

**REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR THE
CHARLOTTE SMITH PROPERTY SITE
MEDDYBEMPS, WASHINGTON COUNTY, MAINE
28 AND 29 NOVEMBER 2006**

Prepared For:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
1 Congress Street, Suite 1100
Boston, MA 02114-2023

CONTRACT NO. EP-W-05-042

TDD NO. 06-11-0001

TASK NO. 0258

DC NO. R-4664

Submitted By:

Weston Solutions, Inc.
Region I
Superfund Technical Assessment and Response Team III (START)
3 Riverside Drive
Andover, MA 01810

May 2007



TABLE OF CONTENTS

- I. Preliminary Assessment/Site Investigation Forms
- II. Narrative Chronology
- III. Appendices
 - Appendix A - Figures
 - Figure 1 – Site Location Map
 - Figure 2 – Basement Sample Location Diagram
 - Appendix B - Photodocumentation Log
 - Appendix C - Chain-of-Custody Records
 - Appendix D - Analytical Result Tables
 - Table 1 – VOC Field Screening Results Air/Soil Gas Samples
 - Table 2 – VOC Field Screening Result Soil/Solid Samples
 - Table 3 – Air/Soil Gas Analyses (TO-15)
 - Table 4 – VOAs in Soil High Level Method



I. Preliminary Assessment/Site Investigation Forms





**EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT**

Site Name and Location

Name: Charlotte Smith Property
Town: Meddybemps

Location: Route 191
County: Washington **State:** Maine (ME)

Site Status: ☐NPL ☐NON-NPL ☐RCRA ☐TSCA
 ☒ACTIVE ☒ABANDONED ☐OTHER

☒Attached USGS Map of Location ☐Site I.D. No.:

Latitude: 45° 2' 18.8" North

Longitude: 67° 21' 66.3" West

Referral

☐Citizen ☐City/Town ☒State ☐Preremedial
☐RCRA ☐Other:

Name of referring party: Kathy Howatt, Maine Department of Environmental Protection (MEDEP)

Telephone: (207) 287-2651

Address: 27 State House Station, Augusta, ME

Contacts Identified

1)	Telephone:()
2)	Telephone:()
3)	Telephone:()

Source of Information

☒ **Verbal:** Discussions between MEDEP Representative Howatt and the property owner.

☐ **Report:**

☒ **Other:** *Chronology of Indoor Air Sampling*, conducted by Jacques Whitford Co. Inc., August 2006.

REMOVAL PRELIMINARY ASSESSMENT

Potential Responsible Parties

Owner: Dawn Smith **Telephone:**()
Address: Route 214
Meddybemps, ME 04657

Site Access

Authorizing Person: Dawn Smith

Date: 28 November 2006 **(X)Obtained** **()Verbal**
Telephone: () **()Not Obtained** **(X)Written**

Historical Preservation

() Site is Historically Significant or Eligible for Historic Preservation

Contacts Identified

1) State Historical Preservation Officer (SHPO)

Name: Earle G. Shettleworth, Jr. **Telephone:** (207) 287-2132

2) Tribal Historical Preservation Officer (THPO)

Name: **Telephone:**()

Comments: This site is not considered historically significant or eligible for historic preservation.

Physical Site Characterization

Background Information: The Charlotte Smith Property site (the site) consists of a large, flat parcel that is bounded by Main Street (Route 191) to the south, by the Dennys River to the north and west, and by Lombard Road to the east. The geographic coordinates of the site are 45° 02' 18.8" north latitude and 67 ° 21' 66.3" west longitude, as measured from the center of the site. The site is located in a rural residential area. The Eastern Surplus Superfund site lies northwest of the site to the north of the Dennys River.

Description of Substances Possibly Present, Known or Alleged:

During May 2006, MEDEP performed a removal action, which consisted of the removal of more than 200 5-gallon containers of industrial solvents, including perchloroethylene (PCE), from the basement of the on-site residence. The MEDEP removal included the collection of concrete samples from the basement, and soil and soil gas samples from below the concrete slab. MEDEP analytical and air monitoring results indicated that there were elevated levels of volatile organic compounds (VOCs) in the air, soil, and soil gas in the basement of the residence.

REMOVAL PRELIMINARY ASSESSMENT

Existing Analytical Data

☐ Real-Time Monitoring Data:

☒ **Sampling Data:** Air sampling results for samples collected for MEDEP by Jacques Whitford Co. Inc. on 23 August 2006.

Potential Threat

Description of potential hazards to environment and/or population-identify any of the criteria for a Removal Action (from NCP) that may be met by the site under 40 CFR 300.415 [b] [2].

- i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.
- ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.
- iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.
- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- vi. Threat of fire or explosion.
- vii. The availability of other appropriate federal or state response mechanisms to respond to the release.
- viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Prior Response Activities

☐ PRP ☒ STATE ☐ FEDERAL ☐ OTHER

Brief Description: In May 2006, MEDEP completed the removal of more than 200 5-gallon containers of solvents. On 23 August 2006, MEDEP subcontractors conducted air sampling in the basement of the residence.

REMOVAL PRELIMINARY ASSESSMENT

Priority for Site Investigation

☒ (X) High ☐ () Medium ☐ () Low ☐ () None
Comments:

Report Generation

Originator: Alysha Lynch
Affiliation: Weston Solutions, Inc., START
TDD No.: 01-06-11-0001

Date: 16 May 2007
Telephone: (978) 552-2115
Task No.: 0258



**EPA REGION I
REMOVAL SITE INVESTIGATION**

Inspection Information

Site Name: Charlotte Smith Property **Address:** Route 191
Town: Meddybemps **County:** Washington **State:** Maine (ME)
Date of Inspection: 28 November 2006 **Time of Inspection:** 0800 hours (hrs) to 1745 hrs
Weather Conditions: Overcast, 42° Fahrenheit
Date of Inspection: 29 November 2006 **Time of Inspection:** 0800 hrs to 1315 hrs
Weather Conditions: Overcast, 38° Fahrenheit
Site Status at Time of Inspection: () ACTIVE (X) INACTIVE
Comments:

Agencies/Personnel Performing Inspection

	<u>Names</u>	<u>Program</u>
(X) EPA:	AmyJean McKeown	U.S. Environmental Protection Agency (EPA) Region I Emergency Planning and Response Branch (EPRB), On-Scene Coordinator (OSC).
	Scott Clifford	EPA Office of Environmental Measurement and Evaluation (OEME), Chemist.
(X) EPA Contractor:	Eric Ackerman Lindsay Rasel	Weston Solutions, Inc. (WESTON), Superfund Technical Assessment and Response Team III (START).
(X) State:	Kathy Howatt	Maine Department of Environmental Protection (MEDEP) Bureau of Remediation & Waste Management

REMOVAL SITE INVESTIGATION

Agencies/Personnel Performing Inspection (Concluded)

☐ Other:

