



Weston & Sampson Engineers, Inc.
Five Centennial Drive
Peabody, MA 01960-7985
www.westonandsampson.com
Tel: (978) 532-1900 Fax: (978) 977-0100

SCANNED
Innovative Solutions since 1899

Boston Redevelopment Authority
WSE Project Number 200317.A

April 19, 2002

Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Site Cleanup
205A Lowell Street
Wilmington, Massachusetts 01887

W/19-L Parcel P-3 Tremont
Roxbury
3-15009

Re: Phase II Comprehensive Site Assessment and Phase III Remedial Action Plan
Boston Redevelopment Authority
Parcel P-3, Roxbury, Massachusetts
Release Tracking Number (RTN) 3-15009

Dear Sir or Madam:

Please find enclosed the Phase II Comprehensive Site Assessment and Phase III Remedial Action Plan Report prepared by Weston & Sampson Engineers, Inc. for a portion of Boston Redevelopment Authority's (BRA's) Parcel P-3 property located at Tremont and Whittier Streets in Roxbury, Massachusetts (the Site). The Site is identified as release tracking number (RTN) 3-15009 and is classified as Tier II.

This report was prepared in accordance with the Massachusetts Contingency Plan (MCP, 310 CMR 40.0000). Included in Appendix G of this report are the original BWSC transmittal form (BWSC-108) and copies of public notification letters.

If you have any questions regarding the report or the project, please do not hesitate to contact us at (978) 532-1900.

Very truly yours,
WESTON & SAMPSON ENGINEERS, INC.

Prasanta K. Bhunia, Ph.D., LSP
Vice President

Enclosure

cc: File
Mr. Noah Luskin, Boston Redevelopment Authority

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Boston Redevelopment Authority

Boston's Planning & Economic
Development Office

Thomas M. Menino, Mayor
Clarence J. Jones, Chairman
Mark Maloney, Director

One City Hall Square
Boston, MA 02201-1007
Tel 617-722-4300
Fax 617-248-1937

KC

NIA-L RECEIVED

JUL 13 2005

July 12, 2005

DEP
NORTHEAST REGIONAL OFFICE

key
pt.
(Anne S. Rogers, Esquire
Alternatives for Community & Environment
2181 Washington Street, Suite 301
Roxbury, MA 02119)

Subject: Designation of Public Involvement Plan Site Roxbury
Parcel P-3, Tremont and Whittier Streets, Boston, RTN 3-15009

Dear Ms. Rogers,

On (June 23, 2005) the Boston Redevelopment Authority (received a petition) signed by 11 residents to request that the above reference site be designated as a Public Involvement Plan Site. In accordance with the Massachusetts Contingency Plan at 310 CMR 40.1404(4), this letter has been prepared to formally notify you that the site has been (2) designated as a Public Involvement Plan site.

As required by 310 CMR 40.1405, a draft site-specific Public Involvement Plan (the "Plan") will be prepared and presented at a public meeting within 60 days of the date of this letter. We will provide you with information regarding the date and time of that meeting at least 14 days in advance. We will also be interviewing key community officials and the key petitioner (assumed to be you unless we are notified otherwise) during the next month regarding local concerns that will be addressed in developing the draft Plan.

If you have any questions, please feel free to call myself, or Ms. Maria Faria (Assistant Director of Housing - Boston Redevelopment Authority) at 617-918-4319 and 617-918-4366, respectively.

Sincerely,

John Walser
Senior Project Manager/Environmental Review Specialist
Boston Redevelopment Authority

Boston Redevelopment Authority

Boston's Planning & Economic
Development Office

Thomas M. Menino, *Mayor*
Clarence J. Jones, *Chairman*
Mark Maloney, *Director*

One City Hall Square
Boston, MA 02201-1007
Tel 617-722-4300
Fax 617-248-1937

Ms. Anne S. Rogers

July 12, 2005

Page 2

Cc: Stephanie Ward
Ramona Johnson
Thelma McCastill
Margaret Ward
Harriet White
Ella Callis
Mrs. Krause
Mirelle Ancion
Paul Williams
Dolly Battle
Maurice Sequeira
Rebecca Lee, Chief of Staff, BRA
Maria Faria, Assistant Director of Housing, BRA
Karen Stromberg, MA Department of Environmental Protection
Prasanta Bhunia, LSP, Weston & Sampson

NIA-L

**Boston Redevelopment Authority Parcel P-3 Public Involvement
Weston & Sampson Project No. 205294.A**

September 7, 2005

PIP Mailing List

Re: Public Meeting to Review Draft Public Involvement Plan (PIP)
Boston Redevelopment Authority (BRA) Parcel P-3 Tremont Whittier ST
Roxbury, Massachusetts
Release Tracking Number 3-15009

Dear Sir or Madam:

Weston & Sampson Engineers, Inc., on behalf of our client, the Boston Redevelopment Authority (BRA), is hereby notifying you of a public meeting to be held from 6:00 to 7:45 pm on Monday, September 12, 2005, at the Dudley Branch Library at 65 Warren Street in Roxbury, Massachusetts, to present the draft Public Involvement Plan (PIP) for the above-referenced site. Additional information is included in the attached notice, which was published in the *Bay State Banner*, *South End News*, *Jamaica Plain Gazette*, *Mission Hill Gazette*, and *La Semana* on or about August 25, 2005. This notification is provided in accordance with the public involvement requirements of the Massachusetts Contingency Plan (MCP).

Should you have any questions regarding the meeting, please refer to the contact information on the attached notice.

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.

George D. Naslas

George D. Naslas, P.G., LSP
Associate

Encl.

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NORTHEAST REGIONAL OFFICE

NOTICE OF A PUBLIC INVOLVEMENT PLAN MEETING

**PARCEL P-3
WHITTIER AND TREMONT STREETS
ROXBURY, MASSACHUSETTS
RTN 3-15009**

The Boston Redevelopment Authority (BRA) received a petition from residents in Roxbury, Massachusetts requesting this location be designated as a Public Involvement Plan site, in accordance with MGL c.21E 14(a). This law requires that, upon receiving such a petition, a plan for involving the public in decisions regarding remedial response actions must be prepared and a public meeting to present the proposed plan held.

BRA designated this site as a Public Involvement Plan (PIP) site on July 12, 2005. A public meeting will be held at The Dudley Branch Library at 65 Warren Street in Roxbury, Massachusetts, on Monday, September 12, 2005, at 6.00-p.m. to present the draft Public Involvement Plan which will include the process for public comment. Copies of the draft Public Involvement Plan will be made available prior to the meeting at the Dudley Branch Library and during the public comment period after the meeting, or through the contact information below.

Any questions regarding this meeting or the Public Involvement Plan should be directed to Mr. John Walser, Senior Project Manager, Boston Redevelopment Authority, 9th Floor City Hall, One City Hall Square, Boston Massachusetts, 02201 at telephone (617) 918 4319, or Ms. Sandra Metcalf, Technical Project Coordinator, Weston & Sampson Engineers, Inc., Five Centennial Drive, Peabody, Massachusetts 01960 at telephone (978) 532-1900.

