Exhibit A

EXHIBIT A

PROPERTY DESCRIPTION

72 & 102 Elm Street, North Attleborough MA

PARCEL 1:

Beginning at a Massachusetts highway bound, situated on the southeasterly side of East Washington Street; thence running

Northerly and northeasterly by a curve with R. = 40 a distance of 48.83 feet to a Massachusetts highway bound on the southerly side of Orne Street; thence

Southeasterly by Orne Street, 58.29 feet to land now or formerly of Santoro; thence

Southerly by an interior angle of 96°44' a distance of 142 feet by said land; thence

Easterly by an interior angle of 266° a distance of 107.24 feet to the northwesterly side of a right of way; thence

Northeasterly by said right of way 75.72 feet to the westerly side of Lavery Street; thence

Southerly by Lavery Street 539.13 feet to the northwesterly corner of land now or formerly of James Lavery; thence

Westerly by said Lavery land 249.45 feet; thence

Northerly by a right angle and land now or formerly of Willersinn 69.53 feet; thence

Westerly by a right angle and said land 19.50 feet; thence

Northwesterly by an interior angle of 121°53' by said land 38.66 feet; thence

Southwesterly by said land 93.88 feet; thence

Continuing by a slight angle to the south by said land 54.50 feet; thence

Southerly by said land 21.18 feet to a stone post; thence

Northwesterly by the former location of Elm Street 112.55 feet to a stone bound in the northeasterly line of Elm Street; thence running

Northwesterly by Elm Street 141.36 feet more or less to land of the Town of North Attleborough; thence

Northeasterly by said land 30 feet; thence

Westerly by said land 50 feet to an arrow cut in the retaining wall of the Ten Mile River; thence

Southwesterly by the Ten Mile River as determined by its retaining wall 41 feet to a crowfoot cut in the concrete bridge in the easterly line of Elm Street; thence

Northerly and northeasterly by the curved intersection of Elm Street and East Washington Street 33.65 feet; thence

Northeasterly by East Washington Street 178.02 feet to a Massachusetts highway bound; thence continuing

Northeasterly by said street by a curve with R. = 1760 a distance of 341.34 feet to a Massachusetts highway bound and the point of beginning.

EXCEPTING herefrom the premises described in a deed from Oscar A. Hillman to Marcellus Chandler, dated September 24, 1943 and recorded with the Bristol County Northern District Registry of Deeds in Book 880, Page 572.

ALSO EXCEPTING herefrom a parcel taken by eminent domain by the Town of North Attleborough for the extension of Landry Avenue as recorded in Book 1557, Page 575, containing about 1350 square feet and subject to the rights of slopage, located on the southwesterly side of Orne Street shown on plans entitled, "Layout Plans of Landry Avenue from Station 0 + 00 (Kelley Boulevard) to Station 122 + 54.39 (East Washington St.), North Attleborough, Massachusetts, Scale 40 feet to an inch, September 1969"

PARCEL 2:

All right, title and interest in a parcel of land bounded southwesterly by Elm Street, northeasterly by the above-described Parcel 1 and southeasterly by land now or formerly of James Lavery, which parcel consists of the former location of Elm Street as shown on a plan of land entitled, "Land in North Attleborough, Mass. Surveyed for the Richards Real Estate Trust, Feb. 1940. The Frank T. Wescott Co. Engrs." Duly recorded with said Bristol Northern County Registry of Deeds in Book 32, Page 38.

PARCEL 3:

The land in said North Attleboro, together with the buildings and improvements thereon, situated on the southerly side of Orne Street, and bounded and described as follows:

Beginning at a point in the south line of said Orne Street, said point being the northeasterly corner of land now or formerly of Paul and Lucie Santoro; thence southerly at right angles to the first described line, 100 feet to a corner; thence easterly at right angles to the first described line and parallel to said Orne Street, about 24 feet to a right of way, a corner; thence

northeasterly by said right of way and part of Lavery Street, said right of way and Lavery Street being shown on a plan entitled, "Plat of Richards Real Estate Trust, the F.T. Wescott Co., Eng'rs., Feb. 1940", which plan is recorded with the Bristol County N.D. Registry of Deeds in Plan Book 32, Page 39, about 51 feet to a corner; thence northwesterly still by said Lavery Street, about 71 feet to said Orne Street, a corner; thence westerly by said Orne Street, 16.57 feet to the point of beginning.

PARCEL 4:

The land in North Attleborough, Bristol County, Massachusetts, situated on the southeasterly side of a right of way over land now or formerly of Hillman, leading from Elm Street to Orne Street, bounded and described as follows:

Beginning at a point 22.71 feet northeasterly of an angle point in said right of way; thence northeasterly by said right of way, 104.76 feet to a corner; thence at right angles, southeasterly 32.53 feet to a corner; thence southwesterly parallel to said right of way, 104.76 feet to a corner; thence northwesterly 32.53 feet to the point of beginning.

Being a portion of Lot No. 4 as shown on that plan entitled, "Land in North Attleborough, Mass., Surveyed for The Richards Real Estate Trust" which plan is dated February 1940 and made by Frank T. Wescott Company, Engineers and is recorded with the Bristol County N.D. Registry of Deeds in Plan Book 32 at Page 38, and to which reference may be had.

Exhibit B

EXHIBIT B

SITE DESCRIPTION AND SUMMARY OF ENVIRONMENTAL CONDITION

Summary of Environmental Conditions
Handy & Harman Electronic Materials Corporation
72 Elm Street
North Attleboro, Massachusetts
RTN 4-0958

The following is a concise summary of current environmental conditions at the Handy & Harman Electronic Materials Corp. (HHEM) facility located at 72 Elm Street in North Attleboro, Massachusetts, prepared by Roux Associates, Inc. More detailed information is available for public review at the Richards Memorial Library in North Attleboro, the Department of Environmental Protection's (MassDEP) Southeast Regional Office in Lakeville, and/or the MassDEP's website.

MassDEP initially asserted jurisdiction to the HHEM site under M.G.L. Chapter 21C, the Massachusetts Hazardous Waste Management Act. More recently, however, site response actions have been completed pursuant to M.G.L. Chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention and Response Act.

Soil Quality
Due to historic industrial activities, volatile organic compounds (VOCs), metals, cyanide, and petroleum constituents are present in the soils at the HHEM property. Primary source areas of contamination include the former Crown Building area, the former location of a small oval-shaped pond, and the former location of aboveground solvent storage tanks. Impacted soils are also present beneath and adjacent to portions of the existing HHEM building, in the former wetland area, and in the former surface impoundment area.

Former Crown Building Area
VOCs, metals, and cyanide are all present in soil in this area. However, these constituents are not present at levels exceeding health risk-based criteria and do not appear to be a continuing source of contamination to underlying groundwater. Therefore this area does not require remediation.

Former Pond
VOCs and metals are also present in soil in this area. However, like at the former Crown Building area, these constituents are not present at levels exceeding health risk-based criteria and do not appear to be a continuing source of contamination to underlying groundwater. Therefore, this area likewise does not require remediation.

Former Aboveground Solvent Storage Tank Area
VOCs were formerly present in soil in this area at concentrations warranting remediation. Impacted soils were therefore removed from this area in August 2007.

Existing Building
VOCs and metals are present in soils beneath and adjacent to portions of the existing HHEM building, primarily the older, rear portion of the building. VOC and metals concentrations in this area are much lower than in the primary historical source areas (e.g., former Crown Building area) and therefore do not require remediation.

Former Wetland Area
Various metals have been detected in soil in the former wetland area. In some portions of the former wetland area, concentrations warranted remediation; therefore, the most highly impacted soils were removed from this area in August 2007. Remaining metals concentrations are much lower and do not require remediation.

Former Surface Impoundment
Some metals have been detected in soil in the former surface impoundment area, but at concentrations much lower than in the primary historical source areas. Therefore this area does not require remediation.

A Notice of Activity and Use Limitation ("AUL") has been recorded for the HHEM property ensuring that future use of the property will not result in unacceptable levels of exposure and risk to human health. The AUL is attached.

Groundwater Quality
Groundwater beneath the HHEM facility and several downgradient properties along Elm and Grant Streets contains VOCs and metals. Groundwater beneath properties along Jay Street also contain VOCs; however, it remains unclear to what extent, if any, the existence of such constituents in the groundwater in the Jay Street area is actually attributable to the HHEM facility (versus other nearby sites). The detection of metals in groundwater is limited while VOC detection extends deep into the bedrock. In fact, the highest VOC concentrations at the HHEM site are in bedrock fractures over 100 feet below the land surface. The most recent drawings depicting the extent of VOCs in overburden groundwater and in shallow bedrock groundwater can be found in the Phase II Report/Remedial Action Plan, dated October 2007. It is anticipated that natural attenuation of the VOCs will occur with time, such that active remediation of groundwater will not be required. Groundwater monitoring is ongoing.

Ambient Air Quality
Based on VOC concentrations measured in soil vapor at the HHEM property, VOCs are not likely to be present in outdoor air at concentrations that could pose an unacceptable level of risk to human health. It is contemplated that any future buildings constructed on the property will require vapor engineering controls.

Several of the VOCs detected in soil and groundwater at the HHEM facility were detected in indoor air of the adjacent restaurant at 116 Elm Street during monitoring conducted in the late 1990s and up until 2001. Solely as a precautionary measure, the previous owners of the restaurant installed a vapor barrier and passive sub-slab venting system in 2003 when they renovated the restaurant. However, more recent data indicate that no VOCs attributable to the

HHEM property are impacting indoor air within the restaurant building, even with the venting system deactivated. The vapor barrier was improved in 2009, and a Notice of Activity and Use Limitation was recorded to ensure that the integrity of the barrier is maintained.

Indoor air at the 11 and 14 Grant Street residences was also monitored on one or more occasions. Although VOCs potentially attributable to the HHEM property were detected in the indoor air of the 14 Grant Street residence during sampling conducted in the 1990s, more recent sampling indicates that no VOCs attributable to the HHEM property are currently impacting indoor air within either residence.

Surface Water Quality
No VOCs attributable to the Handy & Harman facility have been detected in the Tenmile River or other surface-water bodies located in the vicinity of the HHEM property. Several metals have been detected in the Tenmile River adjacent to the HHEM property; however, concentrations are within levels protective of both human health and ecological receptors. Therefore no remediation of surface water at the site is required.

Sediment Quality
Metals have been detected in sediment samples collected along the reach of the Tenmile River adjacent to the HHEM property. However, many of these metals have also been detected in sediments upstream of the HHEM property at similar or greater concentrations, and the metals concentrations are within levels protective of both human health and ecological receptors. Therefore no remediation of sediment at the site is required.

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Doc: NOTC 01/23/2009 08:54 AM

Form 1075

NOTICE OF ACTIVITY AND USE LIMITATION
M.G.L. c. 21E, § 6 and 310 CMR 40.0000

Disposal Site Name: Handy & Harman Electronic Materials, 72 Elm Street, North Attleboro, MA
DEP Release Tracking No.: 4-0958

This Notice of Activity and Use Limitation ("Notice") is made as of this 22nd day of January 2009, by Handy & Harman Electronic Materials Corporation (HHEM), 1133 Westchester Avenue, White Plains, New York 10604, together with his/her/its/their successors and assigns (collectively "Owner").

WITNESSETH:

WHEREAS, HHEM is the owner in fee simple of those certain parcels of land located in North Attleboro, Bristol County, Massachusetts with the buildings and improvements thereon, pursuant to deeds recorded with the Bristol County Northern District Registry of Deeds in Book 1992, Page 346; Book 2052, Page 258; Book 2384, Page 158; and Book 2580, Page 251.

WHEREAS, said parcels of land, which are more particularly bounded and described in **Exhibit A**, attached hereto and made a part hereof ("Property"), are subject to this Notice of Activity and Use Limitation. The Property is shown on a plan recorded in the Bristol County Northern District Registry in Plan Book 467, Plan 11.

WHEREAS, the Property comprises part of a disposal site as the result of a release of oil and/or hazardous material. **Exhibit B** is a sketch plan showing the relationship of the Property subject to this Notice of Activity and Use Limitation to the boundaries of said disposal site existing within the limits of the Property and to the extent such boundaries have been established. **Exhibit B** is attached hereto and made a part hereof; and

WHEREAS, one or more response actions have been selected for the Disposal Site in accordance with M.G.L. c. 21E ("Chapter 21E") and the Massachusetts Contingency Plan, 310 CMR 40.0000 ("MCP"). Said response actions are based upon (a) the restriction of human access to and contact with oil and/or hazardous material in soil and/or groundwater and/or (b) the restriction of certain activities occurring in, on, through, over or under the Property. The basis for such restrictions is set forth in an Activity and Use Limitation Opinion ("AUL Opinion"), dated January 22, 2009, (which is attached hereto as **Exhibit C** and made a part hereof);

NOW, THEREFORE, notice is hereby given that the activity and use limitations set forth in said AUL Opinion are as follows:

1. Activities and Uses Consistent with the AUL Opinion. The AUL Opinion provides that a condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time (pursuant to 310 CMR 40.0000) so long as any of the following activities and uses occur on the Property:

(i) Periodic inspection, maintenance and/or repair of the existing vacant building at the Property, or short-term entry thereof for other purposes including, but not limited to, sampling of building materials and environmental media;

(ii) Industrial, commercial, office and/or retail uses and activities associated therewith, including but not limited to, pedestrian and/or vehicular traffic, excavation associated with redevelopment and/or maintenance of the Property, and landscaping and routine maintenance of landscaped areas;

(iii) Excavation associated with redevelopment and/or maintenance of the Property, future construction, and/or future non-emergency utility maintenance/repair and landscaping, provided that, except in areas specifically engineered to preclude exposure to oil and/or hazardous material, such excavation is coordinated with and overseen by a Massachusetts Licensed Site Professional (LSP) and is conducted in accordance with the Soil Management Plan pursuant to Paragraph 3(ii) of this Notice. Where applicable, any disturbance to a building slab or to a vapor barrier installed pursuant to Paragraph 2(iv) below shall be promptly repaired and/or replaced with comparable materials following completion of construction or maintenance/repair;

(iv) Excavation associated with emergency utility maintenance or repair, provided that such excavation is conducted in accordance with the Soil Management Plan pursuant to Paragraphs 3(i) and 3(ii) of this Notice. Where applicable, any disturbance to a building slab or to a vapor barrier installed pursuant to Paragraph 2(iv) below shall be promptly repaired and/or replaced with comparable materials following completion of construction or maintenance/repair;

(v) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Paragraph; and

(vi) Such other activities and uses not identified in Paragraph 2 as being Activities and Uses Inconsistent with the AUL.

2. Activities and Uses Inconsistent with the AUL Opinion. Activities and uses which are inconsistent with the objectives of this Notice of Activity and Use Limitation, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) Continuous occupancy of the existing vacant building at the Property;

(ii) Future use of the Property as a residence, school, recreational area, or institution;

(iii) Future use of the Property for agricultural activities where the soil is used for growing fruits or vegetables for human consumption;

(iv) Construction of any new building at the Property without a vapor barrier meeting the specifications listed in **Exhibit D** and a passive sub-slab venting system , plans and installation of which must be reviewed and overseen by an LSP, unless construction without a vapor barrier and passive sub-slab depressurization system or a less effective vapor barrier and/or passive sub-slab depressurization system is evaluated by an LSP who renders an Opinion that such construction is consistent with maintaining a condition of No Significant Risk; and

(v) Any non-emergency activity including, but not limited to, excavation associated with redevelopment of the Property, which is likely to disturb contaminated soil, without coordination and oversight by an LSP and in accordance with the Soil Management Plan described in Paragraph 3(ii) of this Notice.

3. Obligations and Conditions Set Forth in the AUL Opinion. If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk as set forth in the AUL Opinion shall include the following:

(i) Any soils excavated at the Property must be either 1) disposed offsite in accordance with all applicable regulations or 2) managed pursuant to the Soil Management Plan referenced in Paragraph 3(ii) below and within the limits of the Area of Contamination (AOC) set forth in **Exhibit B**. Notice is hereby given that there may be characteristic or listed wastes in the AOC as defined under the Resource Conservation and Recovery Act.

(ii) The soil management procedures described in the Soil Management Plan provided as **Exhibit E of the Notice of Activity and Use Limitation** must be implemented as part of any activity that is likely to disturb contaminated soil at the Property. Workers who may handle or otherwise manage contaminated soil should be appropriately trained on the requirements of the Plan, and the Plan must remain available on-site throughout the course of any projects that are likely to disturb contaminated soil at the Property.

(iii) Any passive sub-slab depressurization system(s) installed in conjunction with the construction of any new building(s) at the Property must be maintained to ensure that vapors potentially emanating from underlying contaminated soil and/or groundwater freely vent to the atmosphere. Annual inspections of the above grade portions of the passive sub-slab depressurization system(s) must be conducted and documented by an LSP, or by appropriately trained personnel under the coordination of an LSP, to ensure that such inspections are adequately conducted.

4. Proposed Changes in Activities and Uses. Any proposed changes in activities and uses at the Property which may result in higher levels of exposure to oil and/or hazardous material than currently exist shall be evaluated by an LSP who shall render an Opinion, in accordance with 310 CMR 40.1080 *et seq.*, as to whether the proposed changes will present a significant risk of harm to health, safety, public

welfare or the environment. Any and all requirements set forth in the AUL Opinion to meet the objective of this Notice shall be satisfied before any such activity or use is commenced.

