

**EXHIBIT C-11**

**RTN 3-0021380, Thom Building**

Site Information			
Site Number:	3-0021380	Category:	TWO HR
Site Name:	THOM BUILDING	Release Type:	RAO
Address:	FERNALD CENER 200 TRAPELLO RD	Current date:	7/16/2002
Town:	WALTHAM	Phase:	
Zipcode:	02454-6302	RAO class:	
Official notification date:	1/7/2002	Location type:	STATE
Initial status date:	1/7/2003	Source:	PIPE

Response Action Information	
Response Action Type:	IRA - Immediate Response Action
Status:	CSRCVD - Completion Statement Received
Submittal Date:	7/16/2002
RAO class:	
Activity & Use Limitation:	

Response Action Information	
Response Action Type:	RAO - Response Action Outcome - RAO
Status:	RAORCD - RAO Statement Received
Submittal Date:	7/16/2002
RAO class:	A1
Activity & Use Limitation:	NONE

Response Action Information	
Response Action Type:	RNF - Release Notification Form Received
Status:	REPORT - Reportable Release or Threat of Release
Submittal Date:	2/28/2002
RAO class:	
Activity & Use Limitation:	

Response Action Information	
Response Action Type:	REL - Potential Release or Threat of Release
Status:	REPORT - Reportable Release or Threat of Release
Submittal Date:	1/7/2002
RAO class:	
Activity & Use Limitation:	

Chemicals		
Chemical	Amount	Units
FUEL OIL #2	10	GAL
FUEL OIL #2	19	GAL

LSPs	
LSP#	Name
8493	KLINGLER, BRIAN F

RAO Detail			
Class	Method	GW Category	Soil Category
A1	1	2	1
A1	1	2	1

**IMMEDIATE RESPONSE ACTION COMPLETION &  
RESPONSE ACTION OUTCOME STATEMENT**

**FERNALD CENTER, THOM BUILDING**

**200 TRAPELO ROAD**

*N/A-C*

**WALTHAM, MASSACHUSETTS**

**RELEASE TRACKING NUMBER 3-21380**

**SUBMITTED TO:**

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

**July 9, 2002  
Coneco Project No. 4613.A**



CIVIL DESIGN & LAND PLANNING  
SURVEYING  
GEOTECHNICAL ENGINEERING  
ENVIRONMENTAL CONSULTING  
REGULATORY COMPLIANCE & PERMITTING

July 9, 2002  
Project No. 4613.A

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

RE: **Immediate Response Action Completion & Response Action Outcome Statement**  
Massachusetts Department of Mental Retardation Fernald Center  
Thom Building  
200 Trapelo Road  
Waltham, Massachusetts  
Release Tracking Number 3-21380


To Whom It May Concern:

Coneco Engineers and Scientists (Coneco) has prepared the following Immediate Response Action (IRA) Completion and Response Action Outcome (RAO) Statement to address a release of petroleum products at the Thom Building of the Massachusetts Department of Mental Retardation Fernald Center located at 200 Trapelo Road in Waltham, Massachusetts, hereinafter the, "Site." The enclosed report was prepared in accordance with 310 CMR 40.1000 of the Massachusetts Contingency Plan and is based on Coneco's IRA Plan, previously submitted to the Department of Environmental Protection (DEP) on April 8, 2002. In summary, it is the opinion of Coneco that a condition of "No Significant Risk" exists at the Site. This submittal contains the following:


- Immediate Response Action Transmittal Form (BWSC-105)
- Response Action Outcome Transmittal Form (BWSC - 104)
- Copies of Municipal Notifications

Coneco's oversight and assessment findings are detailed in the attached report. If there are any questions, please contact the undersigned.

Sincerely,  
Coneco Engineers and Scientists

  
Jedd S. Steinglass  
Project Manager

JSS:BFK:jd  
JSS/4613.A.ira.rao.doc

  
Brian F. Klingler, P.G., L.S.P.  
Principal Geologist

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Figure 2	Site Plan
Figure 3	IRA Excavation Plan
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Figure 5	DEP GIS Site Scoring Map

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**APPENDICES**

- Appendix 1    Site Photographs
- Appendix 2    Site-Specific Health and Safety Plan
- Appendix 3    Copy of Release Notification Form (BWSC-103)  
                  Immediate Response Action Transmittal Form (BWSC-105)  
                  Response Action Outcome Transmittal Form (BWSC - 104)  
                  Copies of Municipal Notifications
- Appendix 4    Uniform Hazardous Waste Manifests
- Appendix 5    Original Laboratory Data, Laboratory QA/QC, Methods, Chain-Of-Custody  
                  Form

## **1.0 INTRODUCTION**

The release occurred at the Thom Building of the Massachusetts Department of Mental Retardation Fernald Center, located at 200 Trapelo Road in Waltham, Massachusetts. The release occurred as a result of a malfunctioning supply pump, which services the diesel generator located in the basement of the Site building. According to on-Site personnel, approximately 12 gallons of diesel fuel was released. As reported, the release of petroleum impacted the solid concrete slab floor of the generator room and migrated beneath the generator room door to the exterior portion of the Site. As a result, an isolated portion of soil and asphalt located directly adjacent to the generator room was impacted by the release.

The Disposal Site, as defined by 310 CMR 40.0006, is defined as the area in which stained soil was observed at the Site. As such, the approximately 50 square-foot area located adjacent to the southern exterior wall of the Thom Building generator room is considered to be within the limits of the Disposal Site. Site photographs are included as Appendix 1. A Site Specific Health and Safety Plan is enclosed for reference as Appendix 2. A Site Locus Map and Site Plan are provided for reference as Figures 1 and 2, respectively.

### **1.1 Site Parameters**

#### **Person Assuming**

Responsibility: Ms. Joanne Ciardello  
Director of Operations  
Fernald Center  
200 Trapelo Road  
Waltham, Massachusetts 02452-6302  
Phone: (781) 894-3600

#### **Disposal Site**

Limits: This release of petroleum occurred as a result of a malfunctioning supply pump, which services the diesel-fired generator located in the basement of the Site building. The release impacted the solid concrete slab floor and a limited area of surficial soil. The impacted materials associated with this release were limited to the boundaries of the Disposal Site.

Coordinates: Latitude 42° 23' 26" N Longitude 71° 12' 30" W  
UTM 4,695,300 Meters N 318,200 Meters E (Zone 19)

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Adjacent

Properties: The Disposal Site is located within the Fernald Center, a residential and school facility operated by the Massachusetts Department of Mental Retardation. The Fernald Center is situated within a primarily residential area of Waltham, Massachusetts. Private residences and commercial properties surround the Site.

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## **2.0 BACKGROUND**

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### **2.1 Release History**

At approximately 12:00 pm on January 7, 2002, personnel of the Fernald Center detected a release of greater than ten gallons of petroleum in the generator room of the Site building. As a result of these conditions, notification was provided to the Department of Environmental Protection (DEP) Northeast Regional Office (NERO) at 12:15 pm on January 7, 2002. Pursuant to 310 CMR 40.0311, once knowledge that a reportable condition existed at the Site, notification was provided to the DEP within the required 2-hour time frame. DEP Release Tracking Number (RTN) 3-21380 was issued for the release. In accordance with 310 CMR 40.0371, a Release Notification Form (BWSC-103) was submitted to the DEP-NERO on February 28, 2002. A copy of the Release Notification Form (BWSC-103) is included in Appendix 3.

### **2.2 Emergency Response**

Immediately following the release, personnel of Dowling Corporation (Dowling) of Wrentham, Massachusetts applied absorbent materials to the release area and recovered any residual product. Product and impacted absorbent materials were placed in two 55-gallon drums and transported under Uniform Hazardous Waste Manifest to the General Chemical facility in Framingham, Massachusetts for disposal on March 14, 2002. A Copy of the Uniform Hazardous Waste Manifest is provided for reference as Appendix 4.

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## **3.0 IMMEDIATE RESPONSE ACTION**

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The focus of the IRA is as follows: 1) further delineation of impacted materials and 2) the removal of petroleum-impacted materials.

The focus of the petroleum-impacted material removal is to reduce EPH concentrations throughout the Disposal Site to concentrations such that a Class A Response Action Outcome can be achieved.



### 3.1 Delineation Activities

On January 17, 2002, Coneco personnel collected five surficial soil samples, designated S-01 through S-05, from the area located adjacent to the southern exterior wall of the generator room of the Thom Building. Samples were collected in order to evaluate the nature and extent of the release. Soil samples S-01 through S-03 were collected from points located directly adjacent to the exterior wall of the generator room. Soil samples S-04 and S-5 were collected from points located approximately 10 feet south of the release area to obtain initial baseline information prior to the removal of potentially petroleum-impacted media from the Site. Sample locations can be referenced in Figure 2, the Site Plan.

The soil samples collected on this day were submitted to Spectrum Analytical, Inc. (Spectrum), an independent Massachusetts-certified analytical laboratory located in Agawam, Massachusetts, for analysis of extractable petroleum hydrocarbons (EPH) by the DEP Method. Results of EPH analysis are presented in the following Table 1. Original laboratory data, laboratory QA/QC, methods, and the chain-of-custody form are included as Appendix 5.

**Table 1 - Soil Analytical Results**

Analyte	S-01	S-02	S-03	S-04	S-05
C9-C18 Aliphatics	2,900	11,000	160	ND	ND
C19-C36 Aliphatics	1,300	5,900	150	ND	ND
C11-C22 Aromatics	2,838	9,965	163	ND	ND

Notes: All results are provided in mg/Kg.  
ND = Not Detected above laboratory quantification limits.

### 3.2 Excavation Activities

On May 29, 2002, Coneco personnel conducted the hand excavation of surficial soils located adjacent to the generator room in order to remove petroleum-impacted media. Based on the results of initial delineation activities, Coneco personnel removed an approximately 16 square-foot section of asphalt and hand excavated impacted soil to a depth of approximately 14 inches below grade. As a result of excavation activities, approximately 0.65 cubic yards of petroleum-impacted media were removed and stored on-Site in two 55-gallon drums for subsequent transport under Uniform Hazardous Waste Manifest and disposal at an appropriate receiving facility.

Observations made during the performance of soil excavation activities indicated overburden materials consisting of a gravely silty sandy fill comprising mostly medium sand, 20% fine to coarse surrounded gravel, 10% slightly plastic fines, and occasional small cobbles. This unit was observed to a depth of approximately 14 inches below surface grade, the maximum depth of excavation. Construction debris consisting of a small volume of brick and concrete were noted within the fill material. Bedrock and groundwater were not encountered during excavation activities.

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### **3.3 Confirmatory Soil Sampling**

Following the completion of excavation activities on May 29, 2002, Coneco personnel collected confirmatory soil samples from within the excavation area. Soil samples were collected from the base of the excavation at a depth of approximately 14 inches below grade. Three select soil samples, designated S-101 through S-103 and collected from points evenly distributed throughout the excavation area, were submitted to Spectrum Analytical, Inc. (Spectrum), a Massachusetts-certified analytical laboratory located in Agawam, Massachusetts, for analysis of EPH by the MA DEP Method. As a result of EPH analyses no detectable concentrations of petroleum hydrocarbons were identified in the submitted confirmatory soil samples. Original laboratory data, laboratory QA/QC, methods, and the chain-of-custody form are included as Appendix 5.

### **3.4 Remediation Waste**

Following emergency response actions completed by personnel of Dowling, two 55-gallon drums of petroleum-impacted absorbent material and recovered product were removed from the Site on March 14, 2002 under Uniform Hazardous Waste Manifest. The impacted materials were disposed of at the General Chemical facility in Framingham, Massachusetts. A copy of the Uniform Hazardous Waste Manifests is provided for reference as Appendix 4.

As part of response actions conducted at the disposal Site, approximately 0.65 cubic yards of petroleum-impacted media were removed and stored on-Site in two 55-gallon drums for subsequent transport and disposal at an appropriate receiving facility. The generated drums were removed from the Site on July 1, 2002 under Uniform Hazardous Waste Manifest and transported to the Northland Environmental facility in Providence, Rhode Island. A copy of the Uniform Hazardous Waste Manifests is provided for reference as Appendix 4.

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## **4.0 METHOD 1 RISK CHARACTERIZATION**

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Under the MCP (310 CMR 40.0000), once a property has been designated as a Disposal Site, a risk assessment is necessary to demonstrate that a condition of "No Significant Risk" to health, safety, public welfare, and the environment exists at the Disposal Site. Otherwise, further remedial actions are required to achieve a condition of "No Significant Risk."

To determine whether further action is required at the Site, it is first necessary to determine whether a condition of "No Significant Risk" exists using MCP Risk Characterization procedures. A Method 1 Risk Characterization uses a published list of contaminants, and provides risk characterization standards for these contaminants of concern. The following sections present the classifications of soil and groundwater for an MCP Method 1 Risk Characterization, and the applicable threshold concentrations for the contaminants present at the Site.

The basis for the Method 1 Risk Characterization is the Conceptual Site Model (CSM), included as a stem and leaf diagram in Figure 4. The CSM documents known or potential sources of contamination, affected media, known or potential routes of migration, and known or potential human and environmental receptors.

