

**REMOVAL PROGRAM
PRELIMINARY ASSESSMENT/
SITE INVESTIGATION REPORT
FOR THE
BIRCH SWAMP SITE
WARREN, BRISTOL COUNTY, RHODE ISLAND
3, 11 AND 12 JULY 2007**

Prepared For:

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

CONTRACT NO. EP-W-05-042

TDD NO. 01-07-05-0005

TASK NO. 0299

DC NO. R-4798

Submitted By:

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

December 2007

TABLE OF CONTENTS

- I. Preliminary Assessment/Site Investigation Forms
- II. Narrative Chronology
- III. Appendices
 - Appendix A - Figures
 - Appendix B - Tables
 - Appendix C - Chain-of-Custody Record
 - Appendix D - Photodocumentation Log

I. Preliminary Assessment/Site Investigation Forms



**EPA REGION I
REMOVAL PRELIMINARY ASSESSMENT**

Site Name and Location

Name: Birch Swamp **Location:** Birch Swamp Road
Town: Warren **County:** Bristol **State:** Rhode Island

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

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

Latitude: 41° 44' 43" North **Longitude:** 71° 15' 31" West

Referral

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

Name of referring party: Rhode Island Department of Environmental Management (RI DEM)
Address: 235 Promenade Street, Providence, RI 02908
Telephone: (401) 222-4700

Contacts Identified

1) Joan Taylor, RI DEM **Telephone:** (401) 222-4700 ext. 7514

Source of Information

☐ **Verbal:**

☒ **Report:** Rhode Island Department of Environmental Management, Office of Waste Management, *Draft Preliminary Assessment/Site Inspection Report for the Bristol Sandblasting Company (Former) Warren, RI*, dated June 2005.

☐ **Other:**

REMOVAL PRELIMINARY ASSESSMENT

Potential Responsible Parties

Owner: Mr. Amilio Zompa **Telephone:** Unlisted
Address: 23 County Road, Barrington, RI 02885

Owner: Robert and Madeline Chace **Telephone:** Unlisted
Address: 68 Birch Swamp Road, Warren, RI 02885

Operator: Same as above.

Site Access

Authorizing Person: Amilio Zompa

Date: 04/24/07 (√)Obtained ()Verbal
Telephone: Unlisted ()Not Obtained (√)Written*

* Note a Warrant for Access was obtained on 04/24/07.

Authorizing Person: Robert and Madeline Chace

Date: 08/17/06 (√)Obtained ()Verbal
Telephone: Unlisted ()Not Obtained (√)Written

Historical Preservation

() Site is Historically Significant or Eligible for Historic Preservation

Contacts Identified

1) State Historical Preservation Officer (SHPO)

Name: Mr. Frederick C. Williamson **Telephone:** (401) 222-2678

2) Tribal Historical Preservation Officer (THPO)

Name: **Telephone:**()

Comments:

Physical Site Characterization

Background Information: The Birch Swamp site (the site) is located on Birch Swamp Road in the northern portion of the Town of Warren, Bristol County, Rhode Island (RI). The geographical coordinates of the property are 41° 44' 43" north latitude and 71° 15' 31" west longitude. The site is identified as Lot No. 4 on Warren Tax Assessor's Map 22. The site consists of large wooded and wetland areas. Land use in the surrounding area is comprised of a mixture of residential, agricultural, and industrial/commercial property, with single-family homes along Birch Swamp Road, County Road, and adjoining side roads. The site is bordered to the west by Birch Swamp Road, to the north and south by residential properties, and to the east by the Kickemuit River.

REMOVAL PRELIMINARY ASSESSMENT

Physical Site Characterization (Continued)

The property west of Birch Swamp Road, across the street from the site, was the location of the former Warren Town Landfill, and is currently occupied by a transfer station and highway garages maintained by the Town of Warren Public Works and Highway Department. The Kickemuit River is approximately 0.25 miles east of the site and is a physical barrier to the rear of the site, but access is readily obtained from all other directions. The site is adjacent to the former location of the Bristol Sandblasting Company (BSB). Spent sandblasting grit contaminated with lead was stored throughout the property and at times mixed with on-site soil. This mixture of lead-contaminated sandblasting grit and on-site soil was eventually used as fill within the two residential properties, as well as on a small portion of the Town of Warren property. For an undetermined period of time, most likely between February 1991 and August 1991, Halpin Line Construction Company, working on behalf of Narragansett Electric Company, utilized a portion of the site, primarily to the rear of the former BSB garage building, to store electrical transformers.

In October 1994, the U.S. Environmental Protection Agency (EPA) and Roy F. Weston, Inc. (now known as Weston Solutions, Inc.) Technical Assistance Team (TAT) performed a Removal Program Preliminary Assessment/Site Investigation (PA/SI). The PA/SI confirmed the presence of elevated levels of lead and polychlorinated biphenyls (PCBs) in on-site soils. In May 1995, EPA began removal activities at the site. The lead cleanup levels established at the site were as follows: 500 parts per million (ppm) at the surface; 1,000 ppm at a 2-foot depth; and 1,500 ppm at a 3-foot depth. The PCB cleanup levels were 1 ppm at the surface, 5 ppm at a 1-foot depth, and 10 ppm at a 3-foot depth. The removal of lead- and PCB-contaminated soils was completed in November 1995. A total of 8,580 tons of soil was sent off site for disposal.

Because of the fact that the removal action did not involve removal of surface soils with concentrations of lead below 500 ppm, RI DEM initiated a PA/SI at the site. In June 2004, RI DEM and Vanasse Hangen Brustlin, Inc. (VHB) personnel collected 10 soil/source and surface soil samples, four drinking water samples, and seven sediment samples from the former BSB property and properties adjacent to the site.

Analytical results of soil/source samples indicated the presence of five semivolatile organic compounds (SVOCs), two PCBs, three pesticides, and three inorganic elements above the RI Residential Direct Exposure Criteria (RI-R-DEC). SVOCs detected in soil/source samples included benzo(a)anthracene [1,900 parts per billion (ppb)], benzo(b)fluoranthene (1,300 ppb), benzo(k)fluoranthene (1,400 ppb), and chrysene (1,900 ppb), all of which exceed the RI-R-DEC. In addition, benzo(a)pyrene (1,300 ppb) exceeded the RI Industrial/Commercial Direct Exposure Criteria (RI-I/C-DEC). PCBs detected in soil/source samples included Arochlor 1254 (92 ppb) and Arochlor 1260 (45 ppb), neither of which exceeded the RI-R-DEC value of 10,000 ppb. Inorganic elements detected in soil/source samples included lead (130 ppm), mercury (0.20 ppm), and potassium (1,900 ppm), none of which exceeded the RI-R-DEC.

Analytical results of sediment samples indicated the presence of nine SVOCs, three pesticides, two PCBs, and eight metals.

REMOVAL PRELIMINARY ASSESSMENT

Physical Site Characterization (Concluded)

SVOCs detected in sediment samples included benzo(a)anthracene (160 ppb), benzo(b)pyrene (180 ppb), benzo(b)fluoranthene (240 ppb), benzo(k)fluoranthene (230 ppb), butylbenzylphthalate (50 ppb), bis(2-ethylhexyl)phthalate (240 ppb), chrysene (240 ppb), fluoranthene (430 ppb), and pyrene (510 ppb). Pesticides detected in sediment samples included 4,4-DDE (12 ppb); 4,4-DDD (1.8 ppb); and 4,4-DDT (5.7 ppb). However, the presence of pesticides is attributable to normal use in the surrounding area and not to waste disposal practices at the BSB property. Therefore, the presence of these pesticides is not assumed to have originated from the BSB property. PCBs detected in sediment samples collected from properties adjacent to the BSB property, along the banks of the Kickemuit River, included Arochlor 1254 (100 ppb) and Arochlor 1260 (39 ppb), and are associated with the storage of PCB transformers on the BSB property. Metals detected in sediment samples included antimony (2 ppm), arsenic (2.8 ppm), lead (460 ppm), mercury (0.51 ppm), selenium (0.51 ppm), vanadium (24 ppm), calcium (3,100 ppm), and selenium (0.51 ppm).