5. Violation of a Response Action Outcome. The activities, uses and/or exposures upon which this Notice is based shall not change at any time to cause a significant risk of harm to health, safety, public welfare, or the environment or to create substantial hazards due to exposure to oil and/or hazardous material without the prior evaluation by an LSP in accordance with 310 CMR 40.1080 *et seq.*, and without additional response actions, if necessary, to achieve or maintain a condition of No Significant Risk or to eliminate substantial hazards.

If the activities, uses, and/or exposures upon which this Notice is based change without the prior evaluation and additional response actions determined to be necessary by an LSP in accordance with 310 CMR 40.1080 *et seq.*, the owner or operator of the Property subject to this Notice at the time that the activities, uses and/or exposures change, shall comply with the requirements set forth in 310 CMR 40.0020.

6. Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer. This Notice shall be incorporated either in full or by reference into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property or a portion thereof is conveyed.

Owner hereby authorizes and consents to the filing and recordation and/or registration of this Notice, said Notice to become effective when executed under seal by the undersigned LSP, and recorded and/or registered with the appropriate Registry(ies) of Deeds and/or Land Registration Office(s).

WITNESS the execution hereof under seal this 20th day of January, 2009.

Peter T Gelfman

Handy & Harman Electronic Materials Corp.

STATE OF NEW YORK COUNTY OF WESTCHESTER

_____, ss _____,
20__

On this 20th day of January, 2009, before me, the undersigned notary public, personally appeared Peter T. Gelfman (name of document signer), proved to me through satisfactory evidence of identification, which were _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

(as partner for _____, a partnership)
(as Secretary for Handy & Harman Electronic Materials, a corporation)

Bk: 17848 Pg: 5
VIOLETA LUMANI
NOTARY PUBLIC - STATE OF NEW YORK
#01LU6176335
QUALIFIED IN WESTCHESTER COUNTY
MY COMMISSION EXPIRES 10/29/11

(as attorney in fact for _____, the principal)
(as _____ for _____, (a) (the) _____)
_____ (official signature and seal of notary)

The undersigned LSP hereby certifies that he executed the aforesaid Activity and Use Limitation Opinion attached hereto as **Exhibit C** and made a part hereof and that in his Opinion this Notice of Activity and Use Limitation is consistent with the terms set forth in said Activity and Use Limitation Opinion.

Date: 1-22-09

Neil M. Ram, PhD

LSP SEAL

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss

Jan 22, 2009

On this 22 day of Jan, 2009, before me, the undersigned notary public, personally appeared Neil Ram, proved to me through satisfactory evidence of identification, which were Driver License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose.

_____ (official signature and seal of notary)

3/10/2011

Upon recording, return to:

Richard Majos
Handy & Harman Electronic Materials Corp.
1133 Westchester Avenue
Suite N222
White Plains, New York 10604

HANDY & HARMAN ELECTRONIC MATERIALS CORPORATION

SECRETARY'S CERTIFICATE

I, Peter T. Gelfman, hereby certify that:

(a) I am the duly elected and qualified Secretary of Handy & Harman Electronic Materials Corporation, a Florida corporation (the "Corporation") and the keeper of its corporate records;

(b) Attached hereto as Exhibit A is a true and correct copy of resolutions duly adopted by the Board of Directors of the Corporation as of the 1st of May, 2008, which are in full force and effect as of the date hereof;

(c) Set forth below are the genuine and authentic signatures of the following duly appointed officers of the Corporation;

Robert K. Hynes, the duly elected Vice President and Treasurer of the Corporation.

Signature

IN WITNESS WHEREOF, I have hereunto signed my name this 9th day of July, 2008.

Secretary

STATE OF NEW YORK)
) ss
COUNTY OF WESTCHESTER)

On this 9th day of July, 2008, before me personally appeared Robert K. Hynes, to me known to be the person described herein, and who executed the foregoing instrument and who acknowledged that he voluntarily and knowingly executed same.

Notary Public

PETER T. GELFMAN
Notary Public State of New York
No. 02GE6005527
Qualified In Westchester County
Commission Expires April 13, 2012

EXHIBIT A

RESOLVED, that the following persons be and hereby are elected officers of the Company to serve as such in the respective capacities hereinafter designated until further action by the Board of Directors of this and until their respective successors shall have been duly elected and qualified, unless their term of office is sooner terminated as provided by the By-Laws or by their resignation:

Chairman of the Board:	Jeffrey A. Svoboda
President:	Thomas R. Brouillard
Senior Vice President:	James McCabe, Jr.
Vice President and Treasurer:	Robert K. Hynes
Secretary:	Peter T. Gelfman
Asst. Secretary:	Adam S. Bozek
Asst. Treasurer:	Lawrence Yellin

RESOLVED, that the proper officers of the Company be, and each of them hereby is, authorized, directed and empowered to execute and deliver all documents or instruments necessary, appropriate or desirable for the implementation of the foregoing resolutions and the performance by the Company of its obligations, and to do and perform such other acts and things as they or any of them determine, in his or their sole discretion, to be necessary, appropriate or desirable to carry out the foregoing resolutions, any such determination to be conclusively evidenced by the execution and delivery of any such document or instrument or the doing or performing of any such act or thing.

End of Document

EXHIBIT A

Description of the Property Subject to the Notice of Activity and Use Limitation

EXHIBIT A

Description of Parcel of Land Subject to AUL

A certain parcel of land situated in North Attleborough, Bristol County, Massachusetts, shown as Lot 1 on a plan titled "Plan of Land, 72 Elm Street, North Attleborough, Massachusetts, Prepared for Roux Associates, Inc." dated May 5, 2008, prepared by Cullinan Engineering Co., Inc., and recorded with the Bristol County Northern District Registry of Deeds in Plan Book 467, Plan 11, and being more particularly bounded and described as follows:

BEGINNING at a point on the southerly side of Orne Street, which is the northwest corner of land now or formerly of Joseph P. Santoro and Lucy Chabot,

THENCE S01°41'51"W for a distance of 128.74 feet,

THENCE S83°45'54"E for a distance of 107.24 feet,

THENCE N44°47'19"E for a distance of 45.80 feet,

THENCE N81°25'51"W for a distance of 22.73 feet,

THENCE N08°34'09"E for a distance of 86.50 feet,

THENCE S81°25'51"E for a distance of 110.88 feet,

THENCE S44°47'19"W for a distance of 76.22 feet,

THENCE S24°44'21"E for a distance of 532.46 feet,

THENCE S78°16'01"W for a distance of 432.87 feet,

THENCE S03°53'46"E for a distance of 26.66 feet,

THENCE N86°46'16"W for a distance of 28.50 feet,

THENCE along a non-tangent curve to the left (chord bearing S46°40'40"W, length 14.68') having a radius of 12.00' for a distance of 15.80 feet,

THENCE N38°16'34"W for a distance of 104.66 feet,

THENCE N62°10'06"W for a distance of 135.98 feet,

THENCE N26°52'24"E for a distance of 30.00 feet,

THENCE N44°04'35"W for a distance of 50.00 feet,

THENCE S43°17'55"W for a distance of 41.00 feet,

THENCE along a curve to the right having a radius of 45.00' for a distance of 39.06 feet,

THENCE N17°30'37"E for a distance of 178.49 feet,

THENCE along a curve to the right having a radius of 1760.00' for a distance of 326.54 feet,

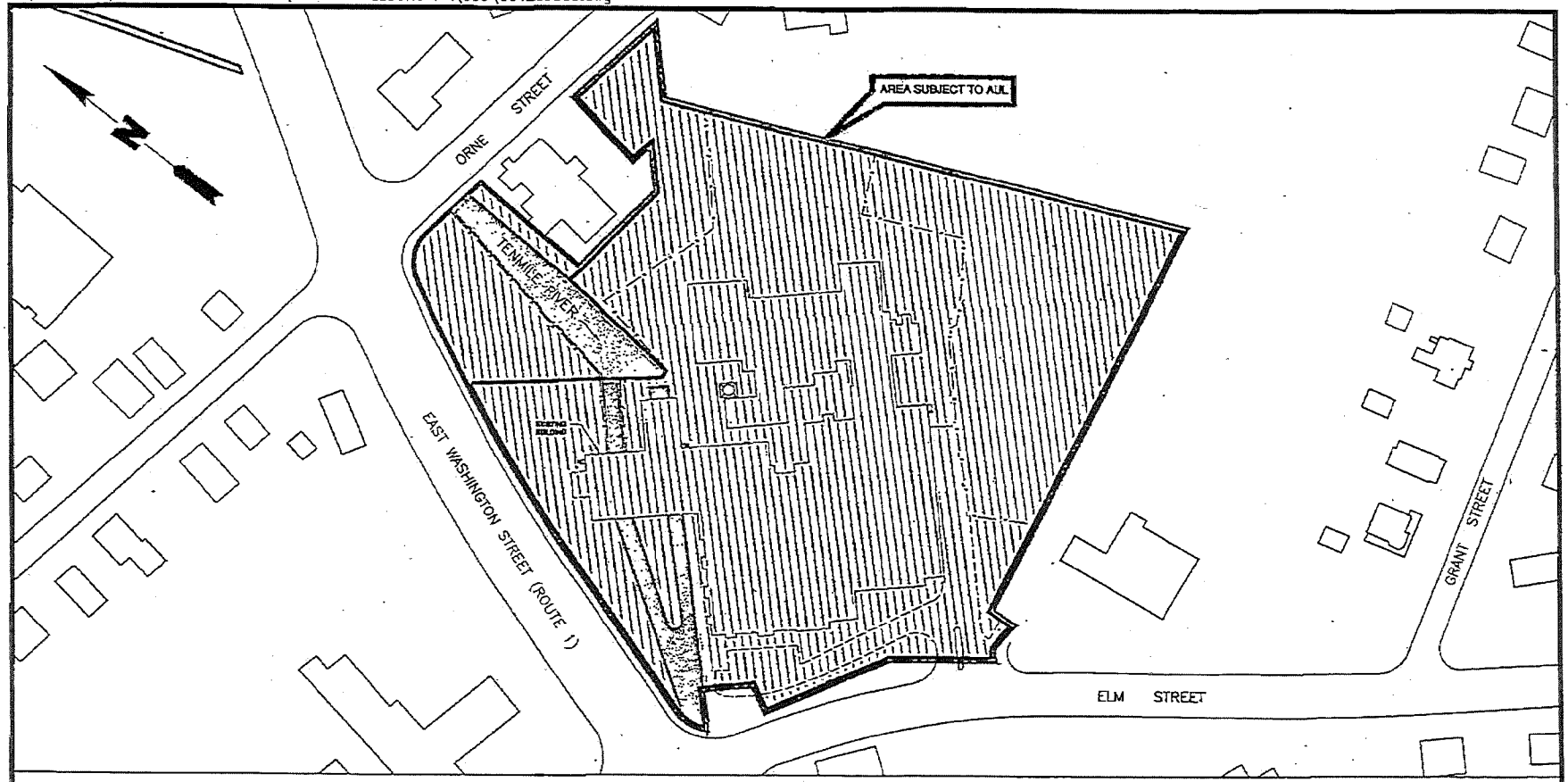
THENCE along a curve to the right having a radius of 40.00' for a distance of 49.17 feet

THENCE S81°25'51"E for a distance of 75.59 feet to the beginning point.

EXHIBIT B

Sketch Plan

N:\PROJECTS\HANDY & HARMAN 285\C012M ATTLEBORO MA\395\C01239505.dwg



SOURCES:

1. SURVEY MAP DEVELOPED BY GUNTHER ENGINEERING, INC. TITLED "WORKSHEET SHOWING MONITORING WELL LOCATIONS IN NORTH ATTLEBORO, MASSACHUSETTS," DATED JULY 19, 2000. REVISED AUGUST 7, 2000

2. APRIL 2001 MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM DIGITAL ORTHOPHOTO IMAGE

3. SURVEY PLAN TITLED "PLAN OF LAND, 72 ELM STREET, NORTH ATTLEBOROUGH, MASSACHUSETTS, PREPARED FOR ROUX ASSOCIATES, INC.," PREPARED BY CULLINAN ENGINEERING CO., INC. DATED MAY 5, 2008

4. SURVEY PLAN TITLED "EXISTING CONDITIONS PLAN, 20 GRANT STREET, NORTH ATTLEBOROUGH, MASSACHUSETTS, PREPARED FOR ROUX ASSOCIATES INC., DATED JANUARY 9, 2008

5. SURVEY PLAN TITLED "EXISTING CONDITIONS PLAN, 28 GRANT STREET, NORTH ATTLEBOROUGH, MASSACHUSETTS, PREPARED FOR ROUX ASSOCIATES INC., DATED APRIL 11, 2008

LEGEND

- FENCE
- PROPERTY BOUNDARY
- PORTION OF DISPOSAL SITE LOCATED AT PROPERTY SUBJECT TO AUL
- AOC BOUNDARY
- AREA SUBJECT TO AUL

(NOTE: DISPOSAL SITE EXTENDS BEYOND PROPERTY BOUNDARY)

Title:

EXHIBIT B - SKETCH PLAN

72 ELM STREET
NORTH ATTLEBORO, MASSACHUSETTS

Prepared For:
Handy & Harmon Electronic Materials Corp.

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: LM	Date: 1/20/09	FIGURE
Prepared by: CRS	Scale: AS SHOWN	
Project Mgr: LM	Office: MA	
File No: C01239505	Project: 28512M	

EXHIBIT C

Activity and Use Limitation Opinion

Exhibit C

Activity and Use Limitation Opinion

1.0 Introduction

In accordance with the requirements of 310 CMR 40.1074, this Activity and Use Limitation Opinion has been prepared to support a Notice of Activity and Use Limitation for the Handy & Harman Electronic Materials Corporation (HHEM) and Advanced Materials Systems, Inc. property located at 72 and 102 Elm Street in North Attleboro, Massachusetts (the Property). The Property comprises almost seven acres of land upon which HHEM conducted various electroplating operations for the jewelry and electronics industries until the HHEM facility closed in March 2000. The Property is currently unoccupied.

2.0 History

HHEM and its predecessors Advanced Materials Systems, Inc. and Oscar A. Hillman & Sons have owned the Property since the mid-1900s. Historical Sanborn™ fire insurance maps dating back to 1885 indicate that, prior to HHEM and its predecessors, a number of tenant jewelry manufacturers occupied the 72 Elm Street property, which was referred to at the time as the E.I. Richards Jewelry Shops. A large industrial building occupies roughly half of the almost 7-acre Property. This 1- to 2-story building, which is currently vacant, formerly contained manufacturing (plating) areas, engineering and laboratory space, office space, storage areas, shipping and receiving areas, and a wastewater treatment area. The oldest portions of the current HHEM building date back to the 1850s, according to a 1926 Associated Factory Mutual Fire Insurance Companies map provided to Roux Associates by HHEM. HHEM used a variety of hazardous materials in its electroplating operations, including various metals, cyanide compounds, and the chlorinated solvents tetrachloroethene (PCE), trichloroethene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA). HHEM also used a number of different petroleum products in its facility operations, including gasoline, No.2 fuel oil, No.6 fuel oil, and kerosene. A surface impoundment, part of the facility's wastewater treatment process, was used at the Property from approximately 1970 until 1981.

The Massachusetts Department of Environmental Protection (MADEP) listed the Property as a Confirmed Disposal Site (Release Tracking Number [RTN] 4-0958) in 1990 because metals were identified in soil associated with a former surface impoundment. A second RTN (4-19121) was issued for the Property in May 2005 for fuel oil released to soil associated with a closed-in-place underground storage tank (UST) formerly used to store No. 6 fuel oil. This second RTN was later linked with the Site-wide RTN. A third RTN (4-20744) was issued for the Property in August 2007 when elevated volatile organic compound concentrations in soil were detected with a photoionization detector (PID) around a previously undocumented UST identified during excavation in the area where PCE/TCE aboveground storage tanks (ASTs) were formerly located. The third RTN was linked to RTN 4-0958 in October 2007.

Various investigations, conducted pursuant to a Resource Conservation and Recovery Act (RCRA) Post-Closure Permit and later pursuant to a Massachusetts Contingency Plan (MCP) Tier IA Permit, have identified the presence of additional Oil and/or Hazardous Materials (OHM) in soil at the Property, including volatile organic compounds (VOCs), cyanides, and petroleum hydrocarbon fractions. In August through September 2007, two excavations were completed to remove OHM-impacted soils from two areas; a former wetland located at the southeastern corner of the 72 Elm Street property and at the former PCE/TCE AST area. Since that time, a Phase II Comprehensive Site Investigation Report was completed, including Method 3 Human Health Risk Characterization (HHRC), a Method 3 Ecological Risk Characterization (ERC) and a Phase III Remedial Action Report. The HHRC concluded that, a condition of No Significant Risk to human health and the environment exists at the 72 Elm Street property. Residual (post-remediation) OHM concentrations are present in soil at the Property along with OHM in soil gas, groundwater, surface water and sediment. These residual OHM may be RCRA characteristic or listed wastes.

3.0 Reason for Activity and Use Limitation

A Method 3 HHRC was performed to evaluate the risk of harm to human health, public safety, public welfare, and the environment posed by residual OHM in various environmental media at the HHEM facility property. The Method 3 HHRC demonstrated that a level of No Significant Risk exists at the HHEM property portion of the Site for all current site uses and activities, as well as for those foreseeable future uses and activities

considered in the risk characterization. However, certain exposure-limiting assumptions (e.g., requiring that new buildings be constructed with a vapor barrier and a passive sub-slab venting system) were incorporated into the risk characterization, and certain potential future exposure pathways (e.g., future potential residential use) were not considered in the risk characterization assuming that such future uses would be restricted. Therefore, an Activity and Use Limitation is required to (1) memorialize and ensure the implementation and maintenance of the exposure-limiting features and (2) prohibit future use of the Property for those uses not considered in the risk characterization. Further, the U.S. Environmental Protection Agency (USEPA), in providing an interpretation of the USEPA's Area of Contamination (AOC) policy for the management of soils during redevelopment of the Property, stated that a "land use restriction needs to identify, at a minimum, the limits of the AOC and the fact that there may be characteristic or listed wastes in the AOC."

