



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-103

Release Tracking Number

RELEASE NOTIFICATION & NOTIFICATION RETRACTION
FORM Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

2 - 11210

If assigned by DEP

A. RELEASE OR THREAT OF RELEASE LOCATION:

Street: Patch Road

Location Aid: Building 3546

City/Town: Devens

ZIP Code: 01433

B. THIS FORM IS BEING USED TO: (check one)

☒ Submit a Release Notification (complete all sections of this form).

☐ Submit a Retraction of a Previously Reported Notification of a Release or Threat of Release (complete Sections A, B, E, F and G of this form). You MUST attach the supporting documentation required by 310 CMR 40.0335.

C. INFORMATION DESCRIBING THE RELEASE OR THREAT OF RELEASE (TOR):

Date and time you obtained knowledge of the Release or TOR. Date: 6/15/96 Time: Specify: ☐ AM ☐ PM

The date you obtained knowledge is always required. The time you obtained knowledge is not required if reporting only 120 Day Conditions.

IF KNOWN, record date and time release or TOR occurred. Date: Time: Specify: ☐ AM ☐ PM

☐ Check here if you previously provided an Oral Notification to DEP (2 Hour and 72 Hour Reporting Conditions only).

Provide date and time of Oral Notification. Date: Time: Specify: ☐ AM ☐ PM

Check all Notification Thresholds that apply to the Release or Threat of Release: (for more information see 310 CMR 40.0310 - 40.0315)

2 HOUR REPORTING CONDITIONS

- ☐ Sudden Release
- ☐ Threat of Sudden Release
- ☐ Oil Sheen on Surface Water
- ☐ Poses Imminent Hazard
- ☐ Could Pose Imminent Hazard
- ☐ Release Detected in Private Well
- ☐ Release to Storm Drain
- ☐ Sanitary Sewer Release (Imminent Hazard Only)

72 HOUR REPORTING CONDITIONS

- ☐ Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch
- ☐ Underground Storage Tank (UST) Release
- ☐ Threat of UST Release
- ☐ Release to Groundwater near Water Supply
- ☐ Release to Groundwater near School or Residence

120 DAY REPORTING CONDITIONS

- ☐ Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)
- ☒ Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards
- ☐ Release of Oil to Groundwater Exceeding Reportable Concentration(s)
- ☐ Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch and Less than 1/2 Inch

List below the Oils or Hazardous Materials that exceed their Reportable Concentration or Reportable Quantity by the greatest amount. If necessary, attach a list of additional Oil and Hazardous Material substances subject to reporting.

Name and Quantities of Oils (O) and Hazardous Materials (HM) Released:

O or HM Released	O HM (check one)	CAS # (if known)	Amount or Concentration	Units	Reportable Concentrations Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2)
Fuel Oil No. 2	<input checked="" type="checkbox"/> <input type="checkbox"/>		TPH > 500	mg/kg	RCS-1
	<input type="checkbox"/> <input type="checkbox"/>				
	<input type="checkbox"/> <input type="checkbox"/>				

D. ADDITIONAL INVOLVED PARTIES:

☐ Check here if attaching names and addresses of owners of properties affected by the Release or Threat of Release, other than an owner who is submitting this Release Notification (required).

☐ Check here if attaching Licensed Site Professional (LSP) name and address (optional).

You may write in names and addresses on the bottom of the second page of this form.



BUILDING 3546

Release Tracking Number

RELEASE NOTIFICATION & NOTIFICATION RETRACTION
FORM Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

2 - 11210

If assigned by DEP

E. PERSON REQUIRED TO NOTIFY:

Name of Organization: Devens Commerce Center / Massachusetts Government Land Bank

Name of Contact: Mr. Ron J. Ostrowski Title: Environmental Manager

Street: 43 Buena Vista Street, P-12

City/Town: Devens State: MA ZIP Code: 01433

Telephone: (508) 772-6340 Ext.: 303 FAX: (optional) (508) 772-7577

F. RELATIONSHIP OF PERSON REQUIRED TO NOTIFY TO RELEASE OR THREAT OF RELEASE: (check one)

☒ RP or PRP Specify: ☐ Owner ☐ Operator ☒ Generator ☐ Transporter Other RP or PRP: _____

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

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

☐ Any Person Otherwise Required to Notify Specify Relationship: _____

G. CERTIFICATION OF PERSON REQUIRED TO NOTIFY:

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

By: RJO [signature] Title: ENV SVS
(signature)

For: RONALD J. OSTROWSKI Date: 9/24/96
(print name of person or entity recorded in Section E)

Enter address of the person providing certification, if different from address recorded in Section E.

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.



**RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADIANT PROPERTY STATUS TRANSMITTAL FORM**
Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

Release Tracking Number

2

11210

A. SITE OR DOWNGRADIANT PROPERTY LOCATION:

Site Name: (optional) _____

Street: Patch Road

Location Aid: Building 3546

City/Town: Devens

ZIP Code: 01433

☒ Check here if this Site location is Tier Classified. If a Tier I Permit has been issued, state the Permit Number: ACO-CEL-96-3001

Related Release Tracking Numbers that this Form Addresses: #84890

If submitting an RAO Statement, you must document the location of the Site or the location and boundaries of the Disposal Site subject to this Statement. If submitting an RAO Statement for a PORTION of a Disposal Site, you must document the location and boundaries for both the portion subject to this submittal and, to the extent defined, the entire Disposal Site. If submitting a Downgradient Property Status Submittal, you must provide a site plan of the property subject to the submittal and, to the extent defined, the Disposal Site.

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

☒ Submit a Response Action Outcome (RAO) Statement (complete Sections A, B, C, D, E, F, H, I, J and L).

☐ Check here if this is a revised RAO Statement. Date of Prior Submittal: _____

☐ Check here if any Response Actions remain to be taken to address conditions associated with any of the Releases whose Release Tracking Numbers are listed above. This RAO Statement will record only an RAO-Partial Statement for those Release Tracking Numbers.

Specify Affected Release Tracking Numbers: _____

☐ Submit an optional Phase I Completion Statement supporting an RAO Statement or Downgradient Property Status Submittal (complete Sections A, B, H, I, J, and L).

☐ Submit a Downgradient Property Status Submittal (complete Sections A, B, G, H, I, J and K).

☐ Check here if this is a revised Downgradient Property Status Submittal. Date of Prior Submittal: _____

☐ Submit a Termination of a Downgradient Property Status Submittal (complete Sections A, B, I, J and L).

☐ Submit a Periodic Review Opinion evaluating the status of a Temporary Solution (complete Sections A, B, H, I, J and L).

Specify one: ☐ For a Class C RAO ☐ For a Waiver Completion Statement indicating a Temporary Solution

Provide Submittal Date of RAO Statement or Waiver Completion Statement: _____

You must attach all supporting documentation required for each use of form indicated, including copies of any Legal Notices and Notices to Public Officials required by 310 CMR 40.1400.

C. DESCRIPTION OF RESPONSE ACTIONS: (check all that apply)

☐ Assessment and/or Monitoring Only

☒ Removal of Contaminated Soils

☐ Re-use, Recycling or Treatment

☐ On Site ☒ Off Site Est. Vol.: _____ cubic yards

Describe: _____

☒ Landfill ☒ Cover ☐ Disposal Est. Vol.: 14 cubic yards

☒ Removal of Drums, Tanks or Containers

Describe: 1,000 gallon UST

☐ Removal of Other Contaminated Media

Specify Type and Volume: _____

☐ Other Response Actions

Describe: _____

☐ Deployment of Absorbant or Contaminant Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor Extraction

☐ Structure Venting System

☐ Product or NAPL Recovery

☐ Groundwater Treatment Systems

☐ Air Sparging

☐ Temporary Water Supplies

☐ Temporary Evacuation or Relocation of Residents

☐ Fencing and Sign Posting

SECTION C IS CONTINUED ON THE NEXT PAGE.



BUILDING 3540

RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADE PROPERTY STATUS TRANSMITTAL FORM

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

Release Tracking Number

2 - 11210

C. DESCRIPTION OF RESPONSE ACTIONS: (continued)

- ☐ Check here if any Response Action(s) that serve as the basis for this RAO Statement involve the use of Innovative Technologies. (DEP is interested in using this information to create an Innovative Technologies Clearinghouse.)

Describe Technologies: _____

D. TRANSPORT OF REMEDIATION WASTE: (If Remediation Waste was sent to an off-site facility, answer the following questions)

Name of Facility: Laidlaw Waste Systems, Inc. (LWS) Plainville Landfill

Town and State: Plainville, MA

Quantity of Remediation Waste Transported to Date: 14 cubic yards

E. RESPONSE ACTION OUTCOME CLASS:

Specify the Class of Response Action Outcome that applies to the Site or Disposal Site. Select ONLY one Class:

- ☐ Class A-1 RAO: Specify one of the following:

☐ Contamination has been reduced to background levels. ☐ A Threat of Release has been eliminated.

- ☒ Class A-2 RAO: You MUST provide justification that reducing contamination to background levels is infeasible.

- ☐ Class A-3 RAO: You MUST provide both an implemented Activity and Use Limitation (AUL) and justification that reducing contamination to background levels is infeasible.

If applicable, provide the earlier of the AUL expiration date or date the design life of the remedy will end: _____

- ☐ Class B-1 RAO: Specify one of the following:

☐ Contamination is consistent with background levels ☐ Contamination is NOT consistent with background levels.

- ☐ Class B-2 RAO: You MUST provide an implemented AUL.

If applicable, provide the AUL expiration date: _____

- ☐ Class C RAO: ☐ Check here if you will conduct post-RAO Operation, Maintenance and Monitoring at the Site.

Specify One: ☐ Passive Operation and Maintenance ☐ Monitoring Only

☐ Active Operation and Maintenance (defined at 310 CMR 40.0006)

F. RESPONSE ACTION OUTCOME INFORMATION:

- ☐ If an RAO Compliance Fee is required, check here to certify that the fee has been submitted. You MUST attach a photocopy of the payment.

- ☐ Check here if submitting one or more AULs. You must attach an AUL Transmittal Form (BWSC-113) and a copy of each implemented AUL related to this RAO Statement. Specify the type of AUL(s) below: (required for all Class A-3 RAOs and Class B-2 RAOs)

☐ Notice of Activity and Use Limitation ☐ Grant of Environmental Restriction Number of AULs attached: _____

Specify the Risk Characterization Method(s) used to achieve the RAO described above and all Soil and Groundwater Categories applicable to the Site.