Analytical results of drinking water samples indicated the presence of lead; however, lead did not exceed its Rhode Island Department of Health (RI DOH) Maximum Containment Level (MCL).

Description of Substances Possibly Present, Known or Alleged: Volatile Organic Compounds (VOCs), SVOCs, PCBs, and metals (lead).

Existing Analytical Data

() Real-Time Monitoring Data:

(√) **Sampling Data:** Analytical results of samples collected from the former BSB property and properties adjacent to the site during the June 2004 PA/SI conducted by RI DEM and their contractor.

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.

REMOVAL PRELIMINARY ASSESSMENT

Potential Threat (Concluded)

- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate.
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
- vi. Threat of fire or explosion.
- vii. The availability of other appropriate federal or state response mechanisms to respond to the release.
- viii. Other situations or factors that may pose threats to public health or welfare or the environment.

Prior Response Activities

☐ PRP ☒ STATE ☒ FEDERAL ☐ OTHER

Brief Description: In May 1995, EPA conducted a removal action at the former BSB property. In June 2004, RI DEM conducted sampling at the former BSB property and properties adjacent to the site.

Priority for Site Investigation

☐ High ☒ Medium ☐ Low ☐ None
Comments:

Report Generation

Originator:	Bonnie Mace	Date:	17 July 2007
Affiliation:	Weston Solutions (START)	Telephone:	(978) 552-2131
TDD No.:	07-05-0005	Task No.:	0299



Site Name: Birch Swamp	Address: Birch Swamp Road	
Town: Warren	County: Bristol	State: Rhode Island
Date of Inspection: 3 July 2007	Time of Inspection: 1030 - 1200 hours	
Date of Inspection: 11 July 2007	Time of Inspection: 0900 - 1800 hours	
Date of Inspection: 12 July 2007	Time of Inspection: 0830 - 1300 hours	
Weather Conditions: 3 July 2007 - Warm, partly cloudy, 82° Fahrenheit.		
11 July 2007 - Hot, humid, partly cloudy, 87° Fahrenheit.		
12 July 2007 - Warm, sunny, 78° Fahrenheit.		
Site Status at Time of Inspection:	() ACTIVE	(√) INACTIVE
Comments:		

	<u>Names</u>	<u>Program</u>
(√) EPA:	Mia Pasquerella	U.S. Environmental Protection Agency (EPA) Region I Emergency Planning and Response Branch (EPRB) On-Scene Coordinator (OSC).
(√) EPA Contractor:	Bonnie Mace Bill Mahany Cheryl Henlin	Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team III (START).
(√) State:	Joan Taylor	Rhode Island Department of Environmental Management (RI DEM).

Current Owner Based on Field Interview: Mr. Amilio Zompa

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 checked="" type="checkbox"/> Stressed Vegetation:	There are several small areas of stressed vegetation.
<input type="checkbox"/> Landfill:	
<input checked="" type="checkbox"/> Population in Vicinity:	The site is surrounded by residential and agricultural properties including a horse farm.
<input type="checkbox"/> Wells:	<input type="checkbox"/> Drinking:
	<input type="checkbox"/> Monitoring:
<input type="checkbox"/> Other:	

Physical Site Observations

The Birch Swamp site (the site) consists of large wooded and wetland areas. Land use in the surrounding area is comprised of a mixture of residential, agricultural, and industrial/commercial properties, with single-family homes along Birch Swamp Road, County Road, and adjoining side roads. The site is bordered to the west by Birch Swamp Road, to the north and south by residential properties, and to the east by the Kickemuit River. The property west of Birch Swamp Road, across the street from the site, was the location of the former Warren Town Landfill, and is currently occupied by a transfer station and highway garages maintained by the Town of Warren Public Works and Highway Department. The Kickemuit River is approximately 0.25 miles east of the site and is a physical barrier to the rear of the site, but access is readily obtained from all other directions.

REMOVAL SITE INVESTIGATION

Field Sampling and Analysis					
Matrix/Analytical Parameter	Field Instrumentation				
	CGI/O ₂	RAD	PID	FID	Other
Background Readings:	0.0/20.9%	10-12 µR/hr	0.0	0.0	
Air:	0.0/20.9%	10-12 µR/hr	0.0	0.0	
Soil:	0.0/20.9%	10-12 µR/hr	0.0	0.0	
Surface:					
Water:					
Tanks:					
Drums:					
Vats:					
Lagoons:					
Spillage:					
Run Off:					
Piles:					
Sediments:	0.0/20.9%	10-12 µR/hr	0.0	0.0	
Groundwater:					
Other:					

Field Quality Control Procedures	
(√) SOP Followed	() Deviation From SOP

Comments: START followed the protocol outlined in the document entitled, *Sampling and Analysis Plan for the Birch Swamp Site, Warren, Rhode Island*.

Description of Sampling Conducted

START collected a total of 24 surface soil samples, eight subsurface soil samples, and three sediment samples. All samples were sent to EPA Office of Environmental Measurement and Evaluation (OEME) located in North Chelmsford, Massachusetts for volatile organic compound (VOC), semivolatile organic compound (SVOC), polychlorinated biphenyl (PCB), and metals analysis.

REMOVAL SITE INVESTIGATION

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

Analytical results: [see Appendix B - Tables]

Receptors	
	<u>Comments</u>
<input type="checkbox"/> Drinking Water <input type="checkbox"/> Private: <input type="checkbox"/> Municipal: <input type="checkbox"/> Groundwater: <input checked="" type="checkbox"/> Unrestricted Access:	Site access is gained through a right-of-way, which has a chain, but a broken lock.
<input checked="" type="checkbox"/> Population in Proximity:	The site is surrounded by residential and agricultural properties including a horse farm.
<input checked="" type="checkbox"/> Sensitive Ecosystem:	The site consists of large wooded and wetland areas. The Kickemuit River is approximately 0.25 miles east of the site and is a physical barrier to the rear of the site, but access is readily obtained from all other directions.
<input type="checkbox"/> Other:	

Additional Procedures for Site Determination	
<input type="checkbox"/> Biological Evaluation	<input type="checkbox"/> ATSDR

To be determined by the Task Monitor.

REMOVAL SITE INVESTIGATION

Site Determination

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

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

Report Generation

Originator:	Bonnie Mace	Date:	17 July 2007
Affiliation:	Weston Solutions (START)	Telephone:	(978) 552-2131
TDD No.:	07-05-0005	Task No.:	0299

II. Narrative Chronology

Narrative Chronology

Site Description

The Birch Swamp site (the site) is located on Birch Swamp Road in the northern portion of the Town of Warren, Bristol County, Rhode Island [see Appendix A – Figures: Site Location Map (Figure 1)]. The geographical coordinates of the property are 41° 44' 43" north latitude and 71° 15' 31" west longitude [1,2]. The site is identified as Lot No. 4 on Warren Tax Assessor's Map 22 [3]. The site consists of large wooded and wetland areas. Land use in the surrounding area is comprised of a mixture of residential, agricultural, and industrial/commercial properties, with single-family homes along Birch Swamp Road, County Road, and adjoining side roads. The site is bordered to the west by Birch Swamp Road, to the north and south by residential properties, and to the east by The Kickemuit River [see Appendix A – Figures: Aerial Site Map (Figure 2)] [1, 2]. The property west of Birch Swamp Road, across the street from the site, was the location of the former Warren Town Landfill, and is currently occupied by a transfer station and highway garages maintained by the Town of Warren Public Works and Highway Department. The Kickemuit River is approximately 0.25 miles east of the site and is a physical barrier to the rear of the site, but access is readily obtained from all other directions.

Site Background

The site is adjacent to the former location of the Bristol Sandblasting Company (BSB). Spent sandblasting grit contaminated with lead was stored throughout the property and at times mixed with on-site soil. This mixture of lead-contaminated sandblasting grit and on-site soil was eventually used as fill within the two residential properties, as well as on a small portion of the Town of Warren property. For an undetermined period of time, most likely between February 1991 and August 1991, Halpin Line Construction Company, working on behalf of Narragansett Electric Company, utilized a portion of the site, primarily to the rear of the former BSB garage building, to store electrical transformers [4].

