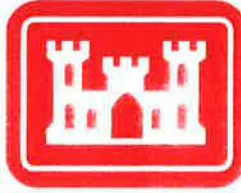


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2-23-98



U.S. Army Corps of Engineers

New England District
Waltham, Massachusetts

RESPONSE ACTION OUTCOME STATEMENT

**Building 3539
Devens, Massachusetts**

VARIOUS REMOVAL ACTIONS

**Contract No. DACW33-95-D-0004
Delivery Order No. 0004
DCN: VRA-010898-AAKA**

January 1998

CY1 of 5

97P-1189

CSV2-9802-2 USA **WESTON**
MANAGERS DESIGNERS/CONSULTANTS

CSV2-9802_2

**RESPONSE ACTION OUTCOME STATEMENT
BUILDING 3539
DEVENS, MASSACHUSETTS**

**Contract No. DACW33-95-D-0004, Delivery Order No. 0004
DCN: VRA-010898-AAKA**

January 1998

Prepared for

**U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
424 Trapelo Road
Waltham, Massachusetts 02254-9149**

Prepared by

**Roy F. Weston, Inc.
Devens, Massachusetts 01433**

Work Order No. 03886-118-204

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**APPENDIX A CONFIRMATORY SOIL SAMPLE AND STOCKPILE
ANALYTICAL DATA**

**APPENDIX B COPY OF RESPONSE ACTION OUTCOME TRANSMITTAL
FORM (BWSC-104)**

1.0 INTRODUCTION

Roy F. Weston, Inc. (WESTON®), under Contract No. DACW-33-95-D-0004, Delivery Order No. 0004 with the U.S. Army Corps of Engineers, New England District (CENEA), conducted a Release Abatement Measure (RAM) at the Building 3539 site at Devens, Massachusetts in May 1997. A locus map showing the location of the site at Devens is shown in Figure 1. WESTON conducted the RAM as a continuation of a RAM initiated by Devens Commerce Center (DCC) and their consultant, SEA Consultants, Inc. The RAM was initiated by DCC to remove an Underground Storage Tank (UST) at the Site. Underground storage tank (USTs) removals and associated response actions at Devens are managed by DCC in accordance with a Memorandum of Agreement (MOA) between DCC and the Devens Reserve Forces Training Area (RFTA). Based on the provisions of the MOA, DCC transferred responsibility for completion of the RAM at Building 3539 back to RFTA upon discovering a quantity of contaminated soil which was expected to be greater than 100 cubic yards, and a petroleum sheen on the water surface in the UST excavation. Subsequently, and in accordance with the MOA, the RAM was completed by the RFTA. A RAM Completion Report for the subject site was previously submitted to the MADEP by WESTON in August 1997. The site data developed during the RAM is provided as support documentation in this RAO Statement.

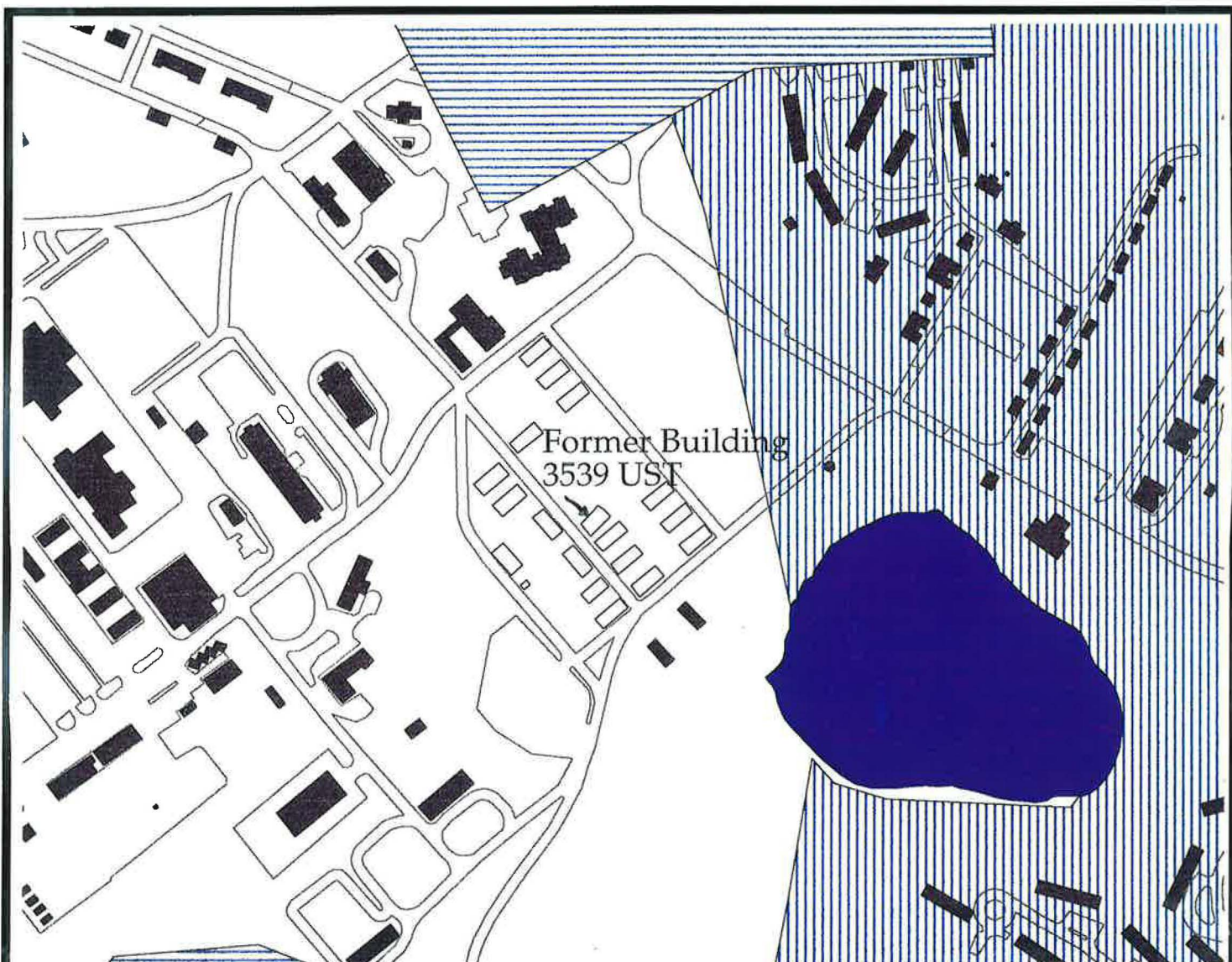
Building 3539, located off Barnum Road, was a former barracks facility used by the military. The site included an underground storage tank (UST) that was likely used for heating the building. The site is generally flat, and is located approximately 500 feet west of Robbins Pond.

