HALEY & ALDRICH

UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

RELEASE ABATEMENT MEASURE COMPLETION REPORT
BUILDING NO. 3529
UNDERGROUND STORAGE TANK NO. 3529X
DEVENS, MASSACHUSETTS
RELEASE TRACKING NUMBER: 2-11210

by

Haley & Aldrich, Inc.
Cambridge, Massachusetts

for

Massachusetts Government Land Bank
Devens Commerce Center
Devens, Massachusetts

File No. 10884-055
August 1997

HALEY & ALDRICH

UNDERGROUND
ENGINEERING &
ENVIRONMENTAL
SOLUTIONS

Haley & Aldrich, Inc.
58 Charles Street
Cambridge, MA 02141-2147
Tel: 617.494.1606
Fax: 617.577.8142
Email: BOS@HaleyAldrich.com

HALEY & ALDRICH

5 August 1997
File No. 10884-055

Massachusetts Department of Environmental Protection
Central Regional Office
627 Main Street
Worcester, Massachusetts 01608

Attention: Mr. John Regan

Subject: Release Abatement Measure Completion Report
Building 3529
Underground Storage Tank No. 3529x
Devens, Massachusetts
RTN: 2-11210

Ladies and Gentlemen:

On behalf of the Massachusetts Government Land Bank-Devens Commerce Center, we are pleased to submit this Release Abatement Measure (RAM) Completion Report describing activities conducted during the removal of Underground Storage Tank (UST) No. 3529X, associated with former Building No. 3529, at Devens, Massachusetts. A Project Locus for the site is included as Figure 1.

This report details the UST removal activities completed at the site, the results of sampling and analysis conducted, and comments on the need for further assessment or remedial activities, including the management of remedial wastes generated during the UST removal. A copy of the completed BWSC-106 Release Abatement Measure Transmittal Form, including a RAM Completion Statement and LSP Opinion, is contained in Appendix A.

This RAM Completion Report and Completion Statement has been prepared in accordance with the following documents:

- Massachusetts Contingency Plan, 310 CMR, Sections 40.0440 to 40.0446.
- Commonwealth of Massachusetts' *Underground Storage Tank Closure Assessment Manual*, dated 9 April 1996.
- Haley & Aldrich, Inc.'s, *General Excavated Soil Management Plan, Devens, Massachusetts*, dated November 1996.
- Massachusetts DEP's *Interim Remediation Waste Management Policy for Petroleum-Contaminated Soils"* (Policy #WSC-94-400), dated April 1994.

- Devens Commerce Center's *Underground Storage Tank (UST) Closure Protocol* (Addendum to Tier 1A Permit No. ACO-CE-96-3001), prepared by SEA Consultants, Inc., dated 14 June 1996.

Because of ongoing remedial activities at the former Fort Devens Army Base, the entire facility is classified as a Tier IA site by DEP. As outlined in the Devens Commerce Center (DCC) UST Closure Protocol document, submission of a RAM Plan to the Department of Environmental Protection-Central Regional Office (DEP-CERO) is required prior to UST removal activities. On behalf of the Massachusetts Government Land Bank (MGLB), a RAM Plan prepared by Haley & Aldrich, Inc., was submitted and received by DEP-CERO on 21 May 1997. Verbal approval for the RAM Plan implementation was granted on 22 May 1997 by DEP-CERO representative Mr. John Regan. Subsequent letter approval was provided by DEP-CERO Environmental Analyst Mr. David M. Salvadore, dated 28 May 1997.

RESPONSIBLE PARTY INFORMATION

The RAM was be conducted by the Massachusetts Government Land Bank, c/o the Devens Commerce Center, as the **Potentially Responsible Party/Responsible Party**. Pertinent information are as follows:

Massachusetts Government Land Bank
Devens Commerce Center
A Division of the Massachusetts Development Finance Agency
43 Buena Vista Street, P-12
Devens, MA 01433

The **contact person** is:

Mr. Ronald J. Ostrowski
Telephone Number: (508) 772-6340

The **Licensed Site Professional** (LSP) assisting in the completion of the RAM is:

Deborah H. Gevalt
LSP#: 9290
Senior Vice President
Haley & Aldrich, Inc.
58 Charles Street
Cambridge, Massachusetts 02141-2147

Telephone Number: (617) 494-4910 ext. 451
Fax Number: (617) 577-8142

INTRODUCTION AND BACKGROUND

On 20 May 1997, a 1,000-gallon, steel UST was encountered during site grading activities in the vicinity of former Building No. 3529, near the intersection of Queenstown Road and Dakota Street. The approximate orientation of the tank is shown on Figure 2, Site Plan. The grading work was associated with site preparations for the ComcoGraphics site, in the vicinity of Robbins Pond (Figure 1). The tank did not appear damaged or compromised, and no visual/olfactory evidence of releases was encountered during the site grading activities. The tank was reportedly installed in 1966, and is believed to have supplied No. 2 heating oil to former Building No. 3529. Previous reportable releases, as defined by 310 CMR 40.0300, have not been identified in association with the UST.

Approximately 909 gallons of fluid of virgin No. 2 fuel oil were pumped from the tank by Triumvirate Environmental, Inc. of Somerville, MA at the direction of the DCC. The fluid was transferred by tanker truck to Environmental Compliance Corporation, Inc. of Stoughton, MA, under Uniform Hazardous Waste Manifest MAJ 306326, as MA01 waste classification. (Please note the Generator USEPA Identification Number and Address provided on Manifest MAJ 306326 were incorrect; the corrected information is included in Appendix B). Reportedly, no water or other fluids were contained in the tank, indicating the UST was not likely compromised. Subsequent waste profiling conducted by Triumvirate Environmental identified the UST contents as 100% #2 fuel oil.

Copies of the Hazardous Waste Manifest, Certificate of Disposal/Recycling, and Land Disposal Restriction Notification Form 1, and other documents related to the fuel oil removal and recycling, are included in Appendix B. A description of further UST removal activities is provided below. Documents related to the UST removal, cleaning and disposition are also included in Appendix B.

EXISTING SITE CONDITIONS AND SURROUNDING RECEPTORS

The location of UST 3529X is currently an active construction site, associated with the new construction of the ComcoGraphics facility and parking lot. The site is generally level, with gradually sloping topography to the east and southeast, towards Dakota Street. Robbins Pond, which is located approximately 800 ft. southeast of the site, is the primary potential sensitive receptor in the site vicinity. The site is not within the draft Zone II areas of any of the Devens water supply wells; however, the site is within the Devens aquifer, which is protected under the Devens Water Resources Protection Plan, incorporated by reference in the Devens By-Laws. Accordingly, Groundwater Category GW-1 applies to the response actions under the Massachusetts Contingency Plan (MCP), including the RAM activities.

Located approximately 200 ft. north of UST 3529X across Queenstown Road is an active day-care center. Given the proximity of the day care center, it was assumed that children could be present at the site, and that the soils in the vicinity of UST 3529x are "potentially accessible," as defined in the MCP. As such, RAM activities were conducted under the assumption the most stringent soil category would apply, specifically the MCP Method 1 Risk Characterization Standards for Soil Category S-1 and Groundwater Category GW-1 was assumed.

SUMMARY OF UST REMOVAL ACTIVITIES

On 22 May 1997, EnviroServe, Inc. of Burlington, MA, exposed and removed the 1,000-gallon steel fuel oil UST encountered near former Building 3529, using a Komatsu PC4000LC excavator. The UST had been installed outside and parallel to a former building wall/footing, at an approximate depth of 2.5 ft. below then-current grade (See Appendix C-Test Pit Field Log). Subsurface soil conditions exposed in the excavation consisted of 1.3 to 4.0 ft. of granular fill materials, overlying a thin, windblown loess deposit and interbedded glaciofluvial/glaciolacustrine units, consisting of medium to fine sands and silts.

The top of the UST appeared mildly-stained, most likely related to overfilling events. However, no piping, delivery lines or phase-separated petroleum product were observed during the UST removal. The steel, single-walled UST appeared slightly rusted, but free from visible perforations or cracks. The dimension of the tank was approximately 4 ft. in diameter and 10.7 ft. in length, with an estimated volume of 1,000-gallons. No sacrificial anodes, leak detection devices or secondary containment structures were present. The Fire Department permit (#17919) for removal and transportation of the UST was provided to EnviroServe on 22 May 1997. A copy of the permit is included in Appendix B.

Following removal, the UST was placed at an angle in a shallow, polyethylene-lined trench to allow any remaining product to settle and accumulate. Using a reciprocating metal saw, EnviroServe representative Mr. Bill Carkin opened up two small access holes in the UST, and removed approximately three (3) gallons of fuel oil/sludge remaining in the tank, using adsorbent pads. The fuel oil/sludge and adsorbent pads were contained in a 55-gallon drum, which was moved to a corner of the building lot. The steel UST was then crushed, using the excavator bucket and treads, and placed in an EnviroServe utility truck. Disposition records of the fuel oil/sludge and oily debris (contained in two 55-gallon drums) and UST disposal receipt from John C. Tombarello & Sons, Inc., Lawrence, MA, are included in Appendix B.

The soil between the south wall of the UST and the former concrete footing appeared slightly discolored from fuel oil overfilling. Based on HNu Systems photoionization detector (PID) headspace readings, PetroFLAG© hydrocarbon field screening (described below) and visual/olfactory evidence, the upper 2.0 to 2.5 ft. of soil was judged to be not impacted by the release, and was excavated, segregated and stockpiled for future backfilling. The excavator removed visibly impacted soils from the UST grave, and soil samples for screening were periodically obtained by the Haley & Aldrich representative from the test pit walls and floors to assist in assessing the level and extent of petroleum-impacted soil. The impacted soil, approximately 30 cubic yards in volume, was segregated and temporarily stockpiled on polyethylene sheeting adjacent to the excavation.

Groundwater was encountered at 6.6 ft. below ground surface, entering the excavation very slowly. No odor, discoloration, sheen or LNAPL (i.e., free-phase petroleum product) was observed on the incoming groundwater; accordingly, no groundwater samples were obtained for chemical analysis. Based on these conditions and very low headspace readings, no 2-Hour or 72-Hour DEP Release Notification events were triggered during the conduct of the RAM.

Five (5) confirmatory soil samples (identified as samples S1 to S5) were obtained from the perimeter and bottom of the excavation. A composite sample of the stockpile of petroleum-impacted soil was obtained and designated sample S6. Pending results of the analytical testing, the stockpile of petroleum-impacted soil was secured with additional polyethylene sheeting and boulders. The UST excavation was lined with polyethylene sheeting and the unimpacted soil was used to backfill a portion of the excavation. Following receipt of the chemical analysis data of the confirmatory soil samples and stockpile sample, the excavation was backfilled with the stockpile material and other on-site soils.

SUMMARY OF FIELD SCREENING AND CHEMICAL ANALYSIS

During the removal of the 1,000 gallon UST, representative soil samples were collected from the sidewalls and floor of the excavation, and screened with a PID. Headspace PID measurements are included in Table I. Headspace readings ranged from 0.0 to 0.8 parts-per-million (ppm) above ambient background air, levels considered very low and typical of low-volatility fuel oil. Locations and approximate depths of screening samples and confirmatory soil samples are indicated on Figure 2.

Selected soil samples obtained for headspace screening and confirmatory analysis were evaluated by hydrocarbon analysis, using the Dexsil PetroFLAG© field screening system. Results of the PetroFLAG© hydrocarbon field screening are included in Table II. PetroFLAG© results ranged from non-detectable levels to 207 ppm (in sample PFS-1), obtained at 3.4 ft. below ground surface from an area of stained fill soils.

The confirmatory soil samples were submitted to IEA, Inc., of North Billerica, MA, a Massachusetts DEP-certified laboratory. Samples designated S1 to S5 were analyzed for Extractable Petroleum Hydrocarbons (EPH), including target analytes, volatile organic compounds (VOCs) by EPA Method 8260, and polyaromatic hydrocarbons (PAHs) by Method 8270. Sample S6, a composite sample from the soil stockpile, was analyzed for VOCs and total petroleum hydrocarbons (TPH) by EPA Method 418.1. For QA/AC purposes, an aqueous trip blank, designated TB-1, prepared by the laboratory of analyte-free water, accompanied the shipment of glassware during sample collection. The trip blank was analyzed for VOCs only. Laboratory data are included in Appendix D, and the soil quality results are summarized in Table III.

FINDINGS AND CONCLUSIONS

Based on the laboratory results of the analytical testing, no PAHs were detected in the five confirmatory soil samples obtained. The volatile organic compound methylene chloride was detected at very low levels in five of six soil samples. However, methylene chloride is a common laboratory contaminant, and was also detected in the laboratory method blank, and consequently is not believed to be present associated with the UST removal. Methylene chloride was detected in the aqueous trip blank at a concentration below the calibration limit of 2 ppb.

Extractable Petroleum Hydrocarbons were identified in three of five confirmatory soil samples, with total concentrations of the three carbon fractions ranging from 31 to 270 milligrams-per-kilogram (mg/kg). The EPH concentrations for the individual carbon fractions are below the proposed EPH/VPH standards, based on the 17 January 1997 MADEP Public Hearing Draft, and therefore are below the Reportable Concentration S-1 (RCS-1) levels, which will become effective on 31 October 1997. The results of the TPH-IR analysis of the stockpile sample S6 indicates a concentration of 44 mg/kg. This result is also well below the 500 mg/kg (or ppm) TPH threshold for MCP RCS-1 Category that applies to the site.