4.0 Permitted Uses and Activities

A Condition of No Significant Risk to health, safety, public welfare or the environment exists for any foreseeable period of time so long as any of the following activities and uses occur on the Property:

(i) Periodic inspection, maintenance and/or repair of the existing vacant building at the Property, or short-term entry thereof for other purposes including, but not limited to, sampling of building materials and environmental media;

(ii) Industrial, commercial, office and/or retail uses and activities associated therewith, including but not limited to, pedestrian and/or vehicular traffic, excavation associated with redevelopment and/or maintenance of the Property, and landscaping and routine maintenance of landscaped areas;

(iii) Excavation associated with redevelopment and/or maintenance of the Property, future construction, and/or future non-emergency utility maintenance/repair and landscaping , provided that, except in areas specifically engineered to preclude exposure to oil and /or hazardous material, such excavation is coordinated with and overseen by a Massachusetts Licensed Site Professional (LSP) and is conducted in accordance with the Soil Management Plan pursuant to Obligation/Condition (ii) in Section 6.0 of this Activity and Use Limitation Opinion. Where applicable, any disturbance to a building slab or to a vapor barrier installed pursuant to Restriction (iv) in Section 5.0 of this Activity and Use Limitation Opinion shall be promptly repaired and/or replaced with comparable materials following completion of construction or maintenance/repair;

(iv) Excavation associated with emergency utility maintenance or repair, provided that such excavation is conducted in accordance with the Soil Management Plan pursuant to Obligation/Condition (ii) in Section 6.0 of this Activity and Use Limitation Opinion. Where applicable, any disturbance to a building slab or to a vapor barrier installed pursuant to Restriction (iv) in Section 5.0 of this Activity and Use Limitation Opinion shall be promptly repaired and/or replaced with comparable materials following completion of construction or maintenance/repair;

(v) Such other activities or uses which, in the Opinion of an LSP, shall present no greater risk of harm to health, safety, public welfare or the environment than the activities and uses set forth in this Section; and

(vi) Such other activities and uses not identified in Section 5.0 as being Restricted Uses and Activities.

5.0 Restricted Uses and Activities

Activities and uses which are inconsistent with the objective of this Notice of Activity and Use Limitation, and which, if implemented at the Property, may result in a significant risk of harm to health, safety, public welfare or the environment or in a substantial hazard, are as follows:

(i) Continuous occupancy of the existing vacant building at the Property;

(ii) Future use of the Property as a residence, school, recreational area, or institution;

(iii) Future use of the Property for agricultural activities where the soil is used for growing fruits or vegetables for human consumption;

(iv) Construction of any new building at the Property without a vapor barrier meeting the specifications listed in Exhibit D of the Notice of Activity and Use Limitation and a passive sub-slab venting system, plans and installation of which must be reviewed and overseen by an LSP, unless construction without a vapor barrier and passive sub-slab depressurization system or a less effective vapor barrier and/or passive sub-slab depressurization system is evaluated by an LSP who renders an Opinion that such construction is consistent with maintaining a condition of No Significant Risk; and

(v) Any non-emergency activity including, but not limited to, excavation associated with redevelopment of the Property, which is likely to disturb contaminated soil, without coordination and oversight by an LSP and prior development of the Soil Management Plan in accordance with Obligation/Condition (ii) in Section 6.0 of this Activity and Use Limitation Opinion.

(

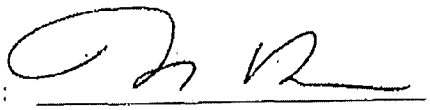
6.0 Obligations and Conditions

If applicable, obligations and/or conditions to be undertaken and/or maintained at the Property to maintain a condition of No Significant Risk include the following:

(i) Any soils excavated at the Property must be either 1) disposed offsite in accordance with all applicable regulations or 2) managed pursuant to the Soil Management Plan referenced in Obligation/Condition (ii) below and within the limits of the Area of Contamination (AOC) set forth in **Exhibit B** of the Notice of Activity and Use Limitation.

(ii) The soil management procedures described in the Soil Management Plan provided as **Exhibit E** of the Notice of Activity and Use Limitation must be implemented as part of any activity that is likely to disturb contaminated soil at the Property. Workers who may handle or otherwise manage contaminated soil should be appropriately trained on the requirements of the Plan, and the Plan must remain available on-site throughout the course of any projects that are likely to disturb contaminated soil at the Property;

(iii) Any passive sub-slab depressurization system(s) installed in conjunction with the construction of any new building(s) at the Property must be maintained to ensure that vapors potentially emanating from underlying contaminated soil and/or groundwater freely vent to the atmosphere. Annual inspections of the above grade portions of the passive sub-slab depressurization system(s) must be conducted and documented by and LSP, or appropriately trained personnel under the coordination of an LSP, to ensure that such inspections are adequately conducted.

LSP: 

Neil M. Ram, PhD, LSP #6799

Date: 1-22-09

EXHIBIT D

Specification for Vapor Barrier

Exhibit D

Specifications for Vapor Barrier

Any vapor barrier installed at the Site must be seamless and composed of material that will adhere to itself so that any perforations can be sealed by applying the same material locally. Further, the material must meet the following minimum specifications:

Property	*Test Method*	*Value*
PCE Diffusion Coefficient	Tested at 6,000 mg/m^3	2.74×10^{-10} cm^2/s
TCE Diffusion Coefficient	Tested at 20,000 mg/m^3	8.04×10^{-10} cm^2/s
Hydraulic Conductivity	ASTM D2434	$<7.75 \times 10^{-9}$ cm/s
Chemical Resistance to PCE, TCE, Vinyl Chloride, and BTEX compounds	ASTM D543 Tested at 20,000 ppm	<1% weight change

The integrity of the vapor barrier must be proved via a post-installation smoke test.

Notes:
PCE = Tetrachloroethene
TCE = Trichloroethene
BTEX = Benzene, toluene, ethylbenzene, and xylenes
mg/m^3 = milligrams per cubic meter
ppm = parts per million
cm^2/s = square centimeters per second
cm/s = centimeters per second

EXHIBIT E

Soil Management Plan

SOIL MANAGEMENT PLAN

72 Elm Street Property
North Attleboro, Massachusetts

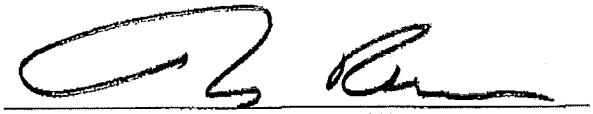
January 2009

Prepared for:

Handy & Harman Electronic Materials Corp.
1133 Westchester Avenue
Suite # N222
White Plains, New York 10604

Prepared by:

ROUX ASSOCIATES, INC.
67 South Bedford Street, Suite 101 West
Burlington, Massachusetts 01803



Neil M. Ram, PhD
Vice President

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APPENDICES

1.0 INTRODUCTION

On behalf of Handy & Harman Electronic Materials Corporation (HHEM), Roux Associates, Inc. has prepared this Soil Management Plan (SMP) for the property located at 72 Elm Street in North Attleboro, Massachusetts (hereinafter, "72 Elm Street property"). The 72 Elm Street property is a portion of the disposal site (Site) being governed under Massachusetts Department of Environmental Protection (MADEP) Release Tracking Number (RTN) 4-0958. The Site comprises the 72 Elm Street property, the abutting 20 Grant Street property, and all or portions of several other abutting or nearby commercial and residential properties beneath which oil and/or hazardous material (OHM) has come to be located in groundwater as a result of historical operations at the 72 Elm Street property.

The SMP presents the soil management procedures that must be followed by parties engaged in both emergency and non-emergency soil excavation activities at the 72 Elm Street property. This SMP does not apply to building demolition activities or to any other site activities that do not involve the excavation and/or movement of soils at the 72 Elm Street property,[1] except to the extent that crushed building materials are reused at the Site in accordance with all applicable federal and state statues, regulations and guidance. A Licensed Site Professional (LSP) and all supervisory and management personnel undertaking non-emergency excavation activities at the 72 Elm Street property must read this SMP and sign and date the signature page attached hereto prior to commencing any excavation activities. This SMP must remain available onsite during the course of any excavation activities. Compliance with this SMP is required pursuant to the Notice of Activity and Use Limitation (AUL) that was recorded at the Bristol County Northern District Registry of Deeds for the 72 Elm Street property.

This SMP may be amended by an LSP as long as such amendments are consistent with the November 27, 2006 memorandum and associated December 1, 2006 EPA approval provided in **Appendix A** (see section 2.3 of this SMP), where applicable.

[1] Building demolition debris must be managed in accordance with applicable MADEP solid waste regulations and guidance (e.g., "ABC Policy").

2.0 BACKGROUND INFORMATION

2.1 72 Elm Street Property Description

The 72 Elm Street property consists of a large industrial building owned by HHEM, occupying roughly half of the almost 7-acre 72 Elm Street property. This 1- to 2-story building, which is currently vacant, formerly contained manufacturing (metal plating) areas, engineering and laboratory space, office space, storage areas, shipping and receiving areas, and a wastewater treatment area.

A security fence surrounds much of the exterior portion of the 72 Elm Street property, most of which is paved. With the exception of the courtyard-like area between the front and rear sections of the HHEM building, only peripheral areas of the property (mainly outside the fence) are unpaved. It is noted, however, that although most of the exterior portion of the 72 Elm Street property is paved, the condition of some of the pavement—particularly in the southeast part of the property—is quite deteriorated, with weeds growing in abundance through vast networks of cracks.

A closed-in-place underground storage tank (UST) is located adjacent to the northwest corner of the rear section of the HHEM building, near the boiler room. This UST, made of concrete, dates back to at least 1926 and formerly held No. 6 fuel oil used to supply fuel to the HHEM facility boilers.

2.2 HHEM Regulatory History

In 1980, when the disposal of metal hydroxide sludges and spent cyanide bath solutions from electroplating operations became regulated under the Resource Conservation and Recovery Act (RCRA), HHEM filed Part A of a RCRA Hazardous Waste Permit Application with the U.S. Environmental Protection Agency (EPA), associated with the discharge of electroplating waste to an on-site surface impoundment, and thus qualified as an Interim Status facility (EPA ID - MAD04897439). Further, on September 17, 1990, following several site investigations, the MADEP listed the HHEM facility as a Confirmed Disposal Site (RTN 4-0958), pursuant to Massachusetts General Laws Chapter 21E, (M.G.L Ch. 21E, or the 21E program) and the Massachusetts Contingency Plan (the MCP, 310 CMR 40.0000). Although for many years the HHEM facility was regulated under MADEP's Bureau of Waste Prevention (BWP), on April 4,

2005, RTN-4-0958 was transitioned into the 21E program as a Tier IA Site. The Tier 1 permit for the Site expires on April 4, 2010. More recently, RTN-4-19121, associated with the aforementioned closed-in place former fuel oil UST, was linked to RTN 4-0958 (hereinafter, "the Site-wide RTN"). A third RTN (4-20744) was also issued for the 72 Elm Street property when elevated volatile organic compound concentrations in soil were detected with a photoionization detector (PID) around a previously documented UST uncovered during excavation activities in the area where PCE/TCE aboveground storage tanks (ASTs) were formerly located. This RTN was also subsequently linked to the Site-wide RTN.

Remedial investigations have been conducted at the Site for many years, first under the purview of the BWP and then under the 21E program. In August and September 2007, two excavations were completed to remove OHM-impacted soils from two areas at the HHEM property: a former wetland located at the southeastern corner of the 72 Elm Street property and at the former PCE/TCE AST area[2]. Since that time, Roux Associates has also completed a Phase II Report, including human health and ecological risk evaluations and a Phase III Remedial Action Plan. The Phase II human health risk characterization concluded that a condition of No Significant Risk[3] exists at the 72 Elm Street property assuming that, in the future, the 72 Elm Street property will be used as commercial property and not for residential purposes. The restriction against future residential use, as well as other restrictions and obligations, was memorialized in the aforementioned AUL recorded at the Bristol County Northern District Registry of Deeds. The AUL requires, among other things, that a SMP be prepared to communicate (to parties planning future excavation work) the presence of OHM in soils at the 72 Elm Street property and the need to manage excavated soils in accordance with all local, state, and federal regulations including, where applicable, the EPA's Area of Contamination (AOC) policy governing the handling of contaminated, excavated soils at the 72 Elm Street property. Further details regarding EPA's AOC policy is described in the section that follows.

[2] These excavations were implemented by Roux Associates, on behalf of HHEM, as a Release Abatement Measure.
[3] A Condition of No Significant Risk is defined in the MCP as "a level of control of each identified substance of concern at a site or in the surrounding environment such that no substance of concern shall present a significant risk of harm to health, safety, public welfare, or the environment during any foreseeable period of time"

2.3 Soil Management at the 72 Elm Street Property under EPA's Area of Contamination Policy

Soil contamination at the 72 Elm Street property derives from past releases of RCRA-listed hazardous wastes (e.g., "F" wastes) and must therefore been managed in accordance with both MCP and RCRA requirements. To facilitate redevelopment of the property, EPA (via email) and MADEP (verbally to EPA) approved a soil management approach under EPA's AOC policy[4] that is described in a November 27, 2006 memorandum, jointly prepared by Roux Associates, Norfolk Ram Group and Robinson & Cole.[5] A copy of the November 27, 2006 memorandum and associated December 1, 2006 EPA approval is provided as **Appendix A**. The approach approved by EPA and MADEP includes the following:

1. Soils at the 72 Elm Street property will be managed under EPA's AOC policy, which allows excavation (including lifting) during construction trenching;
2. Soils that are consolidated in the trenches and former Crown building areas must be protective of human health and the environment;
3. The soil contaminant concentrations must not exceed the MADEP's Upper Concentration Limits (UCLs);
4. Any soils that are determined to be a listed or characteristic hazardous waste that must be taken off site or managed outside the AOC must be managed in accordance with all applicable federal and state regulations; and
5. The AUL must, at a minimum, identify the limits of the AOC and the fact that there may be characteristic or listed hazardous wastes in the AOC.

[4] See **Appendix B**, "Use of the Area of Contamination Concept during RCRA cleanups".

[5] The EPA email dated December 1, 2006 stated that EPA Headquarters has determined that "during the site redevelopment the soil management procedures as described in the options for soil management section of Neil Ram's November 27, 2006 memo, attached below, are acceptable to EPA."

3.0 SOIL MANAGEMENT PROCEDURES

The following describes the soil management procedures to be followed for future excavation activities at the 72 Elm Street property (herein after referred to as the "soil management requirements"). A flow diagram depicting the soil management procedures is provided in **Figure 1.**

1. All soil management activities at the 72 Elm Street property will be coordinated and overseen by an LSP.

2. For all *planned* future excavation activities, an LSP must verify in advance of the scheduled commencement of activities that the planned activities will be conducted in accordance with the soil management requirements set forth below. During such excavation, the LSP must also, from time to time, evaluate and confirm that excavation work is being conducted in accordance with the soil management requirements. Following completion of all planned excavation, the LSP must verify that all soils were managed in accordance with soil management requirements and correct any work in which soils were not managed in accordance with these requirements. In the event that certain soils were not managed in accordance with soil management requirements, the LSP must oversee the re-excavation of such soils in accordance with this soil management plan and all other applicable laws and regulations. All management and supervisory personnel must sign the signature paper found at Section 4 prior to each phase of construction involving management of soil at the Site. All completed signature pages must be maintained in project files for at least two years following project completion.

3. For all *unplanned* excavation activities (e.g., emergency utility repairs), an LSP must be contacted as soon as possible following the commencement of excavation to verify that soils were managed in accordance with the soil management requirements or to oversee re-excavation of soils that were not managed in accordance with the soil management requirements.

4. All excavation at the 72 Elm Street property will occur within the AOC depicted in **Figure 2.**[6] The specific limits of AOC are shown in **Figure 2** of this Soil Management Plan.

5. Soils that are excavated during planned and unplanned activities will either be:

   (a) Transported and disposed off-Site in accordance with all applicable federal and state regulations;[7]

[6] The December 1, 2006 EPA approval email did not explicitly provide the AOC limits.

[7] Note that all excavated soils in which OHM exceed upper concentration limits (UCLs) will be transported off-Site in accordance with all applicable federal and state regulations.

(b) Returned/consolidated to trenches for footings and other excavations within the AOC associated with redevelopment of the 72 Elm Street property, including (but not limited to) utility trenches and drainage structures; or

(c) Consolidated into the AOC consolidation area shown in **Figure 2** or any other AOC consolidation area designated by the LSP. [8]

6. In general, soils from anywhere in the AOC can be moved into an AOC consolidation area.

7. Notwithstanding the general guidelines presented above, under no circumstances shall soil knowingly be moved from an area of higher contamination to an area of lower contamination.