NIAL

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**Boston Redevelopment Authority Parcel P-3 Public Involvement
Weston & Sampson Project No. 205294.A**

February 1, 2006

PIP Mailing List

Parcel P-3 Tremont Whittier ST
Re: Final Public Involvement Plan (PIP)
Boston Redevelopment Authority (BRA) Parcel P-3
Roxbury, Massachusetts
Release Tracking Number 3-15009

Dear Sir or Madam:

As discussed at the public meeting on September 12, 2005, Weston & Sampson Engineers, Inc., on behalf of the Boston Redevelopment Authority (BRA), prepared a Public Involvement Plan (PIP) for the above-referenced site. The draft PIP was presented publicly at the September 12 meeting and was made available at public repositories. Comments on the draft PIP were accepted through October 27, 2005. The PIP was then finalized, incorporating both comments made at the September 12 meeting and written comments submitted during the public comment period. The final PIP was submitted to the Department of Environmental Protection in Wilmington, and to the following repositories established for the site, where it is available for public review:

- Dudley Branch Library, 65 Warren Street, Roxbury, 617-442-6186
- South End Branch Library, 685 Tremont Street, Boston, 617-536-8241
- Uphams Corner Branch Library, 500 Columbia Road, Dorchester, 617-265-0139
- Egleston Square Branch Library, 2044 Columbia Avenue, Roxbury, 617-445-4340
- Grove Hall Branch Library, 5 Crawford Street, Roxbury, 617-427-3337
- Whittier Street Housing Management Office, 1158 Tremont Street, Roxbury, 617-988-5059

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.

George D. Naslas

George D. Naslas, P.G., LSP
Associate

cc: John Walser, BRA
File

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FEB 03 2006

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NIA-L

Weston & Sampson
ENGINEERS, INC.

Weston & Sampson Engineers, Inc. KC
Five Centennial Drive
Peabody, MA 01960-7985
www.westonandsampson.com
Tel: 978-532-1900 Fax: 978-977-0100

Innovative Solutions since 1899

**Boston Redevelopment Authority Parcel P-3 Public Involvement
Weston & Sampson Project No. 205294.A**

October 13, 2005

PIP Mailing List

Re: Public Comments on Draft Public Involvement Plan (PIP)
Boston Redevelopment Authority (BRA) Parcel P-3 Tremont & Whittier St
Roxbury, Massachusetts
Release Tracking Number NS-15009

Dear Sir or Madam:

As requested by residents at the public meeting on September 12, 2005, the Boston Redevelopment Authority (BRA), has extended the public comment period on the draft Public Involvement Plan (PIP) to 45 days, which places the close of the comment period on October 27, 2005. Copies of the draft PIP are available for review at the following public repositories:

- o Dudley Branch Library, 65 Warren Street, Roxbury, 617-442-6186
- o South End Branch Library, 685 Tremont Street, Boston, 617-536-8241
- o Uphams Corner Branch Library, 500 Columbia Road, Dorchester, 617-265-0139
- o Egleston Square Branch Library, 2044 Columbia Avenue, Roxbury, 617-445-4340

Written comments on the draft PIP should be mailed to Ms. Sandy Metcalf, Weston & Sampson Engineers, Inc., 5 Centennial Drive, Peabody MA 01960, or e-mailed to metcalfs@wseinc.com. Any questions regarding the comment period may also be directed to Ms. Metcalf at (978) 532-1900, x2261.

Very truly yours,

WESTON & SAMPSON ENGINEERS, INC.

Sandra J. Metcalf for con
George D. Naslas, P.G., LSP
Associate

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OCT 17 2005

DEP
NORTHEAST REGIONAL OFFICE

O:\BRA MA\IP-3 PIP 205294\PIP\End of comment period ltr.doc



**TIER CLASSIFICATION, TIER II EXTENSION &
TIER II TRANSFER TRANSMITTAL FORM**

Release Tracking
Number

3 - 15009

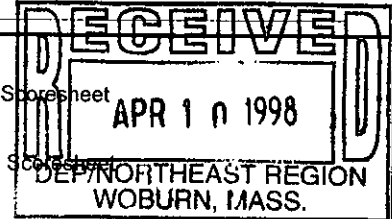
Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

A. DISPOSAL SITE LOCATION:

Disposal Site Name: Parcel P-3
Street: Tremont and Whittier Streets Location Aid: UTMs: 4688700 mN, 327800 mE
City/Town: Boston (Roxbury) ZIP Code: 02120-0000
Related Release Tracking Numbers That This Submittal Will Address:

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

- Submit a new or revised Tier Classification Submittal for a Tier I Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, I, J, K and L).
- Submit a new or revised Tier Classification Submittal for a Tier II Site, including a Numerical Ranking Scoresheet (complete Sections A, B, C, F, G, I, J, K and L).
- Submit a Notice that an additional Release Tracking Number(s) is (are) being linked to this Tier Classified Site and rescoring is not required at this time (complete Sections A, B, J, K and L). If this submittal is for a Tier I Site, you must also submit a Minor Permit Modification Transmittal Form (BWSC-109).
- List Additional Release Tracking Number(s): _____
- Submit a Phase I Completion Statement supporting a Tier Classification Submittal (complete Sections A, B, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions at a Tier II Site (complete Sections A, B, D, F, G, I, J, K and L).
- Submit a Tier II Extension Submittal for Response Actions taken after expiration of a Waiver, pursuant to 310 CMR 40.0630(4) (complete Sections A, B, D, F, J, K and L, and also complete Sections G and I or Section H).*
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Tier II Site (complete Sections A, B, E, F, G, I, J, K, L, M, N and O).
- Submit a Tier II Transfer Submittal for a change in person(s) undertaking Response Actions at a Waiver Site, pursuant to 310 CMR 40.0630(6) (complete Sections A, B, E, F, J, K, L, M, N and O, and also complete Sections G and I or Section H).*



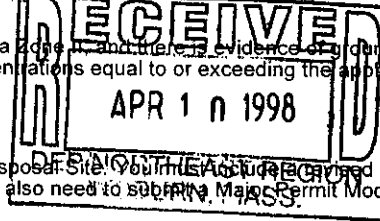
You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.
*NOTE: The Waiver expires on the effective date of this submittal and all further Response Actions must be taken as a Tier II Site.

C. TIER CLASSIFICATION SUBMITTAL:

Numerical Ranking Score for Disposal Site: (from Numerical Ranking Scoresheet) 143
Proposed Tier Classification of Disposal Site: (check one) Tier IA Tier IB Tier IC Tier II

Check which, if any, of the Tier I inclusionary criteria are met by the Disposal Site, pursuant to 310 CMR 40.0520:

- Groundwater is located within an Interim Wellhead Protection Area or a Zone II, 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.
- An Imminent Hazard is present at the time of Tier Classification.
- Check here if this Tier Classification revises a previous submittal for this Disposal Site. You must also attach a revised Numerical Ranking Scoresheet with this submittal. If a Tier I Permit has been issued, you may also need to submit a Major Permit Modification Application (BWSC-10).