More than one Soil Category and more than one Groundwater Category may apply at a Site.
Be sure to check off all APPLICABLE categories, even if more stringent soil and groundwater standards were met.

Risk Characterization Method(s) Used: ☒ Method 1 ☐ Method 2 ☐ Method 3

Soil Category(ies) Applicable: ☒ S-1 ☐ S-2 ☐ S-3

Groundwater Category(ies) Applicable: ☒ GW-1 ☐ GW-2 ☒ GW-3

> When submitting any Class A-1 RAO or a Class B-1 RAO where contamination is consistent with background levels, do NOT specify a Risk Characterization Method.

> When submitting any Class A-2 RAO or a Class B-1 RAO where contamination is NOT consistent with background levels, you cannot use an AUL to maintain a level of no significant risk. Therefore, you must meet S-1 Soil Standards, if using Risk Characterization Method 1.



Building 3546

RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADIANT PROPERTY STATUS TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

2 - 11210

G. DOWNGRADIANT PROPERTY STATUS SUBMITTAL:

- ☐ If a Downgradient Property Status Submittal Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.
- ☐ Check here if a Release(s) of Oil or Hazardous Material(s), other than that which is the subject of this submittal, has occurred at this property.
- Release Tracking Number(s): _____
- ☐ Check here if the Releases identified above require further Response Actions pursuant to 310 CMR 40.0000.

Required documentation for a Downgradient Property Status Submittal includes, but is not limited to, copies of notices provided to owners and operators of both upgradient and downgradient abutting properties and of any known or suspected source properties.

H. LSP OPINION:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and (iii) the provisions of 309 CMR 4.03(5), to the best of my knowledge, information and belief,

> if Section B indicates that a Downgradient Property Status Submittal is being provided, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in 310 CMR 40.0183(2)(b), and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that either an RAO Statement, Phase I Completion Statement and/or Periodic Review Opinion is being provided, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

- ☐ Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you **MUST** attach a statement identifying the applicable provisions thereof.

LSP Name: William J. Mallio LSP #: 4966 Stamp:

Telephone: (617) 498-4635 Ext.: _____

FAX: (optional) (617) 498-4623

Signature: William J. Mallio

Date: 9/25/96



I. PERSON MAKING SUBMITTAL:

Name of Organization: Devens Commerce Center/Massachusetts Land Bank

Name of Contact: Ronald J. Ostrowski Title: Environmental Manager

Street: 43 Buena Vista St., P-12

City/Town: Devens State: MA ZIP Code: 01433

Telephone: (508) 772-6340 Ext.: 303 FAX: (optional) (508) 772-7577

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

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



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-104

BUILDING

3546

RESPONSE ACTION OUTCOME (RAO) STATEMENT &
DOWNGRADIANT PROPERTY STATUS TRANSMITTAL FORM

Release Tracking Number

Pursuant to 310 CMR 40.0180 (Subpart B), 40.0580 (Subpart E) & 40.1056 (Subpart J)

2 - 11210

K. CERTIFICATION OF PERSON SUBMITTING DOWNGRADIANT PROPERTY STATUS SUBMITTAL:

I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form; (ii) that, based on my inquiry of the/those individual(s) immediately responsible for obtaining the information, the material information contained herein is, to the best of my knowledge, information and belief, true, accurate and complete; (iii) that, to the best of my knowledge, information and belief, I/the person(s) or entity(ies) on whose behalf this submittal is made satisfy(ies) the criteria in 310 CMR 40.0183(2); (iv) that I/the person(s) or entity(ies) on whose behalf this submittal is made have provided notice in accordance with 310 CMR 40.0183(5); and (v) that I am fully authorized to make this attestation on behalf of the person(s) or entity(ies) legally responsible for this submittal. I/the person(s) or entity(ies) on whose behalf this submittal is made is/are aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

By: _____ Title: _____
(signature)

For: _____ Date: _____
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

L. CERTIFICATION OF PERSON MAKING SUBMITTAL:

If you are completing only a Downgradient Property Status Submittal, you do not need to complete this section of the form.

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

By: RJO Title: ENV SU5
(signature)

For: RONALD J. OSTROWSKI Date: 9/24/96
(print name of person or entity recorded in Section I)

Enter address of the person providing certification, if different from address recorded in Section I:

Street: _____

City/Town: _____ State: _____ ZIP Code: _____

Telephone: _____ Ext.: _____ FAX: (optional) _____

YOU MUST COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE, AND YOU MAY INCUR ADDITIONAL COMPLIANCE FEES.

**THE COMMONWEALTH OF MASSACHUSETTS
GOVERNMENT LAND BANK
Devens Commerce Center
Devens, Massachusetts**

RELEASE TRACKING NO. 2-11210

UST NO. 3546

SEPTEMBER 1996

Attachment to:

**RESPONSE ACTION OUTCOME (RAO) STATEMENT
(BWSC-104)**

**Prepared by:
S E A CONSULTANTS INC.
Science/Engineering/Architecture
Cambridge, Massachusetts
Rocky Hill, Connecticut
Rochester, New York
Londonderry, New Hampshire**

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1.0 INTRODUCTION

This Release Action Outcome (RAO) Statement has been completed in accordance with 310 CMR 40.1000. The response action was conducted as a result of a historical release of No. 2 heating oil from a 1,000-gallon steel underground storage tank (UST) located at Building No. 3546, Patch Road, Devens, Massachusetts (north/east [North American Datum, 1983] coordinates N3021363/E626759).

The UST closure was conducted in accordance with the Commonwealth of Massachusetts Underground Storage Tank Closure Assessment Manual, dated April 9, 1996, and the Devens Commerce Center's (DCC) *"Underground Storage Tank Closure Protocol"* (Addendum to a Department of Environmental Protection (DEP) approved Tier 1A permit), dated June 14, 1996.

The 1,000-gallon steel UST, storing No. 2 heating oil, was removed on May 23, 1996. Petroleum-impacted soil above RCS-1 Reportable Concentrations was identified during tank closure through laboratory analysis of soil samples. Per 310 CMR 40.0361(1)(a), the RCS-1 reporting category applies to this site because it is within the geographic boundaries of a groundwater resource area categorized as RCGW-1 in 310 CMR 40.0362(1)(a). The release at the site is, therefore, subject to the DEP's 120-day notification requirements, as per 310 CMR 40.0300.

Because the DCC was conducting a large number of these UST removals, the DEP had issued the DCC a Presumptive Letter of Approval on March 19, 1996 to conduct an Immediate Response Action (IRA) at the UST excavation if impacted soil was detected above Reportable Concentrations outlined in the Massachusetts Contingency Plan (MCP) [310 CMR 40.1600].

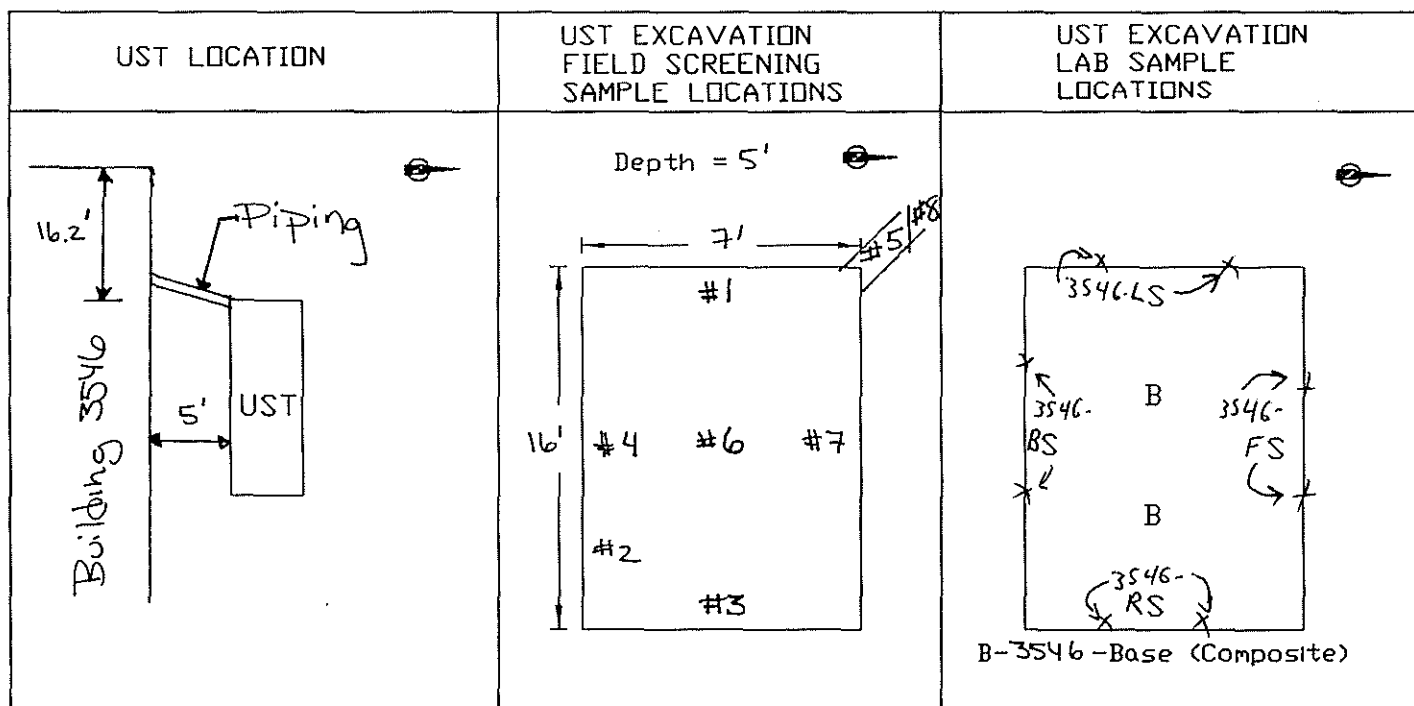
As part of the IRA, approximately fourteen (14) cubic yards of petroleum-impacted soil have been removed and disposed of by the DCC. Following laboratory tests which confirmed that criteria were met for closure of the excavation, the excavation was backfilled and compacted with off-site fill.