8. Soils excavated during construction may be temporarily stockpiled in on-site staging piles[9] in accordance with the following requirements of 310 CMR 40.0036 (Management Requirements for Storing Remediation Waste) and RCRA section 264.544:

   310 CMR 40.0036

   (a) All stockpiled contaminated soil will be stored in a secure manner to prevent exposure to humans and the environment;

   (b) Where practicable, soil stockpiles should not be placed near the Tenmile River or the wetland adjacent to (southeast of) the 72 Elm Street property;

   (c) Contaminated soil should be placed entirely on a base composed of an impermeable material (such as polyethylene sheeting with a minimum thickness of 6 mils[10]) and should be immediately covered with the same material or other suitable material at the end of each workday to minimize the infiltration of precipitation, volatilization of contaminants, and erosion of the stockpile;

   (d) Stockpile covers shall be secured and posses the necessary physical strength to resist tearing or displacement by wind action;

   (e) Any failure of materials or procedures used in employing the base layer or cover layer should be immediately repaired, or re-secured so as to minimize precipitation, infiltration, volatilization, and erosion/runoff from the soil stock pile; and

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[8] Additional consolidation areas can be designated by the LSP as long as such additional consolidation areas are within the AOC and comply with the December 1, 2006 EPA email and associated November 27, 2006 memorandum provided in **Appendix A.**

[9] A staging pile is defined under RCRA as "an accumulation of solid, non-flowing remediation waste that is not a containment building and that is used only during remedial operations for temporary storage at a facility (section 260.10)." Remediation waste may be placed in a staging pile without triggering the land disposal restrictions program or minimum technological requirements for hazardous waste piles. Staging piles must be located within the contiguous property under the control of the owner/operator where the wastes to be temporarily storage originated.

[10] 6 mils = six thousandths of an inch.

(f) Movement and/or aeration of the soil stockpiles should be limited to those activities that are necessary to manage such stockpiles in accordance with the MCP.

RCRA section 264.544

(g) The staging piles are intended to facilitate short term storage of remediation wastes;

(h) The staging piles can be used for physical operations intended to prepare wastes for subsequent treatment (e.g. mixing, sizing, blending, and other similar physical operations) [Section 264.554(a)(1)];

(i) A 2-year limit (with a possible 180-day extension) applies to staging piles from the time the owner/operator first places remediation waste in the pile;

(j) Where AOCs are non-contiguous, a staging pile in one of those areas may be used to temporarily store waste from the other contaminated areas prior to further management [63 FS 65920]; and

(k) Staging piles must be closed within 180 days after their operating term expires. If the pile is located in an uncontaminated area, it must be clean closed. If the staging pile is located in a previously contaminated area, the final cleanup of the contaminated subsoil may be coordinated with the overall site remedy [Section 264.554(j-k)].

Notwithstanding the above, parties may seek regulatory relief from appropriate regulatory agencies for stockpiling/staging pile provisions of this SMP or any other provision of this SMP by obtaining written approval from the regulatory authority stating the specific provision(s) which no longer apply to a specific project. Any written approval of alternate approaches provided by an appropriate regulatory agency will be considered consistent with this plan and would therefore not be a violation of the SMP.

9. The following requirements pertain to soils to be transported and disposed off site:

(a) All excavated soils in which OHM concentrations are known to exceed MCP UCLs, must be disposed off-site;

(b) Any soils intended for off-site disposal that contain a listed or characteristic hazardous waste must be transported and disposed in accordance with all applicable laws and regulations;

(c) Soils that do not contain a listed waste, are not a characteristic hazardous waste, or have been subject to a "contained out" determination under the RCRA "contained-in" policy[11], may be transported and disposed in accordance with the MCP's Bill of Lading (BOL) process (310 CMR 40.0034), under the supervision of an LSP, within 120 days of generation. A BOL (or a reproduction of the BOL) containing all information described in 310 CMR 40.0035(1)(a) through (i) shall accompany each shipment of contaminated soil transported from the 72 Elm Street Property, and a completed BOL containing the signature of a representative of the receiving facility shall be submitted to MADEP within 30 days of the date of final shipment from the 72 Elm Street Property. In accordance with 310 CMR 40.0032(5), impacted media managed under the BOL process shall not be disposed at a land disposal facility if a feasible alternative exists that involves the reuse, recycling, destruction, and/or demolition of such materials; and

(d) Regardless of classification, all soils transported over public roadways shall be covered to minimize fugitive dust, and where necessary, washing of truck tires and undercarriage shall be employed to minimize tracking of soils onto public roadways.

10. Soils returned to trenches and/or the AOC consolidation area will be compacted/consolidated (i.e. resulting in a smaller consolidated soil volume) with the most contaminated soils placed in the deepest parts of the consolidation areas unless otherwise indicated by an LSP.

11. Following soil consolidation, all excavations and the AOC consolidation area will be covered with suitable material (e.g., asphalt pavement, concrete, clean fill) unless otherwise approved by an LSP.

Any excavated soils that are not placed into a staging pile, returned to an excavation or consolidated at other locations within the AOC, unless demonstrated not to be a listed and/or characteristic hazardous waste, must be removed from the 72 Elm Street Property within 90 days of the commencement of excavation, with transportation and disposal documented using USEPA's Hazardous Waste Manifest System.

A Health and Safety Plan which will consider the need for air monitoring, may be required in accordance with 310 CMR 40.0018 during Site re-development and/or any further response actions which may be required under the Massachusetts Contingency Plan, unless an LSP determines otherwise[12].

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[11] Such determination shall be made in compliance with all applicable federal and state regulations and guidance; See **Appendix C** for MADEP's interpretation of EPA's Contained Out Policy.

[12] Note that OSHA guidance as to whether employers must comply with all the provisions of 29 CFR 1910.120(e) was provided in a June 27, 1997 letter to CH2M Hill from Stephen J. Mallinger, OSHA's Acting Director Office of Health Compliance Assistance. In this letter, Mr. Mallinger stated that if results indicate that, "control procedures are not and will not be potentially necessary to protect employees from the identified safety and

The above soil management procedures will be protective of human health and the environment for the proposed property use under MADEP's 21E program. More specifically, all residual soils remaining on the 72 Elm Street property after construction has been completed will represent a condition of No Significant Risk. Any knowledge to the contrary should be evaluated by an LSP and reported to DEP, if necessary pursuant to the MCP.

health hazards during site operations, then employees will not be considered to be exposed to the safety and health hazards. Those site operations with employees who are not exposed to or who could not be exposed to safety and health hazards are not within the scope of the applicability of the HAZWOPER standard and, therefore, the provisions of the requirements of 29 CFR 1910.120 are not applicable." Because the Phase II Human Health Characterization (Roux Associates, October 2007) concluded that there was no risk to a construction worker, a HASP may not be required during future site redevelopment activities. Therefore, the LSP overseeing the soil management plan will determine the specific needs for a HASP and/or air monitoring during site redevelopment.

4.0 SIGNATURE PAGE

I have read and understand the soil management procedures required at the 72 Elm Street Property:

Project Description: _____

Anticipated Project Start Date and Duration: _____

Name of Licensed Site Professional: _____

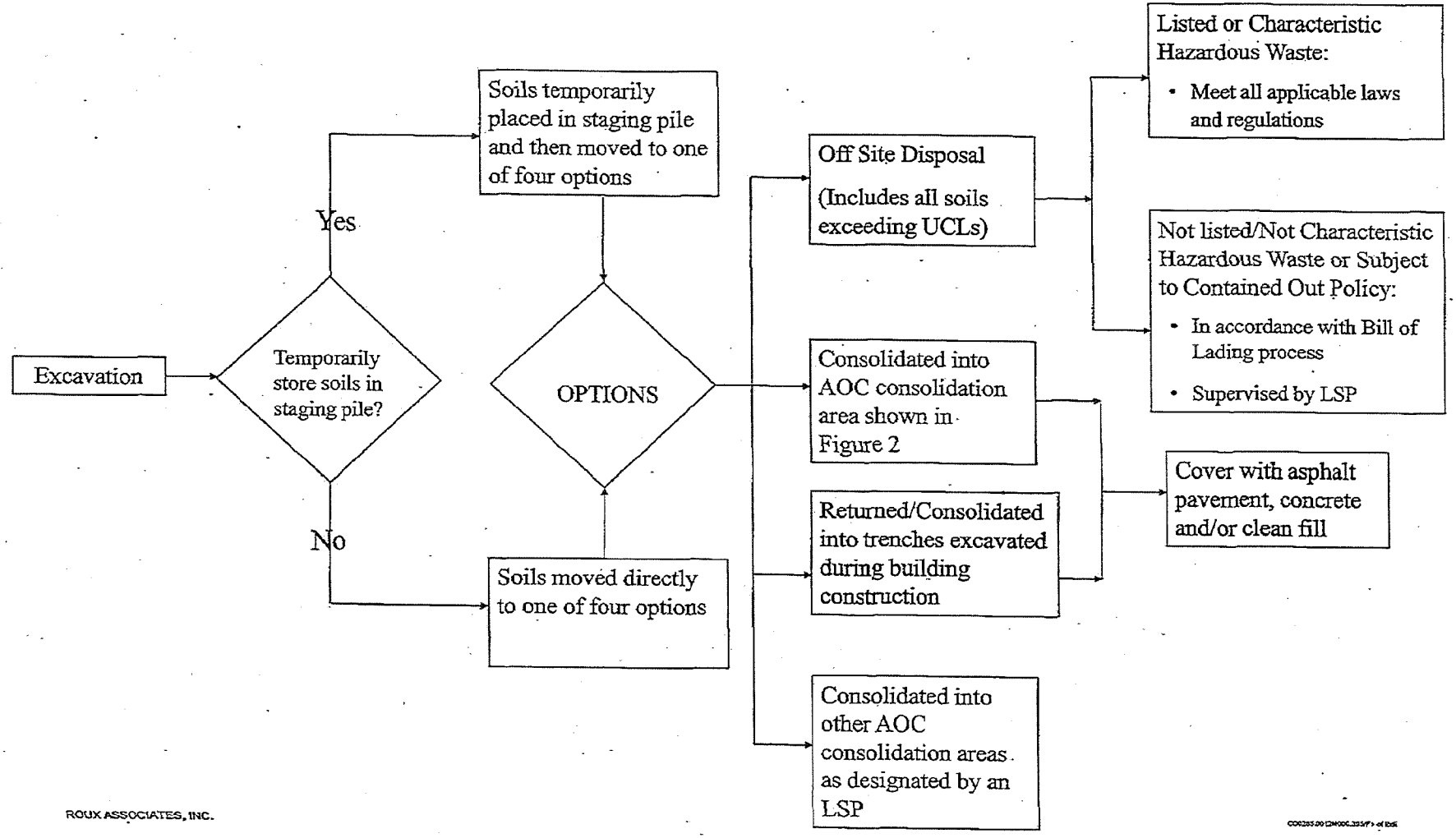
LSP Signature and Date: _____

LSP License Number: _____

Additional Management and Supervisory Personnel Responsible for Implementing this Soil Management Plan			
Name	**Affiliation**	**Signature**	**Date**

A copy of this page is to be completed for each project involving the management of soil at the site.

Figure 1: Soil Management Flow Diagram



ROUX ASSOCIATES, INC.

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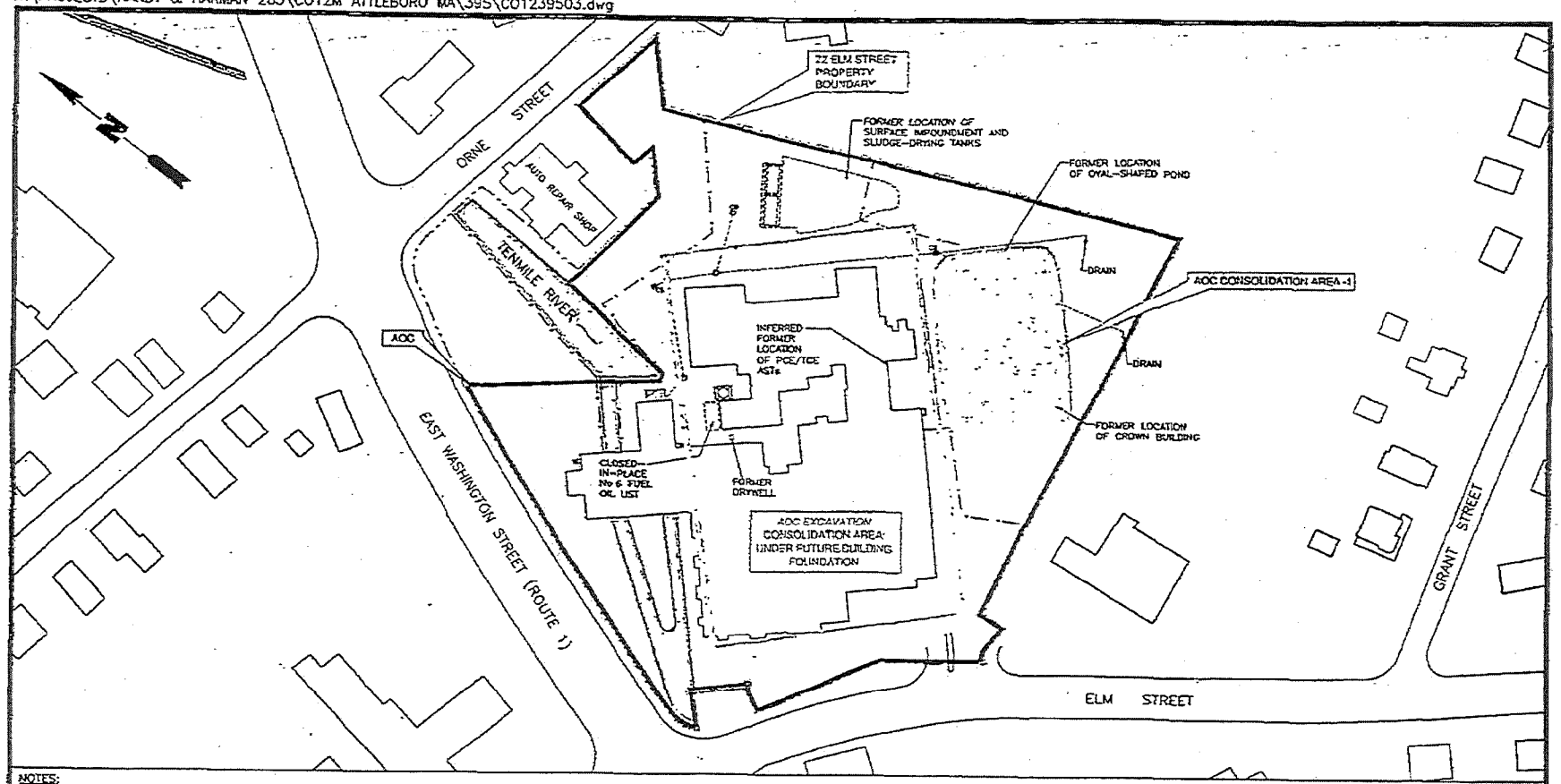


NOTES:

1. BASE MAP ADAPTED FROM SURVEY MAP DEVELOPED BY GUNTHER ENGINEERING, INC. TITLED "WORKSHEET SHOWING MONITORING WELL LOCATIONS IN NORTH ATTLEBORO, MASSACHUSETTS," DATED JULY 19, 2000, REVISED AUGUST 7, 2000, AND MODIFIED TO INCLUDE ADDITIONAL STREETS AND BUILDINGS BASED ON APRIL 2001 MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEM DIGITAL ORTHOPHOTO IMAGE AND SURVEYED PROPERTY LINE INFORMATION BASED ON CULLINAN ENGINEERING CO., INC. SURVEY PLAN TITLED "PLAN OF LAND, 72 ELM STREET, NORTH ATTLEBOROUGH, MASSACHUSETTS, PREPARED FOR ROUX ASSOCIATES INC.," DATED MAY 5, 2008
2. FORMER SURFACE IMPOUNDMENT/SLUDGE-DRYING TANKS LOCATION BASED ON APRIL 7, 1981 US GEOLOGICAL SURVEY AERIAL PHOTOGRAPH.
3. FORMER CROWN BUILDING AND FORMER OVAL-SHAPED POND LOCATIONS BASED ON APRIL 25, 1969 MASSACHUSETTS HIGHWAY DEPARTMENT AERIAL PHOTOGRAPH.
4. FORMER PCE/TCE AST LOCATION INFERRED BASED ON INFORMATION PROVIDED IN PARAGON ENVIRONMENTAL SERVICES, INC. (PARAGON) REPORT TITLED "HANDY & HARMAN ELECTRONIC MATERIALS, INC. – SITE ASSESSMENT," DATED AUGUST 1995 AND ROUX ASSOCIATES' FIELD OBSERVATIONS.

LEGEND

- CATCH BASIN
- FENCE
- STORM DRAIN AND MANHOLE
- 72 ELM STREET PROPERTY BOUNDARY
- AOC BOUNDARY
- AOC CONSOLIDATION AREAS

150' 0 150'

Title:

AOC BOUNDARY

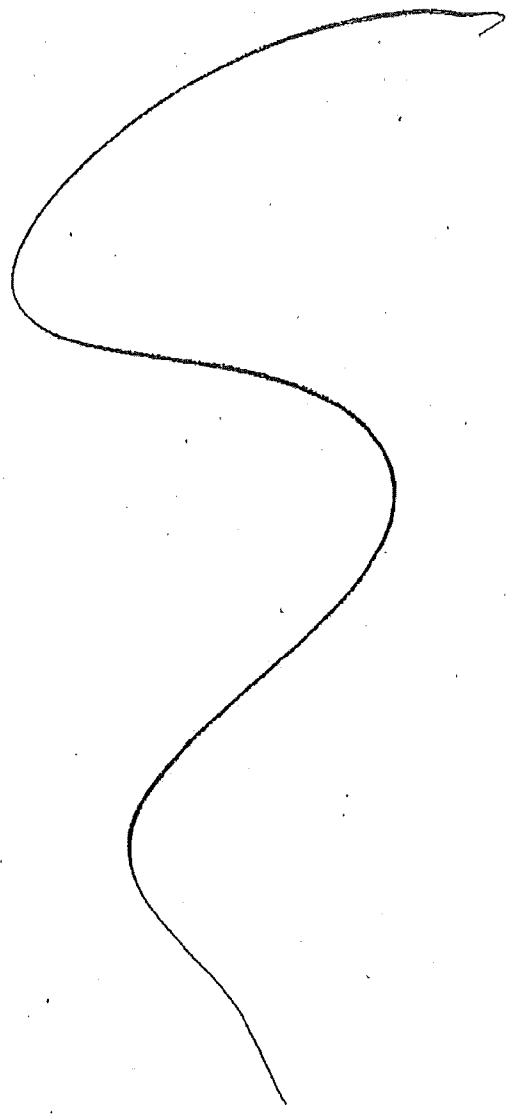
72 ELM STREET
NORTH ATTLEBORO, MASSACHUSETTS

Prepared For:
Handy & Harman Electronic Materials Corp.

