

**REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR THE
GRUHN PROPERTY SITE
HAMPTON FALLS, ROCKINGHAM COUNTY,
NEW HAMPSHIRE
21 TO 22 JUNE 2010 AND 16 TO 17 MARCH 2011**

Prepared For:

U.S. Environmental Protection Agency
Region I
Emergency Planning and Response Branch
5 Post Office Square, Suite 100
Boston, Massachusetts 02109-3912

CONTRACT NO. EP-W-05-042

TDD NO. 01-10-05-0002

TASK NO. 0634

DC NO. R-6779

Submitted By:

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

June 2011

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I. Preliminary Assessment/Site Investigation Forms



**EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT**

Site Name and Location

Name: Gruhn Property **Location:** 35 Weare Road
Town: Hampton Falls **County:** Rockingham **State:** New Hampshire

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

☒ **Attached USGS Map of Location** ☐ **Site I.D. No.:** None Assigned

Latitude: 42° 54' 21.4" North **Longitude:** 70° 54' 39.3" West

Referral

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

Name of referring party: Ralph Wickson, New Hampshire **Telephone:**(603) 271-6572
Department of Environmental Services (NH DES)
Address: 29 Hazen Drive, Concord, NH 03301

Contacts Identified

- 1) Douglas DeNatale, AECOM, consultant for **Telephone:**(978) 371-4000
Town of Seabrook
- 2) Curtis Slayton, Superintendent Town of **Telephone:**(603) 474-9921
Seabrook Water Department

Source of Information

☐ **Verbal:**

☒ **Report:**

- (1) Roy F. Weston, Inc. (now known as Weston Solutions, Inc.). 1989. *Preliminary Site Assessment For Gruhn Engine Site, Hampton Falls, New Hampshire*. November.
- (2) Whitman & Howard, Inc. 1991. *Initial Phase Hydrogeologic Investigation Gruhn Engine Repair Site*. Prepared for Town of Seabrook, New Hampshire. 20 August.
- (3) Whitman & Howard, Inc. 1993. *Continued Hydrogeologic Investigations, Gruhn Engine Repair Site and Bedrock Well No. 5*. Prepared for Town of Seabrook, New Hampshire. 18 August.
- (4) Whitman & Howard, Inc. 1994. *Remedial Action Plan, Gruhn Engine Repair Site*. Prepared for New Hampshire Department of Environmental Services. 21 December.

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Source of Information (Concluded)

- (5) GZA Environmental, Inc. (GZA). 2006. *Supplemental Site Investigation, Gruhn Engine Repair Site, DES No. 198905073, 35 Weare Road, Hampton Falls, New Hampshire*. September.
- (6) GZA Environmental, Inc. (GZA). 2009. *Supplemental Site Investigation and Vapor Intrusion Assessment, Gruhn Engine Repair Site, DES No. 198905073, 35 Weare Road, Hampton Falls, New Hampshire*. June.
- () **Other:**

Potential Responsible Parties

Owner: Wanda Carter (via Carol Carter) **Telephone:**(321) 773-1964
Address: 112 Marion Court, Indian Harbour
Beach, Florida
Operator (Tenant): Lisa Pierce **Telephone:**(603) 929-4388
Address: 35 Weare Road, Hampton Falls, NH

Site Access

Authorizing Person: Carol Carter (for Wanda Carter)
Date: 20 April 2010 ☒ **Obtained** ☐ **Verbal**
Telephone: (321) 773-1964 ☐ **Not Obtained** ☒ **Written**

Historical Preservation

() **Site is Historically Significant or Eligible for Historic Preservation**

Contacts Identified

1) State Historical Preservation Officer (SHPO)
Name: Elizabeth H. Muzzey **Telephone:**(603) 271-8850
2) Tribal Historical Preservation Officer (THPO)
Name: **Telephone:**()

Comments:

Physical Site Characterization

Background Information: The Gruhn Property Site (the site) is located at 35 Weare Road, Hampton Falls, Rockingham County, New Hampshire (NH). The 0.7-acre site was first developed as a residential property around 1953. Reportedly, the owner at the time (Mr. H. Gruhn) was a pilot

REMOVAL PRELIMINARY ASSESSMENT

Physical Site Characterization (Continued)

who repaired and cleaned small aircraft engines on a part-time basis out of his garage and the outside area immediately north of the garage between the early 1950s and 1973.

The interior of the garage reportedly included a machining area, a tank for solvents, and a slop sink. The slop sink was connected to a 4-inch tile pipe that extended approximately 250-feet (ft) to the east of the garage and discharged to an outfall location at the rear of the property.

Degreasing agents reportedly used by Mr. Gruhn to clean the aircraft engines included tetrachloroethene (PCE) and trichloroethylene (TCE). The volumes of solvents used are unknown, though estimates of 20 gallons of solvents per year have been proposed. The solvents were reportedly stored outside and north of the garage. Engines were suspended from the trees that border the northern rock wall along the property boundary and washed down with solvents. In 1973, the aircraft engine operations ceased, and the garage was reportedly cleaned and all chemicals and equipment removed. The disposal destination of the residual chemicals is unknown, but they are suspected to have been discharged either to the slop sink or to the ground surface north of the garage.

In 1988, trace concentrations of PCE and TCE were detected in the neighboring Town of Seabrook bedrock water supply Well No. 1. Residential water supply wells in the vicinity of the site were sampled for volatile organic compounds (VOCs) to attempt to identify the possible source of PCE and TCE contamination. In 1989 and 1991, drinking water samples collected from the Gruhn property bedrock water supply well indicated maximum concentrations of PCE and TCE of 3,750 micrograms per liter ($\mu\text{g/L}$) and 450 $\mu\text{g/L}$, respectively. Several subsequent investigations were conducted at the site to determine the source and extent of contamination.

In 1988, EPA contractor Roy F. Weston, Inc., now Weston Solutions, Inc. (WESTON), conducted a preliminary site assessment of the site and collected shallow soil samples from the area immediately north of the garage. No VOCs were detected in the soil samples.

In 1991, Whitman & Howard (now Earth Tech) conducted a hydrogeologic investigation of the site, including a soil gas survey [0-4 feet (ft) below ground surface (bgs)], test pits, soil borings/monitoring well installation, and soil and groundwater sampling. Soil gas results indicated two areas of contamination: 1) the northwestern corner of the garage downgradient to the front lawn; and 2) the outfall pipe and downgradient of the pipe to the east. Soil gas results indicated maximum concentrations of PCE at 20,000 parts per billion (ppb) adjacent to the northwest corner of the garage (MW-3 area) and 12,000 ppb near the pipe outfall. Soil samples indicated maximum concentration of 0.7 micrograms per kilogram ($\mu\text{g/kg}$) (MW-3 area). Groundwater sample results indicated maximum concentrations of PCE and TCE in overburden groundwater of 1,200 $\mu\text{g/L}$ and 150 $\mu\text{g/L}$, respectively, and PCE and TCE in the bedrock drinking water supply well of 2,900 $\mu\text{g/L}$ and 450 $\mu\text{g/L}$, respectively.

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Physical Site Characterization (Concluded)

In 1993, Whitman & Howard conducted additional soil gas and groundwater investigations at the site. Groundwater sample results indicated maximum concentrations of PCE overburden groundwater of 6,500 µg/L (MW-3). A pump test was conducted on the bedrock drinking water supply well; and after pumping more than 32,000 gallons of water from the well, PCE concentrations were still near 2,000 µg/L. Soil gas results in the vicinity of the tile pipe outfall indicated PCE and TCE concentrations ranging from 1 to 380 ppb.

In 1994, Whitman & Howard submitted a Remedial Action Plan to New Hampshire Department of Environmental Protection (NHDES) and installed a bedrock groundwater treatment system. In 1995, NHDES issued a Groundwater Management Permit to the Town of Seabrook. According to Earth Tech, the Gruhn property bedrock drinking water supply well was closed and sealed in 1995. The property is currently connected to a public water supply.

In September 2006, GZA GeoEnvironmental, Inc. (GZA) completed a Supplemental Site Investigation for NHDES, including soil borings/monitoring well installations, and soil and groundwater sampling. Analytical results of the soil samples indicated the presence of PCE and TCE, with maximum concentrations of 0.29 milligrams per kilogram (mg/kg) and 0.44 mg/kg, respectively. Analytical results of the groundwater samples indicated the presence of PCE at 250 µg/L, TCE at 310 µg/L, trans-1,2-dichloroethene at 610 µg/L, cis-1,2-dichloroethene at 890 µg/L, and methyl tertiary-butyl ether (MtBE) at 130 µg/L.

In June 2009, GZA completed a Supplemental Site Investigation and Vapor Intrusion Assessment for NHDES, including a geophysical survey to confirm the location of the on-site leach field, as well as groundwater, soil gas, and indoor air sampling. Analytical results of the soil samples indicated no VOCs detected above laboratory reporting limits. Analytical results of the groundwater samples indicated the presence of PCE at 8,900 µg/L, TCE at 59 µg/L, trans-1,2-dichloroethene at 390 µg/L, cis-1,2-dichloroethene at 420 µg/L, and MtBE at 10 µg/L. Analytical results of the subslab soil gas sampling indicated the presence of PCE at 21 parts per billion by volume (ppbv)/140 micrograms per cubic meter (µg/m³) and TCE at 0.72 ppbv/3.9 µg/m³.

Description of Substances Possibly Present, Known or Alleged: Previous sampling investigations indicate the presence of chlorinated VOCs, primarily PCE and TCE in soil, groundwater, soil gas, and indoor air.

Existing Analytical Data

() Real-Time Monitoring Data:

(✓) **Sampling Data:** In 1989 and 1991, drinking water samples collected from the on-site drinking water supply well indicated the presence of PCE and TCE. In 1991 and 1993, soil gas, soil, and groundwater samples collected from the property by Whitman & Howard indicated the presence of

REMOVAL PRELIMINARY ASSESSMENT

Existing Analytical Data (Concluded)

VOCs. In 2006 and 2009, soil, soil gas, and groundwater samples collected from the property by GZA indicated the presence of VOCs.

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.