If incorporating additional Release(s) into the Disposal Site, list Release Tracking Number(s): _____

D. TIER II EXTENSION SUBMITTAL REQUIREMENTS:

State the expiration date of the Tier II Classification or Waiver for the Disposal Site, whichever is applicable: _____

Attach a statement summarizing why a Permanent or Temporary Solution has not been achieved at the Disposal Site. A Tier II Extension is effective for a period of one year beyond the current expiration date of the Tier II Classification or Waiver.

E. TIER II TRANSFER SUBMITTAL REQUIREMENTS:

State the proposed effective date of the change in person(s) undertaking Response Actions at the Disposal Site: _____

Attach a statement summarizing the reasons for the proposed change in person(s) undertaking the Response Actions. 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 or received a Waiver of Approvals.



TIER CLASSIFICATION, TIER II EXTENSION &
TIER II TRANSFER TRANSMITTAL FORM

Release Tracking
Number

3 - 15009

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

DISPOSAL SITE COMPLIANCE HISTORY SUMMARY:

- > If providing either a Tier Classification Submittal for a Tier II Site or a Tier II Extension Submittal for a Waiver Site, the person named in Section J must provide a Compliance History.
> If providing a Tier II Extension Submittal for a Tier II Site, the person named in Section J must update their Compliance History since the effective date of the Tier II Classification.
> If providing a Tier II Transfer Submittal for a Tier II or Waiver Site, the person named in Section M must provide a Compliance History.

Compliance History for (provide only one name per History): Boston Redevelopment Authority

Check here if there has been no change to the Compliance History of the person named above (Extension Submittal for a Tier II Site ONLY).

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

Table with 4 columns: PROGRAM, PERMIT NUMBER, PERMIT CATEGORY, FACILITY ID. Rows include Air Quality, Hazardous Waste (M.G.L. c. 21C), Solid Waste, Industrial Wastewater Management, Water Supply, Water Pollution Control/Surface Water, Water Pollution Control/Groundwater, Water Pollution Control/Sewer Connection, Wetland & Waterways.

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

Table with 3 columns: ISSUING AUTHORITY OR PROGRAM, OR DOCUMENTATION TYPE; IDENTIFICATION NUMBER; DATE ISSUED. Row 1: NA, NA, NA.

If needed, attach to this Transmittal Form a statement further describing the Compliance History of this Disposal Site. This statement must describe the compliance history of the person named above 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.



**TIER CLASSIFICATION, TIER II EXTENSION &
TIER II TRANSFER TRANSMITTAL FORM**

Release Tracking
Number

3 - 15009

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

G. CERTIFICATION OF ABILITY AND WILLINGNESS:

> If providing either a Tier II Classification Submittal or a Tier II Extension Submittal, the person who signs this certification **MUST** be the person named in Section J, or that person's agent.
> If providing a Tier II Transfer Submittal, the person who signs this certification **MUST** be the person named in Section M, or that person's agent.
I 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.

By: 
(signature)

Title: Director

For: Boston Redevelopment Authority
(print name of person or entity recorded in Section J or M, as appropriate)

Date: APR 7 1998

If you are submitting either a Tier II Extension Submittal for a Waiver Site or a Tier II Transfer Submittal for a Waiver Site, you may choose to sign the alternative Ability and Willingness Certification found in Section H in place of providing the certification in Section G and the LSP Opinion in Section I.

H. ALTERNATIVE CERTIFICATION OF ABILITY AND WILLINGNESS:

> If providing a Tier II Extension Submittal for a Waiver Site, the person who signs this certification **MUST** be the person named in Section J, or that person's agent.
> If providing a Tier II Transfer Submittal for a Waiver Site, the person who signs this certification **MUST** be the person named in Section M, or that person's agent.

I 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 Consultant-of-Record 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.

By: _____
(signature)

Title: _____

For: _____
(print name of person or entity recorded in Section J or M, as appropriate)

Date: _____

I. LSP OPINION:

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 (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> if Section B of this form indicates that a Tier I or Tier II Classification Submittal which relies upon a previously submitted Phase I Completion Statement 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;

> if Section B of this form indicates that a Phase I Completion Statement or a Tier I or Tier II Classification Submittal which does not rely upon a previously submitted 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) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

SECTION I IS CONTINUED ON THE NEXT PAGE



TIER CLASSIFICATION, TIER II EXTENSION & TIER II TRANSFER TRANSMITTAL FORM

Release Tracking Number

3 - 15009

Pursuant to 310 CMR 40.0510 and 40.0560 (Subpart E)

I. LSP OPINION: (continued)

> If Section B of this form indicates that a Tier II Extension Submittal or a Tier II 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.

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.

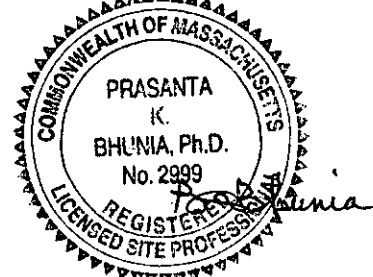
LSP Name: Dr. Prasanta K. Bhunia LSP #: 2999 Stamp:

Telephone 978-532-1900 Ext.: 2287

FAX: 978-977-0110 (optional)

Signature: [Handwritten Signature]

Date: 4/10/98



J. PERSON MAKING SUBMITTAL:

Name of Organization: Boston Redevelopment Authority

Name of Contact: Mr. Thomas N. O'Brien (c/o Mr. Richard Mertens) Title: Director

Street: 1 City Hall Plaza

City/Town: Boston State: MA ZIP Code: 02201-1007

Telephone: 617-722-9950 Ext.: 4283 FAX: 617-742-7783 (optional)

K. RELATIONSHIP TO DISPOSAL SITE OF PERSON MAKING SUBMITTAL: (check one)

[X] RP or PRP Specify [X] Owner [] Operator [] Generator [] Transporter Other RP or PRP:

[] 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))

[] Any Other Person Making Submittal Specify Relationship:

L. CERTIFICATION OF PERSON MAKING SUBMITTAL:

I, Thomas O'Brien, 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/We 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.

By: [Signature] Title: Director

For: Boston Redevelopment Authority Date: APR 7 1998 (print name of person or entity recorded in Section J)

Enter address of the person providing certification(s), including Ability and Willingness Certification where applicable, if different from address recorded in Section J:

Street:

City/Town: State: ZIP Code:

Telephone: Ext. FAX: (optional)

YOU MUST 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, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.