The following Response Action Outcome (RAO) Statement presents a summary of the RAM conducted at the site, the findings and conclusions of a Method 1 Risk Assessment (RA), and conclusions regarding the achievement of a Permanent Solution and a Class A-2 RAO.

2.0 DESCRIPTION OF THE RELEASE

Prior to the RAM, no known release was documented. An underground storage tank (UST) was discovered at the site during the construction of a concrete foundation. The tank contained material identified as fuel oil. The contents of the tank were pumped on April 25, 1997 by EnviroServe, Inc. Approximately 940 gallons of fuel were removed. No water was evident in the fuel and therefore it was assumed that the tank walls were not compromised.

The UST was cleaned and removed by EnviroServe, Inc. under observation by SEA. During the removal of the tank, SEA personnel detected visual and olfactory evidence indicating the presence of soil impacted by fuel oil. In addition, a small pipe was discovered and was likely part of the inlet piping system for the tank. Overflow and spillage during tank filling are possible causes of contamination in the soils immediately surrounding the tank.



0.1 0 0.1 0.2 Miles

-  Zone II
-  Robbins Pond
-  Buildings
-  Previously Removed Buildings
-  Roads
-  Potentially Productive Aquifer (High and Medium Yield Aquifer)



SITE LOCATION MAP

BUILDING 3539
DEVENS, MASSACHUSETTS

WESTON
MANAGERS DESIGNERS/CONSULTANTS

FIGURE - 1

3.0 RELEASE ABATEMENT MEASURE

The objectives of the RAM included the excavation, removal, cleaning and disposal of the UST and the excavation and stockpiling of contaminated soil in the area of the former UST.

Confirmatory analyses would be conducted on soil samples collected from the excavation limits.

These soil samples would be characterized for extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH). In addition, the stockpiled soil would be characterized for disposal parameters and, subsequently, the soil would be transported off-site for eventual disposal or recycling at an approved facility.

The UST was excavated, removed and disposed of by SEA Consultants, Inc. (SEA) on April 30, 1997. Approximately 940 gallons of No. 2 fuel oil were pumped out of the tank and disposed of prior to the removal. Water was not evident in the tank contents. The structure of the tank appeared intact upon removal and was not likely a source of contamination to the subsurface soils.

During the excavation of the tank, soil containing petroleum-like odors was encountered. This soil from the immediate vicinity of the tank was excavated and stockpiled. Approximately 30 cubic yards of soil were excavated at that time. The excavation was secured for sampling and additional soil removal if necessary.

A 1-inch pipe was discovered during the excavation of soils immediately surrounding the tank. This pipe was likely the inlet pipe for filling the tank and, therefore, a possible source of contamination in the surrounding soils due to overflows and spills.

WESTON mobilized equipment to the site on May 3, 1997 to complete the excavation of contaminated soil. Equipment at the site included a CAT 325 tracked excavator, a 10-wheel dump truck and a front end loader. Safety equipment included a combustible gas indicator (CGI) and an OVM for personal air monitoring. Additionally, 6-mil polyethylene sheeting (6-mil poly), absorbent pads and booms, and construction fence were available for securing the stockpiled soil and the excavation.

Excavation of additional contaminated soil took place on May 3rd and May 6th. The excavation started within the limits established during the tank removal and extended several feet in each direction away from the former tank location. Soil was excavated based upon the combination of visual and olfactory evidence of contamination and the results of field screening soil samples for total petroleum hydrocarbons (TPH) using a Dexsil PetroFLAG Hydrocarbon Analyzer.

The contaminated soils were excavated in three stages. The initial and secondary excavations occurred on May 3rd and the final stage occurred on May 6th. Each stage began with the excavation of soil based on visual and olfactory evidence of contamination, and resulted in the collection of soil samples for field screening.

The initial and secondary excavations resulted in the detection of additional contamination, as indicated on Table 1. Particularly, the contamination was concentrated in the eastern sidewall and the excavation floor at the 8-9 foot depth. Subsequently, the excavation was continued in the eastern direction and to a depth of 11 feet. After the final excavation, which removed contaminated soil observed in the eastern wall, none of the sidewalls displayed visible signs of

petroleum contamination. Representative samples were then collected from depths of 8 feet for the last round of field screening.

Field screening results for each stage are included in Table 1.

Table 1
Results of Field Screening

Sample Identification	Location	Depth (feet bgs)	TPH (ppm)
Initial Excavation			
NW-1	northern wall	9	10
SW-1	southern wall	8-9	23
WW-1	western wall	8	34
BOT-1	excavation floor	9	1095
Secondary Excavation			
NW-2	northern wall	8-9	0
SW-2	southern wall	8-9	0
EW-1	eastern wall	9-10	881/2,000 ¹
WW-2	western wall	8-9	131
BOT-2	excavation floor	11	37
Final Excavation			
NW-1	northern wall	8	37
SW-1	southern wall	8	58
EW-1	eastern wall	8	66

¹ An additional sample was collected from this wall due to its strong odor

The final excavation limits resulted in soil samples with no olfactory evidence of contamination and field screening results for the samples ranging from 37 - 131 ppm TPH. At this point, the excavation was discontinued and confirmatory samples were collected.

Groundwater did not impact the excavation of soils and therefore no dewatering activities were conducted. During the excavation groundwater was observed at ten feet below ground surface.

A sheen was noticed on the water's surface during the initial phase of the excavation. While additional soil was removed from the 9-11 foot depths, observation of the water's surface indicated a reduction in the sheen. Adsorbent booms and diapers were used to remove the remaining sheen on the water's surface. This sheen is believed to have resulted from mixing of petroleum contaminated soils with the water in the excavation during digging.

The initial excavation of the UST observed and monitored by SEA generated approximately 30 cubic yards (CY) of contaminated soil. An additional 80 CY of soil were excavated on May 3rd and 78 CY were excavated on May 6th. The total estimated volume of contaminated soil excavated from the area is 188 cubic yards. Samples of soil were collected from the sidewalls of the final excavation limits as indicated on Figure 2.

These samples included one composite sample from each sidewall and a duplicate sample. No sample was obtained from the bottom of the excavation due to the presence of groundwater. However, based on the soil TPH screening results obtained after the secondary excavation work which proceeded below the water table, residual soils in the excavation floor (BOT-2) contained low levels of TPH (37 ppm). The confirmatory soil samples were submitted to the Toxicon Corporation, in Bedford, MA for EPH, VPH and total solids analyses.