#### 4.1 Soil Categories

The classifications for soil are listed at 310 CMR 40.0933. Soil at a given site is classified as either S-1, S-2, or S-3, based upon exposure potential. Frequency of use by adults and children, the intensity of the use of the Site, and the accessibility of the soil are considered in the classification of soil. Frequency of use is classified as "high, low, or not present." Intensity is classified as "high or low," and soil accessibility is described as "accessible, potentially accessible, or isolated." These criteria are as follows:

*Frequency of Use:* The Disposal Site is located within the boundaries of a Massachusetts Department of Mental Retardation Facility. As such, children and adults are considered present at the Site at a "high frequency".

*Intensity of Use:* Intensity of use is considered "low," as normal Site activities do not have the potential to disturb soil.

*Accessibility:* Impacted surficial soils were observed between zero and 14 inches below grade. The surface area of the Disposal Site is paved, therefore the soil is considered "potentially accessible."

Using these parameters, soil at the Disposal Site is classified as Category S-2.

#### 4.2 Groundwater Categories

The classifications for groundwater are listed at 310 CMR 40.0932. Groundwater at all locations is classified as category GW-3, based upon its potential to discharge to surface water. Groundwater can also be classified as GW-1 based upon potential to be used as drinking water supply, and as GW-2, based upon the potential for inhalation of vapors of oil or hazardous materials in indoor air.

The GW-1 /GW-2 groundwater classification evaluation for the Disposal Site is based upon a DEP GIS Site Scoring Map, and is shown in the following table. The DEP GIS Site Scoring Map is included for reference as Figure 5.

**Table 2 - GW-1 / GW-2 Groundwater Classification Criteria**

<b>GW-1 Criteria</b>	<b>GW-1 Classification</b>
1) within the Zone II for a public water supply	No
2) within an Interim Wellhead Protection Area	No
3) within a Potentially Productive Aquifer	No
4) within the Zone A of a Class A surface water body used as a public water supply	No
5) at any point located 500 or more feet from a public water supply distribution pipeline	No
6) at any groundwater sampling point located within 500 feet of a private water supply well	No
<b>GW-2 Criteria</b>	<b>GW-2 Classification</b>
1) Located within 30 feet of an occupied building and average annual depth to water is less than 15 feet	Yes

Groundwater was not encountered during excavation activities and was not sampled as part of this investigation. For the purposes of this Risk Characterization, groundwater at the Site is subject to the GW-2 Groundwater Classification. All groundwater at the Site is classified as GW-3, based upon its potential to discharge to surface water.

#### **4.3 Method 1 Risk Characterization Standards**

Using the groundwater and soil classifications derived above, Method 1 Risk Characterization threshold concentrations for compounds detected in groundwater and soil at the Site are listed in the MCP 310 CMR40.0974 and 40.0975, respectively.

##### **4.3.1 Method 1 Risk Characterization - Soil**

Using the groundwater and soil classifications derived above, Method 1 Risk Characterization threshold concentrations for compounds detected in soil at the Site are listed in the MCP 310 CMR 40.0975. The most stringent concentration from each soil and groundwater classification is considered to be the threshold under which a concentration of "No Significant Risk" exists.

EPH constituents were not detected in excess of the laboratory quantification limit of 30 mg/Kg in confirmatory soil samples S-101 through S-103. Laboratory quantification limits for the analyzed constituents are below the applicable Method 1 Risk Characterization Standards tabulated in 310 CMR 40.0975. Using the criteria presented above and laboratory analytical results, a condition of "No Significant Risk" is present for all current and future uses of soil at Site. Groundwater was not impacted by the release, therefore, groundwater was not considered in this Method 1 Risk Characterization.

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#### **4.4 Potential Receptors and Critical Exposure Pathways**

The Site is located within the boundaries of a Massachusetts Department of Mental Retardation Facility. The Fernald Center is situated within a primarily residential area of Waltham, Massachusetts. Private residences and commercial properties surround the Site. No private water supply wells are located at residential properties within 500 feet of the Site.

Critical Exposure Pathways (CEP) are defined in 310 CMR 40.006 as those routes by which oil and/or hazardous material(s) release at a disposal site are transported, or are likely to be transported, to human receptors via:

- a) vapor-phase emissions or measurable concentrations of oil and/or hazardous materials into the living or working space of a pre-school, daycare, school or occupied residential dwelling, or;
- b) ingestion, dermal absorption, or inhalation of measurable concentrations of oil and/or hazardous materials from drinking water supply wells located at and servicing a pre-school, daycare, school, or occupied residential dwelling.

Impacted soils were encountered within 30 feet of an occupied residential facility. However, laboratory analysis of confirmatory soil samples indicated that concentrations of EPH were below the applicable Method 1 Risk Characterization standards and all petroleum impacted media had been removed from the disposal Site. No private water supply wells are located within 500 feet of the Site. These conditions thereby preclude the possibility of ingestion, dermal absorption, or inhalation of measurable concentrations of oil and/or hazardous materials via vapor phase emissions or water supply wells. Therefore, a CEP as defined in 310 CMR 40.006, has not been identified and is not considered likely at the Site.

#### **4.5 Discussion**

The Method 1 Risk Characterization, using the criteria presented above, demonstrates that a condition of "No Significant Risk" exists for current and future uses of the Site.

In addition, laboratory analysis of confirmatory soil samples collected subsequent to IRA excavation activities indicated no detectable concentrations of petroleum hydrocarbons. As such, pursuant to 310 CMR 40.1020, it is the opinion of Coneco that remedial actions have reduced concentrations of oil and/or hazardous materials to background conditions.

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#### **5.0 IMMEDIATE RESPONSE ACTION COMPLETION STATEMENT**

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Environmental conditions of the Site were evaluated in a manner consistent with guidelines presented in the "Massachusetts Contingency Plan" (310 CMR 40.0000). The focus of the

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IRA is as follows: 1) further delineation of impacted materials and 2) the removal of petroleum-impacted materials.

Immediate Response Actions completed at the Site are summarized below:

- On January 7, 2002, immediately following the release, personnel of Dowling applied absorbent materials to the release area and recovered any residual product. Product and impacted absorbent materials were placed in two 55-gallon drums and transported under Uniform Hazardous Waste Manifest to the General Chemical facility in Framingham, Massachusetts for disposal on March 14, 2002.
- On January 17, 2002, Coneco personnel collected five surficial soil samples, designated S-01 through S-05, from the area located adjacent to the southern exterior wall of the generator room of the Thom Building. Samples were collected in order to evaluate the nature and extent of the release. Soil samples S-01 through S-03 were collected from points located directly adjacent to the exterior wall of the generator room. Soil samples S-04 and S-5 were collected from points located approximately 10 feet south of the release area to obtain initial baseline information prior to the removal of potentially petroleum-impacted media from the Site.
- On May 29, 2002, Coneco personnel conducted the hand excavation of surficial soils located adjacent to the generator room in order to remove petroleum-impacted media. Based on the results of initial delineation activities, Coneco personnel removed an approximately 16 square-foot section of asphalt and hand excavated impacted soil to a depth of approximately 14 inches below grade. As a result of excavation activities, approximately 0.65 cubic yards of petroleum-impacted media were removed and stored on-Site in two 55-gallon drums. The generated drums were removed from the Site on July 1, 2002 under Uniform Hazardous Waste Manifest and transported to the Northland Environmental facility in Providence, Rhode Island.
- Following the completion of excavation activities on May 29, 2002, Coneco personnel collected confirmatory soil samples from within the excavation area. Soil samples were collected from the base of the excavation at a depth of approximately 14 inches below grade. Three select soil samples, designated S-101 through S-103 and collected from points evenly distributed throughout the excavation area, were submitted for laboratory analysis of EPH by the MA DEP Method. As a result of EPH analyses no detectable concentrations of petroleum hydrocarbons were identified in the submitted confirmatory soil samples.

Pursuant to the provisions of 310 CMR 40.0427, no ongoing activities related to the Immediate Response Action are required. An Immediate Response Action Transmittal Form (BWSC-105) is included in Appendix 3.

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## **6.0 RESPONSE ACTION OUTCOME**

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- A summary and conclusions of the Response Action are as follows:
- No uncontrolled sources of contamination are present at the Site. As a result, no additional response actions are necessary at the Site.
- EPH constituents were not detected in excess of the laboratory quantification limit of 30 mg/Kg in confirmatory soil samples S-101 through S-103. Laboratory quantification limits for the analyzed constituents are below the applicable Method 1 Risk Characterization Standards tabulated in 310 CMR 40.0975.
- A level of "No Significant Risk" for current and future uses exists at the Site and a Permanent Solution has been achieved. Remedial actions have reduced concentrations of oil and/or hazardous materials to background conditions
- Conditions for a Class A-1 RAO specified at 310 CMR 40.1035 and 310 CMR 40.1036 have been met at the Site.
- An RAO Transmittal Form (BWSC - 104) and copies of Municipal Notifications are included as Appendix 3.

Based on the information presented herein, and subject to the limitations of the proposed Scope of Services, it is the opinion of Coneco that a condition of "No Significant Risk" to human health, safety, public welfare, and the environment exists at the Site.

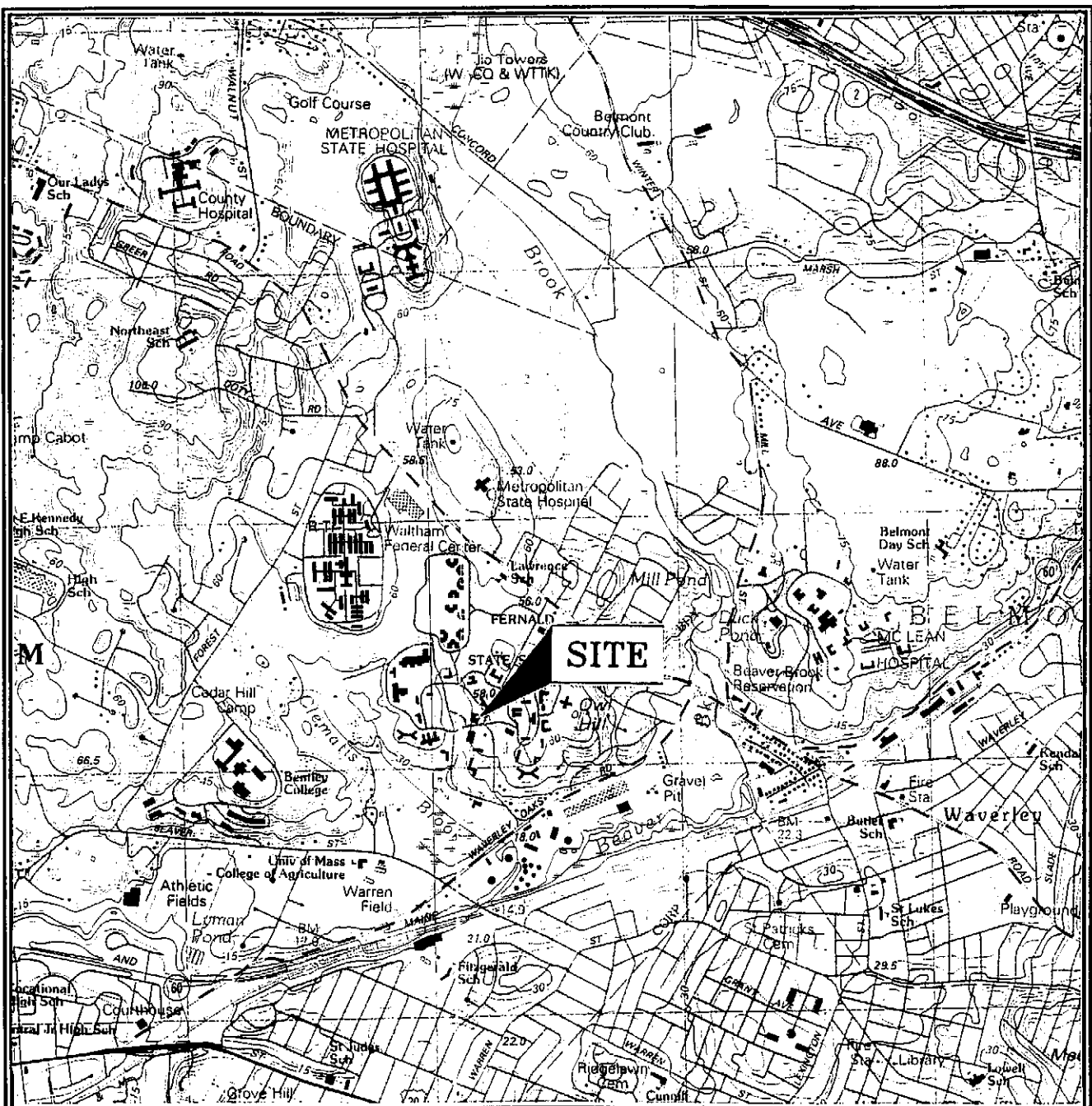
Pursuant to 310 CMR 4.03, response actions conducted by State Agencies are exempt from the Response Action Outcome compliance fee as described in 310 CMR 40.0156(3).

