



**TIER CLASSIFICATION TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0500 (Subpart E)

Release Tracking Number

-

**A. DISPOSAL SITE LOCATION:**

1. Disposal Site Name: New Bedford High School - Mechanical Room

2. Street Address: 230 Hathaway Blvd

3. City/Town: New Bedford      4. ZIP Code: 02740

5. Coordinates:      Latitude: N 4612193      Longitude: W 337849

**B. THIS FORM IS BEING USED TO:** (check all that apply)

1. Submit a new **Tier Classification Submittal**, including a **Tier Classification Compliance History** (BWSC107B).  
Check the tier classification category:
- a. Tier I       b. Tier II
- c. Check all Tier I criteria that apply, pursuant to 310 CMR 40.0520(2):
- i. Groundwater is located within an Interim Wellhead Protection Area, Zone II, or within 500 feet of a Private Water Supply Well, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.
  - ii. An Imminent Hazard is present at the time of Tier Classification.
  - iii. One or more remedial actions are required as part of an Immediate Response Action pursuant to 310 CMR 40.0414(2).
  - iv. One or more response actions are required as part of an Immediate Response Action to eliminate or mitigate a Critical Exposure Pathway pursuant to 310 CMR 40.0414(3).
- d. Check here if including an **Eligible Person, Eligible Tenant, or Other Person Certification** (BWSC107D)
2. Submit a **Phase I Completion Statement** as per 310 CMR 40.0480.  
If previously submitted, provide date \_\_\_\_\_  
mm/dd/yyyy
3. Submit a **Phase II Scope of Work** as per 310 CMR 40.0834.  
If previously submitted, provide date \_\_\_\_\_  
mm/dd/yyyy
4. Submit a **Phase II Conceptual Scope of Work supporting a Tier Classification Submittal**.
5. Submit a **Tier Classification Extension Submittal** for Response Actions at a Tier Classified Site including the **Tier Classification Compliance History** (BWSC107B).
6. Submit a Tier Classification Transfer Submittal for a change in person(s) undertaking Response Actions at a Tier Classified Site including the **Tier Classification Compliance History** (BWSC107B) and the **Tier Classification Transferor Certification** (BWSC107C).  
Proposed effective date of transfer : \_\_\_\_\_  
mm/dd/yyyy



**TIER CLASSIFICATION TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0500 (Subpart E)

Release Tracking Number

-

**B. THIS FORM IS BEING USED TO: (cont.)**

7. Submit a **Revised Tier Classification Submittal**.

Check the revised Tier Classification Category. If the Tier Classification Category is not changing, indicate the current classification.

- a. Tier I       b. Tier II

c. Check all Tier I criteria that apply, pursuant to 310 CMR 40.0520(2):

- i. Groundwater is located within an Interim Wellhead Protection Area, Zone II, or within 500 feet of a Private Water Supply Well, and there is evidence of groundwater contamination by an Oil or Hazardous Material at the time of Tier Classification at concentrations equal to or exceeding the applicable RCGW-1 Reportable Concentration set forth in 310 CMR 40.0360.
- ii. An Imminent Hazard is present at the time of Tier Classification.
- iii. One or more remedial actions are required as part of an Immediate Response Action pursuant to 310 CMR 40.0414(2).
- iv. One or more response actions are required as part of an Immediate Response Action to eliminate or mitigate a Critical Exposure Pathway pursuant to 310 CMR 40.0414(3).

d. Check here if including an **Eligible Person, Eligible Tenant, or Other Person Certification** (BWSC107D)

8. Provide a **Notice that an additional Release Tracking Number(s) is (are) being linked to this Tier Classified Site** (Primary RTN). Future response actions addressing the Release or Threat of Release notification condition associated with additional Release Tracking Numbers (RTNs) will be conducted as part of the Response Actions planned or ongoing at the Primary Site listed above. For a previously Tier Classified Primary Site, if there is a reasonable likelihood that the addition of the new secondary RTN(s) would change the classification of the site, a **Revised Tier Classification Submittal** must also be made.

Provide Release Tracking Number(s):    a.  -     b.  -

All future Response Actions must occur according to the deadlines applicable to the Primary RTN. Use only the Primary RTN when making future submittals for this site unless specifically relating to response actions started before the linking occurred.



**TIER CLASSIFICATION TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0500 (Subpart E)

Release Tracking Number

4 - 22409

**C. LSP SIGNATURE AND STAMP:**

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, 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 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B of this form indicates that a **Tier Classification Submittal** is being submitted, this Tier Classification Submittal has been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Phase I Completion Statement** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Phase II Scope of Work** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B of this form indicates that a **Tier Classification Extension Submittal** or a **Tier Classification Transfer Submittal** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified 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.