REMOVAL PRELIMINARY ASSESSMENT

Prior Response Activities

☐ PRP ☒ STATE ☒ FEDERAL ☒ OTHER

Brief Description: The following EPA, NHDES, and Town of Seabrook investigations have been conducted at the property:

- 1) Roy F. Weston, Inc. (now known as Weston Solutions, Inc.). 1989. *Preliminary Site Assessment For Gruhn Engine Site, Hampton Falls, New Hampshire*. November.
- 2) Whitman & Howard, Inc. 1991. *Initial Phase Hydrogeologic Investigation Gruhn Engine Repair Site*. Prepared for Town of Seabrook, New Hampshire. 20 August.
- 3) Whitman & Howard, Inc. 1993. *Continued Hydrogeologic Investigations, Gruhn Engine Repair Site and Bedrock Well No. 5*. Prepared for Town of Seabrook, New Hampshire. 18 August.
- 4) Whitman & Howard, Inc. 1994. *Remedial Action Plan, Gruhn Engine Repair Site*. Prepared for New Hampshire Department of Environmental Services. 21 December.
- 5) GZA. 2006. *Supplemental Site Investigation, Gruhn Engine Repair Site, DES No. 198905073, 35 Weare Road, Hampton Falls, New Hampshire*. September.
- 6) GZA. 2009. *Supplemental Site Investigation and Vapor Intrusion Assessment, Gruhn Engine Repair Site, DES No. 198905073, 35 Weare Road, Hampton Falls, New Hampshire*. June.

Priority for Site Investigation

☒ High ☐ Medium Low ☐ None ☐

Comments: Groundwater at the property has been impacted by VOC contamination. In 1994, a groundwater treatment system was installed at the property. In 1995, the contaminated deep bedrock private drinking water supply well on site was decommissioned and sealed, and the on-site residence was connected to public water supply. A Town of Seabrook public drinking water supply wellfield is located approximately 1,200 feet northwest of the site. Indoor air samples collected by GZA from the on-site residence in 2009 indicated the presence of VOCs in air.

Report Generation

Originator:	Dean Brammer	Date:	9 July 2010
Affiliation:	Weston Solutions, Inc. (START)	Telephone:	(978) 552-2115
TDD No.:	01-10-05-0002	Task No.:	0634



**EPA REGION I
REMOVAL SITE INVESTIGATION**

Inspection Information

Site Name: Gruhn Property **Address:** 35 Weare Road
Town: Hampton Falls **County:** Rockingham **State:** New Hampshire
Date of Inspection: 21 June 2010 **Time of Inspection:** 0715 to 1500 hours
Weather Conditions: 80 - 85 ° Fahrenheit (° F), Sunny, Warm, Humid
Site Status at Time of Inspection: ☒ **ACTIVE** ☐ **INACTIVE**
Comments: The site is an occupied residential property.

Agencies/Personnel Performing Inspection

	<u>Names</u>	<u>Program</u>
(✓) EPA:	Ted Bzenas	U.S. Environmental Protection Agency (EPA) Region I, Emergency Planning and Response Branch (EPRB), On-Scene Coordinator (OSC)
	Peter Kahn Alysha Lynch	EPA Office of Environmental Measurement and Evaluation (OEME) Air Program Field Team
(✓) EPA Contractor:	Dean Brammer John Kelly Lauren Bolte	Weston Solutions, Inc. (WESTON), Superfund Technical Assessment and Response Team III (START)
(✓) State:	Ralph Wickson	New Hampshire Department of Environmental Services (NHDES), Project Manager
(✓) Other:	Douglas DeNatale	Consultant to the Town of Seabrook Water Department
	Curtis Slayton	Town of Seabrook Water Department

Current Owner Based on Field Interview: Ms. Wanda Carter, 112 Marion Court, Indian Harbour Beach, Florida

REMOVAL SITE INVESTIGATION

Physical Site Characteristics

Parameter	Quantities/Extent
<input type="checkbox"/> Cylinders:	
<input type="checkbox"/> Drums:	
<input type="checkbox"/> Lagoons:	
<input type="checkbox"/> Tanks:	<input type="checkbox"/> Above:
	<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 residential area and bordered by residential properties to the north and south along Weare Road (NH Route 107).
<input checked="" type="checkbox"/> Wells:	<input checked="" type="checkbox"/> Drinking:
	The former, on-site, deep, bedrock private drinking water supply well was decommissioned and sealed in 1995, and the on-site residence was connected to the public water supply main running along Weare Road.
	<input checked="" type="checkbox"/> Monitoring:
	Groundwater monitoring wells and groundwater treatment system extraction wells are installed on the property.
<input type="checkbox"/> Other:	

Physical Site Observations

The Gruhn Property site is located at 35 Weare Road in the Town of Hampton Falls, Rockingham County, NH. The 0.7-acre site is located in a residential area and bordered to the north and south by residential properties, to the west by Weare Road (NH Route 107), and to the east by an undeveloped property. The site is currently occupied by a one-story, ranch-style, single-family residence with attached two-car garage; a paved, circular driveway; and a mix of grassed lawn and landscaped areas. A Town of Seabrook public drinking water supply wellfield is located approximately 1,200 feet northwest of the property. Hampton Falls River and Winkley Brook are located approximately 1,500 feet south/southwest and approximately 1,500 feet northeast of the site, respectively.

REMOVAL SITE INVESTIGATION

Field Sampling and Analysis					
Matrix/Analytical Parameter	Field Instrumentation				
	CGI/O ₂	RAD	PID	FID	Other (CO/H ₂ S)
Background Readings:	0%/20.9%	12-14 µR/hr*	0.0 ppm**	--	0 ppm/0 ppm
Air:	0%/20.9%	12-14 µR/hr	0.0 ppm		0 ppm/0 ppm
Soil:	0%/20.9%	12-14 µR/hr	0.0 ppm		0 ppm/0 ppm
Surface:					
Water:					
Tanks:					
Drums:					
Vats:					
Lagoons:					
Spillage:					
Run Off:					
Piles:					
Sediments:					
Groundwater:					
Other:					

* µR/hr = microRoentgens per hour

** ppm = parts per million

Field Quality Control Procedures	
(✓) SOP Followed	() Deviation From SOP
Comments: For the June 2010 soil sampling, START followed the protocol outlined in the document entitled, <i>Sampling and Analysis Plan for the Gruhn Property Site, Hampton Falls, Rockingham County, New Hampshire</i> , dated 14 June 2010.	

Description of Sampling Conducted
<p>On 21 June 2010, START collected a total of 36 soil samples, including duplicates, from four soil boring locations (SB-01 through SB-04) on the site. Soil sample station locations were selected by the OSC with concurrence from on-site NHDES personnel. Soil borings locations SB-01 and SB-02 were advanced to a depth of 8 feet below ground surface (bgs). Soil boring locations SB-03 and SB-04 were advanced to a depth 10 feet bgs and 12 feet bgs, respectively. All soil samples were collected using dedicated syringes and extruded into pre-weighed 40-milliliter (mL) vials with 10-mL of methanol preservative for volatile organic compound (VOC) analysis and 4-ounce jars for percent solids analysis. The soil samples were submitted to the EPA OEME Laboratory located in North Chelmsford, MA for VOC and percent solids analyses.</p>

REMOVAL SITE INVESTIGATION

Description of Sampling Conducted (Concluded)

Concurrent to the START soil sampling, EPA OEME personnel collected 24-hour indoor and ambient air samples with Summa canisters at the on-site residence. The air samples were submitted to the EPA OEME Laboratory located in North Chelmsford, MA for VOC/Air Toxicity analysis.

On 16 and 17 March 2011, EPA OEME personnel collected a second round of 24-hour indoor and ambient air samples with Summa canisters at the on-site residence. Four air samples were collected from the basement (including duplicate location), first floor, and backyard of the on-site residence. The air samples were submitted to the EPA OEME Laboratory located in North Chelmsford, MA for VOC/Air Toxicity analysis. As requested by EPA OSC Bzenas, START personnel were on-site to document the air sampling.

Analyses

Analytical Parameter	Media	Laboratory
(✓) VOC	(✓) AIR	(✓) NERL
() PCB	() WATER	() CLP
() PESTICIDE	(✓) SOIL	() PRIVATE
() METALS	() SOURCE	() DAS
() CYANIDE	() SEDIMENT	() SOW
() SVOC	() SOIL GAS	() FIELD
() TOXICITY		
() DIOXIN		
() ASBESTOS		
(✓) OTHER (% Solids)		

Analytical results: See Appendix E, Tables 1 and 2.

Receptors

		<u>Comments</u>
(✓) Drinking Water:	(✓) Private:	The former on-site, deep, bedrock private drinking water supply well was decommissioned and sealed in 1995, and the on-site residence was connected to public water supply.
	(✓) Municipal:	A Town of Seabrook public drinking water supply wellfield is located approximately 1,200 feet northwest of the site.
(✓) Groundwater:		The groundwater beneath the site has been impacted by VOC contamination, and a groundwater treatment system has been installed at the site.

REMOVAL SITE INVESTIGATION

Receptors (Concluded)

- (✓) **Unrestricted Access:** The site is a residential property with unrestricted vehicle and pedestrian access.
- (✓) **Population in Proximity:** Residential properties are located adjacent to the north and south of the site.
- (✓) **Sensitive Ecosystem:** Hampton Falls River and Winkley Brook are located approximately 1,500 feet south/southwest and approximately 1,500 feet northeast of the site, respectively.
- () **Other:**

Additional Procedures for Site Determination

() **Biological Evaluation** () **ATSDR**

To be determined by the Task Monitor.

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.

REMOVAL SITE INVESTIGATION

Report Generation

Originator:	Dean Brammer	Date:	17 June 2011
Affiliation:	Weston Solutions, Inc. (START)	Telephone:	(978) 552-2115
TDD No.:	01-10-05-0002	Task No.:	0634

II. Narrative Chronology

Narrative Chronology

Site Description

The Gruhn Property Site (the site) is located at 35 Weare Road, Hampton Falls, Rockingham County, New Hampshire (NH) (see Appendix A, Figures 1 and 2) [1; 2]. The 0.7-acre site is located in a residential area and bordered to the north and south by residential properties, to the west by Weare Road (NH Route 107), and to the east by an undeveloped property. The site is currently occupied by a one-story, ranch-style, single-family residence with attached two-car garage; a paved, circular driveway; and a mix of grassed lawn and landscaped areas. A Town of Seabrook public drinking water supply wellfield is located approximately 1,200 feet northwest of the property.

Site History

The 0.7-acre site was first developed as a residential property around 1953. Reportedly, the owner at the time (Mr. H. Gruhn) was a pilot who repaired and cleaned small aircraft engines on a part-time basis out of his garage, and in the outside area immediately north of the garage, between the early 1950s and 1973. The interior of the garage reportedly included a machining area, a tank for solvents, and a slop sink. The slop sink was connected to a 4-inch tile pipe that extended approximately 250 feet (ft) to the east of the garage and discharged to an outfall location at the rear of the property (see Appendix A, Figure 2 and GZA Site Plan) [3; 4].