## **7.0 LIMITATIONS**

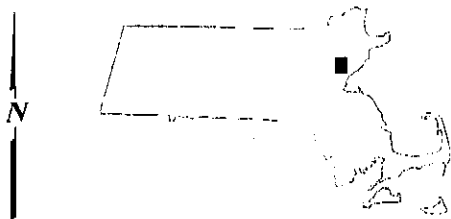
The conclusions expressed by Coneco in this report are based solely on the references cited. Observations were made under the conditions stated. Information provided by federal, state, and local agencies contacted was relied upon as accurate and complete. This study was conducted to define the limits of petroleum-impacted media and reduce petroleum concentrations. This report represents Coneco's opinion relative to the referenced findings. Unless otherwise specified in the scope of work, Coneco accepts no responsibility for client performance of recommendations as may be offered in this report. No attempt was made to investigate Site owner or operator compliance with federal, state, or local laws and regulations in connection with Site usage.

Should additional information become available concerning this Site or neighboring properties, Coneco should be given the opportunity to review and modify the Site investigation findings, as necessary. With specific regard to subsurface explorations, data obtained from soil sampling may not be wholly representative of the nature and extent of subsurface conditions at locations other than the actual sample location. Variable conditions may only become evident upon further exploration. If variations become apparent in the future, it will be necessary to reevaluate the conclusions and recommendations offered in this report.





U.S.G.S. 1985  
 Boston North, Massachusetts  
 3 Meter Contours, Scale 1:25,000



Coordinates: 42° 23' 26" N 71° 12' 30" W  
 UTM 4,695,300 N 318,200 E (Zone 19)

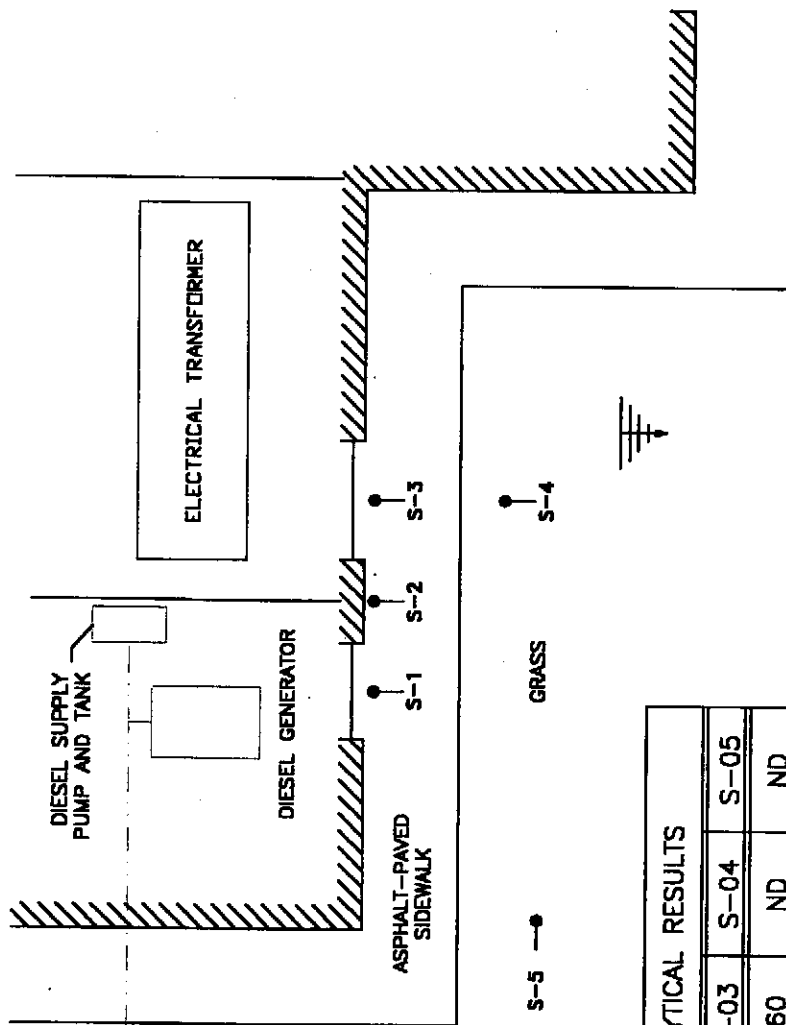
Coneco Engineers & Scientists

Site Locus Map

Fernald Center, Thom Building  
 200 Trapelo Road  
 Waltham, Massachusetts  
 RTN 3-21380

FIGURE 1

# THOM BUILDING



0 8 16  
SCALE: 1"=8'

NOTE: THE LOCATIONS AND DIMENSIONS OF SITE FEATURES ARE APPROXIMATE AND BASED ON CONECO FIELD OBSERVATIONS.

## INITIAL DELINEATION-EPH SOIL ANALYTICAL RESULTS

ANALYTE	S-01	S-02	S-03	S-04	S-05
C9-C18 ALIPHATICS	2,900	11,000	160	ND	ND
C19-C36 ALIPHATICS	1,300	5,900	150	ND	ND
C11-C22 AROMATICS	2,838	9,965	163	ND	ND

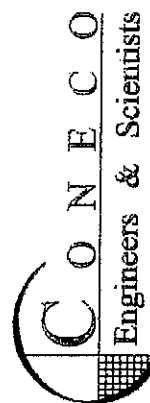
NOTES: ALL RESULTS PROVIDED IN mg/Kg  
ND = NOT DETECTED ABOVE LABORATORY QUANTIFICATION LIMITS

## LEGEND

DOWNSCOPE INDICATOR

SOIL SAMPLE LOCATION

UST SUPPLY LINE



Engineers & Scientists

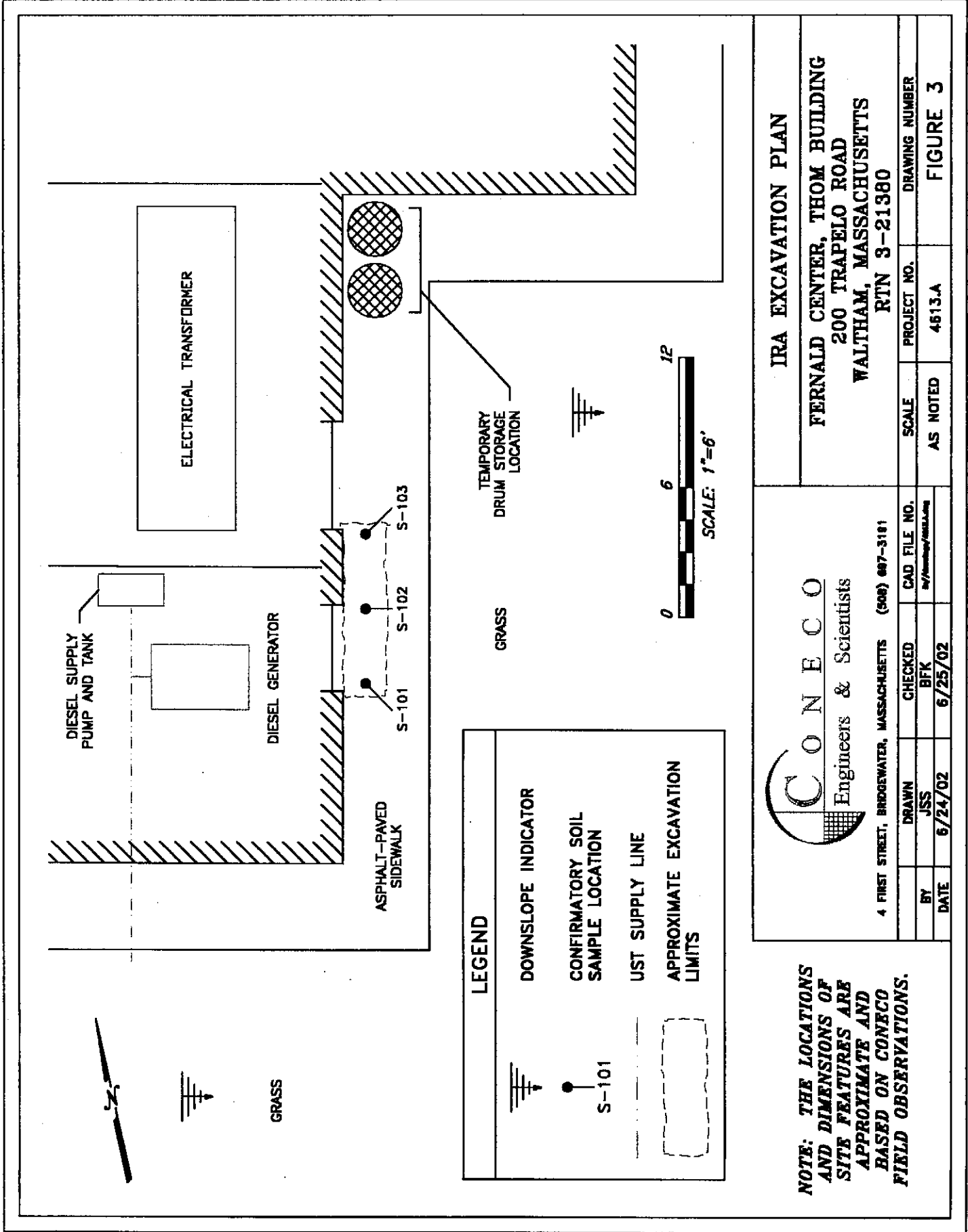
4 FIRST STREET, BRIDGEWATER, MASSACHUSETTS (508) 897-3191

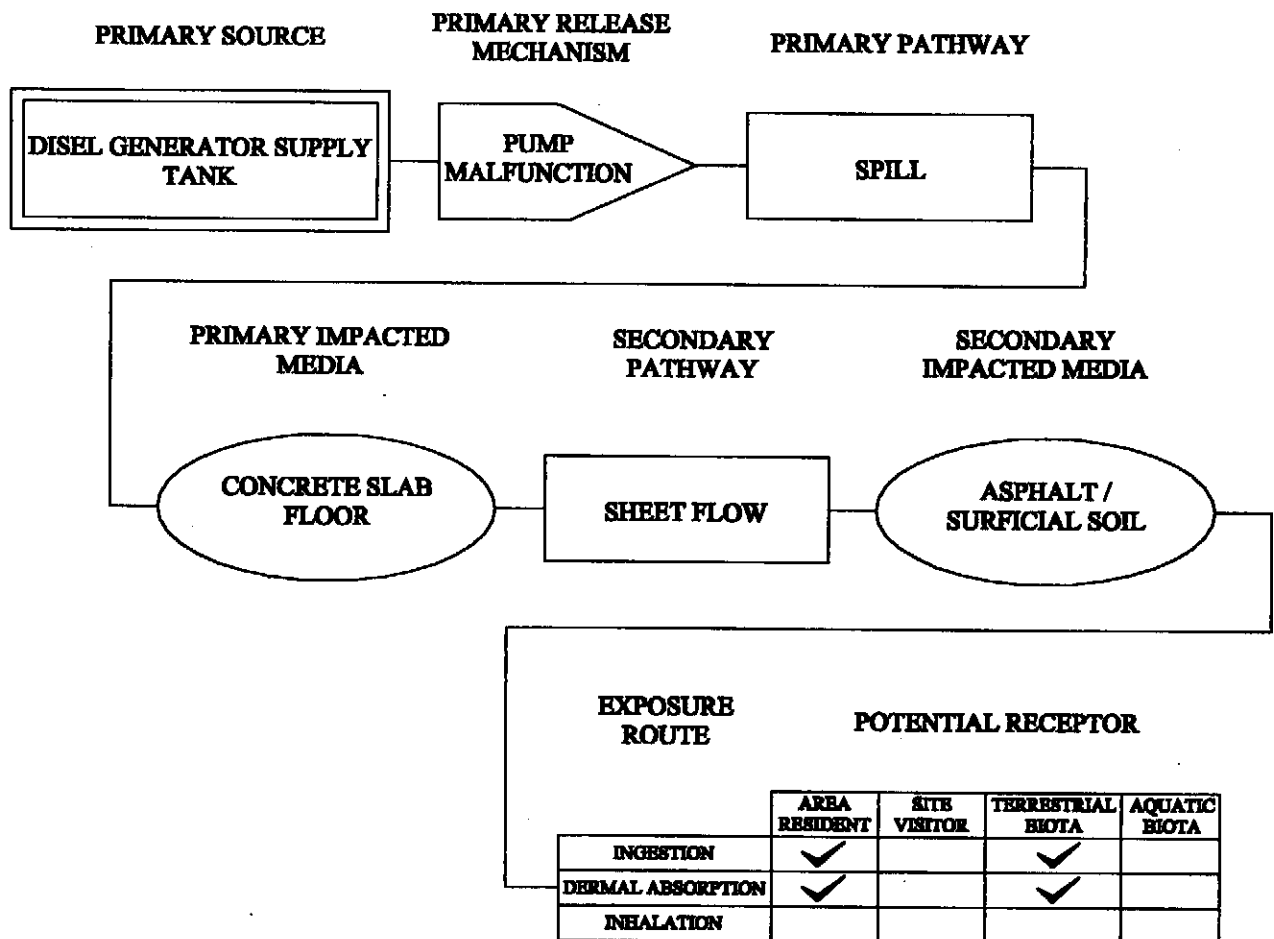
BY	DRAWN	CHECKED	CAD FILE NO.
DATE	JSS	BPK	12/10/02/04/11/02
4/4/02	4/5/02		