1. LSP #: 1488

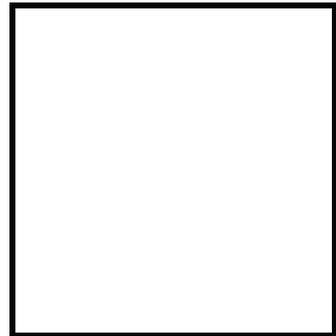
2. First Name: David 3. Last Name: Sullivan

4. Telephone: 978-656-3565 5. Ext.: \_\_\_\_\_ 6. Email: dsullivan@trcsolutions.com

7. Signature: David M. Sullivan  
Digitally signed by David M. Sullivan  
DN: cn=David M. Sullivan, o=TRC Environmental Corporation, ou,  
email=dsullivan@trcsolutions.com, c=US  
Date: 2014.02.25 10:49:06 -05'00'

8. Date: 4/17/2014  
mm/dd/yyyy

9. LSP Stamp:





**TIER CLASSIFICATION TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0500 (Subpart E)

Release Tracking Number

4 - 22409

**D. PERSON MAKING SUBMITTAL:**

1. Check all that apply:  a. change in contact name  b. change of address  c. change in the person undertaking response actions
2. Name of Organization: City of New Bedford
3. Contact First Name: Michele 4. Last Name: Paul
5. Street: 133 William Street 6. Title: Director, Environmental Stewardship
7. City/Town: New Bedford 8. State: MA 9. ZIP Code: 02740
10. Telephone: 508-979-1527 11. Ext.: \_\_\_\_\_ 12. Email: \_\_\_\_\_

**E. RELATIONSHIP OF PERSON MAKING SUBMITTAL TO DISPOSAL SITE:**

Check here to change relationship

1. RP or PRP  a. Owner  b. Operator  c. Generator  d. Transporter

e. Other RP or PRP Specify: Non-specified PRP

2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

4. Any Other Person Making Submittal Specify Relationship: \_\_\_\_\_

**F. REQUIRED ATTACHMENT AND SUBMITTALS:**

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.
3. Check here to certify that a copy of the Legal Notice of a Tier Classification or Re-classification Submittal is attached, and a cover letter and a copy of the notice is sent to the Chief Municipal Officer and the Local Board of Health pursuant to 310 CMR 40.0510(3) and 40.1403.
4. Check here to certify that the owner of a Public Water Supply has been provided written notice pursuant to 310 CMR 40.0510(3).
5. For a Tier Classification Extension Submittal, check here to certify that a statement summarizing why a Permanent or Temporary Solution has not been achieved at the Disposal Site is attached.
6. For a Tier Classification Transfer Submittal, check here to certify that a statement summarizing the reasons for the proposed change in person(s) undertaking the Response Actions is attached. All Response Actions must be completed by the deadline applicable to the person who first filed either a Tier Classification Submittal for the Disposal Site.
7. Check here if any non-updatable information provided on this form is incorrect, e.g., Release Address/Location Aid. Send corrections to bwsc.edep@state.ma.us.
8. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



**TIER CLASSIFICATION TRANSMITTAL FORM**

Pursuant to 310 CMR 40.0500 (Subpart E)

4 - 22409

**G. CERTIFICATION OF PERSON MAKING SUBMITTAL:**

1. I, Michele Paul, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

If submitting a Tier II Classification, Extension or Transfer, I also attest under the pains and penalties of perjury that (i) I/the person(s) or entity(ies) on whose behalf this submittal is made has/have personally examined and am/is familiar with the requirements of M.G.L. c. 21E and 310 CMR 40.0000; (ii) based upon my inquiry of the/those Licensed Site Professional(s) employed or engaged to render Professional Services for the disposal site which is the subject of this Transmittal Form and of the person(s) or entity(ies) on whose behalf this submittal is made, and my/that person's(s') or entity's(ies)' understanding as to the estimated costs of necessary response actions, that/those person(s) or entity(ies) has/have the technical, financial and legal ability to proceed with response actions for such site in accordance with M.G.L. c. 21E, 310 CMR 40.0000 and other applicable requirements; and (iii) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is aware of the requirements in 310 CMR 40.0172 for notifying the Department in the event that I/the person(s) or entity(ies) on whose behalf this submittal is made learn(s) that it/they is/are unable to proceed with the necessary response actions.

2. By: Michele Paul Digitally signed by Michele Paul  
DN: cn=Michele Paul, c=US, o=City of New Bedford, ou=Department of Environmental Stewardship,  
email=michele.paul@newbedford-ma.gov  
Date: 2014.02.25 10:09:32 -0500 3. Title: Director, Environmental Stewardship

Signature

4. For: City of New Bedford 5. Date: 4/17/2014  
(Name of person or entity recorded in Section D) mm/dd/yyyy

6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: \_\_\_\_\_

8. City/Town: \_\_\_\_\_ 9. State: \_\_\_\_\_ 10. ZIP Code: \_\_\_\_\_

11. Telephone: \_\_\_\_\_ 12. Ext.: \_\_\_\_\_ 13. Email: \_\_\_\_\_

**YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY):





**TIER CLASSIFICATION COMPLIANCE HISTORY**

Pursuant to 310 CMR 40.0540 (Subpart E)

4 - 22409

**A. DISPOSAL SITE COMPLIANCE HISTORY SUMMARY:**

1. Check here if a Tier Classification Compliance History of the person listed in BWSC107, Section D, was previously submitted, and there has been no change in that person's compliance history, or the person in Section D has no compliance history. If this box is checked, this section does not have to be completed.