The results of the analyses indicated no presence of EPH and VPH compounds in the soil samples. The laboratory certificates of analyses are located in Appendix A. The results of analyses are summarized on Table 2.

After confirmatory samples were collected, the UST excavation was backfilled up to pre-existing grade with clean fill from off-site. The backfill was compacted in place.

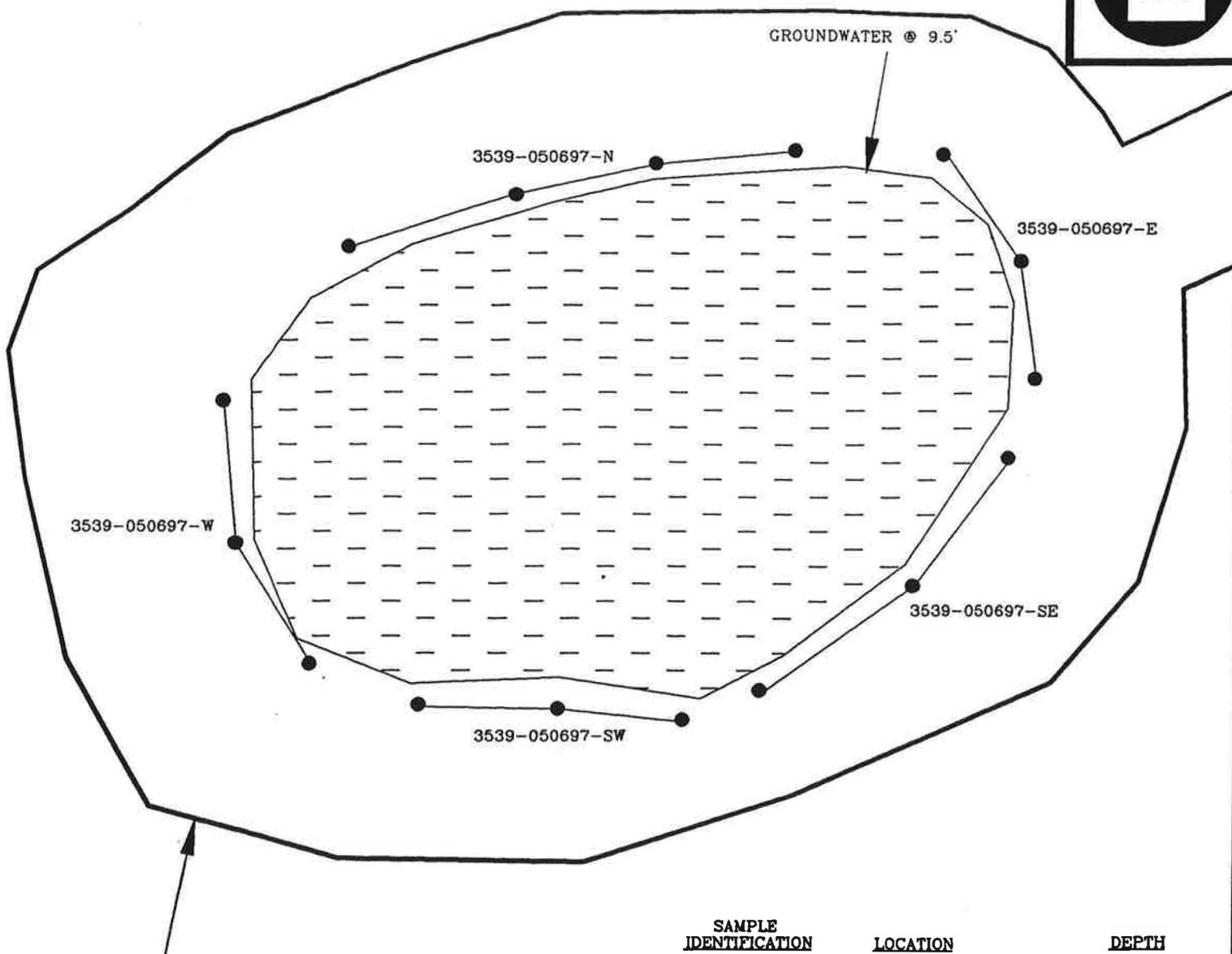
4.0 RISK CHARACTERIZATION

This Method 1 Risk Assessment (RA) evaluates potential risks of harm to human health, public welfare, safety, and the environment posed by contaminants at the subject site. This assessment was conducted in accordance with the Massachusetts Contingency Plan (MCP). Current and reasonably foreseeable future human exposure to contaminants at this Site would occur predominantly through contact with soil. Groundwater was encountered during the RAM soil excavation. However, once the excavation was complete, the water in the excavation showed no sign of petroleum contamination. In addition, the site is not located within a drinking water resource area, and residual soils in the excavation floor contained low levels of TPH (37 ppm by field screening). Based on these factors, data from the RAM Completion, and discussions with David Salvatore of the MADEP, groundwater impacts were qualitatively evaluated in this RA and found to pose no significant risk.

Identification Of Human Receptors

Current and proposed future use for the Site is for commercial activities. Currently, a new office/warehouse building has been constructed on the site, and is occupied by Comcographics, Inc. However, in order to provide the most conservative estimate of risk to human health, potential future human receptors will be assumed to include on-site residents.

The UST 3539 site is not located within a groundwater resource area as defined by the most recent delineation of Zone II areas and potentially productive aquifers at Devens (see Figure 1).



EXCAVATION AREA

SAMPLE IDENTIFICATION	LOCATION	DEPTH
3539-050697-N	NORTH WALL	9-10'
3539-050697-W	WEST WALL	9-10'
3539-050697-E	EAST WALL	9-10'
3539-050697-SE	SOUTHEAST WALL	9-10'
3539-050697-SW	SOUTHWEST WALL	9-10'
3539-050697-DUP	DUPLICATE OF SW WALL	9-10'

MAY 6 , 1997 CONFIRMATORY SAMPLE LOCATIONS
FORMER BUILDING 3539 UST
QUEENSTOWN AND BARNUM ROADS
DEVENS, MASSACHUSETTS

WESTON
MANAGERS DESIGNERS/CONSULTANTS

FIGURE 2

Table 2
Results of Confirmatory Analyses
Final Excavation Limits - Sidewalls

Analytes of Concern	Regulatory Levels ^a	Units	Sample Identification					
			3539-050697-N North sidewall	3539-050697-E East sidewall	3539-050697-W West sidewall	3539-050697-SSE Southeast sidewall	3539-050697-SSW Southwest sidewall	3539-050697-DUP Duplicate - SSW
Volatile Petroleum Hydrocarbons (VPH)								
C ₅ -C ₈ Aliphatics	100	mg/kg	<10	<10	<10	<10	<10	<10
C ₉ -C ₁₂ Aliphatics	1,000	mg/kg	<10	<10	<10	<10	<10	<10
C ₉ -C ₁₀ Aromatics	100	mg/kg	<10	<10	<10	<10	<10	<10
Target Analytes ^b	---	μg/kg	<2	<2	<2	<2	<2	<2
Extractable Petroleum Hydrocarbons (EPH)								
C ₉ -C ₁₈ Aliphatics	1,000	mg/kg	<10	<10	<10	<10	<10	<10
C ₁₉ -C ₃₆ Aliphatics	2,500	mg/kg	<10	<10	<10	<10	<10	<10
C ₁₁ -C ₂₂ Aromatics	200	mg/kg	<10	<10	<10	<10	<10	<10
Target Analytes ^b	---	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Percent Solids	---	%	94	91	91	95	93	94

^a Regulatory levels represent the MA DEP proposed levels for the MCP Method 1 S-1/GW-1 standards.