## SITE PLAN

FERNALD CENTER, THOM BUILDING  
200 TRAPELO ROAD  
WALTHAM, MASSACHUSETTS  
RTN 3-21380

SCALE	PROJECT NO.	DRAWING NUMBER
AS NOTED	4613.A	FIGURE 2





# CONCEPTUAL SITE MODEL

FERNALD CENTER, THOM BUILDING  
200 TRAPELO ROAD  
WALTHAM, MASSACHUSETTS  
RELEASE TRACKING NUMBER 3-21380



4 FIRST STREET, BRIDGEWATER, MASSACHUSETTS (508) 897-3191

SCALE	PROJECT NO.	DRAWING NUMBER	BY	DRAWN	CHECKED	CAD FILE NO.
N / A	4613.A	FIGURE 4	DATE	JSS 6/24/02	BFK 6/25/02	

# MA DEP - Bureau of Waste Site Cleanup

## Site Scoring Map: 500 feet & 0.5 Mile Radii

### SITE NAME:

Thom Building  
Fernald Center  
200 Trapelo Road  
WALTHAM, MA 02452  
4695289n 318224ew

Site Location

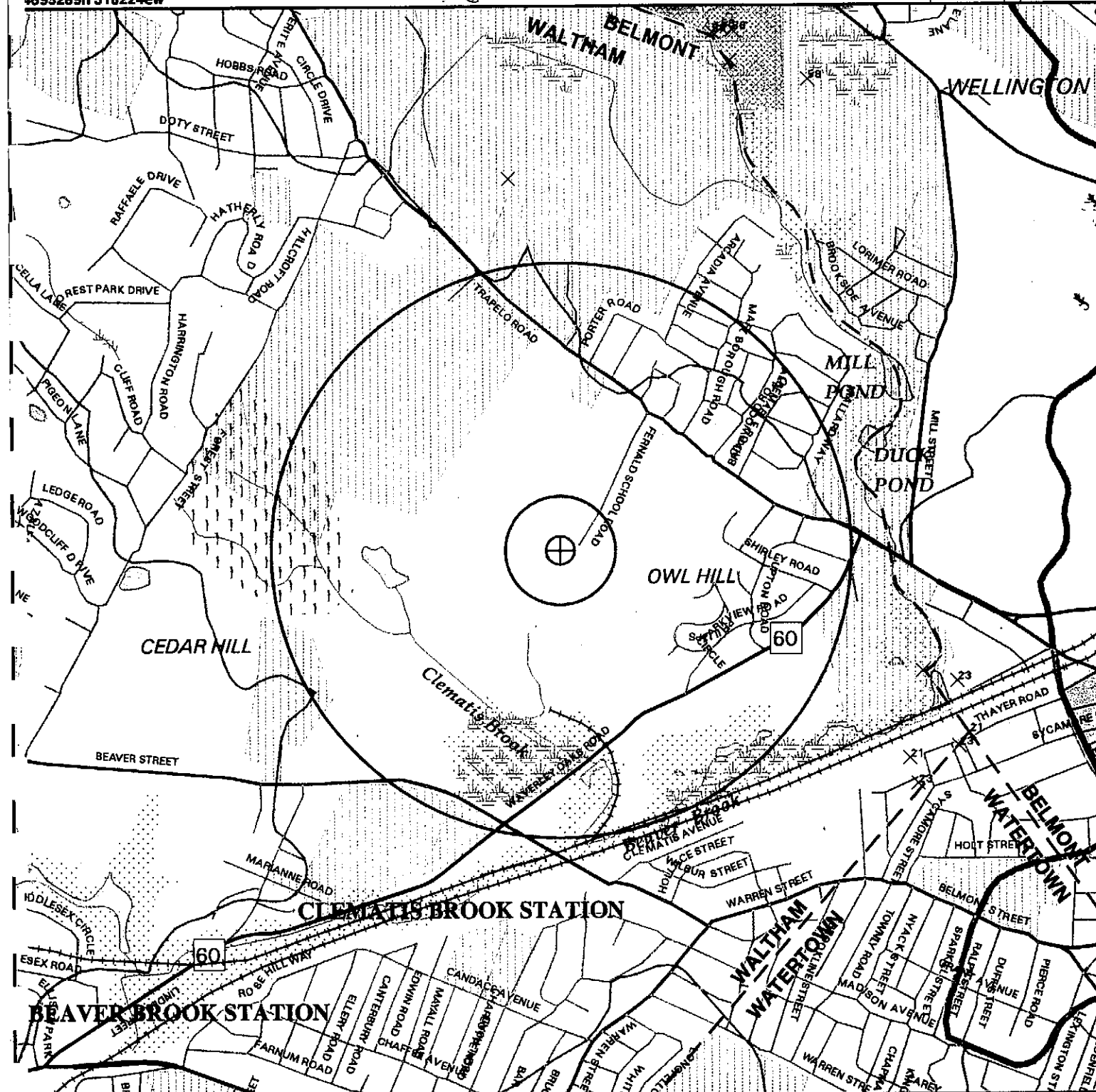


The information shown on this map is the best available at the date of printing. Please refer to the data source descriptions document.



Massachusetts  
Geographic  
Information  
System

Massachusetts Executive Office of Environmental Affairs - 2002



Roads: Limited Access, Divided, Major Road, Connector, Street, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, Sub; Streams: Perennial, Intermittent, Man Made Shore, Dams

Potentially Productive Aquifers: Medium, High Yield

Non-Potential Drinking Water Source Area: Medium, High Yield

EPA Sole Source Aquifer; FEMA 100-year floodplain

Public Water Supplies: Ground, Surface, Non Community

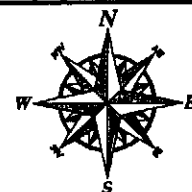
Approved Zone 2; NWPA; Surface Water Supply Zone A

Hydrography: Water Features, Public Surface Water Supply

Wetlands: Fresh, Salt, NHESP Wetlands Habitat

Protected Open Space; ACEC

DEP Permitted Solid Waste Facilities; Certified Vernal Pools



SCALE 1:15000

0 1/2 1 KILOMETERS

June 25, 2002



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-104

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

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

Release Tracking  
Number

3 - 21380

A. SITE OR DOWNGRADIANT PROPERTY LOCATION:

Site Name: (optional) \_\_\_\_\_

Street: Fernald Center, 200 Trapelo Road

Location Aid: Thom Building

City/Town: Waltham

ZIP: 02452-6302

Code: \_\_\_\_\_

☐ Check here if this Site location is Tier  
Classified.

If a Tier I Permit has been issued, state the Permit  
Number: \_\_\_\_\_

Related Release Tracking Numbers that this Form  
Addresses: \_\_\_\_\_

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

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

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

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

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

Specify Affected Release Tracking  
Numbers: \_\_\_\_\_

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

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

☐ Check here if this is a revised Downgradient Property Status  
Submittal.

Date of Prior  
Submittal: \_\_\_\_\_

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

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

Specify  
one:

☐ For a Class C RAO

☐ For a Waiver Completion Statement indicating a Temporary  
Solution

Provide Submittal Date of RAO Statement or Waiver Completion  
Statement: \_\_\_\_\_

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

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

☐ Assessment and/or Monitoring Only

☒ Removal of Contaminated Soils

☒ Re-use, Recycling or Treatment

☐ On Site

☒ Off Site

Describe: Diesel-impacted soil

☐ Landfill ☐ Cover ☐ Disposal Est. Vol.: \_\_\_\_\_ cubic yards

☐ Removal of Drums, Tanks or Containers

Describe: \_\_\_\_\_

☒ Removal of Other Contaminated Media

Specify Type and  
Volume: Absorbent Mat./Product, 2 drums

☐ Other Response Actions

Describe: \_\_\_\_\_

☒ Deployment of Absorbant or Contaminant  
Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor  
Extraction

☐ Structure Venting System

☒ Product or NAPL  
Recovery

☐ Groundwater Treatment  
Systems

☐ Air Sparging

☐ Temporary Water Supplies

☐ Temporary Evacuation or Relocation of  
Residents

☐ Fencing and Sign Posting

SECTION C IS CONTINUED ON THE NEXT PAGE.



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

Release Tracking  
Number

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

3 - 21380

C. DESCRIPTION OF RESPONSE ACTIONS: (continued)

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

Describe  
Technologies: \_\_\_\_\_

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

Name of Facility: General Chemical / Northland Environmental  
Town and State: Framingham, Massachusetts / Providence, Rhode Island  
Quantity of Remediation Waste Transported to Date: (2) 55-gal drums / (2) 55-gal drums

E. RESPONSE ACTION OUTCOME CLASS:

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

- ☒ **Class A-1 RAO:** Specify one of the following:
- ☒ Contamination has been reduced to background levels. ☐ A Threat of Release has been eliminated.
- ☐ **Class A-2 RAO:** You **MUST** provide justification that reducing contamination to background levels is infeasible.
- ☐ **Class A-3 RAO:** You **MUST** provide both an implemented Activity and Use Limitation (AUL) and justification that reducing contamination to background levels is infeasible.
- If applicable, provide the earlier of the AUL expiration date or date the design life of the remedy will end: \_\_\_\_\_
- ☐ **Class B-1 RAO:** Specify one of the following:
- ☐ Contamination is consistent with background levels ☐ Contamination is **NOT** consistent with background levels.
- ☐ **Class B-2 RAO:** You **MUST** provide an implemented AUL.
- If applicable, provide the AUL expiration date: \_\_\_\_\_
- ☐ **Class C RAO:** ☐ Check here if you will conduct post-RAO Operation, Maintenance and Monitoring at the Site.
- Specify One: ☐ Passive Operation and Maintenance ☐ Monitoring Only
- ☐ Active Operation and Maintenance (defined at 310 CMR 40.0006)

F. RESPONSE ACTION OUTCOME INFORMATION:

- ☐ If an RAO Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.
- ☐ Check here if submitting one or more AULs. You must attach an AUL Transmittal Form (BWSC-113) and a copy of each implemented AUL related to this RAO Statement. Specify the type of AUL(s) below: (required for all Class A-3 RAOs and Class B-2 RAOs)

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

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

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

Risk Characterization Method(s) Used:	<input checked="" type="checkbox"/> Method 1	<input type="checkbox"/> Method 2	<input type="checkbox"/> Method 3
Soil Category(ies) Applicable:	<input checked="" type="checkbox"/> S-1	<input checked="" type="checkbox"/> S-2	<input type="checkbox"/> S-3
Groundwater Category(ies) Applicable:	<input type="checkbox"/> GW-1	<input checked="" type="checkbox"/> GW-2	<input checked="" type="checkbox"/> GW-3

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

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



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-104

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

Release Tracking  
Number

3 - 21380

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

G. DOWNGRADIANT PROPERTY STATUS SUBMITTAL:

- ☐ If a Downgradient Property Status Submittal Compliance Fee is required, check here to certify that the fee has been submitted. You **MUST** attach a photocopy of the payment.
- ☐ Check here if a Release(s) of Oil or Hazardous Material(s), other than that which is the subject of this submittal, has occurred at this property.

Release Tracking  
Number(s):

☐ Check here if the Releases identified above require further Response Actions pursuant to 310 CMR 40.0000.

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

H. LSP OPINION:

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

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

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

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

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

LSP Name: Brian F. Klingler LSP #: 8493 Stamp:

Telephone: 508-697-3191 Ext.: \_\_\_\_\_

FAX: 508-697-5996

(optional)

Signature: [Signature]

Date: 7-1-02



I. PERSON MAKING SUBMITTAL:

Name of Organization: Joanne Ciardello

Name of Contact: MA Dept. of Mental Retardation Title: Director of Operations

Street: 200 Trapelo Road

City/Town: Waltham State: MA ZIP Code: 02452-6302

Telephone: 781-894-3600 Ext.: 2104 FAX: \_\_\_\_\_  
(optional)

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

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

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

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

☐ Any Other Person Submitting This Form Specify \_\_\_\_\_  
Relationship: \_\_\_\_\_





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

Release Tracking  
Number

3 - 21380

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

K. CERTIFICATION OF PERSON SUBMITTING DOWNGRADE 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 Downgrade Property Status Submittal, you do not need to complete this section of the form.

I, Joanne Ciardello, 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: Joanne Ciardello Title: Director of Operations  
(signature)

For MA Dept. of Mental Retardation Date: July 1, 2002  
(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.