2.0 BACKGROUND

The UST at Building 3546 was originally installed in 1966 by the U.S. Army to store No. 2 fuel oil for heating Building 3546. Upon the closure of Fort Devens, the UST's ownership was transferred from the U.S. Army to the DCC. As part of the DCC's goal to develop Fort Devens, a number of USTs, including this UST at Building 3546, were removed. This steel UST had a diameter of four (4) feet and a length of eleven (11) feet. The associated piping was copper tubing.

3.0 UST REMOVAL

During the weeks of May 13 and 20, 1996, D&C Construction Co., Inc. of Rockland, Massachusetts, as part of its UST removal contract with the DCC, removed product from the UST with a vacuum truck. Later, soil above the UST and its associated piping were removed with an excavator and by hand. The UST was then tilted by the excavator to allow the remaining product to pool at the UST's bottom corner. A two-foot by two-foot access hole was cut in the UST after it had been tested for combustible gases and oxygen. A laborer made entry into the tank, and using squeegee wipers, rags and a vacuum hose, cleaned out the remaining product from the tank. All product was transported off-site as hazardous waste. The manifests are included as Appendix A. On May 23, 1996, the UST was removed and transported off-site. Copies of transfer documentation (Forms FP290R and 291) are included as Appendix B. A total of four (4) cubic yards of soil were excavated in the process of removing the UST. Contaminant levels within the stockpile were later found to be above applicable MCP thresholds.



FIELD SCREENING				
SAMPLE #	DEPTH	TPH SCREEN	HEAD SPACE	LAB ANAL METHOD
#1	2'		40	
#2	3'	234		
#3	3'	1662	20	
#4	1'	77		
#5	1'	513	13	
#6	4'	7200		
#7	5'		38	
#8	3'	92	11	
#9	Composite	411		
3546 - BASE				ND
3546 - LS				101
3546 - RS				103
3546 - FS				90.8
3546 - BS				74.3

Figure 1
UST and Sample Locations
Massachusetts Land Bank
Devens, Massachusetts

4.0 FIELD OBSERVATIONS, EXCAVATION, AND ASSESSMENT

Upon removal of the UST, it was observed to be intact with no sign that the integrity of the tank skin had been compromised. There was some visual evidence of petroleum-impacted soil near the fill area of the UST, which was likely due to overfilling. Groundwater was not observed in the excavation during tank removal.

Soil samples were screened by the Jar Headspace method using a Photoionization Detector (PID). PID readings ranged from **13** to **40** parts per million by volume (ppmv) as benzene. Composite samples collected from the sidewalls and base of the excavation and a sample collected below the UST's piping were screened using the Petroflag Hydrocarbon Analyzer system. The samples ranged from **77** ppm to **> 2,000** ppm of Total Petroleum Hydrocarbons (TPH). Results and sampling locations are shown in Figure 1. Due to the elevated levels of these field readings, an additional ten (10) cubic yards were excavated.

A composite sample collected from the sidewalls and base of the excavation and a sample collected below the UST's piping were screened using the Petroflag Hydrocarbon Analyzer system. The samples measured **411** ppm and **92** ppm of Total Petroleum Hydrocarbons (TPH). Due to the low levels of these field screening values, no further excavation was conducted and closure samples were collected from the excavation. A sample was also collected from the soil stockpile for characterization and disposal. The following laboratory analyses were conducted:

LOCATION DESCRIPTION	LABORATORY ANALYSES METHOD
Sidewalls	TPH (EPA Method 418.1)
Base	TPH (EPA Method 8100) Polynuclear Aromatic Hydrocarbons (EPA Method 8270) Volatile Organic Compounds (EPA Method 8260)
Stockpile	TPH (EPA Method 418.1) Polynuclear Aromatic Hydrocarbons (EPA Method 8270) Volatile Organic Compounds (EPA Method 8260)

The base of the excavation was analyzed for additional parameters due to its higher headspace reading. Laboratory results indicated TPH levels within the stockpile were above the Reportable Concentrations, but within the acceptable range for recycling. Results of samples collected from the excavation sidewalls and base of the excavation were below these concentrations. Results and sampling locations are shown in Table 1 and Figure 1, respectively. The laboratory analytical data package is contained in Appendix C.

After receipt of the laboratory data, the stockpiled soil was transported off-site under an LSP-approved Bill of Lading (Appendix E). Off-site clean fill was later backfilled into the excavation and compacted in accordance with the contract documents to bring the excavation back to grade. Compaction documentation is contained in Appendix D.

5.0 METHOD 1 RISK CHARACTERIZATION

Analytical results from the environmental sampling were compared to MCP "Reportable Concentrations" and "Applicable Cleanup Standards" to assess site constraints. The soil and groundwater cleanup standards for the subject site were selected as per 310 CMR 40.0970 for both current and foreseeable site uses. A Method 1 Risk Characterization was conducted in order to select the applicable cleanup standards for soil and groundwater on-site. The basis for the selected cleanup standards for current and foreseeable uses is presented below.

Current Use:

The site was formerly the U.S. Army's Fort Devens. Currently, the tank location is part of the DCC's Innovation and Technical Business Use Development. The site is unpaved and there are no residences on the site.

TABLE 1
SUMMARY OF LABORATORY ANALYTICAL RESULTS

SAMPLE I.D. NUMBER	ANALYTE	LABORATORY RESULT (PPM)	S-1/GW-1/GW-3* (PPM)
3546-Base	TPH	ND	500
3546-FS	TPH	90.8	500
3546-BS	TPH	74.3	500
3546-LS	TPH	101	500
3546-RS	TPH	103	500
3546-Stock	TPH	566	500
3546-Base 3546-Stock	Fluorene	ND ND	400
3546-Base 3546-Stock	Phenanthrene	ND ND	100
3546-Base 3546-Stock	Anthracene	ND ND	1,000
3546-Base 3546-Stock	Fluoranthene	ND ND	600
3546-Base 3546-Stock	Pyrene	ND ND	500
3546-Base 3546-Stock	Benzo(a)anthracene	ND ND	0.7
3546-Base 3546-Stock	Chrysene	ND ND	7
3546-Base 3546-Stock	Benzo(b)fluoranthene	ND ND	0.7
3546-Base 3546-Stock	Benzo(k)fluoranthene	ND ND	7
3546-Base 3546-Stock	Benzo(a)pyrene	ND ND	0.7
3546-Base 3546-Stock	Indeno(1,2,3-cd)pyrene	ND ND	0.7

TABLE 1 (CONTINUED)
SUMMARY OF LABORATORY ANALYTICAL RESULTS

SAMPLE I.D. NUMBER	ANALYTE	LABORATORY RESULT (PPM)	S-1/GW-1/GW-3* (PPM)
3546-Base 3546-Stock	Toluene	ND ND	90
3546-Base 3546-Stock	Ethyl Benzene	ND ND	80
3546-Base 3546-Stock	Xylenes	ND ND	500

*Soil/Groundwater Category S-1/GW-1/GW-3 [310 CMR 40.0975(6)(a)].
 ND = Not detected above laboratory detection limits.

Applicable Groundwater Standards:

The applicable "Groundwater Category" for the subject site, as defined under the MCP (310 CMR 40.0932), was identified based on the following considerations:

1. **Groundwater Category "GW-1" Standards:** GW-1 groundwater standards are applicable to groundwater that is or could be used as drinking water (e.g., within a "Zone II" aquifer protection area, interim wellhead protection area, "Potentially Productive" aquifer, or Zone A/Class A surface water body). Currently, the site is within a Zone II delineated area, and, therefore, this GW-1 groundwater category does apply. This Zone II delineation is based on a 3-layer model drafted by ETA, Inc. on August 15, 1995. The DEP is currently using this delineation on an interim basis (phone conversation Ron Ostrowski (DCC)/Lynne Welsh (DEP), July 24, 1996).
2. **Groundwater Category "GW-2" Standards:** GW-2 groundwater standards are applicable to groundwater located within thirty (30) feet of an existing occupied structure when depth to groundwater is fifteen (15) feet or less. GW-2 standards account for potential exposure to vapors resulting from compounds in groundwater. The average depth to groundwater in the area is over twenty (20) feet, and, therefore, this classification does not apply.
3. **Groundwater Category "GW-3" Standards:** Due to ecological exposure considerations, all groundwater in Massachusetts is classified as Category GW-3 (per 310 CMR 40.0932 [3]), including groundwater classified as Groundwater Category GW-1 or GW-2. This means that for those compounds for which GW-3 standards are more stringent than GW-1 or GW-2 standards, the GW-3 standards apply.

Applicable Soil Standards:

Soil Standards are determined based on potential exposure scenarios. Pertinent aspects of the exposure scenario developed for the site, using current site conditions, are summarized as follows:

- Potential receptors include adult contract workers engaged in demolition or construction activities;
- Potential frequency of use is "high" (since the site contractors are walking over the site daily);
- Potential intensity of use is "high" (since there is routine disturbance of surface and subsurface soils); and
- The soil is considered "accessible" (impacted soil is present less than three (3) feet below grade and the area is unpaved).

Based on the potential exposure scenario, and the provisions outlined under 310 CMR 40.0933, Soil Category "S-1", standards have been identified as applicable for characterization of risk of soil exposure on the site.

In addition to considerations of direct exposure to soil, indirect exposures could result from leaching of contaminants from soil into groundwater. As such, cleanup standards are also based in part on the category of groundwater, as defined under 310 CMR 40.0932, at or near potentially accessible soil.

Therefore, based upon the potential exposure scenario and the above groundwater classification, Soil Category S-1/GW-1/GW-3 has been identified as applicable for the site's current uses.

Future or Foreseeable Use:

The foreseeable future use for the site is to be as part of the DCC's Innovation and Technical Business Use development.

Applicable Groundwater Standards:

As the groundwater category and elevation are not expected to change, GW-1/GW-3 standards will still apply to the site.

Applicable Soil Standards:

Soil Standards applicable for risk characterization using Method 1 (per 310 CMR 40.0970) are determined based on potential exposure scenarios. Pertinent aspects of the exposure scenario developed for the site, assuming future site conditions, are summarized as follows:

- Receptors include employees and possibly children;
- Potential frequency of use is "high" for adults (since it is a workplace and large numbers of adults may be present at any given time, regardless of any one person's frequency of use) and "low" for children (infrequent visitors);
- Potential intensity of use is "high" (since activity could potentially result in the inhalation of soil-derived dust); and

- The contaminated soil is "accessible" (less than three (3) feet below grade on an unpaved area).