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: LM	Date: 6/30/08	FIGURE
Prepared by: CRS	Scale: AS SHOWN	2
Project Mgr: LM	Office: MA	
File No: C01239503	Project: 28512M	

C028512M.395/F2.Rev



APPENDIX A

December 1, 2006 EPA Email Approving the Soil Management Approach Described in a November 27, 2006 Memorandum Prepared by Roux Associates, Norfolk Ram Group, and Robinson & Cole, Dated November 27, 2006.

Neil Ram

From:	battaglia.frank@epamail.epa.gov
Sent:	Friday, December 01, 2006 1:06 PM
To:	Neil Ram; 'Chris Foster'
Cc:	'Jeffrey Chormann'
Subject:	Re: Handy & Harman Electronics Materials Site Redevelopment Project
Attachments:	28512M.322.M.pdf; AOC.figures.pdf

Neil/Chris/Jeff...I have heard back from HQ regarding soil management at the Handy and Harman site in North Attleboro, MA and their response is that during the site redevelopment the soil management procedures as described in the "options for soil management" section of Neil Ram's November 27, 2006 memo, attached below, are acceptable to EPA.

Other considerations are that the soils that are consolidated in the trenches and former Crown building area must be protective of human health and the environment for the proposed site use under the MADEP's 21E program; the soil contaminant concentrations must not exceed the MADEP's Upper Concentration Limit's; any soils that are determined to be a listed or characteristic hazardous waste that must be taken off-site or managed outside the AOC must be managed in accordance with all applicable Federal and State RCRA regulations; and the land use restriction needs to identify, at a minimum, the limits of the AOC and the fact that there may be characteristic or listed wastes in the AOC (be as specific/detailed as possible). MADEP has verbally concurred with EPA on this decision/interpretation of the AOC policy for this site. Contact Jeff Chormann at (617) 292-5888, for any additional State input, if needed.

Sincerely,

Frank Battaglia
(617) 918-1362

Neil Ram
<nram@rouxinc.com>

11/27/2006 10:39 AM

To
Frank Battaglia/R1/USEPA/US@EPA, 'Jeffrey Chormann' <Jeffrey.Chormann@state.ma.us>

cc
'David Kelly' <dlkelly@handyharman.com>, 'Chris Foster' <cfoster@rc.com>, 'Larry McTiernan' <lmctiernan@rouxinc.com>, 'Joseph Salvetti' <jsalvetti@norfolkram.com>, jkitchen@norfolkram.com, 'Scott Weymouth' <smouth24@aol.com>, 'Lauren Mazzella' <lmazzella@nutter.com>

Subject
Handy & Harman Electronics Materials Site Redevelopment Project

As a follow up to our November 21, 2006 meeting, attached is a memorandum summarizing the soil management approach that we are requesting EPA and DEP to consider. Thank you in advance for your timely consideration of this information.

Regards,

Neil

Neil M. Ram, PhD
Roux Associates, Inc.
67 South Bedford Street
Suite 101W
Burlington, MA 01803
781 270 6600 (phone)
781 270 9066 (fax)
www.rouxinc.com

(See attached file: 28512M.322.M.pdf)(See attached file: AOC.figures.pdf)

MEMORANDUM

TO: Frank Battaglia, USEPA
Jeff Chorman, MADEP

FROM: Neil Ram, Roux Associates, Inc.
Joseph Salvetti, Norfolk RAM
Christopher Foster, Esquire, Robinson & Cole

DATE: November 27, 2006

RE: 72 Elm Street, North Attleboro, Massachusetts

In response to our November 11, 2006 meeting, this memorandum summarizes our recommendation regarding anticipated construction and associated soil management for redevelopment of the Brownfield property located at 72 Elm Street, North Attleboro, Massachusetts (the "Site").

Regulatory Framework

The property is currently a closed industrial facility owned by Handy & Harman Electronics & Materials, Inc. (HHEM). The plant operated from about 1850 to 2000 as an electroplating facility for jewelry and electronic manufacturing. HHEM applied for a Part A Interim Status Permit in 1980 and subsequently operated a surface impoundment, which was excavated and closed in 1981. In 1990, volatile organic compounds (VOCs) and metals were identified at the Site and the Massachusetts Department of Environmental Protection (MADEP) issued HHEM Release Tracking Number RTN4-0958. While the Site was initially regulated under the 21C program (MADEP Hazardous Waste program), on April 1, 2005 it was transitioned to the 21E program and its classification as an Adequately Regulated Status was terminated. Current assessment and cleanup at the Site is being governed by the Massachusetts Contingency Program (the "MCP" at 310 CMR 40.0000), although soil management continues to be governed under 21C. Extensive soil, groundwater, sediment, surface water, soil vapor and indoor air sampling has been conducted at the Site such that the nature and extent of subsurface contamination has been well established. A Phase II (Comprehensive Site Evaluation) describing the nature and extent of Site contamination and Phase III (Evaluation of Remedial Alternatives) are due to MADEP in April 2007. Work is being conducted under the oversight of a Massachusetts Licensed Site Professional (LSP). The Site will be closed under the MCP after (1) completing human health and ecological risk assessments, (2) implementing appropriate remedial response actions to remove or control any residual sources and to eliminate human and ecological risks, if any are identified and (3) monitoring Site groundwater to establish that chemical concentrations in groundwater are stable. It is contemplated that an Activity and Use Limitation (AUL) will be recorded, which will prohibit various Site activities including residential use of the property.

Project Description

Arista Development, LLC (Arista) is currently planning on redeveloping the Site by constructing commercial buildings on the property under the Massachusetts Brownfield program. This will provide beneficial reuse of the property and improve the local economy of North Attleboro. A potential plan of Arista's proposed buildings is attached. Arista's building construction will require excavation of footings, foundations and utility corridors. Arista's construction requires

the trenching, excavation and replacement of excavated soils to the sides of the foundation walls and utility corridors. The soils will be excavated from the trench, temporarily stockpiled adjacent to the trenches and then returned to the excavation or consolidated at another Site location after footings, foundations and/or utility trenching have been completed. The soils returned to the excavation would be located either beneath a minimum of one-foot clean fill and loam, a parking lot or a newly constructed building. All of this work would be conducted after completion of a human health risk assessment and under the requirements of a written soil management plan consistent with the MCP and under the direction of an LSP.

Regulatory Framework for Managing Excavated Soils during Construction as an "Area of Contamination"

After reviewing various EPA guidance, it is our opinion that the AOC policy allows for the excavation and replacement of soils within an AOC. As you know, under EPA's AOC Policy, EPA interprets RCRA to allow discrete areas of dispersed contamination to be considered disposal units. Because an AOC is equated to a RCRA land-based unit, either consolidation and/or *in-situ* treatment of hazardous waste within the AOC do not create a new point of hazardous waste generation for purposes of RCRA nor do they trigger land disposal restrictions or minimum technology requirements. While normally excavation of contaminated soil is considered the point of generation, under the AOC policy, consolidation (including lifting during excavation) is not considered to be removal from the land (i.e. generation)[1]. This conclusion is further supported by information contained in EPA training materials on RCRA Correction Action[2], which provides an example of consolidating waste from three SWMU's into a single engineered unit. Clearly such consolidation would require excavation. The AOC interpretation may be applied to any hazardous remediation waste (including non-media wastes) that is in or on the land. The AOC policy includes consolidation and other *in-situ* waste management techniques carried out within an AOC[3]. "Placement does not occur when waste is consolidated within an AOC, when it is treated *in situ*, or when it is left in place.[4]"

Options for Soil Management

Although we discussed three options for managing excavated soils during anticipated construction at the site, upon further analysis, the following option is the only feasible approach for Site redevelopment. Under this approach, soils would be managed under the AOC policy, which would allow excavation (including lifting) during construction trenching. All construction would occur within an AOC. All or some of the excavated soils would be returned and compacted (i.e. resulting in a smaller consolidated soil volume) in the trench after completing footings, foundations and/or utility corridors.

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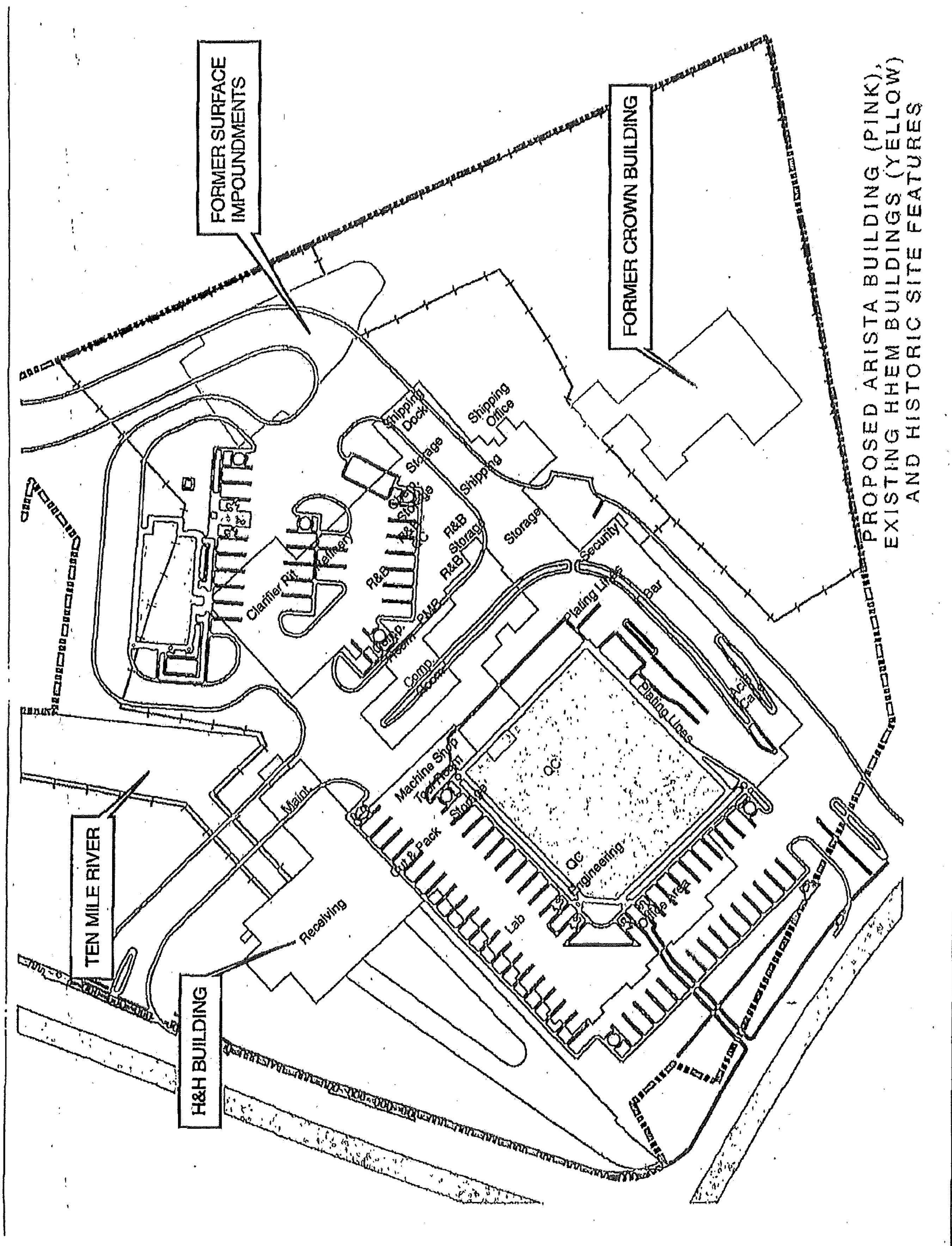
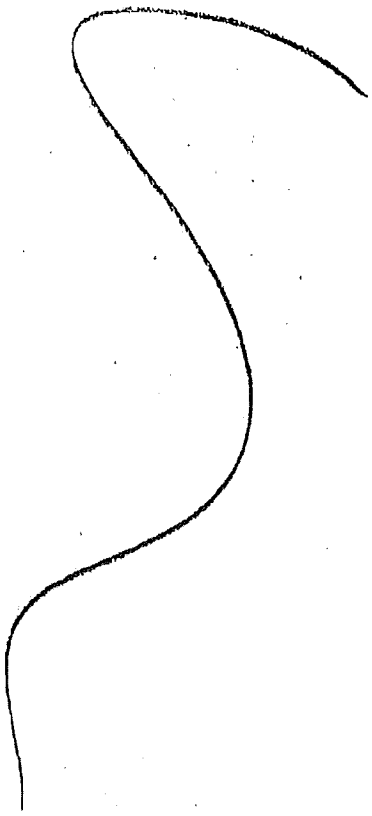
[1] McCoy's RCRA Unraveled, 2004 Edition, page 613 (section 17.14, The area of contamination policy). [See attached for excerpt].
[2] "Managing Remediation Waste," training materials for the RCRA Corrective Action Workshop, see attached excerpt.
[3] NCP Preamble, 55 FR 8758-8760.
[4] March 13, 1996, memo from M. Shapiro RCRA Branch Chiefs, "Use of AOC Concept During RCRA Cleanups."

In addition to consolidating excavated soils within the trenches being excavated for footings, foundations and utilities, some soils excavated during construction may need to be consolidated at other Site locations. In such case, soils would be consolidated at current source areas that contain similar or greater contaminant concentrations (e.g. the area of the former Crown building). This would provide an added protective measure in that some of the soils excavated during building construction would be placed over more contaminated soils followed by installation of a suitable cover.

Another approach, as we discussed, was approved at another RCRA site as indicated in a June 11, 1992 letter from Sylvia Lawrence (Director, Office of Solid Waste) to Douglas Green of Piper Marbury, cited in EPA's Memorandum: Use Of the Area of Contamination (AOC) Concept During RCRA Cleanups, March 13, 1996 (see attached). In this letter, EPA allowed, *"excavation of soils, such as trenching operations for pipeline installation, where the soils may be hazardous by characteristic, or may contain listed hazardous wastes."* There was no specific mention or requirement in this letter to consolidate excavated soil. We ask that EPA and MADEP consider this prior approval in a manner similar to the redevelopment and beneficial reuse work being planned for the North Attleboro Brownfield Site.

This approach is protective of human health and the environment, is cost effective, is similar to the approach previously approved by EPA (the June 11, 1992 EPA letter noted above) and would enable the productive reuse of this currently unutilized Brownfield site. We appreciate your review of this information and look forward to your response.


FORMER SURFACE IMPOUNDMENTS
FORMER CROWN BUILDING
TEN MILE RIVER
H&H BUILDING
Shipping Dock
Shipping Office
Storage
Shipping
Storage
Security
R&B Storage
R&B
Refinery
Clarifier Pit
PMP
Comp. Room
Plating Lines
Bar
Plating Lines
QC
Machine Shop
Tool Room
Maint
Storage
Cut & Pack
QC
Engineering
Lab
Office Area
Receiving
PROPOSED ARISTA BUILDING (PINK),
EXISTING HHEM BUILDINGS (YELLOW)
AND HISTORIC SITE FEATURES



APPENDIX B

March 13, 1996 EPA Memorandum re: Use of the Area of Contamination (AOC) Concept During RCRA Cleanups

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 13 1995

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

SUBJECT: Use of the Area of Contamination (AOC) Concept During RCRA Cleanups

FROM: Michael Shapiro, Director
Office of Solid Waste

Stephen D. Luftig, Director
Office of Emergency and Remedial Response

Jerry Clifford, Director
Office of Site Remediation Enforcement

TO: RCRA Branch Chiefs
CERCLA Regional Managers

This memorandum confirms that, under current regulations, certain broad areas of contamination (AOCs) may be considered RCRA landfills. Under certain conditions, hazardous wastes may be moved within such areas without triggering RCRA land disposal restrictions or minimum technology requirements. This memorandum also describes the distinctions between the final Corrective Action Management Unit (CAMU) regulations and the Area of Contamination (AOC) approach, and encourages appropriate use of both options to expedite remedial actions.