**SITE PHOTOGRAPHS**

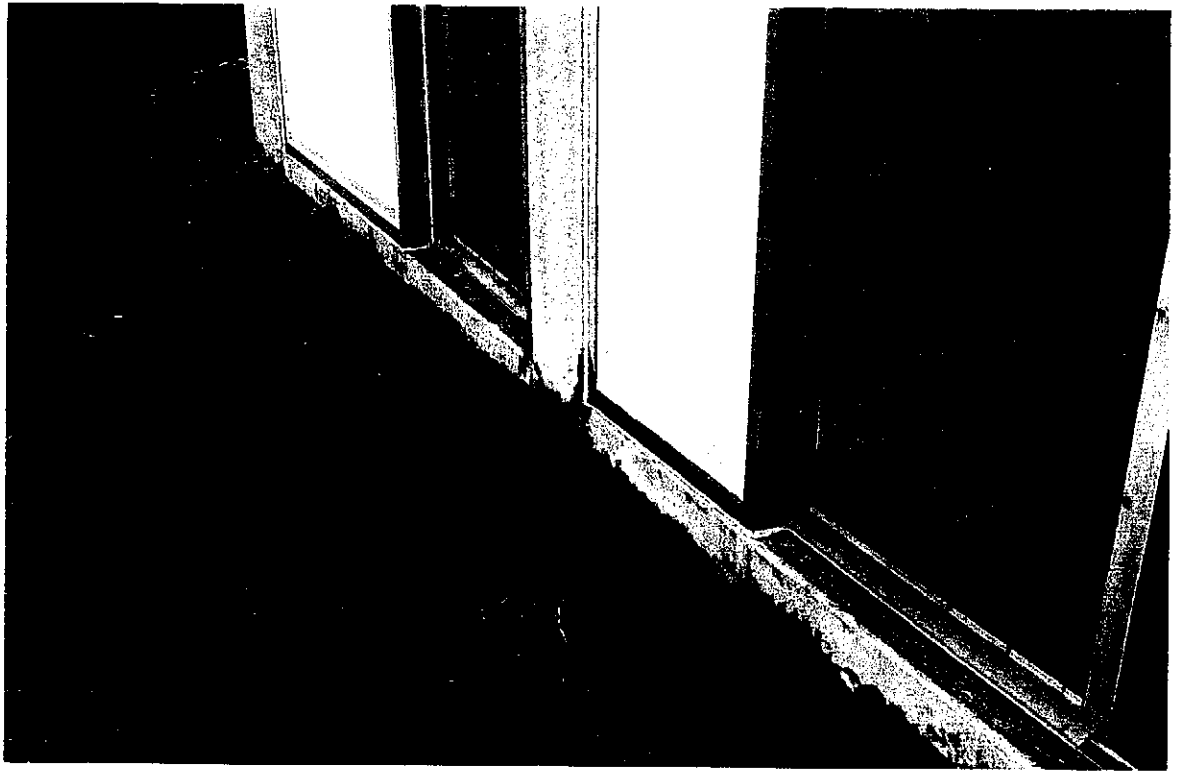


Photo 1. Site conditions following emergency response activities.



Photo 2. IRA Excavation area.

CONECO ENGINEERS AND SCIENTISTS



Photo 3. Site conditions following  
IRA Excavation activities.



Photo 4. View of the Site from the east at the completion of IRA excavation  
activities.

**SITE-SPECIFIC HEALTH AND SAFETY PLAN**

**CONECO ENGINEERS AND SCIENTISTS  
SITE HEALTH & SAFETY PLAN**

DATE: April 5, 2002

PREPARER'S SIGNATURE:



**A. SITE DESCRIPTION: FERNALD CENTER, THOM BUILDING**

LOCATION: 200 Trapelo Road

CROSS STREETS: Marlborough Road

SITE USAGE: Residential / School Facility

PAST SITE USAGE: Same

**SURROUNDING AREA:**

       Virgin Land        X   Residential        X   Parkland/School

  X   Commercial/Retail             Industrial             Other:

**ENTRY OBJECTIVES:**

  X   Visual/Surficial             Test Pits/Identify Contaminated Soil

       Test Borings/Observation Wells        X   Monitor Tank/Soil Removal

  X   Sampling Soil/Water             Other:

**ONSITE CONTROL:**

An exclusion zone will be designated on site as the area within a 10-foot radius of the area of work interest. The Project Manager is responsible for physically delineating this zone with flagging, hazard cones, etc. Entry into the exclusion zone by individuals other than those listed in Section F of this document is prohibited without authorization from the Health/Safety Officer or the Group Supervisor.

**B. HAZARD EVALUATION**

The following substance(s) are known or suspected to be on the site or within the immediate site vicinity:

Substance	Anticipated Concentration	Media
Petroleum	Unknown	Soil
Note: Material Safety Data Sheets for the above referenced compounds are attached.		

**C. PERSONNEL PROTECTIVE EQUIPMENT**

Based on an evaluation of the anticipated potential hazards, a personal protection level of \_\_\_\_\_ C,   X   D, or \_\_\_\_\_ Other (check one) has been designated for all personnel working in the exclusion zone.

***Personnel must always be equipped to upgrade to level C if necessary. Down grading of the specified level of protection will not be made without authorization from the Health/Safety Officer and the Group Supervisor listed in Section F of this document.***

Specific protection equipment and clothing materials are as follows (check as necessary):

1. RESPIRATORY PROTECTION: (MSHA/NIOSH Approved)
 

\_\_\_\_\_ Full Face  
 (50 X P.E.L. or cartridge limits)

X (C)   Half Face  
 (10 X P.E.L. or cartridge limits)

CARTRIDGE TYPE:

X (C)   Organic Vapor  
  X (C)   Dust/Mist/Fume  
 \_\_\_\_\_ Other
2. COVERALLS:
 

X (C)   Standard TYVEK  
 \_\_\_\_\_ Polylaminated TYVEK  
 \_\_\_\_\_ Saran TYVEK  
 \_\_\_\_\_ Other
3. GLOVES:
 

X   Inner PVC  
  X (C)   Outer Neoprene - Latex  
 \_\_\_\_\_ Other

4. BOOTS:   X   Rubber, Steel Toe  
           Disposable Outer
5. HARD HAT   X
6. EYE PROTECTION   X
7. EAR PROTECTION   X
8. OTHER (specify)   X

#### D. ENVIRONMENTAL / PERSONNEL MONITORING

Air monitoring will generally be conducted by the Coneco Site personnel. Each designated operator will be properly trained in the use of the monitoring equipment. The results of all air monitoring will be recorded and used as the basis for specifying personnel protective equipment and determining the need to upgrade/downgrade protective measures. Work activities at the Site will be shut down if monitoring values exceed those specified below for Level C. Monitoring procedures and action levels are as follows:

Monitoring Point	Reading	Action	Notes
HNU HW-101	< 5 Units above Background	Repeat monitoring at 30-minute intervals; Discontinue when readings remain at or below background for 1 hour	a
	5-25 Units above Background	Use half-mask respirator; Ventilate area; Monitor at 15-minute intervals; Discontinue when readings remain at or below background for 1 hour	a,b
	> 25 Units above Background	Stop Work; Contact supervisor and H&S Officer; Ventilate area	a,b
Notes: a. Use appropriate lamp and calibrate unit. b. Air-purifying respirators must be used only when use criteria are met and with appropriate cartridges.			

#### E. DECONTAMINATION PROCEDURES

All personnel will refer to the Coneco Environmental Corporation Standard Operating Procedures Manual for DE-CON, unless otherwise specified or attached to this plan.



## F. COMMUNICATION AND EMERGENCY PROCEDURES

The following items should be located and discussed with all field personnel prior to the initial entry of the exclusion zone or before work begins.

- 1) Coneco Health/Safety Plan    4) Location of nearest telephone
- 2) Personal protection equipment    5) Emergency method of equipment shutdown
- 3) On-site client contact    6) Hand signals

In the event of an emergency, development of hazardous site conditions, or significant changes in the work plan, communication will be established as soon as is practicable with the Group Supervisor and the on-site client contact.

### EMERGENCY SERVICES ARE SERVICES ARE AVAILABLE AS FOLLOWS:

AGENCY	TELEPHONE
Police	911
Fire	911
Ambulance	911
Public Works Dept.	781-314-3800
DigSafe	1-800-322-4844
ChemTrec	1-800-424-9300
DEP HOTLINE	1-800-424-8802

PERSON/COMPANY	TELEPHONE
Principal: Brian F Klingler L.S.P.	(508) 697-3191 ext. 103 (508) 962-6277 (mobile)
Health and Safety Officer: Amy A. Willoughby	(508) 697-3191 ext. 105 (508) 962-7423 (mobile)

NOTE: A FIRST AID KIT IS AVAILABLE FROM THE PROJECT MANAGER

Deaconess-Waltham Hospital is the nearest Hospital to the Site. It is located at 9 Hope Avenue in Waltham with telephone number (781) 647-6000. From the Site, turn right onto Trapelo Road and continue for approximately 0.4 miles. Turn right onto Waverly Oaks Road (MA Route 60) and continue for approximately 1.75 miles. Merge Right onto Main Street (MA Route 20) and continue for approximately 1.10 miles. Turn left onto Prospect Street and continue for approximately 0.3 miles the turn right onto Sharon. Deaconess-Waltham Hospital is approximately straight ahead across the intersection of Sharon and Hope Street.

**SEE ATTACHED MAP FOR HOSPITAL ROUTES**

**G. PLAN LIMITATIONS & ACKNOWLEDGMENT**

The preceding Site Health and Safety Plan has been prepared pursuant to 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response. It is not intended to cover any other OSHA General Industry Standards. It has also been prepared for the protection of Coneco's personnel and as preliminary information for use by Coneco's subcontractors and other individuals involved in site environmental activities associated with the stated Entry Objectives. Coneco's subcontractors and other involved individuals not employed by Coneco are responsible for their own safety while on the Site. Coneco will not be responsible for providing personal protection equipment for individuals other than Coneco personnel. Coneco will not be responsible or held liable for personal injury resulting from the direct actions, negligence, or lack of approved health and safety training on the part of individuals other than Coneco personnel.

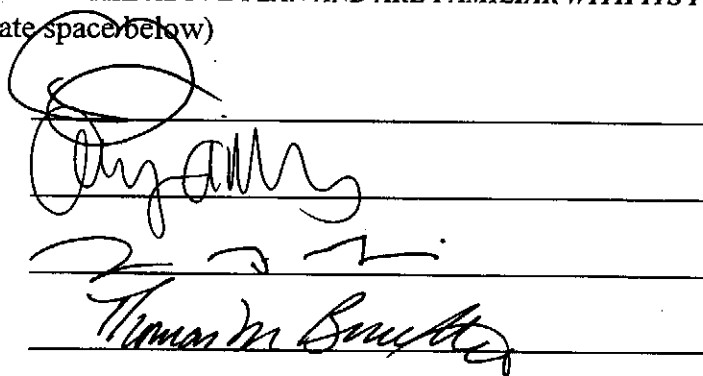
***ALL SITE PERSONNEL HAVE READ THE ABOVE PLAN AND ARE FAMILIAR WITH ITS PROVISIONS.***  
(Please sign in the appropriate space below)

Group Supervisor

Health/Safety Officer

Project Manager

Other Site Personnel



The image shows four handwritten signatures, each written over a horizontal line. The first signature is a large, circular scribble. The second signature is a cursive name that appears to be 'Dyally'. The third signature is a cursive name that appears to be 'Z. J. L.'. The fourth signature is a cursive name that appears to be 'Thomas M. Bouché'.

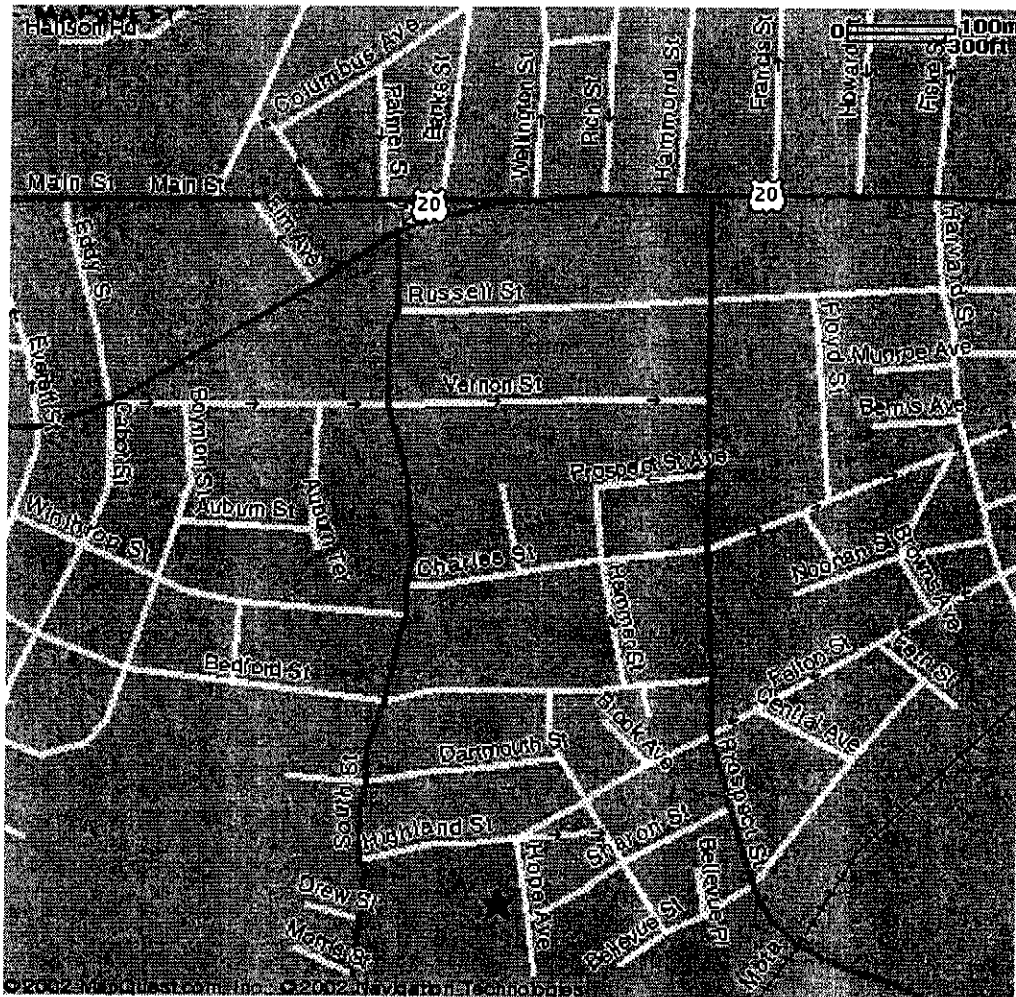
Welcome!

