IMMEDIATE RESPONSE ACTION PLAN

New Bedford High School – HB-23 Soil Removal
230 Hathaway Boulevard, New Bedford, Massachusetts
Release Tracking Number 4-21847

Prepared for:

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

Prepared by:

TRC Environmental Corporation
Wannalancit Mills
650 Suffolk Street
Lowell, Massachusetts 01854
(978) 970-5600

May 2009

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1

2.0 PERSON ASSUMING RESPONSIBILITY FOR THE IRA 2-1

3.0 RELEASE DESCRIPTION, SITE CONDITIONS & SURROUNDING RECEPTORS 3-1

3.1 Site Description 3-1
3.2 Surrounding Receptors 3-1
3.3 Release Description 3-1
3.3.1 Investigation History 3-2
3.3.2 PCB Concentrations at the HB-23 Site 3-3

4.0 IMMEDIATE RESPONSE ACTIONS UNDERTAKEN TO DATE 4-1

4.1 Release Reporting 4-1
4.2 Immediate Response Action 4-1
4.3 Imminent Hazard Analysis 4-1
4.4 Soil Excavation and Removal 4-1
4.4.1 Staking of Contaminated Area 4-1
4.4.2 Soil Excavation and Removal 4-2
4.4.3 Lawn Reconstruction 4-2
4.4.4 Waste Characterization Analysis 4-2

5.0 WHY AN IMMEDIATE RESPONSE ACTION IS REQUIRED 5-1

6.0 OBJECTIVE, PLAN & IMPLEMENTATION SCHEDULE 6-1

6.1 Objective 6-1
6.2 Immediate Response Action Plan 6-1
6.3 Immediate Response Action Completion Report 6-1
6.4 Implementation Schedule 6-1

7.0 REMEDIATION WASTE MANAGEMENT STATEMENT 7-1

7.1 Off-Site Soil Management 7-1
7.2 Off-Site Disposal 7-1

8.0 ENVIRONMENTAL MONITORING PLAN 8-1

8.1 Air Monitoring 8-1
8.1.1 Real-Time Dust Monitoring 8-1
8.1.2 VOC Air Monitoring 8-1
8.2 Action Levels 8-1

9.0 FEDERAL, STATE & LOCAL PERMITS 9-1

9.1 Federal Permit Requirements 9-1
9.2 State Permit Requirements 9-1
9.3 Local Permit Requirements 9-1
9.4 Miscellaneous Fees, Notices, and Transportation Documentation 9-1

10.0 SEAL & SIGNATURE OF LICENSED SITE PROFESSIONAL 10-1

11.0 OTHER RELEVANT INFORMATION 11-1

11.1 Public Involvement 11-1
11.2 Special Waste Determination 11-1

12.0 REFERENCES 12-1

TABLES

Table 1: Summary of Analytical Results for Soil – HB-23 Site
Table 2: Summary of Analytical Results for Waste Characterization Soil Sample
Table 3: Summary of Analytical Results for TCLP Analysis – HB-23-Disposal

FIGURES

Figure 1: Site Aerial Photograph
Figure 2: Analytical Results Summary Map
Figure 3: Excavation Plan

APPENDICES

Appendix A: Imminent Hazard Evaluation Summary
Appendix B: Sample Results from Laboratory Reports
Appendix C: Bill of Lading
Appendix D: Copies of Notification Letters to City of New Bedford Mayor and Board of Health
Appendix E: Dust Monitoring Results
Appendix F: Boring Logs

1.0 INTRODUCTION

On behalf of the City of New Bedford, Massachusetts (the "City"), TRC Environmental Corporation (TRC) has prepared this Immediate Response Action (IRA) Plan in accordance with 310 CMR 40.0424 of the Massachusetts Contingency Plan (MCP). The purpose of this IRA Plan is to outline the risk reduction measures by the City at the New Bedford High School in New Bedford, Massachusetts, specifically relative to the HB-23 excavation area (the "Site"). The Massachusetts Department of Environmental Protection (MassDEP) has assigned Release Tracking Number (RTN) 4-21847 to the Site. The Site is part of the larger Parker Street Waste Site (PSWS) that is tracked by MassDEP under RTN 4-15685.

Work performed under this IRA includes:

- Analysis of supplemental soil samples to delineate the extent of elevated polychlorinated biphenyl (PCB) concentrations in soil at the HB-23 area;
- Preparation of an Imminent Hazard (IH) evaluation;
- Removal of PCB-contaminated surface soil to a depth of three (3) feet within the area defined by pre-excavation soil sampling as a risk reduction measure;
- Replacement of the removed surface soil with contaminant-free stone dust and loam; and
- Transportation of the contaminated soil (remediation waste) to an appropriate disposal facility.

The remaining sections of this document include information pertaining to the party assuming responsibility for the IRA (Section 2), release description, site conditions and surrounding receptors (Section 3), description of IRA activities to date (Section 4), the reason the IRA is required (Section 5) and the objective, plan and implementation schedule of the IRA (Section 6). In addition, information pertaining to remediation waste management (Section 7), environmental monitoring (Section 8), and Federal, State, and Local permits (Section 9) is included. This document also includes the seal and signature of the Licensed Site Professional (Section 10), other relevant information (Section 11) and references cited in preparing this document (Section 12).

2.0 PERSON ASSUMING RESPONSIBILITY FOR THE IRA

The party undertaking this IRA is:

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

Relationship to Site: Responsible Party (RP)

3.0 RELEASE DESCRIPTION, SITE CONDITIONS & SURROUNDING RECEPTORS

3.1 Site Description

The New Bedford High School (NBHS) is located at 230 Hathaway Boulevard in New Bedford, Massachusetts. The HB-23 Site is a lawn area located along a tree belt at the western boundary of the NBHS property, adjacent to Hathaway Boulevard. Specifically, the HB-23 Site is positioned approximately 37 feet north of the main entrance, and 37 feet east of Hathaway Boulevard. A Site Aerial Photograph indicating the location of the HB-23 area is included as Figure 1.

3.2 Surrounding Receptors

The HB-23 Site lies within 500 feet of both the NBHS building and the Keith Middle School (KMS) building. Residential areas are located in excess of 500 feet from the Site. Access to the area is not secure, and adults and children can pass over the area when going to and from school during the spring, winter, and fall seasons.

Groundwater categories at the NBHS include actual or potential GW-2, depending upon proximity to occupied structures (groundwater is expected to be less than 15 feet below ground surface based on data from nearby locations), and GW-3, which applies to all groundwater throughout the Commonwealth. However, groundwater impacts from contaminants associated with HB-23 are not expected. For example, recent groundwater monitoring conducted at NBHS in September 2008 (TRC, 2008) in eight monitoring wells did not detect PCBs above groundwater standards or MCP Reportable Concentrations (RCs).

Based on a 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 NBHS 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.

3.3 Release Description

The potential IH condition was discovered during additional investigations to delineate the extent of previously detected concentrations of PCBs in soil at the NBHS property, and to determine the extent of potential soil removal necessary to achieve a condition of no significant risk for the top three feet of soil within this area. The HB-23 sampling location had been identified as one of the areas requiring further delineation sampling within the NBHS property.

The contamination at the HB-23 Site, and detected in other locations the NBHS campus, is associated with historical landfilling activities. Boring logs included in Appendix F indicate the

presence of fill material containing ash, glass, and clinkers. The fill at NBHS is associated with the PSWS that includes the NBHS property as well as several other municipal and residential properties in the area.

3.3.1 Investigation History

On March 10, 2009, TRC conducted soil sampling at the HB-23 Site portion of the NBHS grounds to delineate the extent of previously detected concentrations of PCBs in soil, and to determine the extent of soil removal that would be necessary to achieve a condition of no significant risk for the top three feet of soil within this area. This work was conducted in accordance with a TRC-prepared scope of work, approved by the City, for addressing data gaps identified in the delineation of the PSWS.

The protocol for the delineation sampling called for the collection of five soil samples (0 to 1 foot and 1 to 3 feet in depth) centered at the HB-23 location (designated "A") and within ten feet of the HB-23A sampling location to the north, east, south and west (designated "B" through "E"). The protocol further called for the collection of five additional "outer ring" samples twenty feet from the HB-23A sampling location (designated "F" through "J"). "Outer ring" samples were also collected from the 0 to 1 and 1 to 3 feet intervals. All samples were collected on March 10, 2009 and the "A" through "E" samples were authorized for PCB Aroclor analysis by ConTest Analytical Laboratory of East Longmeadow, Massachusetts. The "F" through "J" samples were held at the laboratory, pending the results of the "A" through "E" sample analysis. PCB samples were sent to Northeast Analytical (NEA) of Schenectady, New York.

Total PCB concentrations were below the Method 1 S-1/GW-2 and S-1/GW-3 standards (2 mg/kg) at three of the five initial surface soil locations (HB-23B through HB-23D). However, at locations HB-23A and HB-23E, concentrations of 45.9 mg/kg and 13.5 mg/kg were detected in the 0 to 1 foot interval, respectively. Due to the detection of PCBs at levels greater than 10 mg/kg within the top 12 inches of soil at the HB-23A and HB-23E locations, the potential IH condition was reported and the "G" through "I" samples were immediately authorized for analysis to assess the extent of the elevated surficial PCBs. HB-23G was authorized primarily to determine the extent of PCBs in the 1 to 3 foot interval, while HB-23H and HB-23I, which flanked HB-23A and HB-23E, were authorized to determine the lateral extent of surficial soil (0 to 1 foot) PCBs.

As noted in the IH evaluation for the HB-23 Site, contained in Appendix A, the estimated cancer risk for the young child recreational user did exceed the MCP risk limits for an IH of an excess lifetime cancer risk (ELCR) with a value of 2E-05. The noncarcinogenic hazard quotient of 10 met the MCP hazard index (HI) limit of 10. The IH was identified at the HB-23 Site primarily due to the ingestion and dermal contact exposure pathways with PCB-containing surface soil. This IRA plan focuses on the elevated PCB concentrations in the surface soil at the HB-23 Site.

3.3.2 PCB Concentrations at the HB-23 Site

The HB-23 sampling location had been identified as an area requiring further delineation sampling within the NBHS campus, based on prior analytical results. The laboratory analytical results for the soil samples collected to delineate documented contamination are summarized in Table 1. Two soil samples collected on March 10, 2009 exceeded the reporting thresholds for contamination that could pose an IH as defined under the MCP under 310 CMR 40.0321(2)(b). One sample collected at boring HB-23A from 0-1 foot below ground surface (bgs) contained total PCBs at a concentration of 45.9 mg/kg, which exceeds the aforementioned reporting threshold of 10 mg/kg of PCBs as presented in 310 CMR 40.0321(2)(b). Soil sample HB-23E (0-1') also exceeded the reporting threshold by exhibiting a concentration of 13.5 mg/kg. Analytical results from the remaining samples located in the vicinity of HB-23 indicated that concentrations of PCBs above IH thresholds were confined to a polygonal area within the tree belt area, encompassing a total of 568 square feet to a depth of 3 feet (see Figure 2). The lateral extent of the excavation area was defined by PCB samples HB-23H to the northeast, HB-23G to the southeast, HB-23A to the south, HB-23B to the west, and HB-23I to the northwest. Results from these samples allowed TRC to identify an excavation area to remove PCB-contaminated soil and address the IH condition, as shown in Figure 3. The removal of the contaminated soil from the vicinity of HB-23 eliminated the IH condition, as noted in the IH evaluation included in Appendix A.

4.0 IMMEDIATE RESPONSE ACTIONS UNDERTAKEN TO DATE

4.1 Release Reporting

RTN 4-21847 has been assigned to the Site, and is related to a potential IH condition associated with the HB-23 that triggered a 2-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0321(2)(b) for a contamination condition that could pose an IH. The condition was reported to the MassDEP by TRC via telephone in conjunction with the City on March 19, 2009. MassDEP orally approved IRA assessment (March 19, 2009) and removal (March 25, 2009) activities at the Site, and assigned RTN 4-21823.

4.2 Immediate Response Action

At the time of oral notification, MassDEP approved the following response action as an IRA:

- Assessment

Later, on March 25, 2009, Mass DEP orally approved soil removal activities to mitigate the IH condition.

4.3 Imminent Hazard Analysis

An IH evaluation, which is provided in Appendix A, was initiated within 14 days of obtaining knowledge of the potential IH condition. For the HB-23 area, TRC's risk assessment specialist conducted the IH calculations using the maximum detected concentration (45.9 mg/kg) as the Exposure Point Concentration (EPC) for PCBs. Arithmetic mean concentrations were used as EPCs for barium, chromium, and lead. Arsenic and cadmium were not considered further, because their maximum detected concentrations were less than the MassDEP background concentrations for natural soil. TRC also used site-specific exposure assumptions that were more health-protective than used by MassDEP for a park visitor scenario, and default MassDEP toxicity criteria. TRC completed the IH analysis on March 31, 2009, satisfying the IH evaluation initiation timeline under the MCP. The risk assessment calculations indicate an IH existed at the HB-23 Site, but was eliminated following soil excavation and removal.

4.4 Soil Excavation and Removal

4.4.1 Staking of Contaminated Area

Analytical results of soil samples collected in the vicinity of HB-23 were used in the delineation of an approximate 568 square foot area to be excavated and removed. The lateral extent of the soil excavation area was identified by sample locations conducted in advance of excavation. The locations of all TRC sampling points were surveyed by Land Planning, Incorporated of Hanson, Massachusetts (Land Planning). Land Planning field staked TRC's delineation sampling locations prior to excavation, in order to guide soil removal.

4.4.2 Soil Excavation and Removal

Soils in the vicinity of the HB-23 Site containing elevated total PCB concentrations were excavated on March 28, 2009 with verbal approval from MassDEP. Approximately 63.1 cubic yards of excavated soils were loaded directly into five roll-off containers lined with 6-mil polyethylene sheeting. All soils were excavated up to the staked excavation boundaries and down to 3 feet below grade. The dimensions of the excavation area were intended to be protective of potential soil exposure, consistent with the assumptions in TRC's IH evaluation.

During IRA-related contaminated soil excavation and management activities, TRC conducted real-time field screening of dust levels using direct reading instruments that are designed to monitor air quality on a real-time basis at locations upwind and downwind of excavation and soil moving activities. The dust monitoring units were TSI Dustrak™ units with size-selective inlet for particles of 10 micrometers in diameter or less (PM_{10}). The dust monitoring instruments were zeroed before use and at the end of the day. Data was logged at 60-second intervals and monitored periodically by field personnel during IRA-related excavation activities. Data was downloaded daily. There were no exceedances of TRC's prescribed action level, 150 ug/m^3 sustained for 15 minutes, during soil excavation and loading.

4.4.3 Lawn Reconstruction

The excavated area was backfilled on March 28, 2009 using a contaminant-free source. Approximately 2.5 vertical feet of stone dust was placed into the open excavation, followed by approximately 0.5 vertical foot of loam which was used to grade the area to the original surface elevation. Future grounds keeping activities are expected at the area to improve the aesthetic appearance of the lawn.

4.4.4 Waste Characterization Analysis

A waste characterization soil sample (HB-23-Disposal) was collected from the excavated soils, and submitted for laboratory analysis of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total PCBs, polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and Resource and Conservation Recovery Act (RCRA) 8 metals. Additional volume was collected for Toxicity Characteristic Leaching Procedure (TCLP) metals analysis, contingent upon total metals results. All waste characterization analyses were conducted by ConTest Analytical Laboratory of east Longmeadow, Massachusetts.

The roll-off containers containing the excavated soils were transported under a Bill of Lading to the Shawmut Avenue Transfer Station, owned by the City of New Bedford, for temporary storage. A copy of the Bill of Lading is provided as Appendix C.

The results of HB-23-Disposal sample were received following transport to the Shawmut Avenue Transfer Station. The sample exhibited a cadmium concentration of 18.1 mg/kg (Table 2). The cadmium concentration exceeds only the threshold required for reuse via thermal processing plant. Toxicity Characteristic Leaching Procedure (TCLP) analysis was subsequently

performed for all 8 RCRA metals. Following the TCLP analysis, extract from the soil contained only 0.521 mg/L of cadmium, which does not exceed the 1.0 mg/L identified as the regulatory level for cadmium by MassDEP in 310 CMR 30.125: Table 1. However, sample HB-23-Disposal also exhibited a total PCB concentration of 59.9 mg/kg. This concentration is greater than the threshold of 2 mg/kg required for off-site disposal or reuse via the all of methods presented in Table 2. Therefore the soil is considered a hazardous waste under 310 CMR 30.131. Since the total PCB concentration of the soil is greater than 50 mg/kg, the waste soil is also regulated by the Toxic Substances Control Act (TSCA), and must be disposed of at a TSCA regulated facility. Presently, the soil remains in lined and covered roll-off containers at the Shawmut Avenue Transfer Station in New Bedford, Massachusetts and is currently labeled with a EPA-required PCB label.