According to the General Excavated Soil Management Plan for Devens, Massachusetts, the stockpiled soils would be considered Category B-2 soils, those that exceed Devens background levels, but do not exceed the RCS-1 Reportable Concentrations under the MCP. The excavated soils were also below the 250 ppm TPH management threshold stipulated in the DCC UST Closure Protocol document, allowing the excavated soil to be placed back into the excavation. Consequently, the soils did not need to be removed off-site and could be reused on site. The stockpiled soils were correspondingly spread as subgrade for bituminous pavement in the area of the UST and reused as backfill in the excavation. This approach was verbally approved by DEP in a telephone conversation with Mr. David Salvadore on 2 June 1997. Therefore, the objectives of the RAM Plan have been fulfilled and no future remedial activities related to the UST release are considered necessary.

MANAGEMENT OF REMEDIATION WASTE

Based on the analytical results of the soil present within the excavation (samples S1 to S5) and a soil sample of the temporary stockpile (sample S6), the excavated soil associated with the UST removal does not have petroleum contaminants that exceed applicable existing S-1/GW-1 standards, or applicable Devens protocol standards. The future anticipated use of the UST area is an asphalt-paved parking lot. Accordingly, the excavated soil (remediation waste) was backfilled into the excavation and spread as a thin lift near the UST grave by the on-site contractor between 2 and 6 June 1997, in preparation for future paving. No soil or groundwater related to the UST removal and closure was removed from the site.

ONGOING REMEDIAL RAM ACTIVITIES AT SITE

No remedial systems are operating, or are scheduled to operate, at the site. Accordingly, no monitoring data is presented herein.

LSP OPINION

A copy of the required LSP Opinion, seal and signature is provided on the RAM Transmittal Form BWSC-106, which is attached to this RAM Completion Report.

Please do not hesitate to contact us should you have any questions or require additional information regarding these RAM activities.

Sincerely yours,
HALEY & ALDRICH, INC.

Andrea J. Wang

for Bradford A. Miller
Staff Environmental Geologist

Deborah H. Gevalt
Senior Vice President, LSP

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Attachments:

Table I	- Summary of PID Screening Data
Table II	- Summary of PetroFlag Soil Screening Data
Table III	- Summary of Soil Quality Data
Figure 1	- Project Locus
Figure 2	- Site Plan
Appendix A	- Copy of Transmittal Form BWSC-106 and LSP Opinion
Appendix B	- Manifests, UST Disposal Documentation and Fire Department Permit
Appendix C	- Test Pit Field Log
Appendix D	- Laboratory Analytical Data

Distribution:

Devens Commerce Center; Attn: Ron Ostrowski
MADEP-CERO; Attn: David Salvadore
MADEP-CERO; Attn: Lynn Welsh
USEPA; Attn: Jim Byrne
USACOE; Attn: Mark Applebee
BRAC; Attn: Jim Chambers
ComcoGraphics; Attn: Mike Capone

TABLE I
SUMMARY OF PID SCREENING DATA
RELEASE ABATEMENT MEASURE - UST REMOVAL
BUILDING 3529
UST 3529X
DEVENS, MASSACHUSETTS
FILE NO. 10884-055

SOIL SAMPLE DESIGNATION	SAMPLING DATE	SAMPLE DEPTH (ft.)	GROUNDWATER DEPTH (ft.)	SOIL TYPE	SAMPLE READING (ppm)	BACK-GROUND READING (ppm)	SUBMITTED FOR CHEMICAL ANALYSIS	COMMENTS
HS-1	22-May-97	2.3	6.6	FILL	0.6	0.4		Faint fuel oil odor, no visible staining.
HS-2	22-May-97	2.8	6.6	FILL	**0.8**	0.6		Faint fuel oil odor, no visible staining.
HS-3	22-May-97	3.4	6.6	FILL	0.6	0.6		Slight gray discoloration/staining. Same as PFS-1.
HS-4	22-May-97	6.0-6.2	6.6	SILT	0.6	0.6		Faint fuel oil odor, no visible staining. Same as PFS-2.
S1	22-May-97	6.5-7.0	6.6	SILT	**1.4**	0.6	VOC, PAH, EPH	Faint fuel oil odor, no visible staining. Same as PFS-3.
S2	22-May-97	6.0-6.2	6.6	SAND/SILT	**0.8**	0.6	VOC, PAH, EPH	Faint fuel oil odor, no visible staining. Same as PFS-4.
S3	22-May-97	5.0-6.0	6.6	SAND/SILT	0.6	0.6	VOC, PAH, EPH	No noticeable odor or staining.
S4	22-May-97	5.5-6.0	6.6	SAND/SILT	**0.8**	0.6	VOC, PAH, EPH	No noticeable odor or staining.
S5	22-May-97	6.0-6.5	6.6	SAND/SILT	**0.8**	0.6	VOC, PAH, EPH	Very faint fuel oil odor. Same as PFS-5.
S6	22-May-97	---	—	FILL/SAND	---	---	TPH-IR	Composite from excavated soil stockpile. Same as PFS-6.

NOTES AND ABBREVIATIONS
1. ppm: Parts per million
2. Groundwater depth measured during test pit excavation.
3. ---: Indicates not applicable or not measured.
4. PFS-1: Indicates soil sample also analyzed using Dexsil PetroFlag hydrocarbon field screening test. Number indicates PetroFlag sample designation.
5. Readings taken with an HNU Systems Model PI-101 photoionization detector equipped with a 10.2 eV lamp, and measured in field.
6. Readings taken in the headspace in soil sample jars covered with aluminum foil.
7. Readings represent concentration of total volatile organic compounds in headspace air as compared to a benzene-equivalent standard.
8. PID calibrated prior to use in accordance with manufacturer's instructions.
9. Background readings represent instrument response in ambient air prior to insertion of probe into sample headspace.

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TABLE II
SUMMARY OF PETROFLAG SOIL SCREENING DATA
RELEASE ABATEMENT MEASURE - UST REMOVAL
BUILDING 3529
UST 3529X
DEVENS, MASSACHUSETTS
FILE NO. 10884-055

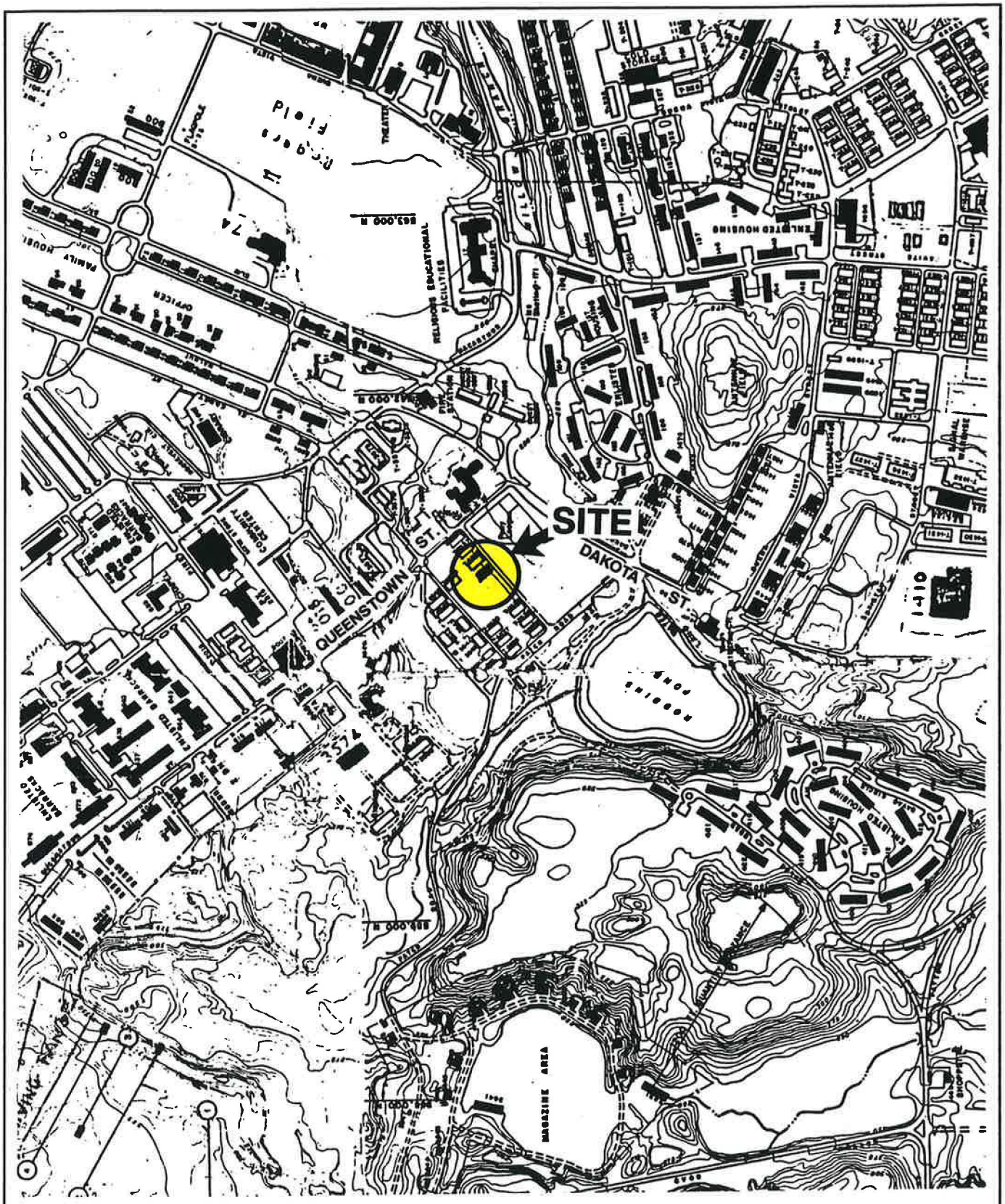
SAMPLE DESIGNATION	DATE	TIME	APPROXIMATE DEPTH (ft.)	SAMPLE WEIGHT (grams)	UNCORRECTED READING (ppm)	DILUTION FACTOR	CORRECTED READING (ppm)	COMMENTS
Calibration Blank	22-May-97	0930	-	-	-	-	0	
Calibration Standard	22-May-97	0936	-	-	-	-	1,000	Calibration Acceptable
PFS-1	22-May-97	1151	3.4	10.0	207	1.00	**207**	Southeast wall/corner.
PFS-2	22-May-97	1200	6.0-6.2	10.1	0	0.99	**0**	Floor of excavation.
PFS-3	22-May-97	1250	6.5-7.0	10.0	54	1.00	**54**	Floor of excavation.
PFS-4	22-May-97	1310	6.0-6.2	10.2	104	0.98	**102**	Northwest sidewall.
PFS-5	22-May-97	1400	6.0-6.5	10.1	0	0.99	**0**	Below footing, southeast wall.
PFS-6	22-May-97	1430	-	10.1	80	0.99	**79.2**	Composite sample from soil stockpile.

NOTES AND ABBREVIATIONS
1. Soil screening conducted in field using Dexsil PetroFLAG Hydrocarbon Test Kit.
2. -: Indicates not applicable.
3. Dilution Factor: Calculated as ratio of optimum 10.0 gram sample weight to actual sample weight, as measured in field.
4. Per manufacturers instructions, instrument response factor for all samples set at 7, for anticipated fuel oil compounds.

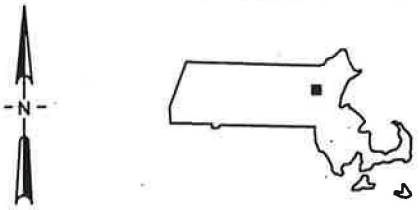
TABLE III
SUMMARY OF SOIL QUALITY DATA
RELEASE ABATEMENT MEASURE - UST REMOVAL
BUILDING 3529
UST 3529X
DEVENS, MASSACHUSETTS
FILE NO. 10884-055

SAMPLE DESIGNATION	S1	S2	S3	S4	S5	S6	TB-1	MCP	Method 1
SAMPLING DATE	22-May-97	22-May-97	22-May-97	22-May-97	22-May-97	22-May-97	-	RCS-1	S-1/GW-1
SAMPLE DEPTH (ft.)	6.5-7.0	6.0-6.2	5.0-6.0	5.5-6.0	6.0-6.5	STOCKPILE	(Aqueous) (Trip Blank)	Threshold (mg/kg)	Standards (mg/kg)
VOLATILE ORGANIC COMPOUNDS (ug/kg)			ND				ND		
Methylene Chloride	**10 ***	**9 ***		**9 ***	**8 ***	**8 ***		0.1	0.1
POLYNUCLEAR AROMATIC HYDROCARBONS (ug/kg)	ND	ND	ND	ND	ND				
TOTAL PETROLEUM HYDROCARBONS-IR (mg/kg)									
TPH						**44**		500	500
EXTRACTABLE PETROLEUM HYDROCARBONS (mg/kg)									
C9-C18 Aliphatics	ND	**21**	**21**	**160**	ND			1,000	1,000
C19-C36 Aliphatics	ND	**10**	**12**	**73**	ND			2,500	2,500
C10-C22 Aromatics	ND	ND	**15**	**32**	ND			200	200
EPH TOTAL CONCENTRATION	ND	**31**	**48**	**270**	ND				
PERCENT MOISTURE	**20.9**	**22.1**	**18.9**	**19.1**	**16.4**				

NOTES AND ABBREVIATIONS
1. ND: Compound not detected at or above practical quantitation limit of analytical method.
2. *: Indicates compound also detected in analytical method blanks.
3. Blank spaces indicate compounds not analyzed for, or applicable standards do not exist.
4. Volatile Organic Compounds: EPA Method 8260; Polynuclear Aromatic Hydrocarbons by EPA Method 8270A.
5. TPH-IR: Total Petroleum Hydrocarbons by EPA Method 418.1.
6. EPH: Extractable Petroleum Hydrocarbons, MADEP Draft Methodology, with carbon ranges indicated.
7. RCS-1: Massachusetts Contingency Plan (MCP) Reportable Concentrations for S-1 soil category, per 310 CMR 40.1600.
8. Method 1 S-1/GW-1Standards: MCP Risk Characterization Method 1 Standards, per 310 CMR 40.0970.
9. Analytical laboratory data provided in Appendix D.