# MAPQUEST.

**Deaconess-Waltham Hospital**  
9 Hope Ave  
Waltham, MA  
02453-2711, US

SEND TO PRINTER

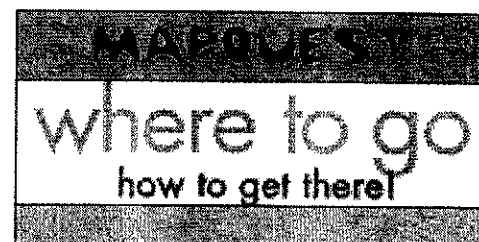
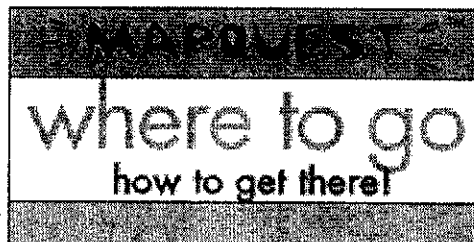
[Back](#)



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NAVTECH  
ON BOARD



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**COPY OF RELEASE NOTIFICATION FORM (BWSC-103)**  
**IMMEDIATE RESPONSE ACTION TRANSMITTAL FORM (BWSC-105)**  
**RESPONSE ACTION OUTCOME TRANSMITTAL FORM (BWSC - 104)**  
**COPIES OF MUNICIPAL NOTIFICATIONS**



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

COPY

BWSC-103

RELEASE NOTIFICATION & NOTIFICATION RETRACTION  
FORM

Pursuant to 310 CMR 40.0335 and 310 CMR 40.0371 (Subpart C)

Release Tracking  
Number

3 - 21380

If assigned by DEP

A. RELEASE OR THREAT OF RELEASE LOCATION:

Street: Fernald Center, 200 Trapelo Road Location Aid: Thom Building

City/Town: Waltham ZIP Code: 02454-6302

B. THIS FORM IS BEING USED

TO:

(check one)

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

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

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

Date and time you obtained knowledge of the Release or TOR. 01/07/02 Time: 12:15 Specify: ☐ AM ☒ PM

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

IF KNOWN, record date and time release or TOR occurred. 01/07/02 Time: 12:00 Specify: ☐ AM ☒ PM

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

Provide date and time of Oral Notification. 01/07/02 Time: 12:30 Specify: ☐ AM ☒ PM

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

2 HOUR REPORTING CONDITIONS

72 HOUR REPORTING CONDITIONS

120 DAY REPORTING CONDITIONS

☒ Sudden Release

☐ Threat of Sudden Release

☐ Oil Sheen on Surface Water

☐ Poses Imminent Hazard

☐ Could Pose Imminent Hazard

☐ Release Detected in Private Well

☐ Release to Storm Drain

☐ Sanitary Sewer Release (Imminent Hazard Only)

☐ Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/2 Inch

☐ Underground Storage Tank (UST) Release

☐ Threat of UST Release

☐ Release to Groundwater near Water Supply

☐ Release to Groundwater near School or Residence

☐ Release of Hazardous Material(s) to Soil or Groundwater Exceeding Reportable Concentration(s)

☐ Release of Oil to Soil Exceeding Reportable Concentration(s) and Affecting More than 2 Cubic Yards

☐ Release of Oil to Groundwater Exceeding Reportable Concentration(s)

☐ Subsurface Non-Aqueous Phase Liquid (NAPL) Equal to or Greater than 1/8 Inch and Less than 1/2 Inch

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

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

O or HM Released	O HM (check one)	CAS # (if known)	Amount or Concentration	Units	Reportable Concentrations Exceeded, if Applicable (RCS-1, RCS-2, RCGW-1, RCGW-2)
No. 2 Fuel Oil	<input checked="" type="checkbox"/> <input type="checkbox"/>		>10	Gallons	
	<input type="checkbox"/> <input type="checkbox"/>				
	<input type="checkbox"/> <input type="checkbox"/>				

D. ADDITIONAL INVOLVED PARTIES:

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

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

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



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

*J. H.* BWSC-105

IMMEDIATE RESPONSE ACTION (IRA)  
TRANSMITTAL FORM

Release Tracking  
Number

3 - 21380

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart 40.0427)

A. RELEASE OR THREAT OF RELEASE LOCATION:

Release Name:  
(optional)

Street: Fernald Center, 200 Trapelo Road

Location Aid: Thom Building

City/Town: Waltham

ZIP: 02452-6302

Code:

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

☐ Check here if this location is Adequately Regulated, pursuant to 310 CMR 40.0110-0114.

Specify Program: ☐ CERCLA ☐ HSWA Corrective Action ☐ Solid Waste Management ☐ RCRA State Program (21C Facilities)

Related Release Tracking Numbers That This IRA

Addresses:

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

☐ Submit an IRA Plan (complete Sections A, B, C, D, E, H, I, J and K).

☐ Check here if this IRA Plan is an update or modification of a previously approved written IRA Plan Submitted:

☐ Submit an Imminent Hazard Evaluation (complete Sections A, B, C, F, H, I, J and K).

☐ Submit an IRA Status Report (complete Sections A, B, C, E, H, I, J and K).

☐ Submit a Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard (complete Sections A, B, C, D, E, H, I, J and K).

☒ Submit an IRA Completion Statement (complete Sections A, B, C, D, E, G, H, I, J and K).

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.

RECEIVED

JUL 16 2002

DEP

NORTHEAST REGIONAL OFFICE

C. RELEASE OR THREAT OF RELEASE CONDITIONS THAT WARRANT

IRA:  
Identify Media and Receptors Affected: (check all that apply)

☐ Air ☐ Groundwater ☐ Surface Water ☐ Sediments ☒ Soil

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

☐ School ☐ Unknown ☐ Other Specify \_\_\_\_\_

Identify Conditions That Require IRA, Pursuant to 310 CMR 40.0412: (check all that apply)

☒ 2 Hour Reporting Condition(s)

☐ 72 Hour Reporting Condition(s) ☐ Substantial Release Migration ☐ Other Condition(s)

Describe Sudden release of approximately 12 gallons of diesel fuel

Identify Oils and Hazardous Materials Released: (check all that apply)

☒ Oils ☐ Chlorinated Solvents ☐ Heavy Metals

☐ Others Specify: Diesel fuel

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.: 1 cubic yards

Describe Diesel-impacted soil

☐ Store ☐ On Site ☐ Off Site Est. Vol.: \_\_\_\_\_ cubic yards

☐ Landfill ☐ Cover ☐ Disposal Est. Vol.: \_\_\_\_\_ cubic yards

☐ Removal of Drums, Tanks or Containers

Describe \_\_\_\_\_

☒ Deployment of Absorbent or Containment Materials

☐ Temporary Covers or Caps

☐ Bioremediation

☐ Soil Vapor Extraction

☐ Structure Venting System

☒ Product or NAPL Recovery

☐ Groundwater Treatment Systems

☐ Air Sparging

☐ Temporary Water Supplies

SECTION D IS CONTINUED ON THE NEXT PAGE.



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-105

IMMEDIATE RESPONSE ACTION (IRA)  
TRANSMITTAL FORM

Release Tracking  
Number

3 - 21380

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

D. DESCRIPTION OF RESPONSE ACTIONS (continued):

☒ Removal of Other Contaminated Media

Specify Type and Volume: Absorbent Mat / Product 2 Drums

☐ Temporary Evacuation or Relocation of Residents

☐ Fencing and Sign Posting

☐ Other Response Actions Describe \_\_\_\_\_

☐ Check here if this IRA 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: General Chemical / Northland Environmental

Town and State: Framingham, Massachusetts / Providence, Rhode Island

Quantity of Remediation Waste Transported to Date: (2) 55-gal. drums / (2) 55-gal. drums

F. IMMINENT HAZARD EVALUATION SUMMARY: (check one of the following)

☐ Based upon an evaluation, an Imminent Hazard exists in connection with this Release or Threat of Release.

☐ Based upon an evaluation, an Imminent Hazard does not exist in connection with this Release or Threat of Release.

☐ Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release, and further assessment activities will be undertaken.

☐ Based upon an evaluation, it is unknown whether an Imminent Hazard exists in connection with this Release or Threat of Release. However, response actions will address those conditions that could pose an Imminent Hazard.

G. IRA COMPLETION STATEMENT:

☐ Check here if future response actions addressing this Release or Threat of Release will be conducted as part of the Response Actions planned for a Site that has already been Tier Classified under a different Release Tracking Number, or a Site that is identified on the Transition List as described in 310 CMR 40.0600 (i. e., a Transition Site, which includes Sites with approved Waivers). These additional response actions must occur according to the deadlines applicable to the earlier Release Tracking Number (i. e., Site ID Number).

State Release Tracking Number (i. e., Site ID Number) of Tier Classified Site or Transition Site: \_\_\_\_\_

If any Remediation Waste will be stored, treated, managed, recycled or reused at the site following submission of the IRA 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 IRA Completion Statement.

H. LSP OPINION:

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

> if Section B of this form indicates that an **Immediate Response Action 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 an **Imminent Hazard Evaluation** is being submitted, this Imminent Hazard Evaluation was developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and the assessment activity(ies) undertaken to support this Imminent Hazard Evaluation complies(y) with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000;

> if Section B of this form indicates that an **Immediate Response 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 an **Immediate Response Action Completion Statement** or a **Request to Terminate an Active Remedial System and/or Terminate a Continuing Response Action(s) Taken to Address an Imminent Hazard** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000 and (iii) complies(y) with the identified provisions of all orders, permits, and approvals identified in this submittal.

SECTION H IS CONTINUED ON THE NEXT PAGE.



Massachusetts Department of Environmental Protection  
Bureau of Waste Site Cleanup

BWSC-105

IMMEDIATE RESPONSE ACTION (IRA)  
TRANSMITTAL FORM

Pursuant to 310 CMR 40.0424 - 40.0427 (Subpart D)

Release Tracking  
Number

3 - 21380

H. LSP Opinion (continued):

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: Brian F. Klingler LSP #: 8493 Stamp:

Telephone: 508-697-3191 Ext.: \_\_\_\_\_

FAX: 508-697-5996  
(optional)

Signature: \_\_\_\_\_

Date: 7-1-02



I. PERSON UNDERTAKING IRA:

Name of Organization: Massachusetts Department of Mental Retardation

Name of Contact: Joanne Ciardello Title: Director of Operations

Street: 200 Trapelo Road

City/Town: Waltham State: MA ZIP Code: 02452-6302

Telephone: 781-894-3600 Ext.: 2104 FAX: \_\_\_\_\_  
(optional)

☐ Check here if there has been a change in the person undertaking the IRA.

J. RELATIONSHIP TO RELEASE OR THREAT OF RELEASE OF PERSON UNDERTAKING IRA: (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 IRA Specify Relationship: \_\_\_\_\_

K. CERTIFICATION OF PERSON UNDERTAKING IRA:

I, Joanne Ciardello, 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: Joanne Ciardello Title: Director of Operations  
(signature)

For MA Department of Mental Retardation Date: July 1, 2002  
(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.





CIVIL DESIGN & LAND PLANNING  
SURVEYING  
GEOTECHNICAL ENGINEERING  
ENVIRONMENTAL CONSULTING  
REGULATORY COMPLIANCE & PERMITTING

July 9, 2002  
Project No. 4613.A

The Honorable Mayor David F. Gately  
City of Waltham Mayor's Office  
City Hall Second Floor  
610 Main Street  
Waltham, Massachusetts 02452

RE: **Public Involvement Notification**  
Massachusetts Department of Mental Retardation Fernald Center  
Thom Building  
200 Trapelo Road  
Waltham, Massachusetts  
Release Tracking Number 3-21380

Dear Mayor Gately:

Pursuant to 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP), the following serves as written notification of the identification of a release of approximately 12 gallons of diesel fuel at the Thom Building of the Massachusetts Department of Mental Retardation Fernald Center in Waltham, Massachusetts. This letter follows notification to the Department of Environmental Protection - Northeast Regional Office (NERO) on January 7, 2002 and the submittal of a Response Action Outcome (RAO) Statement on July 9, 2002. The Site has been assigned Release Tracking Number (RTN) 3-21380. Copies of the RAO Statement are available for review at the DEP-NERO.