In October 1994, the U.S. Environmental Protection Agency (EPA) and Roy F. Weston, Inc. (now known as Weston Solutions, Inc.) Technical Assistance Team (TAT) performed a Removal Program Preliminary Assessment/Site Investigation (PA/SI). The PA/SI confirmed the presence of elevated levels of lead and polychlorinated biphenyls (PCBs) in on-site soils. In May 1995, EPA began removal activities at the site. The lead cleanup levels established at the site were as follows: 500 parts per million (ppm) at the surface; 1,000 ppm at a 2-foot depth; and 1,500 ppm at a 3-foot depth. The PCB cleanup levels were as follows: 1 ppm at the surface, 5 ppm at a 1-foot depth, and 10 ppm at a 3-foot depth. The removal of lead- and PCB-contaminated soils was completed in November 1995. A total of 8,580 tons of soil was sent off site for disposal [4].

Because the removal action did not involve removal of surface soils with concentrations of lead below 500 ppm, Rhode Island Department of Environmental Management (RI DEM) initiated a PA/SI at the site. In June 2004, RI DEM and Vanasse Hangen Brustlin, Inc. (VHB) personnel collected 10 soil/source and surface soil samples, four drinking water samples, and seven sediment samples from the former BSB property and properties adjacent to the site.

Analytical results of soil/source samples indicated the presence of five semivolatile organic compounds (SVOCs), two PCBs, three pesticides, and three inorganic elements above reference

criteria. SVOCs detected in soil/source samples included benzo(a)anthracene [1,900 parts per billion (ppb)], benzo(b)fluoranthene (1,300 ppb), benzo(k)fluoranthene (1,400 ppb), and chrysene (1,900 ppb), all of which exceed the Rhode Island Residential Direct Exposure Criteria (RI-R-DEC). In addition, benzo(a)pyrene (1,300 ppb) exceeded the RI Industrial/Commercial Direct Exposure Criteria (RI-I/C-DEC). PCBs detected in soil/source samples included Arochlor 1254 (92 ppb) and Arochlor 1260 (45 ppb), neither of which exceeded the RI-R-DEC value of 10,000 ppb. Inorganic elements detected in soil/source samples included lead (130 ppm), mercury (0.20 ppm), and potassium (1,900 ppm), none of which exceeded the RI-R-DEC. Analytical results of sediment samples indicated the presence of nine SVOCs, three pesticides, two PCBs, and eight metals. SVOCs detected in sediment samples included benzo(a)anthracene (160 ppb), benzo(b)pyrene (180 ppb), benzo(b)fluoranthene (240 ppb), benzo(k)fluoranthene (230 ppb), butylbenzylphthalate (50 ppb), bis(2-ethylhexyl)phthalate (240 ppb), chrysene (240 ppb), fluoranthene (430 ppb), and pyrene (510 ppb). Pesticides detected in sediment samples included 4,4-DDE (12 ppb), 4,4-DDD (1.8 ppb), and 4,4-DDT (5.7 ppb). However, the presence of pesticides was attributable to normal use in the surrounding area and not to waste disposal practices at the BSB property. Therefore, the presence of these pesticides was not assumed to have originated from the BSB property. PCBs detected in sediment samples collected from properties adjacent to the BSB property, along the banks of the Kickemuit River, included Aroclor 1254 (100 ppb) and Aroclor 1260 (39 ppb), and are associated with the storage of PCB transformers on the BSB property. Metals detected in sediment samples included antimony (2 ppm), arsenic (2.8 ppm), lead (460 ppm), mercury (0.51 ppm), selenium (0.51 ppm), vanadium (24 ppm), calcium (3,100 ppm), and selenium (0.51 ppm). Analytical results of drinking water samples indicated the presence of lead; however, lead did not exceed its Rhode Island Department of Health (RI DOH) Maximum Containment Level (MCL) [4].

Site Activities

On 3 July 2007, EPA On-Scene Coordinator (OSC) Mia Pasquerella, START member Bonnie Mace, and RI DEM member Joan Taylor mobilized to the site to conduct a reconnaissance of the property to prepare for sampling activities as part of a Removal Program PA/SI.

START member Mace 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 Birch Swamp Site, Warren, Rhode Island*.

EPA, START, and RI DEM conducted a site walk-through of the property. START member Mace photodocumented site conditions and utilized the Trimble™ Pathfinder Pro XRS Global Positioning System (GPS) unit to mark site features [5].

On 11 July 2007, EPA OSC Pasquerella and START members Mace, Bill Mahany, and Cheryl Henlin mobilized to the site to conduct surface and subsurface soil and sediment sampling. START personnel established a support zone and calibrated the air monitoring instrument, a combination photoionization detector (PID)/flame ionization detector (FID) [6]. Background levels were recorded in the HASP as follows: PID = 0.0 ppm; FID = 0.0 ppm. START member Mace conducted a safety and operations meeting, and on-site personnel reviewed and signed the site HASP.

START personnel collected grab surface soil samples from locations selected by the OSC on site using dedicated sampling equipment [7]. In addition, START collected subsurface soil samples from locations determined by the OSC, using hand augers. START also collected sediment samples from several intermittent streams, using hand augers [8] [see Appendix A – Figures: Sample Location Map (Figure 3)]. 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 Birch Swamp Site, Warren, Rhode Island*. Air monitoring conducted at each sample location indicated no readings above background levels.

START collected a total of 24 surface soil, eight subsurface soil, and three sediment samples for VOC, SVOC, PCB, and metals analyses [see Appendix B – Tables: Surface Soil Sample Descriptions (Table 1), Subsurface Soil Sample Descriptions (Table 2), and Sediment Sample Descriptions (Table 3)]. The water quality parameters were measured and recorded using a YSI meter prior to sediment sample collection activities [8]. All the samples were sent to EPA Office of Environmental Measurement and Evaluation (OEME) located in North Chelmsford, Massachusetts for VOC, SVOC, PCB, and metals analyses (see Appendix C – Chain-of-Custody Records). The sediment sample locations were photographed by START member Henlin (see Appendix D – Photodocumentation Log).

On 12 July 2007, START personnel re-mobilized to the site to photodocument the site and selected sample locations [9].

On 20 August 2007, START received the analytical data results from OEME [10]. These data are summarized in Appendix B [see Appendix B – Tables: Volatile Organic Compound Analytical Results (Table 4), Semivolatile Organic Compound Analytical Results (Table 5), Polychlorinated Biphenyl Analytical Results (Table 6), and Metals Analytical Results (Table 7)]. Complete laboratory data results may be found in the Birch Swamp Site File.

Analytical Data Summaries

Thirteen SVOCs, three PCB aroclors, and six metals were detected above detection limits in the surface soil samples; and one VOC was detected above detection limits in the sediment samples. A discussion of these results follows.

Volatile Organic Compounds Results

One VOC, methylene chloride, was detected at a maximum concentration of 220 micrograms per kilogram ($\mu\text{g/Kg}$) in sediment sample SD-03. However, methylene chloride did not exceed the RI-R-DEC in this sample. A summary of VOCs detected in soil and sediment samples is provided in Appendix B [Volatile Organic Compounds Analytical Results (Table 4)].

Semivolatile Organic Compounds Results

Thirteen SVOCs (with sample number and maximum concentration in parentheses) were detected in soil samples and include the following: bis (2-ethylhexyl) phthalate (1,700 $\mu\text{g/kg}$ in SS-06); diethylphthalate (2,800 $\mu\text{g/kg}$ in SS-07); fluoranthene (5,700 $\mu\text{g/kg}$ in SS-06 2'); pyrene (4,600 $\mu\text{g/kg}$ in SS-06 2'); benzo (a) anthracene (1,600 $\mu\text{g/kg}$ in SS-06 2'); benzo (a) pyrene (2,100 $\mu\text{g/kg}$ in SS-06 2'); benzo (b) fluoranthene (4,200 $\mu\text{g/kg}$ in SS-06 2'); benzo (k)

fluoranthene (2,200 µg/kg in SS-06 2v); chrysene (3,200 µg/kg in SS-06 2'); isophorone (620 µg/kg in SS-08); phenanthrene (4,100 µg/kg in SS-06 2'); indo (1,2,3-cd) pyrene (2,800 µg/kg in SS-06 2'); and safrole (1,600 µg/kg in SS-06 2'). Six of the 13 SVOCs detected in soil samples exceeded the RI-R-DEC. In addition, one SVOC exceeded the RI-I/C-DEC. A summary of SVOCs detected in soil and sediment samples is provided in Appendix B [Semivolatile Organic Compound Analytical Results (Table 5)].