2. List all permits or licenses that have been issued by the Department that are relevant to this Disposal Site:

Program	Permit Number	Permit Category	Facility ID
a. Air Quality	NA	NA	NA
b. Hazardous Waste (M.G.L. c. 21C)	NA	NA	NA
c. Solid Waste	NA	NA	NA
d. Industrial Wastewater Management	NA	NA	NA
e. Water Supply	NA	NA	NA
f. Water Pollution Control/Surface Water	NA	NA	NA
g. Water Pollution Control/Groundwater	NA	NA	NA
h. Water Pollution Control/Sewer Connection	NA	NA	NA
i. Wetland & Waterways	NA	NA	NA

3. List all other Federal, state or local permits, licenses, certifications, registrations, variances, or approvals that are relevant to this Disposal Site:

Issuing Authority or Program, or Documentation Type	Identification Number	Date Issued mm/dd/yyyy
City of New Bedford - DPI	S-123	03/29/2012
MassDEP Conditional Approval-IRA	NA	02/23/2011

4. Check here to certify that, if needed, a statement further describing the Compliance History of this Disposal Site is attached.

This statement must describe the compliance history of the person or entity named in BWSC107, Section D with the following: (1) DEP regulations; and (2) other laws for the protection of health, safety, public welfare and the environment administered or enforced by any other government agency. Such a statement should identify information such as: (1) actions relevant to the Disposal Site taken by the Department to enforce its requirements including, but not limited to, a Notice of Noncompliance (NON), Notice of Intent to Assess Civil Administrative Penalty (PAN), Notice of Intent to Take Response Action (NORA), and an administrative enforcement order; (2) administrative consent orders; (3) judicial consent judgements; (4) similar administrative actions taken by other Federal, state or local agencies; (5) civil or criminal actions relevant to the Disposal Site brought on behalf of the DEP or other Federal, state, or local agencies; and (6) any additional relevant information. For each action identified, provide the following information: (1) name of the issuing authority, type of action, identification number and date issued; (2) description of noncompliance cited; (3) current status of the matter; and (4) final disposition, if any.

# CONCEPTUAL PHASE II SCOPE OF WORK

## **New Bedford High School Immediate Response Action**

230 Hathaway Boulevard  
New Bedford, Massachusetts  
Release Tracking Number (RTN) 4-22409

---

*Prepared for:*

**Department of Environmental Stewardship**  
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

**April 2014**

## Acronyms

BOD	Biological Oxygen Demand
CEP	Critical Exposure Pathway
DNAPL	Dense Non-Aqueous Phase Liquid
EPA	United States Environmental Protection Agency
IRA	Immediate Response Action
MassDEP	Massachusetts Department of Environmental Protection
MCP	Massachusetts Contingency Plan
MIPS	Membrane Interface Probe System
NBHS	New Bedford High School
PCB	Polychlorinated Biphenyl
POTW	Publicly-Owned Treatment Works
RTN	Release Tracking Number
SOW	Scope of Work
SRM	Substantial Release Migration
TRC	TRC Environmental Corporation
TSS	Total Suspended Solids
VOC	Volatile Organic Compound

## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>2.0</b>	<b>BACKGROUND .....</b>	<b>1</b>
<b>3.0</b>	<b>COMPLIANCE HISTORY (310 CMR 40.0510(e)).....</b>	<b>2</b>
<b>4.0</b>	<b>CONCEPTUAL PHASE II SCOPE OF WORK (310 CMR 40.0510(f)).....</b>	<b>3</b>
4.1	Scope of Work .....	3
4.1.1	Supplemental Soil Investigation .....	4
4.2	Estimated Cost .....	4
4.3	Projected Schedule.....	5
4.4	LSP of Record.....	5
<b>5.0</b>	<b>REFERENCES.....</b>	<b>5</b>

## FIGURES

- Figure 1 Site Location Map  
Figure 2 Approximate Disposal Site Boundary

## 1.0 INTRODUCTION

TRC Environmental Corporation (TRC) is submitting this Conceptual Phase II Scope of Work (SOW) on behalf of the City of New Bedford (the “City”) through the City’s Department of Environmental Stewardship and per the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). Consistent with proposed amendments to the MCP, the following sections provide information associated with the a Tier I Classification Submittal for the Mechanical Room (B-114)/Kitchen Storage (B-155) portions of the New Bedford High School (NBHS) campus located at 230 Hathaway Boulevard in New Bedford, Massachusetts (the “Site”). The following information is also provided per the proposed amendments for Tier Classification under 310 CMR 40.0510.