Pursuant to the provisions of 310 CMR 40.0427, no ongoing activities related to the above described release are required.

If you have any questions, please contact the undersigned.

Sincerely,  
Coneco Engineers & Scientists

A handwritten signature in black ink, appearing to read 'Jedd S. Steinglass'.

Jedd S. Steinglass  
Project Manager

A handwritten signature in black ink, appearing to read 'Brian F. Klingler'.

Brian F. Klingler, P.G., L.S.P.  
Principal Geologist

JSS:BFK:jd  
jss-4613.A.notification.mayor.doc



CIVIL DESIGN & LAND PLANNING  
SURVEYING  
GEOTECHNICAL ENGINEERING  
ENVIRONMENTAL CONSULTING  
REGULATORY COMPLIANCE & PERMITTING

July 9, 2002  
Project No. 4613.A

Mr. Walter Sweder  
Director  
City of Waltham Health Department  
119 School Street  
Waltham, Massachusetts 02451

RE: **Public Involvement Notification**  
Massachusetts Department of Mental Retardation Fernald Center  
Thom Building  
200 Trapelo Road  
Waltham, Massachusetts  
Release Tracking Number 3-21380

Dear Director Sweder:

Pursuant to 310 CMR 40.1403 of the Massachusetts Contingency Plan (MCP), the following serves as written notification of the identification of a release of approximately 12 gallons of diesel fuel at the Thom Building of the Massachusetts Department of Mental Retardation Fernald Center in Waltham, Massachusetts. This letter follows notification to the Department of Environmental Protection - Northeast Regional Office (NERO) on January 7, 2002 and the submittal of a Response Action Outcome (RAO) Statement on July 9, 2002. The Site has been assigned Release Tracking Number (RTN) 3-21380. Copies of the RAO Statement are available for review at the DEP-NERO.

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Coneco Engineers & Scientists

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Jedd S. Steinglass  
Project Manager

A handwritten signature in black ink, appearing to read 'Brian F. Klingler'.

Brian F. Klingler, P.G., L.S.P.  
Principal Geologist

JSS:BFK:jd  
jss-/4613.A.notification.mayor.doc

**UNIFORM HAZARDOUS WASTE MANIFESTS**



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF HAZARDOUS MATERIALS

One Winter Street Boston, Massachusetts 02108

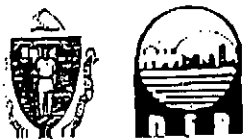
GCC FILE # 22585

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

73-8283

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

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. MP7B18943600		Manifest Document No. 72091		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address  COMMONWEALTH OF MASSACHUSETTS-DMR 160 NORTH WASHINGTON ST. BOSTON MA. 02114 4. Generator's Phone ( ) 781-894-3600						A. State Manifest Document Number MA Q 072091					
5. Transporter 1 Company Name CLEAN VENTURE INC.						B. State Gen. ID 200 TRAPELO RD. WALTHAM, MA					
6. US EPA ID Number NJ0000027193						C. State Trans. ID 46512 MA					
7. Transporter 2 Company Name						D. Transporter's Phone ( )					
8. US EPA ID Number						E. State Trans. ID 908-355-5800					
9. Designated Facility Name and Site Address GENERAL CHEMICAL CORPORATION 133 LELAND STREET FRAMINGHAM MA 01702						F. Transporter's Phone ( )					
10. US EPA ID Number MA0019371079						G. State Facility's ID NOT REQUIRED					
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)						H. Facility's Phone ( ) 508-872-5000					
a. STATE REGULATED WASTE OIL (Non DOT/RCRA Regulated per 40/49 CFR)						12. Containers No. Type		13. Total Quantity		14. WASTE NO.	
						001 DM 00035 G				MA01	
b. STATE REGULATED OILY SOLIDS (Non DOT/RCRA Regulated per 40/49 CFR)						001 DM 00200 P				MA01	
c.											
d.											
J. Additional Descriptions for Materials Listed Above (include physical state and hazard code.)						K. Handling Codes for Wastes Listed Above					
WATER AND DIESEL a(0001)						c		S 0 1 2		d	
SOIL W/ DIESEL b(0002)						d		S 0 1		d	
15. Special Handling Instructions and Additional Information  GENERAL CHEMICAL (508)872-5000											
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. JOHN WE CARRIELLO Signature: Joanne Gendell As Agent Date: 03/14/02											
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name: DANA CALLAHAN Signature: Dana Callahan Date: 03/14/02						18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name: _____ Signature: _____ Date: _____					
19. Discrepancy Indication Space											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19 Printed/Typed Name: R Swartz Signature: R Swartz Date: 03/15/02											



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

A-365

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No. **MP7818943600** Manifest Document No. **246295**

3 Generator's Name and Mailing Address  
**STATE OF MA D.M.R.  
500 HARRISON AVE BOSTON MA 02110**

4 Generator's Phone ( ) **617-724-7886**

5 Transporter 1 Company Name  
**WESTERN OIL, INC.**

6 Transporter 2 Company Name

7 Designated Facility Name and Site Address  
**NORTHLAND ENVIRONMENTAL, INC.  
275 ALLENS AVENUE  
PROVIDENCE, RI 02905**

8 US EPA ID Number  
**RI00050002**

9 US EPA ID Number  
**RI00050002**

10 US EPA ID Number  
**RI00050002**

11 US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)

a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.	q.	r.	s.	t.	u.	v.	w.	x.	y.	z.
HA REGULATED OILY SOLIDS	NONE	NONE																							

12. Containers No. Type

13. Total Quantity

14. Vol Wt

15. Special Handling Instructions and Additional Information

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.

17. Transporter 1 Acknowledgement of Receipt of Materials

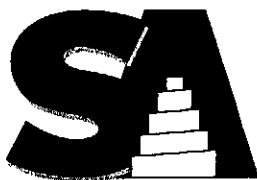
18. Transporter 2 Acknowledgement of Receipt of Materials

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.

246295 COPY 5: TRANSPORTER 1 RETAINS

**ORIGINAL LABORATORY DATA, LABORATORY QA/QC, METHODS,  
CHAIN-OF-CUSTODY FORMS**



SPECTRUM ANALYTICAL, INC.

*Featuring*  
**HANIBAL TECHNOLOGY**

Massachusetts Certification # M-MA138  
Rhode Island # 98 Maine # MA138  
Florida # E87600 / 87562  
New Hampshire # 2538  
Connecticut # PH-0777  
New York # 11393

Coneco  
4 First Street  
Bridgewater, MA 02324

Attn: Jedd Steinglass

**Client Project Number:** 4613.A

**Location:** Waltham, MA

Thursday, January 24, 2002

Report Status:

- ☒ Final Report  
☐ Re-issued Report  
☐ Revised Report



---

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analyses Requested</u>
AC93620	S-1	EPH Aliphatics/Aromatics Ultrasonic Extraction % Solids
AC93621	S-2	EPH Aliphatics/Aromatics Ultrasonic Extraction % Solids
AC93622	S-3	EPH Aliphatics/Aromatics Ultrasonic Extraction % Solids
AC93623	S-4	EPH Aliphatics/Aromatics Ultrasonic Extraction % Solids
AC93624	S-5	EPH Aliphatics/Aromatics Ultrasonic Extraction % Solids



SPECTRUM ANALYTICAL, INC.

*Featuring*

HANIBAL TECHNOLOGY

**Client Project Number:** 4613.A

**Location:** Waltham, MA

---

**Laboratory ID**

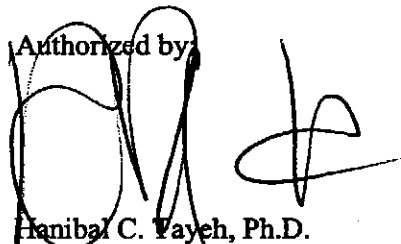
**Client Sample ID**

**Analyses Requested**

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method and meet the requirements of NELAC including any data obtained from a subcontract laboratory. Please note that all solid matrix sample results are calculated on a dry weight basis unless otherwise specified.

This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Authorized by:



Hanibal C. Yayah, Ph.D.  
President/Laboratory Director



# SPECTRUM ANALYTICAL, INC.

## Laboratory Report

Location: Waltham, MA

Client: CONECO

Lab ID No: AC93620

Client Id: S-1

Client Project No: 4613.A

Submittal Date: 1/22/02

Collection Date: 1/17/02

Matrix: Soil

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			1/23/02	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<b><i>EPH Aliphatics/Aromatics</i></b>						
C9-C18 Aliphatic Hydrocarbons	2,900	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	1,300	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	2,838	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	2,867	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	1/23/02	MSL	MA EPH 98-1
% Solids	92.8	%		1/23/02	RT	SM2540 B Mod

Lab ID No: AC93621

Client Id: S-2

Collection Date: 1/17/02

Matrix: Soil

---

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			1/23/02	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<i><b>EPH Aliphatics/Aromatics</b></i>						
C9-C18 Aliphatic Hydrocarbons	11,000	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	5,900	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	9,965	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	10,073	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	1/23/02	MSL	MA EPH 98-1
 % Solids	 85.5	 %		 1/23/02	 RT	 SM2540 B Mod

Lab ID No: AC93622

Client Id: S-3

Collection Date: 1/17/02

Matrix: Soil

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			1/23/02	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<b><i>EPH Aliphatics/Aromatics</i></b>						
C9-C18 Aliphatic Hydrocarbons	160	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	150	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	163	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	165	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	1/23/02	MSL	MA EPH 98-1
% Solids	91.4	%		1/23/02	RT	SM2540 B Mod

**Lab ID No:** AC93623**Client Id:** S-4**Collection Date:** 1/17/02**Matrix:** Soil

---

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			1/23/02	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<i><b>EPH Aliphatics/Aromatics</b></i>						
C9-C18 Aliphatic Hydrocarbons	Below det lim	mg/Kg	50	1/23/02	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	Below det lim	mg/Kg	50	1/23/02	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	Below det lim	mg/Kg	50	1/23/02	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	Below det lim	mg/Kg	50	1/23/02	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	1/23/02	MSL	MA EPH 98-1
% Solids	83.2	%		1/23/02	RT	SM2540 B Mod

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Lab ID No: AC93624  
Client Id: S-5

Collection Date: 1/17/02  
Matrix: Soil

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			1/23/02	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<b>EPH Aliphatics/Aromatics</b>						
C9-C18 Aliphatic Hydrocarbons	Below det lim	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	Below det lim	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	Below det lim	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	Below det lim	mg/Kg	40	1/23/02	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	1/23/02	MSL	MA EPH 98-1
% Solids	81.7	%		1/23/02	RT	SM2540 B Mod

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrix	<input type="checkbox"/> Aqueous <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other:
Containers	<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Broken <input type="checkbox"/> Leaking
Aqueous Preservative	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> pH < 2 <input type="checkbox"/> pH > 2 <input type="checkbox"/> pH adjusted to < 2 in lab Comment:
Temperature	<input type="checkbox"/> Received on ice <input checked="" type="checkbox"/> Received cold <input type="checkbox"/> Received ambient <input checked="" type="checkbox"/> Recorded temperature: 20°C

Were all QA/QC procedures followed as required by the EPH method? Yes    No   

Were any significant modifications made to the EPH method, as specified in Section 11.3? Yes \* see below

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes    No   

\* Sample(s) was run via GCMS using all QC criteria specified in the method.

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Reviewed by:

  
Quality Service/Quality Assurance Depts.

Validated by:

  
President/Laboratory Director

1/24/02



**SPECTRUM ANALYTICAL, INC.**

*Featuring*  
**HANIBAL TECHNOLOGY**

**Laboratory Report Supplement**

**References**

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19 <sup>th</sup> edition, 1995
ASTM D 3328	Standard Methods for the Comparison of Waterborne Petroleum Oils by Gas Chromatography
EPA 540/G-87/003	Data Quality Objectives for Remediation Response Activities, Development Process
EPA 600/4-79-012	Quality Assurance Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-019	Handbook for Analytical Quality Control in Water and Wastewater Laboratories
EPA 600/4-79-020	Method for the Chemical Analysis of Water and Wastes
EPA 600/4-82-057	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
EPA 600/4-85/056	Choosing Cost-Effective QA/QC Programs for Chemical Analysis
EPA 600/4-88/039	Method for the Determination of Organic Compounds in Drinking Water
CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

**Acronyms & Abbreviations**

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons



SPECTRUM ANALYTICAL, INC.

Featuring

HANDBAL TECHNOLOGY

# CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 1/24/02
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Report To: VEDD STEINGLASS

Invoice To: Stam

Project No.: 4613.A

CONCRE

4 FIRST ST.

Site Name: FEARNS CEMENT, THOM BLDG.