5.0 WHY AN IMMEDIATE RESPONSE ACTION IS REQUIRED

This IRA is required to address the detection of PCBs in surface soil at the HB-23 area of the NBHS in excess of a concentration indicating a release condition that could pose an IH. The IH condition is associated with the concentration, depth below surface, and proximity to a school or residential dwelling of the soil samples containing PCBs above the potential IH evaluation threshold. Although the soils are not accessible due to excavation and removal, they have not yet been disposed at an appropriate receiving facility. The waste soil exhibits a concentration of PCBs in excess above the 50 mg/kg threshold triggering applicable EPA PCB regulations, classifying it as hazardous waste in accordance with 310 CMR 30.131, and requires disposal at a TSCA-regulated facility. Conducting further response actions as an IRA, rather than another MCP remedial vehicle, will allow for the time necessary to pursue this option. TRC prepared this IRA Plan to describe the risk reduction measures taken at this Site and to report the current disposition of the associated remediation waste.

6.0 OBJECTIVE, PLAN & IMPLEMENTATION SCHEDULE

6.1 Objective

The objectives of this IRA are:

1. Analysis of supplemental soil samples to delineate PCB-contaminated soils;

2. To conduct an IH evaluation;

3. To remove the top 3 feet of soil within the staked area of the HB-23 area of the NBHS that contained elevated concentrations of PCBs;

4. To replace the removed surface soil with contaminant-free stone dust and loam; and

5. To transport the waste soil to TSCA-regulated disposal facility.

As outlined in Section 4.0, objectives 1, 2, 3, and 4 have been completed to date; however, the excavated soil has remained in storage at a temporary holding facility since it was removed. Following waste characterization sampling that indicated the soil exhibited a total PCB concentration greater than 50 mg/kg (59.9 mg/kg), previous disposal assumptions will need to be re-assessed in order to appropriately dispose of the material.

6.2 Immediate Response Action Plan

Section 4.0 of this report describes the IRA activities that have been taken to date, including supplemental soil sampling to delineate the soil excavation area, preparation of an IH evaluation, excavation of PCB-contaminated soil, and backfilling of the excavation with imported, certified clean backfill. The remaining tasks to be performed as part of this IRA include disposal of the remediation waste soil. Section 7.0 outlines TRC's the disposal procedures. No other tasks are anticipated under this IRA.

6.3 Immediate Response Action Completion Report

Following proper disposal of the contaminated soil, TRC will submit an IRA Completion Report to MassDEP. The City of New Bedford will continue to assure the security of the roll-off containers at the Shawmut Avenue Transfer Station, by methods such as covering, appropriate signage and marking, and access restrictions.

6.4 Implementation Schedule

The timing of the disposal of hazardous remediation waste is dictated by 310 CMR 40.0031(7)(b). Therefore, the waste soil being stored at the Shawmut Avenue Transfer Station must be disposed of by June 28, 2009.

7.0 REMEDIATION WASTE MANAGEMENT STATEMENT

This section describes procedures for the off-site transport and off-site disposal of remediation waste generated during this IRA. Remediation waste management and disposal will be conducted in accordance with the applicable sections of the MCP, the Toxic Substances Control Act, MassDEP *Interim Remediation Waste Management Policy for Petroleum Contaminated Soils*, WSC-94-400, MassDEP Policy COMM#97-001 *Reuse and Disposal of Contaminated Soils and Sediments at Massachusetts Landfills*, Massachusetts General Law 310 CMR 30, and Massachusetts General Law 310 CMR 40.0030.

The soil excavated from the localized area containing elevated PCBs at the NBHS property as described in Section 4.0 of this IRA Plan will be transported off-site for disposal. The total volume of excavated soil to be transported as part of this IRA is approximately 63.1 cubic yards.

7.1 Off-Site Soil Management

Excavated soils associated with the IRA are currently stored in roll-off containers at the Shawmut Avenue Transfer Station, which is a secure City property. The roll-off containers are lined and covered with 6-mil polyethylene sheeting form a continuous waterproof barrier over the excavated soil. The City intends to dispose of the soil at a TSCA-regulated facility; therefore, off-site remediation of the soil is not anticipated.

During any soil movement that may be required during temporary storage at the Shawmut Avenue Transfer Station, TRC will monitor dust generation consistent with the procedures conducted by TRC during soil excavation activities. Soils may be transferred to different containers prior to shipment to the disposal facility.

7.2 Off-Site Disposal

The soil contained in the roll-off containers will be transported from the temporary storage facility once they can be characterized as appropriate for off-site disposal at a suitable TSCA-regulated facility. The final facility location is under evaluation.

Following identification of the proper soil disposal subcontractor, the soil will be transported from the temporary storage facility for off-site disposal. Transportation of all materials from the site will be performed using a Hazardous Waste Manifest, and will be performed within 90 days of excavation 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.

8.0 ENVIRONMENTAL MONITORING PLAN

TRC personnel were present at the HB-23 Site during the excavation and off-site transport for storage of PCB-contaminated soil and conducted environmental monitoring as described herein.

8.1 Air Monitoring

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

8.1.1 Real-Time Dust Monitoring

During IRA-related contaminated soil excavation and management activities, TRC conducted real-time field screening of dust levels using direct reading instruments that are designed to monitor air quality on a real-time basis at locations upwind and downwind of excavation and soil moving activities. The dust monitoring units were TSI Dustrak™ units with size-selective inlet for particles of 10 micrometers in diameter or less (PM_{10}). The dust monitoring instruments were zeroed before use and at the end of the day. Data was logged at 60-second intervals and monitored periodically by field personnel during IRA-related excavation activities. Data was downloaded at the end of the work day. There were no exceedances of TRC's prescribed Action Level, 150 ug/m^3 sustained for 15 minutes, during soil excavation and loading. (Note that water sprays were used to ensure dust generation was controlled. In addition, the excavation work took place after a significant rain event the prior day, so soils were moist and not prone to fugitive dust generation.) This Action Level for PM_{10} also provides protection against potential dust-borne PCB exposures, so PCB-specific air monitoring and analysis was not necessary.

8.1.2 VOC Air Monitoring

VOC air monitoring was performed during excavation and loading 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 were not expected during construction, but field monitoring of the breathing zone for VOCs was conducted as a precaution.

8.2 Action Levels

Instrument readings from the breathing zone and from the downwind monitoring locations were used to help evaluate the need for instituting additional safety measures such as dust control (e.g., water sprays) or upgrading personal protective equipment (PPE) levels.

The Action Level for airborne dust is based on the EPA 24 hour national ambient air quality standard (NAAQS) for PM_{10} particulate of 150 ug/m^3. Due to moist soil conditions, action levels were not reached during excavation.

The same action levels will be employed, as necessary, for potential future soil management/loading.

9.0 FEDERAL, STATE & LOCAL PERMITS

9.1 Federal Permit Requirements

There are no known Federal permit requirements. However, a generator identification will be required to manifest the remediation waste for shipment.

9.2 State Permit Requirements

There are no known State permit requirements.

9.3 Local Permit Requirements

There are no known Local permit requirements.

9.4 Miscellaneous Fees, Notices, and Transportation Documentation

Massachusetts Dig-Safe was notified at least 72 hours prior to commencing the excavation activities described in this IRA Plan.

All soil material that was transported from the site to the temporary storage facility was transported under a MassDEP BOL containing the signature and seal of the LSP of record for the site. The BOL is included in Appendix C.

Disposal/reuse of the soil at an appropriate facility will be documented consistent with the requirements of that facility.

10.0 SEAL & SIGNATURE OF LICENSED SITE PROFESSIONAL

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

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

This IRA Plan has been prepared in accordance with 310 CMR 40.0424 as set forth in the MCP.

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

Date

Stamp

11.0 OTHER RELEVANT INFORMATION

11.1 Public Involvement

As required by 310 CMR 40.1403(3)(b), the Mayor and the Board of Health for the City of New Bedford have been notified of the IRA activities. Copies of the notification letters sent to the Mayor and Board of Health are provided in Appendix D.

11.2 Special Waste Determination

As noted in Section 7.4, disposal of the soil at an appropriate facility may require the submittal and approval of a BWP SW 14 Special Waste Determination (Major).

12.0 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

TRC, 2008. *Data Summary Report, New Bedford High School, New Bedford, Massachusetts.* Prepared for: City of New Bedford department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. December 2008.

TABLES

Table 1: Summary of Analytical Results for Soil Samples
Immediate Response Action Plan
HB-23 Excavation Area
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA	Sample Location: HB23	HB-23A		HB-23B		HB-23C		HB-23D		HB-23E		HB-23F
								Sample Depth (ft.): 0.75-3	0-1	1-3	0-1	1-3	0-1	1-3	0-1	1-3	0-1	1-3	1-3
								Sample Date: 12/29/2004	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009
PCBs																			
(mg/kg)	Aroclor 1016/1242	2	2	3	3	2	1	0.064 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	NA	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1221	2	2	3	3	2	1	0.127 U	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1232	2	2	3	3	2	1	0.064 U	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1242	2	2	3	3	2	1	NA	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1248	2	2	3	3	2	1	0.064 U	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1254	2	2	3	3	2	1	**25**	**45.9** *	**4.12** *	**0.786** *	**0.915** *	**1.41** *	**4.74** *	**1.50** *	**19.9** *	**13.5** *	**16.8** *	NA
	Aroclor 1260	2	2	3	3	2	1	0.064 U	1.72 U	0.197 U	0.0596 U	0.0585 U	0.0597 U	0.306 U	0.0545 U	0.532 U	0.568 U	0.601 U	NA
	Aroclor 1262	2	2	3	3	2	1	**0.756**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aroclor 1268	2	2	3	3	2	1	0.064 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total PCBs	2	2	3	3	2	1	**25.756**	**45.9**	**4.12**	**0.786**	**0.915**	**1.41**	**4.74**	**1.50**	**19.9**	**13.5**	**16.8**	NA
Metals																			
(mg/kg)	Mercury	20	20	30	30	20	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Antimony	20	20	30	30	20	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	20	20	20	N/A	NA	NA	NA	**3.11**	**7.30**	3.10 U	**18.1**	NA	NA	NA	NA	NA
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	NA	NA	NA	**58.1**	**236**	**53.2**	**1,020**	NA	NA	NA	NA	**612**
	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	NA	NA	NA	**0.37**	**1.14**	0.31 U	**3.86**	NA	NA	NA	NA	**2.20**
	Chromium	30	30	200	200	30	N/A	NA	NA	NA	**8.95**	**14.7**	**8.13**	**60.2**	NA	NA	NA	NA	**47.0**
	Lead	300	300	300	300	300	N/A	NA	NA	NA	**48.5**	**169**	**42.9**	**1,460**	NA	NA	NA	NA	**893**
	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	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Silver	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Thallium	8	8	60	60	8	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Vanadium	600	600	1,000	1,000	600	N/A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	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

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.

NS - No MassDEP GW-2 standards exist for this compound.

U - Compound was not detected at specified quantitation limit.

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

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

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

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

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

** - For reference purpose only.

^ - TRC developed Method 1 standards.

Table 1: Summary of Analytical Results for Soil Samples
Immediate Response Action Plan
HB-23 Excavation Area
New Bedford, Massachusetts

Analysis	Analyte	Sample Location:						HB-23G		HB-23H		HB-23I	
		Sample Depth (ft.):						0-1	1-3	0-1	1-3	0-1	1-3
		Sample Date:						3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009
		S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA						
PCBs													
(mg/kg)	Aroclor 1016/1242	2	2	3	3	2	1	NA	NA	NA	NA	NA	NA
(mg/kg)	Aroclor 1016	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1221	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1232	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1242	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1248	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1254	2	2	3	3	2	1	**0.943** *	**4.94** *	**2.53** *	**0.0843** *	**4.70** *	**0.517** *
	Aroclor 1260	2	2	3	3	2	1	0.0570 U	0.282 U	0.118 U	0.0631 U	0.230 U	0.0645 U
	Aroclor 1262	2	2	3	3	2	1	NA	NA	NA	NA	NA	NA
	Aroclor 1268	2	2	3	3	2	1	NA	NA	NA	NA	NA	NA
	Total PCBs	2	2	3	3	2	1	**0.943**	**4.94**	**2.53**	**0.0843**	**4.70**	**0.517**
Metals													
(mg/kg)	Mercury	20	20	30	30	20	N/A	NA	NA	NA	NA	NA	NA
	Antimony	20	20	30	30	20	N/A	NA	NA	NA	NA	NA	NA
	Arsenic	20	20	20	20	20	N/A	2.90 U	**6.77**	**3.42**	**17.7**	**7.29**	**10.6**
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	**55.1**	**297**	**343**	**269**	**311**	**1,210**
	Beryllium	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	NA
	Cadmium	2	2	30	30	2	N/A	0.29 U	**1.28**	**0.61**	**3.31**	**1.03**	**4.06**
	Chromium	30	30	200	200	30	N/A	**15.4**	**29.7**	**26.9**	**36.8**	**36.7**	**35.2**
	Lead	300	300	300	300	300	N/A	**88.4**	**423**	**220**	**548**	**293**	**3,630**
	Nickel	20	20	700	700	20	N/A	NA	NA	NA	NA	NA	NA
	Selenium	400	400	800	800	400	N/A	NA	NA	NA	NA	NA	NA
	Silver	100	100	200	200	100	N/A	NA	NA	NA	NA	NA	NA
	Thallium	8	8	60	60	8	N/A	NA	NA	NA	NA	NA	NA
	Vanadium	600	600	1,000	1,000	600	N/A	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

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.

NS - No MassDEP GW-2 standards exist for this compound.

U - Compound was not detected at specified quantitation limit.

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

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

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

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

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

** - For reference purpose only.

^ - TRC developed Method 1 standards.

Table 2: Summary of Analytical Results for Waste Characterization Soil Sample - March 2009
Immediate Response Action Plan
HB-23 Excavation Area
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: / Sample Date:					HB-23-DISPOSAL 3/28/2009	
		Reuse Level*		Soil Recycling Facility Summary Levels**				
		Lined Landfills	Unlined Landfill	Hot Mix Asphalt Plants	Thermal Processing Plant	Cold Mix Emulsion Plant		
VOCs (mg/kg)	Acetone	NA	NA	NA	NA	NA	0.077	U
	tert-Amylmethyl Ether	NA	NA	NA	NA	NA	0.001	U
	Benzene	NA	NA	NA	NA	NA	0.002	U
	Bromobenzene	NA	NA	NA	NA	NA	0.002	U
	Bromochloromethane	NA	NA	NA	NA	NA	0.002	U
	Bromodichloromethane	NA	NA	NA	NA	NA	0.002	U
	Bromoform	NA	NA	NA	NA	NA	0.002	U
	Bromomethane	NA	NA	NA	NA	NA	0.008	U
	2-Butanone (MEK)	NA	NA	NA	NA	NA	0.031	U
	n-Butylbenzene	NA	NA	NA	NA	NA	0.002	U
	sec-Butylbenzene	NA	NA	NA	NA	NA	0.002	U
	tert-Butylbenzene	NA	NA	NA	NA	NA	0.002	U
	tert-Butylethyl Ether	NA	NA	NA	NA	NA	0.001	U
	Carbon Disulfide	NA	NA	NA	NA	NA	0.008	U
	Carbon Tetrachloride	NA	NA	NA	NA	NA	0.002	U
	Chlorobenzene	NA	NA	NA	NA	NA	0.002	U
	Chlorodibromomethane	NA	NA	NA	NA	NA	0.001	U
	Chloroethane	NA	NA	NA	NA	NA	0.016	U
	Chloroform	NA	NA	NA	NA	NA	0.004	U
	Chloromethane	NA	NA	NA	NA	NA	0.008	U
	2-Chlorotoluene	NA	NA	NA	NA	NA	0.002	U
	4-Chlorotoluene	NA	NA	NA	NA	NA	0.002	U
	1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	0.008	U
	1,2-Dibromoethane	NA	NA	NA	NA	NA	0.001	U
	Dibromomethane	NA	NA	NA	NA	NA	0.002	U
	1,2-Dichlorobenzene	NA	NA	NA	NA	NA	0.002	U
	1,3-Dichlorobenzene	NA	NA	NA	NA	NA	0.002	U
	1,4-Dichlorobenzene	NA	NA	NA	NA	NA	0.002	U
	Dichlorodifluoromethane	NA	NA	NA	NA	NA	0.016	U
	1,1-Dichloroethane	NA	NA	NA	NA	NA	0.002	U
	1,2-Dichloroethane	NA	NA	NA	NA	NA	0.002	U
	1,1-Dichloroethylene	NA	NA	NA	NA	NA	0.004	U
	cis-1,2-Dichloroethylene	NA	NA	NA	NA	NA	0.002	U
	trans-1,2-Dichloroethylene	NA	NA	NA	NA	NA	0.002	U
	1,2-Dichloropropane	NA	NA	NA	NA	NA	0.002	U
	1,3-Dichloropropane	NA	NA	NA	NA	NA	0.001	U
	2,2-Dichloropropane	NA	NA	NA	NA	NA	0.002	U
	1,1-Dichloropropene	NA	NA	NA	NA	NA	0.002	U
	cis-1,3-Dichloropropene	NA	NA	NA	NA	NA	0.001	U
	trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	0.001	U
	Diethyl Ether	NA	NA	NA	NA	NA	0.016	U
	Diisopropyl Ether	NA	NA	NA	NA	NA	0.001	U
	1,4-Dioxane	NA	NA	NA	NA	NA	0.077	U
	Ethyl Benzene	NA	NA	NA	NA	NA	0.002	U
	Hexachlorobutadiene	NA	NA	NA	NA	NA	0.002	U
	2-Hexanone	NA	NA	NA	NA	NA	0.016	U
	Isopropylbenzene	NA	NA	NA	NA	NA	0.002	U
	p-Isopropyltoluene	NA	NA	NA	NA	NA	0.002	U
	MTBE	NA	NA	NA	NA	NA	0.004	U
	Methylene Chloride	NA	NA	NA	NA	NA	0.016	U
	MIBK	NA	NA	NA	NA	NA	0.016	U
	Naphthalene	NA	NA	NA	NA	NA	0.008	U
	n-Propylbenzene	NA	NA	NA	NA	NA	0.002	U
	Styrene	NA	NA	NA	NA	NA	0.002	U
	1,1,1,2-Tetrachloroethane	NA	NA	NA	NA	NA	0.002	U
	1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	NA	0.001	U
	Tetrachloroethylene	NA	NA	NA	NA	NA	0.002	U
	Tetrahydrofuran	NA	NA	NA	NA	NA	0.008	U
	Toluene	NA	NA	NA	NA	NA	0.002	U
	1,2,3-Trichlorobenzene	NA	NA	NA	NA	NA	0.002	U
	1,2,4-Trichlorobenzene	NA	NA	NA	NA	NA	0.002	U
	1,1,1-Trichloroethane	NA	NA	NA	NA	NA	0.002	U
	1,1,2-Trichloroethane	NA	NA	NA	NA	NA	0.002	U
	Trichloroethylene	NA	NA	NA	NA	NA	0.002	U
	Trichlorofluoromethane	NA	NA	NA	NA	NA	0.008	U
	1,2,3-Trichloropropane	NA	NA	NA	NA	NA	0.002	U
	1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	0.002	U
	1,3,5-Trimethylbenzene	NA	NA	NA	NA	NA	0.002	U
	Vinyl Chloride	NA	NA	NA	NA	NA	0.008	U
	m + p Xylene	NA	NA	NA	NA	NA	0.004	U
	o-Xylene	NA	NA	NA	NA	NA	0.002	U
	Total VOCs	10	4	30 to 1,800			*ND*	