Based on the potential exposure scenario, and the provisions outlined under 310 CMR 40.0933, soil standards have been identified as applicable for characterization of risk of soil on-site. Soil Category "S-1" would apply to the site.

Therefore, based upon the potential exposure scenario and the above groundwater classification, Soil Category S-1/GW-1/GW-3 has been identified as applicable for the site's foreseeable future uses.

In order to make future use of the site unrestricted, the DCC preferred the remediation of impacted soil to continue until soil contaminant levels were below these restrictive soil-groundwater limits (S-1/GW-1/GW-3). Therefore, soil/groundwater category S-1/GW-1/GW-3 has been selected as a goal by the owners as a standard that will allow unrestricted use in the future.

Impacted soil was excavated until the post-excavation samples taken were below the soil/groundwater concentrations applicable to category S-1/GW-1/GW-3.

Discussion of Results:

As presented in Figure 1, final soil samples from the excavation sidewalls and base have TPH concentrations below the S-1/GW-1/GW-3 Method 1 Risk standard of 500 mg/kg. Therefore, the soil does not present a "significant risk" to human health or the environment.

6.0 FEASIBILITY OF RESTORATION TO BACKGROUND

As per 310 CMR 40.0860, the feasibility of implementing a Permanent Solution of reducing the level of oil and hazardous material (OHM) to background is required for a Class A-2 RAO, which is applicable to the subject site.

A Technological Feasibility Assessment (310 CMR 40.0860 [5]) and Benefit-Cost Analysis (310 CMR 40.0860 [6]) have been conducted for the subject site, as follows.

Technological Feasibility (310 CMR 40.0860 [5])

- a.) The excavation of impacted soil is technologically feasible using an excavator.
- b.) This remedial action alternative (excavation) has been sufficiently proven reliable at other sites.
- c.) The remedial action alternative (excavation) can comply with applicable regulations and requirements.

Benefit-Cost Analysis (310 CMR 40.0860 [6])

- a.) The cost of conducting additional excavation of impacted soil is disproportionate to the incremental benefits achieved through additional reduction of potential risk.
- b.) The implementation of additional excavation does not appear to present risk of harm to health, safety, and public welfare or the environment. Note that there may be a safety hazard associated with open excavation.

impacted soil at the subject site, however, the costs of conducting the remedial action outweigh the incremental benefits. Therefore, "No Further Action" is necessary at the subject site.

Based on these findings, it is concluded that a Class A-2 RAO is applicable to this site, as (1) a Permanent Solution has been achieved; (2) the level of oil and hazardous material in the environment has not been reduced to background; and (3) one or more AULs are not required to maintain a level of No Significant Risk.

APPENDIX A

UNIFORM HAZARDOUS WASTE MANIFESTS



DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street
Boston, Massachusetts 02108

→ Carter Fahy

ease print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator US EPA ID No. NOT APPLICABLE 48176		Manifest Document No. of 1		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address DEVENS COMMERCE CENTER 43 BUENA VISTA ST. P-12 FORT DEVENS, MA 01433				A. State Manifest Document Number MA 0148176							
4. Generator's Phone (508 772-6340)				B. State Gen. ID 43 BUENA VISTA ST. FORT DEVENS, MA							
5. Transporter 1 Company Name ENVIRONMENTAL PRODUCTS & SERVICES, INC				C. State Trans. ID 25684 MA							
6. US EPA ID Number NY 098076119				D. Transporter's Phone (315 471-0503)							
7. Transporter 2 Company Name				E. State Trans. ID							
8. US EPA ID Number				F. Transporter's Phone ()							
9. Designated Facility Name and Site Address OLSON'S GREENHOUSES 590 SOUTH ST. E. RAYNHAM, MA 02767				G. State Facility's ID Not Required							
10. US EPA ID Number MA D059733448				H. Facility's Phone (508 880-6002)							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity		14. Unit Wt/Vol		Waste No.	
a. FUEL OIL MIXTURE, COMBUSTIBLE LIQUID, NA1993, PGIII				No. 001 Type T		12700		G		MA96	
b.											
c.											
d.											
J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)				K. Handling Codes for Wastes Listed Above							
a. 12 FUEL OIL, WATER				a. A b. B c. C d. D							
b.				b. E c. F d. G							
c.				c. H d. I							
d.				d. J e. K f. L							
15. Special Handling Instructions and Additional Information Job #: E0641 PO #: Emergency #: (315) 471-0503 ERG A. 27											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name RONALD J OSTROWSKI				Signature RJ Ostrowski				Date 08/16/96			
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature Philip Ples Jr				Date 08/16/96			
Printed/Typed Name Philip Ples Jr				Signature Philip Ples Jr				Date 08/16/96			
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature				Date			
Printed/Typed Name				Signature				Date			
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.											
Printed/Typed Name Anthony S. Germino				Signature Anthony S. Germino				Date 08/16/96			

MA 0148176

COPY>3:

FACILITY MAILS TO GENERATOR



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS MATERIALS
One Winter Street
Boston, Massachusetts 02108

se print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No. <u>MA 0508177</u> Manifest No. <u>6340</u>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address DEVENS COMMERCE CENTER 43 BUENA VISTA ST. P-12 FORT DEVENS, MA 01433		A. State Manifest Document Number MA 0148179		B. State Gen. ID 43 BUENA VISTA ST. FORT DEVENS, MA		C. State Trans. ID 26133 MA	
4. Generator's Phone 508 772-6340		5. Transporter 1 Company Name ENVIRONMENTAL PRODUCTS & SERVICES, INC		6. US EPA ID Number NYD98076119		D. Transporter's Phone 315 471-0503	
7. Transporter 2 Company Name		8. US EPA ID Number		E. State Trans. ID		F. Transporter's Phone	
9. Designated Facility Name and Site Address OLSON'S GREENHOUSES 590 SOUTH ST. E. RAYNHAM, MA 02767		10. US EPA ID Number MA D05973337		G. State Facility's ID Not Required		H. Facility's Phone 508 880-6002	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity		14. Unit Wt/Vol	
a. FUEL OIL MIXTURE, COMBUSTIBLE LIQUID, NA1993, PGIII		No. Type		Quantity		Waste No.	
b.		1		1600		MA98	
c.		1		1600		MA98	
d.		1		1600		MA98	
J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)		K. Handling Codes for Wastes Listed Above		a. 8.4		b. 8.4	
a. #2 FUEL OIL, WATER		c.		a. 8.4		b. 8.4	
b.		d.		a. 8.4		b. 8.4	
15. Special Handling Instructions and Additional Information Job #: 50641 PO #: Emergency #: (315) 471-0503 ERG A. 27		E0649		Bunker In		Emergency	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.							
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name		Signature		Date		Month Day Year	
JAMES E. ARMSTRONG		[Signature]		05/23/96		05/23/96	
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Date		Month Day Year	
PHILIP RICE JR		[Signature]		05/23/96		05/23/96	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Date		Month Day Year	
[Signature]		[Signature]		[Signature]		[Signature]	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name		Signature		Date		Month Day Year	
JEFFREY E. RICHARDY		[Signature]		05/23/96		05/23/96	

APPENDIX B

TANK MANIFESTS AND RECEIPTS



The Commonwealth of Massachusetts

Department of Public Safety—Division of Fire Prevention

APPLICATION FOR PERMIT FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

May 20 1996
10441

To: HEAD OF FIRE DEPARTMENT
CHIEF PAOLICAN
City or Town

C.82 S.40 M.G.L.

DIG SAFE NUMBER
961907225
Start Date May 10 96

In accordance with the provisions of Chapter 148, G.L. as provided in
Section 38A Application is hereby made by JIM MORRIS
(Name of Person, Firm or Corporation)

T. 3546

Address

For permission to remove and transport underground steel storage tank(s) from

DEVED COMMERCE CENTER
Street address (city or town)

FDID# 17919 to approved Tank Yard# 008

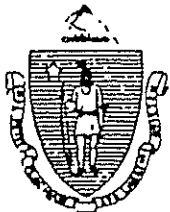
State clearly type of
inert gas used in
steel storage tank

CO2
type of inert gas used

Name of Person, Firm, Corporation disposing tank J.C. Gans Readville MA.

Date issued - rejected 5/20 1996
Date of expiration 19 paid/due
Fee (NGL C-148, S-10A)

By: J.C. Gans
Signature of Applicant



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION

PERMIT

FOR REMOVAL AND TRANSPORTATION TO APPROVED TANK YARD

In accordance with the provisions of Chapter 148, G.L. as provided in
Section 38A this permit is granted to

Name:

Full name of person, firm or Corporation
To transport underground steel storage tank(s)
to Approved tank yard#

State clearly type of
inert gas used in
steel storage tank

steel tank:

method

FDID# 17919

Fee paid \$

Name and address of contractor
disposing tank
Location to which tank will
be transported

This permit will expire 19

Approved tank yard# 008
Signature of official granting permit (TITLE)
(Head of Fire Dept.)

C.82 S.40 M.G.L.

DIG SAFE NUMBER
961907225
Start Date May 10 96

Tank Data

Gallons 1,100

Previous Contents #2/F0

Diameter _____ Length _____

Date Received 5-23-96

Serial # (if available) _____

Tank I.D. # (Form FP-290) _____

Owner/Operator to mail revised copy of Notification Form(FP-290, or Fp-290R) to: UST Compliance, Office of the State Fire Marshal, 1010 Commonwealth Avenue, Boston, Ma. 02215.

Tank Removed From:

DEVENS COMMENCE CTN
(No. and Street)

FT. DEVENS
(City or Town)

Fire Dept. Permit # N/A

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK

NAME AND ADDRESS

OF

APPROVED TANK YARD

APPROVED TANK YARD NO.

Tank Yard Ledger 502 CMR 3.03(4) Number:

I certify under penalty of law I have personally examined the underground steel storage tank delivered to this "approved tank yard" by firm, corporation or partnership

and accepted same in conformance with Massachusetts Fire Prevention

Regulation 502 CMR 3.00 Provisions for Approving Underground Steel Storage Tank dismantling yards.

A valid permit was issued by LOCAL Head of Fire Department FDID# to transport this tank to this yard.