^b No target analyte was detected in any sample as indicated, see also Appendix B for the laboratory certificates of analyses.

ND = not detected above the method detection limits

Identification Of Environmental Receptors

No wildlife communities have been identified on-site. Robbins Pond is located approximately 500 feet east-southeast of the UST 3539 site. The UST 3539 site does not lie within the 100-year floodplain. The nearest environmental receptor is a small wetland area located approximately 700 feet southeast of the site. No other sensitive receptors are located in the immediate vicinity of the location of the UST 3539 site.

Identification Of Site Activities And Uses

As stated above, future use for the Site is business/commercial use.

Identification Of Site Groundwater And Soil Categories

From Figure 1, groundwater at the Site is not located within a drinking water resource area, and is therefore not subject to MCP Method 1 GW-1 Standards. An occupied building exists currently at the site, and additional buildings could be constructed in the future, the entire site will conservatively be assumed to also be subject to GW-2 standards. Finally, as with all groundwater in Massachusetts, category GW-3 also applies.

The current site use is for commercial/light industrial purposes. Frequency of use for adults is high and children are not present at the site. Intensity of use for adults is low. The site is partially paved, therefore soil from 0-3 feet depth is conservatively considered accessible, and soil from 3-15 feet depth is considered potentially accessible. Soil at the site is therefore classified as follows:

- soil from 0-3 feet depth is classified as S-2 soil
- soil from 3-15 feet depth is classified as S-3 soil

Although the current and likely future use for the UST 3539 site is commercial/light industrial purposes, unrestricted future use is assumed, and therefore the MCP Method 1 soil category S-1 is applicable to the site.

Table 3 summarizes the soil exposure categories for identified exposure pathways under current and foreseeable future site uses (310 CMR 40.0933).

Table 3

Summary of Soil Exposure Categories

Potential Receptor	Soil Depth (feet)	Children's Frequency of Use	Adult's Frequency of Use	Intensity of Use	MCP Method 1 Soil Category
Future resident	0 to 15	High	High	High	S-1
Current worker	0-3	Not Present	High	Low	S-2
Current worker	> 3	Not Present	High	Low	S-3

Identification Of Exposure Points And Exposure Pathways

Residual subsurface contaminated soil at depths of 0-15 feet in a residential scenario represent one exposure point. Residual subsurface contaminated soil at depths of 0 to 3 feet in a industrial/commercial scenario represent another exposure point. Residual contaminated soil at depths of greater than 3 feet in an industrial/commercial scenario represent a third exposure point. For potential human receptors, the exposure pathway available is through direct exposure to contaminated soil.

Depth to groundwater at the site is approximately 10 feet. During the RAM a slight sheen was observed on water in the excavation. Upon completion of soil removal for the RAM, a reduction in the sheen was observed on the groundwater in the excavation. The site has been developed for commercial/industrial use, and is connected to a public water supply. WESTON discussed these site conditions with Dave Salvadore of the MADEP during preparation of this RAO. Mr. Salvadore stated that based on the observations made during the RAM, and the confirmatory soil sample results indicating non-detectable levels of petroleum hydrocarbons, further investigation of groundwater was not necessary. The potential for groundwater impacts at the site is considered to be low, and groundwater is therefore not considered an exposure pathway for this RA.

Identification Of Exposure Point Concentrations

After UST 3539 was removed, a total of five soil samples (four sidewalls and one duplicate) were collected by WESTON and sent to a state certified laboratory for analysis by the MADEP method for EPH and VPH and for TPH. No detectable levels of petroleum hydrocarbons were found in any of the confirmatory samples.

Based on the soil analytical data, concentrations of petroleum hydrocarbons of concern in the excavation sidewalls have been reduced to non-detectable concentrations. The TPH screening result for the floor sample obtained after secondary excavation during the RAM was 37 ppm. No floor sample was obtained for confirmatory analysis because of the presence of groundwater. In determining the exposure points to be evaluated by the RA, we assumed the entire UST excavation is one exposure point. This is based on the premise that no single portion of the

excavation is distinct from another in terms of potential human or environmental exposure, and that there are no Hot Spots present as defined in the MCP.

Since no petroleum hydrocarbon compounds were detected above detection limits other than the screening result of 37 ppm, the Exposure Point Concentrations (EPCs) were determined to be well below the applicable Method 1 S-1/GW-2 and S-1/GW-3 Standards for EPH and VPH fractions. However, since the TPH screening result from a floor sample (BOT-1) was 37 ppm, background (assumed to be the laboratory detection limit for petroleum hydrocarbon fractions) has not been achieved.

Characterization Of Risk Of Harm

The contaminants of concern at the Site are petroleum hydrocarbons associated with oil potentially released from UST 3539. The soil EPCs at the UST 3539 site for the contaminants of concern do not exceed Method 1 standards for category S1/GW-2 and S-1/GW-3 soil. Therefore, there is concluded to be no significant risk of harm posed to human health, public welfare, or the environment posed for both current and future conditions.

The release of oil at the UST 3539 site associated with the former 1,000-gallon fuel oil UST has resulted in residual contamination of soil. The contaminants do not pose a threat of fire or explosion, and based on the nature of the contamination, will not exhibit corrosive, reactive, or flammable characteristics described in 310 CMR 40.0347. Therefore, there is concluded to be no significant risk of harm to safety posed by the contaminants detected at the Site under both current and reasonably foreseeable future uses.

5.0 MANAGEMENT OF REMEDIATION WASTES

At the direction of CENAE, the excavated soil from the site was stockpiled at the Soil Storage Facility (SSF) located adjacent to Building 202 off of Market Street. The soil is stockpiled on 6-mil polyethylene sheeting and covered. The cover is secured and the pile is bermed with sand.