## 2.0 BACKGROUND

A Condition of Substantial Release Migration (SRM) as defined under 310 CMR 40.0006 of the MCP was discovered in 2010. The SRM condition was discovered during investigation of water pooled on the lower floors of the Mechanical Room (Room B-114) of the NBHS building. TRC collected several samples of the pooled water, which appeared to be seeping through cracks or seams in the floor. Samples were submitted for laboratory analysis. Analytical results for these samples suggested the potential for chlorinated volatile organic compounds (VOCs) to be present in indoor air in the building, which led to the reporting condition and the initiation of IRA assessment activities.

On January 28, 2010 at approximately 3:30 PM, TRC advised the City’s Department of Environmental Stewardship that the seep and impacted water and the underdrain system represented two potential SRM conditions as defined in 310 CMR 40.0006:

- Releases to the groundwater that have migrated or are expected to migrate more than 200 feet per year; or
- Releases to the groundwater or to the vadose zone that have resulted or are within one year likely to result in the discharge of vapors into school buildings or occupied residential dwellings.

Either of these conditions constitute a 72-hour regulatory reporting obligation to the MassDEP in accordance with 310 CMR 40.0313(5). The City reported the condition to the Massachusetts Department of Environmental Protection (MassDEP) per 310 CMR 40.0313(5) and 310 CMR 40.0412(2) via telephone with TRC on January 29, 2010 at approximately 11:05 AM. MassDEP verbally approved Immediate Response Action (IRA) assessment and mitigation activities at the Site, and assigned Release Tracking Number (RTN) 4-22409. An IRA Plan was submitted by the City to MassDEP on March 22, 2010 (TRC, 2010a), with subsequent IRA Plan Modifications submitted in January 2011 (TRC 2011a) and February 2012 (TRC 2012a). The location of the Site is shown on Figure 1.

Following the reporting of the release condition to MassDEP, the City undertook investigations of indoor air, subslab soil vapors, groundwater, aqueous seeps, storm sewer infrastructure, and sanitary sewer infrastructure to evaluate the SRM and the nature and extent of impacts at NBHS. More recently activities have been undertaken to remove impacted groundwater, mitigate its migration and further investigate subsurface impacts. A detailed description of the release discovery at the Mechanical Room area of the NBHS building is presented in the above noted IRA Plan and IRA Plan Modifications, as well as several IRA Status Reports (TRC 2010b & c, TRC 2011b & c and TRC 2012b & c, TRC 2013a & b).

### **3.0 COMPLIANCE HISTORY (310 CMR 40.0510(e))**

Following notification, initial IRA-related activities consisted of monitoring and assessment only. This first IRA Plan Modification (TRC, 2011a) added the removal of chlorinated VOC-impacted groundwater in the vicinity of monitoring well MW-27 by pumping and vacuum extraction (Total Fluid Extraction [TFE]) and off-site disposal in accordance with the previously approved IRA activities. The IRA Plan Modification was conditionally approved by MassDEP on February 23, 2011. The TFE events, supplemental indoor air sampling and supplemental site investigation activities, including the detection of presence of PCBs in the dense non-aqueous phase liquid (DNAPL) in the vicinity of monitoring well MW-27R, are described in the various IRA Status Reports referenced herein.

As a result of the detection of PCB-impacted DNAPL, a second IRA Plan Modification was submitted to MassDEP (TRC, 2012a) to specify remedial measures to address the NAPL encountered beneath the NBHS Mechanical Room. The IRA Plan Modification added the following activities to the existing IRA Plan:

- **Hydraulic Control** - Installation, operation, and maintenance of a hydraulic control system in the vicinity of MW-27R within the NBHS Mechanical Room; and
- **Supplemental Investigation** - Investigation of soil, groundwater, and NAPL contamination in that area using a Membrane Interface Probe System (MIPS).

The hydraulic control system includes groundwater extraction, treatment and discharge to the City's sanitary sewer system. The remedial wastewater is managed in a manner that is consistent with 310 CMR 40.0041 (General Provisions for the Management of Remedial Wastewater and/or Remedial Additives), 310 CMR 40.0043 (Remedial Wastewater Discharges to Publicly Owned Treatment Works [POTW]) and 310 CMR 40.0047 (Reporting Requirements for Discharges of Remedial Wastewater and Remedial Additives) of the MCP.

Operation and maintenance of the hydraulic control system also requires a permit to discharge to the City's POTW. Treated groundwater is discharged to the City's sanitary sewer system via a floor drain located in the former incinerator pit in accordance with the Industrial Discharge Permit (#S-123) obtained by TRC from the City's DPI. The permit became effective on April 1, 2012 and was granted a two-year extension in March 2013

The Industrial Discharge Permit contains reporting and self-monitoring conditions that include the collection of discharge samples on a quarterly basis. Quarterly discharge monitoring

sampling events have been routinely conducted by TRC on behalf of the City per the permit requirements and the sampling, preservation, handling and analytical methods specified in 40 CFR § 136.

Aqueous discharge samples are collected during each quarterly event to be representative of daily hydraulic control system operations. Individual discrete samples are collected for pH and Oil & Grease analysis. Time-proportioned Biological Oxygen Demand (BOD), Total Suspended Solids (TSS) and polychlorinated biphenyl (PCB) samples were collected and composited in the field. Individually preserved sample aliquots were collected for VOC analysis during each event and submitted to the laboratory for time-proportioned compositing by the laboratory per EPA Method 5030.