Current Owner Based on Field Interview: Dawn Smith

Physical Site Characteristics

Parameter	Quantities/Extent
<input checked="" type="checkbox"/> Cylinders:	There were numerous decommissioned compressed gas cylinders staged on the property.
<input type="checkbox"/> Drums:	
<input type="checkbox"/> Lagoons:	
<input checked="" type="checkbox"/> Tanks:	<input checked="" type="checkbox"/> Above: One 275-gallon home heating oil tank was located along the exterior north wall of the residence.
	<input type="checkbox"/> Below:
<input type="checkbox"/> Asbestos:	
<input type="checkbox"/> Piles:	
<input type="checkbox"/> Stained Soil:	
<input type="checkbox"/> Sheens:	
<input type="checkbox"/> Stressed Vegetation:	
<input type="checkbox"/> Landfill:	
<input checked="" type="checkbox"/> Population in Vicinity:	The site is located in a rural residential area.
<input type="checkbox"/> Wells:	<input type="checkbox"/> Drinking:
	<input type="checkbox"/> Monitoring:
<input checked="" type="checkbox"/> Other:	There were several rusty machines and generators on the site.

Physical Site Observations

The one-story wood-frame house is located approximately 25 feet from the northern edge of Route 191. There was noticeable debris in the backyard and near the bulkhead entrance to the basement of the residence. The basement had poured-concrete walls and a poured-concrete floor. The basement contained metal shelves where electrical and plumbing components and various types of hardware were stored.

Field Sampling and Analysis

Matrix/Analytical Parameter	Field Instrumentation				
	CGI/O ₂	RAD	PID	FID	Other
Background Readings:	0.0/20.9%	8-9 µR/hr	0.0 ppm	0.0 ppm	

REMOVAL SITE INVESTIGATION

Field Sampling and Analysis (Concluded)

Matrix/Analytical Parameter	Field Instrumentation				
	CGI/O ₂	RAD	PID	FID	Other
Air:	0.0/20.9%	8-9 µR/hr	0.0 ppm	0.0 ppm	
Soil:	0.0/20.9%	8-9 µR/hr	0.0 ppm	0.0 ppm	
Surface:					
Water:					
Tanks:					
Drums:					
Vats:					
Lagoons:					
Spillage:					
Run Off:					
Piles:					
Sediments:					
Groundwater:					
Other:					

Field Quality Control Procedures

() SOP Followed

(X) Deviation From SOP

Comments: START sampling activities followed the protocol outlined in the document entitled, *Sampling and Analysis Plan (SAP) for the Charlotte Smith Property, Meddybemps, Washington County, Maine*. Modifications included the following: WT-11 was not collected as there was no concrete to core through within the sump; SS-10 was not collected for analysis as the subslab soil type consisted of cobbles; and WT-05 was not analyzed due to the lack of methanol volume needed to conduct the analysis. In addition, OEME Chemist Clifford collected four Summa canister samples from basement sample locations SG-01, SG-02, SG-06, and SG-10, and one ambient (background) sample from an area outside the basement, for laboratory VOC analysis.

Description of Sampling Conducted

On 28 November 2006, EPA OSC McKeown, START members Ackerman and Rasel, and MEDEP representative Howatt arrived at the site to conduct Preliminary Assessment/Site Investigation (PA/SI) activities. Property owner Dawn Smith arrived on site to sign the EPA Access Agreement prior to EPA conducting site activities. START member Ackerman conducted a safety and operations meeting, and on-site personnel reviewed and signed the site Health and Safety Plan (HASP). The HASP was prepared as a separate document, entitled *Weston Solutions, Inc. Region I START Site Health and Safety Plan (HASP) Charlotte Smith Site, Meddybemps, Maine*.

REMOVAL SITE INVESTIGATION

Description of Sampling Conducted (Continued)

Bob Black from Eastern Maine Electrical arrived on site to conduct a DigSafe inspection. Mr. Black determined that the electrical power was live in the residence. START member Ackerman requested that Mr. Black disconnect the power.

START members Ackerman and Rasel established a support zone and calibrated air monitoring instruments, including a combination photoionization detector (PID)/flame ionization detector (FID), a combustible gas indicator/oxygen meter (CGI/O₂), and a radiation meter (MicroR). Background levels were recorded in the HASP as follows: PID = 0 parts per million (ppm); FID = 0 ppm; lower explosive limit (LEL) = 0%; oxygen (O₂) = 20.9%; and MicroR = 9 microRoentgens per hour (μR/hr).

START members Ackerman and Rasel donned Level C personal protective equipment (PPE), entered the basement of the residence, and conducted a reconnaissance. Air monitoring levels were not elevated at the floor level or in the breathing zone of the basement. START personnel exited the basement, reported their findings, and downgraded to Modified Level D PPE per the HASP.

START and MEDEP representative Howatt utilized portable electric generators and existing temporary lighting to illuminate the basement. START and MEDEP personnel entered the basement and established a fan/blower assembly to ventilate/circulate air in the basement. The ventilation system was exhausted through a basement window along the south side of the residence. MEDEP representative Howatt photodocumented activities for the duration of the PA/SI.

Prior to conducting the concrete, soil gas, and subsurface soil sampling activities, START member Ackerman discussed the sampling procedure with EPA Office of Environmental Management and Evaluation (OEME) New England Regional Laboratory (NERL) Chemist Scott Clifford, who had arrived on site. OEME Chemist Clifford requested that the concrete dust samples be collected in 40-milliliter (ml) pre-weighed methanol vials and that isopropanol not be used for decontamination of the non-dedicated equipment.

START members Ackerman and Rasel, and MEDEP representative Howatt entered the basement and established 11 sample locations from which concrete dust (WT), soil gas (SG), and subsurface soil (SS) samples were collected for on-site volatile organic compound (VOC) analysis by OEME Chemist Clifford. START collected concrete dust, soil gas, and subsurface soil samples from each location except for the following: WT-11 was not collected as there was no concrete to core through within the sump; and SS-10 was not collected for analysis as the slab soil type consisted of cobbles. Furthermore, WT-05 was not analyzed due to the lack of methanol volume needed to conduct the analysis. In addition, OEME Chemist Clifford collected four Summa canister samples from basement sample locations SG-01, SG-02, SG-06, and SG-10, and one ambient (background) sample from an area outside the basement, for laboratory VOC analysis. At the completion of sampling activities, all personnel departed for the day.

REMOVAL SITE INVESTIGATION

Description of Sampling Conducted (Concluded)

On 29 November 2006, START members Ackerman and Rasel arrived on site to complete PA/SI activities. Activities for the day included the backfilling of borings created on 28 November 2006 with bentonite and concrete. Ventilation of the basement continued prior to the completion of tasks in the basement. At the completion of site activities, OSC McKeown selected 10% of the samples that had been analyzed on site to be sent for confirmatory analysis at OEME NERL, located in North Chelmsford, Massachusetts.