40.1511 (Continued)

II. EXPOSURE PATHWAYS

II. EXPOSURE PATHWAYS				
<i>Score according to 40.1512 - Exposure Pathway Designation Criteria</i>				
MEDIA	DESIGNATION			
	NONE or NOT APPLICABLE	EVIDENCE OF CONTAMINATION	POTENTIAL EXPOSURE PATHWAY	LIKELY OR CONFIRMED EXPOSURE PATHWAY
A. SOIL (Includes Sediment)	0	15	100	150
B. GROUNDWATER	0	20	100	150
C. SURFACE WATER (Includes Wetlands)	0	20	100	150
D. AIR	0	15	100	200

Note: Score only the highest value for each media, i.e., score None or Not-Applicable or Evidence of Contamination or Potential Exposure Pathway or Likely or Confirmed Exposure Pathway.

II. (A - D)	Summary Rationale for Section II A - D Values and Phase I Report References
A.	OHM in soil >RCs, site access restricted. See p. 5-1, 5-2, 6-1, Tables 3 & 4
B.	Contaminants in groundwater were below RCs. p. 5-2, 6-1, Table 5
C.	There are no surface water bodies at the site. p. 2-5, Figure 3
D.	No VOCs detected in air; background concentrations were <0.2 ppm on the PID. p. 5-1, Table 2

II.E. OHM SOURCES			
Number of OHM Sources	1	2	≥ 3
	0	25	50

SECTION II SCORE (A. + B. + C. + D. + E.)					
A.	B.	C.	D.	E.	TOTAL: (15 - 700)
15	0	0	0	0	15

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
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40.1511 (Continued)

III. DISPOSAL SITE CHARACTERISTICS

III.A. OHM TOXICITY SCORE <i>Highest OHM Toxicity Score From Table III.A. or Worksheet III.A.1. on Following Pages.</i>	
OHM Scored: <u>Lead</u> Concentration and Media: <u>total lead soil, 5,000 ug/g</u>	Toxicity Score (1 - 80) <u>40</u>

III.B. MULTIPLE OHMs		
More Than One OHM With an OHM Toxicity Score of ≥ 30	No <input checked="" type="radio"/>	Yes 30

III.C. OHM MOBILITY and PERSISTENCE <i>Score according to 40.1514 - OHM Mobility and Persistence</i>	
OHM Scored: <u>Lead</u>	Score (0 - 50) <u>25</u>

III.D. DISPOSAL SITE HYDROGEOLOGY <i>Score according to 40.1515 - Soil Permeability</i>			
DEPTH TO GROUNDWATER (in feet)	SOIL PERMEABILITY		
	Low	Medium	High
> 25	2	4	8
10.1 - 25	4	<input checked="" type="radio"/> 8	12
5.1 - 10	8	12	16
0 - 5	12	16	20

SECTION III SCORE (A + B + C + D)				
A.	B.	C.	D.	TOTAL: (3 - 180)
<u>40</u>	<u>0</u>	<u>25</u>	<u>8</u>	<u>73</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input checked="" type="checkbox"/>
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40.1511 (Continued)

Table III.A.		OHM TOXICITY SCORE						
OHM	CONCENTRATION (soil/sediment: µg/g; surface/groundwater µg/l)							
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"	
Arsenic	20	30	40	50	60			
Benzene	15	25	35	45	55	65	75	
Bis(2-ethylhexyl)phthalate	10	20	30	40	50	60	70	
Cadmium	10	20	30	40	50			
Carbon Tetrachloride	20	30	40	50	60	70	80	
Chlorobenzene	5	15	25	35	45	55	65	
Chromium III	1	10	20	30	40			
Chromium VI	10	20	30	40	50			
Coal Tar	5	15	25	35	45	55	65	
Cyanide	5	15	25	35	45			
1,1 Dichloroethane	10	20	30	40	50	60	70	
1,2 Dichloroethane	10	20	30	40	50	60	70	
Ethylbenzene	5	15	25	35	45	55	65	
Ethylene Dibromide	20	30	40	50	60	70	80	
#2 Fuel Oil (virgin product)	5	15	25	35	45	55	65	
Gasoline (virgin product)	10	20	30	40	50	60	70	
Lead	20	30	40	50	60			
Mercury	20	30	40	50	60	70	80	
Methylene Chloride	10	20	30	40	50	60	70	
Methyl Ethyl Ketone	5	15	25	35	45	55	65	
Methyl Tert Butyl Ether	10	20	30	40	50	60	70	
Nickel	5	15	25	35	45			
Phenol	1	10	20	30	40	50	60	
PAHs	10	20	30	40	50	60	70	
PCBs	20	30	40	50	60	70	80	
Tetrachloroethylene	10	20	30	40	50	60	70	
Toluene	1	10	20	30	40	50	60	
1,1,1 Trichloroethane	5	15	25	35	45	55	65	

Table III.A.

OHM TOXICITY SCORE

OHM	CONCENTRATION (soil/sediment: µg/g; surface/groundwater µg/l)						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
Trichloroethylene	15	25	35	45	55	65	75
Vinyl Chloride	15	25	35	45	55	65	75
Xylenes	1	10	20	30	40	50	60
Zinc	1	10	20	30	40		

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40.1511 (Continued)

Use Worksheet III A.1. to determine the OHM Toxicity Score for OHM not listed in Table III A.
See 40.1513 for Human Health-Based Toxicity Values for each OHM.

Worksheet III A.1		OHM TOXICITY SCORE					
HUMAN HEALTH-BASED TOXICITY VALUE	CONCENTRATION						
	Use pg/g for Soil and pg/l for Surface Water and Groundwater						
	≤ 99	100 - 999	1,000 - 9,999	10,000 - 100,000	> 100,000 NAPL < 0.5"	NAPL 0.5" - 12"	NAPL > 12"
< 5	1	10	20	30	40	50	60
5 - 19	5	15	25	35	45	55	65
20 - 29	10	20	30	40	50	60	70
30 - 39	15	25	35	45	55	65	75
40 - 50	20	30	40	50	60	70	80

III A.1.		OHM and Concentrations Used in Section III A.1.		
OHM	Human Health-Based Toxicity Value	Concentration (Soil - pg/g)	Concentration (Water - pg/l)	OHM Toxicity Score
Naphthalene	18	82	--	5
2-Methylnaphthalene	25**	23		10
Benzo(a)anthracene	28	39	--	10
Chrysene	28	44		10
Benzo(b)fluoranthene	28	34		10
Benzo(k)fluoranthene	28	35		10
Benzo(a)pyrene	44	39		20
Dibenzo(a,h)anthracene	25**	47		10
Indeno(1,2,3-cd)pyrene	25**	14		10
Phenanthrene	25	110		20

** Assumed value

40 1511 (Continued)

IV. HUMAN POPULATION AND LAND USES

IV.A. HUMAN POPULATION				
Residential Population Within 1/4 Mile	None 0	1 - 99 5	100 - 999 10	≥ 1,000 15
Institutions Within 500 feet	None 0		One or More 10	
On-Site Workers	None 0	1 - 99 5	100 - 999 10	≥ 1,000 15

IV.B. AQUIFERS		
Gole Source Aquifer Name: _____	No 0	Yes 25
Potentially Productive Aquifer	No 0	Medium or High 15

IV.C. WATER USE					
Proximity of Disposal Site to Public Drinking Water Supply Source	Not Applicable (NA) 0			Zone A 20	Zone II, IWPA, or SW Intake ≤ 400' 50
Persons Served by Public Drinking Water Supply	NA 0	25 - 999 5	1,000 - 4,999 10	5,000 - 49,999 20	≥ 50,000 25
Private Water Supplies Within 500 Feet	None 0		Commercial Industrial 10	Agriculture Residential (Not Ingested) 15	Drinking Food Processing 25
Alternative Public Water Supply Available (Viable Public Water Supply in Disposal Site Community and Public Water Connection ≤ 500 Feet from Site)	Yes 0			No 25	

SECTION IV SCORE (A + B + C)			
A.	B.	C.	TOTAL: (0 - 205)
35	0	0	35

Check here if Section VI has been used to amend the score for this Section of the NRS.

