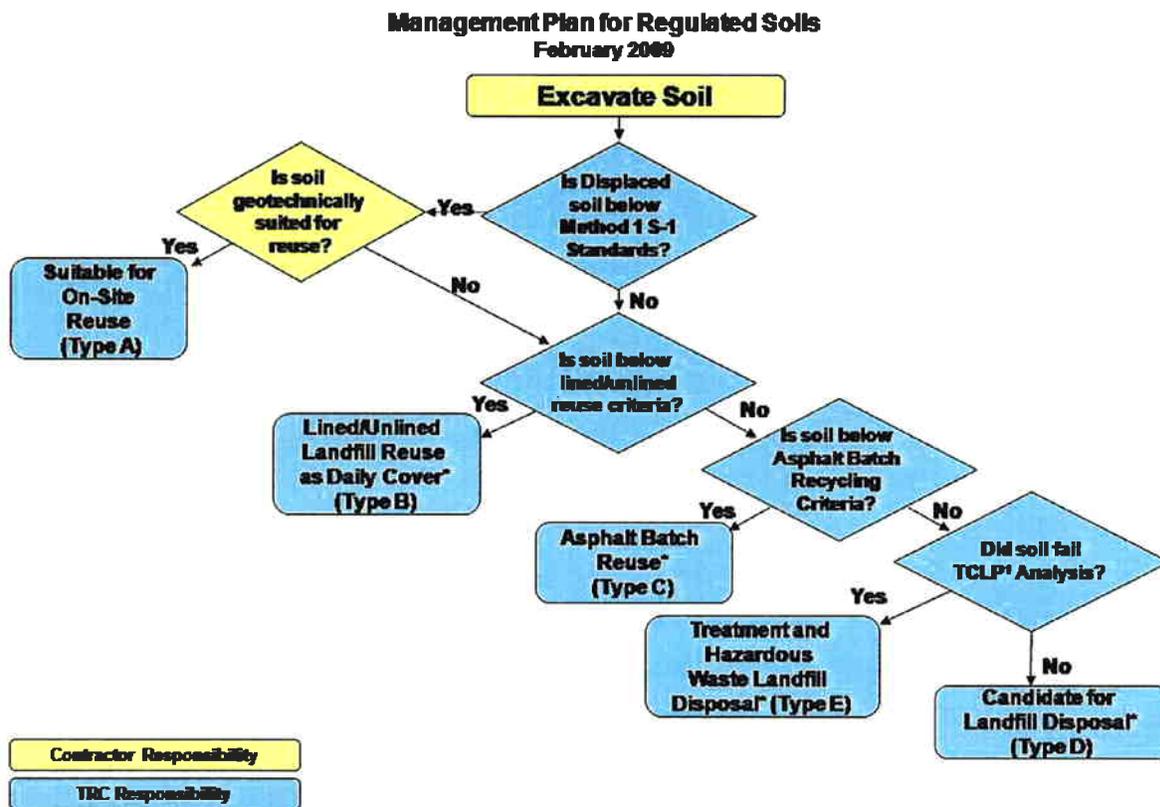
A Hazardous Waste Manifest is a MassDEP-approved form used to track the origin, quantity, composition, transportation and final destination of hazardous waste. Hazardous Waste Manifests should be utilized for shipping of any wastes subject to the Massachusetts Hazardous Waste Regulations (310 CMR 30.000). The Contractor will prepare any Hazardous Waste Manifest required for transport of the materials from this Site. The hazardous waste disposal facility to be used for disposal of any such material will be subject to approval by the Owner and/or LSP. Other requirements apply as described in 310 CMR 30.310. It is not anticipated that the generation of hazardous waste will be a part of this project.

Note that the reference to MassDEP policies COMM-97-001 and WSC-94-400 does not preclude the use of out-of-state facilities that offer similar reuse (e.g., landfill daily cover) or recycling (e.g., asphalt batch) opportunities. Such opportunities may be evaluated and/or utilized on a case-by-case basis assuming facility acceptance criteria can be met and the facility is currently within its regulatory jurisdiction for the reuse and/or recycling services provided.

## 2.0 EXCAVATION OVERSIGHT

TRC personnel will provide periodic oversight during construction activities when soil is being excavated, backfilled, transported, or when excavation dewatering activities are occurring. The soil oversight personnel will be screening soil with pre-characterization analytical data and providing as needed clarification regarding the soil category to the Contractor to ensure soil is segregated to the appropriate stockpile pending final reuse, recycling and/or disposal determinations.

Typical soil management options for a construction project at a listed Disposal Site may include on-site reuse; offsite reuse/recycling; disposal at an approved and appropriately licensed non-hazardous waste, lined or unlined landfills; and disposal at an approved and appropriately licensed hazardous waste landfill. The determination of the reuse, recycling, or disposal option for soils from different portions of the excavation will consider physical and chemical characteristics of the soil and the reuse capacity within the construction project, as shown in the following flow diagram:



<sup>1</sup> – TCLP = Toxicity Characteristic Leachate Procedure

<sup>2</sup> – Indicates that alternate disposal methods may become available based on changes in Site conditions and/or additional waste characterization data.