Analyses

Analytical Parameter	Media	Laboratory
<input checked="" type="checkbox"/> VOC	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> OEME NERL
<input type="checkbox"/> PCB	<input type="checkbox"/> WATER	<input type="checkbox"/> CLP
<input type="checkbox"/> PESTICIDE	<input checked="" type="checkbox"/> SOIL	<input type="checkbox"/> PRIVATE
<input type="checkbox"/> METALS	<input type="checkbox"/> SOURCE	<input type="checkbox"/> SAS
<input type="checkbox"/> CYANIDE	<input type="checkbox"/> SEDIMENT	<input type="checkbox"/> SOW
<input type="checkbox"/> SVOC	<input checked="" type="checkbox"/> CONCRETE	<input checked="" type="checkbox"/> FIELD - OEME
<input type="checkbox"/> TOXICITY		Mobile Laboratory
<input type="checkbox"/> DIOXIN		
<input type="checkbox"/> ASBESTOS		
<input type="checkbox"/> OTHER		

Analytical results: See Appendix D – Analytical Result Tables

Receptors

Comments

☒ Drinking Water ☒ Private: A private drinking water supply well was noted approximately 20 feet southeast of the residence.

☐ Municipal:

☐ Groundwater:

☐ Unrestricted Access:

☒ Population in Proximity:

The site is located in a rural residential area.

☒ Sensitive Ecosystem:

The Dennys River abuts the site to the north and west.

☐ Other:

Additional Procedures for Site Determination

☐ Biological Evaluation

None planned at the time.

☐ ATSDR

REMOVAL SITE INVESTIGATION

Site Determination

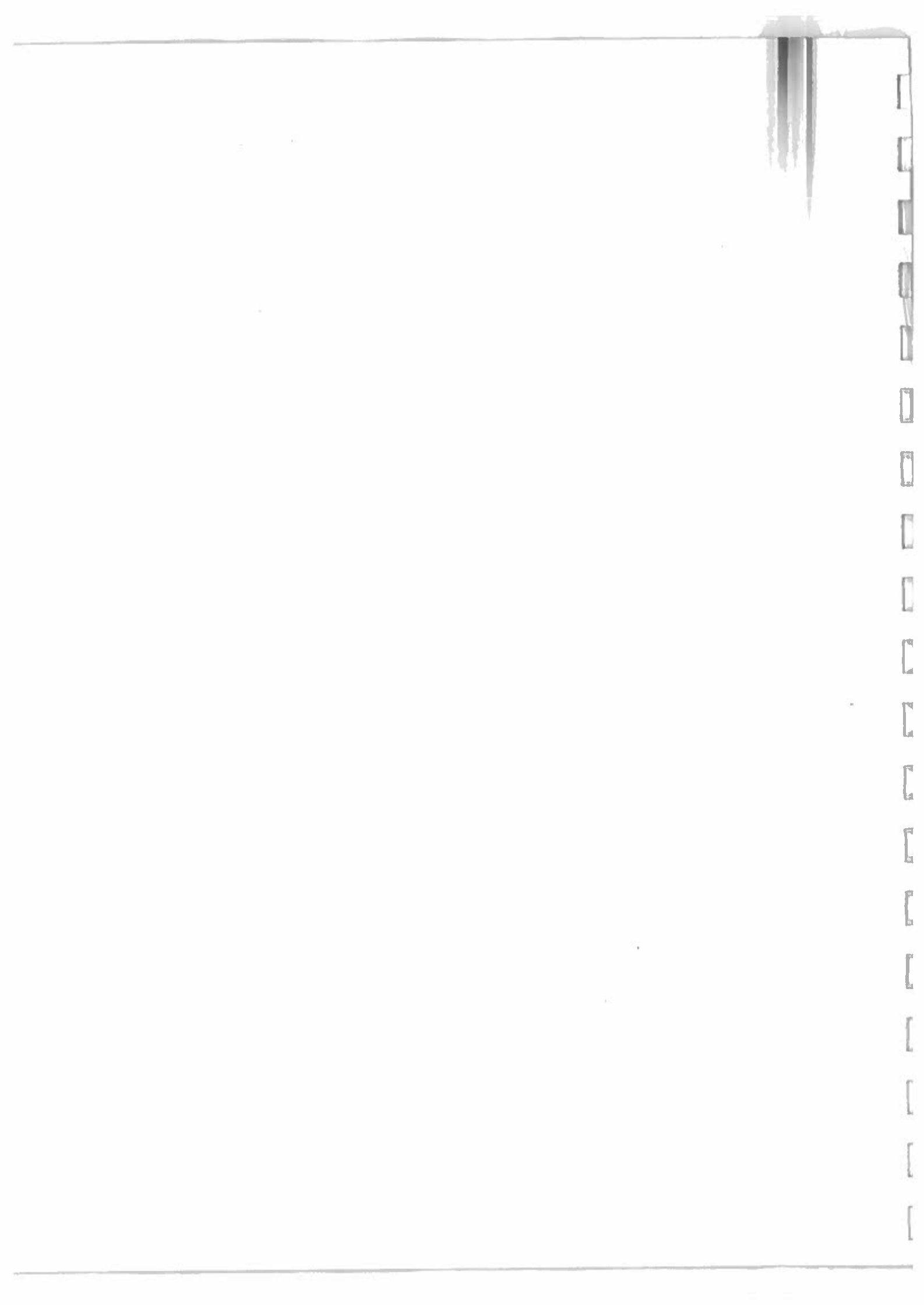
Depending on further information, criteria that may be met by the site include 40 CFR 300.415 [b] [2], parts:

- i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants or contaminants.
- ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems.
- iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.
- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- vi. Threat of fire or explosion.
- vii. The availability of other appropriate federal or state response mechanisms to respond to the release.
- viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Report Generation

Originator:	Alysha Lynch	Date:	16 May 2007
Affiliation:	Weston Solutions, Inc., (START)	Telephone:	(978) 552-2115
TDD No.:	01-06-11-0001	Task No.:	0258

II. Narrative Chronology



Narrative Chronology

On 28 November 2006, U.S. Environmental Protection Agency (EPA) On-Scene Coordinator (OSC) AmyJean McKeown, Weston Solutions, Inc., Superfund Technical Assessment and Response Team (START) members Eric Ackerman and Lindsay Rasel, and Maine Department of Environmental Protection (MEDEP) representative Kathy Howatt arrived at the Charlotte Smith Property site (the site) to conduct Preliminary Assessment/Site Investigation (PA/SI) activities.

The site consists of an unoccupied private residence located on a flat parcel that is bounded by Main Street (Route 191) to the south, by the Dennys River to the north and west, and by Lombard Road to the east. The geographic coordinates of the site are 45° 02' 18.8" north latitude and 67° 21' 66.3" west longitude, as measured from the center of the site (see Appendix A – Figures: Figure 1 – Site Location Map). Property owner Dawn Smith arrived on site to sign the EPA Access Agreement prior to EPA conducting site activities. START member Ackerman conducted a safety and operations meeting, and on-site personnel reviewed and signed the site Health and Safety Plan (HASP). The HASP was prepared as a separate document, entitled *Weston Solutions, Inc. Region I START Site Health and Safety Plan (HASP) Charlotte Smith Site, Meddybemps, Maine*.