Area of Contamination Approach

The area of contamination concept was discussed in detail in the preamble to the National Contingency Plan (55 FR 8758-8760, March 8, 1990). In this discussion, EPA clarified that certain discrete areas of generally dispersed contamination (called "areas of contamination" or "AOCs") could be equated to a RCRA landfill and that movement of hazardous wastes within those areas would not be considered land disposal and would not trigger the RCRA land disposal restrictions. The NCP also discusses using the concept of "placement" to determine which requirements might apply within an AOC. The concept of "placement" is important because placement of hazardous waste into a landfill or other land based unit is considered land disposal,

which triggers the land disposal restrictions, and may trigger other RCRA requirements including *permitting* (at a *non*-CERCLA site), closure and post-closure. In the NCP, EPA stated, "placement does not occur when waste is consolidated within an AOC, when it is treated in situ, or when it is left in place." Placement does occur, and additional RCRA requirements may be triggered, when wastes are moved from one AOC to another (e.g., for consolidation) or when waste is actively managed (e.g., treated *ex situ*) within or outside the AOC and returned to the land. Additional information on when placement does and does not occur is provided in the attached guidance document, *Determining When Land Disposal Restrictions (LDRs) Are Applicable to CERCLA Response Actions*, OSWER Directive 9347.3-05FS, July 1989.

Although the AOC concept was initially discussed in the context of the CERCLA program, it applies equally to RCRA corrective action sites, cleanups under state law, and voluntary cleanups[1]. For additional information on the AOC concept, see, for example, the October 9, 1990 memorandum from Sylvia Lowrance to David Ullrich, "Replacement of Contaminated Soil and Debris Treated under a Treatability Variance," the January 7, 1991 letter from Don Clay to Richard Stoll, and the June 11, 1992 letter from Sylvia Lowrance to Douglas Green (attached).

The interpretations of landfill, placement and the area of contamination concept discussed in the NCP preamble were reiterated by EPA in the 1990 subpart S proposal (55 FR 30798, July 27, 1990). In the 1990 proposal, EPA termed AOCs at RCRA facilities "Corrective Action Management Units" or "CAMUs." Although the name was changed, from AOC to CAMU, the CAMU concept discussed in the 1990 proposal was equivalent to the AOC concept (although, as discussed below, the CAMU concept was broadened when the final CAMU rule was issued). In response to great interest in the CAMU/AOC concept as discussed in the 1990 proposal, EPA issued a fact sheet titled *Use of the Corrective Action Management Unit Concept* in August 1992 (attached). In the August, 1992 fact sheet, EPA further reiterated the AOC concept by explaining that broad areas of contamination, including specific subunits[2], could be considered landfills under the RCRA regulations and discussed activities which would or would not trigger additional RCRA requirements when conducted in such areas.

The discussions of the AOC approach in the NCP preamble, 1990 subpart S proposal, and the August, 1992 fact sheet continue to reflect EPA's interpretation of current statutory and regulatory provisions. They remain useful guidance documents when the AOC approach is

---

[1] Although advance approval at the Federal level is not required for private parties to take advantage of the AOC concept, we encourage them to consult with the appropriate agency to ensure they implement the AOC concept appropriately. It should be noted that the agency responsible for determining that the AOC concept is being properly applied might not be the same as the agency overseeing cleanup at a site. Additionally, states may have more stringent standards which require consultation and/or prior approval of an AOC.

[2] Note, if the subunit were a RCRA regulated unit, inclusion of the unit within an AOC could necessitate a RCRA permit modification or a change under RCRA interim status.

under consideration at RCRA corrective action sites, Superfund sites and during other cleanup actions involving the movement or consolidation of hazardous waste, or media and debris contaminated with hazardous waste.

Relationship of the AOC Concept to the Final CAMU Rules

On February 16, 1993, EPA published final Corrective Action Management Unit regulations (58 FR 8658, February 16, 1993). The final CAMU rule differs from the AOC approach in important respects. First, the CAMU regulations create a new type of RCRA unit - a "Corrective Action Management Unit" or "CAMU." CAMUs are distinct from the type of units listed in RCRA Section 3004(k)[3]. Second, only EPA and authorized states may choose to designate CAMUs for management of remediation waste during RCRA corrective action and other cleanups. Third, the CAMU regulations expanded the flexibility available for management of remediation wastes beyond that offered by the AOC approach. Under the CAMU regulations, certain activities which would normally be considered placement are allowed when carried out in an agency-approved CAMU, including: remediation waste[4] may be removed from a CAMU and replaced (before or after treatment) in the same or a different CAMU; remediation waste may be consolidated into a CAMU before or after treatment; and, remediation waste may be moved (again, before or after treatment) between two or more CAMUs at the same facility.

While the CAMU concept contained in the final CAMU rule was historically an outgrowth of the AOC concept, it has a separate statutory and regulatory basis; therefore, it supplements rather than supersedes the AOC concept. The AOC concept was not altered when the final CAMU rules were promulgated and it does not depend on the existence of the CAMU rule.

As you may be aware, several parties challenged the CAMU rule. The lawsuit has been stayed pending promulgation of the final Hazardous Waste Identification Rule for contaminated media ("HWIR-Media"). At the time the stay was issued, EPA stated that the HWIR-Media rule was expected to replace a substantial portion of the CAMU rule; however, as long as the CAMU rule remains in effect, CAMUs may be used to facilitate protective remedies under RCRA, CERCLA, and state cleanup authorities. If a CAMU is under consideration, we recommend you take the following steps, in addition to the CAMU approval steps required at 40 CFR § 264.552:

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[3] RCRA Section 3004(k) defines the term land disposal, when used with respect to a specified hazardous waste, to include placement of such hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave.

[4] Remediation waste is defined as, "all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under 40 CFR § 264.101 and RCRA section 3004(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.

1) explain the potential risks associated with CAMUs to facility owner/operators by informing them that the CAMU rule has been challenged and that EPA may issue a proposal to withdraw it; 2) where possible, mitigate potential risks associated with CAMUs by, for example, implementing a CAMU remedy within the shortest possible time frame; and 3) document all CAMU decisions completely, emphasizing how the CAMU provides support for the best site-specific remedy.

Continued Use of the AOC Concept

Both AOCs and CAMUs can be used to expedite effective and protective remedial actions; however, EPA encourages the use of the AOC concept in cases where the additional flexibility provided in the final CAMU regulations is not needed. For example, the AOC concept is particularly useful for consolidation of contiguous units or areas of contaminated soil. Using the AOC concept, a RCRA facility owner/operator with a large contiguous area of soil contamination could consolidate such soils into a single area or engineered unit within an AOC without triggering the RCRA land disposal restrictions or minimum technology requirements. Use of the AOC concept would not be affected by the pending litigation over CAMU or any changes in the CAMU rule. In addition, please note, the AOC and CAMU concepts only address management of materials which would otherwise be subject to RCRA (i.e., hazardous wastes, or media and debris contaminated with hazardous waste). RCRA regulated materials are a subset of the materials managed during site cleanups.

We know you will continue to use the AOC and CAMU concepts to support appropriate remedies and to expedite cleanup processes. If you have any questions regarding the AOC or CAMU concepts, please contact Elizabeth McManus, Hugh Davis or Robin Anderson at (703) 308-8657, (703) 308-8633, and (703) 603-8747, respectively.

attachments

cc: Susan Bromm, OECA
Elizabeth Cotsworth, OSW
Larry Reed, OERR
Jim Woolford, FFRRO
Barbara Pace, OGC
George Wyeth, OGC
Earl Salo, OGC
RCRA Regional Division Directors
Superfund Regional Division Directors

APPENDIX C

January 2002 LSPA News with Article on MADEP's Interpretation of EPA's Contained Out Policy.

VOLUME 9/NUMBER 1
JANUARY 2002

LSPANews

LSP Board Update: The Special Problems of the Sole Practitioner

by Larry Feldman (Phone: 508/755-1700; Email: lfeldman@gza.com)

Alone, alone, all, all alone,
Alone on a wide, wide sea!
And never a soul took pity on
My soul in agony...
- *Samuel Taylor Coleridge*

Like the unlucky wedding guest stopped by the Ancient Mariner, anyone engaging an LSP in a discussion of his or her profession is likely to get more than an earful of sad stories. While I hesitate to draw the all-too-easy comparison between the MCP (and its accompanying guidance, policies and question and answers) and an albatross, it is clear to anyone in the business that this is a stressful profession under even the best of circumstances. Being a sole practitioner in a field where interaction with colleagues is always welcome, if not actually necessary, is often not the best of circumstances.

While by no means the only class of LSPs appearing on the LSP Board's agenda for disciplinary actions, the universe of sole practitioners (which, for the purposes of this article, will also be taken to include LSPs practicing in small firms) is certainly well represented. Often the LSP's problem of being alone on the wide, wide sea of the MCP is compounded by a less sophisticated client. But in many cases the central issue is related to the LSP simply trying to do too much (in both the technical sense and the human capacity sense). In several cases reviewed by the Board, the LSP acknowledged that he or she had made an error, but ascribed it to practicing too far out of his or her expertise, or being too overworked, to catch the offending mistake. Sometimes the specific reason for the oversight is legitimate (e.g., a family health issue) and sometimes it sorely stretches the Board's patience (memo to self: do not use "tried to save client money" as excuse for poor performance), but in the end there is one

(cont. on p. 6)

President's Message

by Carol Bols, LSP (Phone: 508/788-9988, Email: cb@bolsconsulting.com)

Happy New Year to you all! This is a time of year for reflection, and a time to return to more "normal" schedules, more rested and relaxed (I hope!). The LSPA had a watershed (no pun intended) moment in late November, when the Board of Directors voted to go forward with funding the position of an Executive Director. We envision this position as a full-time, paid position, reporting to the Board of Directors. This position does not replace our administrative services from The Engineering Center but would augment them. The board has spent much time evaluating the need for this position and we are convinced that having an Executive Director will benefit all members. The benefits of hiring an Executive Director include:

- Maintaining the focus on our short and long-term goals,
- Raising the LSPA's visibility,
- Maintaining continuity, both internally and externally,
- Assisting the board and committees as a regulatory and legislative liaison,
- Supporting our volunteer board of directors, committee chairs, and committee members.

For more information on this latest development, please refer to the enclosed article and "Fact Sheet" on the Executive Director position, which has been posted on the LSPA Web site. This process is a dynamic one but we will keep you informed and seek your feedback as we continue to move forward with it.

In the meantime, our committees have summarized their action items for the coming months. It is an impressive list – reviewing and commenting on proposed regulations, tracking legislative bills that may affect us, providing courses of interest to LSPs and associate members, preparing summaries of DEP audit cases (look for a membership meeting on this topic this spring), planning member meetings, providing technical updates and promoting LSPs' work with other stakeholders and the general public. I respect and appreciate all that the committee members have accomplished. I know they will continue to provide all of us with relevant information, timely summaries and insightful evaluation of changes in the environmental world. Keep up the good work—and don't forget to let us know if you would like to join any one of our many committees, even if you can only assist on a periodic or task-by-task basis. ○

Program Committee

by Ray Leather (Phone: 508/746-1188, Email: rleather@earthlink.net)

Let me begin by thanking Bill Alpine, Executive Director of the 21J Fund, for providing us with a very informative presentation at last month's LSP Association monthly meeting. Bill provided an excellent overview of how the 21J Fund operates and answered several questions applicable to those seeking reimbursement from the 21J Fund. I also wish to thank Alan Golobski, Deputy Commissioner of the Department of Revenue and Chair of the 21J Board, and Kevin Horrigan, an engineer on the staff, for attending the monthly meeting. Their time away from personal endeavors is testimony to their commitment to keep the public informed about the 21J Fund. Finally, hats off to Bill McCambridge of American Recycling Corporation for sponsoring the monthly meeting.

For the January 10, 2002 monthly meeting in Marlboro there will be a panel discussion concerning the new Data Quality Enhancement (DQE) Policy. Don Muldoon, of DEP, Chair of the DQE Workgroup will begin the panel discussions with an overview of the DQE Policy and implementation schedule. The panel will then move into implementation

(cont. on p. 3)

Waste Site Cleanup Program Advisory Committee Update/"Measures of Success" Workgroup Meeting

by Elliot Steinberg (Phone: 617/886-7454, Email:eis@haleyaldrich.com)

After being rescheduled twice, the October Waste Site Cleanup Program Advisory Committee meeting was held on November 29, 2001. The agenda for the Advisory Committee meeting included updates on policy and regulation development, and presentations on the MDL Permeable Reactive Barrier project and the Massachusetts Weapons of Mass Destruction Team. In addition, the DEP held its first Measures of Success (MOS) Workgroup meeting on October 31, 2001. The purpose of this workgroup is to assist DEP in developing ways to communicate the successes of the redesigned MCP program.

Measures of Success

DEP presented the results of a stakeholder survey mailed to 2,500 interested parties, including: LSPs/consultants, regulators, PRPs, the public, attorneys, abutters and real estate lenders. Nine percent of the surveys were returned, with the greatest response from LSPs/consultants (40%). Information ranked most important to program stakeholders included: 1) adequacy of site cleanups; 2) status of sites in the MCP process; 3) timeliness of cleanups; and 4) effectiveness of 21E program. Measures of success suggested by stakeholders included:

- Compliance and enforcement data on individual sites
- More guidance, clear regulatory interpretation and outreach
- Public involvement, cost of cleanup, innovative technologies and others.

DEP is considering an annual report format to improve communication of program success and therefore presented a draft outline of a Measures of Success fiscal year 2001 Report. The draft outline was structured to present information on risk reduction, rates and quality of cleanup actions and brownfields. Brian Moran, of the DEP, commented that the MOS program is *not* intended to be a GEIR process, but a means to communicate the positive results of the redesigned MCP program. A draft annual report is planned for January 2002. Contact Rose Knox at 617/556-1026 for further information on the MOS Workgroup or Drew Hoyt at 617/292-5949 with ideas for the annual report.

A draft revised Audit Follow-up Plan Transmittal Form and Post-Audit Completion Statement, BWSC-111 was also distributed at the MOS meeting. This form will assist in tracking whether the audits changer the outcome of the response actions and what types of additional work were requested. DEP expected this new form to be in use by the end of the year.

Proposed Regulation Package

By the time this newsletter is published, the second wave of upcoming MCP revisions should have premiered at the December 20 Advisory Committee meeting. An agenda for this meeting has been issued with the main topic comprising draft regulations on construction/front end, public involvement, numerical standards and post-RAO activities. As previously outlined by DEP, the proposed regulation package will be presented as a pre-public hearing draft with a two to three week comment period, followed by a series of focused workgroup meetings during January 2002. The LSPA Regulations Committee will be coordinating comments from the LSPA community. Regulations Committee contacts are provided below:

Numerical Standards/Method 1
Lisa Campe, 781/251-0200

Post-RAO Issues
Kelley Race, 978/532-1900

Public Involvement
Kerry Tull, 978/977-0100

Front-End Issues/RAM, Construction
Elliot Steinberg, 617/886-7454

Please contact these committee members if you would like to assist in the review of a portion of the regulation package.

MCP Question and Answer-November 2001

A Question and Answer (Q&A) Sheet, dated November 2001 was distributed at the Advisory Committee meeting. The guidance included 13 questions covering topics such as: DEP interpretation of the word "pesticide;" impact of a recent court decision on the applicability of TCLP analyses to MGP wastes; applicability of URAM provisions for cellular phone towers; the number of quarterly groundwater monitoring rounds following remediation to support an RAO; and use of the proposed MCP Method 1 Standards prior to promulgation. A lively discussion ensued, in particular relative to post-remedial groundwater monitoring and whether these requirements applied to impacted sites where remediation was not conducted. DEP considered the November 2001 Q&A to be a draft and planned to clarify the issues raised at the meeting. The November 2001 version of the Q&A was distributed at the December LSPA membership meeting and is available on the DEP Web site under the BWSC Advisory Committee heading.

"Feasibility of Achieving Background" Policy

DEP is forming a workgroup for the Background Feasibility Policy currently under development. The workgroup should convene in about two months and DEP plans to distribute a draft of the policy prior to the first meeting. A sign-up sheet was provided at the Advisory Committee meeting, or contact Rose Knox at 617/556-1026 if you wish to participate.

Permeable Reactive Barrier

DEP gave an interesting presentation on the permeable reactive iron barrier (PRB) installed last summer to protect Town of Wellesley drinking water supply wells from a TCE plume emanating from the MDL site in Needham. The PRB was more than 500 feet long and up to 60 feet deep and was constructed using biopolymer slurry techniques with a "big-stick" (extended boom) backhoe. Initial results show that the reductive dehalogenation technology is working with 90% average reductions in dissolved TCE concentrations. A question was raised regarding DEP project specifications, which did not classify excavated materials as an RCRA listed waste even though the source of the contaminant plume was known. Excavated materials were transported to an in-state landfill.

RCRA Listed Waste vs. DEP's "Contained Out" Waste

Stephen Johnson and Brian Moran of DEP explained that that this non-hazardous RCRA

(cont. on p. 8)

CALENDAR

JANUARY

LSP Association Membership Meeting
Thursday, January 10, 2002
Location: Holiday Inn, Marlboro
Topic: Data Quality Enhancement Policy

Monitoring of Natural Attenuation
Tuesday, January 15, 2002, 8:00-5:00 PM
Location: Royal Plaza/Best Western, Marlboro

Field Screening Petroleum Hydrocarbons Using UV Fluorescence Technology
Thursday, January 24, 2002, 6:00-10:00 PM
Location: Radisson Hotel, Chelmsford

FEBRUARY

LSP Association Membership Meeting
Tuesday, February 5, 2002
Location: Holiday Inn, Marlboro
Topic: Risk Assessment and Risk Analysis

Indoor Air Contamination: Measurements and Models
Wednesday, February 13, 2002, 9:00-4:00 PM
Location: Royal Plaza/Best Western, Marlboro

Help Wanted

Licensed Site Professional

The Canton, MA office of Envirogen, Inc. is seeking a LSP w/ experience doing Method 3 RA and remediation. Candidates must demonstrate good business development skills, will be responsible for generating new contract opportunities. Envirogen is a technology based environmental systems and services company. Our staff has unique expertise with in-situ remedial technologies, including bioremediation. Send resume to: Kelly McQueeney, Envirogen, 480 Neponset St, Canton, MA, 02021, mcqueeney@envirogen.com.