40.1511 (Continued)

V. ECOLOGICAL POPULATION

V.A. ENVIRONMENTAL RESOURCE AREAS			
RESOURCE	LOCATION		
Area of Critical Environmental Concern	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Species of Special Concern, Threatened or Endangered Species Habitat	> 500' from Site 0	On-Site or ≤ 500' from Habitat 30	
Wetlands, Certified Vernal Pool, or Outstanding Resource Water	> 100' from Site 0	≤ 100' from Site 20	On-Site 30
Fish Habitat	> 500' from Site 0	≤ 500' from Site 20	On-Site 30
Protected Open Space (Local/State/Federal/Trustee)	> 500' from Site 0	≤ 500' from Site 20	On-Site 30

SCORE SECTION V.B. ONLY IF SECTION V.A. SCORE IS ≥ 30.

V.B. ENVIRONMENTAL TOXICITY SCORE	
<i>Highest Environmental Toxicity Score From Table V.B. or Worksheet V.B.I. on Following Pages.</i>	
OHM Scored: _____ Concentration and Media: _____	Toxicity Score (1 - 35) <u>N/A</u>

SECTION V. SCORE (A. + B.)		
A. <u>20</u>	B. <u>N/A</u>	TOTAL: (0 - 185) <u>20</u>

Check here if Section VI has been used to amend the score for this Section of the NRS.	<input type="checkbox"/>
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40.511 (Continued)

Table V.B. ENVIRONMENTAL TOXICITY SCORE					
OHM	CONCENTRATION (soil/sediment: µg/g; surface/groundwater µg/l)				
	< 1	1 - 99	100 - 999	1,000 - 9,999	≥ 10,000
Arsenic	5	10	15	20	25
Benzene	0	1	5	10	15
Bis(2-ethylhexyl)phthalate *	5	10	15	20	25
Cadmium	10	15	20	25	30
Carbon Tetrachloride	0	1	5	10	15
Chlorobenzene *	5	10	15	20	25
Chromium III	1	5	10	15	20
Chromium VI	5	10	15	20	25
Coal Tar *	5	10	15	20	25
Cyanide	5	10	15	20	25
1,1 Dichloroethane *	5	10	15	20	25
1,2 Dichloroethane	0	1	5	10	15
Ethylbenzene	0	1	5	10	15
Ethylene Dibromide *	5	10	15	20	25
#2 Fuel Oil (virgin product) *	1	5	10	15	20
Gasoline (virgin product) *	5	10	15	20	25
Lead	5	10	15	20	25
Mercury	15	20	25	30	35
Methylene Chloride *	5	10	15	20	25
Methyl Ethyl Ketone *	5	10	15	20	25
Methyl Tert Butyl Ether *	1	5	10	15	20
Nickel	1	5	10	15	20
Phenol	0	1	5	10	15
PAHs *	5	10	15	20	25
PCBs	15	20	25	30	35
Tetrachloroethylene	0	1	5	10	15
Toluene	0	1	5	10	15
1,1,1 Trichloroethane	0	1	5	10	15
Trichloroethylene	0	1	5	10	15

Table V.B.		ENVIRONMENTAL TOXICITY SCORE				
OHM		CONCENTRATION (soil/sediment: µg/g; surface/groundwater µg/l)				
		< 1	1 - 99	100 - 999	1,000 - 9,999	≥ 10,000
Vinyl Chloride	*	5	10	15	20	25
Xylenes	*	5	10	15	20	25
Zinc		1	5	10	15	20

* Scores derived by default methods 40.1516(2).

NON-TEXT PAGE

40.1511 (Continued)

VI. MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS

VI.

MITIGATING DISPOSAL SITE-SPECIFIC CONDITIONS

Disposal site-specific conditions that warrant amending the site score. Changes directly related to NRS Sections or Subsection scores may not reduce the score more than the relevant subsection value assigned for the disposal site in that subsection. Section VI must reference specific pages of the Phase I. Section VI may not exceed ± 50 Points and may be scored only in 5-point increments. Attach additional pages as necessary.

Disposal Site Score Amendment (Not to Exceed ± 50 Points)

Score

0

40.1512 Exposure Pathway Designation Criteria
 40.1512(1) Soil

II.A. SOIL EXPOSURE CRITERIA		
DEFINITION	Soil includes sediments.	
DESIGNATION	CRITERIA	POINTS
NONE or NOT APPLICABLE	<p><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, soil. <li style="text-align: center;"><i>or</i> ▶ OHM has not been identified in soils at concentrations > applicable soil Reportable Concentrations (RCs). This criteria may be met by conducting a response action in accordance with these regulations to reduce soil concentrations. 	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	<p><i>Any of the Following</i></p> <ul style="list-style-type: none"> ▶ A release of OHM to soil has been identified but no laboratory analysis has been conducted. <li style="text-align: center;"><i>or</i> ▶ Qualitative evidence of a release. <ul style="list-style-type: none"> • OHM stained soils <i>or</i> • Distressed vegetation <i>or</i> • OHM-attributable odors <i>or</i> <li style="text-align: center;"><i>or</i> ▶ OHM has been identified in soils at concentrations ≥ applicable RCs. 	15
POTENTIAL EXPOSURE PATHWAY	<p><i>All of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM has been identified at concentrations ≥ applicable soil RCs ≤ 6" from the accessible soil surface. OHM located beneath unbroken paved surfaces/concrete slabs may be considered inaccessible. <li style="text-align: center;"><i>and</i> ▶ Efforts to restrict access to the area where a release of OHM has been identified have been unsuccessful, have not been taken, or are infeasible. Fencing may be sufficient to show restriction of access unless there has been evidence of repeated access to areas of OHM-contaminated surficial soils. <li style="text-align: center;"><i>and</i> ▶ The area of OHM contamination is not used for active recreation. 	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	<p><i>All of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM has been identified at concentrations ≥ applicable soil RCs ≤ 6" from the accessible soil surface. <li style="text-align: center;"><i>and</i> ▶ Efforts to restrict access to the area where a release of OHM has been identified have been unsuccessful, have not been taken, or are infeasible. <li style="text-align: center;"><i>and</i> ▶ The area of contamination is used for active recreation (e.g., bicycling, dirt-biking, playground, or ballfield) or gardening. 	150