Polychlorinated Biphenyl Results

Three PCB aroclors (1248, 1254, and 1260) (with sample number and maximum concentration in parentheses) were detected in surface soil samples and include the following: Aroclor-1248 [59 milligrams per kilogram (mg/kg) in SS-04]; Aroclor-1254 (36 mg/kg in SS-04); and Aroclor-1260 (0.64 mg/kg in SS-12). Only two of the three aroclors (1248 and 1254) exceeded the RI-R-DEC. A summary of PCBs detected in soil and sediment samples is provided in Appendix B [Polychlorinated Biphenyl Analytical Results (Table 6)].

Metals Results

Six metals (with sample number and maximum concentration in parentheses) were detected in soil samples and include the following: antimony (130 mg/kg in SS-14), arsenic (110 mg/kg in SS-06), cadmium (63 mg/kg in SS-07), copper (8,900 mg/kg in SS-05), lead (7,000 mg/kg in SS-05), and manganese (4,800 mg/kg in SS-06). Concentrations of metals exceeded RI-R-DEC in 19 surface soil samples and two subsurface soil samples. A summary of metals detected in soil and sediment samples is provided in Appendix B [Metals Results (Table 7)].

References

- [1] USGS (U.S. Geological Survey). 1977. Tiverton, Rhode Island/Massachusetts (7.5-minute series topographic map).
- [2] Rhode Island Geographic Information System (RI GIS). 2007. 1:5,000 Color Digital Orthophoto Imagery, RE: Image Numbers 3824 and 3826R3. Available From <http://www.edu.uri.edu/rigiscom>. Internet accessed 1 June 2007.
- [3] Town of Warren, Rhode Island. 2005. Tax Assessor's Map No. 22. 31 May.
- [4] Rhode Island Department of Environmental Management, Office of Waste Management. June 2005. *Draft Preliminary Assessment/Site Inspection Report for Bristol Sandblasting Company (Former) Warren, RI*.
- [5] Weston Solutions, Inc. July 2005. *Standard Operating Procedure for Trimble™ Pathfinder Pro XRS Global Positioning System (GPS) with TSCI Data Logger*, SOP No. WSI/S3-020, Superfund Technical Assessment and Response Team III (START), Wilmington, MA.
- [6] Weston Solutions, Inc. July 2005. *Standard Operating Procedure for Thermo Environmental Instruments Flame Ionization Detector/PhotoIonization Detector Model TVA-1000B, Toxic Vapor Analyzer*, SOP No. WSI/S3-023, Superfund Technical Assessment and Response Team III (START), Wilmington, MA.
- [7] Weston Solutions, Inc. July 2005. *Standard Operating Procedure for Surface and Subsurface Soil Sampling*, SOP No. WSI/S3-001, Superfund Technical Assessment and Response Team III (START), Wilmington, MA.
- [8] Weston Solutions, Inc. July 2005. *Standard Operating Procedure for Sediment Sampling*, SOP No. WSI/S3-003, Superfund Technical Assessment and Response Team III (START), Wilmington, MA.
- [9] Weston Solutions, Inc. Superfund Technical Assessment and Response Team III (START). 2007. Personal Logbook for Bonnie Mace. pp. 56-57, 61-65. No. 00507-A.
- [10] U.S. Environmental Protection Agency. 2007. Office of Environmental Measurement and Evaluation, Laboratory Reports, Birch Swamp, Warren, RI.

III. Appendices

Appendix A

Figures

Site Location Map (Figure 1)
Aerial Site Map (Figure 2)
Sample Location Map (Figure 3)

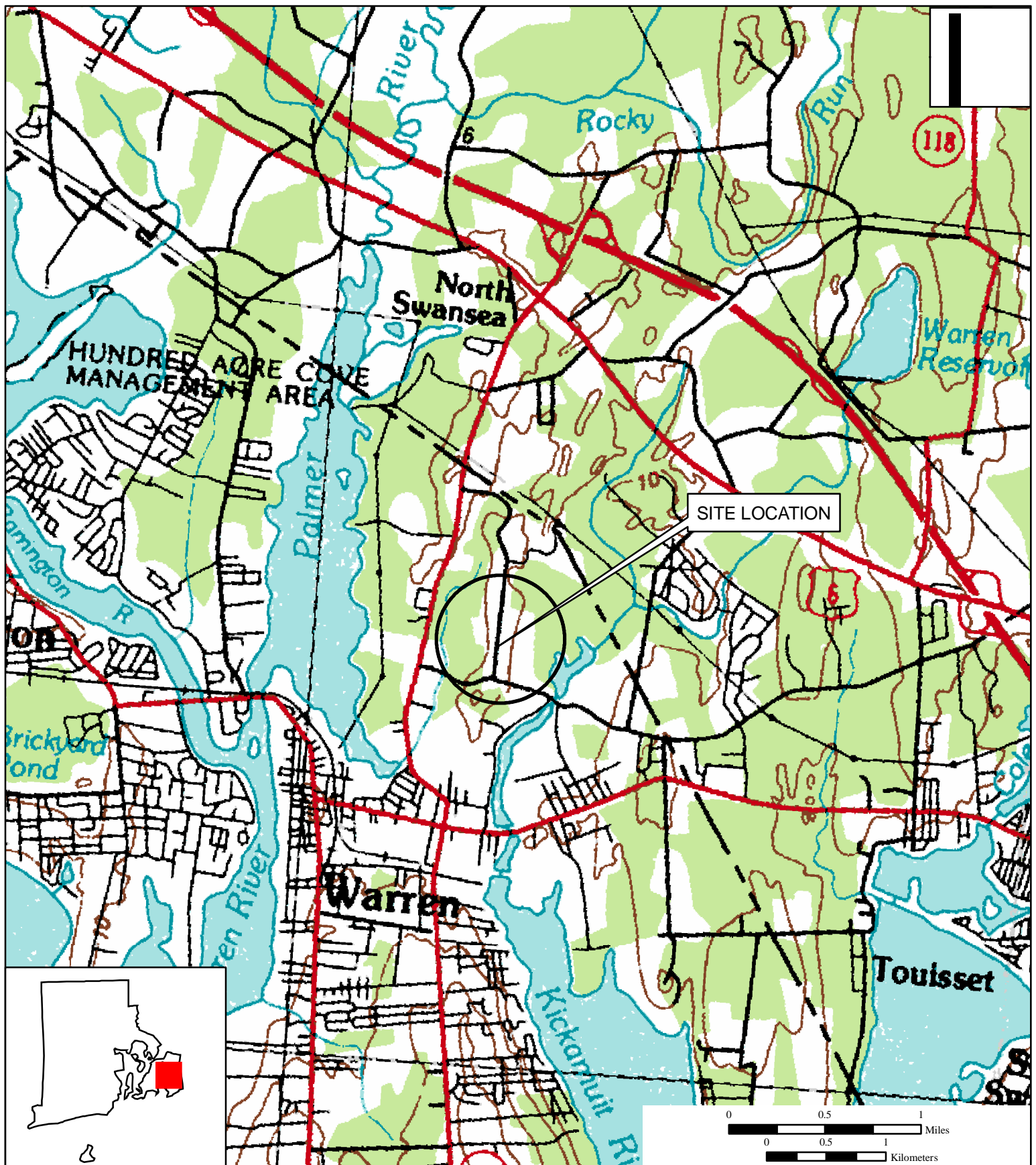


FIGURE 1

SITE LOCATION MAP

**Birch Swamp
Birch Swamp Road
Warren, Rhode Island**

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

TDD Number: 07-05-0005
Created by: B. MACE
Created on: 01 JUNE 2007
Modified by:
Modified on:

Data Sources:

Topos: MicroPath/USGS
Quadrangle Name(s): Tiverton, Rhode Island/
Massachusetts. 1975. Revised 1977
All other data: START

WESTON
SOLUTIONS
Restoring Resource Efficiency

E:\RI_gis\Birch Swamp\MXDs\Figure 1.mxd



FIGURE 2

AERIAL SITE MAP

**Birch Swamp
Birch Swamp Road
Warren, Rhode Island**

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

TDD Number: 07-05-0005

Created by: A. LYNCH

Created on: 05 July 2007

Modified by: B. MACE

Modified on: 09 July 2007

LEGEND



0 250 500
Feet

Data Sources:

Imagery: RI DOT

Topos: MicroPath

All other data: START





FIGURE 3

SAMPLE LOCATION MAP

**Birch Swamp
Birch Swamp Road
Warren, Rhode Island**

**EPA Region I
Superfund Technical Assessment and
Response Team (START) III
Contract No. EP-W-05-042**
TDD Number: 07-05-0005
Created by: B. MACE
Created on: 15 AUGUST 2007
Modified by:
Modified on:

LEGEND

- Soil Sample Locations
- Sediment Sample Locations



0 250 500
Feet

Data Sources:
Imagery: RI DOT
Topos: MicroPath
All other data: START



Appendix B

Tables

Surface Soil Sample Descriptions (Table 1)

Subsurface Soil Sample Descriptions (Table 2)

Sediment Sample Descriptions (Table 3)

Volatile Organic Compound Analytical Results (Table 4)

Semivolatile Organic Compound Analytical Results (Table 5)

Polychlorinated Biphenyl Analytical Results (Table 6)

Metals Analytical Results (Table 7)

TABLE 1

SURFACE SOIL SAMPLE DESCRIPTIONS
BIRCH SWAMP SITE
WARREN, RHODE ISLAND
11 JULY 2007

Sample Location	Sample Number	Sample Depth	Collection Date	Sample Type	Sample Description	Comments
SS-01	0299-0001	0 - 3 in.	7/11/07	Grab	Light brown, fine SAND, trace organics.	None.
SS-02	0299-0002	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace gravel and organics.	None.
SS-03	0299-0003	0 - 3 in.	7/11/07	Grab	Dark brown, coarse SAND, trace gravel, trace organics.	None.
SS-04	0299-0004	0 - 3 in.	7/11/07	Grab	Light to medium brown SAND, some coarse gravel.	Subsurface sample collected.
SS-05	0299-0005	0 - 3 in.	7/11/07	Grab	Dark brown, coarse SAND, trace gravel, trace organics.	None.
SS-06	0299-0006	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, some metal and other debris (glass).	Subsurface sample collected.
SS-07	0299-0007	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace gravel and organics, metal debris.	None.
SS-08	0299-0008	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace gravel and organics, metal debris.	None.
SS-09	0299-0009	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace gravel and organics, metal debris.	None.
SS-10	0299-0010	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace gravel and organics, metal debris.	None.
SS-11	0299-0011	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace gravel and organics.	Subsurface sample collected.
SS-12	0299-0012	0 - 3 in.	7/11/07	Grab	Dark brown, medium SAND, trace coarse gravel.	None.
SS-13	0299-0013	0 - 3 in.	7/11/07	Grab	Light brown, fine SAND, trace debris (metal, wood), trace organics.	None.
SS-14	0299-0014	0 - 3 in.	7/11/07	Grab	Light brown, fine SAND, trace to fine gravel, little debris.	None.
SS-15	0299-0015	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, some clay.	Moist.
SS-16	0299-0016	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace organics.	Subsurface sample collected.
SS-17	0299-0017	0 - 3 in.	7/11/07	Grab	Dark brown, fine SAND, trace organics.	None.
SS-18	0299-0018	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace organics.	None.
SS-19	0299-0019	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace organics.	None.
SS-20	0299-0020	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace gravel.	None.
SS-21	0299-0021	0 - 3 in.	7/11/07	Grab	Light brown, medium SAND, trace gravel.	None.
SS-22	0299-0022	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace gravel.	None.
SS-23	0299-0023	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace gravel, little broken shells.	None.
SS-24	0299-0024	0 - 3 in.	7/11/07	Grab	Medium brown, fine SAND, trace gravel.	None.

NOTES:

in. = Inches

SS = Soil Sample

TABLE 2

SUBSURFACE SOIL SAMPLE DESCRIPTIONS
BIRCH SWAMP SITE
WARREN, RHODE ISLAND
11 JULY 2007

Sample Location	Sample Number	Sample Depth (ft.)	Collection Date	Sample Type	Sample Description	Comments
SS-04	0299-0028	1	7/11/07	Grab	Light to medium brown, fine SAND, some coarse gravel.	None.
	0299-0029	2	7/11/07	Grab	Light to medium brown, fine SAND, some coarse gravel.	None.
SS-06	0299-0030	1	7/11/07	Grab	Light brown, fine SAND, some metal.	None.
	0299-0031	2	7/11/07	Grab	Dark brown, fine SAND, little coarse gravel.	None.
SS-11	0299-0032	1	7/11/07	Grab	Medium brown, fine SAND, trace organics and gravel.	None.
	0299-0033	2	7/11/07	Grab	Medium brown, fine SAND, trace organics and gravel.	None.
SS-16	0299-0034	1	7/11/07	Grab	Light brown, coarse SAND.	None.
	0299-0035	2	7/11/07	Grab	Medium brown to orange, coarse SAND.	None.

NOTES:

ft. = feet

SS = Soil Sample

TABLE 3

SEDIMENT SAMPLE DESCRIPTIONS
BIRCH SWAMP SITE
WARREN, RHODE ISLAND
11 JULY 2007

Sample Location	Sample Number	Sample Depth (in.)	Collection Date	Sample Type	Sample Description	Comments
SD-01	0299-0025	0 - 12	7/11/07	Grab	Light brown, fine SAND, trace silt.	Water color was a pale yellow, clear of particulates, no odor.
SD-02	0299-0026	0 - 12	7/11/07	Grab	Dark brown, fine SAND, trace silt.	Water color was a pale yellow, clear of particulates, no odor.
SD-03	0299-0027	0 - 12	7/11/07	Grab	Dark grey, fine SAND, trace silt, trace organics.	Water color was a pale yellow, clear of particulates, no odor.

NOTES:

in. = Inches.

SD = Sediment Sample.

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER:	SS-01 0299-0001 AA72284	SS-02 0299-0002 AA72285	SS-03 0299-0003 AA72286	SS-04 0299-0004 AA72287	SS-05 0299-0005 AA72288	SS-06 0299-0006 AA72289
COMPOUND	REPORTING LIMIT					
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND
DILUTION:	50	50	50	50	50	50
DATE SAMPLED:	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07
DATE ANALYZED:	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER:		SS-07 0299-0007 AA72290	SS-08 0299-0008 AA72291	SS-09 0299-0009 AA72292	SS-10 0299-0010 AA72293	SS-11 0299-0011 AA72294	SS-12 0299-0012 AA72295
COMPOUND	REPORTING LIMIT						
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND	ND
DILUTION:		50	50	50	50	50	50
DATE SAMPLED:		07/11/07	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:		07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07
DATE ANALYZED:		07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER:		SS-13 0299-0013 AA72296	SS-14 0299-0014 AA72297	SS-15 0299-0015 AA72298	SS-16 0299-0016 AA72299	SS-17 0299-0017 AA72300	SS-18 0299-0018 AA72301
COMPOUND	REPORTING LIMIT						
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND	ND
DILUTION:		50	50	50	50	50	50
DATE SAMPLED:		07/11/07	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:		07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07
DATE ANALYZED:		07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015/07070016
LABORATORY: OEME