Table 2: Summary of Analytical Results for Waste Characterization Soil Sample - March 2009
Immediate Response Action Plan
HB-23 Excavation Area
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: / Sample Date:					HB-23-DISPOSAL 3/28/2009	
		Reuse Level*		Soil Recycling Facility Summary Levels**				
		Lined Landfills	Unlined Landfill	Hot Mix Asphalt Plants	Thermal Processing Plant	Cold Mix Emulsion Plant		
SVOCs								
(mg/kg)	Acenaphthene	NA	NA	NA	NA	NA	0.410	U
	Acenaphthylene	NA	NA	NA	NA	NA	0.410	U
	Anthracene	NA	NA	NA	NA	NA	0.410	U
	Benzo(a)anthracene	NA	NA	NA	NA	NA	**1.01**	
	Benzo(a)pyrene	NA	NA	NA	NA	NA	**0.967**	
	Benzo(b)fluoranthene	NA	NA	NA	NA	NA	**1.10**	
	Benzo(g,h,i)perylene	NA	NA	NA	NA	NA	**0.604**	
	Benzo(k)fluoranthene	NA	NA	NA	NA	NA	0.410	U
	Chrysene	NA	NA	NA	NA	NA	**1.20**	
	Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	0.410	U
	Fluoranthene	NA	NA	NA	NA	NA	**1.57**	
	Fluorene	NA	NA	NA	NA	NA	0.410	U
	Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	**0.697**	
	2-Methylnaphthalene	NA	NA	NA	NA	NA	0.410	U
	Naphthalene	NA	NA	NA	NA	NA	0.410	U
	Phenanthrene	NA	NA	NA	NA	NA	**1.94**	
	Pyrene	NA	NA	NA	NA	NA	**1.98**	
	Total SVOCs	100	100	NA	NA	NA	***11.068***	
PCBs								
(mg/kg)	PCB 1016	NA	NA	NA	NA	NA	12.3	U
	PCB 1221	NA	NA	NA	NA	NA	12.3	U
	PCB 1232	NA	NA	NA	NA	NA	12.3	U
	PCB 1242	NA	NA	NA	NA	NA	12.3	U
	PCB 1248	NA	NA	NA	NA	NA	12.3	U
	PCB 1254	NA	NA	NA	NA	NA	**59.9**	
	PCB 1260	NA	NA	NA	NA	NA	12.3	U
	PCB 1262	NA	NA	NA	NA	NA	12.3	U
	PCB 1268	NA	NA	NA	NA	NA	12.3	U
	Total PCBs	< 2	< 2	< 2	< 2	< 2	***59.9***	
Metals,total								
(mg/L)	Mercury	10	10	10	3	10	**0.217**	
	Arsenic	40	40	30	30	30	**10.7**	
	Barium	NA	NA	NA	NA	NA	**757**	
	Cadmium	80	30	30	11	30	**18.1**	
	Chromium	1,000	1,000	500	500	500	**79.2**	
	Lead	2,000	1,000	1,000	1,000	1,000	**888**	
	Selenium	NA	NA	NA	NA	NA	6.15	U
	Silver	NA	NA	NA	NA	NA	**1.04**	
Total Petroleum Hydrocarbon								
(mg/kg)	Unknown Hydrocarbons	5,000	2,500	5,000 to 60,000			**430**	

Notes:

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

NA - No listed Massachusetts criteria exist for this compound.

ND - Not detected.

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 criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semi-Volatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TCLP - Toxicity Characteristic Leaching Procedure.

* - Contaminant Levels for the Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, August 1997.

** - Massachusetts Soil Recycling Facility Summary Levels,

Table 3: Summary of Analytical TCLP Results for Soil Sample - HB-23-Disposal
Immediate Response Action Plan
HB-23 Excavation Area
New Bedford, Massachusetts

Analysis	Analyte	Sample ID: HB-23-DISPOSAL Sample Date: 3/28/2009 Maximum Concentration for Toxicity Characteristic*		
Metals, TCLP				
(mg/L)	Mercury	0.2	0.0001	U
	Arsenic	5.0	0.01	U
	Barium	100.0	**4.23**	
	Cadmium	1.0	**0.521**	
	Chromium	5.0	0.01	U
	Lead	5.0	**4.71**	
	Selenium	1.0	0.05	U
	Silver	5.0	0.005	U

Notes:

ug/L - micrograms per liter.

TCLP - Toxicity Characteristic Leaching Procedure.

*SW-846 Chapter 7, Table 7-1, *Maximum Concentration of Contaminants for Toxicity Characteristic.*

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

FIGURES


75-5
75-6
75-7
75-8
75-542
75-543
75-544
75-527
76-22
76-24
76-201
76-37
76-256
75-12
HATHAWAY BOULEVARD
LIBERTY STREET
75-167
70-2
70-227
HB-23 EXCAVATION
69-345
69-99
69-100
69-93
69-91
69-92
69-88
69-86
70-1
69-65
69-63
69-61
69-59
69-55
69-53
69-52
69-49
GREENWOOD STREET
69-29
69-31
PARKER STREET
63-47
63-19
63-102
Parcels
Orthophotography: MassGIS, April 2005
0 50 100 200
Feet
N
R:\Projects\GIS 2007\54634 NBedford\FIG2 nbhs1.mxd
TRC
650 Suffolk St.
Wannalancit Mills
Lowell, MA 01854
FIGURE 1
SITE AERIAL PHOTOGRAPH
NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

HB–23I 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	4.70	0.517
Arsenic	7.29	10.6
Cadmium	1.03	4.06
Chromium	36.7	35.2
Lead	293	3630

HB–23I

HB–23E 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	13.5	16.8
Arsenic	NA	NA
Cadmium	NA	NA
Chromium	NA	NA
Lead	NA	NA

HB–23E

HB–23

HB–23A 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	45.9	4.12
Arsenic	NA	NA
Cadmium	NA	NA
Chromium	NA	NA
Lead	NA	NA

HB–23A

HB–23B

HB–23B 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	0.786	0.915
Arsenic	3.11	7.3
Cadmium	0.37	1.14
Chromium	8.95	14.7
Lead	48.5	169

HB–23C

HB–23C 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	1.41	4.74
Arsenic	3.1 U	18.1
Cadmium	0.31 U	3.86
Chromium	8.13	60.2
Lead	42.9	1460

HB–23F

HB–23F 03/10/09 Constituent	1.00 – 3.00
Total PCBs	NA
Arsenic	NA
Cadmium	2.2
Chromium	47
Lead	893

HB–23H

HB–23H 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	2.53	0.0843
Arsenic	3.42	17.7
Cadmium	0.61	3.31
Chromium	26.9	36.8
Lead	220	548

HB–23D

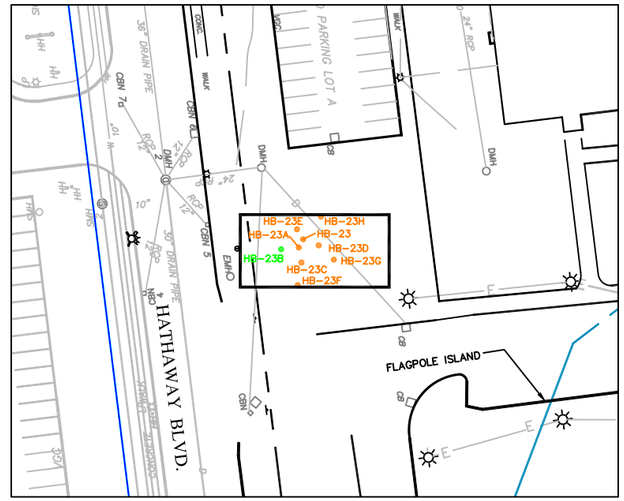
HB–23 12/29/04 Constituent	0.75 – 3.00
Total PCBs	25.756
Arsenic	NA
Cadmium	NA
Chromium	NA
Lead	NA

HB–23D

HB–23D 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	1.50	19.9
Arsenic	NA	NA
Cadmium	NA	NA
Chromium	NA	NA
Lead	NA	NA

HB–23G

HB–23G 03/10/09 Constituent	0.00 – 1.00	1.00 – 3.00
Total PCBs	0.943	4.94
Arsenic	2.9 U	6.77
Cadmium	0.29 U	1.28
Chromium	15.4	29.7
Lead	88.4	423



LOCUS

APPROXIMATE GRAPHIC SCALE

0' 40' 80' 160' 240'

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

Contaminant Names	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1	TSCA
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

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

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

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

● SOIL BORING ● SOIL BORING THAT HAS CONCENTRATION WITH EXCEEDANCE

SAMPLE LOCATION
SAMPLE DATE

HB–23F 03/10/09 Constituent	1.00 – 3.00
Total PCBs	NA
Arsenic	NA
Cadmium	2.2
Chromium	47
Lead	893

CONTAMINANT NAME /ABBREVIATION

SAMPLE DEPTH (DEPTH RANGE) IN FEET

APPROXIMATE GRAPHIC SCALE

0' 5' 7.5' 10'

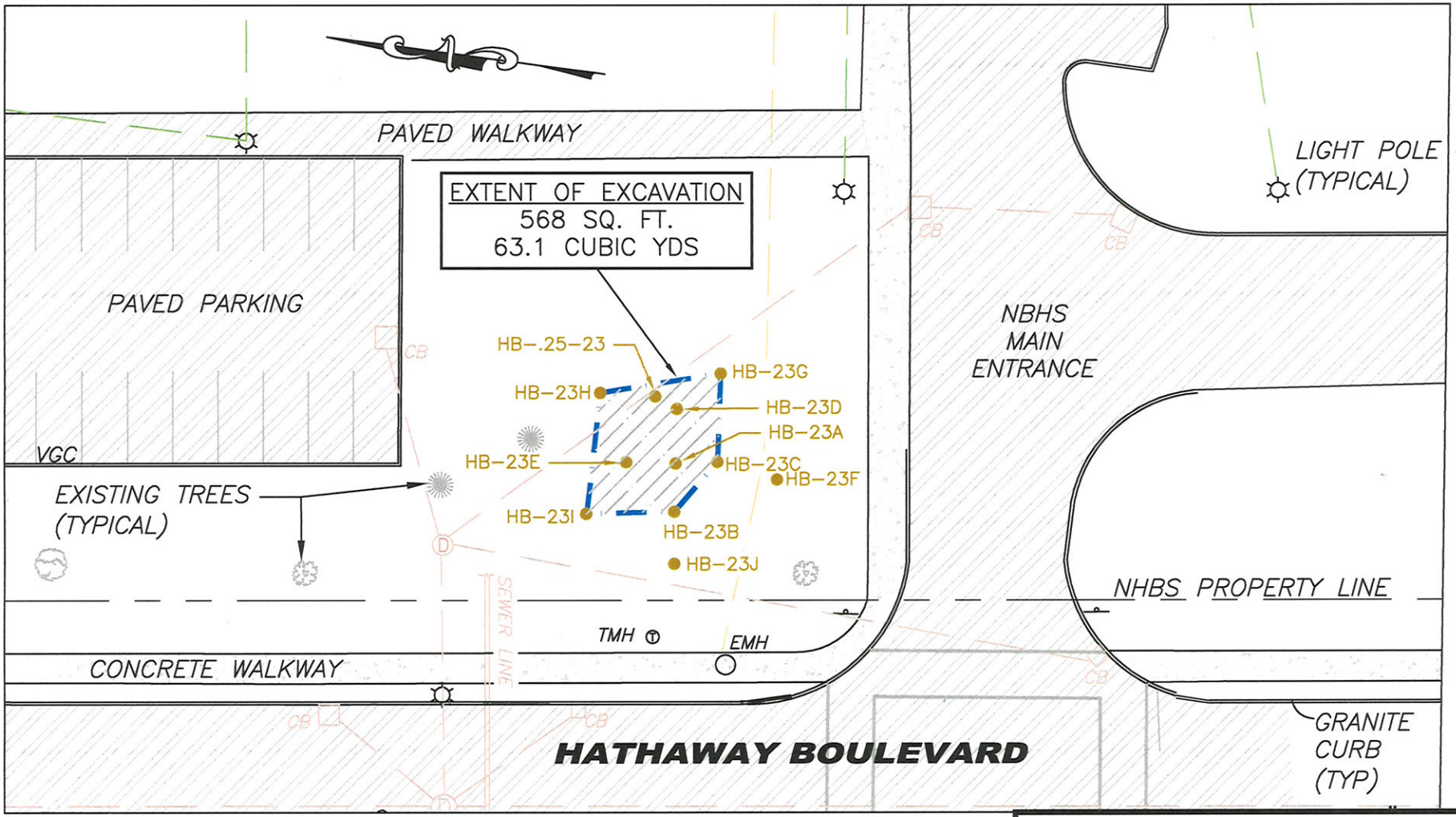
NEW BEDFORD HIGH SCHOOL - TREE BELTS AREA
NEW BEDFORD, MASSACHUSETTS
ANALYTICAL RESULTS SUMMARY MAP

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

DRAWN BY: PZ
CHECKED BY: DMS
DATE: MAY 2009

FIGURE 2

FILE: Q:\GEOSCI\GISKEY\Projects\NewBedford\NBHS_HB-23.dwg



APPROXIMATE GRAPHIC SCALE

0' 15' 30' 60'

NOTE:

FIGURE IS APPROXIMATE AND IS CONCEPTUAL.

LEGEND:

- SOIL EXCAVATED ON MARCH 28, 2009
- SOIL SAMPLE LOCATION
- UNDERGROUND DRAIN LINE
- UNDERGROUND CONCRETE CONDUIT
- UNDERGROUND ELECTRIC LINE

NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

HB-23 EXCAVATION AREA

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

FIGURE 3

DRAWN BY: DMP
CHECKED BY: RNS
DATE: MAY 2009

FILE: C:\Documents and Settings\dpettit\Desktop\hb-23 work.dwg

APPENDIX A

IMMINENT HAZARD EVALUATION SUMMARY

IMMINENT HAZARD EVALUATION
HB-23 SURFACE SOIL
NEW BEDFORD HIGH SCHOOL
NEW BEDFORD, MASSACHUSETTS

Due to the potential Imminent Hazard (IH) condition that was triggered at the Site on March 19, 2009 for the detection of polychlorinated biphenyls (PCBs) in surface soil (0 to 1 foot in depth) at the HB-23 area of the New Bedford High School (NBHS) campus, an IH evaluation has been performed. The potential IH condition was discovered during additional investigation to delineate the extent of elevated levels of PCBs in soil within the tree belts on the NBHS campus and to determine the extent of potential soil removal necessary to achieve a condition of no significant risk for the top three feet of soil within these areas. The HB-23 sampling location had been identified as one of three areas requiring further delineation sampling within the tree belt areas.

The protocol for the delineation sampling called for the collection of five soil samples (0 to 1 foot and 1 to 3 feet in depth) centered at the HB-23 location (designated "A") and within 10 feet of the HB-23A sampling location to the north, east, south and west (designated "B" through "E"). The protocol further called for the collection of five additional "outer ring" samples 20 feet from the original HB-23A sampling location (designated "F" through "J"). "Outer ring" samples were also collected from the 0 to 1 and 1 to 3 feet intervals. All samples were collected on March 10, 2009 and the "A" through "E" samples were authorized for PCB analysis. The "F" through "J" samples were held at the laboratory, pending the results of the "A" through "E" sample analysis.