40.1512(2) Groundwater

II.B. GROUNDWATER EXPOSURE CRITERIA		
DEFINITION	Score source area and extent of plume(s) as defined by most recent field studies.	
DESIGNATION	CRITERIA	POINTS
NONE <i>or</i> NOT APPLICABLE	<p><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, groundwater. <i>or</i> ▶ OHM has not been identified in groundwater at concentrations \geq applicable groundwater RCs. This criteria may be met by conducting a response action, in accordance with these regulations, to reduce groundwater concentrations. 	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	<p><i>Any of the Following</i></p> <ul style="list-style-type: none"> ▶ A release of OHM to groundwater has been identified but no laboratory analysis has been conducted. <i>or</i> ▶ A non-aqueous phase liquid (NAPL) has been identified in or on the groundwater. <i>or</i> ▶ OHM has been identified in groundwater at concentrations \geq applicable groundwater RCs. 	20
POTENTIAL EXPOSURE PATHWAY	<p><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ A private drinking water well is located within 500' of any portion of a disposal site where OHM has been identified in groundwater at concentrations \geq 310 CMR 40.0974(2). <i>or</i> ▶ The disposal site is located within a Zone II or upgradient of a public well within an Interim Wellhead Protection Area <i>and</i> OHM has been identified in groundwater at concentrations \geq 310 CMR 40.0974(2). 	100
LIKELY <i>or</i> CONFIRMED EXPOSURE PATHWAY	<p><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM, possibly attributable to the disposal site, has been identified in a public or private drinking water supply well. Drinking water samples shall be taken prior to treatment or blending. <i>or</i> ▶ A reasonable likelihood exists that a public or private drinking water supply well has been or is likely to be impacted by OHM from the disposal site. 	150

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40.1512(3) Surface Water

II.C. SURFACE WATER EXPOSURE CRITERIA		
DEFINITION	As defined by 310 CMR 40.0006, including rivers, streams, lakes, ponds, springs, impoundments, estuaries, wetlands, coastal waters and vernal pools.	
DESIGNATION	CRITERIA	POINTS
NONE or NOT APPLICABLE	<ul style="list-style-type: none"> ▶ OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, surface waters. 	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	<p style="text-align: center;"><i>Any of the Following</i></p> <ul style="list-style-type: none"> ▶ A release (past or on-going) of OHM to surface water has been identified. <li style="text-align: center;"><i>or</i> ▶ Qualitative evidence of a release. <ul style="list-style-type: none"> • OHM-attributable visible sheen or discoloration; <i>or</i> • OHM entering surface water; <i>or</i> • OHM-attributable stained soils in contact with surface water; <i>or</i> • There is a reasonable likelihood that OHM <i>will</i> be identified in surface water as a result of OHM migration. <li style="text-align: center;"><i>or</i> ▶ OHM, likely attributable to the disposal site, has been identified in groundwater at concentrations that are likely to result in detectable concentrations in surface water. 	20
POTENTIAL EXPOSURE PATHWAY	<p style="text-align: center;"><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM, likely to be attributable to the disposal site, has been identified in a surface water known to be used for drinking, swimming, boating or fishing. <li style="text-align: center;"><i>or</i> ▶ OHM, likely to be attributable to the disposal site, has been identified at concentrations \geq Ambient Water Quality Criteria (AWQC) pursuant to 40.1505(2) and 40.1516(1). 	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	<p style="text-align: center;"><i>Any of the Following</i></p> <ul style="list-style-type: none"> ▶ There is a reasonable likelihood that a surface public drinking water supply has been or may be impacted by OHM from the disposal site. <li style="text-align: center;"><i>or</i> ▶ OHM, possibly attributable to the disposal site, has been identified at the entry point to a public drinking water supply distribution system. <li style="text-align: center;"><i>or</i> ▶ A fish advisory likely attributable to the disposal site is in effect. <li style="text-align: center;"><i>or</i> ▶ OHM likely attributable to the disposal site present has been identified at concentrations \geq Ambient Water Quality Criteria (AWQC) pursuant to 40.1505(2) and 40.1516(1), and the disposal site is located in or contains: an Area of Critical Environmental Concern (ACEC); a mapped habitat of a Species of Special Concern, Endangered or Threatened Species; a Certified Vernal Pool; a Restricted Wetland; an Outstanding Resource Water; a fish habitat; or a Protected Open Space. 	150

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40.1512(4) Air

II.D. AIR EXPOSURE CRITERIA		
DEFINITION	Air contamination includes both vapors, particularly focusing on indoor air, and particulates. Score only releases regulated under C. 21E; do not score permitted releases associated with on-going commercial or industrial processes.	
DESIGNATION	CRITERIA	POINTS
NONE or NOT APPLICABLE	<ul style="list-style-type: none"> ▶ OHM likely attributable to the disposal site has not been identified in, and is not anticipated to be identified in, air. 	0
EVIDENCE OF CONTAMINATION (Assumes No Exposure Pathway)	<p style="text-align: center;"><i>Any of the following</i></p> <ul style="list-style-type: none"> ▶ A release, or potential release, of OHM to air has been identified. <li style="text-align: center;"><i>or</i> ▶ OHM that may be released to air as particulate material has been identified in the top 6" of the ground surface. Unbroken paved/concrete slab surfaces may be interpreted as preventing release of particulates to air. <li style="text-align: center;"><i>or</i> ▶ OHM that may be released to air as a vapor has been identified in an open container or surface impoundment that is part of the disposal site. <li style="text-align: center;"><i>or</i> ▶ An odor that is reasonably attributable to a release of OHM at the disposal site has been identified. 	15
POTENTIAL EXPOSURE PATHWAY	<p style="text-align: center;"><i>Any of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM releases, likely attributable the disposal site, have been repeatedly identified in ambient air within 100' of a residence, school, hospital, nursing home, or playground when such releases are above ambient background concentrations and are not related to permitted releases. <li style="text-align: center;"><i>or</i> ▶ Total volatile organic compounds have been identified in groundwater at concentrations ≥ 5 mg/l within 30 feet of a school or occupied residence where the depth to groundwater is ≤ 15 feet. Soil gas surveys or indoor air sampling may be conducted to demonstrate no exposure to OHM. <li style="text-align: center;"><i>or</i> ▶ A reasonable likelihood exists that the indoor air quality of an occupied building will be impacted by OHM likely attributable to the disposal site. 	100
LIKELY or CONFIRMED EXPOSURE PATHWAY	<p style="text-align: center;"><i>Either of the Following</i></p> <ul style="list-style-type: none"> ▶ OHM has been identified in indoor air in an occupied building, above background concentrations, when the OHM is likely attributable to a non-permitted release at the disposal site. <li style="text-align: center;"><i>or</i> ▶ A reasonable likelihood exists that OHM likely attributable to the disposal site is affecting air quality in an occupied building. 	200

40.1513 Human Health-Based Toxicity Values and Scores

(1) The Human Health-Based Toxicity Values found in 310 CMR 40.1513(2) shall be used to score OHM not included in Table III.A. of the Scoresheet. If a site-related OHM is not listed in 310 CMR 40.1513(2) use the Relative Toxicity Value Matrix [310 CMR 40.1513(3)] to derive a OHM-specific Toxicity Value. Correlate the value derived using 310 CMR 40.1513(3) with the OHM concentration to determine the OHM Toxicity Score using Worksheet III.A.1. in the Scoresheet. Record each OHM name, Toxicity Value, concentration and Toxicity Score in Table III.A.1 of the Scoresheet.