The soil was sampled for characterization for purposes of disposal. The results are included in Table 3. Two composite samples of the stockpiled soil were submitted for disposal characterization. The laboratory certificates of analyses for the disposal characterization are included in Appendix A.

During the excavation of soil, groundwater was observed at depth of 10 feet below ground surface. The groundwater did not effect the excavation efforts and therefore no water was removed from the excavation. As a result, there was no need for pumping, treatment or discharge of contaminated water as part of the RAM.

Table 4
Summary of Analytical Data
Stockpiled Soil Samples

Analyses	Sample Identification	
	3539-WC-01	3539-WC-02
TPH (ppm)	520	1,700
Metals		
As	17.3	16.2
Cd	0.56	<0.52
Cr	15.1	12.9
Pb	13.7	10.2
Hg	0.02	<0.009
PAHs (total)	None detected	< 1.0 ppm
VOCs (total)	<1.0 ppm	None detected
PCBs	None detected	None detected
PH	6.4	6.3
Reactivity	Non-reactive	Non-reactive
Ignitability	> 93°C	> 93°C

6.0 FEASIBILITY OF ACHIEVING BACKGROUND

The feasibility of restoration of the UST 3539 site to background was evaluated by assessing the fate and transport of the contaminants of concern, and conducting a benefit-cost analysis in accordance with 310 CMR 40.0860. Background was assumed to be the laboratory detection limit for TPH.

The analytical data from the UST 3539 site indicate that low levels of petroleum hydrocarbons are present in soil in the excavation floor. The soil encountered is generally sandy. The most likely remedial alternative to address this contamination would be excavation, removal and

disposal/recycling of contaminated soil. This would require demolition of the on-site building as well as costs for excavation, dewatering, stockpiling, sampling, testing, soil transport, and disposal. The costs for implementing this type of remediation would be likely be as much as \$100,000 to \$200,000, which is much higher than the amount previously spent to conduct the UST removal at the site. The compounds of concern are known to be subject to significant natural attenuation in the subsurface environment due to both biotic and abiotic transformation

processes. The soil conditions present at the site do not present any known impediments to attenuation of the compounds of concern.

Based on the above described site and contaminant characteristics, and because the UST 3539 site conditions evaluated already constitute No Significant Risk, the incremental benefit of risk reduction and environmental restoration, and the effect on pecuniary and non-pecuniary values would be small relative to the cost of restoring the UST 3539 site to background. We believe that costs to achieve background would be substantial and disproportionate to the incremental benefits that would be achieved, and therefore, in accordance with the MCP, it is not feasible to achieve background conditions at the UST 3539 site.

7.0 CONCLUSIONS

A RAM was conducted at the Building 3539 site including removal of UST 3539 and excavation, removal, and stockpiling of petroleum contaminated soil. UST 3539 was exposed, cleaned, removed and properly disposed per applicable Federal, State and local regulations. After removal of the UST, additional contaminated soil was excavated and removed. Subsequently, confirmatory soil sampling of the excavation sidewalls and floor was conducted. Approximately 188 tons of soil that was removed from the excavation for the UST removal was transferred to the Building 202 SSF at Devens.

Confirmatory soil samples showed no detectable levels of petroleum hydrocarbons in excavation sidewall soils after completion of the RAM. A Method 1 RA was subsequently conducted to evaluate impacts to human health and the environment. Site soil was classified as S-2 and S-3 under current use; however, site soil also was classified as S-1 to evaluate risks under potential unrestricted future site use. Groundwater underneath the site was classified as GW-2 and GW-3. The Method 1 RA concluded that there is No Significant Risk from petroleum hydrocarbons and PAHs in soil. Therefore, a Permanent Solution has been achieved for the site, and the requirements for a Class A-2 RAO Statement have been met. A copy of the Response Action Outcome Statement Transmittal Form (BWSC-104) for the UST 3539 site is included in Appendix B.

APPENDIX A

Received: 05/06/97

05/12/97 08:45:45

REPORT ROY F. WESTON
TO P.O. BOX 425
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ATTEN DAVID CRISPO

PREPARED TOXIKON CORPORATION

BY 15 WIGGINS AVE

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CERTIFIED BY 

ATTEN PAUL LEZBERG

PHONE (617)275-3330

CONTACT JOHNN

CLIENT ROY WES AYER SAMPLES 7
COMPANY ROY F. WESTON
FACILITY P.O. BOX 425
AYER, MA. 01432-0425

MA CERT # M-MA064: TRACE METALS, SULFATE, CYANIDE, RES. FREE
CHLORINE, Ca, TOTAL ALK., TDS, pH, THMs, VOC, PEST., NUTRIENTS.
DEMAND. O&G, PHENOLICS, PCBs. CT DHS #PH-0563, NY #10778
FL HRS E87143, NJ DEP 59538, NC DNR286, SC 88002, NH 204091-C.

WORK ID BLDG 3539 UST, FT. DEVENS, MA

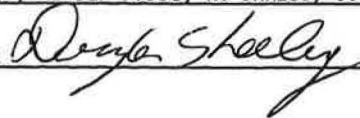
TAKEN 5/6/97

TRANS

TYPE SOIL AND WATER

P.O. #

INVOICE under separate cover

VERIFIED BY: 

SAMPLE IDENTIFICATION

TEST CODES and NAMES used on this workorder

01 3539-050697-N
02 3539-050697-E
03 3539-050697-W
04 3539-050697-SSE
05 3539-050697-SSW
06 3539-050697-DUP
07 3539-050697-TB

EPH EXTRACTABLE PHC
SOLID % SOLID
VPH VOLATILE PHC

Received: 05/06/97

Results by Sample

SAMPLE ID	<u>3539-050697-N</u>	SAMPLE #	<u>01</u>	FRACTIONS:	<u>A</u>
Date & Time Collected		<u>05/06/97 11:00:00</u>		Category <u>SOIL</u>	
SOLID	<u>94.4</u>				
	%				

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
 SITE: Bldg 3539 UST, Ft. Devens, MA
 PROJECT #: 9705084
 MATRIX: SOIL