SITE COORDINATES: 42°32'21"N 71°36'31"W



BASE PLAN: FORT DEVENS GENERAL SITE PLAN, DATED 1984

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UNDERGROUND ENGINEERING & ENVIRONMENTAL SOLUTIONS

RELEASE ABATEMENT MEASURE
BUILDING 3529
UST 3529X
DEVENS, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1:4,800

AUGUST 1997

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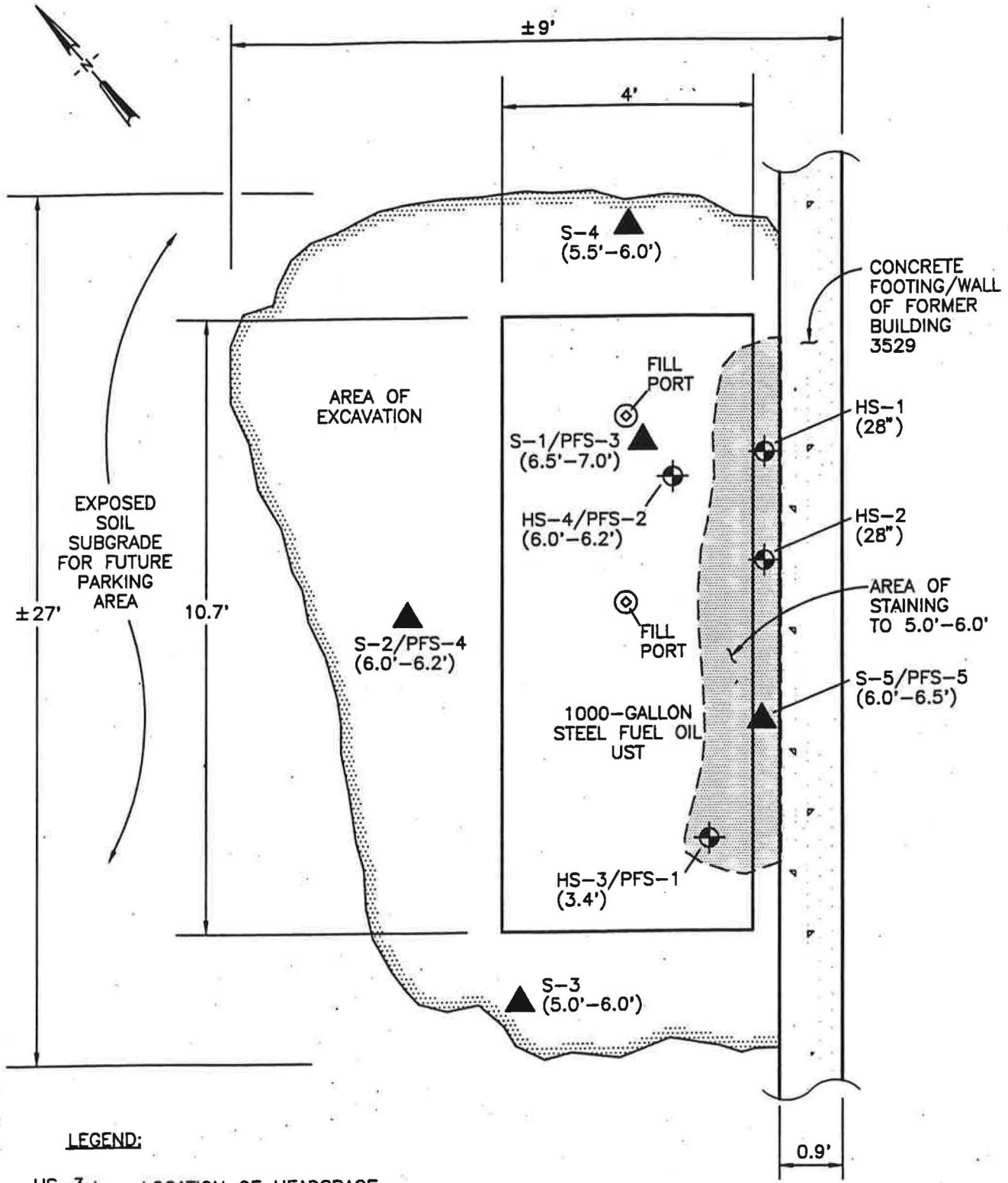
FIGURE 1



LEGEND:

HS-3 ⊕ LOCATION OF HEADSPACE GRAB SAMPLE

S-2 ▲ LOCATION OF CONFIRMATORY GRAB SAMPLE

(6.0'-6.2') DEPTH IN PARENTHESES

PFS-2 INDICATES PETROFLAG SCREENING SAMPLE ALSO OBTAINED

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RELEASE ABATEMENT MEASURE
BUILDING 3529
UST 3529X
DEVENS, MASSACHUSETTS

SITE PLAN

NOT TO SCALE

AUGUST 1997

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FIGURE 2

APPENDIX A

Copy of Transmittal Form BWSC-106 and LSP Opinion

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 11210

A. SITE LOCATION:

Site Name: (optional) Devens, Massachusetts

Street: Building No. 3529 Location Aid: Queenstown Rd. and Dakota St.

City/Town: Devens ZIP Code: 01433-9999

☐ Check here if a Tier Classification Submittal has been provided to DEP for this Release Tracking Number.

Related Release Tracking Numbers That This RAM or URAM Addresses: _____

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

☐ Submit a **RAM Plan** (complete Sections A, B, C, D, E, F, J, K, L and M).

☐ Check here if this RAM Plan is an update or modification of a previously approved written RAM Plan. Date Submitted: _____

☐ Submit a **RAM Status Report** (complete Sections A, B, C, E, J, K, L and M).

☑ Submit a **RAM Completion Statement** (complete Sections A, B, C, D, E, G, J, K, L and M).

☐ Confirm or Provide **URAM Notification** (complete Sections A, B, H, K, L and M).

☐ Submit a **URAM Status Report** (complete Sections A, B, C, E, J, K, L and M).

☐ Submit a **URAM Completion Statement** (complete Sections A, B, C, D, E, I, J, K, L and M).

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. SITE CONDITIONS:

☑ Check here if the source of the Release or Threat of Release is known.

If yes, check all sources that apply: ☑ UST ☐ Pipe/Hose/Line ☐ AST ☐ Drums ☐ Transformer ☐ Boat

☐ Tanker Truck ☐ Vehicle ☐ Other Specify: _____

Identify Media and Receptors Affected: (check all that apply) ☐ Air ☐ Groundwater ☐ Surface Water ☐ Sediments ☑ Soil

☐ Wetlands ☐ Storm Drain ☐ Paved Surface ☐ Private Well ☐ Public Water Supply ☐ Zone 2 ☐ Residence

☐ School ☐ Unknown ☐ Other Specify: _____

Identify Release and/or Threat of Release Conditions at Site: (check all that apply)

☐ 2 and 72 Hour Reporting Condition(s) ☐ 120 Day Reporting Condition(s) ☐ Other Condition(s)

Describe: RAM was implemented in accordance with the Massachusetts Government Land Bank's Closure Protocol" (Amendment to Tier IA Permit No. 84890, dated 14 June 1996.

RAMs may be conducted concurrently with an IRA only with written DEP approval
URAMs may not be conducted if any 2 or 72 Hour conditions exist at the site.

Identify Oils and Hazardous Materials Released: (check all that apply) ☑ Oils ☐ Chlorinated Solvents ☐ Heavy Metals

☐ Others Specify: Release did not exceed MCP Reportable Concentrations.

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

☐ Assessment and/or Monitoring Only

☑ Excavation of Contaminated Soils

☑ Re-use, Recycling or Treatment

◉ On Site ○ Off Site Est. Vol.: 30 cubic yards

Describe: _____

☐ Store ○ On Site ○ Off Site Est. Vol.: _____ cubic yards

☐ Deployment of Absorbant or Containment Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor Extraction

☐ Structure Venting System

☐ Product or NAPL Recovery

SECTION D IS CONTINUED ON THE NEXT PAGE.

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 11210

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

- ☐ Landfill ◯ Cover ◯ Disposal Est. Vol.: _____ cubic yards
- ☑ Removal of Drums, Tanks or Containers
  - Describe: One 1,000-gal. UST (fuel oil) was removed
- ☑ Removal of Other Contaminated Media
  - Specify Type and Volume: 909 gal.virgin #2 fuel oil and
- ☐ Other Response Actions Describe: 3 gallons fuel oil sludge was removed.
- ☐ Groundwater Treatment Systems
- ☐ Air Sparging
- ☐ Temporary Water Supplies
- ☐ Temporary Evacuation or Relocation of Residents
- ☐ Fencing and Sign Posting

See 310 CMR 40.0442 for limitations on the scope and type of RAMs.
See 310 CMR 40.0464 for performance standards for URAMs.

☐ Check here if this RAM or URAM involves the use of Innovative Technologies. DEP is interested in using this information to aid in creating an Innovative Technologies Clearinghouse.

Describe Technologies: _____

E. TRANSPORT OF REMEDIATION WASTE: (if Remediation Waste has been sent to an off-site facility, answer the following questions)

Name of Facility: Environmental Compliance Corp.; Pollution Control Industries

Town and State: Stoughton, MA East Chicago, Illinois

Quantity of Remediation Waste Transported to Date: 909 gals. #2 fuel oil;2 drums oily debris/#2 oil sludge.

F. RAM PLAN:

☐ Check here if this RAM Plan received previous oral approval from DEP as a continuation of a Limited Removal Action (LRA).

Date of Oral Approval: _____

☐ If a RAM Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment. See 310 CMR 40.0444(2) to learn when a fee is not required.

☐ Check here if the RAM Plan is proposed for a Transition Site. If this is the case, you may need to attach an LSP Evaluation Opinion prior to undertaking the RAM, if not previously provided. See 310 CMR 40.0600 for further information about Transition Sites.

G. RAM COMPLETION STATEMENT:

☐ If a RAM Compliance Fee is required in connection with submission of the RAM Completion Statement, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment. You owe this fee when submitting a RAM Completion Statement if you received oral approval of a RAM that continued an LRA, and have NOT previously submitted a RAM Plan and accompanying fee.

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the RAM Completion Statement, you must submit a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the RAM Completion Statement.

H. URAM NOTIFICATION:

Identify Location Type: (check all that apply) ☐ Public Right of Way ☐ Utility Easement ☐ Private Property

Identify Utility Type: (check all that apply) ☐ Sanitary/Combined Sewerage ☐ Water ☐ Drainage ☐ Natural Gas

☐ Telephone ☐ Steam Lines ☐ Telecommunications ☐ Electric ☐ Other Specify: _____

☐ Check here if you provided DEP with previous oral notification of this URAM. Date of Oral Notice: _____

☐ Check here if the property owner was NOT contacted prior to initiation of the URAM. If this is the case, you must attach an explanation of why the owner was not contacted, including the date and time when contact ultimately occurred.

☐ Check here if this URAM will occur in connection with the construction of new public utilities. If this is the case, document the nature and extent of encountered contamination, the scope and expense of necessary mitigation and the benefits amd limitations of project alternatives.

With the exception stated below, the person undertaking the URAM must provide the name and license number of an LSP engaged or employed in connection with the URAM:

LSP Name: _____ LSP License Number: _____

LSP information is not required if the URAM is limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated either by a Hazardous Material or a mixture of a Hazardous Material and Oil.

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 11210

I. URAM COMPLETION STATEMENT:

☐ Check here if this URAM was limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated by either a Hazardous Material or a mixture of a Hazardous Material and Oil.

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the URAM Completion Statement, you must submit either a Release Abatement Measure (RAM) Plan or a Phase IV Remedy Implementation Plan, along with the appropriate transmittal form, as an attachment to the URAM Completion Statement.

J. LSP OPINION:

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

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

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

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

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: Deborah H. Gevalt LSP #: 9290 Stamp:

Telephone: 617-494-4910 Ext.: 451

FAX: (optional) 617-577-8142

Signature: Deborah H. Gevalt

Date: 8/8/97

An LSP Opinion is not required for a Utility-Related Abatement Measure Notification.

An LSP Opinion is not required for a URAM Completion Statement if the URAM is limited to the excavation and/or handling of not more than 100 cubic yards of soil contaminated by Oil, or not more than 20 cubic yards of soil contaminated either by Hazardous Material or a mixture of Hazardous Material and Oil.

K. PERSON UNDERTAKING RAM OR URAM:

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

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

Street: 43 Buena Vista Street, P-12

City/Town: Devens State: MA ZIP Code: 01433-9999

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

☐ Check here if there has been a change in person undertaking the RAM or URAM.