Bob Black from Eastern Maine Electric arrived on site to conduct a DigSafe inspection. Mr. Black determined that the electrical power was live from the pole to an external box on the residence. START member Ackerman requested that Mr. Black leave the power to the interior of the residence disconnected.

START members Ackerman and Rasel established a support zone and calibrated air monitoring instruments, including a combination photoionization detector (PID)/flame ionization detector (FID), a combustible gas indicator/oxygen meter (CGI/O₂), and a radiation meter (MicroR). Background levels were recorded in the HASP as follows: PID = 0 parts per million (ppm); FID = 0 ppm; lower explosive limit (LEL) = 0%; oxygen (O₂) = 20.9%; and MicroR = 9 microRoentgens per hour (μR/hr).

START members Ackerman and Rasel donned Level C personal protective equipment (PPE), entered the basement of the residence, and conducted a reconnaissance. Air monitoring levels were not elevated at the floor level or in the breathing zone of the basement. START personnel exited the basement, reported their findings, and downgraded to Modified Level D PPE per the HASP.

START and MEDEP representative Howatt utilized portable electric generators and existing temporary lighting to illuminate the basement. START and MEDEP personnel entered the basement and established a fan/blower assembly to ventilate/circulate air in the basement. The ventilation system was exhausted through a basement window along the south side of the residence. MEDEP representative Howatt photodocumented activities during the duration of the PA/SI (see Appendix B – Photodocumentation Log).

Prior to conducting the concrete, soil gas, and subsurface soil sampling activities, START member Ackerman discussed the sampling procedure with EPA Office of Environmental Management and Evaluation (OEME) New England Regional Laboratory (NERL) Chemist Scott Clifford, who had arrived on site to conduct sample analysis for volatile organic compounds (VOCs). OEME Chemist Clifford requested that the concrete dust samples be collected in 40-milliliter (ml) pre-weighed methanol vials and that isopropanol not be used for decontamination of the non-dedicated equipment.

START members Ackerman and Rasel, and MEDEP representative Howatt entered the basement and established 11 sample locations from which concrete dust (WT), soil gas (SG), and subsurface soil (SS) samples were collected for on-site VOC analysis by OEME Chemist Clifford (see Appendix A – Figures: Figure 2 – Basement Sample Location Diagram). START collected concrete dust, soil gas, and subsurface soil samples from each location except for the following: WT-11 was not collected as there was no concrete to core through within the sump; and SS-10 was not collected for analysis as the slab soil type consisted of cobbles. Furthermore, WT-05 was not analyzed due to the lack of methanol volume needed to conduct the analysis. In addition, OEME Chemist Clifford collected four Summa canister samples from basement sample locations SG-01, SG-02, SG-06, and SG-10, and one ambient (background) sample from an area outside the basement, for laboratory VOC analysis. At the completion of sampling activities, all personnel departed for the day.

On 29 November 2006, OSC McKeown, EPA Chemist Clifford, START members Ackerman and Rasel, and MEDEP representative Howatt arrived on site to complete PA/SI activities. Activities for the day included using bentonite and concrete to backfill the borings created on 28 November 2006. Ventilation of the basement continued prior to the completion of tasks in the basement. At the completion of site activities, OSC McKeown selected 10% of the samples that had been analyzed on site to be sent for confirmatory analysis at OEME NERL located in North Chelmsford, Massachusetts (see Appendix C – Chain-of-Custody Records).

On 3 January 2007, START member Ackerman received the analytical results from OEME: The results are included in Appendix D [see Appendix D – Analytical Result Tables: Table 1 – VOC Field Screening Results Air/Soil Gas Samples; Table 2 – VOC Field Screening Result Soil/Solid Samples; Table 3 – Air/Soil Gas Analyses (TO-15); Table 4 – VOAs in Soil High Level Method].

Analytical Summaries

Analytical field screening results of the 11 soil gas samples (SG-01 through SG-11) indicated the presence of three VOCs; including cis-1,2-Dichloroethylene (cis-1,2-DCE), trichloroethylene (TCE), and tetrachloroethylene (PCE) (see Appendix D – Analytical Result Tables: Table 1 – VOC Field Screening Results Air/Soil Gas Samples). Cis-1,2-DCE was detected in one sample (SG-07) at a concentration of 340 ppb/V. TCE was detected in five samples (SG-03, SG-06, SG-07, SG-08, and SG-11); at concentrations ranging from 18 to 1,940 ppb/V. PCE was detected in all 11 samples, at concentrations ranging from 42 to 642,000 ppb/V. Confirmation results from the summa canister samples collected at sample locations SG-01, SG-02, SG-06, and SG-10

indicated the presence of PCE at concentrations ranging from 83 to 10,700 ppb/V. Cis-1,2-DCE and TCE were not detected in the summa canister confirmation samples [see Appendix D – Analytical Result Tables: Table 3 – Air/Soil Gas Analyses (TO-15)].

Analytical field screening results of the 10 concrete dust samples (WT-01 through WT-10) indicated the presence of one VOC. PCE was detected in five samples (WT-03, WT-04, WT-06, WT-07, and WT-08) at concentrations ranging from 57 to 110,500 micrograms per kilogram ($\mu\text{g/kg}$) (see Appendix D – Analytical Result Tables: Table 2 – VOC Field Screening Result Soil/Solid Samples). No VOCs were detected in confirmation sample WT-02; however, PCE was detected in sample WT-07, at a concentration of 130 $\mu\text{g/kg}$ (see Appendix D – Analytical Result Tables: Table 4 – VOAs in Soil High Level Method).

PCE was detected in all 10 subsurface soil samples (SS-01 through SS-09, and SS-11) screened on site, at concentrations ranging from 82 to 2,300,000 $\mu\text{g/kg}$ (see Appendix D – Analytical Result Tables: Table 4 – VOAs in Soil High Level Method). Two VOCs, bromomethane and PCE, were detected in subsurface soil confirmation samples. Bromomethane was detected in subsurface soil sample SS-05 at a concentration of 310 $\mu\text{g/kg}$; and PCE was detected in SS-05 (77 $\mu\text{g/kg}$), SS-07 (1,950,000 $\mu\text{g/kg}$), and SS-11 (95 $\mu\text{g/kg}$).