Total PCB concentrations were below the Method 1 S-1/GW-2 and S-1/GW-3 standards (2 mg/kg) at three of the five initial surface soil locations (HB-23B through HB-23D). However, at locations HB-23A and HB-23E, concentrations of 45.9 mg/kg and 13.5 mg/kg were detected in the 0 to 1 foot interval, respectively. Due to the detection of PCBs at levels greater than 10 mg/kg within the top 12 inches of soil at the HB-23A and HB-23E locations, the potential IH condition was reported and the "G" through "I" samples were immediately authorized for analysis to determine the extent of the elevated surficial PCBs. HB-23G was authorized primarily to determine the extent of PCBs in the 1 to 3 foot interval, while HB-23H and HB-23I, which flanked HB-23A and HB-23E, were authorized to determine the extent of surficial PCBs.

The total PCB results for HB-23G through HB-23I were reported by the laboratory on March 20, 2009. The total PCB concentration in the HB-23G 0 to 1 foot sample was less than the Method 1 S-1 standard of 2 mg/kg, while total PCBs in HB-23H and HB-23I slightly exceeded the Method 1 S-1 standard (2.53 mg.kg and 4.7 mg/kg, respectively). These results confirmed that the extent of the surficial PCB contamination that triggered an IH conditions had been delineated.

Subsequent to the PCB sampling, 0 to 1 foot samples HB-23B, HB-23C, HB-23G, HB-23H and HB-23I, located at the perimeter of the delineated PCB area, were authorized for analysis for arsenic, barium, cadmium, chromium and lead to confirm that the five metals of historical concern in this general area were also within acceptable levels for the top foot of soil. All

sample results were below applicable Method 1 S-1 standards except for the chromium result at HB-23I of 36.7 mg/kg which slightly exceeded its Method 1 standard of 30 mg/kg. Sample-specific results for the HB-23 0 to 1 foot samples are presented in Table 1.

This IH evaluation reflects surface soil sampling conducted to date for the HB-23 area. The surface soil sample results are summarized in Table 2. Arsenic and cadmium were not considered further because their maximum detected concentrations were less than their Massachusetts Department of Environmental Protection (MassDEP) background concentrations for natural soil. Arithmetic mean concentrations were used as exposure point concentrations (EPCs) for barium, chromium and lead. However, because the maximum detected PCB concentration (45.9 mg/kg) is greater than the 10 mg/kg potential IH threshold, averaging of the 0 to 1 foot total PCB concentrations from the HB-23 area is not appropriate. Therefore, the maximum detected concentration or a 95 percent upper confidence limit (95% UCL) on the arithmetic mean concentration may be used as the EPC to determine whether an IH condition exists at the site. However, due to the variability in the data set, the calculated 95% UCL was greater than the maximum detected concentration. Therefore, the maximum detected concentration was used as the EPC for total PCBs.

The area of concern is located in front of the NBHS building, on a tree belt along Hathaway Boulevard. This area is only accessed by pedestrians walking through the neighborhood or by children on their way to and from school. The area is sparsely vegetated and periodically maintained by mowing. For the purposes of this IH evaluation, exposures are assumed to occur over 24 weeks, during the spring and fall when the ground is not frozen and school is in session. During this 24-week period, exposures are assumed to occur 5 days per week for 1 hour per day. These values are conservative because their use assumes that: (1) a child always contacts this small area when passing by the school; (2) children go to this area even during inclement weather; and (3) children remain at this location for 1 hour per day which is unlikely to occur due to small size and lack of attractive potential of this area.

To estimate exposures, a young child (age 1 to 6) was selected for evaluation because this age group may be present at this location, accompanying parents or older siblings on their way to and from school or through the neighborhood. Incidental ingestion of and dermal contact with impacted soils are assumed to occur while the young child plays at this location. The inhalation of fugitive dust generated while the child plays at this location is also considered a complete exposure pathway. Older children may also exposed to the HB-23 surface soils, but a young child is evaluated as the most sensitive receptor due to their higher soil intake rate, lower body weight, and sensitive developmental stage.

Exposure assumptions applicable to the young child are provided on the risk calculation spreadsheets (Tables 3 through 6). Exposure assumptions selected for use are consistent with those used by MassDEP in the park visitor IH shortform, adjusted to be applicable to the 24-week exposure period of concern. For the fugitive dust pathway, methods and assumptions consistent with the MassDEP Technical Update "Characterization of Risks Due to Inhalation of Particulates by Construction Workers" (July 2008) were used including a PM_{10} of 60 ug/m^3. Inhalation rates used are age-specific values provided by MassDEP in the 1995 risk assessment guidance document.

The hazard index (HI) of 10 meets the MCP noncarcinogenic IH limit of 10. However, the excess lifetime cancer risk (ELCR) of 2E-05 exceeds the MCP carcinogenic IH limit of 1E-05. The IH is identified at the HB-23 area of the NBHS campus primarily due to the ingestion of and dermal contact with PCB-containing surface soil.

On March 28, 2009, soil in the vicinity of HB-23 was excavated. The limits of the excavation were defined by HB-23B, HB-23C, HB-23G, HB-23H, and HB-23I. Soil up to the excavation limits was removed to a depth of three feet below ground surface, including soil at the HB-23A, HB-23D and HB-23E locations. Table 7 presents summary statistics for soil that remains at the HB-23 area following the March 28, 2009 excavation. Risk calculations for these remaining concentrations are presented in Tables 8 through 11 and demonstrate that the IH condition no longer exists at the HB-23 area of the NBHS campus. The HI of 2 and the ELCR of 2E-06 are below the MCP noncarcinogenic and carcinogenic IH limits of 10 and 1E-05, respectively.

Table 1. Summary of Analytical Results for HB-23 Soil Samples - 0 to 1'
NBHS
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-2	S-1/GW-3	S-2/GW-2	S-2/GW-3	RC S-1**	TSCA	Sample Location: HB-23A	HB-23B	HB-23C	HB-23D	HB-23E	HB-23G	HB-23H	HB-23I
								Sample Depth (ft.): 0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
								Sample Date: 3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009	3/10/2009
PCBs															
	Aroclor 1254	2	2	3	3	2	1	**45.9** *	**0.786** *	**1.41** *	**1.50** *	**13.5** *	**0.943** *	**2.53** *	**4.70** *
	Total PCBs	2	2	3	3	2	1	**45.9**	**0.786**	**1.41**	**1.50**	**13.5**	**0.943**	**2.53**	**4.70**
Metals															
	Arsenic	20	20	20	20	20	N/A	NA	**3.11**	3.10 U	NA	NA	2.90 U	**3.42**	**7.29**
	Barium	1,000	1,000	3,000	3,000	1,000	N/A	NA	**58.1**	**53.2**	NA	NA	**55.1**	**343**	**311**
	Cadmium	2	2	30	30	2	N/A	NA	**0.37**	0.31 U	NA	NA	0.29 U	**0.61**	**1.03**
	Chromium	30	30	200	200	30	N/A	NA	**8.95**	**8.13**	NA	NA	**15.4**	**26.9**	**36.7**
	Lead	300	300	300	300	300	N/A	NA	**48.5**	**42.9**	NA	NA	**88.4**	**220**	**293**

Notes:

All units in mg/kg unless otherwise specified.

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

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable.

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.

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

PAHs - Polynuclear Aromatic Hydrocarbons.

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TSCA - Toxic Substances Control Act criteria.

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

** - For reference purpose only.

Table 2. Summary Statistics for HB-23 Soil Samples - 0 to 1'
NBHS
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-2	S-1/GW-3	S-2/GW-2	# of Samples	# of Detects	Freq. of Detects	Min. of Detects (mg/kg)	Max. of Detects (mg/kg)	Location of Max. Detected	Min. of Non-Detects (mg/kg)	Max. of Non-Detects (mg/kg)	Mean Concentration (mg/kg)	EPC (mg/kg)	EPC Rationale
PCBs															
	Total PCBs	2	2	NS	8	8	100.0%	0.786	**45.9**	HB-23A	--	--	**8.9E+00**	**4.6E+01**	Maximum
Metals															
	Arsenic	20	20	20	5	3	60.0%	3.11	7.29	HB-23I	2.9	3.1	3.4E+00	NA	Below background
	Barium	1,000	1,000	50	5	5	100.0%	53.2	343	HB-23H	--	--	1.6E+02	1.6E+02	Mean
	Cadmium	2	2	2	5	3	60.0%	0.37	1.03	HB-23I	0.29	0.31	4.6E-01	NA	Below background
	Chromium	30	30	30	5	5	100.0%	8.13	**36.7**	HB-23I	--	--	1.9E+01	1.9E+01	Mean
	Lead	300	300	100	5	5	100.0%	42.9	293	HB-23I	--	--	1.4E+02	1.4E+02	Mean

Notes:

All units in mg/kg unless otherwise specified.

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

NA - Not available

SVOCs - Semi-volatile organic compounds

PCBs - Polychlorinated biphenyls

Background - Background Concentration for natural soil.

UCL - Upper confidence limit on the arithmetic mean concentration.

EPC - Exposure Point Concentration

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

Boxed maxima exceed natural soil background.

Table 3
Pedestrian - Child
Incidental Ingestion of Surface Soil
New Bedford High School - HB-23 area (0-1')
New Bedford, Massachusetts

Constituent		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
		Surface Soil Concentration (mg/kg)	RAF Ingestion Cancer (--)	LADD Cancer (mg/kg-d)	RAF Ingestion Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	45.9	8.5E-01	4.6E-06	8.5E-01	2.6E-04	2.0E+00	5.0E-05	9E-06	5.2E+00
Metals										
7440-39-3	Barium	164	NC	NA	1.0E+00	1.1E-03	NA	7.0E-02	NA	1.6E-02
18540-29-9	Chromium	19.2	NC	NA	1.0E+00	1.3E-04	NA	2.0E-02	NA	6.4E-03
7439-92-1	Lead	138.6	NC	NA	5.0E-01	4.6E-04	NA	7.5E-04	NA	6.2E-01

	Cancer Risk	Hazard Index
TOTAL:	9E-06	6E+00

NA = Not Applicable
NC = No Criteria
Where:

LADDcancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APcancer]
ADDnon-cancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APnon-cancer]
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC) =	1.0E-06	kg/mg
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Ingestion Rate (IR) =	100	mg/d [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 4
Pedestrian - Child
Dermal Contact with Surface Soil
New Bedford High School - HB-23 area (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
	Constituent	Surface Soil Concentration (mg/kg)	RAF Dermal Cancer (--)	LADD Cancer (mg/kg-d)	RAF Dermal Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (--)	Hazard Quotient (--)
PCBs										
1336-36-3	Total PCBs	46	0.16	6.8E-06	0.16	2.9E-04	2.0E+00	5.0E-05	1E-05	5.7E+00
Metals										
7440-39-3	Barium	164	NC	NA	0.05	3.2E-04	NA	7.0E-02	NA	4.6E-03
18540-29-9	Chromium	19	NC	NA	0.09	6.7E-05	NA	2.0E-02	NA	3.4E-03
7439-92-1	Lead	139	NC	NA	0.006	3.2E-05	NA	7.5E-04	NA	4.3E-02

	Cancer Risk	Hazard Index
TOTAL:	1E-05	6E+00

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

NA = Not Applicable
NC = No Criteria

Where:

LADDcancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APcancer)
ADDnon-cancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APnon-cancer)
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC1) =	1E-06	kg/mg
Skin Surface Area (SA) - Noncancer =	1670	cm2/d [1] - (1-2 year old)
Skin Surface Area (SA) - Cancer =	2231	cm2/d [1] - (1-6 year old)
Soil Adherence Factor (SAF) =	0.35	mg/cm2 [1]
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 5
Pedestrian - Young Child
Inhalation of Fugitive Dusts - Exposure Via the Lungs
New Bedford High School - HB-23 area (0-1')
New Bedford, Massachusetts

			Exposure Estimates		Toxicity Values		Risk Estimates	
	Constituent	Surface Soil Concentration (mg/kg)	$LADE_{Ca}$ Cancer (ug/m^3)	ADE_{Ca} Noncancer (ug/m^3)	Unit Risk Factor (Inh) $(ug/m^3)^{-1}$	Subchronic Noncancer Reference Conc. (Inh) (ug/m^3)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs								
1336-36-3	Total PCBs	46	2.0E-05	6.9E-04	1.0E-04	2.0E-02	2E-09	3.4E-02
Metals								
7440-39-3	Barium	164	7.3E-05	2.5E-03	NA	5.0E+00	NA	4.9E-04
18540-29-9	Chromium	19	8.5E-06	2.9E-04	1.2E-02	3.0E-01	1E-07	9.6E-04
7439-92-1	Lead	130	6.1E-05	2.1E-03	NA	1.0E+00	NA	2.1E-03

	Cancer Risk	Hazard Index
TOTAL:	1E-07	4E-02

NA = Not Applicable

Where:

LADEcancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UCI / (APcancer x BW)) x (BW assumed/IR assumed)
ADEnon-cancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UCI / APnon-cancer x BW) x (BW assumed/IR assumed)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Respirable Dust (PM_{10}) =	60	ug/m3 [4]
Relative Absorption Factor (RAF) =	1	unitless
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	4	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Inhalation Rate assumed (IR assumed) =	20	m3/day [2] - for adjustment of toxicity value
Body Weight (BW assumed) =	70	kg [2] - for adjustment of toxicity value
Unit Conversion (UC) =	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 6
Pedestrian - Young Child
Inhalation of Fugitive Dusts - Exposure Via the GI Tract
New Bedford High School - HB-23 area (0-1')
New Bedford, Massachusetts

Constituent		Surface Soil Concentration (mg/kg)	Exposure Estimates: RAF Cancer Ing (--)	Exposure Estimates: $LADD_{Cancer}$ Cancer (mg/kg-day)	Exposure Estimates: RAF Noncancer Ing (--)	Exposure Estimates: $ADD_{Noncancer}$ Noncancer (mg/kg-day)	Toxicity Values: Cancer Slope Factor (Oral) $(mg/kg\text{-}day)^{-1}$	Toxicity Values: Subchronic Noncancer Reference Dose (Oral) (mg/kg-day)	Risk Estimates: Cancer Risk (- -)	Risk Estimates: Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	46	8.5E-01	1.48E-08	8.50E-01	5.02E-07	2.0E+00	5.0E-05	3E-08	1.0E-02
Metals										
7440-39-3	Barium	164	NC	NA	1.00E+00	2.11E-06	NA	7.0E-02	NA	3.0E-05
18540-29-9	Chromium	19	NC	NA	1.00E+00	2.47E-07	NA	2.0E-02	NA	1.2E-05
7439-92-1	Lead	139	NC	NA	5.00E-01	8.91E-07	NA	7.5E-04	NA	1.2E-03

	Cancer Risk	Hazard Index
TOTAL:	3E-08	1E-02

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

NA = Not Applicable

Where:

LADEcancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW))
ADDEnon-cancer = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Respirable Dust (PM_{10}) =	60	ug/m3 [1]
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	4	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Unit Conversion (UC1)=	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 7. Summary Statistics of HB-23 Post-Excavation Soil Samples - 0 to 1'
NBHS
New Bedford, Massachusetts

Analysis	Analyte	S-1/GW-2	S-1/GW-3	Background	# of Samples	# of Detects	Freq. of Detects	Min. of Detects (mg/kg)	Max. of Detects (mg/kg)	Location of Max. Detected	Min. of Non-Detects (mg/kg)	Max. of Non-Detects (mg/kg)	Mean Concentration (mg/kg)	EPC (mg/kg)	EPC Rationale
PCBs															
	Total PCBs	2	2	NS	5	5	100.0%	0.786	**4.7**	HB-23I	--	--	**2.1E+00**	**4.7E+00**	Maximum
Metals															
	Arsenic	20	20	20	5	3	60.0%	3.11	7.29	HB-23I	2.9	3.1	3.4E+00	NA	Below background
	Barium	1,000	1,000	50	5	5	100.0%	53.2	343	HB-23H	--	--	1.6E+02	1.6E+02	Mean
	Cadmium	2	2	2	5	3	60.0%	0.37	1.03	HB-23I	0.29	0.31	4.6E-01	NA	Below background
	Chromium	30	30	30	5	5	100.0%	8.13	**36.7**	HB-23I	--	--	1.9E+01	1.9E+01	Mean
	Lead	300	300	100	5	5	100.0%	42.9	293	HB-23I	--	--	1.4E+02	1.4E+02	Mean

Notes:

All units in mg/kg unless otherwise specified.

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

NA - Not available

SVOCs - Semi-volatile organic compounds

PCBs - Polychlorinated biphenyls

Background - Background Concentration for natural soil.

UCL - Upper confidence limit on the arithmetic mean concentration.

EPC - Exposure Point Concentration

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

Boxed maxima exceed natural soil background.