Massachusetts Department of Environmental Protection **BWSC-106**
Bureau of Waste Site Cleanup

RELEASE & UTILITY-RELATED ABATEMENT MEASURE (RAM & URAM) TRANSMITTAL FORM

Pursuant to 310 CMR 40.0444 - 0446 and 310 CMR 40.0462 - 0465 (Subpart D)

Release Tracking Number: 2 11210

L. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RAM or URAM: (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 Undertaking RAM or URAM Specify Relationship: _____

M. CERTIFICATION OF PERSON UNDERTAKING RAM OR URAM:

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: RJOstrowski (signature) Title: Environmental Manager

For: Devens Commerce Center/MA Gov't Land Bank (print name of person or entity recorded in Section K) Date: 6/20/97

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

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.

Attachment to Section J

The Response Actions on which the LSP Opinion in Section J of Transmittal Form BWSC-106 are based, are subject to the conditions of Administrative Consent Order ACO-CE-96-3001, dated 20 May 1996, and Tier IA Permit No. 84890, issued on 16 May 1996.

Verbal approval of the RAM Plan implementation (prepared by Haley & Aldrich on behalf of the Massachusetts Government Land Bank) was given by DEP-CERO representative Mr. John Regan on 22 May 1997. Letter approval of the RAM Plan implementation was provided by DEP-CERO Environmental Analyst Mr. David Salvadore, dated 28 May 1997.

F:\10884\055\ATTRAMJ.WPF

APPENDIX B

Manifests, UST Disposal Documentation and Fire Department Permit

DEVENS
COMMERCE
CENTER

43 Buena Vista Street Devens, MA 01433 Tel: 508-772-6340 Fax: 508-772-7577 http://www.devenscenter.com

June 16, 1997

Commonwealth of Massachusetts
Department of Environmental Protection
Division of Hazardous Material
One Winter Street
Boston, MA 02108

Subject: Incorrect Information Sections #1 & #3, Manifest #MA J 306326

Dear Sir or Madam:

The information listed in sections #1 and 3 on manifest #MA J 306326 (copy attached) is incorrect. Please accept this letter as notification of the error and a request for you to correct your copies follows:

- Section #1 Generator's US EPA # MA5087726340

- Section #3 Generator's Name and Mailing Address:
  Devens Commerce Center
  43 Buena Vista Street
  Devens, MA 01433
  Attn: Ron Ostrowski

Should you require any additional information or if I can be of any further assistance, please do not hesitate to contact this office.

Sincerely,

RJ Ostrowski
Ronald J. Ostrowski
Environmental Management

RO/mas

Encl: (1)

cc: Triumvirate Environmental, Inc., w/encl.
Environmental Compliance Corp., w/encl.
Gail Miller, DRFTA, w/encl.

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

Robbins Rd.

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MA7210025154
Manifest Document No.: 75871
2. Page 1 of
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: MA J 306326
B. State Gen ID: SAME
C. State Trans. ID: MA37494
D. Transporter's Phone (617) 6...-0090
E. State Trans. ID
F. Transporter's Phone ( )
G. State Facility's ID: NOT REQUIRED
H. Facility's Phone (617) 297-3530

3. Generator's Name and Mailing Address
Devens RFTA
AFRC-FMD-DPW-EM-Box 19
Devens MA 01433-5190
4. Generator's Phone: 508 796-2393

5. Transporter 1 Company Name: TRIUMVIRATE ENVIRONMENTAL, INC.
6. US EPA ID Number: MAD985226098
7. Transporter 2 Company Name
8. US EPA ID Number

9. Designated Facility Name and Site Address
Environmental Compliance Corp.
441R Canton Street
Stoughton MA 02072
10. US EPA ID Number: MAD062179890

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers NO.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Other regulated substances, liquid, n.o.s. 9, NA3082, PG III ... ERG# 31	001	TT	00909	G	MA01
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)
a. L) #2 Oil 100% ...

K. Handling Codes for Wastes Listed Above
a. T35

15. Special Handling Instructions and Additional Information
ER# 800-966-9232
Approval# 0560 Contact Ed Goode

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: RJO Ostrowski — Date (Month Day): 05 30 01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Paul J. Harrison — Signature: Paul J. Harrison — Date (Month Day): 05 30 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Date (Month Day)

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: Richard Stonkus — Signature: Richard Stonkus — Date (Month Day): 05 30 01

In case of emergency or spill, immediately call the National Response ... 4-8802.

Form Approved OMB No. 2050-0039. Expires 9-30-96
EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY>3: FACILITY MAILS TO GENERATOR

ENVIRONMENTAL
COMPLIANCE
CORPORATION

CERTIFICATE OF DISPOSAL/RECYCLING

Manifest #: MAJ 306326

This is to certify that the material received from your facility has been managed at Environmental Compliance Corporation (ECC) or another licensed facility which has been approved by ECC in accordance with all applicable federal, state, and local laws, statutes, and regulations.

Recyclable material has been blended for use in accordance with all applicable federal, state, and local statutes, laws and regulations at ECC, a licensed facility.

All materials consolidated at ECC and subsequently shipped to another licensed facility for treatment and disposal, shall be identified as being generated by ECC.

ECC shall indemnify the generator from any claims as result of damage to any property, contamination of, or adverse effects on the environment, any violation of governmental laws, regulations, or orders, caused by treatment and disposal of the material specified on this manifest.

Waste Description	Treatment/Disposal Method	Facility
Combustible Liquids Oils n.o.s. NA 1270 MA 97/98/01	909 gal T35	ECC 441R Canton St. Stoughton, MA 02072

Authorized by:

Wanda M. Kopcych

Wanda M. Kopcych
Administrative/Compliance
Coordinator

Date: 5/21/97

DIVISION OF HAZARDOUS MATERIALS
One Winter Street Boston, Massachusetts 02108

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
MA7210025154	76371		

3. Generator's Name and Mailing Address
Devens RFTA
AFRC-FMD-EPM-EM-Box 19
Devens MA 01433-5190
4. Generator's Phone ( ) 508 796-2393

A. State Manifest Document Number: MA J 306326
B. State Gen ID:
C. State Trans. ID: MA37494
D. Transporter's Phone ( )
E. State Trans. ID (617) 828-8090
F. Transporter's Phone ( )
G. State Facility's ID NOT REQUIRED
H. Facility's Phone (617) 297-8530

5. Transporter 1 Company Name: TRIUMVIRATE ENVIRONMENTAL, INC.
6. US EPA ID Number: MAD980550080
7. Transporter 2 Company Name:
8. US EPA ID Number:

9. Designated Facility Name and Site Address
Environmental Compliance Corp.
441R Canton Street
Stoughton MA 02072
10. US EPA ID Number: MAD062170330

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers NO.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. Other regulated substances, liquid, n.o.s. 9, NA3082, PG III ERG# 31 (011)	001	TT	00909	G	MA01
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)
(L) #2 Oil 100%

K. Handling Codes for Wastes Listed Above
a. c. b. d.

15. Special Handling Instructions and Additional Information
ER# 800-966-9282
a.Approval# 0560 Contact Ed Goode

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)
RONALD J. OSTROWSKI	RJ Ostrowski	6 10 96

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Paul J. Harrison	Paul J. Harrison	6 10 96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

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)

GENERATOR

FACILITY

In case of emergency or spill, immediately call the National Response Center (800) 424-8802.

Form Approved OMB No. 2050-0039. Expires 9-30-96
EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY>8: GENERATOR RETAINS

...nmental, Inc. P.O. Box 136 Boston, MA 02143-0003 Tel 800 966-9282 Fax 617 628-8099 WPS#: 0500
...Specialists Facility: 63 Inner Belt Road Somerville, MA 02143

WASTE PROFILE SHEET

3529X
Robbins Rd.

...ERATOR INFORMATION

...or: Lowell DFTA Bill to: TFI SIC Code: ____

...s: AFRC-FMB, DPW-EM-Bxl9 Customer Contact: ____ Title: ____

Lowell, MA 01453-5... Customer Phone: ____ Fax: ____

...cation: ?AM? EPA/State ID#: MA7210025159

...al Contact: Bill Parkin Phone: ...-274-4701 Sales Rep: ____

...ERAL WASTE INFORMATION *This Item MUST be Completed!*

...Generating Waste: Tank pump out

...or's Common Name for Waste: #2 Oil

...SICAL CHARACTERISTICS OF WASTE Physical State @ 70F (check all that apply)

...k viscous liquid (sludge) ☐ solid without free liquids # Layers: ☒ 1 ☐ 2 ☐ ≥3 #____

...id with no suspended solids ☐ liquid/solid mixture % Water: ☒ <5 ☐ 5 - 10 ☐ 11-20 ☐ >20 (approx. ____%)

✓ % liquid ____ % solid ☐ Pourable ☐ Pumpable ☐ Dumpable

...	☐ none	☒ mild	☐ strong	Type: ____	
...nce	☒ clear	☐ opaque		Color(s): ____	
...oint (F)	☐ <73	☐ 73-141	☒ 142-200	☐ >200	☐ NA
...ge	☐ ≤2	☐ 3- 6	☒ 7-9	☐ 10-12	☐ ≥12.5
...gens	☒ <20	☐ 20-50	☐ >50	☐ NA	☐ known: ____
...s in Oil (ppm)	☒ <1000	☐ 1000-4000	☐ >4000	☐ NA	☐ known: ____
... Gravity	☒ <0.8	☐ 0.8-1.0	☐ 1.1-1.7	☐ >1.7	
...ntent (BTU/lb)	☐ <5000	☐ 5000 - 10000	☒ >10000	☐ known: ____	

...ARDOUS CHARACTERISTICS

...izer	☐ Cyanides	☐ Air reactive	☐ Biological	☐ Chrome +6	☐ Chrome +3
...phoric	☐ Sulfides	☐ Elevated temperature	☐ Infectious	☐ F001-F005 solvents (specify under constituents)	
...osive	☐ Water reactive	☐ Other reactive	☐ Radioactive	☐ Other (specify) ____	

...POSITION (include inert components, debris, etc.)

...nic ☐ inorganic *Use specific chemical names when known-do not use trade names*

#2 Oil 100 %

MSDS attached/available? ☐ Yes ☒ No

Sample for analytical? ☐ Yes ☒ No

____ %
____ %
____ %
____ %
____ %
____ %

...MENT METHOD

...lk liquid ☐ Bulk solid ☐ Non-bulk Container *Type* ☐ metal drum ☐ fiber drum ☐ poly drum ☐ other: ____

...portation By: ☒ Highway ☐ Rail

...CIPATED VOLUME

...200 ☒ gals ☐ lbs ☐ yd^3 ☐ tons ☐ other: ____

per ☒ one time ☐ month ☐ quarter ☐ year ☐ other: ____

...ERATOR'S CERTIFICATION

...certify that the above information, including that which is attached hereto is complete and accurate to the best of my knowledge and ability to ...e, that no deliberate or willful omission or misrepresentation of composition or properties exists, and that all known or suspected hazards have been ... I further certify that the material if tested is representative of the material to be managed as waste.

5/20/97 Generator's Signature: R J Ostrowski

Land Disposal Restriction Notification Form 1

Generator Name / Location DRUMS RFTA

EPA ID Number MA7210025754 Manifest Number MAJ306326

Waste Analysis Available _____ Yes ✓ No _____ On file at facility

PROFILE #	RCRA NON-REGULATED please check if waste stream is not regulated by RCRA	RCRA WASTE CODES (List all that apply)	SUBCATEGORY (See Table II and Select Key # if Applicable)	TREATABILITY GROUP Please check the applicable treatability group.		CALIFORNIA LIST WASTES	REGULATED CONSTITUENTS FOR D001*, D002, D012-D043 F001-F005 & F039
				Nonwastewater >1% TOC & >1% TSS	Wastewater	List all applicable constituents from key below	List all applicable constituents from Table 1 and/or key below
a	b	c	d	e	f	g	h
0560	P						

CALIFORNIA LIST WASTE (for Column g)

1) PCB > = 50 ppm
2) Halogenated Organic Carbon (HOC's) > = 1000 mg/l
3) Nickel (Ni) > = 134 mg/l
4) Thallium (TI) > = 130 mg/l

REGULATED CONSTITUENTS FOR F001, F002, F003, F004, F005, (for Column h)

5) Acetone
6) Benzene
7) N-Butly Alcohol
8) Carbon Disulfide
9) Carbon Tetrachloride
10) Chlorobenzene
11) Cresols (o,m, or p isomers)
12) Cresylic Acid
13) Cyclohexanone
14) 1,2-Dichlorobenzene
15) Ethyl Acetate
16) Ethyl Benzene
17) Ethyl Ether
18) Isobutanol (Isobutyl alcohol)
19) Methanol
20) Methylene Chloride
21) Methyl Ethyl Ketone
22) Methyl Isobutyl Ketone
23) Nitrobenzene
24) Pyridine
25) Tetrachloroethylene
26) Toluene
27) 1,1,1 Trichloroethane
28) 1,1,2 Trichloroethane
29) 1,1,2 Trichloro 1,2,2 Trifluoroethane
30) Trichloroethylene
31) Trichlorofluoromethane
32) Xylene (Total)

I certify under penalty of law that the above information is accurate and true.