Degreasing agents reportedly used by Mr. Gruhn to clean the aircraft engines included tetrachloroethene (PCE) and trichloroethylene (TCE). The volume of solvents used are unknown, although estimates of 20 gallons of solvents per year have been proposed. The solvents were reportedly stored outside and north of the garage. Engines were suspended from the trees that border the northern rock wall along the property boundary and washed down with solvents. In 1973, the aircraft engine operations ceased; and the garage was reportedly cleaned and all chemicals and equipment removed. The disposal destination of the residual chemicals is unknown; but the chemicals are suspected to have been discharged either to the slop sink or to the ground surface north of the garage [3; 4].

In 1988, trace concentrations of PCE and TCE were detected in the neighboring Town of Seabrook bedrock water supply Well No. 1. Residential water supply wells in the vicinity of the site were sampled for volatile organic compounds (VOCs) to attempt to identify the possible source of PCE and TCE contamination. In 1989 and 1991, drinking water samples collected from the Gruhn property bedrock water supply well indicated maximum concentrations of PCE and TCE of 3,750 micrograms per liter ($\mu\text{g/L}$) and 450 $\mu\text{g/L}$, respectively. Several subsequent investigations were conducted at the site to determine the source and extent of contamination [3; 4].

In 1988, EPA and Roy F. Weston, Inc., now Weston Solutions, Inc. (WESTON), conducted a preliminary site assessment of the site and collected shallow soil samples from the area immediately north of the garage. No VOCs were detected in the soil samples [5].

In 1991, Whitman & Howard (now Earth Tech) conducted a hydrogeologic investigation of the site, including a soil gas survey [0-4 feet (ft) below ground surface (bgs)], test pits, soil borings/monitoring well installation, and soil and groundwater sampling. Soil gas results indicated two areas of contamination: 1) the northwestern corner of the garage downgradient to the front lawn; and 2) the outfall pipe, and downgradient of the pipe to the east. Soil gas results indicated maximum concentrations of PCE at 20,000 parts per billion (ppb) adjacent to the northwest corner of the garage (MW-3 area) and 12,000 ppb near the pipe outfall. Soil samples indicated maximum concentration of 0.7 micrograms per kilogram ($\mu\text{g}/\text{kg}$) (MW-3 area). Groundwater sample results indicated maximum concentrations of PCE and TCE in overburden groundwater of 1,200 $\mu\text{g}/\text{L}$ and 150 $\mu\text{g}/\text{L}$, respectively, and PCE and TCE in the bedrock drinking water supply well of 2,900 $\mu\text{g}/\text{L}$ and 450 $\mu\text{g}/\text{L}$, respectively [6].

In 1993, Whitman & Howard conducted additional soil gas and groundwater investigations at the site. Groundwater sample results indicated maximum concentrations of PCE in overburden groundwater at 6,500 $\mu\text{g}/\text{L}$ (MW-3). A pump test was conducted on the bedrock drinking water supply well; and after pumping more than 32,000 gallons of water from the well, PCE concentrations were still near 2,000 $\mu\text{g}/\text{L}$. Soil gas results in the vicinity of the tile pipe outfall indicated PCE and TCE concentrations ranging from 1 to 380 ppb [7].

In 1994, Whitman & Howard submitted a Remedial Action Plan to New Hampshire Department of Environmental Protection (NHDES) and installed a bedrock groundwater treatment system. In 1995, NHDES issued a Groundwater Management Permit to the Town of Seabrook. According to Earth Tech, the Gruhn Property bedrock drinking water supply well was closed and sealed in 1995. The property is currently connected to a public water supply [8].

In September 2006, GZA GeoEnvironmental, Inc. (GZA) completed a Supplemental Site Investigation for NHDES, including soil borings/monitoring well installations, and soil and groundwater sampling. Analytical results of the soil samples indicated the presence of PCE and TCE, with maximum concentrations of 0.29 milligrams per kilogram (mg/kg) and 0.44 mg/kg , respectively. Analytical results of the groundwater samples indicated the presence of PCE at 250 $\mu\text{g}/\text{L}$, TCE at 310 $\mu\text{g}/\text{L}$, trans-1,2-dichloroethene (trans-1,2-DCE) at 610 $\mu\text{g}/\text{L}$, cis-1,2-dichloroethene (cis-1,2-DCE) at 890 $\mu\text{g}/\text{L}$, and methyl tertiary-butyl ether (MtBE) at 130 $\mu\text{g}/\text{L}$ [3].

In June 2009, GZA completed a Supplemental Site Investigation and Vapor Intrusion Assessment for NHDES, including conducting a geophysical survey to confirm the location of the on-site leachfield, as well as groundwater, soil gas, and indoor air sampling. Analytical results of the soil samples indicated no VOCs detected above laboratory reporting limits. Analytical results of the groundwater samples indicated the presence of PCE at 8,900 $\mu\text{g}/\text{L}$, TCE at 59 $\mu\text{g}/\text{L}$, trans-1,2-DCE at 390 $\mu\text{g}/\text{L}$, cis-1,2-DCE at 420 $\mu\text{g}/\text{L}$, and MtBE at 10 $\mu\text{g}/\text{L}$. Analytical results of the subslab soil gas sampling indicated the presence of PCE at 21 parts per billion by volume (ppbv)/140 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and TCE at 0.72 ppbv/3.9 $\mu\text{g}/\text{m}^3$ [4].

Site Activities

15 June 2010 (Tuesday)

On 15 June 2010, Weston Solutions, Inc. Superfund Technical Assessment and Response Team (START) member Dean Brammer mobilized to the site to conduct a reconnaissance of the site and surrounding properties, and to mark for DigSafe to prepare for sampling activities as part of a Removal Program Preliminary Assessment/Site Investigation (PA/SI).

21 June 2010 (Monday)

On 21 June 2010, EPA On-Scene Coordinator (OSC) Ted Bzenas, START members Brammer, John Kelly, and Lauren Bolte mobilized to the site to collect soil samples from four boring locations (SB-01 through SB-04) on site (see Appendix A, Figure 3). Representative from NHDES, Ralph Wickson, and the Town of Seabrook Water Department, Douglas DeNatale (consultant) and Curtis Slayton (Superintendent), mobilized to the site to observe the sampling. START personnel established a support zone and calibrated the air monitoring instrument, a photoionization detector (PID)/combustible gas indicator/oxygen meter (PID/CGI/O₂), and a radiation meter (MicroR) [9; 10]. Background levels were recorded in the HASP as follows: PID = 0.0 parts per million (ppm); lower explosive limit (LEL) = 0%; oxygen (O₂) = 20.9%; and MicroR = 10-12 microRoentgens per hour (μR/hr). START member Brammer 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) for the Gruhn Property Site, Hampton Falls, Rockingham County, New Hampshire* [11]. Sampling activities were performed in accordance with the site sampling and analysis plan (SAP), which was prepared as a separate document, entitled *Sampling and Analysis Plan for the Gruhn Property Site, Hampton Falls, Rockingham County, New Hampshire* [12].

START personnel collected grab soil samples from four soil borings (SB-01 through SB-04), advanced using the START truck-mounted Geoprobe (see Appendix A, Figure 3) [13; 14]. Soil sample station locations were selected by the OSC with concurrence from on-site NHDES personnel. Soil boring locations SB-01 and SB-02 were advanced to a depth of 8 ft bgs. Soil boring locations SB-03 and SB-04 were advanced to a depth 10 feet bgs and 12 feet bgs, respectively. Each 4-foot soil core was screened with a MultiRAE PID/multigas meter prior to soil classification and VOC sample collection. The soil VOC samples were collected using a dedicated syringe and preserved in pre-weighed methanol (10-mL) vials. The percent solids fraction was collected in a 4-ounce jar using dedicated plastic scoops.

START collected a total of 36 soil samples, including duplicates, from the on-site soil borings as follows: eight samples from soil boring SB-01 (designated A through H, and collected approximately every 1 foot); eight samples from soil boring SB-02 (designated A through H, and collected approximately every 1 foot); eight samples from soil boring SB-03 (designated A through H and collected approximately every 2 feet in the 0- to 4-foot core, and then every 1 foot); and 12 samples, including two duplicates, from soil boring SB-04 (designated A through L, and collected approximately every 1 foot). Soil descriptions and sample intervals were recorded on soil boring logs (see Appendix B, Soil Boring Logs). START recorded the sample

locations using a Global Positioning System (GPS) unit, and photodocumented sampling activities, including site features and sampling locations (see Appendix C, Photodocumentation Log) [15]. All samples were submitted to the EPA Office of Environmental Measurement and Evaluation (OEME) Laboratory located in North Chelmsford, Massachusetts, for VOC and percent solids analysis (see Appendix D, Chain-of-Custody Record).

Concurrent to the START soil sampling, EPA OEME personnel collected 24-hour indoor and ambient air samples with Summa canisters at the on-site residence. The air samples were submitted to the EPA OEME Laboratory located in North Chelmsford, MA for VOC/Air Toxicity analysis.

16 March 2011 (Monday)

On 16 March 2011, EPA OEME personnel set up 24-hour indoor and ambient air sampling locations with Summa canisters at the on-site residence. Air sampling locations included the basement (duplicate location), first-floor, and backyard (ambient location). At the request of EPA OSC Bzenas, START member Brammer was on-site to document site activities. It was noted that the property owner attempted to seal cracks in the basement floor and piping junctions in the basement walls (see Appendix C – Photodocumentation Log).

17 March 2011 (Monday)

On 17 March 2011, EPA OEME personnel collected the 24-hour indoor and ambient air samples. The air samples were submitted to the EPA OEME Laboratory located in North Chelmsford, MA for VOC/Air Toxicity analysis. At the request of EPA OSC Bzenas, START member Brammer was on-site to document site activities.

Analytical Data Summaries

START Soil Sample Results

Analytical results of the START soil samples indicated the presence of PCE in one sample, SB-01A, at a concentration of 100 micrograms per kilogram ($\mu\text{g/kg}$) or ppb (see Appendix E, Table 1). In addition, four other VOCs were detected in the soil samples, including (maximum concentrations in parentheses): 1,2,4-trimethylbenzene ($77 \mu\text{g/kg}$ in SB-04A); 1,3,5-trimethylbenzene ($71 \mu\text{g/kg}$ in SB-04A); 2-butanone ($52 \mu\text{g/kg}$ in SB-04A); and bromomethane ($91 \mu\text{g/kg}$ in SB-03C) (see Appendix E, Table 1) [16; 17].