Name and official title of approved tank yard owner or owners authorized representative:

SIGNATURE

TITLE

DATE SIGNED

This signed receipt of disposal must be returned to the local head of the fire department FDID# pursuant to 502 CMR 3.00. (EACH TANK MUST HAVE A RECEIPT OF DISPOSAL)



APPENDIX C

LABORATORY ANALYTICAL RESULTS

Received: 06/03/96

06/14/96 18:19:06

REPORT D & C CONSTRUCTION CO. PREPARED TOXIKON CORPORATION
TO 415 VFW DRIVE BY 15 WIGGINS AVE
ROCKLAND, MA. 02370 BEDFORD, MA 01730
617-871-8200 FAX: 871-8871
ATTEN WHITEY MORRIS ATTN PAUL LEZBERG
PHONE (617)275-3330 CONTACT JOHNM
CLIENT D C CONSTRUC SAMPLES 45
COMPANY D & C CONSTRUCTION CO. MA CERT # M-MA064: TRACE METALS, SULFATE, CYANIDE, RES. FREE
FACILITY 415 VFW DRIVE CHLORINE, Ca, TOTAL ALK., TDS, pH, THMs, VOC, PEST., NUTRIENTS.
ROCKLAND, MA. 02370 DEMAND. O&G, PHENOLICS, PCBs . CT DHS #PH-0563, NY #10778
FL HRS E87143, NJ DEP. 59538, NC DNR286, SC 88002, NH 204091-C.
WORK ID DEVENS VERIFIED BY: Rhonda E. Fields
TAKEN 5/31/96 CERT # M-MA064
TRANS _____
TYPE SOIL
P.O. # _____
INVOICE under separate cover

SAMPLE IDENTIFICATION

TEST CODES and NAMES used on this workorder

01 <u>237 BASE</u>	8260 <u>PURGEABLE ORGANICS VOA</u>
02 <u>237-RS</u>	827PAH <u>8270 PAH ONLY</u>
03 <u>237-LS</u>	EPETS <u>EXTRACTION GC PET SOIL</u>
04 <u>237-FS</u>	GC PET <u>PETROLEUM SCAN BY GC</u>
05 <u>237-BS</u>	TPH IR <u>TPH BY IR</u>
06 <u>3546-STOCK</u>	
07 <u>3546-BASE</u>	
08 <u>3546-LS</u>	
09 <u>3546-RS</u>	
10 <u>3546-FS</u>	
11 <u>3546-BS</u>	
12 <u>1670-STOCK</u>	
13 <u>1670-BASE</u>	
14 <u>1670-LS</u>	
15 <u>1670-RS</u>	
16 <u>1670-BS</u>	
17 <u>1670-FS</u>	
18 <u>1672-STOCK</u>	
19 <u>1672-BASE</u>	
20 <u>1672-LS</u>	
21 <u>1672-RS</u>	
22 <u>1672-BS</u>	
23 <u>1672-FS</u>	
24 <u>1436-STOCK</u>	
25 <u>1436-BASE</u>	
26 <u>1436-SIDE</u>	

JUN 19 1996
RECEIVED

Received: 06/03/96

Results by Sample

SAMPLE ID <u>237-BS</u>	SAMPLE # <u>05</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:00:00</u> Category <u>SOIL</u>
TPH_IR <u>11500</u>	
mg/Kg DL=40	

SAMPLE ID <u>3546-STOCK</u>	SAMPLE # <u>06</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:15:00</u> Category <u>SOIL</u>
TPH_IR <u>566</u>	
mg/Kg DL=40	

Received: 06/03/96

Results by Sample

SAMPLE ID 3546-STOCKFRACTION 06ATEST CODE 8260NAME PURGEABLE ORGANICS VOADate & Time Collected 05/31/96 11:15:00Category SOIL**EPA 8260 PURGEABLE ORGANICS**

	RESULT	LIMIT		RESULT	LIMIT
Chloromethane	ND	10	o-Xylene	ND	5.0
Bromomethane	ND	10	m-Xylene	ND	5.0
Vinyl Chloride	ND	2.0	p-Xylene	ND	5.0
Chloroethane	ND	10	1,2-Dichlorobenzene	ND	5.0
Methylene Chloride	ND	10	1,3-Dichlorobenzene	ND	5.0
1,1-Dichloroethane	ND	5.0	1,4-Dichlorobenzene	ND	5.0
Trichlorofluoromethane	ND	10	Naphthalene	ND	10
1,1-Dichloroethane	ND	5.0	n-Propylbenzene	ND	10
Trans-1,2-Dichloroethene	ND	5.0	Bromobenzene	ND	5.0
Chloroform	ND	5.0	Bromochloromethane	ND	5.0
1,2-Dichloroethane	ND	5.0	n-Butylbenzene	ND	10
1,1,1-Trichloroethane	ND	5.0	sec-Butylbenzene	ND	10
Carbon Tetrachloride	ND	5.0	tert-Butylbenzene	ND	10
Bromodichloromethane	ND	5.0	2-Chlorotoluene	ND	5.0
1,2-Dichloropropane	ND	5.0	4-Chlorotoluene	ND	5.0
Trichloroethene	ND	5.0	1,2-Dibromo-3-chloropropane	ND	5.0
Dibromochloromethane	ND	5.0	1,2-Dibromomethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0	Dibromomethane	ND	5.0
Benzene	ND	5.0	Dichlorodifluoromethane	ND	10
1,1-Dichloropropene	ND	5.0	cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0	1,3-Dichloropropane	ND	5.0
Bromoform	ND	5.0	1,1,1,2-Tetrachloroethane	ND	5.0
Hexachlorobutadiene	ND	10	1,2,3-Trichlorobenzene	ND	5.0
Isopropylbenzene	ND	10	1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0	1,2,4-Trichlorobenzene	ND	5.0
Methyl tertiary butyl ether	ND	5.0	1,2,3-Trichloropropane	ND	5.0
Toluene	ND	5.0	1,2,4-Trimethylbenzene	ND	10
Chlorobenzene	ND	5.0	1,3,5-Trimethylbenzene	ND	10
Ethyl Benzene	ND	5.0			
p-Isopropyltoluene	ND	10			

Notes and definitions for this report:

DATE RUN 06/11/96

ANALYST CM

INSTRUMENT B

DIL. FACTOR 1

UNITS ug/Kg

COMMENTS

ND = Not detected at detection limit

TPH by Modified EPA Method 8100

PARAMETER	RESULT
JP-4	<u>ND</u>
Gasoline	<u>ND</u>
Kerosene	<u>ND</u>
Diesel	<u>ND</u>
No. 2 Fuel Oil	<u>ND</u>
No. 4 Fuel Oil	<u>ND</u>
No. 6 Fuel Oil	<u>ND</u>
Waste Oil	<u>ND</u>
Petroleum Constituent	<u>ND</u>
Total Petro. Hydrocarbons	<u>ND</u>

DETECTION LIMIT

Water Matrix	<u>*</u>
Solid Matrix	<u>10.0 mg/Kg</u>

Notes and Definitions for this Report:EXTRACTED 06/10/96DATE RUN 06/11/96ANALYST STINSTRUMENT HP 5

N.O.S. = Not Otherwise Specified

ND = Compound(s) not detected
above detection limit

Comments _____

Received: 06/03/96

Results by Sample

SAMPLE ID <u>3546-LS</u>	SAMPLE # <u>08</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:15:00</u> Category <u>SOIL</u>
TPH_IR <u>101</u>	
mg/Kg DL=40	
SAMPLE ID <u>3546-RS</u>	SAMPLE # <u>09</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:15:00</u> Category <u>SOIL</u>
TPH_IR <u>103</u>	
mg/Kg DL=40	
SAMPLE ID <u>3546-FS</u>	SAMPLE # <u>10</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:05:00</u> Category <u>SOIL</u>
TPH_IR <u>90.8</u>	
mg/Kg DL=40	
SAMPLE ID <u>3546-BS</u>	SAMPLE # <u>11</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:15:00</u> Category <u>SOIL</u>
TPH_IR <u>74.3</u>	
mg/Kg DL=40	
SAMPLE ID <u>1670-STOCK</u>	SAMPLE # <u>12</u> FRACTIONS: <u>A</u>
	Date & Time Collected <u>05/31/96 11:30:00</u> Category <u>SOIL</u>
TPH_IR <u>96.3</u>	
mg/Kg DL=40	

Received: 06/03/96

Test Methodology

TEST CODE 8260 NAME PURGEABLE ORGANICS VOA

EPA METHOD: 8260: Gas Chromatography/Mass Spectrometry for Volatile Organics.

Reference: Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

TEST CODE 827PAH NAME 8270 PAH ONLY

EPA METHOD: 8270 GAS CHROMATOGRAPHY / MASS SPECTROMETRY FOR SEMIVOLATILE
ORGANICS; CAPILLARY COLUMN TECHNIQUE. BASE NEUTRAL ONLY.

REFERENCE: TEST METHODS FOR EVALUATING SOLID WASTES: PHYSICAL/CHEMICAL METHODS.
EPA SW-846 (THIRD EDITION) 1986. OFFICE OF SOLID WASTE, USEPA.

RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

TEST CODE EPETS NAME EXTRACTION GC PET SOIL

EPA METHOD: 3540: Soxhlet Extraction.

Reference: Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

TEST CODE GC PET NAME PETROLEUM SCAN BY GC

EPA Method: 8100 Modified

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical
Methods. EPA SW-846 (Third Edition) 1986.
Office of Solid Waste, USEPA.

This method utilizes analytical procedures consistent with EPA
Method 8100. The identity of petroleum contaminants is subject to
comparison with commercially supplied standards.

Alternate Method: ASTM Method D 3328

TEST CODE TPH IR NAME TPH BY IR

EPA METHOD: 418.1 for water sample.

Reference: Methods for Chemical Analysis of Water and Wastes.
EPA 600/4-79-020 (Revised, March 1983). EPA/EMSL, Cincinnati, OH.

EPA METHOD: 9071/9073

Page 54

TOXIKON CORP.

REPORT

Work Order # 96-06-021

Received: 06/03/96

Test Methodology

Continued From Above

TEST CODE TPH IR NAME TPH BY IR

Reference: Test Methods for Evaluating Solid Waste: Physical/Chemical Methods.
EPA SW-846 (Third Edition) 1986. Office of Solid Waste, USEPA.