(2) Human Health-Based Toxicity Values

40.1513(2) Human Health-Based Toxicity Values and Scores							
OHM	CAS Number	Chronic Oral RfD mg/kg/d	Oral Cancer Slope Factor 1/(mg/kg/d)	CLASS	Inhalation Cancer Slope Factor 1/(mg/kg/d)	CLASS	HUMAN TOXICITY VALUE
Acenaphthene	83329	6.0e-02					8
Acenaphthylene	208968			D		D	25
Acetate	30560191	4.0e-03	8.7e-03	C		ND	30
Acetaldehyde	75070						25
Acetone	67641	1.0e-01		D		D	8
Acetone Cyanohydrin	75865	7.0e-02					8
Acetonitrile	75058	6.0e-03		D			25
Acetophenone	98862	1.0e-01		D		D	8
Acetyl Chloride	75365			D		D	25
Acrolein	107028	2.0e-02		C		C	25
Acrylamide	79061	2.0e-04	4.5e+00	B2	4.5e+00	B2	46
Acrylic acid	79107	8.0e-02					8
Acrylonitrile	107131		5.4e-01	B1	2.4e-01	B1	28
Alachlor	15972608	1.0e-02	8.0e-02	B2		B2	25
Aldicarb	116063	2.0e-04		D		D	40
Aldrin	309002	3.0e-05	1.7e+01	B2	1.7e+01	B2	50
Alkanes/Alkenes							25
Allyl Alcohol	107186	5.0e-03					25
Allyl Chloride	107051	5.0e-02		C		C	22
Aluminum phosphide	20859738	4.0e-04					40
Ametryn	834128	9.0e-03					18
Aminopyridine, 4-	504245	2.0e-05		D		D	40
Ammonia	7664417						25
Ammonium Acetate	631618			D		D	25
Aniline	62533		5.7e-03	B2		B2	22
Anthracene	120127	3.0e-01		D		D	4

REFERENCES

- * Solubility of 1,000,000 mg/l assigned because of reported "infinite solubility" in the literature.
- 1 "Superfund Public Health Evaluation Manual", Office of Emergency and Remedial Response Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, 1986.
 - a Environmental Criteria and Assessment Office (ECAO), EPA, Health Effects Assessments for Specific Chemicals, 1985.
 - b Mabey, W.R., J.H. Smith, R.T. Rodoll, H.L. Johnson, T. Mill, T.W. Chou, J. Gates, I.W. Patridge, H. Jaber, and D. Vanderberg. "Aquatic Fate Process Data for Organic Priority Pollutants," EPA Contract Nos. 68-01-3867 and 68-03-2981 by SRA International for Monitoring and Data Support Division, Office of Water Regulations and Standards, Washington, DC, 1982.
 - c Dawson, et al., Physical/Chemical Properties of Hazardous Waste Constituents, by Southeast Environmental Research Laboratory for US EPA, 1980.
 - d Jaber, et al., "Data Acquisition for Environmental Transport and Fate Screening", Office of Health and Environmental Assessment, US EPA, Washington DC, EPA 600/6-84-009, 1984.
 - e ORD, US EPA, "Treatability Manual, Volume 1", EPA 600/2-82-001a.
 - f Verschueren K., "Handbook of Environmental Data for Organic Chemicals", Van Nostrand Reinhold Co., New York, 2nd ed., 1983.
 - 1 US EPA, "Basics of Pump-and-Treat Ground-Water Remediation Technology," EPA/600/8-901003, Robert S. Kerr Environmental Research Laboratory, March 1990.
 - 2 Manufacturer's data; Texas Petrochemicals Corp., Gasoline Grade Methyl-tert-butyl-ether Shipping Specifications and Technical Data, 1986.
 - 4 CRC Handbook of Chemistry and Physics, 71st Edition, CRC Press, Ohio, 1990.
 - 5 Lyman W.J. et al., "Research and Development of Methods for Estimating Physicochemical Properties of Organic Compounds of Environmental Concern," June 1981.
 - 6 EPA Draft Document, "Hazardous Waste Treatment, Storage and Disposal Facilities (TSDF) Air Emissions Model," April 1989.
 - 7 Citations compiled in E.K. Nyer, "Groundwater Treatment Technology," 2nd edition, in production.
 - 8 Dragun J., "The Soil Chemistry of Hazardous Materials," The Hazardous Materials Control Research Institute, 1988, pp.366-367.
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40.1516 Environmental Toxicity Values

(1) Environmental Toxicity Values

40.1516(1) ENVIRONMENTAL TOXICITY VALUES					
(for OHM with Ambient Water Quality Criteria)					
OHM	AMBIENT WATER QUALITY CRITERIA				TOXICITY VALUE
	FRESH WATER ACUTE	FRESH WATER CHRONIC	MARINE ACUTE	MARINE CHRONIC	
	pp/l	pp/l	pp/l	pp/l	
Acenaphthene	1700	520	970	710	20
Acrolein	68	21	55		30
Acrylonitrile	7550	2600			10
Aldrin	30		13		40
Antimony	88	30	1500	500	30
Arsenic	850		2319		30
Benzene	5300		5100	700	10
Benzidine	2500				20
Beryllium	130	53			40
Benzene Hexachloride	100		0.34		20
Cadmium	3.9	1.1	43	9.3	40
Carbon Tetrachloride	35200		50000		10
Chlordane	2.4	0.0043	0.09	0.004	50
Chloroform	28900	1240			10
Chlorophenol, 2-	4380				20
Chlorophenol, 4-			29700		10
Chlorpyrifos	0.083	0.041	0.011	0.0056	40
Chromium III	1700	210	10300		20
Chromium VI	16	11	1100	50	30
Copper	18	12	2.9		30
Cyanide	22	5.2	1		30
DDT	1.1	0.001	0.13	0.001	50
DDE	1050		14		30
Demeton		0.1		0.1	40
Di-2-Ethylhexyl Phthalate	400	360	400	360	20
Dichlorobenzenes	1120	763	1970		10
Dichloroethane, 1,2-	118000	20000	113000		10
Dichloroethylenes	11600		224000		10
Dichlorophenol, 2,4-	2020	365			20
Dichloropropane	23000	5700	10300	3040	10
Dichloropropane	6060	244	790		20
Dieldrin	2.5	0.0019	0.71	0.0019	50
Dimethylphenol, 2,4-	2120				20
Dinitrotoluene			590	370	10
Dinitrotoluene, 2,4-	330	230			20
Diphenylhydrazine, 1,2-	270				30
Endosulfans	0.22	0.056	0.034	0.0087	40