EPA OEME Air Sample Results - June 2010

Analytical results of the EPA indoor basement air sample (and duplicate) indicated the presence of 20 VOCs at concentrations above laboratory reporting limits. Analytical results indicated the presence of TCE (contaminant of concern) in the basement indoor air sample (and duplicate) collected from the on-site residence at a concentration of 0.15 ppb/v ($0.81 \mu\text{g/m}^3$) [0.18 ppb/v ($0.97 \mu\text{g/m}^3$) in the duplicate sample]. In addition, analytical results of the EPA indoor and ambient air samples indicated the presence of PCE (contaminant of concern) in the basement

indoor air sample (and duplicate) collected from the on-site residence at a concentration of 0.89 ppb/v ($6.0 \mu\text{g}/\text{m}^3$) [0.82 ppb/v ($5.6 \mu\text{g}/\text{m}^3$) in the duplicate sample] (See Appendix E, Table 2 from the EPA Laboratory Report) [18].

Analytical results of the EPA indoor first-floor air sample indicated the presence of 15 VOCs at concentrations above laboratory reporting limits. Analytical results of the EPA outside ambient air sample indicated the presence of 12 VOCs at concentrations above laboratory reporting limits. However, TCE and PCE (contaminants of concern) were not detected above laboratory reporting limits in either the first-floor or outside ambient air samples (See Appendix E, Table 2 from the EPA Laboratory Report) [18].

The detected concentrations of PCE in the indoor basement air samples are above the EPA Residential Air Regional Screening Level (RSL) Carcinogenic Target Risk (TR) of $0.41 \mu\text{g}/\text{m}^3$. The detected concentrations of TCE in the indoor basement air samples were below the EPA RSL Carcinogenic TR of $1.2 \mu\text{g}/\text{m}^3$. The Residential Air RSL table was accessed from http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm.

EPA OEME Air Sample Results - March 2011

Analytical results of the EPA indoor basement air sample (and duplicate) indicated the presence of four VOCs at concentrations above laboratory reporting limits. Analytical results of the EPA indoor and ambient air samples indicated the presence of PCE (contaminant of concern) in the basement indoor air sample (and duplicate) collected from the on-site residence at a concentration of 1.3 ppb/v ($8.8 \mu\text{g}/\text{m}^3$) [1.20 ppb/v ($8.1 \mu\text{g}/\text{m}^3$) in the duplicate sample]. However, no TCE (contaminant of concern) was detected in the basement indoor air sample (and duplicate) collected from the on-site residence (See Appendix E, Table 2 from the EPA Laboratory Report) [19].

Analytical results of the EPA indoor first-floor air sample indicated the presence of seven VOCs at concentrations above laboratory reporting limits. Analytical results of the EPA indoor and ambient air samples indicated the presence of PCE (contaminant of concern) in the first-floor indoor air sample collected from the on-site residence at a concentration of 3.2 ppb/v ($22.0 \mu\text{g}/\text{m}^3$). However, no TCE (contaminant of concern) was detected in the first-floor indoor air sample collected from the on-site residence (See Appendix E, Table 2 from the EPA Laboratory Report) [19].

Analytical results of the EPA outside ambient air sample indicated the presence of 12 VOCs at concentrations above laboratory reporting limits. However, TCE and PCE (contaminants of concern) were not detected above laboratory reporting limits in the outside ambient air samples (See Appendix E, Table 2 from the EPA Laboratory Report) [19].

The detected concentrations of PCE in the indoor basement and first floor air samples are above the EPA Residential Air Regional Screening Level (RSL) Carcinogenic Target Risk (TR) of $0.41 \mu\text{g}/\text{m}^3$. The Residential Air RSL table was accessed from http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/index.htm.

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III. Appendices

Appendix A

Figures

Figure 1 – Site Location Map

Figure 2 – Site Diagram

Figure 3 – Sample Location Map



Figure 1

Site Location Map

**Gruhn Property Site
35 Weare Road
Hampton Falls, New Hampshire**

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

TDD Number: 10-05-0002
Created by: D. Brammer
Created on: 2 June 2010
Modified by: D. Brammer
Modified on: 9 July 2010

Data Sources:

Topos: MicroPath/USGS
Quadrangle Name(s): Exeter, NH/MA, 1985
All other data: START



E:\NH_gis\Gruhn Property\MXD\0634_Figure1.mxd



Figure 2

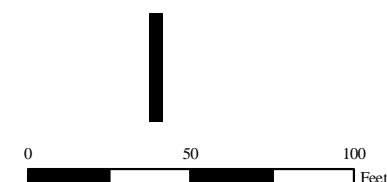
Site Diagram

**Gruhn Property Site
35 Weare Road
Hampton Falls, New Hampshire**

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

TDD Number: 10-05-0002
Created by: D. Brammer
Created on: 8 June 2010
Modified by: D. Brammer
Modified on: 9 August 2010

LEGEND



Data Sources:

Imagery: GRANIT NHGIS
(Department of Transportation SENH 2005)
Topos: MicroPath
All other data: START





Figure 3

Sample Location Map

**Gruhn Property Site
35 Weare Road
Hampton Falls, New Hampshire**

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

TDD Number: 10-05-0002

Created by: D. Brammer

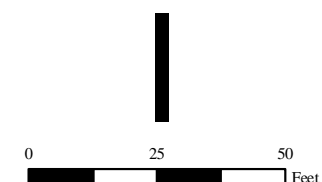
Created on: 8 June 2010

Modified by: D. Brammer

Modified on: 26 July 2010

LEGEND

- (Soil Boring Locations
- A Monitoring Well (MW-3)



Data Sources:

Imagery: GRANIT NHGIS
(Department of Transportation SENH 2005)
Topos: MicroPath
All other data: START



Appendix B

Soil Boring Logs

**GRUHN PROPERTY SITE
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-01

RECOVERY (inches): 28
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

0 ft			SOIL DESCRIPTION
1 ft			0 to 3 inches: Light brown, SILT and fine SAND, trace organics (roots). 3 to 18 inches: Light brown, fine SAND, little silt, trace fine gravel. 18 to 28 inches: Light brown, fine-to-medium SAND, some fine gravel, trace silt.
2 ft			
3 ft			
4 ft			

COMMENTS Hit refusal on first attempt at 6 inches; second attempt advanced to 4 feet below ground surface (bgs).
Digital photograph file SAM_0765.JPG

SB-01A - VOC sample collected at 5- to 6-inch interval @ 0900 hours.

SB-01B - VOC sample collected at 10- to 11-inch interval @ 0905 hours.

SB-01C - VOC sample collected at 18- to 19-inch interval @ 0910 hours.

SB-01D - VOC sample collected at 25- to 26-inch interval @ 0915 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE >10 to 20% = LITTLE >20 to 35% = SOME >35 to 50% = AND >50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-01

RECOVERY (inches): 46 (full)
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

SOIL DESCRIPTION	
4 ft	0 to 3 inches: Light brown, fine SAND, some fine gravel, trace silt.
	3 to 12 inches: Light brown, fine-to-medium SAND, and fine-to-coarse GRAVEL, trace silt.
5 ft	12 to 13 inches: Rock fragments (grey).
	13 to 22 inches: Light brown, fine-to-medium SAND, some fine gravel, trace silt.
	22 to 32 inches: Light brown, fine SAND, some silt, trace fine gravel.
6 ft	32 to 46 inches: Light brown to brown, SILT, little fine sand, trace fine gravel, trace clay (very dense).
7 ft	
8 ft	

COMMENTS First attempt hit refusal at 4 feet 10 inches; second attempt hit refusal at 4 feet 5 inches; third attempt advanced to 8 feet bgs.

Digital photograph file SAM_0766.JPG

SB-01E - VOC sample collected at 7- to 8-inch interval @ 0950 hours.

SB-01F - VOC sample collected at 16- to 17-inch interval @ 0955 hours.

SB-01G - VOC sample collected at 29- to 30-inch interval @ 1000 hours.

SB-01H - VOC sample collected at 40- to 41-inch interval @ 1005 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY SITE
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-02

RECOVERY (inches): 38
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

0 ft

SOIL DESCRIPTION

0 to 17 inches: Light brown, SILT and fine SAND, trace fine gravel, organics (0 to 3 inches, roots).

17 to 18 inches: Rock fragments.

18 to 38 inches: Light brown to tan, SILT, some fine sand, trace fine gravel.

1 ft

2 ft

3 ft

4 ft

COMMENTS Digital photograph file SAM_0767.JPG

SB-02A - VOC sample collected at 6- to 7-inch interval @ 1020 hours.

SB-02B - VOC sample collected at 13- to 14-inch interval @ 1025 hours.

SB-02C - VOC sample collected at 23- to 24-inch interval @ 1030 hours.

SB-02D - VOC sample collected at 33- to 34-inch interval @ 1035 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-02

RECOVERY (inches): 46 (full)
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

4 ft

SOIL DESCRIPTION

0 to 3 inches: Sluff material.

3 to 36 inches: Light brown, SILT, trace fine sand, trace fine gravel, trace clay (very dense).

36 to 41 inches: Light brown, fine-to-medium SAND, some fine gravel.

41 to 46 inches: Brown, SILT, trace fine sand, trace fine gravel (very dense).

5 ft

6 ft

7 ft

8 ft

COMMENTS Digital photograph file SAM_0768.JPG

SB-02E - VOC sample collected at 6- to 7-inch interval @ 1045 hours.

SB-02F - VOC sample collected at 17- to 18-inch interval @ 1050 hours.

SB-02G - VOC sample collected at 29- to 30-inch interval @ 1055 hours.

SB-02H - VOC sample collected at 39- to 40-inch interval @ 1100 hours.

**PROPORTIONS USED
(by DRY WEIGHT)**

0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY SITE
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-03

RECOVERY (inches): 35
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

SOIL DESCRIPTION	
0 ft	0 to 4 inches: Brown, fine SAND and SILT, trace fine gravel, organics (roots).
	4 to 21 inches: Light brown, fine-to-medium SAND, some fine-to-coarse gravel, trace silt.
1 ft	21 to 23 inches: Rock fragments.
	23 to 28 inches: Light brown, fine-to-medium SAND, trace fine-to-coarse gravel (rock fragments at 27 to 28 inches).
2 ft	28 to 35 inches: Brown to tan, fine-to-coarse SAND, trace silt, trace fine gravel.
3 ft	
4 ft	

COMMENTS Digital photograph file SAM_0769.JPG; per OSC, soil samples collected every 2 foot interval in this core.

SB-03A - VOC sample collected at 10- to 11-inch interval @ 1115 hours.