TOXIKON

15 Wiggins Ave., Bedford, MA 01730
 Telephone: (617) 275-3330
 Fax: (617) 271-1136

CHAIN OF CUSTODY RECORDWORK ORDER #: 46-06-021DUE DATE: 6-10-961/4

COMPANY: D-C
 ADDRESS: 415 VFW Dr
Rockland 07770 02370
 PHONE #: (617) 871-0232 FAX #: (617) 871-1029
 P.O. #: _____
 PROJECT MANAGER: W. H. Taylor, M. A. Davis
 PROJECT ID/LOCATION: Dugans

SAMPLE TYPE CONTAINER TYPE
 1. WASTEWATER P - PLASTIC
 2. SOIL G - GLASS
 3. SLUDGE V - VOA
 4. OIL
 5. DRINKING WATER
 6. WATER (GWMW/SW)
 7. OTHER (SPECIFY)

ANALYSESSPECIAL
INSTRUCTIONS/
COMMENTS

TOXIKON #	SAMPLE IDENTIFICATION	SAMPLE TYPE	CONTAINER			SAMPLING		PRESERVATIVE											
			SIZE	TYPE	#	DATE	TIME												
1	237-base	Soil	250 202	G	2	5/31/96	11 ⁰⁰	—	X	X	X	X	X	X	X	X	X	X	DO ALL
2	237-RS								X	X	X	X	X	X	X	X	X	X	(3) THRES
3	237-LS								X	X	X	X	X	X	X	X	X	X	TESTS
4	237-FS								X	X	X	X	X	X	X	X	X	X	ONLY ON
5	237-Bs								X	X	X	X	X	X	X	X	X	X	—
6	3546-stock						11 ¹⁵		X	X	X	X	X	X	X	X	X	X	STOCK
7	3546-base								X	X	X	X	X	X	X	X	X	X	SAMPLES
8	3546-LS								X	X	X	X	X	X	X	X	X	X	—
9	3546-RS								X	X	X	X	X	X	X	X	X	X	—
10	3546-FS								X	X	X	X	X	X	X	X	X	X	ON ALL
11	3546-Bs								X	X	X	X	X	X	X	X	X	X	4 PAGES
12	1670-stock						11 ³⁰		X	X	X	X	X	X	X	X	X	X	6/3
13	1670-base								X	X	X	X	X	X	X	X	X	X	6/3/96

SAMPLED BY: <u>CCF</u>	DATE: - -	QUOTATION #:	
RELINQUISHED BY: <u>[Signature]</u>	TIME: <u>6-3</u>	RECEIVED BY: <u>[Signature]</u>	DATE: <u>6-3-96</u>
	DATE: <u>8-25-96</u>		TIME: <u>16-40</u>
RELINQUISHED BY: <u>[Signature]</u>	TIME: <u>16-40</u>	RECEIVED FOR LAB BY: <u>[Signature]</u>	DATE: - -
	DATE: - -		TIME: - -

☒ RUSH BUSINESS DAY TURN AROUND
☐ ROUTINE
 Sample disposal information
 Are there any other known or suspected contaminants in these samples other than those listed above?

APPENDIX D

COMPACTION TESTS



Briggs Associates
400 Hingham Street
Rockland, MA 02370
A Tundra Corporation Company

SOILS COMPACTION REPORT

PROJECT: *Fort Devens, Ayer*
PROJECT #: *60409*
DATE: *June 19, 1986*
INSPECTOR: *John Vogel*

EMP.#: <i>226</i>	REPORT #:	CODE:	LAB #:
ARR. TIME: <i>800</i>	JOB HOURS:	T.T.:	MILEAGE:
TEMP: <i>H L</i>	WIND: <i>H L</i>	HUMID.: <i>H L</i>	SUNNY/CLOUDY

MAXIMUM DRY DENSITY: *120.8 // 115.3*

OPTIMUM MOISTURE CONTENT: *8.3 // 9.5*

METHOD OF TESTING (CHECK ONE): SAND CONE: ☐ NUCLEAR DENSOMETER: ☒

Test No:	Location	Estimated Area Tested	Elevation Depth	Test Results % compaction	Min.% Comp. Req.	Moist. Content %	Optimum Moisture %
1	<i>Building 3541</i>	<i>11 ft</i>	<i>2 ft</i>	<i>95.2% 124.5 ft</i>	<i>95%</i>	<i>4.1</i>	<i>8.3</i>
2	<i> </i>		<i>grade</i>	<i>95.7 125.7 ft</i>		<i>4.3</i>	<i>8.3</i>
3	<i> </i>		<i>grade</i>	<i>96.5 114.1</i>		<i>6.6</i>	<i>9.5</i>
4	<i>3548</i>		<i>3 ft</i>	<i>95.4 124.9</i>		<i>5.5</i>	<i>8.3</i>
5	<i> </i>		<i>1 ft</i>	<i>96.3 125.9</i>		<i>6.1</i>	<i>8.3</i>
6	<i> </i>		<i>grade</i>	<i>96.8 114.5</i>		<i>4.6</i>	<i>9.5</i>
7	<i>3546</i>		<i>2 ft</i>	<i>95.9 113.4</i>		<i>5.9</i>	<i>9.5</i>
8	<i> </i>		<i>1 ft</i>	<i>96.8 114.5</i>		<i>6.2</i>	<i>9.5</i>
9	<i> </i>		<i>grade</i>	<i>97.9 115.8</i>		<i>4.8</i>	<i>9.5</i>
10	<i>1131</i>		<i>4 ft</i>	<i>96.3 113.9</i>		<i>6.5</i>	<i>9.5</i>
11	<i> </i>		<i>2 ft</i>	<i>96.7 114.4</i>		<i>7.1</i>	<i>9.5</i>
12	<i> </i>		<i>grade</i>	<i>95.8 113.3</i>		<i>6.3</i>	<i>9.5</i>
13	<i>1671</i>		<i>2 ft</i>	<i>97.1 114.8</i>		<i>6.0</i>	<i>9.5</i>
14	<i> </i>		<i>grade</i>	<i>96.0 113.5</i>		<i>5.6</i>	<i>9.5</i>
15	<i>1661</i>		<i>2 ft</i>	<i>95.4 112.8</i>		<i>5.3</i>	<i>9.5</i>
16	<i> </i>		<i>grade</i>	<i>96.6 114.3</i>		<i>5.8</i>	<i>9.5</i>
17	<i>242</i>		<i>2 ft</i>	<i>96.4 114.0</i>		<i>6.4</i>	<i>9.5</i>
18	<i> </i>		<i>grade</i>	<i>95.9 113.4</i>		<i>5.9</i>	<i>9.5</i>
19	<i>1676</i>		<i>2 ft</i>	<i>95.8 113.3</i>		<i>5.8</i>	<i>8.3</i>
20	<i> </i>		<i>grade</i>	<i>96.2 113.8</i>		<i>6.1</i>	<i>9.5</i>

Tests not meeting requirements: *none*

Who notified: *John (Dir. Const.)*

Recommendations: *none at this time*

REMARKS: *None at this time*

TECHNICIAN:
APPROVED:



Tundra Corporation

D & C Construction / Ft. Devens
Briggs # 60904
Tested: 6-5-96

1. Sample No. *Keating Gravel*
Sand + Gravel
Fitchburg. M-956 Description
Gravelly Sand
with silt Source
Site

2. Sieve Analysis {ASTM C 136, and ASTM C 117}

<u>Sieve Size</u>	<u>Results</u> { % Passing by Wt }	<u>Specs.</u>
4"	100	
3"	100	
2-1/2"	100	
2"	100	
1-1/2"	86	
1"	86	
3/4"	75	
1/2"	71	
3/8"	67	
#4	55	
#10	45	
#20	36	
#40	30	
#80	23	
#100	20	
#200	17.8	

3. No specifications provided.

4. Proctor Density {four point procedure - ASTM D 1557 Method C, and ASTM D 4718}.

	<u>Results</u>
Maximum Dry Unit Weight (pcf)	130.8
Optimum Moisture Content (%)	8.3

400 Mingham Street, Rockland, Massachusetts 02370

Tel (617) 871-6040 • Fax (617) 871-7982

Offices located throughout the United States and Canada



Briggs Associates
A Tundra Corporation Company

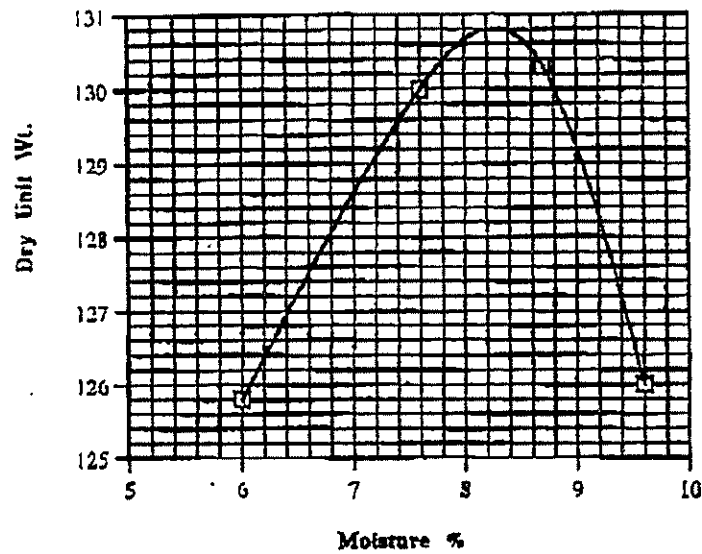
Project: D & C Construction / Ft. Devens

Sample no.