SAMPLE LOCATION:	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
SAMPLE NUMBER:	0299-0019	0299-0020	0299-0021	0299-0022	0299-0023	0299-0024
LABORATORY NUMBER:	AA72302	AA72303	AA72304	AA72305	AA72306	AA72307

COMPOUND	REPORTING LIMIT						
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND	ND

DILUTION:	50	50	50	50	50	50
DATE SAMPLED:	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07
DATE ANALYZED:	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07	07/12/07

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE LOCATION: SAMPLE NUMBER: LABORATORY NUMBER:		SD-01 0299-0025 AA72308	SD-02 0299-0026 AA72309	SD-03 0299-0027 AA72310	SS-04 1' 0299-0028 AA72311	SS-04 2' 0299-0029 AA72312	SS-06 1' 0299-0030 AA72313
COMPOUND	REPORTING LIMIT						
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroetha	50	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	220	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND	ND
DILUTION:		50	50	50	50	50	50
DATE SAMPLED:		07/11/07	07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:		07/12/07	07/12/07	07/12/07	07/12/07	07/14/07	07/14/07
DATE ANALYZED:		07/12/07	07/12/07	07/12/07	07/12/07	07/14/07	07/14/07

TABLE 4

VOLATILE ORGANIC COMPOUNDS ANALYTICAL RESULTS
HIGH LEVEL METHOD
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE LOCATION:		SS-06 2'	SS-11 1'	SS-11 2'	SS-16 1'	SS-16 2'
SAMPLE NUMBER:		0299-0031	0299-0032	0299-0033	0299-0034	0299-0035
LABORATORY NUMBER:		AA72314	AA72315	AA72316	AA72317	AA72318
COMPOUND	REPORTING LIMIT					
1,1,1,2-Tetrachloroethane	50	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	50	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	50	ND	ND	ND	ND	ND
1,1,2-Trichloro-1,2,2-Trifluoroetha	50	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	50	ND	ND	ND	ND	ND
1,1-Dichloroethylene	50	ND	ND	ND	ND	ND
1,1-Dichloropropene	50	ND	ND	ND	ND	ND
1,1-dichloroethane	50	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	50	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	50	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	50	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	50	ND	ND	ND	ND	ND
1,2-Dibromo-3-Chloropropane	50	ND	ND	ND	ND	ND
1,2-Dibromoethane	50	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	50	ND	ND	ND	ND	ND
1,2-Dichloroethane	50	ND	ND	ND	ND	ND
1,2-Dichloropropane	50	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	50	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	50	ND	ND	ND	ND	ND
1,3-Dichloropropane	50	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	50	ND	ND	ND	ND	ND
2,2-Dichloropropane	50	ND	ND	ND	ND	ND
2-Butanone (MEK)	50	ND	ND	ND	ND	ND
2-Chlorotoluene	50	ND	ND	ND	ND	ND
2-Hexanone	50	ND	ND	ND	ND	ND
2-Propanone (acetone)	50	ND	ND	ND	ND	ND
4-Chlorotoluene	50	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone(MIBK)	50	ND	ND	ND	ND	ND
Acrylonitrile	50	ND	ND	ND	ND	ND
Benzene	50	ND	ND	ND	ND	ND
Bromobenzene	50	ND	ND	ND	ND	ND
Bromochloromethane	50	ND	ND	ND	ND	ND
Bromodichloromethane	50	ND	ND	ND	ND	ND
Bromoform	50	ND	ND	ND	ND	ND
Bromomethane	50	ND	ND	ND	ND	ND
c-1,3-dichloropropene	50	ND	ND	ND	ND	ND
Carbon Disulfide	50	ND	ND	ND	ND	ND
Carbon tetrachloride	50	ND	ND	ND	ND	ND
Chlorobenzene	50	ND	ND	ND	ND	ND
Chloroethane	50	ND	ND	ND	ND	ND
Chloroform	50	ND	ND	ND	ND	ND
Chloromethane	50	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND
Dibromochloromethane	50	ND	ND	ND	ND	ND
Dibromomethane	50	ND	ND	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND	ND	ND
Ethyl Ether	50	ND	ND	ND	ND	ND
Ethylbenzene	50	ND	ND	ND	ND	ND
Hexachlorobutadiene	50	ND	ND	ND	ND	ND
Isopropylbenzene	50	ND	ND	ND	ND	ND
M/P Xylene	50	ND	ND	ND	ND	ND
Methylene Chloride	50	ND	ND	ND	ND	ND
Methyl-t-Butyl Ether	50	ND	ND	ND	ND	ND
Naphthalene	50	ND	ND	ND	ND	ND
N-Butylbenzene	50	ND	ND	ND	ND	ND
N-Propylbenzene	50	ND	ND	ND	ND	ND
Ortho Xylene	50	ND	ND	ND	ND	ND
Para-Isopropyltoluene	50	ND	ND	ND	ND	ND
Sec-Butylbenzene	50	ND	ND	ND	ND	ND
Styrene	50	ND	ND	ND	ND	ND
t-1,3-Dichloropropene	50	ND	ND	ND	ND	ND
Tert-Butylbenzene	50	ND	ND	ND	ND	ND
Tetrachloroethylene	50	ND	ND	ND	ND	ND
Tetrahydrofuran	50	ND	ND	ND	ND	ND
Toluene	50	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene	50	ND	ND	ND	ND	ND
Trichloroethylene	50	ND	ND	ND	ND	ND
Trichlorofluoromethane	50	ND	ND	ND	ND	ND
Vinyl Acetate	50	ND	ND	ND	ND	ND
Vinyl Chloride	50	ND	ND	ND	ND	ND
DILUTION:		50	50	50	50	50
DATE SAMPLED:		07/11/07	07/11/07	07/11/07	07/11/07	07/11/07
DATE EXTRACTED:		07/14/07	07/14/07	07/14/07	07/14/07	07/14/07
DATE ANALYZED:		07/14/07	07/14/07	07/14/07	07/14/07	07/14/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE NUMBER:	0299-0001	0299-0002	0299-0003	0299-0004	0299-0005	0299-0006	0299-0007
SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07
LABORATORY NUMBER:	AA72284	AA72285	AA72286	AA72287	AA72288	AA72289	AA72290
COMPOUND	REPORTING LIMIT						
1,2,4,5-Tetrachlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	500	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	500	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	500	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	500	ND	ND	ND	ND	ND	ND
2-Chlorophenol	500	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2-Methylphenol	500	ND	ND	ND	ND	ND	ND
2-Nitroaniline	500	ND	ND	ND	ND	ND	ND
2-Nitrophenol	500	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1000	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	500	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	500	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Chloroaniline	500	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4-Nitrophenol	500	ND	ND	ND	ND	ND	ND
4-nitroquinoline-1-oxide	500	ND	ND	ND	ND	ND	ND
Acenaphthene	500	ND	ND	ND	ND	ND	ND
Acenaphthylene	500	ND	ND	ND	ND	ND	ND
Acetophenone	500	ND	ND	ND	ND	ND	ND
Aniline	500	ND	ND	ND	ND	ND	ND
Anthracene	500	ND	ND	ND	ND	ND	ND
Aramite	500	ND	ND	ND	ND	ND	ND
Azobenzene	500	ND	ND	ND	ND	ND	ND
Benzidine	500	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	500	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	500	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	500	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	500	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	500	ND	ND	ND	ND	ND	ND
Benzoic Acid	500	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	500	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethyl)ether	500	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	500	550	ND	920	1,100	1,700	ND
Butylbenzylphthalate	500	ND	ND	ND	ND	ND	ND
Carbazole	500	ND	ND	ND	ND	ND	ND
Chlorobenzilate	500	ND	ND	ND	ND	ND	ND
Chrysene	500	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	500	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	500	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	500	ND	ND	ND	ND	ND	ND
Dibenzofuran	500	ND	ND	ND	ND	ND	ND
Diethylphthalate	500	ND	ND	ND	ND	850	2,800
Dimethyl phthalate	500	ND	ND	ND	ND	ND	ND
Dinoseb	500	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	97	96	96	91	93	87	94
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07
DATE ANALYZED:	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE NUMBER:	0299-0001	0299-0002	0299-0003	0299-0004	0299-0005	0299-0006	0299-0007
SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07
LABORATORY NUMBER:	AA72284	AA72285	AA72286	AA72287	AA72288	AA72289	AA72290
COMPOUND	REPORTING LIMIT						
Fluoranthene	500	760	ND	ND	ND	ND	ND
Fluorene	500	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	500	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	500	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	500	ND	ND	ND	ND	ND	ND
Hexachloroethane	500	ND	ND	ND	ND	ND	ND
Hexachloropropene	500	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	ND	ND	ND	ND	ND	ND
Isodrin	500	ND	ND	ND	ND	ND	ND
Isophorone	500	ND	ND	ND	ND	ND	ND
Isosafrole	500	ND	ND	ND	ND	ND	ND
Kepone	500	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	500	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	500	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	500	ND	ND	ND	ND	ND	ND
Naphthalene	500	ND	ND	ND	ND	ND	ND
Nitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	500	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorophenol	500	ND	ND	ND	ND	ND	ND
Phenacetin	500	ND	ND	ND	ND	ND	ND
Phenanthrene	500	ND	ND	ND	ND	ND	ND
Phenol	500	ND	ND	ND	ND	ND	ND
Pyrene	500	630	ND	ND	ND	ND	ND
Pyridine	500	ND	ND	ND	ND	ND	ND
Safrole	500	ND	ND	ND	ND	ND	ND
bis(-2-Chloroethoxy)methane	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	97	96	96	91	93	87	94
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07
DATE ANALYZED:	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07	7/17/07