III. Appendices



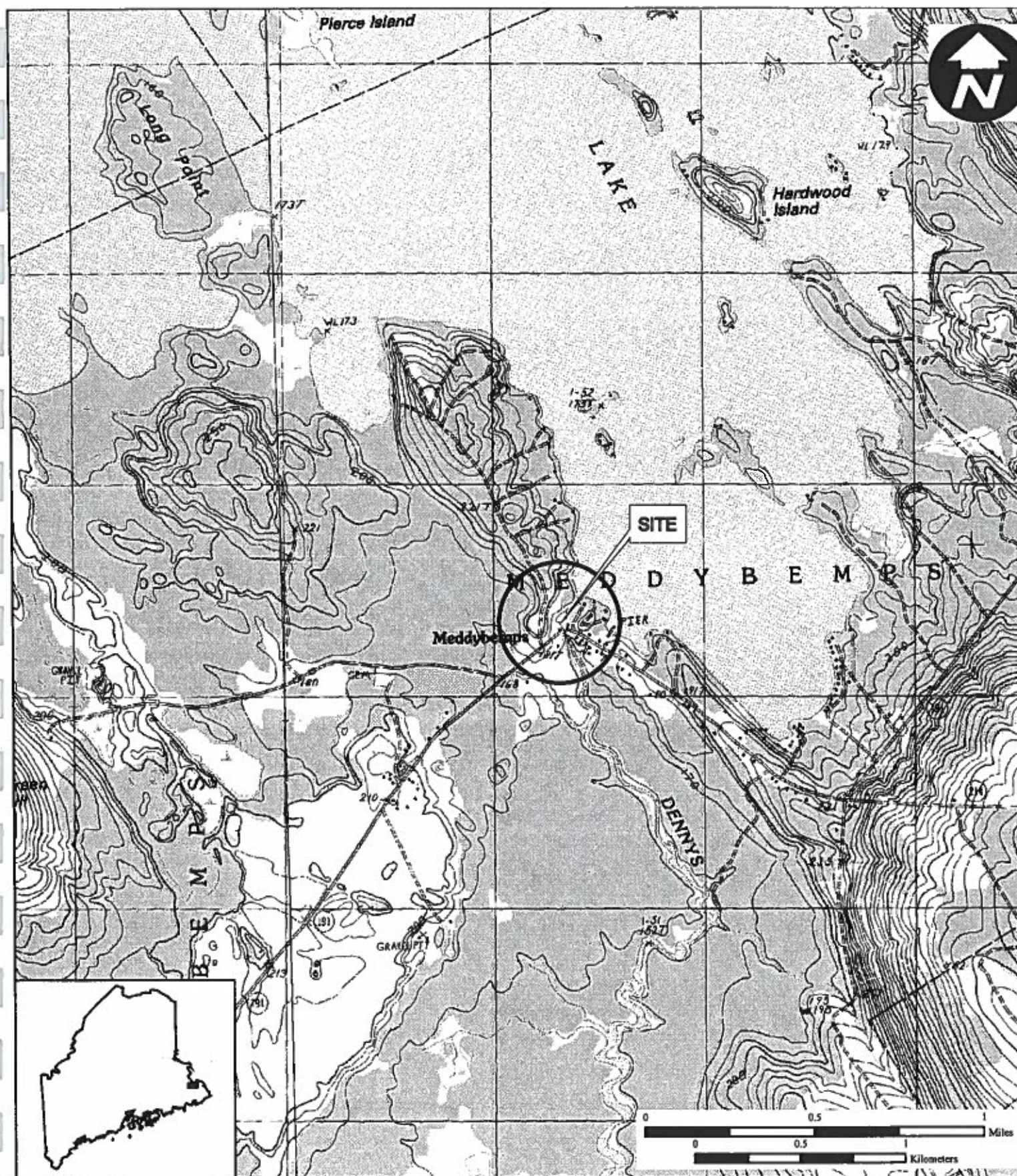


Figure 1

Site Location Map

**Charlotte Smith Property
Route 191
Meddybemps, Maine**

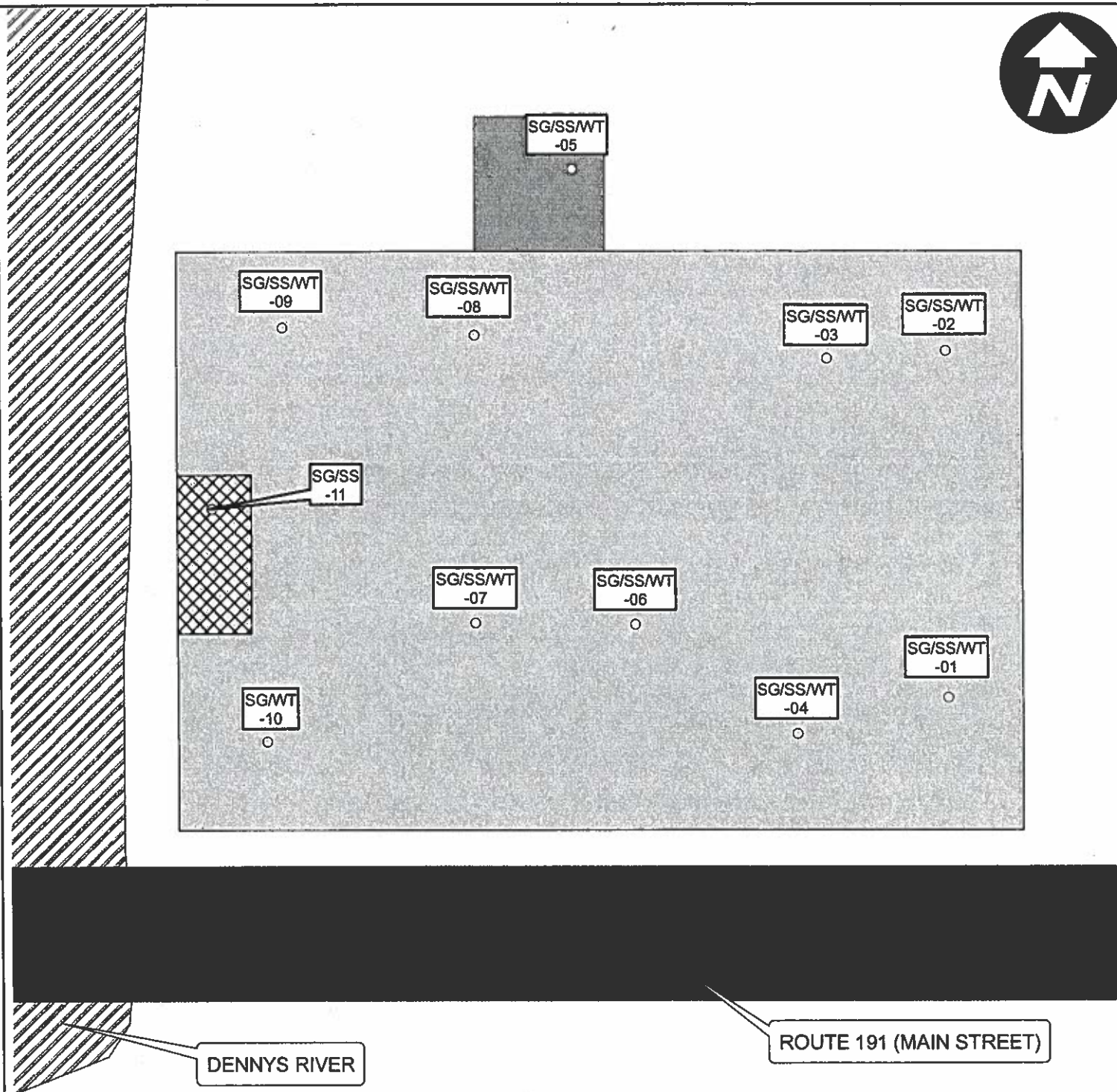
**EPA Region I
Superfund Technical Assessment and
Response Team (START) III
Contract No. EP-W-05-042**