M-956

Date: 6/5/96

Proctor



Max. Dry Density
130.8 pcf

Optimum
Moisture
8.3 %



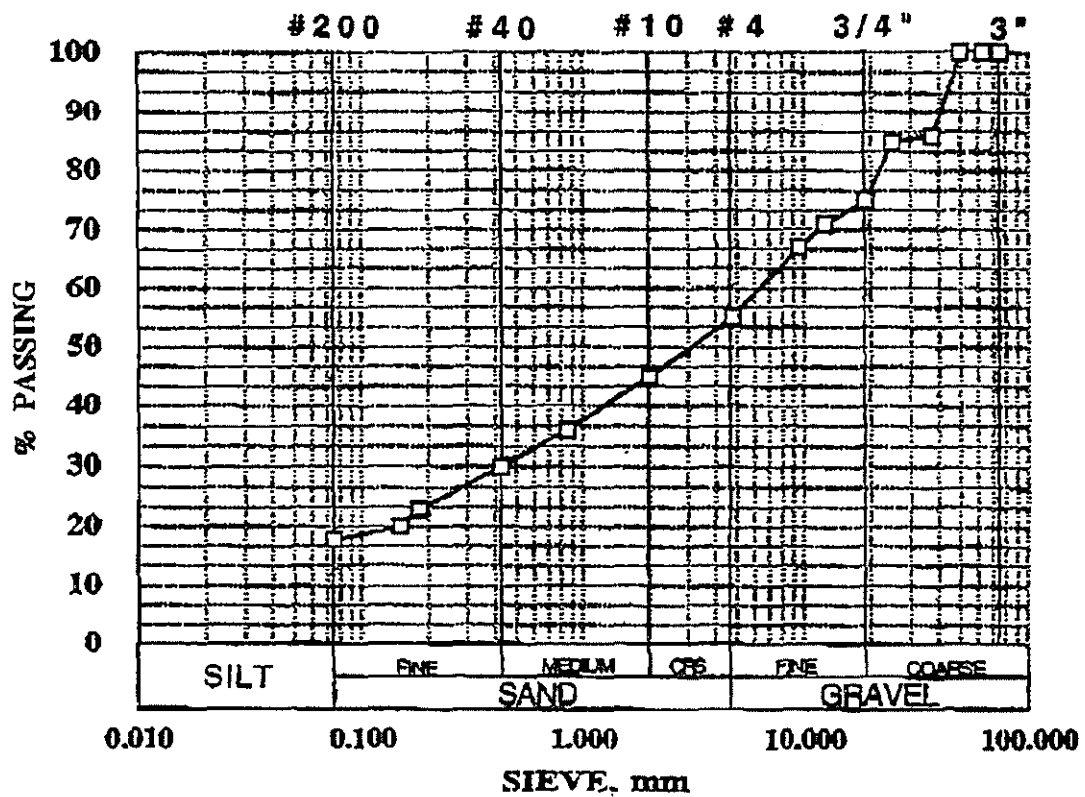
Briggs Associates
A Tundra Corporation Company

Project: D & C Construction / Ft. Devens

Sample No. M-956

Date: 6/3/96

SIEVE





Tundra Corporation

D & C Construction / Ft. Devens
Briggs # 60904
Tested: 6-5-96

1.	<u>Sample No.</u>	<u>Description</u>	<u>Source</u>
	M-957	Gravelly Sand	Site

2. Sieve Analysis {ASTM C 136, and ASTM C 117}

<u>Sieve Size</u>	<u>Results</u> (% Passing by Wt.)	<u>Specs.</u>
4"	100	
3"	100	
2-1/2"	100	
2"	100	
1-1/2"	100	
1"	100	
3/4"	98	
1/2"	96	
3/8"	95	
#4	90	
#10	85	
#20	70	
#40	38	
#80	11	
#100	9	
#200	5.4	

3. No specifications provided.

4. Proctor Density {four point procedure - ASTM D 1557 Method C, and ASTM D 4718}.

	<u>Results</u>
Maximum Dry Unit Weight (pcf)	118.3
Optimum Moisture Content (%)	9.5



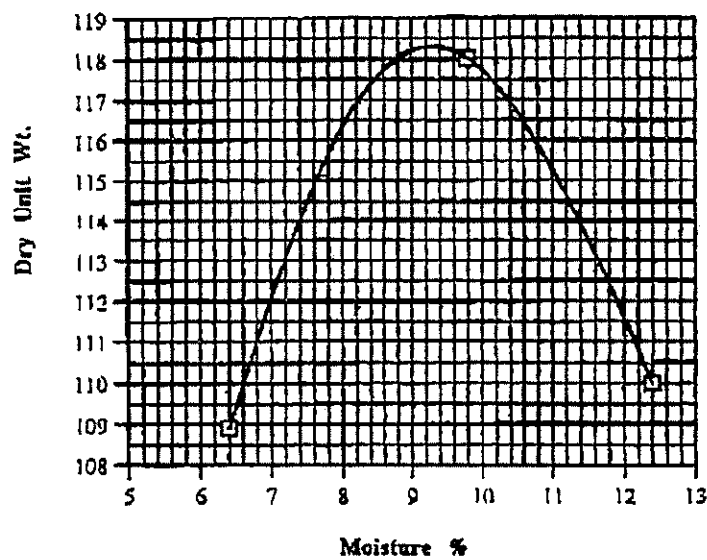
Briggs Associates
A Tundra Corporation Company

Project: D & C Construction / Ft. Devens

Sample no. M-957

Date: 6/5/96

Proctor



Max. Dry Density
118.3 pcf

**Optimum
Moisture**
9.5 %



Briggs Associates
A Tundra Corporation Company

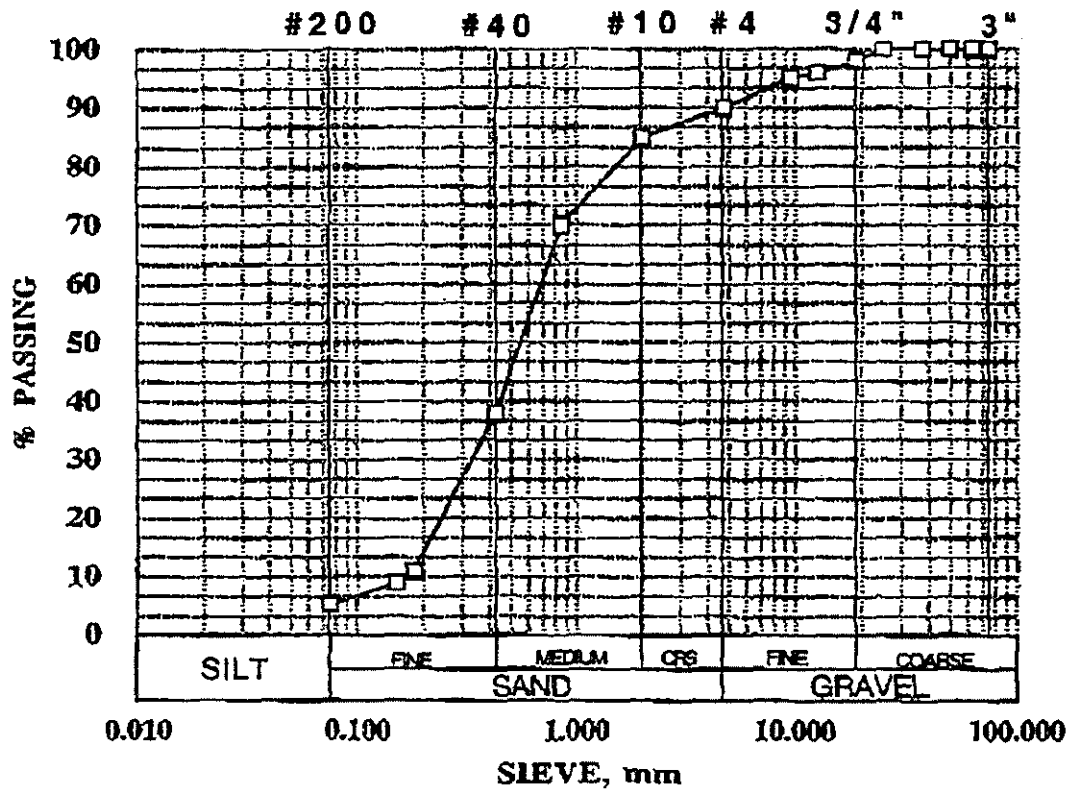
Project: D & C Construction / Ft. Devens

Sample No.

M-957

Date: 6/3/96

SIEVE



APPENDIX E
BILL OF LADING



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012A

Release Tracking Number *

BILL OF LADING (pursuant to 310 CMR 40.0030)

2 - 11210

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

Release Name (optional):

Street: Location Aid: Bldgs. in 200, 1400, 1600
City/Town: Devens Zip Code: 01433 - 2600, 2700
Date/Period of Generation: 5 / 20 / 96 to 7 / 12 / 96 and 3500-blocks
Additional Release Tracking Numbers Associated with this Bill of Lading:

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

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

Name of Organization: Devens Commerce Center
Name of Contact: Ronald J. Ostrowski Title: Env. Mgr.
Street: 43 Buena Vista St., P-12
City/Town: Devens State: MA Zip Code: 01433 -
Telephone: 508 - 772 - 6340 Ext. 303

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

check one/specify)

☐ RP Specify (circle one): Owner Operator Generator Transporter Other RP:
☒ PRP Specify (circle one): Owner Operator Generator Transporter Other PRP:
☐ Fiduciary/Secured Lender
☐ Agency/Public Utility on a Right of Way
☐ Other Person:

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

D. TRANSPORTER/Common CARRIER INFORMATION:

Transporter/Common Carrier Name: Carney Brothers Trucking
Contact Person: Jimmy Casey Title: General Manager
Street: 1958 Broadway
City/Town: Raynham State: MA Zip Code: 02767 -
Telephone: 508 - 824 - 4071 Ext.

E. RECEIVING FACILITY/TEMPORARY STORAGE LOCATION:

Operator/Facility Name: Laidlaw Waste Systems
Contact Person: Angelique Cosgrove Title: Sales Coord.
Street: 14 Belcher St.
City/Town: Plainville State: MA Zip Code: 02762 -
Telephone: 508 - 699 - 2267 Ext.

Type of Facility: (check one)
☐ Asphalt Batch/Cold Mix ☒ Landfill/Disposal ☐ Incinerator
☐ Asphalt Batch/Hot Mix ☒ Landfill/Daily Cover ☐ Temporary
☐ Thermal Processing ☐ Landfill/Structural Fill ☐ Storage

Other:

Division of Hazardous Waste/Class A Permit #: 15095 Division of Solid Waste Management Permit #: 15095 EPA Identification #: MAD108010729

Actual/Anticipated Period of Temporary Storage (specify dates if applicable): ___ / ___ / ___ to ___ / ___ / ___

Reason for Temporary Storage (if applicable): N/A



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012A

Release Tracking Number:

2 - 11210

BILL OF LADING (pursuant to 310 CMR 40.0030)

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

Temporary Storage Address:

Street: N/A

City/Town: State: Zip Code:

F. DESCRIPTION OF REMEDIATION WASTE:

(check all that apply)

☒ Contaminated Media (circle all that apply): Soil Groundwater Surface Water Other:

☐ Contaminated Debris (circle all that apply): Demolition/Construction Waste Vegetation/Organic Materials

Inorganic Absorbant Materials Other:

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

☐ Non-hazardous Containerized Waste (circle all that apply): Tank Bottoms/Sludges Containers Drums

Engineered Impoundments Other:

Type of Contamination (circle all that apply): Gasoline Diesel Fuel #2 Oil #4 Oil #6 Oil Waste Oil

Kerosene Jet Fuel Other:

Estimated Volume of Materials: Cubic Yards: 1000 Tons: Other:

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

Response Action Associated with Bill of Lading (circle one): Immediate Response Action Release Abatement Measure

Utility-Related Abatement Measure Limited Removal Action (LRA) Comprehensive Response Action

Other (specify):

Remediation Waste Characterization Support Documentation attached:

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

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

G. LICENSED SITE PROFESSIONAL (LSP) OPINION:

Name of Organization: S E A Consultants, Inc.