Table 8
Pedestrian - Child
Incidental Ingestion of Surface Soil
New Bedford High School - HB-23 post-excavation (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Ingestion Cancer (--)	LADD Cancer (mg/kg-d)	RAF Ingestion Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	4.7	8.5E-01	4.8E-07	8.5E-01	2.7E-05	2.0E+00	5.0E-05	1E-06	5.3E-01
Metals										
7440-39-3	Barium	164	NC	NA	1.0E+00	1.1E-03	NA	7.0E-02	NA	1.6E-02
18540-29-9	Chromium	19.2	NC	NA	1.0E+00	1.3E-04	NA	2.0E-02	NA	6.4E-03
7439-92-1	Lead	138.6	NC	NA	5.0E-01	4.6E-04	NA	7.5E-04	NA	6.2E-01

	Cancer Risk	Hazard Index
TOTAL:	1E-06	1.2E+00

NA = Not Applicable
NC = No Criteria
Where:

LADDcancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APcancer]
ADDnon-cancer = [Soil Concentration x UC x RAF x IR x EF x ED x EP] / [BW x APnon-cancer]
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC) =	1.0E-06	kg/mg
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Ingestion Rate (IR) =	100	mg/d [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 9
Pedestrian - Child
Dermal Contact with Surface Soil
New Bedford High School - HB-23 post-excavation (0-1')
New Bedford, Massachusetts

		EPC	Exposure Estimates				Toxicity Values		Risk Estimates	
Constituent		Surface Soil Concentration (mg/kg)	RAF Dermal Cancer (--)	LADD Cancer (mg/kg-d)	RAF Dermal Noncancer (--)	ADD Noncancer (mg/kg-d)	Cancer Slope Factor (Oral) (mg/kg-d)-1	Subchronic Noncancer Reference Dose (Oral) (mg/kg-d)	Cancer Risk (--)	Hazard Quotient (--)
PCBs										
1336-36-3	Total PCBs	4.7	0.16	7.0E-07	0.16	2.9E-05	2.0E+00	5.0E-05	1E-06	5.9E-01
Metals										
7440-39-3	Barium	164	NC	NA	0.05	3.2E-04	NA	7.0E-02	NA	4.6E-03
18540-29-9	Chromium	19.2	NC	NA	0.09	6.7E-05	NA	2.0E-02	NA	3.4E-03
7439-92-1	Lead	138.6	NC	NA	0.006	3.2E-05	NA	7.5E-04	NA	4.3E-02

	Cancer Risk	Hazard Index
TOTAL:	1E-06	6.4E-01

NA = Not Applicable
NC = No Criteria

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

Where:

LADDcancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APcancer)
ADDnon-cancer = Soil Concentration x UC1 x SA x SAF x RAF x EF x ED x EP / (BW x APnon-cancer)
Cancer Risk = LADDcancer x Slope Factor
Hazard Quotient = ADDnon-cancer / Reference Dose

Unit Conversion (UC1) =	1E-06	kg/mg
Skin Surface Area (SA) - Noncancer =	1670	cm2/d [1] - (1-2 year old)
Skin Surface Area (SA) - Cancer =	2231	cm2/d [1] - (1-6 year old)
Soil Adherence Factor (SAF) =	0.35	mg/cm2 [1]
Relative Absorption Factor (RAF) =	CS	(unitless) [1]
Exposure Duration (ED) =	1	day/event [1]
Exposure Frequency (EF) - Noncancer =	0.714	event/day [2] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [2] - 5 days/week for 18 weeks
Exposure Period (EP) - Noncancer =	0.345	years [2] - 18 weeks
Exposure Period (EP) - Cancer =	5	years [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	15	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	70	years [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	0.345	years [2]

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 10
Pedestrian - Young Child
Inhalation of Fugitive Dusts - Exposure Via the Lungs
New Bedford High School - HB-23 post-excavation (0-1')
New Bedford, Massachusetts

			Exposure Estimates		Toxicity Values		Risk Estimates	
	Constituent	Surface Soil Concentration (mg/kg)	$LADE_{Inh}$ Cancer (ug/m^3)	ADE_{Inh} Noncancer (ug/m^3)	Unit Risk Factor (Inh) $(ug/m^3)^{-1}$	Subchronic Noncancer Reference Conc. (Inh) (ug/m^3)	Cancer Risk (- -)	Hazard Quotient (- -)
PCBs								
1336-36-3	Total PCBs	4.7	2.1E-06	7.1E-05	1.0E-04	2.0E-02	2E-10	3.5E-03
Metals								
7440-39-3	Barium	164	7.3E-05	2.5E-03	NA	5.0E+00	NA	4.9E-04
18540-29-9	Chromium	19.2	8.5E-06	2.9E-04	1.2E-02	3.0E-01	1E-07	9.6E-04
7439-92-1	Lead	138.6	6.1E-05	2.1E-03	NA	1.0E+00	NA	2.1E-03

	Cancer Risk	Hazard Index
TOTAL:	1E-07	7E-03

Bold = Cancer Risk > 1.0E-05 or Hazard Quotient > 1.0E+00

NA = Not Applicable

Where:

LADEcancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / (APcancer x BW)) x (BW assumed/IR assumed)
ADEnon-cancer = (OHM x 0.5 X PM10 x IR x RAF x EF x ED x EP x UC1 / APnon-cancer x BW) x (BW assumed/IR assumed)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Respirable Dust (PM_{10}) =	60	ug/m3 [4]
Relative Absorption Factor (RAF) =	1	unitless
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	4	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Inhalation Rate assumed (IR assumed) =	20	m3/day [2] - for adjustment of toxicity value
Body Weight (BW assumed) =	70	kg [2] - for adjustment of toxicity value
Unit Conversion (UC) =	6.00E-11	(60 min/hour; 1x 10-9 kg/ug; 0.001 m3/l)

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgement
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

Table 11
Pedestrian - Young Child
Inhalation of Fugitive Dusts - Exposure Via the GI Tract
New Bedford High School - HB-23 post-excavation (0-1')
New Bedford, Massachusetts

Constituent		Surface Soil Concentration (mg/kg)	Exposure Estimates: RAF Cancer Ing (--)	Exposure Estimates: $LADD_{cancer}$ (mg/kg-day)	Exposure Estimates: RAF Noncancer Ing (--)	Exposure Estimates: $ADD_{noncancer}$ (mg/kg-day)	Toxicity Values: Cancer Slope Factor (Oral) $(mg/kg\text{-}day)^{-1}$	Toxicity Values: Subchronic Noncancer Reference Dose (Oral) (mg/kg-day)	Risk Estimates: Cancer Risk (- -)	Risk Estimates: Hazard Quotient (- -)
PCBs										
1336-36-3	Total PCBs	4.7	8.5E-01	1.52E-09	8.50E-01	5.14E-08	2.0E+00	5.0E-05	3E-09	1.0E-03
Metals										
7440-39-3	Barium	164	NC	NA	1.00E+00	2.11E-06	NA	7.0E-02	NA	3.0E-05
18540-29-9	Chromium	19.2	NC	NA	1.00E+00	2.47E-07	NA	2.0E-02	NA	1.2E-05
7439-92-1	Lead	138.6	NC	NA	5.00E-01	8.91E-07	NA	7.5E-04	NA	1.2E-03

	Cancer Risk	Hazard Index
TOTAL:	3E-09	2E-03

Bold = Cancer Risk >1.0E-05 or Hazard Quotient > 1.0E+00

NA = Not Applicable

Where:

$LADD_{cancer}$ = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UCF / (APcancer x BW))
$ADD_{non\text{-}cancer}$ = (OHM x 1.5 X PM10 x IR x RAF x EF x ED x EP x UCF / APnon-cancer x BW)
Cancer Risk = LADEcancer x Cancer Slope Factor
Hazard Quotient = ADEnon-cancer / Reference Dose

Respirable Dust (PM_{10}) =	60	ug/m3 [1]
Inhalation Rate (IR) - Noncancer (1-2 year old) =	8.92	l/min [4] - heavy exertion; 1-2 year old
Inhalation Rate (IR) - Cancer (1-6 year old) =	14.77	l/min [4] - heavy exertion; 1-6 year old
Exposure Frequency (EF) - Noncancer =	0.714	event/day [5] - 5 days/week
Exposure Frequency (EF) - Cancer =	0.247	event/day [5] - 5 days/week for 18 weeks
Exposure Duration (ED) =	4	hours/event [3]
Exposure Period (EP) - Noncancer =	126	days [5] - 18 weeks
Exposure Period (EP) - Cancer =	1825	days [1]
Body Weight (BW) - Noncancer =	10.7	kg (1-2 year old)[1]
Body Weight (BW) - Cancer =	14.8	kg (1-6 year old) [1]
Averaging Period Cancer (AP_{cancer}) =	25550	days [1]
Averaging Period Noncancer ($AP_{noncancer}$) =	126	days [5]
Unit Conversion (UCF)=	6.00E-11	(60 min/hour; 1x 10-9 kg/ng; 0.001 m3/l)

[1] MassDEP, 2007; Park User Soil Imminent Hazard Short-form
[2] MassDEP, 2008; Characterization of Risk Due to Inhalation of Particulats by Construction Workers
[3] Professional Judgment
[4] MassDEP, 1995; Guidance for Disposal Site Risk Characterization
[5] Site-specific information for practices and games during 18-week sport season (includes pre-season and playoffs)

APPENDIX B

SAMPLE RESULTS FROM LABORATORY REPORTS

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-10
Matrix:	Soil	Client ID:	HB-23I (0-1)
Sample wt(Dry)/vol:	8.6903 g	Lab Sample ID:	AM02164
Percent Moisture:	14.6	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/19/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/20/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	4
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-344-3

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-383-3

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.230	U
1	11104-28-2	Aroclor 1221	0.230	U
1	11141-16-5	Aroclor 1232	0.230	U
1	53469-21-9	Aroclor 1242	0.230	U
1	12672-29-6	Aroclor 1248	0.230	U
1	11097-69-1	Aroclor 1254	4.70	AF
1	11096-82-5	Aroclor 1260	0.230	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-12
Matrix:	Soil	Client ID:	HB-23H (0-1)
Sample wt(Dry)/vol:	8.4986 g	Lab Sample ID:	AM02166
Percent Moisture:	18.4	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/19/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/20/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	2
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-344-5

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-383-5

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.118	U
1	11104-28-2	Aroclor 1221	0.118	U
1	11141-16-5	Aroclor 1232	0.118	U
1	53469-21-9	Aroclor 1242	0.118	U
1	12672-29-6	Aroclor 1248	0.118	U
1	11097-69-1	Aroclor 1254	2.53	AF
1	11096-82-5	Aroclor 1260	0.118	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-13
Matrix:	Soil	Client ID:	HB-23H (1-3)
Sample wt(Dry)/vol:	7.9287 g	Lab Sample ID:	AM02167
Percent Moisture:	22.0	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/19/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/20/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-344-6

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-383-6

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0631	U
1	11104-28-2	Aroclor 1221	0.0631	U
1	11141-16-5	Aroclor 1232	0.0631	U
1	53469-21-9	Aroclor 1242	0.0631	U
1	12672-29-6	Aroclor 1248	0.0631	U
1	11097-69-1	Aroclor 1254	0.0843	AF
1	11096-82-5	Aroclor 1260	0.0631	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
Note: There were several non-target peaks.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-14
Matrix:	Soil	Client ID:	HB-23E (0-1)
Sample wt(Dry)/vol:	8.7997 g	Lab Sample ID:	AM02168
Percent Moisture:	15.8	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/16/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	10
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-379-20

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-340-20

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.568	U
1	11104-28-2	Aroclor 1221	0.568	U
1	11141-16-5	Aroclor 1232	0.568	U
1	53469-21-9	Aroclor 1242	0.568	U
1	12672-29-6	Aroclor 1248	0.568	U
1	11097-69-1	Aroclor 1254	13.5	AF
1	11096-82-5	Aroclor 1260	0.568	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

FORM I-CLP-PCB (NEA)

Print Date: 03/19/2009
Next Lims Version : 4.4.3.0

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-15
Matrix:	Soil	Client ID:	HB-23E (1-3)
Sample wt(Dry)/vol:	8.3239 g	Lab Sample ID:	AM02169
Percent Moisture:	19.7	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/16/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	10
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-379-21

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-340-21

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.601	U
1	11104-28-2	Aroclor 1221	0.601	U
1	11141-16-5	Aroclor 1232	0.601	U
1	53469-21-9	Aroclor 1242	0.601	U
1	12672-29-6	Aroclor 1248	0.601	U
1	11097-69-1	Aroclor 1254	16.8	AF
1	11096-82-5	Aroclor 1260	0.601	U

Laboratory Qualifiers:

AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

FORM I-CLP-PCB (NEA)

Print Date: 03/19/2009

NEA Lims Version: 4.4.3.0

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-18
Matrix:	Soil	Client ID:	HB-23B (0-1)
Sample wt(Dry)/vol:	8.3878 g	Lab Sample ID:	AM02172
Percent Moisture:	17.1	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/17/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm
Injection Volume: 1.0 uL
Lab File ID: GC20F-379-23

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm
Injection Volume: 1.0 uL
Lab File ID: GC20B-340-23

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0596	U
1	11104-28-2	Aroclor 1221	0.0596	U
1	11141-16-5	Aroclor 1232	0.0596	U
1	53469-21-9	Aroclor 1242	0.0596	U
1	12672-29-6	Aroclor 1248	0.0596	U
1	11097-69-1	Aroclor 1254	0.786	AF
1	11096-82-5	Aroclor 1260	0.0596	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-19
Matrix:	Soil	Client ID:	HB-23B (1-3)
Sample wt(Dry)/vol:	8.5429 g	Lab Sample ID:	AM02173
Percent Moisture:	18.6	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/17/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-340-24

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-379-24

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0585	U
1	11104-28-2	Aroclor 1221	0.0585	U
1	11141-16-5	Aroclor 1232	0.0585	U
1	53469-21-9	Aroclor 1242	0.0585	U
1	12672-29-6	Aroclor 1248	0.0585	U
1	11097-69-1	Aroclor 1254	0.915	AF
1	11096-82-5	Aroclor 1260	0.0585	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030050
ELAP ID No:	11078	LRF ID:	09030050-20
Matrix:	Soil	Client ID:	HB-23A (0-1)
Sample wt(Dry)/vol:	8.7233 g	Lab Sample ID:	AM02174
Percent Moisture:	15.3	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/17/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	30
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-379-27

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-340-27

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	1.72	U
1	11104-28-2	Aroclor 1221	1.72	U
1	11141-16-5	Aroclor 1232	1.72	U
1	53469-21-9	Aroclor 1242	1.72	U
1	12672-29-6	Aroclor 1248	1.72	U
1	11097-69-1	Aroclor 1254	45.9	AF
1	11096-82-5	Aroclor 1260	1.72	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-01
Matrix:	Soil	Client ID:	HB-23A (1-3)
Sample wt(Dry)/vol:	7.6154 g	Lab Sample ID:	AM02175
Percent Moisture:	25.5	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/18/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	3
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-380-27

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-341-27

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.197	U
1	11104-28-2	Aroclor 1221	0.197	U
1	11141-16-5	Aroclor 1232	0.197	U
1	53469-21-9	Aroclor 1242	0.197	U
1	12672-29-6	Aroclor 1248	0.197	U
1	11097-69-1	Aroclor 1254	4.12	AF
1	11096-82-5	Aroclor 1260	0.197	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-02
Matrix:	Soil	Client ID:	HB-23D (0-1)
Sample wt(Dry)/vol:	9.1718 g	Lab Sample ID:	AM02176
Percent Moisture:	12.5	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/18/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-380-28

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-341-28

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0545	U
1	11104-28-2	Aroclor 1221	0.0545	U
1	11141-16-5	Aroclor 1232	0.0545	U
1	53469-21-9	Aroclor 1242	0.0545	U
1	12672-29-6	Aroclor 1248	0.0545	U
1	11097-69-1	Aroclor 1254	1.50	AF
1	11096-82-5	Aroclor 1260	0.0545	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-03
Matrix:	Soil	Client ID:	HB-23D (1-3)
Sample wt(Dry)/vol:	9.3906 g	Lab Sample ID:	AM02177
Percent Moisture:	7.80	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/18/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	10
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-380-29

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-341-29

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.532	U
1	11104-28-2	Aroclor 1221	0.532	U
1	11141-16-5	Aroclor 1232	0.532	U
1	53469-21-9	Aroclor 1242	0.532	U
1	12672-29-6	Aroclor 1248	0.532	U
1	11097-69-1	Aroclor 1254	19.9	AF
1	11096-82-5	Aroclor 1260	0.532	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-04
Matrix:	Soil	Client ID:	HB-23C (0-1)
Sample wt(Dry)/vol:	8.3701 g	Lab Sample ID:	AM02178
Percent Moisture:	19.2	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/18/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-380-30

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-341-30

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0597	U
1	11104-28-2	Aroclor 1221	0.0597	U
1	11141-16-5	Aroclor 1232	0.0597	U
1	53469-21-9	Aroclor 1242	0.0597	U
1	12672-29-6	Aroclor 1248	0.0597	U
1	11097-69-1	Aroclor 1254	1.41	AF
1	11096-82-5	Aroclor 1260	0.0597	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-05
Matrix:	Soil	Client ID:	HB-23C (1-3)
Sample wt(Dry)/vol:	8.1778 g	Lab Sample ID:	AM02179
Percent Moisture:	20.1	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/12/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/18/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	5
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-380-31

Column 2 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-341-31

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.306	U
1	11104-28-2	Aroclor 1221	0.306	U
1	11141-16-5	Aroclor 1232	0.306	U
1	53469-21-9	Aroclor 1242	0.306	U
1	12672-29-6	Aroclor 1248	0.306	U
1	11097-69-1	Aroclor 1254	4.74	AF
1	11096-82-5	Aroclor 1260	0.306	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-06
Matrix:	Soil	Client ID:	HB-23G (0-1)
Sample wt(Dry)/vol:	8.7755 g	Lab Sample ID:	AM02180
Percent Moisture:	14.1	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/19/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/20/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	1
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-344-7

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-383-7

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.0570	U
1	11104-28-2	Aroclor 1221	0.0570	U
1	11141-16-5	Aroclor 1232	0.0570	U
1	53469-21-9	Aroclor 1242	0.0570	U
1	12672-29-6	Aroclor 1248	0.0570	U
1	11097-69-1	Aroclor 1254	0.943	AF
1	11096-82-5	Aroclor 1260	0.0570	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

1D-1
PCB ANALYSIS DATA SHEET

Laboratory Name:	Northeast Analytical, Inc.	SDG No:	09030051
ELAP ID No:	11078	LRF ID:	09030051-07
Matrix:	Soil	Client ID:	HB-23G (1-3)
Sample wt(Dry)/vol:	8.8697 g	Lab Sample ID:	AM02181
Percent Moisture:	13.0	Date Received:	03/11/2009
Extraction:	SOXHLET	Date Extracted:	03/19/2009
Conc. Extract Volume:	25000 uL	Date Analyzed:	03/20/2009
Method:	SW-846 8082 (PCB)	Dilution Factor:	5
		Sulfur Cleanup:	YES

Column 1 Information:

GC Column: PHENOMENEX, NARROWBORE CAPILLARY, ZB-5, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20B-344-8

Column 2 Information:

GC Column: J&W, NARROWBORE CAPILLARY, DB-1, 30M; ID: 0.25 mm

Injection Volume: 1.0 uL

Lab File ID: GC20F-383-8

Column Number	CAS NO	COMPOUND NAME	CONCENTRATION UG/G	Q
1	12674-11-2	Aroclor 1016	0.282	U
1	11104-28-2	Aroclor 1221	0.282	U
1	11141-16-5	Aroclor 1232	0.282	U
1	53469-21-9	Aroclor 1242	0.282	U
1	12672-29-6	Aroclor 1248	0.282	U
1	11097-69-1	Aroclor 1254	4.94	AF
1	11096-82-5	Aroclor 1260	0.282	U

Laboratory Qualifiers:
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
U - Denotes analyte not detected at concentration greater than or equal to the Practical Quantitation Limit (PQL). PQLs are adjusted for sample weight/volume and dilution factors.