Signature RJ Ostrowski Print Name RONALD J. OSTROWSKI Date 5/20/97

...mvirate Environmental, Inc.
Hazardous Waste Specialists 63 Inner Belt Rd. Somerville, MA 02143 Tel.(800) 966-9282 Fax (617) 628-8099

LAB PACK / LOAD SHEET

JOB #: 7687 DATE: 5/20/97 TIME On-Site: 2:15 PM CREW: P. Harrison Vehicle #: 121

Generator: Devens RFTA
Site Address: AFRC-FMD-DPW-EM-Bldg 19 Devens MA.
Contact: Gail Miller
Tel: (508) 796-2393
EPA ID#: MA7210025154

3529 x Robbins Rd,

WASTE GENERATED #2 oil + Water

Proper Shipping Name or Waste Stream (attach)	Qty x Size (list weights for reactives and Hg)	Manifest Number	Approval Code	Drum Count
Bulks				
#2 oil + Water	909 gallons	76871	0560	70 gal.
Non-Bulks				

MATERIALS

Load	Used	Materials	Load	Used	Materials
		55 DM-open top			5 POLY Pail
		55 DM-closed top			Overpack sz:
		55 DF			Drum Liners
		30 DF			POLY Sheeting
		20 DF			Absorbent
		55 POLY			Vermiculite
		30 POLY			Other:
		15 POLY			

CREW HOURS

Personnel	Load & travel	on-site	travel & unload
Chemist/Supervisor:			
Technicians:			
P. Harrison	1.25	1.50	3.0

Date: _____
Generator: _____
TEI Supervisor: _____

Date: 5/20/97
Generator: R J O'Connell
TEI Driver: Paul J. Harrison

White - TEI copy Canary - Generator Pick-up copy Pink - Dispatch copy Gold - Generator copy

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

3539x

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

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: MA5 [illegible] ~~MA7210025154~~
Manifest Document No.: 78111
2. Page 1 of
Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number: **MA J 306361**
B. State Gen ID

3. Generator's Name and Mailing Address
Devens ~~RFTA~~ Commerce Center
~~AFRC-PMD-DPW-EN-Box 19~~ 43 Buena Vista St
Devens MA 01433-5190
4. Generator's Phone: 508 796-2393 Attn: R. [illegible]

5. Transporter 1 Company Name: TRIUMVIRATE ENVIRONMENTAL, INC.
6. US EPA ID Number: MAD986856966
C. State Trans. ID: SAME MA 14524
D. Transporter's Phone: (617) 628-8098

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
Pollution Control Industries
4343 Kennedy Avenue
East Chicago In 46312
10. US EPA ID Number: IND000646943
G. State Facility's ID: NOT REQUIRED
H. Facility's Phone: (800) 388-7242

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers NO.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON RCRA NON DOT REGULATED	002	DM	00500	P	MA99
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)
a. (S) Oily Debris 100%
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. b. c. d.

15. Special Handling Instructions and Additional Information
ER# 800-966-9282
a. (2x55) 142453 Contact Ed Goode

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	Month	Day	Year
Gerald J. Ostrowski	[signature]	01	17	97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Gary C. Lawton	[signature]	01	17	97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

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	Month	Day	Year

Approved OMB No. 2050-0039. Expires 9-30-96
Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

COPY>8: GENERATOR RETAINS

MA J 306361 COPY>8: GENERATOR RETAINS

...nvirate Environmental, Inc. 63 Inner Belt Rd. Somerville, MA 02143 Tel (800) 966-9282 Fax (617) 628-8099
...ardous Waste Speciali...

LAB PACK / LOAD SHEET

...11 DATE: 6/11/97 TIME On-Site: 2:30 CREW: G.L. Vehicle #:

...erator: Devens ~~RFTA~~ Commerce CTR
Address: ~~AFRC Engr Sc Box~~ 943 Buena Vista St
Devens MA 01433-5190

Contact: RON OSTROWSKI
Tel: (508) 772-6340
EPA ID#: MA508-7726340

ASTE GENERATED

...Proper Shipping Name of Waste Stream	Qty X Size (use weights for reactives and Hg)	Manifest Number	Approval Code	Drive Count
Billing Address:				
EST				
10 Middlesex Turnpk. Rd				
Suite 6-332				
Burlington MA				
01803-4914				
...ulks	MAJ	306361	142453	2X55

...ERIALS

Used	Materials	Load	Used	Materials
	55 DM-open top			5 POLY Pail
	55 DM-closed top			Overpack sz:
	55 DF			Drum Liners
	30 DF			POLY Sheeting
	20 DF			Absorbent
	55 POLY			Vermiculite
	30 POLY			Other:
	15 POLY			

CREW HOURS

Personnel	load travel	on-site	travel/unload
Chemist/Supervisor:			
Technicians:			
G. Lawton	20	.75	1.0

...ator: ______________________
...upervisor: ______________________

Date: 6/11/97
Generator: R J Ostrowski
TEI Driver: Glen A. Lawton

White - TEI copy   Canary - Generator Pick-up copy   Pink - Dispatch copy   Gold - Generator copy

P.O. Box 136, Boston, MA 02143-0003
Phone: (617) 628-8098 Fax: (617) 628-8099

Land Disposal Restriction Notification Form 1

Generator Name / Location Drum - SETA Commerce Center Drums, MA

EPA ID Number MA5087726340 Manifest Number MAT 306361

Waste Analysis Available _____ Yes ✓ No _____ On file at facility

PROFILE #	RCRA NON-REGULATED please check if waste stream is not regulated by RCRA	RCRA WASTE CODES (List all that apply)	SUBCATEGORY (See Table II and Select Key # if Applicable)	TREATABILITY GROUP Please check the applicable treatability group.		CALIFORNIA LIST WASTES	REGULATED CONSTITUENTS FOR D001*, D002, D012-D043 F001-F005 & F039
				Nonwastewater >1% TOC & >1% TSS	Wastewater	List all applicable constituents from key below	List all applicable constituents from Table 1 and/or key below
a	b	c	d	e	f	g	h
14243	X						

CALIFORNIA LIST WASTE (for Column g)

1) PCB > = 50 ppm
2) Halogenated Organic Carbon (HOC's) > = 1000 mg/l
3) Nickel (Ni) > = 134 mg/l
4) Thallium (TI) > = 130 mg/l

REGULATED CONSTITUENTS FOR F001, F002, F003, F004, F005, (for Column h)

5) Acetone
6) Benzene
7) N-Butly Alcohol
8) Carbon Disulfide
9) Carbon Tetrachloride
10) Chlorobenzene
11) Cresols (o,m, or p isomers)
12) Cresylic Acid
13) Cyclohexanone
14) 1,2-Dichlorobenzene
15) Ethyl Acetate
16) Ethyl Benzene
17) Ethyl Ether
18) Isobutanol (Isobutyl alcohol)
19) Methanol
20) Methylene Chloride
21) Methyl Ethyl Ketone
22) Methyl Isobutyl Ketone
23) Nitrobenzene
24) Pyridine
25) Tetrachloroethylene
26) Toluene
27) 1,1,1 Trichloroethane
28) 1,1,2 Trichloroethane
29) 1,1,2 Trichloro 1,2,2 Trifluoroethane
30) Trichloroethylene
31) Trichlorofluoromethane
32) Xylene (Total)

I certify under penalty of law that the above information is accurate and true.

Signature [signature] Print Name DONALD J. OSTROWSKI Date 6/11/97

9705211

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC SAFETY—DIVISION OF FIRE PREVENTION

PERMIT

______ 19

C.91 S.40 M.G.L.

DIG SAFE NUMBER
962901048
Start Date 4/97

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: ENVIOR SERVE INC
Full name of person, firm or Corporation

To transport underground steel storage tank(s)
to Approved tank yard# 14901

State clearly type of inert gas used in steel storage tank

steel tank: ROBIG-CUSHING TRANSPORTING
method

FDID# 17919

Fee paid $ $25.00

Name and address of contractor disposing tank TROMBELLO INC LAWRENCE MA.

Location to which tank will be transported

14901
Approved tank yard#

This permit will expire 5/30 1997

Signature of official granting permit (TITLE) Deputy Fire Chief
(Head of Fire Dept.)

JOHN C. TOMBARELLO & SONS, INC.
207 MARSTON STREET • LAWRENCE, MASS. 01841
TEL. (508) 682-5226 • (508) 682-5227 • FAX (508) 686-6484
BUYERS AND PROCESSORS OF FERROUS AND NON-FERROUS METALS
PRECIOUS METALS AND ELECTRONIC SCRAP
WE ALSO SELL NEW AND USED STRUCTURAL STEEL

DATE MAY 22 1997

SOLD TO

BOUGHT FROM

ADDRESS

QUAN	ARTICLES	RATE	PRICE
	tank #9700522 (1000 gal)		

Back

Tank Data

Gallons 1000

Previous Contents # 2 fuel

Diameter 48" **Length** 10'8"

Date Received 5-22-97

Serial # (if available) _____

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

Tank Removed From:

Robins Pond Rd.
(No. and Street)

Ayer - Ft. Devens.
(City or Town)

Fire Dept. Permit # —

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.

Front.

RECEIPT OF DISPOSAL OF UNDERGROUND STEEL STORAGE TANK

NAME AND ADDRESS OF APPROVED TANK YARD: JOHN C. TOMBARELLO & SONS, 207 MARSTON ST., LAWRENCE, MASS. 01841

APPROVED TANK YARD NO. 009

Tank Yard Ledger 502 CMR 3.03(4) Number: 19700527

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 Enviro Sew 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# 17919 to transport this tank to this yard.

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

SIGNATURE	TITLE	DATE SIGNED
[signature]	CREW	5-22-97

This signed receipt of disposal must be returned to the local head of the fire department FDID# 17919 pursuant to 502 CMR 3:00. (EACH TANK MUST HAVE A RECEIPT OF DISPOSAL)

FORM F.P. 291 (rev. 11/95) (OVER) MASSACHUSETTS STATE FIRE MARSHAL'S OFFICE

ENVIROSERVE, INC.

9111

ACCOUNT NO.			VENDOR 4045 Devens Commerce Center		CHECK NO. 009111	CHECK DATE 6/06/97	
VOUCHER	INVOICE NUMBER	INV. DATE	REFERENCE	INVOICE AMOUNT	AMOUNT PAID	DISCOUNT TAKEN	NET CHECK AMOUNT
7069	2	6/06/97	tank permit	25.00	25.00	.00	25.00
						CHECK TOTAL	25.00

9111

ENVIROSERVE, INC.
8840 WASHINGTON BLVD. STE. D
JESSUP, MD 20794
PH 301-317-0222/0223

MELLON BANK
MELLON BANK (MD) NATIONAL ASSOCIATION
ROCKVILLE, MD 20850
85-7212-2550

CHECK NO.	CHECK DATE	VENDOR NO.
	06/06/97	4045

TWENTY-FIVE AND 00/100 DOLLARS**********************

CHECK AMOUNT
$***********25.00

TO THE ORDER OF
Devens Commerce Center
Attn: Gary Prime
43 Buena Vista Street
Devens, MA 01433

[signature] MP

Security features included. Details on back.

⑈009111⑈ ⑆255072126⑆ 010⑈802⑈008 2⑈

080950/8-92

APPENDIX C

Test Pit Field Log

HALEY & ALDRICH, INC.

ENVIRONMENTAL TEST PIT LOG

Project	UST Removal Bldg 3529 X
City/State	Devens, MA
Client	Devens Commerce Center
Contractor	EnviroServe Burlington, MA
Equipment	Komatsu PC400LC Excavator 2C.Y. Bucket

Test Pit	3529 X
Date	22 MAY 97
Ground El.	± 253
El. Datum	NGVD ?
Weather	Sunny 60's
H&A File No.	10884-049
H&A Rep.	B. MILLER

Groundwater depths/entry rates:
Very slowly @ 6.6 ft. No appreciable accumulation.

Visible contamination of soil/water:
Very slight light gray discoloration along south wall of UST and in soil beneath to 5.5-6', see /// area

Odors:
Very faint fuel oil odor from 2.5' to 6 ft. beneath UST.

Obstructions:
Concrete footing wall from former Building 3529

Bucket decontamination method:
NONE

Remarks:
- No groundwater discoloration, sheens, odors, product observed. No boulders.
- Vertical scale exaggerated to show detail.

Depth (ft)	Field Screening Results (ppm)	Sample ID	Stratum Change Depth (ft)	Description of Materials
				NW — Length (ft) NORTH WALL — SW
				Brown intermixed coarse to fine SAND, little gravel, trace silt, glass, metal specks - GRANULAR FILL -
1			1.3	Orange brown m-f SAND, little silt, roots - LOESS DEPS. -
2			2.0	Light brown stratified medium to fine SAND, grading to fine sandy SILT - GLACIOFLUVIAL/ DELTAIC DEPOSITS -
3				
4			4.0	
6				Light brown stratified fine sandy SILT, with frequent seams & layers of fine SAND. - GLACIOLACUSTRINE DEPOSITS -
7				BOTTOM OF EXPLORATION 7.0 ft.

1,000 GAL STEEL FUEL OIL UST

Slight Staining

Screening device: —

Background reading (ppm) _____

Sample	Depth (ft)	Sample	Depth (ft)
[SEE HEADSPACE SCREENING REPORT]			

Pit depth (ft) 7.0

Pit length x width (ft) 27 x 9

Standing water in completed pit at depth N/E ft measured after 4 hrs. elapsed

APPENDIX D

Laboratory Analytical Data

IEA
An Aquarion Company

IEA, Inc.
149 Rangeway Road
North Billerica, MA 01862

Phone 508·667·1400
Fax 508·667·7871

Mr. Rich Rago
Haley & Aldrich, Inc.
58 Charles Street
Cambridge, MA 02141

June 6, 1997

Dear Mr. Rago:

Please find enclosed the analytical results of the sample(s) received at our laboratory on May 22, 1997. This report contains sections addressing the following information at a minimum:

- sample ID correspondence table
- analytical results
- chain-of-custody (if applicable)
- definitions of data qualifiers and terminology

Client Project #	10884-049	**Client Project Name**	FT. Devens
IEA Report #	H111-157	**Purchase Order #**	N/A

Copies of this analytical report and supporting data are maintained in our files for a minimum of 3 years unless special arrangements are made. Unless specifically indicated, all analytical testing was performed at the IEA-Massachusetts laboratory.