Typical soil management options for a construction project at a listed Disposal Site may allow soil to be returned to the approximate location from which it came (i.e., structure footing excavation) providing that it is chemically and geotechnically suitable for reuse as backfill, with the geotechnical suitability determined by the construction Contractor and/or project

Architect/Engineer. Chemical suitability is determined by the LSP. Soil that is suitable for on-site reuse may be returned directly to the excavation or stockpiled for later reuse in a nearby location. Soil that has been deemed unsuitable for reuse on-site will be segregated and stockpiled for off-site management (off-site reuse and/or disposal).

## 2.1 Soil Classification

Soil displaced by field refurbishment activities will be classified by the following criteria. If the criteria are not in agreement, then the classification will be made based on the highest ranked factor.

- 1) Pre-characterization data;
- 2) Physical observations of ash-bearing “fill” material; and
- 3) Physical observations of other anthropogenic “fill” material.

Soil at a listed Disposal Site displaced by Construction Activities may be segregated into one or more of the following classifications:

- Type A – Pre-characterized soils for reuse on-site; excess Type-A soil also suitable for off-site reuse as cover material at a lined or unlined landfill facility. On-site reuse is restricted to the location from which the soils were excavated. Any on-site re-use requires prior approval of the LSP;
- Type B – Suitable for unlined or lined landfill re-use (chemically unsuited for reuse on-site);
- Type C – Suitable for asphalt batch recycling (geotechnically unsuited for reuse on-site and/or chemically unsuited for reuse on-site or off-site);
- Type D – Non-hazardous waste landfill disposal (chemically unsuited for on or off-site reuse, and off-site recycling); and
- Type E – Soil requiring segregation and off-site treatment prior to disposal as a hazardous waste.

The above outlined classification process is expected to produce the following five soil types:

**Type A soils** – As a City policy decision, soil displaced as part of the Varsity Diamond refurbishment will not be reused on-site unless otherwise notified.

**Type B soils** have been pre-characterized as unsuitable for on-site reuse or the soil may be geotechnically unsuitable for on-site reuse as deemed by the Contractor. These soils can be transported offsite for reuse as cover material at a lined or unlined landfill facility (depending upon acceptance criteria comparisons). If these soils indicate concentrations below their applicable off-site facility acceptance criteria, they will be segregated and transported offsite for re-use at a lined or unlined landfill facility.

**Type C soils** are unsuitable for reuse on-site. These soils are suitable for recycling at an off-site asphalt batch facility.

**Type D soils** are unsuitable for on- or off-site reuse and off-site recycling. These soils do not indicate a failure of Toxicity Characteristic Leachate Procedure (TCLP) analysis. Therefore, these soils may be segregated and transported offsite for disposal at a non-hazardous waste landfill.

**Type E soils** have been pre-characterized as unsuitable for reuse on-site. These soils failed TCLP analysis and will need to be segregated for off-site disposal as hazardous waste.

Soil type determinations will be made by the LSP following the collection of suitable characterization data.

## **3.0 ON-SITE SOIL MANAGEMENT**

### **3.1 On-Site Stockpile Disposition**

The stockpiles on-site will be staged on polyethylene sheeting (minimum 6-mil thickness) and covered with sheeting at all times with exception of periods when adding or removing soil to or from the piles. The stockpiles should be designed such that storm water runoff does not impact the soil and any water draining from the soil does not migrate from the polyethylene sheeting to the ground surface. The stockpiles shall be inspected and estimates of total volumes made on a daily basis. If roll-offs will be used, they will be lined with polyethylene and covered to prevent leakage and storm water accumulation. Soil may be stockpiled at an alternative City owned location at the discretion of the City and as consistent with the MCP.

### **3.2 Off-Site Reuse, Recycling and/or Disposal**

Excavated soil that will be transported from the Site will be characterized as appropriate for off-site disposal at a suitable facility. Several suitable off-site facilities are being considered, but the facility locations have not been finalized. The laboratory results of pre-characterization sampling will be used for off-site disposal characterization to the extent possible. The existing Site data will be supplemented as necessary to satisfy facility-specific acceptance criteria. The sample laboratory data will be compared soil data against Massachusetts reuse, recycle, and disposal criteria in accordance to MassDEP Policy# COMM-97-001 and Interim Policy #WSC-94-400.

Transportation of all materials from the site will be performed using a MassDEP Bill of Lading (BOL), Material Shipping Record (MSR) or Hazardous Waste Manifest, as appropriate, and will be performed within 120 days of stockpiling in accordance with 310 CMR 40.0030 of the MCP.

### **3.3 Decontamination of Vehicles Transporting Soils**

Soils and mud will be removed from vehicles prior to their departure from the Site. A decontamination pad will be constructed by the Contractor prior to soil removal activities. The method of soil removal will likely be a combination of brushing the wheels to remove loose soils and/or passing vehicles through a decontamination station. Any liquids generated by vehicle decontamination will be drummed and transported off-site for disposal.

In addition, the Contractor shall be responsible for ensuring that tracking of potentially contaminated soil onto public roadways is prevented.

### **3.4 Supplementary Stockpile Characterization**

Prior to transport and disposal of stockpiled soils, soils stockpiled for disposal will be evaluated to determine whether sufficient analytical data is available to satisfy the requirements of the selected disposal or recycling facility. As deemed necessary, soil samples will be collected and analyzed according to the analytes and the sampling frequency specified by the selected disposal facility.