FORM I-CLP-PCB (NEA)

Print Date: 03/26/2009
Nea Lims Version 4.4.3.1

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/1/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23B(0-1)
Sample ID : 09B09567 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	3.11	03/31/09	OP	3.06			

Field Sample # : HB-23B(1-3)
Sample ID : 09B09568 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	7.30	03/31/09	OP	3.17			

Field Sample # : HB-23C(0-1)
Sample ID : 09B09569 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	ND	03/31/09	OP	3.10			

Field Sample # : HB-23C(1-3)
Sample ID : 09B09570 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	18.1	03/31/09	OP	3.19			

Field Sample # : HB-23G(0-1)
Sample ID : 09B09571 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	ND	03/31/09	OP	2.90			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/1/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23G(1-3)
Sample ID : 09B09572 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	6.77	03/31/09	OP	2.83			

Field Sample # : HB-23H(0-1)
Sample ID : 09B09565 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	3.42	03/31/09	OP	3.04			

Field Sample # : HB-23H(1-3)
Sample ID : 09B09566 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	17.7	03/31/09	OP	3.31			

Field Sample # : HB-23I(0-1)
Sample ID : 09B09563 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	7.29	03/31/09	OP	2.86			

Field Sample # : HB-23I(1-3)
Sample ID : 09B09564 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Arsenic	mg/kg dry wt	10.6	03/31/09	OP	3.24			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/1/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23B(0-1)
Sample ID : 09B09567 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	58.1	03/31/09	OP	6.12			

Field Sample # : HB-23B(1-3)
Sample ID : 09B09568 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	236	03/31/09	OP	6.34			

Field Sample # : HB-23C(0-1)
Sample ID : 09B09569 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	53.2	03/31/09	OP	6.20			

Field Sample # : HB-23C(1-3)
Sample ID : 09B09570 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	1020	03/31/09	OP	6.37			

Field Sample # : HB-23G(0-1)
Sample ID : 09B09571 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	55.1	03/31/09	OP	5.80			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23G(1-3)
Sample ID : 09B09572 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	297	03/31/09	OP	5.65			

Field Sample # : HB-23H(0-1)
Sample ID : 09B09565 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	343	03/31/09	OP	6.07			

Field Sample # : HB-23H(1-3)
Sample ID : 09B09566 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	269	03/31/09	OP	6.61			

Field Sample # : HB-23I(0-1)
Sample ID : 09B09563 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	311	03/31/09	OP	5.72			

Field Sample # : HB-23I(1-3)
Sample ID : 09B09564 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	1210	03/31/09	OP	6.48			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23B(0-1)
Sample ID : 09B09567 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	0.37	03/31/09	OP	0.31			

Field Sample # : HB-23B(1-3)
Sample ID : 09B09568 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	1.14	03/31/09	OP	0.32			

Field Sample # : HB-23C(0-1)
Sample ID : 09B09569 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	ND	03/31/09	OP	0.31			

Field Sample # : HB-23C(1-3)
Sample ID : 09B09570 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	3.86	03/31/09	OP	0.32			

Field Sample # : HB-23G(0-1)
Sample ID : 09B09571 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	ND	03/31/09	OP	0.29			

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/1/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23G(1-3)
Sample ID : 09B09572 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	1.28	03/31/09	OP	0.29			

Field Sample # : HB-23H(0-1)
Sample ID : 09B09565 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	0.61	03/31/09	OP	0.31			

Field Sample # : HB-23H(1-3)
Sample ID : 09B09566 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	3.31	03/31/09	OP	0.34			

Field Sample # : HB-23I(0-1)
Sample ID : 09B09563 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	1.03	03/31/09	OP	0.29			

Field Sample # : HB-23I(1-3)
Sample ID : 09B09564 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	4.06	03/31/09	OP	0.33			

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23B(0-1)
Sample ID : 09B09567 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	8.95	03/31/09	OP	0.62			

Field Sample # : HB-23B(1-3)
Sample ID : 09B09568 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	14.7	03/31/09	OP	0.64			

Field Sample # : HB-23C(0-1)
Sample ID : 09B09569 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	8.13	03/31/09	OP	0.62			

Field Sample # : HB-23C(1-3)
Sample ID : 09B09570 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	60.2	03/31/09	OP	0.64			

Field Sample # : HB-23G(0-1)
Sample ID : 09B09571 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	15.4	03/31/09	OP	0.58			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23G(1-3)
Sample ID : 09B09572 ‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	29.7	03/31/09	OP	0.57			

Field Sample # : HB-23H(0-1)
Sample ID : 09B09565 ‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	26.9	03/31/09	OP	0.61			

Field Sample # : HB-23H(1-3)
Sample ID : 09B09566 ‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	36.8	03/31/09	OP	0.67			

Field Sample # : HB-23I(0-1)
Sample ID : 09B09563 ‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	36.7	03/31/09	OP	0.58			

Field Sample # : HB-23I(1-3)
Sample ID : 09B09564 ‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	35.2	03/31/09	OP	0.65			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23B(0-1)
Sample ID : 09B09567 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	48.5	03/31/09	OP	0.92			

Field Sample # : HB-23B(1-3)
Sample ID : 09B09568 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	169	03/31/09	OP	0.96			

Field Sample # : HB-23C(0-1)
Sample ID : 09B09569 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	42.9	03/31/09	OP	0.93			

Field Sample # : HB-23C(1-3)
Sample ID : 09B09570 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	1460	03/31/09	OP	0.96			

Field Sample # : HB-23G(0-1)
Sample ID : 09B09571 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	88.4	03/31/09	OP	0.87			

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD NBHS
Date Received: 3/28/2009
LIMS-BAT #: LIMT-24303
Job Number: 115058

Field Sample # : HB-23G(1-3)
Sample ID : 09B09572 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	423	03/31/09	OP	0.85			

Field Sample # : HB-23H(0-1)
Sample ID : 09B09565 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	220	03/31/09	OP	0.92			

Field Sample # : HB-23H(1-3)
Sample ID : 09B09566 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	548	03/31/09	OP	1.00			

Field Sample # : HB-23I(0-1)
Sample ID : 09B09563 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	293	03/31/09	OP	0.86			

Field Sample # : HB-23I(1-3)
Sample ID : 09B09564 ‡Sampled : 3/10/2009 Not Specified
Sample Matrix: SOIL

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	3630	03/31/09	OP	0.98			

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/9/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD (NBHS)
Date Received: 4/7/2009
Field Sample # : HB-23F (1-3)
Sample ID : 09B10776
‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

LIMS-BAT #: LIMT-24535
Job Number: 115058

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Barium	mg/kg dry wt	612	04/09/09	OP	6.48			

Analytical Method:
SW846 3050/6010
SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/9/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD (NBHS)
Date Received: 4/7/2009
Field Sample # : HB-23F (1-3)
Sample ID : 09B10776
‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

LIMS-BAT #: LIMT-24535
Job Number: 115058

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Cadmium	mg/kg dry wt	2.20	04/09/09	OP	0.33			

Analytical Method:
SW846 3050/6010
SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY
39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/9/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD (NBHS)
Date Received: 4/7/2009
Field Sample # : HB-23F (1-3)
Sample ID : 09B10776
‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

LIMS-BAT #: LIMT-24535
Job Number: 115058

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Chromium	mg/kg dry wt	47.0	04/09/09	OP	0.65			

Analytical Method:
SW846 3050/6010
SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit
ND = Not Detected at or above the Reporting Limit
NM = Not Measured
* = See end of report for comments and notes applying to this sample
‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

con-test®
ANALYTICAL LABORATORY

39 Spruce Street ° East Longmeadow, MA 01028 ° FAX 413/525-6405 ° TEL. 413/525-2332

DAVID SULLIVAN
TRC SOLUTIONS - LOWELL
650 SUFFOLK STREET
LOWELL, MA 01852

4/9/2009

Purchase Order No.:

Project Location: CITY OF NEW BEDFORD (NBHS)
Date Received: 4/7/2009
Field Sample # : HB-23F (1-3)
Sample ID : 09B10776
‡Sampled : 3/10/2009
Not Specified
Sample Matrix: SOIL

LIMS-BAT #: LIMT-24535
Job Number: 115058

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo	SPEC Limit Hi	P/ F
Lead	mg/kg dry wt	893	04/09/09	OP	0.98			

Analytical Method:
SW846 3050/6010
SAMPLES ARE DIGESTED WITH NITRIC ACID AND THEN ANALYZED BY INDUCTIVELY COUPLED PLASMA EMISSION SPECTROSCOPY.

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

APPENDIX C

BILL OF LADING

Massachusetts Department of Environmental Protection — **BWSC-012A**

Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number*: 4 - 21847

A. LOCATION OF SITE OR DISPOSAL SITE WHERE REMEDIATION WASTE WAS GENERATED:

Release Name (optional): New Bedford High School

Street: 230 Hathaway Blvd. Location Aid: Front

City/Town: New Bedford ZIP Code: 02740

Date/Period of Generation: _____ to: _____

Additional Release Tracking Numbers Associated with this Bill of Lading: _____

** Note: If this Bill of Lading is the result of a Limited Removal Action (LRA) taken prior to Notification, a Release Tracking Number is not needed.*

B. PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

Name of Organization: City of New Bedford

Name of Contact: Scott Alfonse Title: Director, Dept. of Env. Stew.

Street: 133 William Street

City/Town: New Bedford State: MA ZIP Code: 02740

Telephone: (508) 979-1487 Ext.: _____

C. RELATIONSHIP TO RELEASE OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH BILL OF LADING:

- [x] RP or PRP — Specify: [ ] Owner [ ] Operator [ ] Generator [ ] Transporter — Other RP or PRP: Municipality
- [ ] Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- [ ] Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- [ ] Other Person: _____

If an owner and/or operator is not conducting the response action associated with the Bill of Lading, provide on an attachment the name, contact person, address and telephone number, including any area code and extension, for each, if known.

D. TRANSPORTER OR COMMON CARRIER INFORMATION:

Transporter/Common Carrier Name: D.W. White/City of New Bedford

Contact Person: M. White/R. Labelle Title: Owner/Commissioner

Street: 867 Middle Road/1105 Shawmut Avenue

City/Town: Acushnet/New Bedford State: MA ZIP Code: 02743/02746

Telephone: (508) 951-9604 Ext.: _____

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

Operator/Facility Name: City of New Bedford/Shawmut Avenue Transfer Station

Contact Person: Ronald LaBelle Title: Commissioner

Street: Shawmut Avenue

City/Town: New Bedford State: MA ZIP Code: 02746

Telephone: 508-979-1556 Ext.: _____

Type of Facility (check one):
- [ ] Asphalt Batch/Cold Mix
- [ ] Asphalt Batch/Hot Mix
- [ ] Thermal Processing
- [ ] Landfill/Disposal
- [ ] Landfill/Daily Cover
- [ ] Landfill/Structural Fill
- [ ] Incinerator
- [x] Temporary Storage
- [ ] Other: _____

EPA Identification #: _____

Division of Hazardous Waste/Class A Permit #: _____ Division of Solid Waste Management Permit #: _____

Actual/Anticipated Period of Temporary Storage (specify dates if applicable): <120 days to: _____

Reason for Temporary Storage:
Awaiting offsite reuse, recycling and/or disposal facility approval.

Massachusetts Department of Environmental Protection — **BWSC-012A**

Bureau of Waste Site Cleanup

Release Tracking Number*: 4 - 21847

BILL OF LADING (pursuant to 310 CMR 40.0030)

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION (continued) :

Temporary Storage Address:

Street: Shawmut Avenue

City/Town: New Bedford State: MA ZIP Code:

F. DESCRIPTION OF REMEDIATION WASTE:

(check all that apply)

☑ Contaminated Media (check all that apply): ☑ Soil ○ Groundwater ○ Surface Water ☑ Other:

☐ Contaminated Debris (check all that apply): ○ Vegetation or Organic Debris ○ Demolition/Construction Waste ○ Inorganic Absorbant Materials ○ Other:

☐ Non-hazardous Uncontainerized Waste (check all that apply): ○ Non-aqueous Phase Liquid ○ Other:

☐ Non-hazardous Containerized Waste (check all that apply): ○ Tank Bottoms/Sludges ○ Containers ○ Drums ○ Engineered Impoundments ○ Other:

Type of Contamination (check all that apply): ☐ Gasoline ☐ Diesel Fuel ☐ #2 Oil ☐ #4 Oil ☐ #6 Oil ☐ Waste Oil ☐ Kerosene ☐ Jet Fuel ☑ Other: PCBs

Estimated Volume of Materials: Cubic Yards: <100 Tons: Other:

Contaminant Source (check one/specify): ☐ Transportation Accident ☐ Underground Storage Tank ☑ Other: Fill

Response Action Associated with Bill of Lading (check one): ☑ Immediate Response Action ☐ Release Abatement Measure ☐ Utility-Related Abatement Measure ☐ Limited Removal Action ☐ Comprehensive Response Action ☐ Other

Remediation Waste Charcterization Support Documentation attached:

☐ Site History Information ☐ Sampling and Analytical Methods and Procedures ☑ Laboratory Data ☐ Field Screening Data

If supporting documentation is not appended, provide an attachment stating thedate and in connection with what document such information was previously submitted to DEP.