We appreciate your selection of our services and welcome any questions or suggestions you may have relative to this report. Please contact your customer service representative at (508) 667-1400 for any additional information. Thank you for utilizing our services and we hope you will consider us for your future analytical needs.

I have reviewed and approved the enclosed data for final release.

Sincerely,

Michael F. Wheeler, Ph.D.
Laboratory Director

IEA/American Environmental Network (MA)
MA-DEP #MA038

MW/klg

Monroe, Connecticut 203·261·4458
Schaumburg, Illinois 708·705·0740
Whippany, New Jersey 201·428·8181
Cary, North Carolina 919·677·0090

Sample ID Correspondence Table

Client Sample ID	IEA Sample ID
S1	H111-157-01
S2	H111-157-02
S3	H111-157-03
S4	H111-157-04
S5	H111-157-05
Trip Blank	H111-157-06
S6	H111-157-07

IEA
An Aquarion Company

Definitions of Data Qualifiers and Terminology

A number of data qualifiers are widely used within the environmental testing industry and may be utilized in our data reports. The following definitions of these qualifiers are included as a service to our clientele. The majority of the qualifiers have evolved from the EPA contract laboratory program (CLP).

B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to use caution when applying the results of this analyte.

BQL - Below Quantitation Limit indicates the compound was not detected in the sample above the practical quantitation limit.

D - Indicates the compound was diluted below the calibration range.

E - Indicates that the concentration of the specific compound exceeded the calibration range of the instrument for that particular analysis.

J - Indicates an estimated value. The compound is determined to be present in the sample based on GC/MS criteria, but the amount is less than the sample quantitation limit. IEA - MA GC/MS reports do not typically report J - marked results. If requested, J - marked results are provided and the report flagged to verify that the data was appropriately reviewed.

MDL - The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero.

NA - Not applicable or not available.

ND - Indicates the compound or analyte was not detected in the sample above the method detection limit or the practical quantitation limit for the particular analysis.

PQL - The practical quantitation limit is the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine operating conditions.

IEA
An Aquarion Company

CASE NARRATIVE

Report Date: 06/06/97
Client: Haley & Aldrich, Inc.
Project: 10884-049, FT. Devens

Received Date: 05/22/97
IEA Job Number: H111-157

Two EPA Method 8270A reports are enclosed for sample S5(H111-157-05). The initial analysis resulted in surrogate standard recoveries below the method recovery limits. The sample was re-extracted and re-analyzed. Surrogate recoveries upon re-extraction were under control. Target compound results did not change and both analyses were performed within the method specified holding time.

IEA
An Aquarion Company

Analysis Report: MA DEP Extractable Petroleum Hydrocarbons
Draft 1.0

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-01
Project:	10884-049/Ft Devens	Sample:	S1
Report Date:	05/30/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97	By:	DB
Extracted:	05/23/97	Dilution Factor:	1.3
Analyzed:	05/29/97		
Moisture:	20.9 %		

Number	Parameter	PQL mg/kg (dry)	Result mg/kg (dry)
1	C9-C18 Aliphatics	2.08	BQL
2	C19-C36 Aliphatics	2.08	BQL
3	C10-C22 Aromatics	2.08	BQL
4	**EPH Concentration (Total):**	**2.08**	**BQL**

Surrogate Standard Recovery:

Chloro-octadecane (COD)	67	%
Ortho-terphenyl (OTP)	79	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
The C10-C22 aromatic region excludes target PAH analytes.

IEA
An Aquarion Company

Analysis Report: MA DEP Extractable Petroleum Hydrocarbons
Draft 1.0

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-02
Project:	10884-049/Ft Devens	Sample:	S2
Report Date:	05/30/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97	By:	DB
Extracted:	05/23/97	Dilution Factor:	1.3
Analyzed:	05/29/97		
Moisture:	22.1 %		

Number	Parameter	PQL mg/kg (dry)	Result mg/kg (dry)
1	C9-C18 Aliphatics	2.08	21
2	C19-C36 Aliphatics	2.08	10
3	C10-C22 Aromatics	2.08	BQL
4	**EPH Concentration (Total):**	**2.08**	**31**

Surrogate Standard Recovery:

Chloro-octadecane (COD)	66	%
Ortho-terphenyl (OTP)	77	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
The C10-C22 aromatic region excludes target PAH analytes.

IEA
An Aquarion Company

Analysis Report: MA DEP Extractable Petroleum Hydrocarbons
Draft 1.0

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-03
Project:	10884-049/Ft. Devens	Sample:	S3
Report Date:	06/05/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97	By:	DB
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	06/04/97		
Moisture:	18.9 %		

Number	Parameter	PQL mg/kg (dry)	Result mg/kg (dry)
1	C9-C18 Aliphatics	1.92	21
2	C19-C36 Aliphatics	1.92	12
3	C10-C22 Aromatics	1.92	15
4	**EPH Concentration (Total):**	**1.92**	**48**

Surrogate Standard Recovery:

Chloro-octadecane (COD)	71	%
Ortho-terphenyl (OTP)	61	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
The C10-C22 aromatic region excludes target PAH analytes.

IEA
An Aquarion Company

Analysis Report: MA DEP Extractable Petroleum Hydrocarbons
Draft 1.0

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-04
Project:	10884-049/Ft. Devens	Sample:	S4
Report Date:	06/05/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97	By:	DB
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	06/04/97		
Moisture:	19.1 %		

Number	Parameter	PQL mg/kg (dry)	Result mg/kg (dry)
1	C9-C18 Aliphatics	1.92	160
2	C19-C36 Aliphatics	1.92	73
3	C10-C22 Aromatics	1.92	32
4	**EPH Concentration (Total):**	**1.92**	**270**

Surrogate Standard Recovery:

Chloro-octadecane (COD)	61	%
Ortho-terphenyl (OTP)	71	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
The C10-C22 aromatic region excludes target PAH analytes.

IEA
An Aquarion Company

Analysis Report: MA DEP Extractable Petroleum Hydrocarbons
Draft 1.0

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-05
Project:	10884-049/Ft. Devens	Sample:	S5
Report Date:	06/05/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97	By:	DB
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	06/04/97		
Moisture:	16.4 %		

Number	Parameter	PQL mg/kg (dry)	Result mg/kg (dry)
1	C9-C18 Aliphatics	1.92	BQL
2	C19-C36 Aliphatics	1.92	BQL
3	C10-C22 Aromatics	1.92	BQL
4	**EPH Concentration (Total):**	**1.92**	**BQL**

Surrogate Standard Recovery:

Chloro-octadecane (COD)	63	%
Ortho-terphenyl (OTP)	70	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
The C10-C22 aromatic region excludes target PAH analytes.

IEA
An Aquarion Company

IEA Laboratory Results

Client: Haley & Aldrich, Inc.
Project: 10884-049/Ft Devens
Report Date: 05/29/97

IEA ID: H111-157
Received: 05/22/97

IEA #	Client ID	Parameter	Results	Units	PQL	Date Analyzed	Analyst	Method
07	S6	TPH-IR	44	mg/kg (dry)	35	05/29/97	BF	418.1

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-01
Project:	10884-049/Ft. Devens	Sample:	S1
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.2
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	12	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	12	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	12	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	cis-1,2-Dichloroethene	6	BQL
19	trans-1,2-Dichloroethene	6	BQL
20	1,2-Dichloropropane	6	BQL
21	cis-1,3-Dichloropropene	6	BQL
22	trans-1,3-Dichloropropene	6	BQL
23	Ethylbenzene	6	BQL
24	Methylene chloride	6	10B
25	1,1,2,2-Tetrachloroethane	6	BQL
26	Tetrachloroethene	6	BQL
27	Toluene	6	BQL
28	1,1,1-Trichloroethane	6	BQL
29	1,1,2-Trichloroethane	6	BQL
30	Trichloroethene	6	BQL
31	Trichlorofluoromethane	6	BQL
32	Vinyl chloride	12	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-01
Project:	10884-049/Ft. Devens	Sample:	S1

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	120	BQL
34	2-Butanone	120	BQL
35	n-Butylbenzene	6	BQL
36	s-Butylbenzene	6	BQL
37	t-Butylbenzene	6	BQL
38	Carbon disulfide	6	BQL
39	2-Chlorotoluene	6	BQL
40	4-Chlorotoluene	6	BQL
41	1,2-Dibromoethane	6	BQL
42	2-Hexanone	24	BQL
43	Hexachlorobutadiene	6	BQL
44	Isopropylbenzene	6	BQL
45	p-Isopropyltoluene	6	BQL
46	4-Methyl-2-pentanone	24	BQL
47	Methyl-t-butyl ether	6	BQL
48	Naphthalene	60	BQL
49	n-Propylbenzene	6	BQL
50	Styrene	6	BQL
51	1,1,1,2-Tetrachloroethane	6	BQL
52	1,2,3-Trichlorobenzene	6	BQL
53	1,2,4-Trichlorobenzene	6	BQL
54	1,2,4-Trimethylbenzene	6	BQL
55	1,3,5-Trimethylbenzene	6	BQL
56	Vinyl acetate	24	BQL
57	Xylenes	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	85	%
Toluene-d8	107	%
Bromofluorobenzene	87	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
B = Compound in blank

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-02
Project:	10884-049/Ft. Devens	Sample:	S2
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.2
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)	
1	Benzene	6	BQL	
2	Bromodichloromethane	6	BQL	
3	Bromoform	6	BQL	
4	Bromomethane	12	BQL	
5	Carbon tetrachloride	6	BQL	
6	Chlorobenzene	6	BQL	
7	Chloroethane	12	BQL	
8	2-Chloroethylvinyl ether	6	BQL	
9	Chloroform	6	BQL	
10	Chloromethane	12	BQL	
11	Dibromochloromethane	6	BQL	
12	1,2-Dichlorobenzene	6	BQL	
13	1,3-Dichlorobenzene	6	BQL	
14	1,4-Dichlorobenzene	6	BQL	
15	1,1-Dichloroethane	6	BQL	
16	1,2-Dichloroethane	6	BQL	
17	1,1-Dichloroethene	6	BQL	
18	cis-1,2-Dichloroethene	6	BQL	
19	trans-1,2-Dichloroethene	6	BQL	
20	1,2-Dichloropropane	6	BQL	
21	cis-1,3-Dichloropropene	6	BQL	
22	trans-1,3-Dichloropropene	6	BQL	
23	Ethylbenzene	6	BQL	
24	Methylene chloride	6		9B
25	1,1,2,2-Tetrachloroethane	6	BQL	
26	Tetrachloroethene	6	BQL	
27	Toluene	6	BQL	
28	1,1,1-Trichloroethane	6	BQL	
29	1,1,2-Trichloroethane	6	BQL	
30	Trichloroethene	6	BQL	
31	Trichlorofluoromethane	6	BQL	
32	Vinyl chloride	12	BQL	

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-02
Project:	10884-049/Ft. Devens	Sample:	S2

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	120	BQL
34	2-Butanone	120	BQL
35	n-Butylbenzene	6	BQL
36	s-Butylbenzene	6	BQL
37	t-Butylbenzene	6	BQL
38	Carbon disulfide	6	BQL
39	2-Chlorotoluene	6	BQL
40	4-Chlorotoluene	6	BQL
41	1,2-Dibromoethane	6	BQL
42	2-Hexanone	24	BQL
43	Hexachlorobutadiene	6	BQL
44	Isopropylbenzene	6	BQL
45	p-Isopropyltoluene	6	BQL
46	4-Methyl-2-pentanone	24	BQL
47	Methyl-t-butyl ether	6	BQL
48	Naphthalene	60	BQL
49	n-Propylbenzene	6	BQL
50	Styrene	6	BQL
51	1,1,1,2-Tetrachloroethane	6	BQL
52	1,2,3-Trichlorobenzene	6	BQL
53	1,2,4-Trichlorobenzene	6	BQL
54	1,2,4-Trimethylbenzene	6	BQL
55	1,3,5-Trimethylbenzene	6	BQL
56	Vinyl acetate	24	BQL
57	Xylenes	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	78	%
Toluene-d8	102	%
Bromofluorobenzene	81	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
B = Compound in blank

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-03
Project:	10884-049/Ft. Devens	Sample:	S3
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.1
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	6	BQL
2	Bromodichloromethane	6	BQL
3	Bromoform	6	BQL
4	Bromomethane	11	BQL
5	Carbon tetrachloride	6	BQL
6	Chlorobenzene	6	BQL
7	Chloroethane	11	BQL
8	2-Chloroethylvinyl ether	6	BQL
9	Chloroform	6	BQL
10	Chloromethane	11	BQL
11	Dibromochloromethane	6	BQL
12	1,2-Dichlorobenzene	6	BQL
13	1,3-Dichlorobenzene	6	BQL
14	1,4-Dichlorobenzene	6	BQL
15	1,1-Dichloroethane	6	BQL
16	1,2-Dichloroethane	6	BQL
17	1,1-Dichloroethene	6	BQL
18	cis-1,2-Dichloroethene	6	BQL
19	trans-1,2-Dichloroethene	6	BQL
20	1,2-Dichloropropane	6	BQL
21	cis-1,3-Dichloropropene	6	BQL
22	trans-1,3-Dichloropropene	6	BQL
23	Ethylbenzene	6	BQL
24	Methylene chloride	6	BQL
25	1,1,2,2-Tetrachloroethane	6	BQL
26	Tetrachloroethene	6	BQL
27	Toluene	6	BQL
28	1,1,1-Trichloroethane	6	BQL
29	1,1,2-Trichloroethane	6	BQL
30	Trichloroethene	6	BQL
31	Trichlorofluoromethane	6	BQL
32	Vinyl chloride	11	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-03
Project:	10884-049/Ft. Devens	Sample:	S3