Based on the results of the quarterly self-monitoring events conducted to date and consistent with the IRA-related monitoring activities since system startup, the discharge permit pretreatment standards are being met on a consistent basis. No additional operation and maintenance and/or additional pretreatment efforts have been required to date to meet the requirements of the permit

#### **4.0 CONCEPTUAL PHASE II SCOPE OF WORK (310 CMR 40.0510(f))**

The following provides a Conceptual Phase II SOW pursuant to 310 CMR 40.0510(f) of the MCP. In addition, the Conceptual Phase II SOW was developed in consideration of the proposed amendments to 310 CMR 40.0834, including a general scope and nature of investigation activities to characterize the source, extent and migration pathways of contaminants of concern and projected schedule. An estimated cost summary is also provide herein.

##### **4.1 Scope of Work**

As described and referenced herein, a Phase II level of assessment and preliminary remedial actions have already been conducted at the Site including:

- Soil, groundwater, seep water, soil gas and indoor sampling and analysis, including Membrane Interface Probe System (MIPS) investigation of soil, groundwater and NAPL impacts;
- Imminent Hazard evaluation;
- Evaluation and sampling of storm sewer and sanitary sewer systems on the NBHS campus;
- Evaluation of air handling system, foundation cracks, floor drains, sink drains and other annular spaces;
- Sealing of floor drains and cracks;
- Removal of potential interior sources contributing to indoor air measurements;
- Removal of impacted groundwater by TFE and off-site disposal;
- Evaluation and mitigation of the critical exposure pathway (CEP) through design, installation and operation and maintenance of an hydraulic control system;

The previous activities have served to assess potential receptors and exposure pathways, resulting in design and implementation of mitigation measures. However, based on the previous

IRA-related activities, supplemental comprehensive response actions at the Site are required. The following supplemental activities are recommended in this Conceptual Phase II SOW to further define the nature and extent of subsurface impacts.

#### **4.1.1 Supplemental Soil Investigation**

With the exception of limited soil sampling for geotechnical parameters (e.g., grain size, Atterburg Limits) to aid in remedial design planning in August 2010, the initial NBHS Mechanical Room soil investigation was conducted between April 17 and 20, 2012 to assess the nature and extent of subsurface impacts in the vicinity of recovery well MW-27R in order to provide information to evaluate potential remedial options, as documented in the previous IRA status report. The results of this investigation were supplemented in June and August 2012 as described in the previous IRA Status report dated November 28, 2012 (TRC, 2012b).

Based on the results obtained from the previous NBHS Mechanical Room investigations, the lateral and vertical extents of primary contaminants of concerns (i.e., chlorinated VOCs and PCBs) have been largely defined in the vicinity of recovery well MW-27R. However, some uncertainty remained, and additional soil samples were collected in February 2014 for PCB analysis (Method 8082 by Soxhlet extraction) to further delineate the impact extents. Preliminary evaluation of the analytical data indicates further refinement of the extents of the impacts beneath the NBHS Mechanical Room, but also the need for further investigation.

The City proposes the advancement of approximately 12 to 16 additional soil borings. Throughout the Mechanical Room (B-114) and adjacent Kitchen Storage area (B-155). Following clearance of subsurface utilities, including the use of a specialty contractor, and site preparation activities (e.g., relocating stored materials, temporary removal of venting associated with the air-handling system, etc.), the soil borings will be installed using direct-push technologies. New England Geotech of Jamestown, Rhode Island will provide drilling services and equipment.

It is anticipated that each soil boring will be advanced to a depth of approximately 12 feet below grade with continuous geologic logging. Field screening will be conducted using a photoionization detector (PID) per the MassDEP jar headspace procedure (MassDEP, 1996). Soil samples will be collected at two foot intervals from each soil boring from depths of approximately 2 to 12 feet below grade. Soil samples obtained during the investigation will be submitted to Con-Test Analytical Laboratory of East Longmeadow, Massachusetts for analysis of total PCB Aroclors (Method 8082 by Soxhlet extraction).

Consistent with previous soil investigation activities, the soil boring locations will be located in the field by TRC personnel and incorporated into the existing base map.

#### **4.2 Estimated Cost**

The total estimated cost for implementation of the above described supplemental soil investigation is approximately \$25,000.

The proposed activities are based on the current conceptual site model and understanding of known and perceived data gaps. The results of the supplemental environmental investigation activities, response actions beyond those listed will be evaluated as appropriate.

### **4.3 Projected Schedule**

The City of New Bedford School Department seeks to minimize disruption to the educational activities at the NBHS campus. As a result, the City works in concert with the facility to schedule preferable timeframes for environmental investigation and/or remediation activities. The City anticipates implementing this Phase II SOW in approximately 3 to 4 days during the April 2014 school vacation, or as soon as feasible thereafter in coordination with ongoing activities at the NBHS campus.