G. LICENSED SITE PROFESSIONAL (LSP) OPINION:

Name of Organization: TRC Environmental Corp., Lowell, MA

LSP Name: David M. Sullivan Title: Sr. Project Manager

Telephone: (978) 656-3565 Ext.:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this submittal, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of

(i) the standard of care in 309 CMR 4.02(1),
(ii) the applicable provisions of 309 CMR 4.02(2) and (3), and
(iii) the provisions of 309 CMR 4.03(5),

to the best of my knowledge, information and belief, the assessment actions undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with the applicable provisions of 310 CMR 40.0000, and such facility is permitted to accept Remediation Waste having the characteristics described in this submittal. I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

LSP Signature: Seal:

Date: March 25, 2009

License Number: 1488

COMMONWEALTH OF MASSACHUSETTS — DAVID M. SULLIVAN No. 1488 — REGISTERED LICENSED SITE PROFESSIONAL

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012A

BILL OF LADING (pursuant to 310 CMR 40.0030)

Release Tracking Number*
4 - 21847

H. CERTIFICATION OF PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Signature: _____ Date: 3/24/2009

Name of Person (print): SCOTT ALFONSE

Sample: HB23-0.75-3'		Analyst's Initials: DC
Case No.: Q0117-19		
Date Collected: 12/29/04		
Sample Matrix: Soil		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3541	1/25/05	2/2/05
Analytical Method: EPA 8082		
Compound	Concentration ug/kg* (ppb)	Reporting Limit
Aroclor-1221	N.D.	127
Aroclor-1232	N.D.	64
Aroclor-1016/1242	N.D.	64
Aroclor-1248	N.D.	64
Aroclor-1254	25000	64
Aroclor-1260	N.D.	64
Aroclor-1262	756	64
Aroclor-1268	N.D.	64
Surrogates:		
Compound	% Recovery	Limits
TCMX	75	19-139
DCBP	85	29-155

*Dry Weight Basis

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23A (0-1)	**NEA ID:** AM02174	**NEA LRF:** 09030050-20
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:20
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	1.72	ug/g	03/17/2009	U
Aroclor 1221	ND	1.72	ug/g	03/17/2009	U
Aroclor 1232	ND	1.72	ug/g	03/17/2009	U
Aroclor 1242	ND	1.72	ug/g	03/17/2009	U
Aroclor 1248	ND	1.72	ug/g	03/17/2009	U
Aroclor 1254	45.9	1.72	ug/g	03/17/2009	AF
Aroclor 1260	ND	1.72	ug/g	03/17/2009	U
Total PCB Amount > Reporting Limit	45.9				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
3/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23A (1-3)	**NEA ID:** AM02175	**NEA LRF:** 09030051-01
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:25
DATE RECEIVED:	3/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.197	ug/g	03/18/2009	U
Aroclor 1221	ND	0.197	ug/g	03/18/2009	U
Aroclor 1232	ND	0.197	ug/g	03/18/2009	U
Aroclor 1242	ND	0.197	ug/g	03/18/2009	U
Aroclor 1248	ND	0.197	ug/g	03/18/2009	U
Aroclor 1254	4.12	0.197	ug/g	03/18/2009	AF
Aroclor 1260	ND	0.197	ug/g	03/18/2009	U
Total PCB Amount > Reporting Limit	4.12				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NEA
NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23B (0-1)	**NEA ID:** AM02172	**NEA LRF:** 09030050-18
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:10
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0596	ug/g	03/17/2009	U
Aroclor 1221	ND	0.0596	ug/g	03/17/2009	U
Aroclor 1232	ND	0.0596	ug/g	03/17/2009	U
Aroclor 1242	ND	0.0596	ug/g	03/17/2009	U
Aroclor 1248	ND	0.0596	ug/g	03/17/2009	U
Aroclor 1254	0.786	0.0596	ug/g	03/17/2009	AF
Aroclor 1260	ND	0.0596	ug/g	03/17/2009	U
Total PCB Amount > Reporting Limit	0.786				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23B (1-3)	**NEA ID:** AM02173	**NEA LRF:** 09030050-19
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:15
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0585	ug/g	03/17/2009	U
Aroclor 1221	ND	0.0585	ug/g	03/17/2009	U
Aroclor 1232	ND	0.0585	ug/g	03/17/2009	U
Aroclor 1242	ND	0.0585	ug/g	03/17/2009	U
Aroclor 1248	ND	0.0585	ug/g	03/17/2009	U
Aroclor 1254	0.915	0.0585	ug/g	03/17/2009	AF
Aroclor 1260	ND	0.0585	ug/g	03/17/2009	U
Total PCB Amount > Reporting Limit	0.915				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
3/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23C (0-1)	**NEA ID:** AM02178	**NEA LRF:** 09030051-04
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:40
DATE RECEIVED:	3/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0597	ug/g	03/18/2009	U
Aroclor 1221	ND	0.0597	ug/g	03/18/2009	U
Aroclor 1232	ND	0.0597	ug/g	03/18/2009	U
Aroclor 1242	ND	0.0597	ug/g	03/18/2009	U
Aroclor 1248	ND	0.0597	ug/g	03/18/2009	U
Aroclor 1254	1.41	0.0597	ug/g	03/18/2009	AF
Aroclor 1260	ND	0.0597	ug/g	03/18/2009	U
Total PCB Amount > Reporting Limit	1.41				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
3/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23C (1-3)	**NEA ID:** AM02179	**NEA LRF:** 09030051-05
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:45
DATE RECEIVED:	3/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.306	ug/g	03/18/2009	U
Aroclor 1221	ND	0.306	ug/g	03/18/2009	U
Aroclor 1232	ND	0.306	ug/g	03/18/2009	U
Aroclor 1242	ND	0.306	ug/g	03/18/2009	U
Aroclor 1248	ND	0.306	ug/g	03/18/2009	U
Aroclor 1254	4.74	0.306	ug/g	03/18/2009	AF
Aroclor 1260	ND	0.306	ug/g	03/18/2009	U
Total PCB Amount > Reporting Limit	4.74				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NEA
NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
3/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23D (0-1)	**NEA ID:** AM02176	**NEA LRF:** 09030051-02
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:30
DATE RECEIVED:	3/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0545	ug/g	03/18/2009	U
Aroclor 1221	ND	0.0545	ug/g	03/18/2009	U
Aroclor 1232	ND	0.0545	ug/g	03/18/2009	U
Aroclor 1242	ND	0.0545	ug/g	03/18/2009	U
Aroclor 1248	ND	0.0545	ug/g	03/18/2009	U
Aroclor 1254	1.50	0.0545	ug/g	03/18/2009	AF
Aroclor 1260	ND	0.0545	ug/g	03/18/2009	U
Total PCB Amount > Reporting Limit	1.50				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
3/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23D (1-3)	**NEA ID:** AM02177	**NEA LRF:** 09030051-03
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:35
DATE RECEIVED:	3/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.532	ug/g	03/18/2009	U
Aroclor 1221	ND	0.532	ug/g	03/18/2009	U
Aroclor 1232	ND	0.532	ug/g	03/18/2009	U
Aroclor 1242	ND	0.532	ug/g	03/18/2009	U
Aroclor 1248	ND	0.532	ug/g	03/18/2009	U
Aroclor 1254	19.9	0.532	ug/g	03/18/2009	AF
Aroclor 1260	ND	0.532	ug/g	03/18/2009	U
Total PCB Amount > Reporting Limit	19.9				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS

03/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23E (0-1)	**NEA ID:** AM02168	**NEA LRF:** 09030050-14
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 12:10
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.568	ug/g	03/16/2009	U
Aroclor 1221	ND	0.568	ug/g	03/16/2009	U
Aroclor 1232	ND	0.568	ug/g	03/16/2009	U
Aroclor 1242	ND	0.568	ug/g	03/16/2009	U
Aroclor 1248	ND	0.568	ug/g	03/16/2009	U
Aroclor 1254	13.5	0.568	ug/g	03/16/2009	AF
Aroclor 1260	ND	0.568	ug/g	03/16/2009	U
Total PCB Amount > Reporting Limit	13.5				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/18/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23E (1-3)	**NEA ID:** AM02169	**NEA LRF:** 09030050-15
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 12:15
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.601	ug/g	03/16/2009	U
Aroclor 1221	ND	0.601	ug/g	03/16/2009	U
Aroclor 1232	ND	0.601	ug/g	03/16/2009	U
Aroclor 1242	ND	0.601	ug/g	03/16/2009	U
Aroclor 1248	ND	0.601	ug/g	03/16/2009	U
Aroclor 1254	16.8	0.601	ug/g	03/16/2009	AF
Aroclor 1260	ND	0.601	ug/g	03/16/2009	U
Total PCB Amount > Reporting Limit	16.8				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23G (0-1)	**NEA ID:** AM02180	**NEA LRF:** 09030051-06
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:50
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0570	ug/g	03/20/2009	U
Aroclor 1221	ND	0.0570	ug/g	03/20/2009	U
Aroclor 1232	ND	0.0570	ug/g	03/20/2009	U
Aroclor 1242	ND	0.0570	ug/g	03/20/2009	U
Aroclor 1248	ND	0.0570	ug/g	03/20/2009	U
Aroclor 1254	0.943	0.0570	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.0570	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	0.943				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23G (1-3)	**NEA ID:** AM02181	**NEA LRF:** 09030051-07
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 13:55
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.282	ug/g	03/20/2009	U
Aroclor 1221	ND	0.282	ug/g	03/20/2009	U
Aroclor 1232	ND	0.282	ug/g	03/20/2009	U
Aroclor 1242	ND	0.282	ug/g	03/20/2009	U
Aroclor 1248	ND	0.282	ug/g	03/20/2009	U
Aroclor 1254	4.94	0.282	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.282	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	4.94				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23H (0-1)	**NEA ID:** AM02166	**NEA LRF:** 09030050-12
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 12:00
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.118	ug/g	03/20/2009	U
Aroclor 1221	ND	0.118	ug/g	03/20/2009	U
Aroclor 1232	ND	0.118	ug/g	03/20/2009	U
Aroclor 1242	ND	0.118	ug/g	03/20/2009	U
Aroclor 1248	ND	0.118	ug/g	03/20/2009	U
Aroclor 1254	2.53	0.118	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.118	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	2.53				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23H (1-3)	**NEA ID:** AM02167	**NEA LRF:** 09030050-13
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 12:05
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0631	ug/g	03/20/2009	U
Aroclor 1221	ND	0.0631	ug/g	03/20/2009	U
Aroclor 1232	ND	0.0631	ug/g	03/20/2009	U
Aroclor 1242	ND	0.0631	ug/g	03/20/2009	U
Aroclor 1248	ND	0.0631	ug/g	03/20/2009	U
Aroclor 1254	0.0843	0.0631	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.0631	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	0.0843				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
Note: There were several non-target peaks.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23I (0-1)	**NEA ID:** AM02164	**NEA LRF:** 09030050-10
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 11:50
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.230	ug/g	03/20/2009	U
Aroclor 1221	ND	0.230	ug/g	03/20/2009	U
Aroclor 1232	ND	0.230	ug/g	03/20/2009	U
Aroclor 1242	ND	0.230	ug/g	03/20/2009	U
Aroclor 1248	ND	0.230	ug/g	03/20/2009	U
Aroclor 1254	4.70	0.230	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.230	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	4.70				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

NORTHEAST ANALYTICAL LABS

CERTIFICATE OF ANALYSIS
03/20/2009
TRC ENVIRONMENTAL
WANNALANCIT MILLS
650 SUFFOLK ST
LOWELL, MA 01854
CONTACT: DAVID SULLIVAN

CUSTOMER ID:	HB-23I (1-3)	**NEA ID:** AM02165	**NEA LRF:** 09030050-11
MATRIX:	SOIL	**DATE SAMPLED:** 03/10/2009	**TIME:** 11:55
DATE RECEIVED:	03/11/2009 **TIME:** 09:12	**PROJECT:**	115058 NBHS PCB SAMPLING
SAMPLED BY:	SAUNDERS/KITCHIN	**LOCATION:**	NEW BEDFORD, MA
CUSTOMER PO:	N/A	**LAB ELAP#:**	11078

PARAMETER PERFORMED	RESULTS	PQL	UNITS	DATE ANALYZED	FLAGS
SW-846 8082 (PCB)					
Aroclor 1016	ND	0.0645	ug/g	03/20/2009	U
Aroclor 1221	ND	0.0645	ug/g	03/20/2009	U
Aroclor 1232	ND	0.0645	ug/g	03/20/2009	U
Aroclor 1242	ND	0.0645	ug/g	03/20/2009	U
Aroclor 1248	ND	0.0645	ug/g	03/20/2009	U
Aroclor 1254	0.517	0.0645	ug/g	03/20/2009	AF
Aroclor 1260	ND	0.0645	ug/g	03/20/2009	U
Total PCB Amount > Reporting Limit	0.517				

Notes: ND (Not Detected). Denotes analyte not detected at a concentration greater than the PQL.
PQL (Practical Quantitation Limit). Denotes lowest analyte concentration reportable for the sample.
AF-Aroclor 1254 is being reported as the best Aroclor match. The sample exhibits an altered PCB pattern.
Note: There were several non-target peaks.

AUTHORIZED SIGNATURE:

William A. Kotas
Sr. Laboratory Representative

Robert E. Wagner
Laboratory Director

2190 Technology Drive Schenectady, NY 12308 Phone 518.346.4592 Fax 518.381.6055 Email : information@nealab.com

Massachusetts Department of Environmental Protection **BWSC-012B**

Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

SUMMARY SHEET 1 OF 1

Release Tracking Number: 4 - 21407

I. LOAD INFORMATION:

Load 1:
Date of Shipment: 3/28/09 Time of Shipment: 08:15 ☒ AM ☐ PM
Truck/Tractor Registration: 64198 MA (APPORTIONED) Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: 3-28-09 Time of Receipt: 8:24 ☒ AM ☐ PM
Load Size (cu. yds./tons): 15y. 16.70Ton

Load 2:
Date of Shipment: 3-28-09 Time of Shipment: 0915 ☒ AM ☐ PM
Truck/Tractor Registration: 64198 Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: 3-28-09 Time of Receipt: 9:25 ☒ AM ☐ PM
Load Size (cu. yds./tons): 15y 18.92Tons

Load 3:
Date of Shipment: 3-28-09 Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: 64198 Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 4:
Date of Shipment: Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 5:
Date of Shipment: Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

Load 6:
Date of Shipment: Time of Shipment: ☐ AM ☐ PM
Truck/Tractor Registration: Trailer Registration (if any):
Signature of Transporter Representative:
Receiving Facility/Temporary Storage Representative:
Date of Receipt: Time of Receipt: ☐ AM ☐ PM
Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume Recorded This Page (cu. yds./tons)
Total Carried Forward (cu. yds./tons):
Total Carried Forward and This Page (cu. yds./tons):

Massachusetts Department of Environmental Protection **BWSC-012B**

Bureau of Waste Site Cleanup

BILL OF LADING (pursuant to 310 CMR 40.0030)

SUMMARY SHEET 1 **OF** 1

Release Tracking Number: 4 - 21407

I. LOAD INFORMATION: Signature of Transporter Representative:

Load 1:

Date of Shipment: 3-28-09 Time of Shipment: 750 ☒ AM ☐ PM

Truck/Tractor Registration: L61326 Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 3/28/09 Time of Receipt: 08:01 ☒ AM ☐ PM

Load Size (cu. yds./tons): 15 16.71 Tons

Load 2: Signature of Transporter Representative:

Date of Shipment: 3-28-09 Time of Shipment: 855 ☒ AM ☐ PM

Truck/Tractor Registration: ~~6[illegible]~~ L61326 Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 3-28-09 Time of Receipt: 859 ☒ AM ☐ PM

Load Size (cu. yds./tons): 15Y 17.85Ton

Load 3: Signature of Transporter Representative:

Date of Shipment: 3/28/08 Time of Shipment: 9:45 ☐ AM ☐ PM

Truck/Tractor Registration: L61326 Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 3-28-09 Time of Receipt: 10:01 ☒ AM ☐ PM

Load Size (cu. yds./tons): 15Y 16.23 Tons

Load 4: Signature of Transporter Representative:

Date of Shipment: Time of Shipment: ☐ AM ☐ PM

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: Time of Receipt: ☐ AM ☐ PM

Load Size (cu. yds./tons):

Load 5: Signature of Transporter Representative:

Date of Shipment: Time of Shipment: ☐ AM ☐ PM

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: Time of Receipt: ☐ AM ☐ PM

Load Size (cu. yds./tons):

Load 6: Signature of Transporter Representative:

Date of Shipment: Time of Shipment: ☐ AM ☐ PM

Truck/Tractor Registration: Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: Time of Receipt: ☐ AM ☐ PM

Load Size (cu. yds./tons):

J. LOG SHEET VOLUME INFORMATION:

Total Volume Recorded This Page (cu. yds./tons)

Total Carried Forward (cu. yds./tons):

Total Carried Forward and This Page (cu. yds./tons):

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012C

BILL OF LADING (pursuant to 310 CMR 40.0030)

SUMMARY SHEET 1 **OF** 1

Release Tracking Number

4 - 21847

K. SUMMARY OF SHIPMENTS:

Date of Shipment:	Date of Receipt:	Number of Loads Shipped:	Daily Volume Shipped (cu. yds./tons):
3/28/09	3/28/09	5	86.41
Summary Sheet Total Shipped:			
Bill of Lading Total Shipped (only if different):			

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012C

BILL OF LADING (pursuant to 310 CMR 40.0030

SUMMARY SHEET

Release Tracking Number
4 - 21847

ONLY COMPLETE ONE COPY OF THIS PAGE AND ATTACH TO THE FINAL COPY OF THE SUMMARY SHEET.

L. ACKNOWLEDGMENT OF RECEIPT OF REMEDIATION WASTE AT RECEIVING FACILITY OR TEMPORARY STORAGE:

Receiving Facility/Temporary Storage Representative (print): JAMES CORRIGAN Title: TRUCK DRIVER

Signature: [signature] Date: 3-28-2009

M. ACKNOWLEDGMENT OF SHIPMENT AND RECEIPT OF REMEDIATION WASTE BY PERSON CONDUCTING RESPONSE ACTION ASSOCIATED WITH THIS BILL OF LADING:

I certify under penalties of law that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this certification, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in herein is, to the best of my knowledge and belief, true, accurate and complete, I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

Signature: _____ Date: _____

Name of Person (print): _____

APPENDIX D

COPIES OF NOTIFICATION LETTERS TO CITY OF NEW BEDFORD MAYOR AND BOARD OF HEALTH

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854

978.970.5600 PHONE
978.453.1995 FAX

www.TRCsolutions.com

May 15, 2009

TRC Reference Number: 115058.0000

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

RE: Notice of Immediate Response Action Plan
New Bedford High School – HB-23 Soil Removal, New Bedford, Massachusetts;
MassDEP RTN 4-21847

Ms. De Souza:

On behalf of the City of New Bedford, Massachusetts, 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 the submittal of an Immediate Response Action Plan pertaining to soils containing PCBs at the New Bedford High School in New Bedford, Massachusetts. This submittal will be made to the Massachusetts Department of Environmental Protection (MassDEP) by May 18, 2009.