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).
ND = Not Detected.

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE NUMBER:	0299-0008	0299-0009	0299-0010	0299-0011	0299-0012	0299-0013	0299-0014
SAMPLE LOCATION:	SS-08	SS-09	SS-10	SS-11	SS-12	SS-13	SS-14
LABORATORY NUMBER:	AA72291	AA72292	AA72293	AA72294	AA72295	AA72296	AA72297
COMPOUND	REPORTING LIMIT						
1,2,4,5-Tetrachlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	500	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	500	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	500	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	500	ND	ND	ND	ND	ND	ND
2-Chlorophenol	500	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2-Methylphenol	500	ND	ND	ND	ND	ND	ND
2-Nitroaniline	500	ND	ND	ND	ND	ND	ND
2-Nitrophenol	500	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1000	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	500	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	500	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Chloroaniline	500	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4-Nitrophenol	500	ND	ND	ND	ND	ND	ND
4-nitroquinoline-1-oxide	500	ND	ND	ND	ND	ND	ND
Acenaphthene	500	ND	ND	ND	ND	ND	ND
Acenaphthylene	500	ND	ND	ND	ND	ND	ND
Acetophenone	500	ND	ND	ND	ND	ND	ND
Aniline	500	ND	ND	ND	ND	ND	ND
Anthracene	500	ND	ND	ND	ND	ND	ND
Aramite	500	ND	ND	ND	ND	ND	ND
Azobenzene	500	ND	ND	ND	ND	ND	ND
Benzidine	500	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	500	910	ND	ND	ND	ND	ND
Benzo(a)pyrene	500	750	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	500	1,000	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	500	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	500	690	ND	ND	ND	ND	ND
Benzoic Acid	500	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	500	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethyl)ether	500	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	500	1,300	1,200	1,400	ND	ND	870
Butylbenzylphthalate	500	ND	ND	ND	ND	ND	ND
Carbazole	500	ND	ND	ND	ND	ND	ND
Chlorobenzilate	500	ND	ND	ND	ND	ND	ND
Chrysene	500	1,000	ND	ND	ND	ND	ND
Di-n-butylphthalate	500	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	500	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	500	ND	ND	ND	ND	ND	ND
Dibenzofuran	500	ND	ND	ND	ND	ND	ND
Diethylphthalate	500	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	500	ND	ND	ND	ND	ND	ND
Dinoseb	500	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	89	88	94	80	86	86	91
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07
DATE ANALYZED:	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE NUMBER:	0299-0008	0299-0009	0299-0010	0299-0011	0299-0012	0299-0013	0299-0014
SAMPLE LOCATION:	SS-08	SS-09	SS-10	SS-11	SS-12	SS-13	SS-14
LABORATORY NUMBER:	AA72291	AA72292	AA72293	AA72294	AA72295	AA72296	AA72297
COMPOUND	REPORTING LIMIT						
Fluoranthene	500	2,600	ND	ND	ND	ND	ND
Fluorene	500	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	500	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	500	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	500	ND	ND	ND	ND	ND	ND
Hexachloroethane	500	ND	ND	ND	ND	ND	ND
Hexachloropropene	500	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	ND	ND	ND	ND	ND	ND
Isodrin	500	ND	ND	ND	ND	ND	ND
Isophorone	500	620	ND	ND	ND	ND	ND
Isosafrole	500	ND	ND	ND	ND	ND	ND
Kepone	500	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	500	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	500	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	500	ND	ND	ND	ND	ND	ND
Naphthalene	500	ND	ND	ND	ND	ND	ND
Nitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	500	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorophenol	500	ND	ND	ND	ND	ND	ND
Phenacetin	500	ND	ND	ND	ND	ND	ND
Phenanthrene	500	1,900	ND	ND	ND	ND	ND
Phenol	500	ND	ND	ND	ND	ND	ND
Pyrene	500	1,800	ND	ND	ND	ND	ND
Pyridine	500	ND	ND	ND	ND	ND	ND
Safrole	500	ND	ND	ND	ND	ND	ND
bis(-2-Chloroethoxy)methane	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	89	88	94	80	86	86	91
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07
DATE ANALYZED:	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).
ND = Not Detected.

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015/07070016
LABORATORY: OEME

SAMPLE NUMBER:	0299-0015	0299-0016	0299-0017	0299-0018	0299-0019	0299-0020	0299-0021
SAMPLE LOCATION:	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21
LABORATORY NUMBER:	AA72298	AA72299	AA72300	AA72301	AA72302	AA72303	AA72304
COMPOUND	REPORTING LIMIT						
1,2,4,5-Tetrachlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	500	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	500	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	500	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	500	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	500	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	500	ND	ND	ND	ND	ND	ND
2-Chlorophenol	500	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND
2-Methylphenol	500	ND	ND	ND	ND	ND	ND
2-Nitroaniline	500	ND	ND	ND	ND	ND	ND
2-Nitrophenol	500	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1000	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	500	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	500	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	500	ND	ND	ND	ND	ND	ND
4-Chloroaniline	500	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	500	ND	ND	ND	ND	ND	ND
4-Nitroaniline	500	ND	ND	ND	ND	ND	ND
4-Nitrophenol	500	ND	ND	ND	ND	ND	ND
4-nitroquinoline-1-oxide	500	ND	ND	ND	ND	ND	ND
Acenaphthene	500	ND	ND	ND	ND	ND	ND
Acenaphthylene	500	ND	ND	ND	ND	ND	ND
Acetophenone	500	ND	ND	ND	ND	ND	ND
Aniline	500	ND	ND	ND	ND	ND	ND
Anthracene	500	ND	ND	ND	ND	ND	ND
Aramite	500	ND	ND	ND	ND	ND	ND
Azobenzene	500	ND	ND	ND	ND	ND	ND
Benzidine	500	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	500	ND	ND	ND	ND	1,300	ND
Benzo(a)pyrene	500	ND	ND	ND	ND	1,200	ND
Benzo(b)fluoranthene	500	ND	ND	ND	ND	1,700	ND
Benzo(g,h,i)perylene	500	ND	ND	ND	ND	1,300	ND
Benzo(k)fluoranthene	500	ND	ND	ND	ND	ND	ND
Benzoic Acid	500	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	500	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethyl)ether	500	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	500	ND	ND	ND	ND	1,600	ND
Butylbenzylphthalate	500	ND	ND	ND	ND	ND	ND
Carbazole	500	ND	ND	ND	ND	ND	ND
Chlorobenzilate	500	ND	ND	ND	ND	ND	ND
Chrysene	500	ND	ND	ND	ND	1,600	ND
Di-n-butylphthalate	500	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	500	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	500	ND	ND	ND	ND	ND	ND
Dibenzofuran	500	ND	ND	ND	ND	ND	ND
Diethylphthalate	500	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	500	ND	ND	ND	ND	ND	ND
Dinoseb	500	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	74	86	78	81	90	97	91
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/18/07	7/18/07
DATE ANALYZED:	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/23/07	7/23/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070015/07070016
LABORATORY: OEME