CLIENT ID: 3539-050697-N
 LAB ID: 9705084.1
 DATE RECEIVED: 5/6/97
 DATE EXTRACTED: 5/7/97
 DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
 INJECTION VOLUME μ l: 1
 EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING		UNITS	
			LIMIT		
C9-C18 Aliphatics (FID)	ND		10	mg/Kg	
C19-C36 Aliphatics (FID)	ND		10	mg/Kg	
C11-C22 Aromatics (FID) **	ND		10	mg/Kg	
Total EPH	ND		10	mg/Kg	
** Excludes Targeted PAH Analytes					
TARGETED PAH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
				LIMIT	
Acenaphthene	93-32-9	ND		0.50	mg/Kg
Acenaphthylene	208-96-8	ND		0.50	mg/Kg
Anthracene	120-12-7	ND		0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND		0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND		0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND		0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND		0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND		0.50	mg/Kg
Chrysene	218-01-9	ND		0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND		0.50	mg/Kg
Fluoranthene	206-44-0	ND		0.50	mg/Kg
Fluorene	86-73-7	ND		0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND		0.50	mg/Kg
Naphthalene	91-20-3	ND		0.50	mg/Kg
Phenanthrene	85-01-8	ND		0.50	mg/Kg
Pyrene	129-00-0	ND		0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND		0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-N
LAB ID: 9705084.1
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME ul: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
C5-C8 Aliphatics (FID)	ND	10	ug/Kg
C9-C12 Aliphatics (FID)	ND	10	ug/Kg
C9-C10 Aromatics (PID)	ND	10	ug/Kg
Total VPH	ND	10	ug/Kg

TARGETED VPH ANALYTES

ANALYTE	CAS #	RESULT	REPORTING		UNITS
				LIMIT	
Methyl-tert-butylether	1634-04-4	ND		2.0	ug/Kg
Benzene	71-43-2	ND		2.0	ug/Kg
Toluene	108-88-3	ND		2.0	ug/Kg
Ethylbenzene	100-41-4	ND		2.0	ug/Kg
Xylene (total)	1330-20-7	ND		2.0	ug/Kg
Naphthalene	91-20-3	ND		2.0	ug/Kg

Received: 05/06/97

Results by Sample

SAMPLE ID <u>3539-050697-E</u>	SAMPLE # <u>02</u> FRACTIONS: <u>A</u>
Date & Time Collected <u>05/06/97 11:10:00</u> Category <u>SOIL</u>	
SOLID <u>91.1</u> %	

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
 SITE: Bldg 3539 UST, Ft. Devens, MA
 PROJECT #: 9705084
 MATRIX: SOIL

CLIENT ID: 3539-050697-E
 LAB ID: 9705084.2
 DATE RECEIVED: 5/6/97
 DATE EXTRACTED: 5/7/97
 DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
 INJECTION VOLUME μ l: 1
 EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS
C9-C18 Aliphatics (FID)	ND	10	mg/Kg
C19-C36 Aliphatics (FID)	ND	10	mg/Kg
C11-C22 Aromatics (FID) **	ND	10	mg/Kg
Total EPH	ND	10	mg/Kg

** Excludes Targeted PAH Analytes

TARGETED PAH ANALYTES

ANALYTE	CAS #	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	93-32-9	ND	0.50	mg/Kg
Acenaphthylene	208-96-8	ND	0.50	mg/Kg
Anthracene	120-12-7	ND	0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND	0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND	0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND	0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND	0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND	0.50	mg/Kg
Chrysene	218-01-9	ND	0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND	0.50	mg/Kg
Fluoranthene	206-44-0	ND	0.50	mg/Kg
Fluorene	86-73-7	ND	0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND	0.50	mg/Kg
Naphthalene	91-20-3	ND	0.50	mg/Kg
Phenanthrene	85-01-8	ND	0.50	mg/Kg
Pyrene	129-00-0	ND	0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND	0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-E
LAB ID: 9705084.2
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME μ l: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C5-C8 Aliphatics (FID)	ND	10		ug/Kg
C9-C12 Aliphatics (FID)	ND	10		ug/Kg
C9-C10 Aromatics (PID)	ND	10		ug/Kg
Total VPH	ND	10		ug/Kg

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
			LIMIT		
Methyl-tert-butylether	1634-04-4	ND	2.0		ug/Kg
Benzene	71-43-2	ND	2.0		ug/Kg
Toluene	108-88-3	ND	2.0		ug/Kg
Ethylbenzene	100-41-4	ND	2.0		ug/Kg
Xylene (total)	1330-20-7	ND	2.0		ug/Kg
Naphthalene	91-20-3	ND	2.0		ug/Kg

Received: 05/06/97

Results by Sample

SAMPLE ID <u>3539-050697-W</u>	SAMPLE # <u>03</u> FRACTIONS: <u>A</u>
Date & Time Collected <u>05/06/97 11:25:00</u> Category <u>SOIL</u>	
SOLID <u>90.5</u>	
%	

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
 SITE: Bldg 3539 UST, Ft. Devens, MA
 PROJECT #: 9705084
 MATRIX: SOIL

CLIENT ID: 3539-050697-W
 LAB ID: 9705084.3
 DATE RECEIVED: 5/6/97
 DATE EXTRACTED: 5/7/97
 DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
 INJECTION VOLUME ul: 1
 EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING		UNITS
			LIMIT	
C9-C18 Aliphatics (FID)	ND		10	mg/Kg
C19-C36 Aliphatics (FID)	ND		10	mg/Kg
C11-C22 Aromatics (FID) **	ND		10	mg/Kg
Total EPH	ND		10	mg/Kg
** Excludes Targeted PAH Analytes				
TARGETED PAH ANALYTES				
ANALYTE	CAS #	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	93-32-9	ND	0.50	mg/Kg
Acenaphthylene	208-96-8	ND	0.50	mg/Kg
Anthracene	120-12-7	ND	0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND	0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND	0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND	0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND	0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND	0.50	mg/Kg
Chrysene	218-01-9	ND	0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND	0.50	mg/Kg
Fluoranthene	206-44-0	ND	0.50	mg/Kg
Fluorene	86-73-7	ND	0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND	0.50	mg/Kg
Naphthalene	91-20-3	ND	0.50	mg/Kg
Phenanthrene	85-01-8	ND	0.50	mg/Kg
Pyrene	129-00-0	ND	0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND	0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-W
LAB ID: 9705084.3
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME ul: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
			LIMIT	
C5-C8 Aliphatics (FID)	ND		10	ug/Kg
C9-C12 Aliphatics (FID)	ND		10	ug/Kg
C9-C10 Aromatics (PID)	ND		10	ug/Kg
Total VPH	ND		10	ug/Kg

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
				LIMIT	
Methyl-tert-butylether	1634-04-4	ND		2.0	ug/Kg
Benzene	71-43-2	ND		2.0	ug/Kg
Toluene	108-88-3	ND		2.0	ug/Kg
Ethylbenzene	100-41-4	ND		2.0	ug/Kg
Xylene (total)	1330-20-7	ND		2.0	ug/Kg
Naphthalene	91-20-3	ND		2.0	ug/Kg