A copy of this document can be obtained from David Fredette in the Department of Environmental Stewardship. If you have any questions concerning this letter please contact me at (978) 656-3565.

Sincerely,
TRC Environmental Corporation

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

Cc: David Fredette, New Bedford Department of Environmental Stewardship

Wannalancit Mills
650 Suffolk Street
Lowell, MA 01854

978.970.5600 PHONE
978.453.1995 FAX

www.TRCsolutions.com

May 15, 2009

TRC Reference Number: 115058.0000

Mayor Scott W. Lang
City Hall, Room 311
133 William Street
New Bedford, MA 02740

RE: Notice of Immediate Response Action Plan
New Bedford High School – HB-23 Soil Removal, New Bedford, Massachusetts;
MassDEP RTN 4-21847

Mayor Lang:

On behalf of the City of New Bedford, Massachusetts, 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 the submittal of an Immediate Response Action Plan pertaining to soils containing PCBs at the New Bedford High School in New Bedford, Massachusetts. This submittal will be made to the Massachusetts Department of Environmental Protection (MassDEP) by May 18, 2009.

A copy of this document can be obtained from David Fredette in the Department of Environmental Stewardship. If you have any questions concerning this letter please contact me at (978) 656-3565.

Sincerely,
TRC Environmental Corporation

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

Cc: David Fredette, New Bedford Department of Environmental Stewardship

APPENDIX E

DUST MONITORING RESULTS

TrakPro Version 3.6.2 ASCII Data File
Model:,Dust Trak
Model Number:,8520
Serial Number:,85202265
Test ID:,001
Test Abbreviation:,
Start Date:,03/28/2009
Start Time:,07:29:41
Duration (dd:hh:mm:ss):,00:03:54:00
Time constant (seconds):,10
Log Interval (mm:ss):,01:00
Number of points:,234
Notes:,

Statistics,Channel:,Aerosol
,Units:,mg/m^3
,Average:,0.004
,Minimum:,0.000
,Time of Minimum:,09:15:41
,Date of Minimum:,03/28/2009
,Maximum:,0.031
,Time of Maximum:,08:57:41
,Date of Maximum:,03/28/2009

Calibration,Sensor:,Aerosol
,Cal. date,01/18/2008

Date,Time,Aerosol
MM/dd/yyyy,hh:mm:ss,mg/m^3
03/28/2009,07:30:41,0.012
03/28/2009,07:31:41,0.007
03/28/2009,07:32:41,0.006
03/28/2009,07:33:41,0.007
03/28/2009,07:34:41,0.008
03/28/2009,07:35:41,0.010
03/28/2009,07:36:41,0.010
03/28/2009,07:37:41,0.014
03/28/2009,07:38:41,0.013
03/28/2009,07:39:41,0.011
03/28/2009,07:40:41,0.014
03/28/2009,07:41:41,0.008
03/28/2009,07:42:41,0.012
03/28/2009,07:43:41,0.013
03/28/2009,07:44:41,0.011
03/28/2009,07:45:41,0.013
03/28/2009,07:46:41,0.013
03/28/2009,07:47:41,0.013
03/28/2009,07:48:41,0.011
03/28/2009,07:49:41,0.009
03/28/2009,07:50:41,0.010
03/28/2009,07:51:41,0.015
03/28/2009,07:52:41,0.011
03/28/2009,07:53:41,0.010
03/28/2009,07:54:41,0.009
03/28/2009,07:55:41,0.006
03/28/2009,07:56:41,0.004
03/28/2009,07:57:41,0.003
03/28/2009,07:58:41,0.002
03/28/2009,07:59:41,0.005
03/28/2009,08:00:41,0.004
03/28/2009,08:01:41,0.005
03/28/2009,08:02:41,0.007
03/28/2009,08:03:41,0.005

03/28/2009,08:04:41,0.008
03/28/2009,08:05:41,0.008
03/28/2009,08:06:41,0.014
03/28/2009,08:07:41,0.007
03/28/2009,08:08:41,0.004
03/28/2009,08:09:41,0.005
03/28/2009,08:10:41,0.011
03/28/2009,08:11:41,0.012
03/28/2009,08:12:41,0.006
03/28/2009,08:13:41,0.006
03/28/2009,08:14:41,0.007
03/28/2009,08:15:41,0.006
03/28/2009,08:16:41,0.005
03/28/2009,08:17:41,0.004
03/28/2009,08:18:41,0.005
03/28/2009,08:19:41,0.005
03/28/2009,08:20:41,0.005
03/28/2009,08:21:41,0.012
03/28/2009,08:22:41,0.014
03/28/2009,08:23:41,0.005
03/28/2009,08:24:41,0.009
03/28/2009,08:25:41,0.004
03/28/2009,08:26:41,0.003
03/28/2009,08:27:41,0.004
03/28/2009,08:28:41,0.003
03/28/2009,08:29:41,0.003
03/28/2009,08:30:41,0.003
03/28/2009,08:31:41,0.003
03/28/2009,08:32:41,0.003
03/28/2009,08:33:41,0.003
03/28/2009,08:34:41,0.003
03/28/2009,08:35:41,0.003
03/28/2009,08:36:41,0.003
03/28/2009,08:37:41,0.002
03/28/2009,08:38:41,0.003
03/28/2009,08:39:41,0.014
03/28/2009,08:40:41,0.013
03/28/2009,08:41:41,0.003
03/28/2009,08:42:41,0.004
03/28/2009,08:43:41,0.008
03/28/2009,08:44:41,0.010
03/28/2009,08:45:41,0.002
03/28/2009,08:46:41,0.004
03/28/2009,08:47:41,0.007
03/28/2009,08:48:41,0.003
03/28/2009,08:49:41,0.003
03/28/2009,08:50:41,0.003
03/28/2009,08:51:41,0.004
03/28/2009,08:52:41,0.002
03/28/2009,08:53:41,0.003
03/28/2009,08:54:41,0.005
03/28/2009,08:55:41,0.005
03/28/2009,08:56:41,0.012
03/28/2009,08:57:41,0.031
03/28/2009,08:58:41,0.005
03/28/2009,08:59:41,0.004
03/28/2009,09:00:41,0.007
03/28/2009,09:01:41,0.003
03/28/2009,09:02:41,0.003
03/28/2009,09:03:41,0.002
03/28/2009,09:04:41,0.003
03/28/2009,09:05:41,0.003
03/28/2009,09:06:41,0.003

03/28/2009,09:07:41,0.007
03/28/2009,09:08:41,0.006
03/28/2009,09:09:41,0.003
03/28/2009,09:10:41,0.002
03/28/2009,09:11:41,0.002
03/28/2009,09:12:41,0.001
03/28/2009,09:13:41,0.004
03/28/2009,09:14:41,0.001
03/28/2009,09:15:41,0.000
03/28/2009,09:16:41,0.002
03/28/2009,09:17:41,0.001
03/28/2009,09:18:41,0.000
03/28/2009,09:19:41,0.000
03/28/2009,09:20:41,0.000
03/28/2009,09:21:41,0.002
03/28/2009,09:22:41,0.002
03/28/2009,09:23:41,0.007
03/28/2009,09:24:41,0.007
03/28/2009,09:25:41,0.002
03/28/2009,09:26:41,0.002
03/28/2009,09:27:41,0.000
03/28/2009,09:28:41,0.004
03/28/2009,09:29:41,0.001
03/28/2009,09:30:41,0.001
03/28/2009,09:31:41,0.002
03/28/2009,09:32:41,0.004
03/28/2009,09:33:41,0.003
03/28/2009,09:34:41,0.004
03/28/2009,09:35:41,0.008
03/28/2009,09:36:41,0.005
03/28/2009,09:37:41,0.000
03/28/2009,09:38:41,0.001
03/28/2009,09:39:41,0.001
03/28/2009,09:40:41,0.001
03/28/2009,09:41:41,0.001
03/28/2009,09:42:41,0.000
03/28/2009,09:43:41,0.000
03/28/2009,09:44:41,0.000
03/28/2009,09:45:41,0.000
03/28/2009,09:46:41,0.002
03/28/2009,09:47:41,0.003
03/28/2009,09:48:41,0.000
03/28/2009,09:49:41,0.002
03/28/2009,09:50:41,0.004
03/28/2009,09:51:41,0.000
03/28/2009,09:52:41,0.001
03/28/2009,09:53:41,0.003
03/28/2009,09:54:41,0.001
03/28/2009,09:55:41,0.000
03/28/2009,09:56:41,0.000
03/28/2009,09:57:41,0.000
03/28/2009,09:58:41,0.000
03/28/2009,09:59:41,0.000
03/28/2009,10:00:41,0.001
03/28/2009,10:01:41,0.001
03/28/2009,10:02:41,0.001
03/28/2009,10:03:41,0.000
03/28/2009,10:04:41,0.001
03/28/2009,10:05:41,0.001
03/28/2009,10:06:41,0.001
03/28/2009,10:07:41,0.000
03/28/2009,10:08:41,0.000
03/28/2009,10:09:41,0.000

03/28/2009,10:10:41,0.000
03/28/2009,10:11:41,0.000
03/28/2009,10:12:41,0.000
03/28/2009,10:13:41,0.001
03/28/2009,10:14:41,0.001
03/28/2009,10:15:41,0.001
03/28/2009,10:16:41,0.001
03/28/2009,10:17:41,0.001
03/28/2009,10:18:41,0.000
03/28/2009,10:19:41,0.000
03/28/2009,10:20:41,0.003
03/28/2009,10:21:41,0.003
03/28/2009,10:22:41,0.002
03/28/2009,10:23:41,0.002
03/28/2009,10:24:41,0.002
03/28/2009,10:25:41,0.002
03/28/2009,10:26:41,0.002
03/28/2009,10:27:41,0.003
03/28/2009,10:28:41,0.003
03/28/2009,10:29:41,0.002
03/28/2009,10:30:41,0.002
03/28/2009,10:31:41,0.003
03/28/2009,10:32:41,0.001
03/28/2009,10:33:41,0.002
03/28/2009,10:34:41,0.001
03/28/2009,10:35:41,0.001
03/28/2009,10:36:41,0.000
03/28/2009,10:37:41,0.000
03/28/2009,10:38:41,0.001
03/28/2009,10:39:41,0.000
03/28/2009,10:40:41,0.001
03/28/2009,10:41:41,0.000
03/28/2009,10:42:41,0.002
03/28/2009,10:43:41,0.003
03/28/2009,10:44:41,0.001
03/28/2009,10:45:41,0.002
03/28/2009,10:46:41,0.000
03/28/2009,10:47:41,0.000
03/28/2009,10:48:41,0.000
03/28/2009,10:49:41,0.001
03/28/2009,10:50:41,0.005
03/28/2009,10:51:41,0.000
03/28/2009,10:52:41,0.000
03/28/2009,10:53:41,0.001
03/28/2009,10:54:41,0.000
03/28/2009,10:55:41,0.000
03/28/2009,10:56:41,0.000
03/28/2009,10:57:41,0.000
03/28/2009,10:58:41,0.000
03/28/2009,10:59:41,0.000
03/28/2009,11:00:41,0.000
03/28/2009,11:01:41,0.000
03/28/2009,11:02:41,0.007
03/28/2009,11:03:41,0.000
03/28/2009,11:04:41,0.001
03/28/2009,11:05:41,0.004
03/28/2009,11:06:41,0.001
03/28/2009,11:07:41,0.006
03/28/2009,11:08:41,0.007
03/28/2009,11:09:41,0.002
03/28/2009,11:10:41,0.003
03/28/2009,11:11:41,0.001
03/28/2009,11:12:41,0.001

```
03/28/2009,11:13:41,0.002
03/28/2009,11:14:41,0.002
03/28/2009,11:15:41,0.004
03/28/2009,11:16:41,0.002
03/28/2009,11:17:41,0.001
03/28/2009,11:18:41,0.001
03/28/2009,11:19:41,0.003
03/28/2009,11:20:41,0.002
03/28/2009,11:21:41,0.005
03/28/2009,11:22:41,0.002
03/28/2009,11:23:41,0.002
```

APPENDIX F

BORING LOGS

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23A
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Center point of delineation ("A")
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/36		S-1		8" Dark brown organic TOPSOIL, trace roots and grass, slightly moist, no odor, no staining.			
						6" Dark brown SILT with trace to little fill (coal, slag, glass), slightly moist, no odor, no staining.		HB-23A(0-1) 1320	
1						22" FILL (ash, coal, slag, and glass, mottled clay (very dense) from 30-34 inches), slighly moist, no odor, no staining.			
2							0.0	HB-23A(1-3) 1325	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23B
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 10 feet West of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck

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

NOTES Samples collected analyzed for PCBs, MS/DUP QC Volume collected at HB-23B(1-3) sample location

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/36		S-1		8" Dark brown organic TOPSOIL, trace roots and grass, slightly moist, no odor, no staining.			
						28" FILL (ash, coal, slag and glass), slightly moist, no odor, no staining.		HB-23B(0-1) 1310	
1									
2							0.0	HB-23B(1-3) 1315	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23C
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 10 feet South of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/30		S-1		8" Dark brown organic TOPSOIL, trace roots, grass, and fine gravel, trace glass, slightly moist, no odor, no staining.			
						22" FILL (ash, coal, slag, glass, trace plastic), slightly moist, no odor, no staining.		HB-23C(0-1) 1340	
1									
2							0.0	HB-23C(1-3) 1345	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23D
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 10 feet East of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/30		S-1		12" Dark brown organic TOPSOIL, trace roots, grass, fine gravel, glass and coal, slightly moist, no odor, no staining.		HB-23D(0-1) 1330	
1						18" Tan fine SAND, little silt, trace medium to coarse sand, slightly moist, no odor, no staining (note: no fill at depth, could be close to drain line in area).	0.0	HB-23D(1-3) 1335	No Monitoring Well Installed
2									
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23E
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 10 feet North of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/32		S-1		18" Dark brown organic TOPSOIL, trace grass, roots, fine gravel, and fill (glass, gray silty material), slightly moist, no odor, no staining.		HB-23E(0-1) 1210	
1									
						14" FILL (ash, coal, slag, glass, trace possible roofing shingle, trace brick), slightly moist to moist, no odor, no staining.	0.0	HB-23E(1-3) 1215	No Monitoring Well Installed
2									
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23F
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 20 feet South of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs (Hold)

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/30		S-1		8" Dark brown organic TOPSOIL, trace roots and grass, slightly moist, no odor, no staining.			
1						22" FILL (ash, coal, slag, glass), slightly moist, no odor, no staining.		HB-23F(0-1) 1410	
2							0.0	HB-23F(1-3) 1415	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23G
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 20 feet Southeast of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs (Hold)

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/36		S-1		8" Dark brown organic TOPSOIL, trace roots, grass, and fine gravel.			
						2" Gray fine SAND, slightly moist, no odor, no staining.		HB-23G(0-1) 1350	
1						10" Dark brown SILT and fine SAND, little to some fill (coal, slag, glass, and possible ash), slightly moist, no odor, no staining.			
2							0.0	HB-23G(1-3) 1355	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23H
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 20 feet Northeast of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/30		S-1		8" Dark brown organic TOPSOIL, trace roots, grass, and fine gravel, slightly moist, no odor, no staining.		HB-23H(0-1) 1200	
1						22" FILL (ash, coal, slag, glass, trace rusty coloration), slightly moist to moist, no odor, no staining. Note black material at 2 feet has slight creosote odor.			
2							0.0	HB-23H(1-3) 1205	No Monitoring well installed
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23I
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 20 feet Northwest of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs (Hold)

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/38		S-1		8" Dark brown organic TOPSOIL, trace roots and grass, slightly moist, no odor, no staining.		HB-23I(0-1) 1150	
1						8" Dark brown SILT and fine SAND, some fill (glass, coal, and slag).			
						22" FILL (ash, slag, coal, glass, trace rusty coloration), slightly moist, no odor, no staining.	0.0	HB-23I(1-3) 1155	No Monitoring Well Installed
2									
3									
4						End of Boring - Terminated at 4 feet			

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

BORING/WELL CONSTRUCTION LOG

CLIENT/PROJECT NUMBER City of New Bedford (NBHS)/115058
BORING/WELL NUMBER HB-23J
TRC GEOLOGIST J. Saunders
DRILLING CONTRACTOR/FOREMAN New England Geotech/Bill Meadows
DATE DRILLED 3/10/09
LOCATION Approximately 20 feet West of Center point "A"
SAMPLING METHOD 48" Macrocore
DRILLING METHOD Direct Push/5400 Truck
NOTES Samples collected analyzed for PCBs (Hold)

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

DEPTH (ft. BGL)	BLOW COUNTS	PEN/REC (INCHES)	CORE #	TRC ID	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	Field Testing (ppm)	SAMPLE ID/ TIME	WELL DIAGRAM
	NA	48/34		S-1		8" Dark brown organic TOPSOIL, trace roots, grass, fine gravel and glass, slightly moist, no odor, no staining.		HB-23J(0-1) 1300	
1						12" Tan fine SAND, little silt and medium to coarse sand, trace fine gravel, slightly moist, no odor, no staining.			
2						2" Dark brown SILT, trace roots, slightly moist, no odor, no staining. 12" Tan fine SAND, trace to little medium to coarse sand, trace fine gravel, slightly moist, no odor, no staining.	0.0	HB-23J(1-3) 1305	No Monitoring Well Installed
3									
4						End of Boring - Terminated at 4 feet			