### **4.4 LSP of Record**

The Licensed Site Professional (LSP) engaged for this work is David M. Sullivan of TRC Environmental Corporation, Lowell, Massachusetts. His license number is 1488.

## **5.0 REFERENCES**

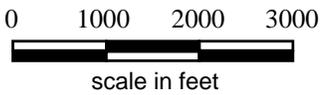
- MassDEP, 1996. Commonwealth of Massachusetts Underground Storage tank Closure Assessment Manual. Policy # WSC-402-96. Massachusetts Department of Environmental Protection. April 9, 1996.
- MassDEP, 2011. Immediate Response Action Plan Modification Approval. Massachusetts Department of Environmental Protection. February 23, 2011.
- TRC, 2010a. *Immediate Response Action Plan, New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. March 2010.
- TRC, 2010b. *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. May, 2010.
- TRC, 2010c. *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. November, 2010.

- TRC, 2011a *Immediate Response Action Plan Modification - New Bedford High School, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. January, 2011.
- TRC, 2011b *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. May, 2011.
- TRC, 2011c *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. November, 2011.
- TRC, 2012a *Immediate Response Action Plan Modification - New Bedford High School, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. February, 2012.
- TRC, 2012b *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. May, 2012.
- TRC, 2012c *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. November, 2012.
- TRC, 2013a *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. May, 2013.
- TRC, 2013b *Immediate Response Action Status Report - New Bedford High School Substantial Release Migration / Critical Exposure Pathway, 230 Hathaway Boulevard, New Bedford, Massachusetts.* Prepared for: City of New Bedford Department of Environmental Stewardship. Prepared by: TRC Environmental Corporation. November, 2013.

## **FIGURES**



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



**NEW BEDFORD HIGH SCHOOL  
NEW BEDFORD, MASSACHUSETTS**

**SITE LOCATION MAP**



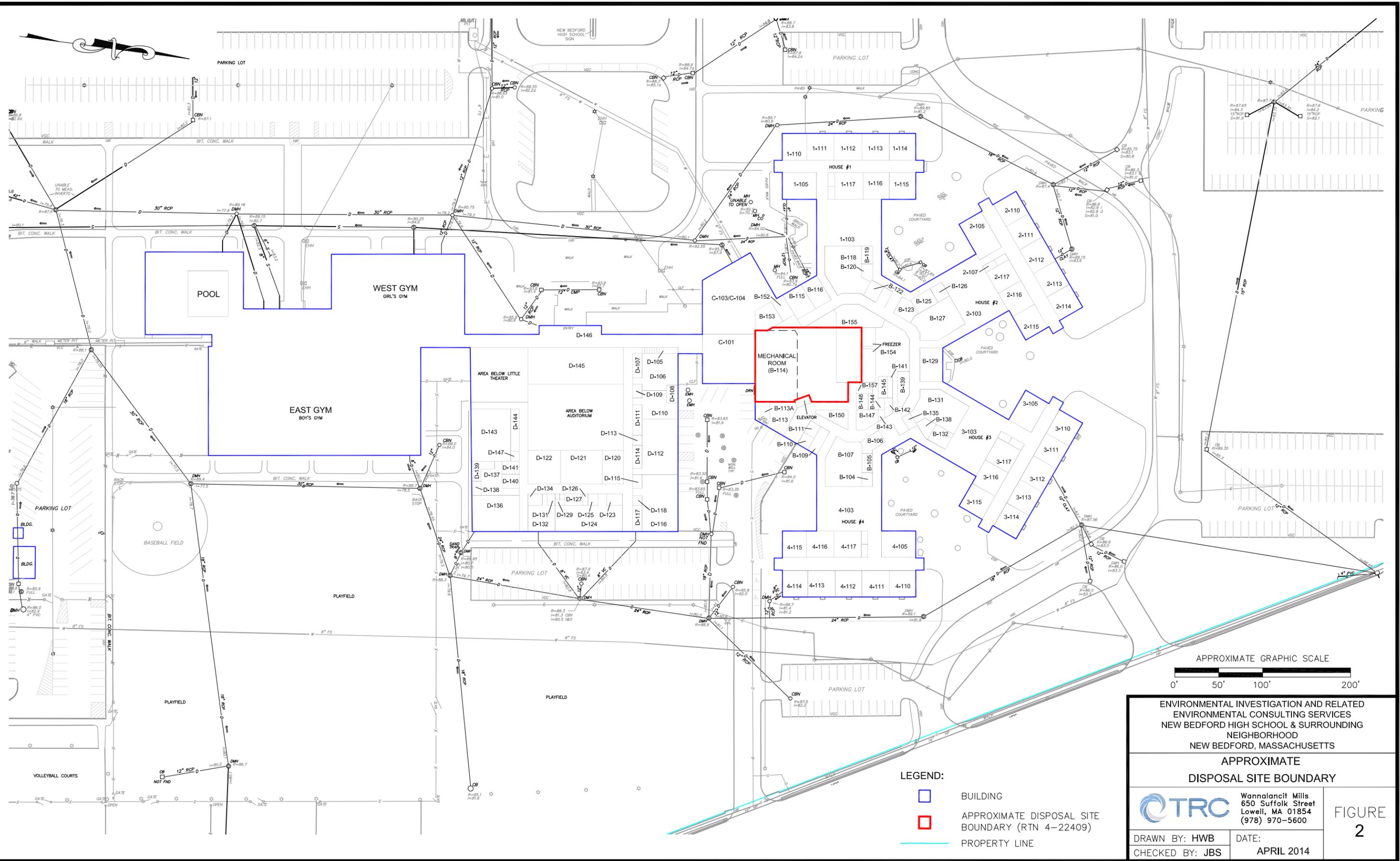
Wannalancit Mills  
650 Suffolk Street  
Lowell, MA 01854  
978-970-5600