Received: 05/06/97

Results by Sample

SAMPLE ID <u>3539-050697-SSE</u>	SAMPLE # <u>04</u> FRACTIONS: <u>A</u>
Date & Time Collected <u>05/06/97 11:55:00</u> Category <u>SOIL</u>	
SOLID <u>94.7</u> %	

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
 SITE: Bldg 3539 UST, Ft. Devens, MA
 PROJECT #: 9705084
 MATRIX: SOIL

CLIENT ID: 3539-050697-SSE
 LAB ID: 9705084.4
 DATE RECEIVED: 5/6/97
 DATE EXTRACTED: 5/7/97
 DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
 INJECTION VOLUME ul: 1
 EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING		UNITS	
			LIMIT		
C9-C18 Aliphatics (FID)	ND		10	mg/Kg	
C19-C36 Aliphatics (FID)	ND		10	mg/Kg	
C11-C22 Aromatics (FID) **	ND		10	mg/Kg	
Total EPH	ND		10	mg/Kg	
** Excludes Targeted PAH Analytes					
TARGETED PAH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
				LIMIT	
Acenaphthene	93-32-9	ND		0.50	mg/Kg
Acenaphthylene	208-96-8	ND		0.50	mg/Kg
Anthracene	120-12-7	ND		0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND		0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND		0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND		0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND		0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND		0.50	mg/Kg
Chrysene	218-01-9	ND		0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND		0.50	mg/Kg
Fluoranthene	206-44-0	ND		0.50	mg/Kg
Fluorene	86-73-7	ND		0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND		0.50	mg/Kg
Naphthalene	91-20-3	ND		0.50	mg/Kg
Phenanthrene	85-01-8	ND		0.50	mg/Kg
Pyrene	129-00-0	ND		0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND		0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-SSE
LAB ID: 9705084.4
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME ul: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C5-C8 Aliphatics (FID)	ND	10		ug/Kg
C9-C12 Aliphatics (FID)	ND	10		ug/Kg
C9-C10 Aromatics (PID)	ND	10		ug/Kg
Total VPH	ND	10		ug/Kg

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
			LIMIT		
Methyl-tert-butylether	1634-04-4	ND	2.0		ug/Kg
Benzene	71-43-2	ND	2.0		ug/Kg
Toluene	108-88-3	ND	2.0		ug/Kg
Ethylbenzene	100-41-4	ND	2.0		ug/Kg
Xylene (total)	1330-20-7	ND	2.0		ug/Kg
Naphthalene	91-20-3	ND	2.0		ug/Kg

Received: 05/06/97

Results by Sample

SAMPLE ID	<u>3539-050697-SSU</u>	SAMPLE #	<u>05</u>	FRACTIONS:	<u>A</u>
Date & Time Collected		<u>05/06/97 11:40:00</u>		Category <u>SOIL</u>	
SOLID	<u>93.2</u>				
	%				

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
 SITE: Bldg 3539 UST, Ft. Devens, MA
 PROJECT #: 9705084
 MATRIX: SOIL

CLIENT ID: 3539-050697-SSW
 LAB ID: 9705084.5
 DATE RECEIVED: 5/6/97
 DATE EXTRACTED: 5/7/97
 DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
 INJECTION VOLUME ul: 1
 EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C9-C18 Aliphatics (FID)	ND	10		mg/Kg
C19-C36 Aliphatics (FID)	ND	10		mg/Kg
C11-C22 Aromatics (FID) **	ND	10		mg/Kg
Total EPH	ND	10		mg/Kg
** Excludes Targeted PAH Analytes				
TARGETED PAH ANALYTES				
ANALYTE	CAS #	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	93-32-9	ND	0.50	mg/Kg
Acenaphthylene	208-96-8	ND	0.50	mg/Kg
Anthracene	120-12-7	ND	0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND	0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND	0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND	0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND	0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND	0.50	mg/Kg
Chrysene	218-01-9	ND	0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND	0.50	mg/Kg
Fluoranthene	206-44-0	ND	0.50	mg/Kg
Fluorene	86-73-7	ND	0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND	0.50	mg/Kg
Naphthalene	91-20-3	ND	0.50	mg/Kg
Phenanthrene	85-01-8	ND	0.50	mg/Kg
Pyrene	129-00-0	ND	0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND	0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-SSW
LAB ID: 9705084.5
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME μ l: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C5-C8 Aliphatics (FID)	ND	10		ug/Kg
C9-C12 Aliphatics (FID)	ND	10		ug/Kg
C9-C10 Aromatics (PID)	ND	10		ug/Kg
Total VPH	ND	10		ug/Kg

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
			LIMIT		
Methyl-tert-butylether	1634-04-4	ND	2.0		ug/Kg
Benzene	71-43-2	ND	2.0		ug/Kg
Toluene	108-88-3	ND	2.0		ug/Kg
Ethylbenzene	100-41-4	ND	2.0		ug/Kg
Xylene (total)	1330-20-7	ND	2.0		ug/Kg
Naphthalene	91-20-3	ND	2.0		ug/Kg

Received: 05/06/97

Results by Sample

SAMPLE ID	<u>3539-050697-DUP</u>	SAMPLE #	<u>06</u>	FRACTIONS:	<u>A</u>
		Date & Time Collected	<u>05/06/97 11:40:00</u> Category <u>SOIL</u>		
SOLID	<u>94.2</u>				
	<u>%</u>				

TOXIKON

EXTRACTABLE PETROLEUM HYDROCARBON (EPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-DUP
LAB ID: 9705084.6
DATE RECEIVED: 5/6/97
DATE EXTRACTED: 5/7/97
DATE ANALYZED: 5/8/97

REF METHOD: MADEP EPH

DILUTION FACTOR: 1
INJECTION VOLUME μ l: 1
EXTRACT VOLUME ml: 1

PARAMETER	RESULT	REPORTING		UNITS
			LIMIT	
C9-C18 Aliphatics (FID)	ND		10	mg/Kg
C19-C36 Aliphatics (FID)	ND		10	mg/Kg
C11-C22 Aromatics (FID) **	ND		10	mg/Kg
Total EPH	ND		10	mg/Kg
** Excludes Targeted PAH Analytes				
TARGETED PAH ANALYTES				
ANALYTE	CAS #	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	93-32-9	ND	0.50	mg/Kg
Acenaphthylene	208-96-8	ND	0.50	mg/Kg
Anthracene	120-12-7	ND	0.50	mg/Kg
Benzo(a)Anthracene	56-55-3	ND	0.50	mg/Kg
Benzo(a)Pyrene	50-32-8	ND	0.50	mg/Kg
Benzo(b)Fluoranthene	205-99-2	ND	0.50	mg/Kg
Benzo(g,h,i)Perylene	191-24-2	ND	0.50	mg/Kg
Benzo(k)Fluoranthene	207-08-9	ND	0.50	mg/Kg
Chrysene	218-01-9	ND	0.50	mg/Kg
Dibenzo(a,h)Anthracene	53-70-3	ND	0.50	mg/Kg
Fluoranthene	206-44-0	ND	0.50	mg/Kg
Fluorene	86-73-7	ND	0.50	mg/Kg
Indeno(1,2,3-cd)Pyrene	193-39-5	ND	0.50	mg/Kg
Naphthalene	91-20-3	ND	0.50	mg/Kg
Phenanthrene	85-01-8	ND	0.50	mg/Kg
Pyrene	129-00-0	ND	0.50	mg/Kg
2-Methylnaphthalene	91-57-6	ND	0.50	mg/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: SOIL