Project Manager

We are seeking an experienced project manager candidate to manage both public and private sector environmental projects. Successful candidates will have a minimum BS degree in environmental-related discipline, 7-10 years of experience, LSP a plus. Project work may include Phase I and II ESA, remedial cost estimation, project planning, CERCLA RI/FS/RD/RA. Strong skills in project management, financial management, writing and oral communication. Expect occasional travel and possible business development opportunities. Email your resume to: hire_lowell@tresolutions.com

Program Committee

(cont. from p. 1)

issues by discussing the DQE Policy and taking questions from the audience. Given the DEP focus on the DQE Policy and Internet implementation, this should prove to be an enlightening topic. Many thanks go out to Larry Cohen of the Technical Practices Committee for pulling together this panel discussion.

The sponsor for the January monthly meeting will be Accutest Labs of New England, Inc. (Accutest). It is my understanding that Accutest intends to provide an operating display of their electronic LabLink deliverables capability, telephone lines willing!

The February 5, 2002 monthly meeting in Waltham is our annual joint meeting with the Boston Society for Risk Assessment and the New England Chapter of the Society for Risk Analysis. Jerry Cura is preparing an agenda addressing representative soil and groundwater sampling. Such topics as area weighting, discrete areas, Hot Spots, the 75% rule and the calculation of EPCs will be discussed. This should be a presentation of interest to every LSP in light of DEP's list of the Top Ten Most Common MCP Risk Characterization Problems (www.state.ma.us/dep/ors/files/topten.htm). Menzie-Cura will be the sponsor for the February 5 monthly meeting.

The Program Committee is in search of monthly meeting topics and ideas to bring variety to our meeting format and agenda. If you have an assessment or remediation topic that you believe might be of interest to your fellow LSPs and colleagues, please call or email any of the Program Committee members. Likewise, if you have an idea that would bring variety to our agenda or meeting format, please let us know. Presently, several LSP Association members have suggested to the Program Committee that perhaps we host a monthly meeting centered on a breakfast style format. For instance, the meeting could begin at 7:00 AM over breakfast, followed by a presentation. The intent is to have everyone on his or her way by 8:30 AM. A luncheon style format has also been suggested. Last but not least, we are looking for ideas to replace the annual dinner cruise, given the low turnout of past years. Perhaps an early (7:00 AM) nine-hole golf scramble at a par three course followed by a brunch? Such an early morning format is intended to get everyone on his or her way by 9:30 AM. Please, let us know your thoughts on these ideas.

The LSP Association via the Program Committee is always in search of sponsors for the monthly meetings. The sponsors help defray the cost of the monthly meetings. There are tangible advantages for the sponsors. First of all, the sponsor is recognized in the monthly *LSPANews* and in the broadcast fax/email monthly meeting reminder sent to all LSP Association members. The sponsor is allowed to send two representatives to the meeting to staff a table for the purpose of providing promotional literature and to answer questions concerning their services. The sponsor is recognized by a sign posted at the registration table and food tables and is recognized during welcoming remarks at the beginning of the meeting. More importantly, sponsorship is an opportunity for LSPs and their companies to extend a professional courtesy to LSP Association members who attend the monthly meetings. The suggested donation is $500. Thank you for considering this opportunity and please call or email me or any other member of the Program Committee if you wish to sponsor a future monthly meeting.

Finally, the Program Committee will meet at 4:30 PM prior to the monthly meeting. Please feel free to come by and help plan the direction for your future monthly meetings.

From the Loss Prevention Committee: MCP/LSP Program Tidbit of the Month

Year	Total Complaints	Complaints from DEP
1995	5	3
1996	9	2
1997	9	4
1998	6	1
1999	20	9
2000	18	11
2001 (to date)	9	6

Agency Speaks
DEP Bureau of Waste Site Cleanup - Audit and Enforcement Update

by Thomas Potter, Audit Coordinator (Phone: 617/292-5628, Email: thomas.potter@state.ma.us)

Audit Findings for October 2001:

DEP BWSC issued 11 Notices of Audit Findings (NOAFs) in October 2001. NOAFs of particular significance in October include:

1. Following an audit of a Release Abatement Measure (RAM) and Class A-2 Response Action Outcome (RAO) Statement, DEP issued a Notice of Audit Finding (NOAF)/ Notice of Noncompliance (NON). DEP requested additional response actions.

The site is located at a residential property in a rural/residential/agricultural area. The property is served by a private potable water supply well. Two additional private wells are located within 500 feet of the site. In May 1999, DEP received a 120-day notification of petroleum-contaminated soil documented during removal of a # 2 fuel-oil underground storage tank (UST). Response actions commenced at the site as a Limited Removal Action (LRA). Subsurface investigations included the installation of four monitoring wells and subsequent overboring of two of the wells to bedrock monitoring wells. Groundwater samples collected from a bedrock well contained petroleum contamination above applicable GW-1 reportable concentrations. The bedrock well is located within 500 feet of the potable well. In October 1999, a Release Abatement Measure (RAM) Plan was submitted for continued soil excavation and removal and treatment of contaminated groundwater from the UST grave. The RAM was approved and implemented. Soil removal beneath the house was also completed by underpinning the foundation. A total of 60 cubic yards of contaminated soil was removed. Nineteen post-excavation soil samples were collected from within the basement and the former UST grave excavation. Indoor air samples were consistent with the background air sample collected outside the house. The second of two potable well water samples tested for Extractable Petroleum Hydrocarbons (EPH) detected 0.094 milligrams per liter (mg/L) of C11-C22 aromatics. In June 2000, a Phase I Report and Numerical Ranking Scoresheet (NRS) supporting a Tier II site classification was submitted to DEP. In July 2000, DEP received a RAM Completion report/Class A-2 RAO Statement. A combined Method 2/3 risk characterization was conducted. An evaluation of the potential for volatilization of contaminants from groundwater into indoor air was also conducted. The risk characterization evaluated hydrocarbon risk by breaking the hydrocarbon fractional data into five aliphatic and three aromatic fractions and calculating the risks posed by the eight fractions separately. The C9-C10 aromatic hydrocarbon was excluded from the calculation. Only 8 of the 19 post-excavation samples collected from the basement were used to calculate soil Exposure Point Concentrations (EPCs). Hydrocarbons detected in the potable drinking water well, as well as 2-methylnapthalene, xylenes and C9-C10 aromatic hydrocarbons in soil, were not evaluated in the risk characterization.

Findings

Identified violations of MCP requirements, which required further action include:

a) Failure to support the RAO with assessments and evaluations of sufficient scope, detail and level of effort to characterize risk (Additional sampling of potable well necessary)

b) Failure to describe all probable Exposure Pathways (Potable water supply well)

c) Failure to identify EPCs for each oil and/or hazardous material in each medium at each Exposure Point

d) Failure to identify a conservative estimate of the EPC

DEP requested either the submission of a revised RAO Statement that complies with the requirements of the MCP, or retraction of the existing RAO Statement. (Belchertown, 1-12960, NON-WE-01-3A107, October 3, 2001)

2. Following an audit of a Class A-3 RAO and Activity and Use Limitation (AUL), DEP issued a NOAF/NON. One AUL error requiring correction was also identified.

The site is located at a large industrial property with a building facility occupied by three companies, which together manufacture furniture. The furniture manufacturing includes electroplating metal parts. On-site underground petroleum storage included No. 6 fuel oil and gasoline. According to a 1985 report, nickel sulfamate and zinc cyanide were used in the electroplating process. In addition, historical degreasing of metal parts was conducted. The facility contains several plating tanks consisting of individual vats for plating solutions. A trough system within the building was used to drain the tanks into the sanitary sewer system. Several groundwater monitoring wells were installed at the site and volatile organic compounds (VOCs) and metals were identified in groundwater. A 1986 report indicated that the former wastewater drainage trenches in the southern end of the plating building leaked contaminants into the subsurface environment. According to DEP RCRA Hazardous Waste files, the No. 6 fuel oil UST was removed in 1986. Soil contamination and separate-phase oil was observed during the UST excavation. During the installation of a required plating solution treatment system in 1985, soil contaminated with cyanide, zinc and nickel was encountered.

In August 1995, DEP received a Class A-3 RAO with a Method 3 risk characterization and AUL. The RAO does not identify and investigate sources of contamination at the site, including the former drainage trenches within the building, an exterior hazardous waste storage area or the current and former petroleum USTs. The RAO indicates that approximately 638 cubic yards of contaminated soil were removed and disposed. The risk characterization does not include cyanide and petroleum hydrocarbons as contaminants of concern at the site.

Findings

Identified violations of MCP requirements include:

a) Failure to complete an adequate characterization of the disposal site to characterize risk.

b) Failure to support the RAO with assessments and evaluations of sufficient scope, detail and level of effort to characterize risk.

c) Failure to evaluate the feasibility of reducing contaminant concentrations at the site to background.

DEP also determined that the AUL does not adequately define what uses and activities are permitted at the site, what uses and activities are restricted or what obligations and conditions must be maintained at the site, which is an error that requires correction. DEP requested either the submission of a revised RAO Statement that complies with the requirements of the MCP (including the results of additional groundwater sampling, delineation of the extent of contamination and identification of any remaining on-site sources of contamination) or retraction of the existing RAO Statement. (Worcester, 2-0178, NON-CE-01-3069, October 11, 2001)

Additional information on the DEP's audit program can be found on our Web page at the following address: www.magnet.state.ma.us/dep/bwsc/audits.htm.

Enforcement – October 2001

In October 2001, DEP BWSC issued 23

(cont. on p. 6)

Education Committee Update

by Matt Hackman (Phone: 401 737-9211, Email: matthew-e-hackman@att.net)

I hope all of you had a very happy holiday and took a break from all this. But now that we're back, I know many of you who are renewing your LSP license in January are concerned about having enough credits. If you need more DEP credits, take the 90-day extension and register for the course Addressing Indoor Air Contamination: Measurements and Methods (6 DEP credits) on February 13, 2002.

I hope you all enjoyed DEP's Audit Review courses as much as I did. (As Michael Palin once said, "If you enjoyed it half as much as we did, then we enjoyed it twice as much as you!). Since these courses will be offered on an ongoing basis, approximately every six months, I am very interested in getting your feedback on how we might improve the course offering (time, handouts, format and food).

If you need more technical credits, don't miss Steve Greason's (Sitelab, Inc.) four-hour technical course on use of Sitelab's UV fluorescence technology to perform VPH and EPH measurements in the field on January 24, 2002, 6:00-10:00 PM. This course has been approved by the LSP Board for 4 technical credits (and by the LEP Board in Connecticut as well).

Mike Bingham and I are planning on meeting with vendors who could assist us in offering courses in ways other than our traditional format, that might allow greater time flexibility, more offerings and a more flexible schedule than our current approach. I would really like to hear what features of such an approach would most benefit you. PLEASE email me with your wish list or suggestions about what we could do to make course offerings more convenient for you.

Also, Joe Landyn has suggested that many of our technical and regulatory courses might be of interest to an LSP firm's staff, to better acquaint them with the issues critical to the LSPs they work for. We all depend a lot on our field staff and project managers, and it would seem to be of great benefit if they were on the same page, so to speak. The Education Committee will be discussing how we might offer courses, perhaps in a more condensed format, perhaps in evenings or through the new delivery methods Mike is investigating, to make them easily available to your staff. I would appreciate hearing from LSP firms regarding what features they would like to see in such courses. Please email me your comments.

Also, as always, there is room for more Education Committee members! Are you interested in being on the forefront of LSPA's continuing education program? Can you help with registration and administration of courses? Come check out the Education Committee! Ask about the many perks that Education Committee members enjoy!

Looking ahead to 2002, the proposed education calendar is as follows:

Monitoring of Natural Attenuation
8 technical credits, January 15, 2002

Field Screening Petroleum Hydrocarbons Using UV Fluorescense Technology
4 technical credits, January 24, 2002

LSP Exam Review course, Spring 2002

ASTM Phase I Environmental Site Assessments
8 technical credits, Winter 2002

Geochemical Forensics
8 technical credits, Winter 2002

Understanding the 2001 MCP, (DEP course)
8 DEP credits, Summer-Fall 2002

Data Enhancement QA/QC Phase II, (DEP course), Winter/Spring 2003

Possible additional courses:

MEPA (DEP and LSPA instructors). Learn how MEPA affects you as an LSP and how to perform a MEPA evaluation.

Sampling for Environmental Risk Assessment (UMass and LSPA instructors). Designed as a combined classroom and field course to show you how to get the samples you need for a valid and viable ecological risk assessment, particularly in surface water and sediments.

Possibly we could repeat offerings of the Bedrock DNAPL and Quantitative Hydrogeology courses. If you are interested and were unable to attend before, PLEASE email me so we can gauge interest.

The next association meeting is January 10, 2002, at the Holiday Inn, Marlboro, MA. The Education Committee will meet at 4:00 PM. New members are always welcome. Please feel free to join us in our planning sessions or just stop by to pass along your ideas.

Course Announcement

Environmental Toxicology and Risk Assessment

Spring Semester 2002
Offered by: University of Massachusetts Boston, Department of Environmental, Coastal and Ocean Studies

CREDIT:
Graduate level course, 3 credits. Also approved for continuing education credit (12 credits pass, 8 audit) by the Massachusetts Registration Board of Hazardous Waste Site Cleanup Professionals (their course number 2013).

CLASS LOCATION:
University of Massachusetts Boston and University of Massachusetts Lowel simultaneouly (interactive TV).

CLASS TIME:
Tuesdays, 6:00-9:00 PM
Beginning Tuesday, January 29, 2002.

INSTRUCTOR:
Dr. Michael Hutcheson
Phone: 617/292-5998
Email: Michael.hutcheson@state.ma.us

TO REGISTER:
Contact Jan O'Brien
Telephone: 617/287-7445

DEP has scheduled Focus Group meetings to review the Pre-Public Hearing Draft Regulations at DEP-Boston, 2nd floor, 1:30-3:30 PM, January 14, 22 and 29, 2002.

The Special Problems of the Sole Practitioner

(cont. from p. 1)

incontrovertible fact: the LSP signed and stamped a submittal, thereby accepting full responsibility for any shortcomings.

The particular problems of the sole practitioner LSP are of concern not only to the Board, but also to the LSPA. While the LSPA may come out with more detailed and/or concrete assistance at some future time, the following suggestions from the Board may be of help in the interim. (Note that these suggestions really apply to all LSPs; however some of them may require special effort from sole practitioner LSPs.)

1. Remember whose license is on the line. First and foremost, remember that YOU are the LSP, and YOU have the responsibility and potential liability that accompany that title. If there's a problem it may cost your client money, but it may cost you part of your livelihood.

2. Know the MCP. Understand what the MCP requires as a basis for each of your Opinions. If you primarily do "front-end" work and you are rendering "back -end" Opinions, review the MCP to determine what information and evaluations are actually required. And don't forget to check 40.1400 for the public involvement requirements!

3. Make sure you have the time and budget to do the job. As a professional, the LSP should be able to estimate (with appropriate allowances for the vagaries of subsurface conditions) a reasonable time and budget to complete a reasonably defined scope of work. If your client (whether it's the PRP or an intermediate, such as another consulting firm) refuses to allocate you the time and money you think are necessary to perform your work adequately, think again about whether you really want to take on that assignment.

4. Make sure you have (or can rely on another qualified person to have) the necessary skills for the job. Don't take on work you can't handle. Period. This is more than just good advice. Remember, the Board's Rules of Professional Conduct (309 CMR 4.02(2)) prohibit an LSP acting alone from providing professional services "outside his or her areas of professional competency." This doesn't mean you have to do everything yourself; you can always rely on an appropriately qualified professional to fill in the gaps in your personal expertise (e.g., you may subcontract to a risk assessor to complete a Method 3 risk assessment for the site). However, it does mean that in one way or another, the appropriate skills have to be brought to bear on a site.

5. Arrange for peer reviews of your work. Most MCP submittals will benefit from being reviewed by a second qualified individual, preferably (although not necessarily) an LSP. Pick a colleague whose judgment you trust, and give him or her free reign to edit your work and raise questions. It will add to your cost, but in the long run it will be worth it.

6. Keep abreast of regulatory and guidance changes. If you can afford the time, attend Waste Site Cleanup Advisory Committee and/or LSPA meetings to get a sense of how the practice might be changing and of what new policies are being considered; it's also a good opportunity to network with colleagues and to discuss similar problems. If you can't afford the time, be sure to visit DEP's Web site on at least a monthly basis to check out the activities of the Advisory Committee and its several work groups and to review drafts of documents prior to their formal public release. (Pay particular attention to the information on the NERO site for work in that region.) Finally, take as many of the "DEP courses" as possible, not just for the continuing education credit but also in order to see first-hand how those who administer the MCP think through issues.

7. Network like crazy. Keep in touch with colleagues—in person, by phone, by email—to share experiences with the MCP and to ask questions. Most of us have at least several colleagues whose judgment and perspective we consider reliable; contact these colleagues as questions arise, and make them feel welcome to contact you.

8. Review the disciplinary action summaries on the Board's Web site. These summaries provide very helpful information about what not to do. Sole practitioners and others would be wise to return to these summaries from time to time, as new summaries are posted whenever the Board takes disciplinary action against an LSP. The Board's Web site is found at www.state.ma.us/lsp.