**FIGURE  
1**

Drawn: HWB  
Checked: DS

SCALE: AS SHOWN  
Date: OCT 2008

FILE: T:\E\_CAD\115058\BOUNDARY - TIER CLASS-RTN 4-22409.dwg



ENVIRONMENTAL INVESTIGATION AND RELATED ENVIRONMENTAL CONSULTING SERVICES NEW BEDFORD HIGH SCHOOL & SURROUNDING NEIGHBORHOOD NEW BEDFORD, MASSACHUSETTS		<b>FIGURE</b>  <b>2</b>
<b>APPROXIMATE DISPOSAL SITE BOUNDARY</b>		
Wannalancit Mills 650 Suffolk Street Lowell, MA 01854 (978) 970-5600		<b>DRAWN BY:</b> HWB <b>CHECKED BY:</b> JBS <b>DATE:</b> APRIL 2014

**NOTICE OF INITIAL SITE INVESTIGATION AND  
TIER I CLASSIFICATION  
NEW BEDFORD HIGH SCHOOL MECHANICAL ROOM  
230 HATHAWAY ROAD, NEW BEDFORD, MA  
RELEASE TRACKING NUMBER 4-22409**

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, § 2 and the Massachusetts Contingency Plan, 310 CMR 40.0000. As a result of this investigation, the site has been classified as Tier I pursuant to 310 CMR 40.0500. On April 17, 2014, the City of New Bedford filed a Tier I Classification Submittal with the Department of Environmental Protection (MassDEP). To obtain more information on this disposal site, please contact Ray Holberger with the City of New Bedford Department of Environmental Stewardship at 508-991-1529.

The Tier I Classification Submittal and the disposal site file can be reviewed at MassDEP, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347 (telephone 508-946-2700). Additional public involvement opportunities are available under 310 CMR 40.1403(9) and 310 CMR 40.1404.



Wannalancit Mills  
650 Suffolk Street  
Lowell, MA 01854

978.970.5600 PHONE  
978.453.1995 FAX

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

TRC Reference Number: 115058.0000

April 17, 2014

Mayor Jon Mitchell  
City Hall, Room 311  
133 William Street  
New Bedford, MA 02740

**RE: Notice of Submission of Tier Classification**

New Bedford High School – Mechanical Room  
230 Hathaway Boulevard  
New Bedford, Massachusetts  
Release Tracking Number 4-22409

Mr. Mayor Mitchell:

On behalf of the City of New Bedford, Massachusetts, TRC Environmental Corporation (TRC) has prepared this letter to inform you of the Tier Classification of the Mechanical Room portion of the New Bedford High School (Release Tracking Number [RTN] 4-22049) pursuant to 310 CMR 40.0510 of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). The above referenced RTN will be classified as a Tier I disposal site on or about April 17, 2014.

The City of New Bedford will publish a public notice regarding the Tier Classification of the above referenced RTN. A copy of the public notification and disposal site map is attached herein. The document can also be obtained from Michele Paul in the City's Department of Environmental Stewardship or at the Massachusetts Department of Environmental Protection, Southeast Regional Office, located at 20 Riverside Drive in Lakeville, Massachusetts.

If you have any questions concerning this letter please contact me at (978) 656-3565.

Sincerely,  
TRC Environmental Corporation

A handwritten signature in blue ink that reads "David M. Sullivan".

David M. Sullivan, LSP  
Sr. Project Manager

Attachment

Cc: Michele Paul, 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](http://www.TRCSolutions.com)

TRC Reference Number: 115058.0000

April 17, 2014

Dr. Brenda Weis  
Health Department  
1213 Purchase Street, First Floor  
New Bedford, MA 02740

**RE: Notice of Submission of Tier Classification**

New Bedford High School – Mechanical Room  
230 Hathaway Boulevard  
New Bedford, Massachusetts  
Release Tracking Number 4-22409

Ms. Weis:

On behalf of the City of New Bedford, Massachusetts, TRC Environmental Corporation (TRC) has prepared this letter to inform you of the Tier Classification of the Mechanical Room portion of the New Bedford High School (Release Tracking Number [RTN] 4-22049) pursuant to 310 CMR 40.0510 of the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). The above referenced RTN will be classified as a Tier I disposal site on or about April 17, 2014.