TDD Number: 06-11-0001
Created by: Aaron Benoit
Created on: 7 November 2006
Modified by: Eric Ackerman
Modified on: 17 May 2007

Data Sources:
Topos: MicroPath/USGS
Quadrangle Name(s): Meddybemps Lake East, Maine
& Meddybemps Lake West, Maine
All other data: START

WESTON
SOLUTIONS
Restoring Resource Efficiency





SG - SOIL GAS
SS - SUBSURFACE SOIL
WT - WASTE SAMPLE (CONCRETE)

0 2 4 8 12 16 Feet

Legend

- | | | | |
|---|--------------------|--|--------------|
| ○ | Sample Location | | Bulkhead |
| | Sump | | Route 191 |
| | Building Footprint | | Dennys River |

BASEMENT SAMPLE LOCATION DIAGRAM

CHARLOTTE SMITH PROPERTY
ROUTE 191
MEDDYBEMPS, MAINE



Restoring Resource Efficiency

REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD NUMBER:
06-11-0001

CREATED BY:
B. MAHANY

CREATED ON:
1/4/2007

FILE LOCATION:
E:\ME_GIS\Charlotte_Smith_Residence\MXDs\
BasementSamples.MXD

FIGURE 2

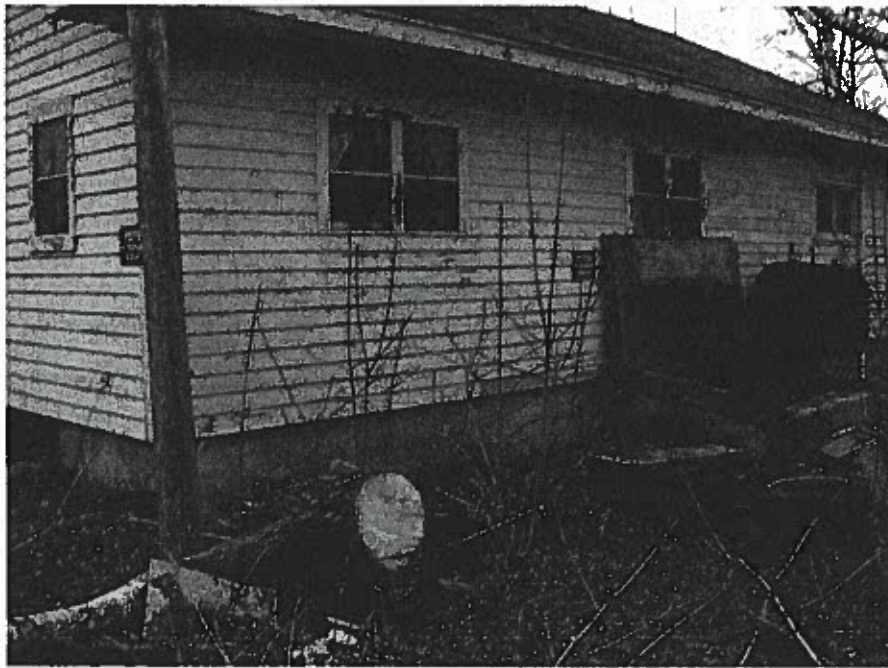


Appendix B
Photodocumentation Log





PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



SCENE: View of the rear of the residence and the entrance to the basement. Photograph taken facing southwest.

DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 0800 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of the bulkhead entrance to the basement. Photograph taken facing southwest.

DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 0801 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



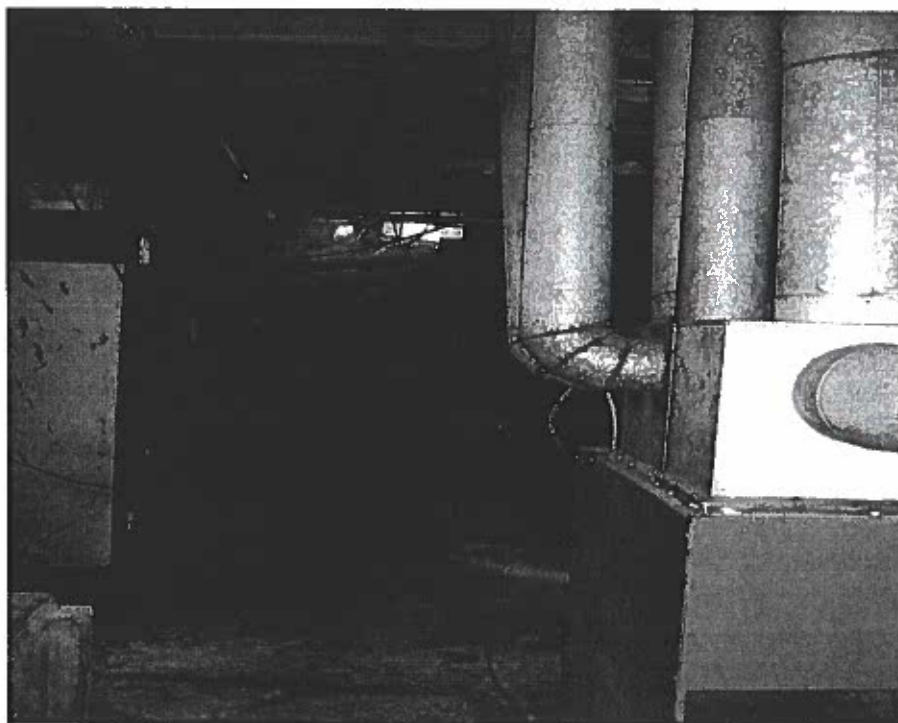
SCENE: View of the ventilation/air circulation system used during sampling activities in the basement.

DATE: 28 November 2006

TIME: 0900 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100



SCENE: View of the ventilation/air circulation system exhaust piping in the basement.