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	110	BQL
34	2-Butanone	110	BQL
35	n-Butylbenzene	6	BQL
36	s-Butylbenzene	6	BQL
37	t-Butylbenzene	6	BQL
38	Carbon disulfide	6	BQL
39	2-Chlorotoluene	6	BQL
40	4-Chlorotoluene	6	BQL
41	1,2-Dibromoethane	6	BQL
42	2-Hexanone	22	BQL
43	Hexachlorobutadiene	6	BQL
44	Isopropylbenzene	6	BQL
45	p-Isopropyltoluene	6	BQL
46	4-Methyl-2-pentanone	22	BQL
47	Methyl-t-butyl ether	6	BQL
48	Naphthalene	55	BQL
49	n-Propylbenzene	6	BQL
50	Styrene	6	BQL
51	1,1,1,2-Tetrachloroethane	6	BQL
52	1,2,3-Trichlorobenzene	6	BQL
53	1,2,4-Trichlorobenzene	6	BQL
54	1,2,4-Trimethylbenzene	6	BQL
55	1,3,5-Trimethylbenzene	6	BQL
56	Vinyl acetate	22	BQL
57	Xylenes	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	84	%
Toluene-d8	101	%
Bromofluorobenzene	80	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-04
Project:	10884-049/Ft. Devens	Sample:	S4
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.1
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)	
1	Benzene	6	BQL	
2	Bromodichloromethane	6	BQL	
3	Bromoform	6	BQL	
4	Bromomethane	11	BQL	
5	Carbon tetrachloride	6	BQL	
6	Chlorobenzene	6	BQL	
7	Chloroethane	11	BQL	
8	2-Chloroethylvinyl ether	6	BQL	
9	Chloroform	6	BQL	
10	Chloromethane	11	BQL	
11	Dibromochloromethane	6	BQL	
12	1,2-Dichlorobenzene	6	BQL	
13	1,3-Dichlorobenzene	6	BQL	
14	1,4-Dichlorobenzene	6	BQL	
15	1,1-Dichloroethane	6	BQL	
16	1,2-Dichloroethane	6	BQL	
17	1,1-Dichloroethene	6	BQL	
18	cis-1,2-Dichloroethene	6	BQL	
19	trans-1,2-Dichloroethene	6	BQL	
20	1,2-Dichloropropane	6	BQL	
21	cis-1,3-Dichloropropene	6	BQL	
22	trans-1,3-Dichloropropene	6	BQL	
23	Ethylbenzene	6	BQL	
24	Methylene chloride	6		9B
25	1,1,2,2-Tetrachloroethane	6	BQL	
26	Tetrachloroethene	6	BQL	
27	Toluene	6	BQL	
28	1,1,1-Trichloroethane	6	BQL	
29	1,1,2-Trichloroethane	6	BQL	
30	Trichloroethene	6	BQL	
31	Trichlorofluoromethane	6	BQL	
32	Vinyl chloride	11	BQL	

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-04
Project:	10884-049/Ft. Devens	Sample:	S4

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	110	BQL
34	2-Butanone	110	BQL
35	n-Butylbenzene	6	BQL
36	s-Butylbenzene	6	BQL
37	t-Butylbenzene	6	BQL
38	Carbon disulfide	6	BQL
39	2-Chlorotoluene	6	BQL
40	4-Chlorotoluene	6	BQL
41	1,2-Dibromoethane	6	BQL
42	2-Hexanone	22	BQL
43	Hexachlorobutadiene	6	BQL
44	Isopropylbenzene	6	BQL
45	p-Isopropyltoluene	6	BQL
46	4-Methyl-2-pentanone	22	BQL
47	Methyl-t-butyl ether	6	BQL
48	Naphthalene	55	BQL
49	n-Propylbenzene	6	BQL
50	Styrene	6	BQL
51	1,1,1,2-Tetrachloroethane	6	BQL
52	1,2,3-Trichlorobenzene	6	BQL
53	1,2,4-Trichlorobenzene	6	BQL
54	1,2,4-Trimethylbenzene	6	BQL
55	1,3,5-Trimethylbenzene	6	BQL
56	Vinyl acetate	22	BQL
57	Xylenes	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	77	%
Toluene-d8	91	%
Bromofluorobenzene	74	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
B = Compound in blank

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-05
Project:	10884-049/Ft. Devens	Sample:	S5
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.1
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)	
1	Benzene	6	BQL	
2	Bromodichloromethane	6	BQL	
3	Bromoform	6	BQL	
4	Bromomethane	11	BQL	
5	Carbon tetrachloride	6	BQL	
6	Chlorobenzene	6	BQL	
7	Chloroethane	11	BQL	
8	2-Chloroethylvinyl ether	6	BQL	
9	Chloroform	6	BQL	
10	Chloromethane	11	BQL	
11	Dibromochloromethane	6	BQL	
12	1,2-Dichlorobenzene	6	BQL	
13	1,3-Dichlorobenzene	6	BQL	
14	1,4-Dichlorobenzene	6	BQL	
15	1,1-Dichloroethane	6	BQL	
16	1,2-Dichloroethane	6	BQL	
17	1,1-Dichloroethene	6	BQL	
18	cis-1,2-Dichloroethene	6	BQL	
19	trans-1,2-Dichloroethene	6	BQL	
20	1,2-Dichloropropane	6	BQL	
21	cis-1,3-Dichloropropene	6	BQL	
22	trans-1,3-Dichloropropene	6	BQL	
23	Ethylbenzene	6	BQL	
24	Methylene chloride	6		8B
25	1,1,2,2-Tetrachloroethane	6	BQL	
26	Tetrachloroethene	6	BQL	
27	Toluene	6	BQL	
28	1,1,1-Trichloroethane	6	BQL	
29	1,1,2-Trichloroethane	6	BQL	
30	Trichloroethene	6	BQL	
31	Trichlorofluoromethane	6	BQL	
32	Vinyl chloride	11	BQL	

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-05
Project:	10884-049/Ft. Devens	Sample:	S5

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	110	BQL
34	2-Butanone	110	BQL
35	n-Butylbenzene	6	BQL
36	s-Butylbenzene	6	BQL
37	t-Butylbenzene	6	BQL
38	Carbon disulfide	6	BQL
39	2-Chlorotoluene	6	BQL
40	4-Chlorotoluene	6	BQL
41	1,2-Dibromoethane	6	BQL
42	2-Hexanone	22	BQL
43	Hexachlorobutadiene	6	BQL
44	Isopropylbenzene	6	BQL
45	p-Isopropyltoluene	6	BQL
46	4-Methyl-2-pentanone	22	BQL
47	Methyl-t-butyl ether	6	BQL
48	Naphthalene	55	BQL
49	n-Propylbenzene	6	BQL
50	Styrene	6	BQL
51	1,1,1,2-Tetrachloroethane	6	BQL
52	1,2,3-Trichlorobenzene	6	BQL
53	1,2,4-Trichlorobenzene	6	BQL
54	1,2,4-Trimethylbenzene	6	BQL
55	1,3,5-Trimethylbenzene	6	BQL
56	Vinyl acetate	22	BQL
57	Xylenes	6	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	81	%
Toluene-d8	96	%
Bromofluorobenzene	81	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
B = Compound in blank

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-07
Project:	10884-049/Ft. Devens	Sample:	S6
Report Date:	05/29/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Analyzed:	05/28/97	Dilution Factor:	1.6
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)	
1	Benzene	8	BQL	
2	Bromodichloromethane	8	BQL	
3	Bromoform	8	BQL	
4	Bromomethane	16	BQL	
5	Carbon tetrachloride	8	BQL	
6	Chlorobenzene	8	BQL	
7	Chloroethane	16	BQL	
8	2-Chloroethylvinyl ether	8	BQL	
9	Chloroform	8	BQL	
10	Chloromethane	16	BQL	
11	Dibromochloromethane	8	BQL	
12	1,2-Dichlorobenzene	8	BQL	
13	1,3-Dichlorobenzene	8	BQL	
14	1,4-Dichlorobenzene	8	BQL	
15	1,1-Dichloroethane	8	BQL	
16	1,2-Dichloroethane	8	BQL	
17	1,1-Dichloroethene	8	BQL	
18	cis-1,2-Dichloroethene	8	BQL	
19	trans-1,2-Dichloroethene	8	BQL	
20	1,2-Dichloropropane	8	BQL	
21	cis-1,3-Dichloropropene	8	BQL	
22	trans-1,3-Dichloropropene	8	BQL	
23	Ethylbenzene	8	BQL	
24	Methylene chloride	8		8B
25	1,1,2,2-Tetrachloroethane	8	BQL	
26	Tetrachloroethene	8	BQL	
27	Toluene	8	BQL	
28	1,1,1-Trichloroethane	8	BQL	
29	1,1,2-Trichloroethane	8	BQL	
30	Trichloroethene	8	BQL	
31	Trichlorofluoromethane	8	BQL	
32	Vinyl chloride	16	BQL	

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-07
Project:	10884-049/Ft. Devens	Sample:	S6

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	160	BQL
34	2-Butanone	160	BQL
35	n-Butylbenzene	8	BQL
36	s-Butylbenzene	8	BQL
37	t-Butylbenzene	8	BQL
38	Carbon disulfide	8	BQL
39	2-Chlorotoluene	8	BQL
40	4-Chlorotoluene	8	BQL
41	1,2-Dibromoethane	8	BQL
42	2-Hexanone	32	BQL
43	Hexachlorobutadiene	8	BQL
44	Isopropylbenzene	8	BQL
45	p-Isopropyltoluene	8	BQL
46	4-Methyl-2-pentanone	32	BQL
47	Methyl-t-butyl ether	8	BQL
48	Naphthalene	80	BQL
49	n-Propylbenzene	8	BQL
50	Styrene	8	BQL
51	1,1,1,2-Tetrachloroethane	8	BQL
52	1,2,3-Trichlorobenzene	8	BQL
53	1,2,4-Trichlorobenzene	8	BQL
54	1,2,4-Trimethylbenzene	8	BQL
55	1,3,5-Trimethylbenzene	8	BQL
56	Vinyl acetate	32	BQL
57	Xylenes	8	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	85	%
Toluene-d8	99	%
Bromofluorobenzene	81	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
B = Compound in blank

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-06
Project:	10884-049/Ft Devens	Sample:	Trip Blank
Report Date:	05/29/97	Type:	Water
Collected:	05/22/97	Container:	VOA
Received:	05/22/97		
Analyzed:	05/27/97	Dilution Factor:	1
By:	WJG		

Number	Priority Pollutant Compounds	PQL (ug/L)	Result (ug/L)
1	Benzene	1	BQL
2	Bromodichloromethane	1	BQL
3	Bromoform	1	BQL
4	Bromomethane	2	BQL
5	Carbon tetrachloride	1	BQL
6	Chlorobenzene	1	BQL
7	Chloroethane	2	BQL
8	2-Chloroethylvinyl ether	1	BQL
9	Chloroform	1	BQL
10	Chloromethane	2	BQL
11	Dibromochloromethane	1	BQL
12	1,2-Dichlorobenzene	1	BQL
13	1,3-Dichlorobenzene	1	BQL
14	1,4-Dichlorobenzene	1	BQL
15	1,1-Dichloroethane	1	BQL
16	1,2-Dichloroethane	1	BQL
17	1,1-Dichloroethene	1	BQL
18	cis-1,2-Dichloroethene	1	BQL
19	trans-1,2-Dichloroethene	1	BQL
20	1,2-Dichloropropane	1	BQL
21	cis-1,3-Dichloropropene	0.5	BQL
22	trans-1,3-Dichloropropene	0.5	BQL
23	Ethylbenzene	1	BQL
24	Methylene chloride	1	BQL
25	1,1,2,2-Tetrachloroethane	1	BQL
26	Tetrachloroethene	1	BQL
27	Toluene	1	BQL
28	1,1,1-Trichloroethane	1	BQL
29	1,1,2-Trichloroethane	1	BQL
30	Trichloroethene	1	BQL
31	Trichlorofluoromethane	1	BQL
32	Vinyl chloride	2	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-06
Project:	10884-049/Ft Devens	Sample:	Trip Blank