40.1516(1) ENVIRONMENTAL TOXICITY VALUES					
(for OHM with Ambient Water Quality Criteria)					
OHM	AMBIENT WATER QUALITY CRITERIA				
	FRESH WATER ACUTE pg/l	FRESH WATER CHRONIC pg/l	MARINE ACUTE pg/l	MARINE CHRONIC pg/l	TOXICITY VALUE
Endrin	0.18	0.0023	0.037	0.0023	50
Ethylbenzene	32000		430		10
Fluoranthene	3980		40	16	20
Guthion		0.01		0.01	50
Heptachlor	0.52	0.0038	0.053	0.0036	50
Heptachlor Epoxide	0.52	0.0038	0.053	0.0036	50
Hexachlorobenzene	6	3.68			50
Hexachlorobutadiene	90	9.3	32		50
Hexachlorocyclohexane, gamma-	2	0.08	0.16		50
Hexachlorocyclopentadiene	7	5.2	7		50
Hexachloroethane	980	540	940		20
Hydrogen Sulfide		2		2	50
Isoparone	117000		12900		10
Lead	83	3.2	220	8.5	50
Lindane	2	0.08	0.16		50
Malathion		0.1		0.1	50
Mercury	2.4	0.012	2.1	0.025	50
Methoxychlor		0.03		0.03	50
Methyl Mercury	2.4	0.012	2.1	0.025	50
Mirex		0.001		0.001	50
Naphthalene	2300	620	2350		20
Nickel	1400	160	75	8.3	50
Nitrobenzene	27000		6680		10
Nitrophenols	230	150	4850		20
Parathion	0.065	0.013			50
PCBs	2	0.014	10	0.03	50
Pentachloroethane	7240	1100	590	281	10
Pentachlorophenol	20	13	13	7.9	50
Phenanthrene	30	6.3	7.7	4.6	50
Phenol	10200	2560	5800		10
Phosphorus (elemental)				0.1	50
Phthalate esters	940	3	2944	3.4	50
Selenium	20	5	300	71	50
Silver	0.92	0.12	7.2	0.92	50
TCDD, 2,3,7,8-	0.01	0.00001			50
TDE (DDT Metabolite)	0.6		3.6		50
Tetrachloroethane, 1,1,2,2-		2400	9020		10
Tetrachloroethanes	9320				10
Tetrachloroethylene	5280	840	10200	450	10
Tetrachlorophenol, 2,3,5,6-			440		50

40.1516(1) ENVIRONMENTAL TOXICITY VALUES					
(for OHM with Ambient Water Quality Criteria)					
OHM	AMBIENT WATER QUALITY CRITERIA				
	FRESH WATER ACUTE	FRESH WATER CHRONIC	MARINE ACUTE	MARINE CHRONIC	TOXICITY VALUE
	pg/l	pg/l	pg/l	pg/l	
Thallium	1400	40	2130		30
Toluene	17500		6300	5000	10
Triphenyl	0.73	0.0002	0.21	0.0002	50
Trichloroethane, 1,1,1-			31200		10
Trichloroethane, 1,1,2-		9400			10
Trichloroethanes	18000				10
Trichloroethylene	45000	21900	2000		10
Trichlorophenol, 2,4,5-	100	63	240	11	20
Trichlorophenol, 2,4,6-		970			10
Zinc	120	110	95	86	20

40.1516(2) Default Environmental Toxicity Values

ENVIRONMENTAL TOXICITY DEFAULT VALUES	
Default values shall be assigned for all OHMs not listed in 310 CMR 40.1516(1) according to the following criteria.	
CHEMICAL CLASS	ENVIRONMENTAL TOXICITY VALUE
Alcohol	20
Aldehydes	30
Alkanes	20
Alkenes	30
Amines	20
Aromatics	30
Esters	40
Ethers	20
Halogenated Hydrocarbons (except Ethers)	30
Ketones	30
Organic Acids	40
Pesticides	40
Metals	20

NOTE: Use the HIGHEST Default Value applicable to the OHM under consideration.

Example: A halogenated pesticide would be assigned a default value of 40.
A halogenated alkane would be assigned a default value of 30.

NOTE: For radionuclides, no Environmental Toxicity Value has been established. Radionuclides present in quantities greater than their federal Reportable Quantity (40 CFR Part 302.4, Appendix B) where the quantity is known or in concentrations greater than background where the quantity is not known shall be assigned an *Environmental Toxicity Score* equal to 30. This score shall be entered directly in Worksheet V.B.1.

40.1516(3) Environmental Toxicity Value Matrix

40.1516(3) ENVIRONMENTAL TOXICITY VALUE MATRIX					
AMBIENT WATER QUALITY CRITERIA (AWQC)	ENVIRONMENTAL TOXICITY VALUE RANGES In µg/l				
Fresh Water Chronic	< 0.03	$0.03 \leq X < 2.8$	$2.8 \leq X < 70$	$70 \leq X < 620$	> 620
Marine Chronic	< 0.005	$0.005 \leq X < 0.3$	$0.3 \leq X < 8$	$8 \leq X < 200$	> 200
Fresh Water Acute	< 3	$3 \leq X < 85$	$85 \leq X < 1,200$	$1,200 \leq X < 8,000$	> 8,000
Marine Acute	< 1.1	$1.1 \leq X < 33$	$33 \leq X < 490$	$490 \leq X < 27,000$	> 27,000
ENVIRONMENTAL TOXICITY VALUE	50	40	30	20	10

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Boston Redevelopment Authority

Boston's Planning & Economic
Development Office

Thomas M. Menino, Mayor
Clarence J. Jones, Chairman
Thomas N. O'Brien, Director

Boston Marine Industrial Park
10 Drydock Avenue
South Boston, MA 02210
Tel 617-635-3300
Fax 617-635-3789

April 8, 1998

Bureau of Waste Site Cleanup
Department of Environmental Protection
10 Commerce Way
Woburn, MA 01801

Re: Phase I Initial Investigation/Tier Classification
Parcel P-3
RTN 3-15009

To whom it may concern:

In accordance with M.G.L. c. 21E, and the Massachusetts Contingency plan, 310 CMR 40.000 the Boston Redevelopment Authority and Weston & Sampson Engineers, Inc., is pleased to submit the attached Phase I Initial Investigation Report and Tier Classification for the Parcel P-3 site in Roxbury, MA.

If you have any questions with the site or the attached document, you may call Weston & Sampson Engineers, Inc. at (617) 532-1900 or myself at (617) 635-3820.

Sincerely,



Paul Osborn
Sr. Project Engineer

xc: R. Mertens/BRA
G. Naslas/WSE
H. Carlson/BRA
L. Mammoli/BRA
File 5013 CF

Roxbury
Parcel P-3 Tremont @ Whittier St
3-15009

pro/P3/DEP1

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