SB-03B - VOC sample collected at 25- to 26-inch interval @ 1120 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-03

RECOVERY (inches): 40
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

4 ft

SOIL DESCRIPTION

0 to 8 inches: Tan, fine-to-medium SAND, some fine gravel.

8 to 29 inches: Light brown, fine-to-medium SAND and fine-to-coarse GRAVEL, trace silt.

29 to 30 inches: Brown, fine-to-medium SAND and fine GRAVEL.

5 ft

30 to 40 inches: Light brown, fine-to-medium SAND and fine-to-coarse GRAVEL, trace silt (rock fragments in drive shoe).

6 ft

7 ft

8 ft

COMMENTS Digital photograph file SAM_0770.JPG

SB-03C - VOC sample collected at 6- to 7-inch interval @ 1135 hours.

SB-03D - VOC sample collected at 16- to 17-inch interval @ 1140 hours.

SB-03E - VOC sample collected at 26- to 27-inch interval @ 1145 hours.

SB-03F - VOC sample collected at 36- to 37-inch interval @ 1150 hours.

**PROPORTIONS USED
(by DRY WEIGHT)**

0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-03

RECOVERY (inches): 24
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

8 ft

SOIL DESCRIPTION

0 to 4 inches: Sluff material.

4 to 14 inches: Light brown to grey, fine SAND, trace silt, trace fine gravel (rock fragments).

14 to 24 inches: Light brown, fine SAND, some silt, trace fine gravel.

9 ft

10 ft

11 ft

12 ft

COMMENTS Digital photograph file SAM_0782.JPG. Refusal hit 9 to 10 feet bgs and Geoprobe rod stuck in hole.
Samples collected from macrocore after recovery of rods from boring.

SB-03G - VOC sample collected at 9- to 10-inch interval @ 1410 hours.

SB-03H - VOC sample collected at 19- to 20-inch interval @ 1415 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY SITE
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-04

RECOVERY (inches): 30
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

SOIL DESCRIPTION	
0 ft	
1 ft	
2 ft	
3 ft	
4 ft	

0 to 5 inches: Brown, fine SAND, trace fine gravel, trace silt, trace organics (roots).
5 to 16 inches: Light brown, fine-to-medium SAND, some silt, trace fine gravel, trace roots.
16 to 30 inches: Light brown, fine-to-medium SAND, some silt, trace fine-to-coarse gravel (loose).

COMMENTS Digital photograph file SAM_0771.JPG. Sample SB-04I is a field duplicate of SB-04D.

- SB-04A - VOC sample collected at 4- to 5-inch interval @ 1215 hours.**
- SB-04B - VOC sample collected at 10- to 11-inch interval @ 1220 hours.**
- SB-04C - VOC sample collected at 18- to 19-inch interval @ 1225 hours.**
- SB-04D/SB-04I (DUP) - VOC sample collected at 26- to 27-inch interval @ 1230 hours.**

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-04

RECOVERY (inches): 46 (full)
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

4 ft

SOIL DESCRIPTION

0 to 2 inches: Sluff material.

2 to 39 inches: Light brown, SILT, little fine sand, trace fine-to-coarse gravel (dense).

39 to 46 inches: Light brown, SILT, trace fine sand, trace fine gravel (very dense).

5 ft

6 ft

7 ft

8 ft

COMMENTS Digital photograph file SAM_0772.JPG. Sample SB-04J is a field duplicate of SB-0HD.

SB-04E - VOC sample collected at 6- to 7-inch interval @ 1240 hours.

SB-04F - VOC sample collected at 16- to 17-inch interval @ 1245 hours.

SB-04G - VOC sample collected at 28- to 29-inch interval @ 1250 hours.

SB-04H/SB-04J (DUP) - VOC sample collected at 39- to 40-inch interval @ 1255 hours.

PROPORTIONS USED (by DRY WEIGHT)
0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

**GRUHN PROPERTY
HAMPTON FALLS, NEW HAMPSHIRE**

BORING NO: SB-04

RECOVERY (inches): 46 (full)
DATE: 6/21/2010

PID/FID (units): 0.0/--
RECORDED BY: D. Brammer

8 ft

SOIL DESCRIPTION

0 to 23 inches: Sluff material (rock at 13 to 14 inches).

23 to 32 inches: Light brown, SILT, trace fine sand, trace fine-to-coarse gravel.

32 to 36 inches: Light brown, fine SAND, little silt, trace fine gravel.

36 to 46 inches: Light brown to brown (with bands of grey), SILT, trace fine sand, trace fine gravel.

9 ft

10 ft

11 ft

12 ft

COMMENTS Digital photograph file SAM_0773.JPG. Hit refusal at 10 feet bgs.

SB-04K - VOC sample collected at 23- to 24-inch interval @ 1305 hours.

SB-04L - VOC sample collected at 34- to 35-inch interval @ 1310 hours (from sandy layer on top of dense till).

**PROPORTIONS USED
(by DRY WEIGHT)**

0 to 10% = TRACE
>10 to 20% = LITTLE
>20 to 35% = SOME
>35 to 50% = AND
>50% = MAJOR

Appendix C

Photodocumentation Log

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of Geoprobe at soil boring location SB-01 located adjacent to the northwest corner of the attached garage. Photograph taken facing northeast.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 0830 hours

CAMERA: Samsung SL605



SCENE: View of soil core SB-01 (0 to 4 feet) from third attempt that successfully reached 4 feet below ground surface.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 0925 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil core SB-01 (4 to 8 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 0948 hours

CAMERA: Samsung SL605



SCENE: View of soil core SB-02 (0 to 4 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1020 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil core SB-02 (4 to 8 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1041 hours

CAMERA: Samsung SL605



SCENE: View of soil core SB-03 (0 to 4 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1108 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil core SB-03 (4 to 8 feet). Photograph taken facing north.

DATE: 21 June 2010

TIME: 1124 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605



SCENE: View of soil core SB-04 (0 to 4 feet).

DATE: 21 June 2010

TIME: 1218 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil core SB-04 (4 to 8 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1232 hours

CAMERA: Samsung SL605



SCENE: View of soil core SB-04 (8 to 10 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1255 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil boring location SB-03. Photograph taken facing south.

DATE: 21 June 2010

TIME: 1329 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605



SCENE: View of soil boring location SB-02 (located between snow blower that had been moved to access the boring location). Photograph taken facing southeast.

DATE: 21 June 2010

TIME: 1329 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of back yard of on-site residence. Note ambient air sample Summa canister hung on bird feeder in center of photograph. Photograph taken facing southeast.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1329 hours

CAMERA: Samsung SL605



SCENE: View of monitoring well MW-3 located adjacent to soil boring location SB-01 (white pin flag in foreground) and northwest corner of attached garage. Photograph taken facing southwest.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1330 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil boring location SB-04 (white pin flag) located between tree and paved driveway near northwest corner of attached garage. Photograph taken facing north.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1331 hours

CAMERA: Samsung SL605



SCENE: View of third attempt location (white pin flag) to reach 8 feet below ground surface at soil boring location SB-01. Photograph taken facing northeast.

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1331 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of soil core SB-03 (8 to 10 feet).

DATE: 21 June 2010

PHOTOGRAPHER: D. Brammer

TIME: 1408 hours

CAMERA: Samsung SL605



SCENE: View of on-site residence basement sump pump. Note standing water in sump. According to on-site resident, the sump pumping was running frequently due to recent rain and snowmelt.

DATE: 16 March 2011

PHOTOGRAPHER: D. Brammer

TIME: 0748 hours

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of on-site residence basement 24-hour air sampling location (including duplicate). Note sealed floor cracks.

DATE: 16 March 2011

TIME: 0749 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605



SCENE: View of water line coming into the west wall of the on-site residence basement. Note foam sealant around water line junction with the basement wall.

DATE: 16 March 2011

TIME: 0750 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of on-site residence first-floor (living room) 24-hour air sampling location.

DATE: 16 March 2011

TIME: 07453 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605



SCENE: View of outdoor (backyard) ambient air sampling location.

DATE: 16 March 2011

TIME: 0809 hours

PHOTOGRAPHER: D. Brammer

CAMERA: Samsung SL605

PHOTODOCUMENTATION LOG
Gruhn Property Site • Hampton Falls, New Hampshire



SCENE: View of on-site residence basement bulkhead door. Note sump pump water line extending through doors to discharge in the backyard.

DATE: 17 March 2011

PHOTOGRAPHER: D. Brammer

TIME: 0746 hours

CAMERA: Samsung SL605



SCENE: View of on-site residence front yard and driveway entrance. Note recently removed trees.

DATE: 17 March 2011

PHOTOGRAPHER: D. Brammer

TIME: 0757 hours

CAMERA: Samsung SL605

Appendix D

Chain-of-Custody Record

Sampler. 

Contact Phone: 978-621-1202

CarrierName: Hand Delivered

Special Instructions: Email results to OSC Ted Bazenas.		SAMPLES TRANSFERRED FROM
		CHAIN OF CUSTODY #

[illegible]

[illegible]

Items/Reason	Relinquished by	Date	Received by	Date	Time
LAS Drop off	[Signature]	6/22/10 1155	[Signature]	6/22/10	11:55

Site #: R01100621TB
Contact Name: Dean Brammer
Contact Phone: 978-621-1202

Lab: EPA OEME
DateShipped: 6/22/2010
CarrierName: Hand Delivered

[illegible]

Special Instructions: Email results to OSC Ted Bazen as.		SAMPLES TRANSFERRED FROM
		CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time
LBS Recop off	D.S.R.	6/22/10 1155	[Signature]	6/22/10	11.55

Appendix E

Tables

Table 1 – EPA OEME Soil Sample Results Summary
(Samples Collected by START)

Table 2 – EPA OEME Air Sample Results Summaries
(June 2010 and March 2011)