The City of New Bedford will publish a public notice regarding the Tier Classification of the above referenced RTN. A copy of the public notification and disposal site map is attached herein. The document can also be obtained from Michele Paul in the City's Department of Environmental Stewardship or at the Massachusetts Department of Environmental Protection, Southeast Regional Office, located at 20 Riverside Drive in Lakeville, Massachusetts.

If you have any questions concerning this letter please contact me at (978) 656-3565.

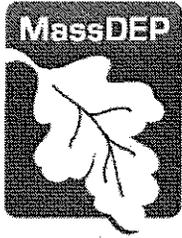
Sincerely,  
TRC Environmental Corporation

A handwritten signature in blue ink that reads "David M. Sullivan".

David M. Sullivan, LSP  
Sr. Project Manager

Attachment

Cc: Michele Paul, New Bedford Department of Environmental Stewardship



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

DEVAL L. PATRICK  
Governor

TIMOTHY P. MURRAY  
Lieutenant Governor

RICHARD K. SULLIVAN JR.  
Secretary

KENNETH L. KIMMELL  
Commissioner

February 23, 2011

Scott Alfonse, Director  
Office of Environmental Stewardship  
City of New Bedford – City Hall  
133 William Street  
New Bedford, Massachusetts 02740

RE: **NEW BEDFORD**  
Release Tracking Number: 4-22409  
New Bedford High School  
**IMMEDIATE RESPONSE ACTION PLAN**  
**MODIFICATION APPROVAL**

Dear Mr. Alfonse:

The Massachusetts Department of Environmental Protection, Bureau of Waste Site Cleanup (MassDEP), is in receipt of an Immediate Response Action (IRA) Plan Modification submitted for Release Tracking Number (RTN) 4-22409 related to a Condition of Substantial Release Migration (SRM) and Critical Exposure Pathway (CEP) identified on the New Bedford High School property. The IRA Plan Modification was prepared and submitted on behalf of the City of New Bedford (the City) by TRC Environmental Corporation (TRC). The IRA Plan Modification details on-going activities related to the detection of volatile organic compounds (VOCs) in both groundwater and the indoor air of a portion of the New Bedford High School. On April 9, 2010, MassDEP provided the City written approval to conduct IRA activities, as described in the March 2010 IRA Plan previously submitted by TRC.

The IRA Plan Modification summarizes activities conducted to date and proposes additional assessment and possible mitigation measures to be conducted related to this detection. Activities to be conducted, as described in the IRA Plan Modification, include, but are not limited to: removal of VOC-impacted groundwater and soil vapors in the vicinity of shallow monitoring well MW-27 by pumping and vacuum extraction (identified in the IRA Plan Modification as Total Fluid Extraction or TFE) and off-site disposal of the impacted groundwater. The proposed activities will occur over a one-day period. Groundwater monitoring will be conducted in the vicinity of MW-27 several weeks after the event. Additional events may be conducted if monitoring results indicate that it is a useful and cost-effective approach to reducing concentrations of VOCs in this area.

MassDEP acknowledges that the City posted public notices of the availability of the IRA Plan Modification and held a public comment period from January 24, 2011 through February 14, 2011. The City did not receive written comments on the IRA Plan Modification.

Based on its review of the IRA Plan Modification, and in accordance with 310 CMR 40.0420(6), MassDEP hereby provides approval to the City of New Bedford to implement the IRA activities as proposed in the IRA Plan Modification, and as conditioned herein:

1. The City, or its contractor, shall provide MassDEP a minimum of seventy-two hours notice prior to commencing field work associated with the IRA Plan Modification. When providing such notice, please provide the name and contact cellular phone number of the person responsible for project management and oversight at the Site;
2. TFE events should be conducted when school is not in session and students are not likely to be present;
3. Pursuant to 310 CMR 40.0425(6)(b), a Remedial Monitoring Report should be submitted along with the next IRA Status Report, which is due to be submitted to MassDEP on May 20, 2011.

Please also be advised that, pursuant to 310 CMR 40.0424(2), IRA Plans are to be updated and modified, if necessary, based on the acquisition and evaluation of significant new information and data on the release, threat of release and/or new site conditions. Any significant modification of an IRA Plan must be submitted to MassDEP in writing for review and approval.

All inquiries regarding this matter should be directed to Molly Cote at the letterhead address or by calling (508) 946-2792. All future communication regarding this matter must reference Release Tracking Number: **4-0022409**.

Sincerely,



Leonard J. Pinaud, Chief  
State & Federal Site Management Section  
Bureau of Waste Site Cleanup

P/MC/lg

W:\BWSC\Document Archive\4-0022409.APWRIT.02-23-2011

ec: Scott W. Lang, Mayor - City of New Bedford

City of New Bedford - Health Department

Eddie Johnson, President – C.L.E.A.N.

Kim Tisa, USEPA Region 1

David Sullivan, LSP - TRC

MassDEP-SERO

ATTN: Lara Goodine, Data Entry [APWRIT]

David Johnston, Acting Regional Director

Millie Garcia-Serrano, Deputy Regional Director