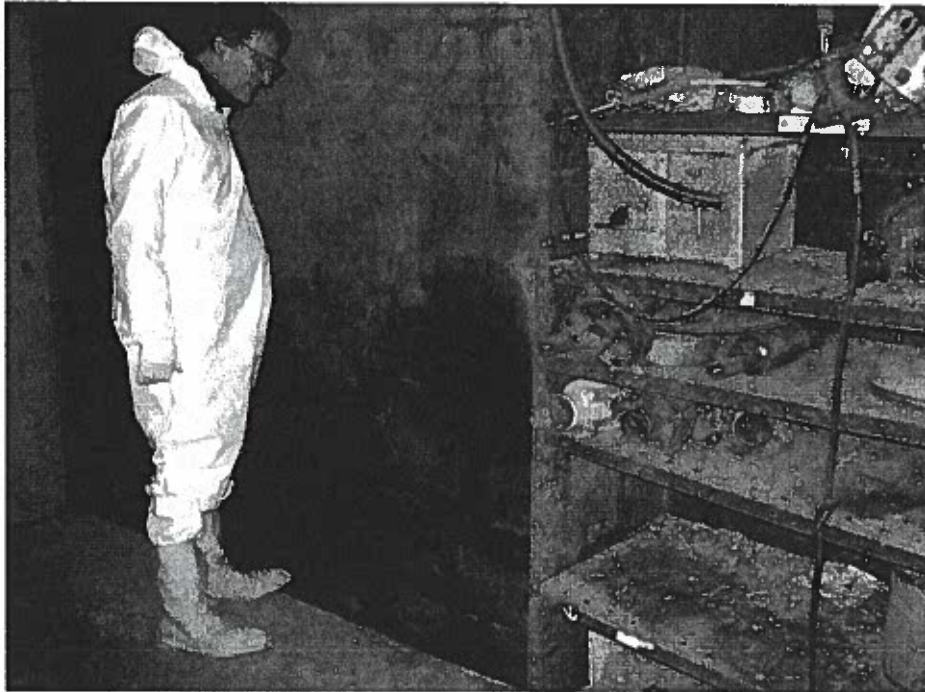
DATE: 28 November 2006

TIME: 0900 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



SCENE: View of START member Eric Ackerman inspecting soil gas (SG)/subsurface soil (SS) sample location 11 located within the 4 foot deep sump.

DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 0930 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of the ventilation/air circulation exhaust outlet extending from the basement window on the east side of the residence. Photograph taken facing southwest.

DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 0945 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



SCENE: View of the ventilation/air circulation exhaust outlet and portable electric generators along the eastern wall of the site residence. Photograph taken facing southwest.

DATE: 28 November 2006

TIME: 0946 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100



SCENE: View of the bulkhead entrance to the basement. Photograph taken facing southwest.

DATE: 28 November 2006

TIME: 0949 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



SCENE: View of START preparing to sample in the basement concrete.

DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 1235 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of air monitoring and sampling equipment in the basement.

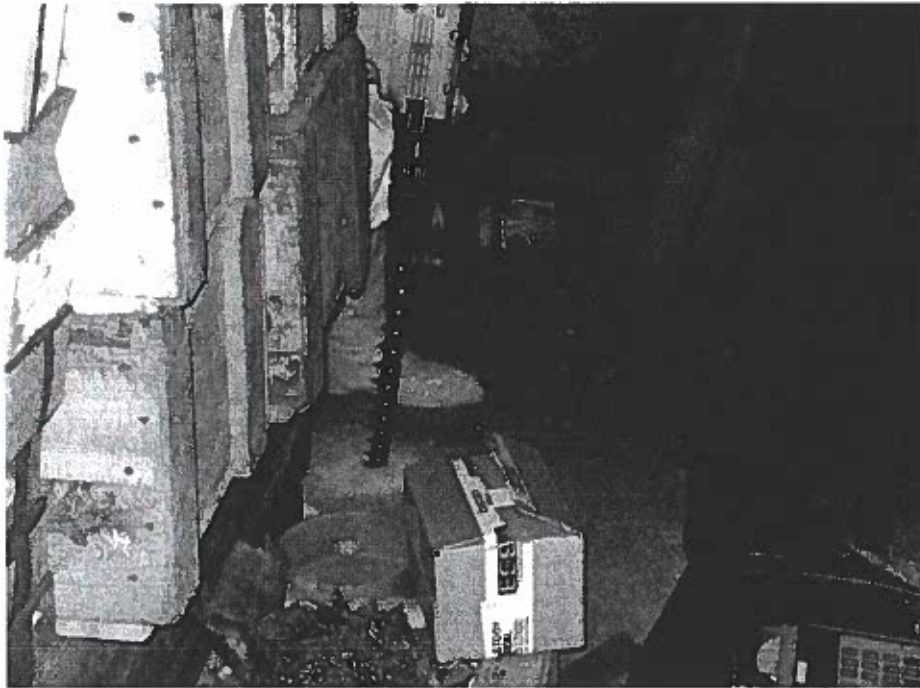
DATE: 28 November 2006

PHOTOGRAPHER: Kathy Howatt (MEDEP)

TIME: 1236 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Charlotte Smith Property Site • Meddybemps, Maine



SCENE: View of the rotary hammer (hammer drill) being used to bore through the concrete floor of the basement.

DATE: 28 November 2006

TIME: 1245 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100



SCENE: View of the staining on the basement floor.

DATE: 28 November 2006

TIME: 1300 hours

PHOTOGRAPHER: Kathy Howatt (MEDEP)

CAMERA: Nikon CoolPix 3100

Appendix C
Chain-of-Custody Records



Charlotte Superior Petroleum

CHAIN OF CUSTODY RECORD

Weston Solutions, Inc., Andover, MA
EPA Contract Number: EP-W-05-042

Site #: 01-08-11-0001
Eric Ackerman
(978) 552-2127

No: 99999-11/28/06-0002

Lab: EPA OEME (NERL)

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
	W1243-0001	SG-01	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0002	SG-02	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0003	SG-03	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0004	SG-04	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0005	SG-05	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0006	SG-06	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0007	SG-07	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0008	SG-08	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0009	SG-09	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0010	SG-10	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0011	SG-11	VOCs	Soil Gas	11/28/2006	1	Tedlar Bag	4 C	
	W1243-0013	SS-01	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0014	SS-02	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0015	SS-03	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0016	SS-04	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0017	SS-05	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0018	SS-06	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0019	SS-07	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	
	W1243-0020	SS-08	VOCs	Soil	11/28/2006	1	40mL Vial	Methanol	

Special Instructions:		SAMPLES TRANSFERRED FROM	
		CHAIN OF CUSTODY #	

Items/Reason	Relinquished by	Date	Received by	Date	Time
	Lois Curran	11/28/06	[Signature]	11/28/06	1700hrs

No: 99999-11/29/06-0006

**Weston Solutions, Inc., Andover, MA
EPA Contract Number: EP-W-05-042**

Site #: 01-08-11-0001

Eric Ackerman

Lab: EPA OEME (NERL)

(978) 552-2127

[illegible]

Special instructions:

**SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #**

[illegible]



Appendix D

Analytical Result Tables

Table 1 – VOC Field Screening Results Air/Soil Gas Samples

Table 2 – VOC Field Screening Result Soil/Solid Samples

Table 3 – Air/Soil Gas Analyses (TO-15)