9. Join the LSPA. If you're reading this article and you're one of the only 10% of LSPs who are not LSPA members, rectify that situation! In addition, support personnel who assist LSPs on projects can also become Associate Members, thereby increasing the number of people in an organization who are staying in touch with current practice. Even better, become active on one of the LSPA committees, such as Technical Practices, Loss Prevention or Regulations. LSPA members monitor the activities of DEP and the Board and share their information with other members at monthly meetings and through the LSPA newsletter. This information, plus the opportunity to interact with a large group of your peers on a regular basis, makes LSPA membership even more important for the sole practitioner LSP.

So remember: while Board members, as individuals, sympathize with the sole practitioner LSP, the Board has to hold these LSPs as accountable for their lapses as any class of LSP. Taking steps now to stay on top of your game may help you avoid more direct interaction with the Board—and with DEP—later on.

(With special thanks to Allan Fierce, Duff Collins and Wes Stimpson for their helpful comments.)

Audit Findings

(cont. from p. 4)

NONs, 7 Administrative Consent Orders (ACOs), 4 Administrative Consent Orders with Penalty (ACOPs) and 1 Unilateral Administrative Order (UAO). Enforcement actions of particular significance include:

1. DEP issued a Standard Penalty Assessment Notice (SPAN) and Unilateral Administrative Order (UAO) to Joseph DiMaggio of Mashpee for failure to complete cleanup actions in a timely manner, including failure to submit a Response Action Outcome (RAO) or Tier Classification submittal by the one-year anniversary of a release at his property. The UAO orders Joseph DiMaggio to perform response actions and comply with MCP submittal requirements. A penalty of $7,000 was assessed. (Mashpee, 4-14286, SPAN-SE-01-3T-003, UAO-SE-01-3T-003, October 5, 2001)

2. DEP entered into an ACOP with Construction Services, Inc. for failure to complete MCP response actions addressing oil contamination of soil and groundwater from leaking underground storage tanks at its property in Wilbraham. The site is a large gravel pit and construction equipment service and storage area located over a potentially productive aquifer. A penalty of $2,500 was assessed. Construction Services, Inc. agreed to complete response actions and submit required reports within specific deadlines. (Wilbraham, 1-00956, 1-11084, ACOP-WE-01-3011, October 31, 2001)

Additional information on DEP's current enforcement actions and policies can be found on our Web page at the following address: www.magnet.state.ma.us/dep/enf/enforce.htm.

21J Fund Board Meeting

by Ray Leather (Phone: 508/746-1188, Email: rleather@earthlink.net)

At the December 4, 2002 monthly meeting of the LSP Association, we learned from Bill Alpine, the Executive Director of the 21J Fund, that the 21J Fund has collected approximately $173 million in fees and disbursed approximately $155 million for reimbursement of response actions.

We also learned, however, that the 21J Fund will probably have committed all of its allocated 2002 Fiscal Year funds as of the December 20-2001 Board meeting. Given state budget cuts and general economic concerns, there will probably not be a supplemental appropriation, as there was last year, to reimburse claims through the remainder of the 2002 Fiscal Year which ends June 30, 2002. Therefore, the 21J Fund may not have money to pay any further claims submitted and/or approved by the 21J Fund Board beyond those anticipated to be approved at the December Board meeting, until the 2003 Fiscal Year state budget is approved. I will attempt to keep the LSP Association membership informed of this situation in my liaison capacity to the 21J Fund for the LSP Association.

The 21J Fund Regulations Subcommittee has been meeting frequently in an attempt to revise the 21J Fund regulations found at 503 CMR 2.00. Such issues under consideration include reducing to 5% from 20% the penalty incurred for late filing of an Application for Eligibility, a revision in the concept of Final Judgment, allowing reimbursement of invoices paid up to one year prior to the date of submission for reimbursement and the processing of requests for interpretation by the 21J Board of its regulations. The Regulations Subcommittee hopes to present revised regulations to the 21J Board on December 20.

Both the Regulations Subcommittee and Board meet in the main conference room of the Massachusetts Information Technology Center (MITC) building located at 200 Arlington Street, Chelsea, MA For more information on these issues or upcoming meetings, please contact the 21 Fund's Executive Director, Mr. William J. Alpine at 617/887-5970.

Please watch future issues of *LSPANews* for additional information about the meetings as it becomes available. It is also suggested that the 21J Board Web site be checked prior to attending meetings of the subcommittee or 21J Board in order to verify any last minute changes to the meeting date, time, etc. The 21J Board's Web site address is: *www.dor.state.ma.us/ust/ust_home.htm.*

Regulations Committee Update

by Dan Polan (Phone: 781/721-4011, Email: dfolan@geiconsultants.com) and Bill Betters (Phone: 781/631-3791, Email: bbetters@mediaone.net)

Engineered Barrier Update

The latest Engineered Barrier Workgroup meeting was held on December 4, 2001 at the DEP in Boston and was well attended. The purpose was to provide and discuss comments on the first engineered barrier workgroup draft document issued in October 2001: "Guidance on the Use, Design, Construction and Monitoring of Engineered Barriers." DEP representatives envisioned that the number of engineered barriers that would actually be implemented in the future would be small. They felt that the use of an engineered barrier at a disposal site should be considered a measure of last resort, to be used only in those situations where there are no other feasible alternatives to reduce and/or fixate concentrations of oil or hazardous materials in soils to levels below Upper Concentration Limits (UCLs). The purpose of the guidance document was to present a "default" standard of generic guidelines that a PRP could follow, analogous to MCP Method 1 cleanup standards for soil and groundwater. Parties electing to use these generic guidelines for the design, construction and monitoring of an engineered barrier would be more likely to gain DEP acceptance. Guidelines for selecting optional elements of a typical engineered barrier would be available for a site-specific approach. Those parties that decide to use an alternative approach would need to provide appropriate supporting rationale and documentation to demonstrate compliance with regulatory and technical performance standards.

The comments and discussions revolved around the goals and technical aspects of the engineered barrier layers, options for design modifications and financial assurance mechanimisms of long-term monitoring. In general, four major layers of an engineered barrier are proposed. In descending order from ground surface to soils containing UCL exceedances, these layers include:

Isolation layer
defining layer
low hydraulic conductivity layer
gas vent layer

DEP representatives stated that the construction of the isolation layer should be such that it would be difficult for unknowing parties to penetrate and that measures would be incorporated to prompt them to stop and ask questions before going further. The purpose of the defining layer is to provide a visual demarcation and to identify the area of concern. The purpose of the low hydraulic conductivity layer (with an overlying drainage layer) is to contain volatile or soluble contaminants by providing an impermeable barrier. The purpose of the gas vent layer is to contain hazardous concentrations of volatile compounds that might be present beneath the engineered barrier in underlying soils and potentially migrate upwards to cause unacceptable exposures. DEP representatives stated that parties should be able to remediate VOCs to concentrations below UCLs.

Draft Regulations Update

By the time of this writing the much anticipated draft of MCP regulations revisions will have been released at the December 20, 2001 Waste Site Cleanup Technical Advisory Committee Meeting in DEP's Boston office. The revisions include changes that have been developed in the following principal areas: Construction/Front End, Public Involvement, Numerical Standards and Post RAO Activities. Once released, Regulations Committee members will be reviewing and furnishing comments to the DEP prior to the final version scheduled for Spring 2002. As always, we welcome comments and suggestions from all LSPA members. Interested parties should contact the LSPA, or can contact Regulations Committee Co-Chairs Bill Betters and Kelley Race directly.

January 15, 2002

Waste Site Cleanup Technical Assistance Grants

Deadline for submitting the completed application for the Fiscal Year 2002 Funding Round of the BWSC Technical Assistance Grants.

Contact: patti.mullan@state.ma.us

Waste Site Cleanup Program Advisory Committee Update/"Measures of Success" Workgroup Meeting

(cont. from p. 2)

Listed Wastevs. DEP's "Contained Out" Waste

Stephen Johnson and Brian Moran of DEP explained that that this non-hazardous classification of the soils was based on a relatively new DEP "Contained-Out" that had been used at other sites. John Carrigan of DEP subsequently provided several letters between DEP, the EPA and private consultants describing this application of the RCRA "Contained-In" policy for management of soils contaminated with low levels (i.e., ppb) of a listed hazardous waste. According to a January 13, 1997 letter from DEP to a private consultant, such materials may be managed as a non-hazardous waste within Massachusetts provided that:

- Concentrations of hazardous constituents are below the MCP Method 1, S1/GW1 Standards and the EPA RCRA Universal Treatment Standards.
- Management of the soil complies with the requirements of the MCP and with DEP Policies BWP-94-037(Reuse and Disposal of Contaminated Soilsat Landfille) and WSC-94-400 "Interim Remediation Wast Management Policy for Petroleum Contaminated Soils";
- Written Determination by the Generator documenting that the soil contains constituents from a listed hazardous waste;
- Soil is generated within Massachusetts, has been adequately characterized and is not a TCLP characteristic waste;
- The contaminants are derived from a listed hazardous waste for which the Commonwealth is authorized by EPA under RCRA; and
- Contaminant concentrations have not been achieved by dilution.

According to John Carrigan, DEP is developing a written policy for their "Contained-Out" interpretation and hopes to issue a draft during summer of 2002. It should be noted that this "Contained-Out" interpretation differs from guidance presented in the December 1996 LSPA/DEP fall training seminar on Remediation Waste and Remedial Wastewater Management which considered soils containing listed wastes below Reportable Concentrations to be hazardous waste.

About the LSP Association

The mission of the LSP Association (LSPA) is to promote sound business and technical practices of member LSPs. To accomplish this mission, the LSP Association will represent its membership concerning the standards of practice, the role and the responsibilities of the LSP and will serve as an education, information and communication resource.

The LSP Association offices are located at: One Walnut St, Boston, MA 02108-3616.

DEADLINES

The deadlines for submitting articles or announcements to the *LSPANews* are as follows:

February Issue:
January 8, 2002

March Issue:
February 8, 2002

April Issue:
March 8, 2002

May Issue:
April 8, 2002

Publication Information

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listed as a hazardous waste as defined in subparts C or D of this part, except for brominated material that meets the following criteria:

(i) The material must contain a bromine concentration of at least 45%; and

(ii) The material must contain less than a total of 1% of toxic organic compounds listed in appendix VIII; and

(iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping).

(3) The Administrator will use the following criteria to add wastes to that list:

(i)(A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in appendix VIII of part 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(c) *Materials that are not solid waste when recycled.* (1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or

(ii) Used or reused as effective substitutes for commercial products; or

(iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at § 261.4(a)(17) apply rather than this paragraph.

(2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs (c)(1)(i) through (iii) of this section):

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section.

(i) *Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation.* Respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

[50 FR 664, Jan. 4, 1985, as amended at 50 FR 33542, Aug. 20, 1985; 56 FR 7208, Feb. 21, 1991; 56 FR 32688, July 17, 1991; 56 FR 42512, Aug. 27, 1991; 57 FR 38564, Aug. 25, 1992; 59 FR 48042, Sept. 19, 1994; 62 FR 6051, Feb. 12, 1997; 62 FR 26019, May 12, 1997; 63 FR 28036, May 26, 1998; 64 FR 24513, May 11, 1999; 67 FR 11253, Mar. 13, 2002]

§ 261.3 Definition of hazardous waste.

(a) A solid waste, as defined in § 261.2, is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under § 261.4(b); and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in subpart C of this part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under § 261.4(b)(7) and any other solid waste

exhibiting a characteristic of hazardous waste under subpart C is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table I to § 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

(ii) It is listed in subpart D of this part and has not been excluded from the lists in subpart D of this part under §§ 260.20 and 260.22 of this chapter.

(iii) [Reserved]

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in subpart D of this part and has not been excluded from paragraph (a)(2) of this section under §§ 260.20 and 260.22, paragraph (g) of this section, or paragraph (h) of this section; however, the following mixtures of solid wastes and hazardous wastes listed in subpart D of this part are not hazardous wastes (except by application of paragraph (a)(2)(i) or (ii) of this section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and;

(A) One or more of the following solvents listed in § 261.31—carbon tetrachloride, tetrachloroethylene, trichloroethylene—*Provided,* That the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or

(B) One or more of the following spent solvents listed in § 261.31—methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents—provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million; or

(C) One of the following wastes listed in § 261.32, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation—heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050), crude oil storage tank sediment from petroleum refining operations (EPA Hazardous Waste No. K169), clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (EPA Hazardous Waste No. K170), spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and spent hydrorefining catalyst (EPA Hazardous Waste No. K172); or

(D) A discarded commercial chemical product, or chemical intermediate listed in § 261.33, arising from *de minimis* losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this paragraph (a)(2)(iv)(D), "de minimis" losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in subpart D of this part, Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pretreatment system or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pretreatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(F) One or more of the following wastes listed in § 261.32—wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157)—Provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that can not be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight; or

(G) Wastewaters derived from the treatment of one or more of the following wastes listed in § 261.32—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156).—Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter.

(v) *Rebuttable presumption for used oil.* Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available for the cost of $110.00 from the Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954, 202-512-1800 (document number 955-001-00000-1).

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(b) A solid waste which is not excluded from regulation under paragraph (a)(1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in subpart D of this part, when the waste first meets the listing description set forth in subpart D of this part.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in subpart C of this part.

(c) Unless and until it meets the criteria of paragraph (d) of this section:

(1) A hazardous waste will remain a hazardous waste.

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h) of this section, any solid waste generated from the treatment, storage, or disposal of a

hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Waste from burning any of the materials exempted from regulation by § 261.6(a)(3)(iii) and (iv).

(C)(*1*) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for "Industrial furnace" in 40 CFR 260.10), that are disposed in subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

Constituent	Maximum for any single composite sample—TCLP (mg/l)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70
Generic exclusion levels for F006 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total) (mg/kg)	1.0
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

(*2*) A one-time notification and certification must be placed in the facility's files and sent to the EPA region or authorized state for K061, K062 or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment

standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(D) Biological treatment sludge from the treatment of one of the following wastes listed in § 261.32—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157).

(E) Catalyst inert support media separated from one of the following wastes listed in § 261.32—Spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and Spent hydrorefining catalyst (EPA Hazardous Waste No. K172).

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in subpart C of this part. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of part 268, even if they no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is a listed waste under subpart D of this part, contains a waste listed under subpart D of this part or is derived from a waste listed in subpart D of this part, it also has been excluded from paragraph (c) of this section under §§ 260.20 and 260.22 of this chapter.

(e) [Reserved]

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 of this chapter does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 40 CFR parts 260, 261 to 266, 268, or 270:

(1) Hazardous debris as defined in part 268 of this chapter that has been treated using one of the required extraction or destruction technologies specified in Table 1 of § 268.45 of this chapter; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

(2) Debris as defined in part 268 of this chapter that the Regional Administrator, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

(g)(1) A hazardous waste that is listed in subpart D of this part solely because it exhibits one or more characteristics of ignitability as defined under § 261.21, corrosivity as defined under § 261.22, or reactivity as defined under § 261.23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in subpart C of this part.

(2) The exclusion described in paragraph (g)(1) of this section also pertains to:

(i) Any mixture of a solid waste and a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section; and

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (c)(2)(i) of this section.

(3) Wastes excluded under this section are subject to part 268 of this chapter (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a solid waste excluded from regulation under § 261.4(b)(7) and a hazardous waste listed in subpart D of this part solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated

under paragraph (a)(2)(iv) of this section is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed.

(h)(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of 40 CFR part 266, Subpart N ("eligible radioactive mixed waste").

(2) The exemption described in paragraph (h)(1) of this section also pertains to:

(i) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(ii) Any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.

(3) Waste exempted under this section must meet the eligibility criteria and specified conditions in 40 CFR 266.225 and 40 CFR 266.230 (for storage and treatment) and in 40 CFR 266.310 and 40 CFR 266.315 (for transportation and disposal). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

[57 FR 7632, Mar. 3, 1992; 57 FR 23063, June 1, 1992, as amended at 57 FR 37203, Aug. 18, 1992; 57 FR 41011, Sept. 10, 1992; 57 FR 49270, Oct. 30, 1992; 59 FR 38545, July 28, 1994; 60 FR 7848, Feb. 9, 1995; 63 FR 28637, May 26, 1998; 63 FR 42184, Aug. 6, 1998; 66 FR 27207, May 16, 2001; 66 FR 60333, Oct. 3, 2001]

§ 261.4 Exclusions.

(a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this part:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under section 402 of the Clean Water Act, as amended.

[*Comment:* This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

(3) Irrigation return flows.

(4) Source, special nuclear or byproduct material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 *et seq.*

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in § 261.1(c) of this chapter.

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in § 261.1(c) of this chapter.

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9)(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(iii) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs (a)(9)(i) and (a)(9)(ii) of this section, so long as they meet all of the following conditions:

End of Document

Exhibit C

EXHIBIT C

ARISTA DEVELOPMENT PROJECT

The project site is located on a busy intersection in North Attleboro and is a prime location for commercial retail development such as a drug store, restaurant or other similar use that would benefit from the high volume of traffic that utilizes the abutting intersection. The property is also potentially large enough to encompass an additional use or uses toward the rear of the property – such uses could include additional retail uses, small office space, storage facilities or other uses typical of commercial retail areas.

As currently proposed, the Project will consist of the demolition of the existing structure(s) and the erection of one or more commercial buildings with associated parking, access isles and landscaping. In addition, subsurface utilities including, but not limited to, water, sewer, gas and electricity will be installed to serve the proposed commercial uses.