LSP Name: William J. Mallio Title: Principal Scientist

Telephone: 617-498-4635 Ext.

I attest that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this submittal, and in my professional opinion and judgment based upon application of

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

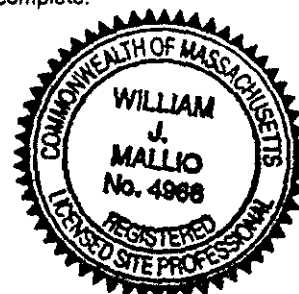
to the best of my knowledge, information and belief, the assessment actions undertaken to characterize the Remediation Waste which is (are) the subject of this submittal for acceptance at the facility identified in this submittal comply with the applicable provisions of 310 CMR 40.0000, and such facility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

Signature: William J. Mallio

Seal:

Date: 7/25/96

License Number: 4966





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012A

Release Tracking Number:

2 - 11210

BILL OF LADING (pursuant to 310 CMR 40.0030)

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

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

Signature: Ronald J. Ostrowski

Date: 7/25/96

Name of Person (print): Ronald J. Ostrowski

Enclosure to Bill of Lading (BWSC -12A)
SUMMARY OF LABORATORY ANALYTICAL RESULTS
Release Tracking No. 2-11210

Analyte	Range/Peak of Lab Results
TPH	2430 ppm
PCB's	Not Detected
Total Arsenic	12.1
Total Cadmium	0.55
Total Chromium	7.66
Total Lead	23.4
Total Mercury	0.066
Total PAH's	< 100 ppm
Listed/Characteristic Hazardous Waste (TCLP)	None
Total VOC's	< 10 ppm

Note: ppm = parts per million



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup Fort Dev. 120313

BWSC-0128

Release Tracking Number:

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET 1 OF 3

DVC

2-11210

LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative:

108518

Date of Shipment: 8/14/96 Time of Shipment: 7:00

(circle one) am/pm

Truck/Tractor Registration:

32895

Trailer Registration (if any):

29641

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 8:07

(circle one) am/pm

Load Size (cu. yds./tons):

31.72

LOAD 2: Signature of Transporter Representative:

108514

Date of Shipment: 8/14/96 Time of Shipment: 8:00

(circle one) am/pm

Truck/Tractor Registration:

528520

Trailer Registration (if any):

27145

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 8:02

(circle one) am/pm

Load Size (cu. yds./tons):

31.69

LOAD 3: Signature of Transporter Representative:

108515

Date of Shipment: 8/14/96 Time of Shipment: 9:00

(circle one) am/pm

Truck/Tractor Registration:

30075

Trailer Registration (if any):

28615

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 8:03

(circle one) am/pm

Load Size (cu. yds./tons):

29.85

LOAD 4: Signature of Transporter Representative:

108512

Date of Shipment: 8/14/96 Time of Shipment: 6:49

(circle one) am/pm

Truck/Tractor Registration:

CE96-535 MA

Trailer Registration (if any):

27794 MA

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 7:54

(circle one) am/pm

Load Size (cu. yds./tons):

33.57

LOAD 5: Signature of Transporter Representative:

108521

Date of Shipment: 8/14/96 Time of Shipment: 7:10

(circle one) am/pm

Truck/Tractor Registration:

28658

Trailer Registration (if any):

29642

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 8:15

(circle one) am/pm

Load Size (cu. yds./tons):

34.58

LOAD 6: Signature of Transporter Representative:

108620

Date of Shipment: 8/14/96 Time of Shipment: 10:00

(circle one) am/pm

Truck/Tractor Registration:

32805

Trailer Registration (if any):

29641

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 11:33

(circle one) am/pm

Load Size (cu. yds./tons):

30.90

LOAD 7: Signature of Transporter Representative:

108625

Date of Shipment: 8/14/96 Time of Shipment: 10:40

(circle one) am/pm

Truck/Tractor Registration:

528520

Trailer Registration (if any):

27145

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 11:44

(circle one) am/pm

Load Size (cu. yds./tons):

34.94

LOG SHEET VOLUME INFORMATION:

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

226.42

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

0

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

226.42



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-0129

Release Tracking Number:

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET 2 OF 3

2-11210

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative:

108639

Date of Shipment: 8/14/96 Time of Shipment: 12:24

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 11:54

(circle one) am/pm

Load Size (cu. yds./tons): 28.87

LOAD 2: Signature of Transporter Representative:

108647

Date of Shipment: 8/14/96 Time of Shipment: 11:05

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 12:16

(circle one) am/pm

Load Size (cu. yds./tons): 35.92

LOAD 3: Signature of Transporter Representative:

108657

Date of Shipment: 8/14/96 Time of Shipment: 11:21

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 12:30

(circle one) am/pm

Load Size (cu. yds./tons): 36.97

LOAD 4: Signature of Transporter Representative:

108719

Date of Shipment: 8/14/96 Time of Shipment: 1:45

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 2:46

(circle one) am/pm

Load Size (cu. yds./tons): 34.71

LOAD 5: Signature of Transporter Representative:

108723

Date of Shipment: 8/14/96 Time of Shipment: 1:50

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 2:54

(circle one) am/pm

Load Size (cu. yds./tons): 36.00

LOAD 6: Signature of Transporter Representative:

108726

Date of Shipment: 8/14/96 Time of Shipment: 1:55

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 3:11

(circle one) am/pm

Load Size (cu. yds./tons): 27.31

LOAD 7: Signature of Transporter Representative:

108731

Date of Shipment: 8/14/96 Time of Shipment: :

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt: 8/14/96

Time of Receipt: 3:32

(circle one) am/pm

Load Size (cu. yds./tons): 35.16

J. LOG SHEET VOLUME INFORMATION:

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

236.94

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

226.42

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

463.36



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012B

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET 3 OF 3

Release Tracking Number:

2-11210

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

8/14/96

2:59

(circle one) am/pm

Truck/Tractor Registration:

LC96-535 MA

Trailer Registration (if any):

A27794 MA

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

8/14/96

4:03

(circle one) am/pm

Load Size (cu. yds./tons):

39.79

LOAD 2: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOAD 3: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOAD 4: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOAD 5: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOAD 6: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOAD 7: Signature of Transporter Representative:

Date of Shipment:

Time of Shipment:

___/___/___

___:___

(circle one) am/pm

Truck/Tractor Registration:

Trailer Registration (if any):

Receiving Facility/Temporary Storage Representative:

Date of Receipt:

Time of Receipt:

___/___/___

___:___

(circle one) am/pm

Load Size (cu. yds./tons):

LOG SHEET VOLUME INFORMATION:

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

39.79

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

463.36

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

503.15



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-012B

For & Dev. 120313

Release Tracking Number:

BILL OF LADING (pursuant to 310 CMR 40.0030)
LOG SHEET 1 **OF** 1

2-11210

I. LOAD INFORMATION:

LOAD 1: Signature of Transporter Representative: [Signature] 108794

Date of Shipment: 8/15/96 Time of Shipment: 7:18 (circle one) am/pm

Truck/Tractor Registration: 32985 Trailer Registration (if any): 29641

Receiving Facility/Temporary Storage Representative: [Signature]

Date of Receipt: 8/15/96 Time of Receipt: 8:17 (circle one) am/pm

Load Size (cu. yds./tons): 29.65

LOAD 2: Signature of Transporter Representative: [Signature] 108784

Date of Shipment: 8/15/96 Time of Shipment: 7:30 (circle one) am/pm

Truck/Tractor Registration: 26642 Trailer Registration (if any): 29658

Receiving Facility/Temporary Storage Representative: [Signature]

Date of Receipt: 8/15/96 Time of Receipt: 8:45 (circle one) am/pm

Load Size (cu. yds./tons): 35.75

LOAD 3: Signature of Transporter Representative: [Signature] 108898

Date of Shipment: 8/15/96 Time of Shipment: 7:30 (circle one) am/pm

Truck/Tractor Registration: 32085 Trailer Registration (if any): 29641

Receiving Facility/Temporary Storage Representative: [Signature]

Date of Receipt: 8/15/96 Time of Receipt: 12:03 (circle one) am/pm

Load Size (cu. yds./tons): 39.48

LOAD 4: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm

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

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: : (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 5: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm

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

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: : (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 6: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm

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

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: : (circle one) am/pm

Load Size (cu. yds./tons):

LOAD 7: Signature of Transporter Representative:

Date of Shipment: / / Time of Shipment: : (circle one) am/pm

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

Receiving Facility/Temporary Storage Representative:

Date of Receipt: / / Time of Receipt: : (circle one) am/pm

Load Size (cu. yds./tons):

II. LOG SHEET VOLUME INFORMATION:

Total Volume This Page (cu. yds./tons): 114.82

Total Carried Forward (cu. yds./tons): 0

Total Carried Forward and This Page (cu. yds./tons): 114.82

BILL OF LADING (pursuant to 310 CMR 40.0030)
SUMMARY SHEET 1 OF 1

Release Tracking Number:

2-11210

K. SUMMARY OF SHIPMENTS:

[illegible]



BILL OF LADING (pursuant to 310 CMR 40.0030)
SUMMARY SHEET

2-11210

**L. ACKNOWLEDGEMENT OF RECEIPT OF REMEDIATION WASTE AT RECEIVING FACILITY OR
TEMPORARY STORAGE LOCATION:**

Receiving Facility/Temporary
Location Representative (print):

Amelique Cosgrove

Title:

Sale Coordinator

Signature:

[Signature]

Date:

8/15/96

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

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

Signature:

[Signature]

Date:

9/12/96

Name of Person (print):

JAMES E. ARMSTRONG

FOR RON OSTROWSKI