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:	MB-01	SB-01A	SB-01B	SB-01C	SB-01D	SB-01E	SB-01F					
SAMPLE NUMBER:	R01100621TB-0038	R01100621TB-0001	R01100621TB-0002	R01100621TB-0003	R01100621TB-0004	R01100621TB-0005	R01100621TB-0006					
LABORATORY NUMBER:	AB07199	AB07202	AB07203	AB07204	AB07205	AB07206	AB07207					
SAMPLE DEPTH:	NA	1 foot bgs	2 feet bgs	3 feet bgs	4 feet bgs	4.75 feet bgs	5.5 feet bgs					
COMPOUND	RL	Q	RL	Q	RL	Q	RL	Q				
1,1,1,2-Tetrachloroethane	ND	50	ND	47	ND	41	ND	33	ND	36	ND	38
1,1,1-Trichloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1,2,2-Tetrachloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1,2-Trichloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1-dichloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1-Dichloroethylene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,1-Dichloropropene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2,3-Trichlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2,3-Trichloropropane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2,4-Trichlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2,4-Trimethylbenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2-Dibromo-3-Chloropropane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2-Dibromoethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2-Dichlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2-Dichloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,2-Dichloropropane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,3,5-Trimethylbenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,3-Dichlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,3-Dichloropropane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
1,4-Dichlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
2,2-Dichloropropane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
2-Butanone (MEK)	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
2-Chlorotoluene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
2-Hexanone	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
2-Propanone (acetone)	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
4-Chlorotoluene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
4-Methyl-2-Pentanone(MIBK)	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Acrylonitrile	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Benzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Bromobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Bromochloromethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Bromodichloromethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Bromoform	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Bromomethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
c-1,3-dichloropropene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Carbon Disulfide	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Carbon tetrachloride	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Chlorobenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Chloroethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Chloroform	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Chloromethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
cis-1,2-Dichloroethylene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Dibromochloromethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Dibromomethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Dichlorodifluoromethane	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Ethyl Ether	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
Ethylbenzene	ND	50	ND	47	ND	41	ND	40	ND	33	ND	38
DILUTION:	50	50	50	50	50	50	50					
PERCENT SOLIDS	NA	92	93	95	97	93	95					
DATE SAMPLED:	06/21/10	06/21/10	06/21/10	06/21/10	06/21/10	06/21/10	06/21/10					
DATE EXTRACTED:	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10					
DATE ANALYZED:	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10	06/23/10					

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		MB-01		SB-01A		SB-01B		SB-01C		SB-01D		SB-01E		SB-01F	
SAMPLE NUMBER:		R01100621TB-0038		R01100621TB-0001		R01100621TB-0002		R01100621TB-0003		R01100621TB-0004		R01100621TB-0005		R01100621TB-0006	
LABORATORY NUMBER:		AB07199		AB07202		AB07203		AB07204		AB07205		AB07206		AB07207	
SAMPLE DEPTH:		NA		1 foot bgs		2 feet bgs		3 feet bgs		4 feet bgs		4.75 feet bgs		5.5 feet bgs	
COMPOUND		RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
Hexachlorobutadiene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Isopropylbenzene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
M/P Xylene		ND	100	ND	94	ND	82	ND	80	ND	66	ND	72	ND	76
Methylene Chloride		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Methyl-t-Butyl Ether		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Naphthalene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
N-Butylbenzene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
N-Propylbenzene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Ortho Xylene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Para-Isopropyltoluene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Sec-Butylbenzene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Styrene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
t-1,3-Dichloropropene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Tert-Butylbenzene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Tetrachloroethylene		ND	50	100	47	ND	41	ND	40	ND	33	ND	36	ND	38
Tetrahydrofuran		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Toluene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Trans-1,2-Dichloroethylene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Trichloroethylene		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Trichlorofluoromethane		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Vinyl Acetate		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
Vinyl Chloride		ND	50	ND	47	ND	41	ND	40	ND	33	ND	36	ND	38
DILUTION:		50		50		50		50		50		50		50	
PERCENT SOLIDS		NA		92		93		95		97		93		95	
DATE SAMPLED:		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER: SAMPLE DEPTH:	SB-01G R01100621TB-0007 AB07208 6.5 feet bgs		SB-01H R01100621TB-0008 AB07209 7.5 feet bgs		SB-02A R01100621TB-0009 AB07210 1 foot bgs		SB-02B R01100621TB-0010 AB07211 1.8 feet bgs		SB-02C R01100621TB-0011 AB07212 2.8 feet bgs		SB-02D R01100621TB-0012 AB07213 3.8 feet bgs		SB-02E R01100621TB-0013 AB07214 4.7 feet bgs	
	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
COMPOUND														
1,1,1,2-Tetrachloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1,1-Trichloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1,2,2-Tetrachloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1,2-Trichloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1-dichloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1-Dichloroethylene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,1-Dichloropropene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2,3-Trichlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2,3-Trichloropropane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2,4-Trichlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2,4-Trimethylbenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2-Dibromo-3-Chloropropane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2-Dibromoethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2-Dichlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2-Dichloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,2-Dichloropropane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,3,5-Trimethylbenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,3-Dichlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,3-Dichloropropane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
1,4-Dichlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
2,2-Dichloropropane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
2-Butanone (MEK)	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
2-Chlorotoluene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
2-Hexanone	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
2-Propanone (acetone)	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
4-Chlorotoluene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
4-Methyl-2-Pentanone(MIBK)	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Acrylonitrile	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Benzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Bromobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Bromochloromethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Bromodichloromethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Bromoform	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Bromomethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
c-1,3-dichloropropene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Carbon Disulfide	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Carbon tetrachloride	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Chlorobenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Chloroethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Chloroform	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Chloromethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
cis-1,2-Dichloroethylene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Dibromochloromethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Dibromomethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Dichlorodifluoromethane	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Ethyl Ether	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Ethylbenzene	ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
DILUTION:	50		50		50		50		50		50		50	
PERCENT SOLIDS	95		94		87		89		92		92		91	
DATE SAMPLED:	06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-01G		SB-01H		SB-02A		SB-02B		SB-02C		SB-02D		SB-02E	
SAMPLE NUMBER:		R01100621TB-0007		R01100621TB-0008		R01100621TB-0009		R01100621TB-0010		R01100621TB-0011		R01100621TB-0012		R01100621TB-0013	
LABORATORY NUMBER:		AB07208		AB07209		AB07210		AB07211		AB07212		AB07213		AB07214	
SAMPLE DEPTH:		6.5 feet bgs		7.5 feet bgs		1 foot bgs		1.8 feet bgs		2.8 feet bgs		3.8 feet bgs		4.7 feet bgs	
COMPOUND		RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
Hexachlorobutadiene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Isopropylbenzene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
M/P Xylene		ND	70	ND	70	ND	100	ND	78	ND	74	ND	70	ND	72
Methylene Chloride		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Methyl-t-Butyl Ether		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Naphthalene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
N-Butylbenzene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
N-Propylbenzene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Ortho Xylene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Para-Isopropyltoluene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Sec-Butylbenzene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Styrene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
t-1,3-Dichloropropene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Tert-Butylbenzene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Tetrachloroethylene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Tetrahydrofuran		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Toluene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Trans-1,2-Dichloroethylene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Trichloroethylene		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Trichlorofluoromethane		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Vinyl Acetate		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
Vinyl Chloride		ND	35	ND	35	ND	52	ND	39	ND	37	ND	35	ND	36
DILUTION:		50		50		50		50		50		50		50	
PERCENT SOLIDS		95		94		87		89		92		92		91	
DATE SAMPLED:		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-02F		SB-02G		SB-02H		SB-03A		SB-03B		SB-03C		SB-03D	
SAMPLE NUMBER:		R01100621TB-0014		R01100621TB-0015		R01100621TB-0016		R01100621TB-0017		R01100621TB-0040		R01100621TB-0018		R01100621TB-0019	
LABORATORY NUMBER:		AB07215		AB07216		AB07217		AB07218		AB07219		AB07220		AB07221	
SAMPLE DEPTH:		5.9 feet bgs		7 feet bgs		8 feet bgs		1.9 feet bgs		3.9 feet bgs		5 feet bgs		6 feet bgs	
COMPOUND		RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
1,1,1,2-Tetrachloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1,1-Trichloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1,2,2-Tetrachloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1,2-Trichloro-1,2,2-Trifluoroetha		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1,2-Trichloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1-dichloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1-Dichloroethylene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,1-Dichloropropene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2,3-Trichlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2,3-Trichloropropane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2,4-Trichlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2,4-Trimethylbenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2-Dibromo-3-Chloropropane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2-Dibromoethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2-Dichlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2-Dichloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,2-Dichloropropane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,3,5-Trimethylbenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,3-Dichlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,3-Dichloropropane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
1,4-Dichlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
2,2-Dichloropropane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
2-Butanone (MEK)		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	42	33
2-Chlorotoluene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
2-Hexanone		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
2-Propanone (acetone)		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
4-Chlorotoluene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
4-Methyl-2-Pentanone(MIBK)		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Acrylonitrile		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Benzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Bromobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Bromochloromethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Bromodichloromethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Bromoform		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Bromomethane		ND	38	ND	35	ND	33	ND	37	ND	40	91	32	73	33
c-1,3-dichloropropene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Carbon Disulfide		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Carbon tetrachloride		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Chlorobenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Chloroethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Chloroform		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Chloromethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
cis-1,2-Dichloroethylene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Dibromochloromethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Dibromomethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Dichlorodifluoromethane		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Ethyl Ether		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
Ethylbenzene		ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33
DILUTION:		50		50		50		50		50		50		50	
PERCENT SOLIDS		90		90		93		96		94		97		96	
DATE SAMPLED:		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:		06/23/10		06/24/10		06/24/10		06/24/10		06/24/10		06/23/10		06/23/10	
DATE ANALYZED:		06/23/10		06/24/10		06/24/10		06/24/10		06/24/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-02F		SB-02G		SB-02H		SB-03A		SB-03B		SB-03C		SB-03D		
SAMPLE NUMBER:		R01100621TB-0014		R01100621TB-0015		R01100621TB-0016		R01100621TB-0017		R01100621TB-0040		R01100621TB-0018		R01100621TB-0019		
LABORATORY NUMBER:		AB07215		AB07216		AB07217		AB07218		AB07219		AB07220		AB07221		
SAMPLE DEPTH:		5.9 feet bgs		7 feet bgs		8 feet bgs		1.9 feet bgs		3.9 feet bgs		5 feet bgs		6 feet bgs		
COMPOUND	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
Hexachlorobutadiene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Isopropylbenzene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
M/P Xylene	ND	76	ND	70	ND	66	ND	74	ND	80	ND	64	ND	66	ND	66
Methylene Chloride	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Methyl-t-Butyl Ether	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Naphthalene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
N-Butylbenzene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
N-Propylbenzene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Ortho Xylene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Para-Isopropyltoluene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Sec-Butylbenzene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Styrene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
t-1,3-Dichloropropene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Tert-Butylbenzene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Tetrachloroethylene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Tetrahydrofuran	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Toluene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Trans-1,2-Dichloroethylene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Trichloroethylene	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Trichlorofluoromethane	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Vinyl Acetate	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
Vinyl Chloride	ND	38	ND	35	ND	33	ND	37	ND	40	ND	32	ND	33	ND	33
DILUTION:		50		50		50		50		50		50		50		
PERCENT SOLIDS		90		90		93		96		94		97		96		
DATE SAMPLED:		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		
DATE EXTRACTED:		06/23/10		06/24/10		06/24/10		06/24/10		06/24/10		06/23/10		06/23/10		
DATE ANALYZED:		06/23/10		06/24/10		06/24/10		06/24/10		06/24/10		06/23/10		06/23/10		