B2/DIVERTER, M

Location: WALHAM State: MA

Project Mgr.: SSS

P.O. No.:

RON:

Sampler(s): SSS/TW3

1= $\text{Na}_2\text{S}_2\text{O}_3$  2= $\text{HCl}$  3= $\text{H}_2\text{SO}_4$  4= $\text{HNO}_3$  5= $\text{NaOH}$  6=Ascorbic Acid  
7= $\text{CH}_3\text{OH}$  8= $\text{NaHSO}_4$  9= 10=

DW=Drinking Water GW=Groundwater WW=Wastewater  
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air  
X1= X2= X3=

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers:				Analyses:				Notes:
094020	S-1	1/17/02	3 PM	G	SO	NP	1								
094021	S-2						1								
094022	S-3						1								
094023	S-4						1								
094024	S-5						1								
AC															
AC															
AC															
AC															
AC															
AC															

Relinquished by:

Received by:

Date:

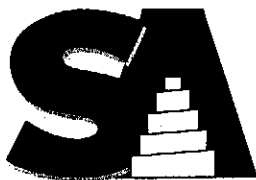
Time:

☒ Fax results when available to (508) 697-5996

☐ E-mail results when available to

Condition upon Receipt: ☐ Iced ☐ Ambient ☒ 2 °C

REFUG.



SPECTRUM ANALYTICAL, INC.

*Featuring*

HANIBAL TECHNOLOGY

Massachusetts Certification # M-MA138

Rhode Island # 98 Maine # MA138

Florida # E87600 / 87562

New Hampshire # 2538

Connecticut # PH-0777

New York # 11393

Coneco

4 First Street

Bridgewater, MA 02324

Attn: Jedd Steinglass

Client Project Number: 4613.A

Location: Fernald Center-Waltham, MA

Wednesday, June 12, 2002

Report Status:

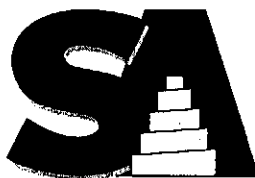
- ☒ Final Report  
☐ Re-issued Report  
☐ Revised Report



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<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analyses Requested</u>
AD18442	S-101	Ultrasonic Extraction EPH Aliphatics/Aromatics EPH Target PAH Analytes % Solids
AD18443	S-102	Ultrasonic Extraction EPH Aliphatics/Aromatics EPH Target PAH Analytes % Solids
AD18444	S-103	Ultrasonic Extraction EPH Aliphatics/Aromatics EPH Target PAH Analytes % Solids





SPECTRUM ANALYTICAL, INC.

Featuring  
HANIBAL TECHNOLOGY

Client Project Number: 4613.A

Location: Fernald Center-Waltham, MA

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Laboratory ID

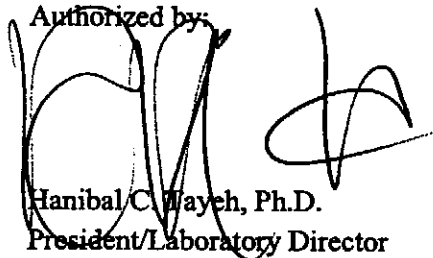
Client Sample ID

Analyses Requested

I attest that all information contained within this report has been reviewed for accuracy and checked against all quality control requirements outlined in each applicable method and meet the requirements of NELAC including any data obtained from a subcontract laboratory. Please note that all solid matrix sample results are calculated on a dry weight basis unless otherwise specified.

This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

Authorized by:



Hanibal C. Waych, Ph.D.  
President/Laboratory Director

**SPECTRUM ANALYTICAL, INC.****Laboratory Report****Location:** Fernald Center-Waltham, MA**Client:** CONECO**Lab ID No:** AD18442**Client Id:** S-101**Client Project No:** 4613.A**Submittal Date:** 5/31/2002**Collection Date:** 5/29/2002**Matrix** Soil

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			6/5/2002	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<b>EPH Aliphatics/Aromatics</b>						
C9-C18 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	6/11/2002	MSL	MA EPH 98-1
<b>EPH Target PAH Analytes</b>						
Naphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
2-Methylnaphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluorene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Phenanthrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Chrysene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (b) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (k) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Indeno (1,2,3-cd) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Dibenzo (a,h) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (g,h,i) perylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
1-Chloro-octadecane Aliphatic (%SR)	59	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Ortho-Terphenyl Aromatic (%SR)	72	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Bromonaphthalene Fractionation (%SR)	84	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Fluorobiphenyl Fractionation (%SR)	83	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Target Analyte Dilution Factor	1	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
% Solids	90.7	%		6/5/2002	RT	SM2540 B Mod

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			6/5/2002	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<i><b>EPH Aliphatics/Aromatics</b></i>						
C9-C18 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	6/11/2002	MSL	MA EPH 98-1
<i><b>EPH Target PAH Analytes</b></i>						
Naphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
2-Methylnaphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluorene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Phenanthrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Chrysene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (b) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (k) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Indeno (1,2,3-cd) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Dibenzo (a,h) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (g,h,i) perylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
1-Chloro-octadecane Aliphatic (%SR)	54	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Ortho-Terphenyl Aromatic (%SR)	58	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Bromonaphthalene Fractionation (%SR)	85	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Fluorobiphenyl Fractionation (%SR)	76	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Target Analyte Dilution Factor	1	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
% Solids	90.1	%		6/5/2002	RT	SM2540 B Mod

Parameter	Results	Units	PQL	Start Date	Analyst	Method
<b>TPH Preparation</b>						
Ultrasonic Extraction	Completed			6/5/2002	RT	SW846 3550B
<b>Petroleum Hydrocarbon Analysis</b>						
<i><b>EPH Aliphatics/Aromatics</b></i>						
C9-C18 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C19-C36 Aliphatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
C11-C22 Aromatic Hydrocarbons	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Unadjusted C11-C22 Aromatics	Below det lim	mg/Kg	30	6/11/2002	MSL	MA EPH 98-1
Carbon Chain Dilution Factor	1	mg/Kg	0.	6/11/2002	MSL	MA EPH 98-1
<i><b>EPH Target PAH Analytes</b></i>						
Naphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
2-Methylnaphthalene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Acenaphthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluorene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Phenanthrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Chrysene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (b) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (k) fluoranthene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (a) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Indeno (1,2,3-cd) pyrene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Dibenzo (a,h) anthracene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
Benzo (g,h,i) perylene	Below det lim	ug/Kg	170	6/11/2002	MSL	MA EPH 98-1
1-Chloro-octadecane Aliphatic (%SR)	67	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Ortho-Terphenyl Aromatic (%SR)	72	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Bromonaphthalene Fractionation (%SR)	81	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
2-Fluorobiphenyl Fractionation (%SR)	89	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
Target Analyte Dilution Factor	1	ug/Kg	0.	6/11/2002	MSL	MA EPH 98-1
% Solids	90	%		6/5/2002	RT	SM2540 B Mod

Lab ID No: AD18444  
Client Id: S-103

Collection Date: 5/29/2002  
Matrix Soil

Parameter	Results	Units	PQL	Start Date	Analyst	Method
-----------	---------	-------	-----	------------	---------	--------

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrix	<input type="checkbox"/> Aqueous <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Other:
Containers	<input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Broken <input type="checkbox"/> Leaking
Aqueous Preservative	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> pH ≤ 2 <input type="checkbox"/> pH > 2 <input type="checkbox"/> pH adjusted to ≤ 2 in lab Comment:
Temperature	<input type="checkbox"/> Received on ice <input checked="" type="checkbox"/> Received cold <input type="checkbox"/> Received ambient <input checked="" type="checkbox"/> Recorded temperature: 10°C

Were all QA/QC procedures followed as required by the EPH method? Yes ☒ No ☐

Were any significant modifications made to the EPH method, as specified in Section 11.3? Yes \* see below

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes ☒ No ☐

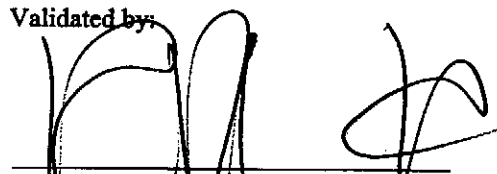
\* Sample(s) was run via GCMS using all QC criteria specified in the method.

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Reviewed by:

  
Quality Service/Quality Assurance Depts.

Validated by:

  
President/Laboratory Director

6/12/2002



**SPECTRUM ANALYTICAL, INC.**

*Featuring*  
**HANIBAL TECHNOLOGY**

**Laboratory Report Supplement**

**References**

SW 846	Test Methods for Evaluating Solid Waste. Third edition, 1998
40 CFR 136	Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act
40 CFR 141	National Primary Drinking Water Regulations
40 CFR 143	National Secondary Drinking Water Regulations
40 CFR 160	Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Good Laboratory Practice Standards
APHA-AWWA-WPCF	Standard Methods for the Examination of Water and Wastewater. 19 <sup>th</sup> edition, 1995
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CT ETPH	Analysis of Extractable Total Petroleum Hydrocarbons (ETPH)
MADEP EPH	Method for the Determination of Extractable Petroleum Hydrocarbons (EPH)
MADEP VPH	Method for the Determination of Volatile Petroleum Hydrocarbons (VPH)
QAMS 004/80	Guidelines and Specifications for Preparing Quality Assurance Program Plans, USEPA Office of Monitoring System and Quality Assurance
GC-D-52-77	Oil Spill Identification System

**Acronyms & Abbreviations**

AA	Atomic Absorption	MS	Matrix Spike
ASTM	American Society for Testing and Materials	MSD	Matrix Spike Duplicate
BOD	Biological Oxygen Demand	NTU	Nephelometric Turbidity Units
°C	degree(s) Celsius	PAHs	Polynuclear Aromatic Hydrocarbons
COD	Chemical Oxygen Demand	PCBs	Polychlorinated Biphenyls
CMR	Code of Massachusetts Regulations	PID	Photo Ionization Detector
DEP	Department of Environmental Protection	PQL	Practical Quantitation Limit
DI	De-ionized	R	Recovery (%R: Percent Recovery)
DO	Dissolved Oxygen	RSD	Relative Standard Deviation
EPA	Environmental Protection Agency	SM	Standard Method
EPH	Extractable Petroleum Hydrocarbons	SR	Surrogate Recovery (%SR)
FID	Flame Ionization Detector	SW	Solid Waste
GC	Gas Chromatograph	THM	Trihalomethane(s)
GC / MS	Gas Chromatograph / Mass Spectrometer	TOC	Total Organic Carbon
ICP	Inductively Coupled Plasma	TOX	Total Organic Halogen
Id	Identification	TPH	Total Petroleum Hydrocarbons
MCL	Maximum Contaminant Level	VOC	Volatile Organic Compound
MDL	Minimum Detection Limit	VPH	Volatile Petroleum Hydrocarbons



SPECTRUM ANALYTICAL, INC.  
Packing  
HAMBURG TECHNOLOGY

# CHAIN OF CUSTODY RECORD

Special Handling: 06031257E  
ETP

- ☒ Standard TAT - 7 to 10 business days
- ☐ Rush TAT - Date Needed: \_\_\_\_\_
- All TATs subject to laboratory approval.
- Min. 24-hour notification needed for rushes.
- All samples are disposed of after 60 days unless otherwise instructed.

Page 1 of 1

Report To: VEDD Smeunings  
CONELCO  
4 FIRST ST  
32104 E WATERS, WA 98324  
Project Mgr.: DS

Invoice To: same  
3060320  
P.O. No.: \_\_\_\_\_  
RON: \_\_\_\_\_

Project No.: 4613.A  
Site Name: Thom Building, Federal Center  
Location: WATERMAN State: WA  
Sampler(s): DS

1= $\text{Na}_2\text{S}_2\text{O}_3$  2= $\text{HCl}$  3= $\text{H}_2\text{SO}_4$  4= $\text{HNO}_3$  5= $\text{NaOH}$  6=Ascorbic Acid  
7= $\text{CH}_3\text{OH}$  8= $\text{NaHSO}_4$  9=\_\_\_\_ 10=\_\_\_\_  
DW=Drinking Water GW=Groundwater WW=Wastewater  
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air  
X1=\_\_\_\_ X2=\_\_\_\_ X3=\_\_\_\_

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Preservative	Containers:				Analyses:				Notes:
							# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic					
<u>48442</u>	<u>S-101</u>	<u>5/29/02</u>	<u>11 AM</u>	<u>G</u>	<u>SD</u>	<u>N/A</u>	<u>1</u>								<u>EPH &amp; MA DEP</u>
<u>48443</u>	<u>S-102</u>	<u>5/29/02</u>	<u>11 AM</u>	<u>G</u>	<u>SD</u>	<u>N/A</u>	<u>1</u>								<u>V</u>
<u>48444</u>	<u>S-103</u>	<u>5/29/02</u>	<u>11 AM</u>	<u>G</u>	<u>SD</u>	<u>N/A</u>									<u>V</u>
AC															
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AC															
AC															
AC															
AC															
AC															

☐ Fax results when available to (\_\_\_\_) \_\_\_\_\_  
☒ E-mail results when available to DS@Smeunings.com  
Condition upon Receipt: ☐ Iced ☐ Ambient ☐ 1 °C

Relinquished by: [Signature] Received by: [Signature]  
Bergerson Witz  
Date: 5-31-02 Time: 11:49 AM

Rea