	Other TCL Compounds:	PQL (ug/L)	Result (ug/L)
33	Acetone	20	BQL
34	2-Butanone	20	BQL
35	n-Butylbenzene	1	BQL
36	s-Butylbenzene	1	BQL
37	t-Butylbenzene	1	BQL
38	Carbon disulfide	1	BQL
39	2-Chlorotoluene	1	BQL
40	4-Chlorotoluene	1	BQL
41	1,2-Dibromoethane	1	BQL
42	2-Hexanone	10	BQL
43	Hexachlorobutadiene	0.6	BQL
44	Isopropylbenzene	1	BQL
45	p-Isopropyltoluene	1	BQL
46	4-Methyl-2-pentanone	10	BQL
47	Methyl-t-butyl ether	1	BQL
48	Naphthalene	10	BQL
49	n-Propylbenzene	1	BQL
50	Styrene	1	BQL
51	1,1,1,2-Tetrachloroethane	1	BQL
52	1,2,3-Trichlorobenzene	1	BQL
53	1,2,4-Trichlorobenzene	1	BQL
54	1,2,4-Trimethylbenzene	1	BQL
55	1,3,5-Trimethlybenzene	1	BQL
56	Vinyl acetate	10	BQL
57	Xylenes	1	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	95	%
Toluene-d8	98	%
Bromofluorobenzene	89	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:		IEA ID:	Method Blank (05/28)
Project:		Sample:	
Report Date:	05/30/97	Type:	Soil
Collected:		Container:	
Received:			
Analyzed:	05/28/97	Dilution Factor:	1
By:	LSB		

Number	Priority Pollutant Compounds	PQL ug/kg (dry)	Result ug/kg (dry)
1	Benzene	5	BQL
2	Bromodichloromethane	5	BQL
3	Bromoform	5	BQL
4	Bromomethane	10	BQL
5	Carbon tetrachloride	5	BQL
6	Chlorobenzene	5	BQL
7	Chloroethane	10	BQL
8	2-Chloroethylvinyl ether	5	BQL
9	Chloroform	5	BQL
10	Chloromethane	10	BQL
11	Dibromochloromethane	5	BQL
12	1,2-Dichlorobenzene	5	BQL
13	1,3-Dichlorobenzene	5	BQL
14	1,4-Dichlorobenzene	5	BQL
15	1,1-Dichloroethane	5	BQL
16	1,2-Dichloroethane	5	BQL
17	1,1-Dichloroethene	5	BQL
18	cis-1,2-Dichloroethene	5	BQL
19	trans-1,2-Dichloroethene	5	BQL
20	1,2-Dichloropropane	5	BQL
21	cis-1,3-Dichloropropene	5	BQL
22	trans-1,3-Dichloropropene	5	BQL
23	Ethylbenzene	5	BQL
24	Methylene chloride	5	2J
25	1,1,2,2-Tetrachloroethane	5	BQL
26	Tetrachloroethene	5	BQL
27	Toluene	5	BQL
28	1,1,1-Trichloroethane	5	BQL
29	1,1,2-Trichloroethane	5	BQL
30	Trichloroethene	5	BQL
31	Trichlorofluoromethane	5	BQL
32	Vinyl chloride	10	BQL

IEA
An Aquarion Company

Analysis Report: EPA Method 8260A

Client:
Project:

IEA ID: Method Blank (05/28)
Sample:

	Other TCL Compounds:	PQL ug/kg (dry)	Result ug/kg (dry)
33	Acetone	100	BQL
34	2-Butanone	100	BQL
35	n-Butylbenzene	5	BQL
36	s-Butylbenzene	5	BQL
37	t-Butylbenzene	5	BQL
38	Carbon disulfide	5	BQL
39	2-Chlorotoluene	5	BQL
40	4-Chlorotoluene	5	BQL
41	1,2-Dibromoethane	5	BQL
42	2-Hexanone	20	BQL
43	Hexachlorobutadiene	5	BQL
44	Isopropylbenzene	5	BQL
45	p-Isopropyltoluene	5	BQL
46	4-Methyl-2-pentanone	20	BQL
47	Methyl-t-butyl ether	5	BQL
48	Naphthalene	50	BQL
49	n-Propylbenzene	5	BQL
50	Styrene	5	BQL
51	1,1,1,2-Tetrachloroethane	5	BQL
52	1,2,3-Trichlorobenzene	5	BQL
53	1,2,4-Trichlorobenzene	5	BQL
54	1,2,4-Trimethylbenzene	5	BQL
55	1,3,5-Trimethylbenzene	5	BQL
56	Vinyl acetate	20	BQL
57	Xylenes	5	BQL

Surrogate Standard Recovery:

1,2-Dichloroethane-d4	76	%
Toluene-d8	96	%
Bromofluorobenzene	65	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.
J = Approximate result. Quantitation below calibration.
Corresponding Samples: H111-157-01, H111-157-02, H111-157-04, H111-157-05
H111-157-07

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-01
Project:	10884-049/Ft. Devens	Sample:	S1
Report Date:	05/28/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/23/97	Dilution Factor:	1.1
Analyzed:	05/27/97		
By:	LSB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	363	BQL
2	Acenaphthylene	363	BQL
3	Anthracene	363	BQL
4	Benzo(a)anthracene	363	BQL
5	Benzo(a)pyrene	363	BQL
6	Benzo(b)fluoranthene	363	BQL
7	Benzo(g,h,i)perylene	363	BQL
8	Benzo(k)fluoranthene	363	BQL
9	Chrysene	363	BQL
10	Dibenzo(a,h)anthracene	363	BQL
11	Fluoranthene	363	BQL
12	Fluorene	363	BQL
13	Indeno(1,2,3-cd)pyrene	363	BQL
14	Phenanthrene	363	BQL
15	2-Methylnaphthalene	363	BQL
16	Naphthalene	363	BQL
17	Pyrene	363	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	30	%
2-Fluorobiphenyl	45	%
Terphenyl-d14	75	%

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-02
Project:	10884-049/Ft. Devens	Sample:	S2
Report Date:	05/30/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	05/30/97		
By:	LSB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	396	BQL
2	Acenaphthylene	396	BQL
3	Anthracene	396	BQL
4	Benzo(a)anthracene	396	BQL
5	Benzo(a)pyrene	396	BQL
6	Benzo(b)fluoranthene	396	BQL
7	Benzo(g,h,i)perylene	396	BQL
8	Benzo(k)fluoranthene	396	BQL
9	Chrysene	396	BQL
10	Dibenzo(a,h)anthracene	396	BQL
11	Fluoranthene	396	BQL
12	Fluorene	396	BQL
13	Indeno(1,2,3-cd)pyrene	396	BQL
14	Phenanthrene	396	BQL
15	2-Methylnaphthalene	396	BQL
16	Naphthalene	396	BQL
17	Pyrene	396	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	24	%
2-Fluorobiphenyl	41	%
Terphenyl-d14	76	%

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-03
Project:	10884-049/Ft. Devens	Sample:	S3
Report Date:	05/28/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	05/27/97		
By:	LSB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	396	BQL
2	Acenaphthylene	396	BQL
3	Anthracene	396	BQL
4	Benzo(a)anthracene	396	BQL
5	Benzo(a)pyrene	396	BQL
6	Benzo(b)fluoranthene	396	BQL
7	Benzo(g,h,i)perylene	396	BQL
8	Benzo(k)fluoranthene	396	BQL
9	Chrysene	396	BQL
10	Dibenzo(a,h)anthracene	396	BQL
11	Fluoranthene	396	BQL
12	Fluorene	396	BQL
13	Indeno(1,2,3-cd)pyrene	396	BQL
14	Phenanthrene	396	BQL
15	2-Methylnaphthalene	396	BQL
16	Naphthalene	396	BQL
17	Pyrene	396	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	32	%
2-Fluorobiphenyl	51	%
Terphenyl-d14	74	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-04
Project:	10884-049/Ft. Devens	Sample:	S4
Report Date:	05/28/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	05/27/97		
By:	LSB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	396	BQL
2	Acenaphthylene	396	BQL
3	Anthracene	396	BQL
4	Benzo(a)anthracene	396	BQL
5	Benzo(a)pyrene	396	BQL
6	Benzo(b)fluoranthene	396	BQL
7	Benzo(g,h,i)perylene	396	BQL
8	Benzo(k)fluoranthene	396	BQL
9	Chrysene	396	BQL
10	Dibenzo(a,h)anthracene	396	BQL
11	Fluoranthene	396	BQL
12	Fluorene	396	BQL
13	Indeno(1,2,3-cd)pyrene	396	BQL
14	Phenanthrene	396	BQL
15	2-Methylnaphthalene	396	BQL
16	Naphthalene	396	BQL
17	Pyrene	396	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	31	%
2-Fluorobiphenyl	57	%
Terphenyl-d14	74	%

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-05
Project:	10884-049/Ft. Devens	Sample:	S5
Report Date:	05/28/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/23/97	Dilution Factor:	1.2
Analyzed:	05/27/97		
By:	LSB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	396	BQL
2	Acenaphthylene	396	BQL
3	Anthracene	396	BQL
4	Benzo(a)anthracene	396	BQL
5	Benzo(a)pyrene	396	BQL
6	Benzo(b)fluoranthene	396	BQL
7	Benzo(g,h,i)perylene	396	BQL
8	Benzo(k)fluoranthene	396	BQL
9	Chrysene	396	BQL
10	Dibenzo(a,h)anthracene	396	BQL
11	Fluoranthene	396	BQL
12	Fluorene	396	BQL
13	Indeno(1,2,3-cd)pyrene	396	BQL
14	Phenanthrene	396	BQL
15	2-Methylnaphthalene	396	BQL
16	Naphthalene	396	BQL
17	Pyrene	396	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	14	%
2-Fluorobiphenyl	30	%
Terphenyl-d14	68	%

Comments:

PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

IEA
An Aquarion Company

Analysis Report: EPA Method 8270A
Polynuclear Aromatic Hydrocarbons

Client:	Haley & Aldrich, Inc.	IEA ID:	H111-157-05R
Project:	10884-049/Ft Devens	Sample:	S5
Report Date:	06/04/97	Type:	Soil
Collected:	05/22/97	Container:	Glass
Received:	05/22/97		
Extracted:	05/30/97	Dilution Factor:	1.2
Analyzed:	06/02/97		
By:	DB		

Number	Compound	PQL ug/kg (dry)	Result ug/kg (dry)
1	Acenaphthene	396	BQL
2	Acenaphthylene	396	BQL
3	Anthracene	396	BQL
4	Benzo(a)anthracene	396	BQL
5	Benzo(a)pyrene	396	BQL
6	Benzo(b)fluoranthene	396	BQL
7	Benzo(g,h,i)perylene	396	BQL
8	Benzo(k)fluoranthene	396	BQL
9	Chrysene	396	BQL
10	Dibenzo(a,h)anthracene	396	BQL
11	Fluoranthene	396	BQL
12	Fluorene	396	BQL
13	Indeno(1,2,3-cd)pyrene	396	BQL
14	Phenanthrene	396	BQL
15	2-Methylnaphthalene	396	BQL
16	Naphthalene	396	BQL
17	Pyrene	396	BQL

Surrogate Standard Recovery:

Nitrobenzene-d5	38	%
2-Fluorobiphenyl	64	%
Terphenyl-d14	106	%

Comments:
PQL = Practical quantitation limit.
BQL = Below quantitation limit.
Dilution factor adjusted for moisture content of sample.

Haley & Aldrich, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

H&A FILE NO.	10884-049	LABORATORY	IEA Rangeway Rd	DELIVERY DATE	22 MAY 97
PROJECT	UST 3529 x; DEVENS	ADDRESS	Billerica, MA	TURNAROUND TIME	-5 DATS -
H&A CONTACT	RAGO / KASTRINOS	CONTACT	Dave Burns	PROJECT MANAGER	KASTRINOS

H&A SAMPLE NUMBER	DATE	TIME	SAMPLE DEPTH	SAMPLE TYPE	ANALYSES: VOA	ABN	METALS	PEST/PCB	PET ID	EPH EPHHF	O&G	TCLP	TPH IR	PAH			NUMBER OF CONTAINERS
S1	22MAY97	1250	6.5'-7.0	SOIL	///					///				///			4
S2	"	1310	6'-6.2	SOIL	///					///				///			4
S3	"	1315	6-6.5'	SOIL	///					///				///			4
S4	"	1350	5.5'-6.0'	SOIL	///					///				///			4
S5	"	1400	6'-6.5'	SOIL	///					///				///			4
S6	"	1430	COMP.	SOIL	///								///				2
TB-1	"	1500	—	AQ.	///												2

COMMENTS (Special Instructions, Precautions, etc.)

VOA by 8260

EPH Draft Method

PAH - 8270

* 5 DAY TURNAROUND *

FOR S6;
Pending J. Kastrinos confirmation on 23 May
TPH-IR, 418.1
VOC by 8260
* 24 HR TURNAROUND *
DUE 28 MAY 97

TRIP BLANKS:
VOA by 8260
* 5 DAY TURNAROUND *

Sampled and Relinquished by	Received by
Sign Brad Miller	Sign E J Adams
Print BRAD MILLER	Print E J Adams
Firm H+A	Firm IEA
Date 22 MAY 97 Time 1625	Date 22 May Time 16:25
Relinquished by	Received by
Sign	Sign
Print	Print
Firm	Firm
Date Time	Date Time
Relinquished by	Received by
Sign	Sign
Print	Print
Firm	Firm
Date Time	Date Time
Relinquished by	Received by
Sign	Sign
Print	Print
Firm	Firm
Date Time	Date Time

	LIQUID												
VOA Vial													
Glass Bottle													
Plastic Bottle													
Preservative													
Container													
Volume													

	SOLID												
VOA Vial													
Glass Bottle													
Plastic Bottle													
Preservative													
Container													
Volume													

PRESERVATION KEY:
A - Sample chilled B - Sample filtered C - NaOH D - HNO3 E - H2SO4
F - HCl G - NaThiosulfate H - Acidified with

Evidence samples tampered with? Yes No If yes, please explain in comments.