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER: SAMPLE DEPTH:	SB-03E R01100621TB-0020 AB07222 7 feet bgs		SB-03F R01100621TB-0021 AB07223 8 feet bgs		SB-03G R01100621TB-0034 AB07224 9 feet bgs		SB-03H R01100621TB-0035 AB07225 10 feet bgs		SB-04A R01100621TB-0022 AB07226 1 foot bgs		SB-04B R01100621TB-0023 AB07227 1.9 feet bgs		SB-04C R01100621TB-0024 AB07228 2.9 feet bgs	
	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
COMPOUND														
1,1,1,2-Tetrachloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1,1-Trichloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1,2,2-Tetrachloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1,2-Trichloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1-dichloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1-Dichloroethylene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,1-Dichloropropene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2,3-Trichlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2,3-Trichloropropane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2,4-Trichlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2,4-Trimethylbenzene	ND	38	ND	28	ND	37	ND	38	77	48	ND	40	ND	33
1,2-Dibromo-3-Chloropropane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2-Dibromoethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2-Dichlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2-Dichloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,2-Dichloropropane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,3,5-Trimethylbenzene	ND	38	ND	28	ND	37	ND	38	71	48	ND	40	ND	33
1,3-Dichlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,3-Dichloropropane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
1,4-Dichlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
2,2-Dichloropropane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
2-Butanone (MEK)	ND	38	ND	28	ND	37	ND	38	52	48	49	40	ND	33
2-Chlorotoluene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
2-Hexanone	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
2-Propanone (acetone)	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
4-Chlorotoluene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
4-Methyl-2-Pentanone(MIBK)	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Acrylonitrile	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Benzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Bromobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Bromochloromethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Bromodichloromethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Bromoform	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Bromomethane	64	38	ND	28	ND	37	82	38	ND	48	ND	40	ND	33
c-1,3-dichloropropene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Carbon Disulfide	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Carbon tetrachloride	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Chlorobenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Chloroethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Chloroform	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Chloromethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
cis-1,2-Dichloroethylene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Dibromochloromethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Dibromomethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Dichlorodifluoromethane	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Ethyl Ether	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Ethylbenzene	ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
DILUTION:	50		50		50		50		50		50		50	
PERCENT SOLIDS	96		95		94		91		92		93		94	
DATE SAMPLED:	06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-03E		SB-03F		SB-03G		SB-03H		SB-04A		SB-04B		SB-04C	
SAMPLE NUMBER:		R01100621TB-0020		R01100621TB-0021		R01100621TB-0034		R01100621TB-0035		R01100621TB-0022		R01100621TB-0023		R01100621TB-0024	
LABORATORY NUMBER:		AB07222		AB07223		AB07224		AB07225		AB07226		AB07227		AB07228	
SAMPLE DEPTH:		7 feet bgs		8 feet bgs		9 feet bgs		10 feet bgs		1 foot bgs		1.9 feet bgs		2.9 feet bgs	
COMPOUND		RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
Hexachlorobutadiene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Isopropylbenzene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
M/P Xylene		ND	76	ND	56	ND	74	ND	76	ND	96	ND	80	ND	66
Methylene Chloride		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Methyl-t-Butyl Ether		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Naphthalene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
N-Butylbenzene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
N-Propylbenzene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Ortho Xylene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Para-Isopropyltoluene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Sec-Butylbenzene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Styrene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
t-1,3-Dichloropropene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Tert-Butylbenzene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Tetrachloroethylene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Tetrahydrofuran		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Toluene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Trans-1,2-Dichloroethylene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Trichloroethylene		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Trichlorofluoromethane		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Vinyl Acetate		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
Vinyl Chloride		ND	38	ND	28	ND	37	ND	38	ND	48	ND	40	ND	33
DILUTION:		50		50		50		50		50		50		50	
PERCENT SOLIDS		96		95		94		91		92		93		94	
DATE SAMPLED:		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER: SAMPLE DEPTH:	SB-04D R01100621TB-0025 AB07229 3.9 feet bgs		SB-04I (Duplicate of SB-04D) R01100621TB-0026 AB07234 3.9 feet bgs		SB-04E R01100621TB-0027 AB07230 4.8 feet bgs		SB-04F R01100621TB-0028 AB07231 5.9 feet bgs		SB-04G R01100621TB-0029 AB07232 6.9 feet bgs		SB-04H R01100621TB-0030 AB07233 7.9 feet bgs		SB-04J (Duplicate of SB-04H) R01100621TB-0031 AB07235 7.9 feet bgs	
	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
COMPOUND														
1,1,1,2-Tetrachloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1,1-Trichloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1,2,2-Tetrachloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1,2-Trichloro-1,2,2-Trifluoroetha	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1,2-Trichloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1-dichloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1-Dichloroethylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,1-Dichloropropene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2,3-Trichlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2,3-Trichloropropane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2,4-Trichlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2,4-Trimethylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2-Dibromo-3-Chloropropane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2-Dibromoethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2-Dichlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2-Dichloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,2-Dichloropropane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,3,5-Trimethylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,3-Dichlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,3-Dichloropropane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
1,4-Dichlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
2,2-Dichloropropane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
2-Butanone (MEK)	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
2-Chlorotoluene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
2-Hexanone	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
2-Propanone (acetone)	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
4-Chlorotoluene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
4-Methyl-2-Pentanone(MIBK)	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Acrylonitrile	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Benzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Bromobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Bromochloromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Bromodichloromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Bromoform	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Bromomethane	65	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
c-1,3-dichloropropene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Carbon Disulfide	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Carbon tetrachloride	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Chlorobenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Chloroethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Chloroform	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Chloromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
cis-1,2-Dichloroethylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Dibromochloromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Dibromomethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Dichlorodifluoromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Ethyl Ether	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Ethylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
DILUTION:	50		50		50		50		50		50		50	
PERCENT SOLIDS	95		94		89		88		89		89		89	
DATE SAMPLED:	06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	
DATE ANALYZED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

COMPOUND	SB-04D		SB-04I		SB-04E		SB-04F		SB-04G		SB-04H		SB-04J	
	R01100621TB-0025		R01100621TB-0026		R01100621TB-0027		R01100621TB-0028		R01100621TB-0029		R01100621TB-0030		R01100621TB-0031	
	AB07229		AB07234		AB07230		AB07231		AB07232		AB07233		AB07235	
	3.9 feet bgs		3.9 feet bgs		4.8 feet bgs		5.9 feet bgs		6.9 feet bgs		7.9 feet bgs		7.9 feet bgs	
COMPOUND	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q	RL	Q
Hexachlorobutadiene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Isopropylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
M/P Xylene	ND	72	ND	76	ND	74	ND	74	ND	80	ND	72	ND	72
Methylene Chloride	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Methyl-t-Butyl Ether	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Naphthalene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
N-Butylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
N-Propylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Ortho Xylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Para-Isopropyltoluene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Sec-Butylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Styrene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
t-1,3-Dichloropropene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Tert-Butylbenzene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Tetrachloroethylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Tetrahydrofuran	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Toluene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Trans-1,2-Dichloroethylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Trichloroethylene	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Trichlorofluoromethane	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Vinyl Acetate	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
Vinyl Chloride	ND	36	ND	38	ND	37	ND	37	ND	40	ND	36	ND	36
DILUTION:	50		50		50		50		50		50		50	
PERCENT SOLIDS	95		94		89		88		89		89		89	
DATE SAMPLED:	06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10		06/21/10	
DATE EXTRACTED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/24/10	
DATE ANALYZED:	06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/23/10		06/24/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-04K		SB-04L	
SAMPLE NUMBER:		R01100621TB-0032		R01100621TB-0033	
LABORATORY NUMBER:		AB07236		AB07237	
SAMPLE DEPTH:		9 feet bgs		10 feet bgs	
COMPOUND		RL	Q	RL	Q
1,1,1,2-Tetrachloroethane		ND	37	ND	34
1,1,1-Trichloroethane		ND	37	ND	34
1,1,2,2-Tetrachloroethane		ND	37	ND	34
1,1,2-Trichloro-1,2,2-Trifluoroetha		ND	37	ND	34
1,1,2-Trichloroethane		ND	37	ND	34
1,1-dichloroethane		ND	37	ND	34
1,1-Dichloroethylene		ND	37	ND	34
1,1-Dichloropropene		ND	37	ND	34
1,2,3-Trichlorobenzene		ND	37	ND	34
1,2,3-Trichloropropane		ND	37	ND	34
1,2,4-Trichlorobenzene		ND	37	ND	34
1,2,4-Trimethylbenzene		ND	37	ND	34
1,2-Dibromo-3-Chloropropane		ND	37	ND	34
1,2-Dibromoethane		ND	37	ND	34
1,2-Dichlorobenzene		ND	37	ND	34
1,2-Dichloroethane		ND	37	ND	34
1,2-Dichloropropane		ND	37	ND	34
1,3,5-Trimethylbenzene		ND	37	ND	34
1,3-Dichlorobenzene		ND	37	ND	34
1,3-Dichloropropane		ND	37	ND	34
1,4-Dichlorobenzene		ND	37	ND	34
2,2-Dichloropropane		ND	37	ND	34
2-Butanone (MEK)		ND	37	ND	34
2-Chlorotoluene		ND	37	ND	34
2-Hexanone		ND	37	ND	34
2-Propanone (acetone)		ND	37	ND	34
4-Chlorotoluene		ND	37	ND	34
4-Methyl-2-Pentanone(MIBK)		ND	37	ND	34
Acrylonitrile		ND	37	ND	34
Benzene		ND	37	ND	34
Bromobenzene		ND	37	ND	34
Bromochloromethane		ND	37	ND	34
Bromodichloromethane		ND	37	ND	34
Bromoform		ND	37	ND	34
Bromomethane		ND	37	ND	34
c-1,3-dichloropropene		ND	37	ND	34
Carbon Disulfide		ND	37	ND	34
Carbon tetrachloride		ND	37	ND	34
Chlorobenzene		ND	37	ND	34
Chloroethane		ND	37	ND	34
Chloroform		ND	37	ND	34
Chloromethane		ND	37	ND	34
cis-1,2-Dichloroethylene		ND	37	ND	34
Dibromochloromethane		ND	37	ND	34
Dibromomethane		ND	37	ND	34
Dichlorodifluoromethane		ND	37	ND	34
Ethyl Ether		ND	37	ND	34
Ethylbenzene		ND	37	ND	34
DILUTION:		50		50	
PERCENT SOLIDS		89		90	
DATE SAMPLED:		06/21/10		06/21/10	
DATE EXTRACTED:		06/24/10		06/24/10	
DATE ANALYZED:		06/24/10		06/24/10	