CLIENT ID: 3539-050697-DUP
LAB ID: 9705084.6
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME ul: 100

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C5-C8 Aliphatics (FID)	ND	10		ug/Kg
C9-C12 Aliphatics (FID)	ND	10		ug/Kg
C9-C10 Aromatics (PID)	ND	10		ug/Kg
Total VPH	ND	10		ug/Kg

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
			LIMIT		
Methyl-tert-butylether	1634-04-4	ND	2.0		ug/Kg
Benzene	71-43-2	ND	2.0		ug/Kg
Toluene	108-88-3	ND	2.0		ug/Kg
Ethylbenzene	100-41-4	ND	2.0		ug/Kg
Xylene (total)	1330-20-7	ND	2.0		ug/Kg
Naphthalene	91-20-3	ND	2.0		ug/Kg

TOXIKON

VOLATILE PETROLEUM HYDROCARBON (VPH) ANALYSIS

CLIENT: Roy F. Weston
SITE: Bldg 3539 UST, Ft. Devens, MA
PROJECT #: 9705084
MATRIX: WATER

CLIENT ID: 3539-050697-TB
LAB ID: 9705084.7
DATE RECEIVED: 5/6/97
DATE ANALYZED: 5/7/97
DILUTION FACTOR: 1
INJECTION VOLUME ml: 5

REF METHOD: MADEP VPH

PARAMETER	RESULT	REPORTING		UNITS
		LIMIT		
C5-C8 Aliphatics (FID)	ND	10		ug/L
C9-C12 Aliphatics (FID)	ND	10		ug/L
C9-C10 Aromatics (PID)	ND	10		ug/L
Total VPH	ND	10		ug/L

TARGETED VPH ANALYTES					
ANALYTE	CAS #	RESULT	REPORTING		UNITS
			LIMIT		
Methyl-tert-butylether	1634-04-4	ND	2.0		ug/L
Benzene	71-43-2	ND	2.0		ug/L
Toluene	108-88-3	ND	2.0		ug/L
Ethylbenzene	100-41-4	ND	2.0		ug/L
Xylene (total)	1330-20-7	ND	2.0		ug/L
Naphthalene	91-20-3	ND	2.0		ug/L

Received: 05/06/97

Test Methodology

TEST CODE EPH NAME EXTRACTABLE PHC

METHOD: EXTRACTABLE PETROLEUM HYDROCARBONS

REFERENCE: METHOD FOR THE DETERMINATION OF EXTRACTABLE PETROLEUM
HYDROCARBONS (EPH). (Public Comment Draft 1.0)
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUGUST 1995

TEST CODE SOLID NAME % SOLID

METHOD: Standard method 2540 G.

Reference: Standard Methods for the Examination of Water and Wastewater; 1992
18th Edition, Total, Fixed, and Volatile Solids in Solid and
Semisolid Samples.

TEST CODE VPH NAME VOLATILE PHC

METHOD: VOLATILE PETROLEUM HYDROCARBONS

REFERENCE: METHOD FOR THE DETERMINATION OF VOLATILE PETROLEUM
HYDROCARBONS. (Public Comment Draft 1.0)
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
AUGUST 1995

Company Name: ROY F. WESTON		Project Number: 03556-118-004-4999		Project Name/Location: Bldg 3539 VST DEVENS, MA		Date Received in Lab:		Date Due: 3 DAY DAT	
Company Address: P.O. BOX 425 AYER, MA 01432-0425		Phone Number: (508) 772-7190		Project Manager: DAVID CRISPO		Alpha Job Number: (Lab use only)			
		P.O. Number:		FAX No.: (508) 772-7251					

ALPHA Lab # (Lab Use Only)	Sample I.D.	Containers (number/type)	Matrix / Source	Method Preserve. (number of containers)							Solubles - F.F.	Sampling		MATRIX / SOURCE CODES	
				Unpres.	Ice	Nitric	Sulfuric	HCl	Other (Specify)	Date		Time	MW = Monitoring Well RO = Runoff O = Outfall W = Well LF = Landfill L = Lake/Pond/Ocean I = Influent E = Effluent DW = Drinking Water R = River Stream S = Soil SG = Sludge B = Bottom Sediment		
													X1 = Other _____ X2 = Other _____		
Analysis Requested															
	3539-050697-N	2 G	S	X					X		5/6/97	1100	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-E	2 G		X					X			1110	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-W	2 G		X					X			1125	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-SSE	2 G		X					X			1155	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-SSW	2 G		X					X			1140	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-DVP	2 G	↓	X					X			1140	EPH Deluxe, VPH Deluxe, TS		
	3539-050697-TB	1 G	W						X		↓	1200	VPH Deluxe		

Sampler's Signature: <i>David Crispo</i>		Affiliation:	Date: 5/6/97	Time: 1600	NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME
ADDITIONAL COMMENTS: Analyze to MCP guidelines 97 05 084 5 9 97					1	<i>David Crispo</i>	<i>[Signature]</i>	5/6/97	1645
					2		<i>[Signature]</i>	5/6/97	1655
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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC-1

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

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

Release Tracking Num

2 - 11210

K. CERTIFICATION OF PERSON SUBMITTING DOWNGRADIANT PROPERTY STATUS SUBMITTAL:

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

By: _____ Title: _____
(signature)

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

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

Street: _____
City/Town: _____ State: _____ ZIP Code: _____
Telephone: _____ Ext.: _____ FAX: (optional) _____

L. CERTIFICATION OF PERSON MAKING SUBMITTAL:

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

I, James C. Chambers, 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: James C. Chambers Title: BRAC Environmental Officer
(signature)

For: U.S. Army BRAC Date: 10 DEC 97
(print name of person or entity recorded in Section I)

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

Street: _____
City/Town: _____ State: _____ ZIP Code: _____
Telephone: _____ Ext.: _____ FAX: (optional) _____

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