Table 4 – VOAs in Soil High Level Method

TABLE 1

VOC FIELD SCREENING RESULTS
AIR/SOIL GAS SAMPLES
CHARLOTTE SMITH PROPERTY
MEDDYBEMPS, MAINE

Sample Number	Location	Date Sampled	Tentatively Identified Compounds		
			cis-1,2-Dichloroethylene	Trichloroethylene	Tetrachloroethylene
Breathing Zone*	Basement	11/28/2006	NA	NA	11
C W1243-0001	SG-01	11/28/2006	10 U	10 U	1,690
C W1243-0002	SG-02	11/28/2006	10 U	10 U	125
W1243-0003	SG-03	11/28/2006	50 U	110	1,840
W1243-0004	SG-04	11/28/2006	50 U	20 U	5,860
W1243-0005	SG-05	11/28/2006	50 U	20 U	42
C W1243-0006	SG-06	11/28/2006	50 U	18	9,730
W1243-0007	SG-07	11/28/2006	340	1,940	642,000
W1243-0008	SG-08	11/28/2006	50 U	52	23,500
W1243-0009	SG-09	11/28/2006	50 U	50 U	302
C W1243-0010	SG-10	11/28/2006	50 U	20 U	950
W1243-0011	SG-11	11/28/2006	50 U	54	9,530

NOTES:

* Breathing Zone Sample - The EPA Chemist confirmed that VOC levels within the breathing zone of the basement were below HASP action levels.

Results are reported on an "as received" basis.

Results are reported in parts per billion by volume (ppb/V).

SG - Soil Gas sample.

C - Indicates that a confirmation sample was collected in Summa cannisters for these locations.

U - The compound was analyzed for, but not detected. The value is the Sample Quantitation Limit (SQL).

TABLE 2

VOC FIELD SCREENING RESULTS
SOIL/SOLID SAMPLES
CHARLOTTE SMITH PROPERTY
MEDDYBEMPS, MAINE

	Sample Number	Location	Date Sampled	Tentatively Identified Compounds
				Tetrachloroethylene
	W1243-0025	WT-01	11/28/2006	30 U
C	W1243-0026	WT-02	11/28/2006	30 U
	W1243-0027	WT-03	11/28/2006	95
	W1243-0028	WT-04	11/28/2006	93
	W1243-0029	WT-05	11/28/2006	NA
	W1243-0030	WT-06	11/28/2006	110,500
C	W1243-0031	WT-07	11/28/2006	2,640
	W1243-0032	WT-08	11/28/2006	57
	W1243-0033	WT-09	11/28/2006	30 U
	W1243-0034	WT-10	11/28/2006	30 U
	W1243-0013	SS-01	11/28/2006	82
	W1243-0014	SS-02	11/28/2006	123
	W1243-0015	SS-03	11/28/2006	405
	W1243-0016	SS-04	11/28/2006	1,310
C	W1243-0017	SS-05	11/28/2006	94
	W1243-0018	SS-06	11/28/2006	5,510
C	W1243-0019	SS-07	11/28/2006	2,300,000
	W1243-0020	SS-08	11/28/2006	3,680
	W1243-0021	SS-09	11/28/2006	218
C	W1243-0023	SS-11	11/28/2006	1,240

NOTES:

WT - Concrete Dust sample

SS - Subsurface Soil sample

Results are reported on a "Wet Weight Basis".

Results are reported in micrograms per Kilogram (µg/Kg).

C - Indicates that a confirmation sample was collected for this station.

U - The compound was analyzed for, but not detected. The value is the sample quantitation limit (SQL).

NA - Not Analyzed.

Site: Charlotte Smith Property
Case: NA SDG: W1243-001
Laboratory: OEME

TABLE 3
Air/Soil Gas Analyses (TO-15)

Analyte	Canister No.		SG-01		SG-02		SG-06		SG-10		Ambient		Method
	Lab Sample ID	AA67950	AA67950	AA67951	AA67952	AA67953	AA67954						
	Scribe Number	W1243-0050	W1243-0051	W1243-0052	W1243-0053	W1243-0054							
	Date Collected	11/28/2006	11/28/2006	11/28/2006	11/28/2006	11/28/2006							
	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL			
1,2,4-Trimethylbenzene	ND	32	ND	3.5	ND	220	ND	0.053	0.19	0.16	TO-15		
4-Ethyltoluene	ND	30	ND	3.3	ND	210	ND	0.05	0.19	0.15	TO-15		
Acetone	ND	58	ND	6.4	ND	400	ND	0.096	2.8	0.29	TO-15		
Benzene	ND	32	ND	3.5	ND	220	ND	0.053	0.69	0.16	TO-15		
Carbon Tetrachloride	ND	31	ND	3.4	ND	220	ND	0.052	0.07	0.16	TO-15		
Dichlorodifluoromethane	ND	32	ND	3.5	ND	220	ND	0.053	0.5	0.16	TO-15		
Ethylbenzene	ND	32	ND	3.5	ND	220	ND	0.053	0.2	0.16	TO-15		
Hexane	ND	32	ND	3.5	ND	220	ND	0.053	0.33	0.16	TO-15		
Isopropyl Alcohol	ND	57	39	6.3	ND	400	ND	0.095	110	0.29	TO-15		
Tetrachloroethylene	1370	32	83	3.5	10700	220	1460	0.053	0.43	0.16	TO-15		
Toluene	ND	31	ND	3.4	ND	220	ND	0.052	1.4	0.16	TO-15		
Trichlorofluoromethane	ND	31	ND	3.4	ND	220	ND	0.052	0.21	0.16	TO-15		
m/p-Xylenes	ND	60	ND	6.6	ND	420	ND	0.1	0.6	0.31	TO-15		
o-Xylene	ND	31	ND	3.4	ND	220	ND	0.052	0.22	0.16	TO-15		

Results are reported in parts per billion by volume (ppb/V).

ND - Not detected

L - Estimated value is below the calibration range.

RL - Reporting Limit

SITE: CHARLOTTE SMITH PROPERTY
CASE: NA SDG: W1243-0001
LABORATORY: OEME (NERL)

TABLE 4
VOAs in Soil High Level Method

SAMPLE LOCATION:	MB-01		SS-05		SS-07		SS-11		WT-02		WT-07	
SAMPLE NUMBER:	W1243-0043		W1243-0045		W1243-0046		W1243-0047		W1243-0048		W1243-0049	
LABORATORY NUMBER:	AA67944		AA67945		AA67946		AA67947		AA67948		AA67949	
COMPOUND	Reporting Limit											
Bromomethane	50	50	U	310	100000	U	51	U	54	U	85	U
Tetrachloroethylene	50	50	U	77	1950000		95		54	U	130	
DILUTION:	50		50		100000		50		50		50	
DATE SAMPLED:	11/28/06		11/28/06		11/28/06		11/28/06		11/28/06		11/28/06	
DATE EXTRACTED:	11/30/06		11/30/06		11/30/06		11/30/06		11/30/06		11/30/06	
DATE ANALYZED:	11/30/06		11/30/06		11/30/06		11/30/06		11/30/06		11/30/06	

VOA - Volatile Organic Analysis

All Results are reported in micrograms per Kilogram ($\mu\text{g}/\text{kg}$)