SITE: GRUHN PROPERTY
PROJECT NO: 10-05-0002
LABORATORY: OEME

TABLE 1
Soil Sample Laboratory Results Summary
micrograms/Kilogram

SAMPLE LOCATION:		SB-04K		SB-04L	
SAMPLE NUMBER:		R01100621TB-0032		R01100621TB-0033	
LABORATORY NUMBER:		AB07236		AB07237	
SAMPLE DEPTH:		9 feet bgs		10 feet bgs	
COMPOUND		RL	Q	RL	Q
Hexachlorobutadiene		ND	37	ND	34
Isopropylbenzene		ND	37	ND	34
M/P Xylene		ND	74	ND	68
Methylene Chloride		ND	37	ND	34
Methyl-t-Butyl Ether		ND	37	ND	34
Naphthalene		ND	37	ND	34
N-Butylbenzene		ND	37	ND	34
N-Propylbenzene		ND	37	ND	34
Ortho Xylene		ND	37	ND	34
Para-Isopropyltoluene		ND	37	ND	34
Sec-Butylbenzene		ND	37	ND	34
Styrene		ND	37	ND	34
t-1,3-Dichloropropene		ND	37	ND	34
Tert-Butylbenzene		ND	37	ND	34
Tetrachloroethylene		ND	37	ND	34
Tetrahydrofuran		ND	37	ND	34
Toluene		ND	37	ND	34
Trans-1,2-Dichloroethylene		ND	37	ND	34
Trichloroethylene		ND	37	ND	34
Trichlorofluoromethane		ND	37	ND	34
Vinyl Acetate		ND	37	ND	34
Vinyl Chloride		ND	37	ND	34
DILUTION:		50		50	
PERCENT SOLIDS		89		90	
DATE SAMPLED:		06/21/10		06/21/10	
DATE EXTRACTED:		06/24/10		06/24/10	
DATE ANALYZED:		06/24/10		06/24/10	

NOTES

START has reported the data as it was received from the EPA OEME Laboratory. START has not performed data validation of the EPA OEME Laboratory data. An internal data review was performed by EPA OEME Laboratory personnel prior to submittal to the EPA Contracting Officer's Representative.

OEME = EPA Office of Environmental Measurement and Evaluation.

Sample analysis was conducted following EPA REGION I SOP, EIASOP-VOAGCMS8, via Gas Chromatograph/Mass Spectrometry (GC/MS).

ug/Kg = micrograms per kilogram.

ND = Non-Detected.

RL = Reporting Limit.

Bold indicates detected compound concentrations.

TABLE 2
35 WEARE ROAD, HAMPTON FALLS, NH
RESULTS SUMMARY

COMPOUND	INDOOR AIR BASEMENT		INDOOR AIR BASEMENT DUPLICATE		INDOOR AIR FIRST FLOOR		AMBIENT AIR OUTSIDE 35 WEARE RD. CANISTER #22692	
	CANISTER #15061 21-Jun-10 24-HOUR AVE.		CANISTER #14893 21-Jun-10 24-HOUR AVE.		CANISTER #13494 21-Jun-10 24-HOUR AVE.		21-Jun-10 24-HOUR AVE.	
	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)
Trichloroethylene	0.15	0.81	0.18	0.97	ND (0.09)	ND (0.51)	ND (0.09)	ND (0.46)
Tetrachloroethylene	0.89	6.0	0.82	5.6	ND (0.09)	ND (0.64)	ND (0.09)	ND (0.58)
1,2,4-Trimethylbenzene	5.1	25	4.7	23	0.13	0.64	ND (0.09)	ND (0.42)
1,2-Dichloroethane	0.20	0.81	0.18	0.73	ND (0.09)	ND (0.38)	ND (0.09)	ND (0.51)
1,3,5-Trimethylbenzene	1.4	6.9	1.3	6.4	0.15	0.74	ND (0.09)	ND (0.42)
4-Ethyltoluene	3.8	19	3.4	17	0.43	2.1	ND (0.09)	ND (0.42)
Benzene	3.5	11	3.3	10	0.53	1.7	ND (0.09)	ND (0.27)
Carbon Tetrachloride	0.13	0.82	0.12	0.76	0.09 L	0.54 L	0.10	0.63
Cyclohexane	3.1	11	2.9	10	0.41	1.4	ND (0.09)	ND (0.29)
Dichlorodifluoromethane	0.53	2.6	0.62	3.1	0.57	2.8	0.48	2.4
Ethylbenzene	4.2	18	3.9	17	0.53	2.3	0.07	0.3
Heptane	3.7	15	3.4	14	ND (0.09)	ND (0.39)	ND (0.09)	ND (0.35)
Hexane	12	42	11	39	1.4	4.90	0.18	0.63
Methyl Ethyl Ketone	ND (0.07)	ND (0.22)	ND (0.09)	ND (0.27)	ND (0.09)	ND (0.28)	0.22 B	0.65 B
Methyl-t-Butyl Ether	1.1	3.9	0.99	3.5	ND (0.09)	ND (0.39)	ND (0.09)	ND (0.31)
Methylchloride	0.29	0.60	0.30	0.62	0.52	1.1	0.45	0.93
Methylene Chloride	2.7	9.4	2.4	8.5	0.09	0.34	0.09	0.32
Toluene	25	94	25	94	3.9	15	0.33	1.2
Trichlorofluoromethane	ND (0.07)	ND (0.41)	ND (0.09)	ND (0.51)	0.3	1.5	0.3	1.6
Trichlorotrifluoroethane	0.08	0.61	0.07	0.59 L	ND (0.09)	ND (0.72)	0.07 L	0.57 L
m/p-Xylenes	14	61	13	56	2	9.5	0.22	0.95
o-Xylene	5.3	23	5.1	22	0.7	3.2	0.09	0.40

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses

L = Estimated value, is below the calibration range

B = Analyte is associated with the lab blank or trip blank concentration.

Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.

Compounds in bold type are target compounds for project.

TABLE 2
35 WEARE ROAD, HAMPTON FALLS, NH
RESULTS SUMMARY

COMPOUND	INDOOR AIR BASEMENT		INDOOR AIR BASEMENT DUPLICATE		INDOOR AIR FIRST FLOOR		AMBIENT AIR OUTSIDE	
	CANISTER #6570 16-Mar-11 24-HOUR AVE.		CANISTER #6553 16-Mar-11 24-HOUR AVE.		CANISTER #6571 16-Mar-11 24-HOUR AVE.		35 WEARE RD. CANISTER #6462 16-Mar-11 24-HOUR AVE.	
	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)	(ppb/v)	(ug/m ³)
Trichloroethylene	ND (11)	ND (59)	ND (11)	ND (59)	ND (12)	ND (64)	ND (0.09)	ND (0.48)
Tetrachloroethylene	1.3	8.8	1.20	8.1	3.2	22.0	ND (0.09)	ND (0.61)
1,2,4-Trimethylbenzene	ND (11)	ND (54)	ND (11)	ND (54)	ND (12)	ND (59)	ND (0.09)	ND (0.42)
1,2-Dichloroethane	ND (11)	ND (66)	ND (11)	ND (66)	ND (12)	ND (49)	ND (0.09)	ND (0.51)
1,3,5-Trimethylbenzene	ND (22)	ND (108)	ND (22)	ND (108)	ND (12)	ND (59)	ND (0.09)	ND (0.42)
4-Ethyltoluene	ND (11)	ND (54)	ND (11)	ND (54)	ND (12)	ND (59)	ND (0.09)	ND (0.42)
Benzene	ND (11)	ND (35)	ND (11)	ND (35)	14	45	0.25	0.8
Carbon Tetrachloride	ND (11)	ND (69)	ND (11)	ND (69)	ND (12)	ND (75)	0.12	0.76
Chloroform	ND (11)	ND (54)	ND (11)	ND (54)	ND (12)	ND (59)	ND (0.09)	ND (0.44)
Cyclohexane	ND (11)	ND (38)	ND (11)	ND (38)	10 L	34 L	ND (0.09)	ND (0.29)
Dichlorodifluoromethane	ND (11)	ND (54)	ND (11)	ND (54)	ND (12)	ND (59)	0.52	2.6
Ethylbenzene	ND (11)	ND (48)	ND (11)	ND (48)	ND (12)	ND (52)	ND (0.09)	ND (0.4)
Heptane	230	940	230	940	980	4000	1.00	4.1
Hexane	14	49	13	46	42	150.00	0.17	0.60
Methyl Ethyl Ketone	ND (11) J	ND (32) J	ND (11) J	ND (32) J	ND (12) J	ND (35) J	0.20 J	0.59 J
Methyl Isobutyl Ketone	ND (11)	ND (45)	ND (11)	ND (45)	ND (12)	ND (49)	ND (0.09)	ND (0.37)
Methyl-t-Butyl Ether	ND (11)	ND (40)	ND (11)	ND (40)	ND (12)	ND (43)	ND (0.09)	ND (0.31)
Methylchloride	ND (11)	ND (23)	ND (11)	ND (23)	ND (12)	ND (25)	0.54	1.10
Methylene Chloride	ND (11) J	ND (38) J	ND (11) J	ND (38)	ND (12)	ND (42)	0.16	0.56
Toluene	13	49	14	53	65.0	240	0.24	0.9
Trichlorofluoromethane	ND (11)	ND (84)	ND (11)	ND (84)	ND (12)	ND (67)	0.25	1.4
m/p-Xylenes	ND (22)	ND (96)	ND (22)	ND (96)	15 L	65 L	0.17 L	0.74 L
o-Xylene	ND (11)	ND (48)	ND (11)	ND (48)	ND (12)	ND (52)	ND (0.09)	ND (0.4)

NOTES:

ND = Not detected above reporting limits; reporting limit in parentheses

L = Estimated value, is below the calibration range

B = Analyte is associated with the lab blank or trip blank concentration.

Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.

Compounds in bold type are target compounds for project.