SAMPLE NUMBER:		0299-0015	0299-0016	0299-0017	0299-0018	0299-0019	0299-0020	0299-0021
SAMPLE LOCATION:		SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21
LABORATORY NUMBER:		AA72298	AA72299	AA72300	AA72301	AA72302	AA72303	AA72304
COMPOUND	REPORTING LIMIT							
Fluoranthene	500	ND	ND	ND	ND	ND	2,900	ND
Fluorene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	500	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	500	ND	ND	ND	ND	ND	ND	ND
Hexachloropropene	500	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	ND	ND	ND	ND	ND	1,500	ND
Isodrin	500	ND	ND	ND	ND	ND	ND	ND
Isophorone	500	ND	ND	ND	ND	ND	ND	ND
Isosafrole	500	ND	ND	ND	ND	ND	ND	ND
Kepone	500	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	500	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	500	ND	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	500	ND	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	500	ND	ND	ND	ND	ND	ND	ND
Naphthalene	500	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	500	ND	ND	ND	ND	ND	ND	ND
Phenacetin	500	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	500	ND	ND	ND	ND	ND	1,400	ND
Phenol	500	ND	ND	ND	ND	ND	ND	ND
Pyrene	500	ND	ND	ND	ND	ND	2,500	ND
Pyridine	500	ND	ND	ND	ND	ND	ND	ND
Safrole	500	ND	ND	ND	ND	ND	ND	ND
bis(-2-Chloroethoxy)methane	500	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:		1	1	1	1	1	1	1
PERCENT SOLIDS:		74	86	78	81	90	97	91
DATE SAMPLED:		7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:		7/16/07	7/16/07	7/16/07	7/16/07	7/16/07	7/18/07	7/18/07
DATE ANALYZED:		7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/23/07	7/23/07

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).
ND = Not Detected.

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE NUMBER:	0299-0022	0299-0023	0299-0024	0299-0025	0299-0026	0299-0027	0299-0028
SAMPLE LOCATION:	SS-22	SS-23	SS-24	SD-01	SD-02	SD-03	SS-04 1'
LABORATORY NUMBER:	AA72305	AA72306	AA72307	AA72308	AA72309	AA72310	AA72311

COMPOUND	REPORTING LIMIT							
1,2,4,5-Tetrachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	500	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	500	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	500	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	500	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	500	ND	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1000	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	500	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	500	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	500	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	500	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	500	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	500	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	500	ND	ND	ND	ND	ND	ND	ND
4-nitroquinoline-1-oxide	500	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	500	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	500	ND	ND	ND	ND	ND	ND	ND
Acetophenone	500	ND	ND	ND	ND	ND	ND	ND
Aniline	500	ND	ND	ND	ND	ND	ND	ND
Anthracene	500	ND	ND	ND	ND	ND	ND	ND
Aramite	500	ND	ND	ND	ND	ND	ND	ND
Azobenzene	500	ND	ND	ND	ND	ND	ND	ND
Benzidine	500	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	500	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	500	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	500	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	500	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	500	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	500	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	500	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethyl)ether	500	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	500	ND	ND	ND	ND	ND	ND	ND
Butylbenzylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Carbazole	500	ND	ND	ND	ND	ND	ND	ND
Chlorobenzilate	500	ND	ND	ND	ND	ND	ND	ND
Chrysene	500	ND	ND	ND	ND	ND	ND	ND
Di-n-butylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	500	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	500	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	500	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	500	ND	ND	ND	ND	ND	ND	ND
Dinoseb	500	ND	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	500	ND	ND	ND	ND	ND	ND	ND

DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	92	57	90	84	67	62	96
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07
DATE ANALYZED:	7/24/07	7/24/07	7/23/07	7/23/07	7/23/07	7/23/07	7/24/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE NUMBER:	0299-0022	0299-0023	0299-0024	0299-0025	0299-0026	0299-0027	0299-0028
SAMPLE LOCATION:	SS-22	SS-23	SS-24	SD-01	SD-02	SD-03	SS-04 1'
LABORATORY NUMBER:	AA72305	AA72306	AA72307	AA72308	AA72309	AA72310	AA72311
COMPOUND	REPORTING LIMIT						
Fluoranthene	500	900	ND	ND	ND	ND	ND
Fluorene	500	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	500	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	500	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	500	ND	ND	ND	ND	ND	ND
Hexachloroethane	500	ND	ND	ND	ND	ND	ND
Hexachloropropene	500	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	ND	ND	ND	ND	ND	ND
Isodrin	500	ND	ND	ND	ND	ND	ND
Isophorone	500	ND	ND	ND	ND	ND	ND
Isosafrole	500	ND	ND	ND	ND	ND	ND
Kepone	500	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	500	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	500	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	500	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	500	ND	ND	ND	ND	ND	ND
Naphthalene	500	ND	ND	ND	ND	ND	ND
Nitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	500	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	500	ND	ND	ND	ND	ND	ND
Pentachlorophenol	500	ND	ND	ND	ND	ND	ND
Phenacetin	500	ND	ND	ND	ND	ND	ND
Phenanthrene	500	ND	ND	ND	ND	ND	ND
Phenol	500	ND	ND	ND	ND	ND	ND
Pyrene	500	800	ND	ND	ND	ND	ND
Pyridine	500	ND	ND	ND	ND	ND	ND
Safrole	500	ND	ND	ND	ND	ND	ND
bis(-2-Chloroethoxy)methane	500	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	92	57	90	84	67	62	96
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07
DATE ANALYZED:	7/24/07	7/24/07	7/23/07	7/23/07	7/23/07	7/23/07	7/24/07

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).
ND = Not Detected.

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE NUMBER:	0299-0029	0299-0030	0299-0031	0299-0032	0299-0033	0299-0034	0299-0035
SAMPLE LOCATION:	SS-04 2'	SS-06 1'	SS-06 2'	SD-11 1'	SD-11 2'	SS-16 1'	SS-16 2'
LABORATORY NUMBER:	AA72312	AA72313	AA72314	AA72315	AA72316	AA72317	AA72318

COMPOUND	REPORTING LIMIT							
1,2,4,5-Tetrachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	500	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2,2'-oxybis(1-Chloropropane)	500	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	500	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND	ND
2,4-dimethylphenol	500	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	500	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	500	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	500	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	500	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	500	ND	ND	ND	ND	ND	ND	ND
3&4-Methylphenol	1000	ND	ND	ND	ND	ND	ND	ND
3,3'-Dichlorobenzidine	500	ND	ND	ND	ND	ND	ND	ND
3-Methylcholanthrene	500	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-methylphenol	500	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl-phenylether	500	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	500	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	500	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	500	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	500	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	500	ND	ND	ND	ND	ND	ND	ND
4-nitroquinoline-1-oxide	500	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	500	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	500	ND	ND	ND	ND	ND	ND	ND
Acetophenone	500	ND	ND	ND	ND	ND	ND	ND
Aniline	500	ND	ND	ND	ND	ND	ND	ND
Anthracene	500	ND	ND	ND	ND	ND	ND	ND
Aramite	500	ND	ND	ND	ND	ND	ND	ND
Azobenzene	500	ND	ND	ND	ND	ND	ND	ND
Benzidine	500	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	500	ND	ND	1,600	ND	ND	ND	ND
Benzo(a)pyrene	500	ND	ND	2,100	ND	ND	ND	ND
Benzo(b)fluoranthene	500	ND	ND	4,200	ND	ND	ND	ND
Benzo(g,h,i)perylene	500	ND	ND	2,200	ND	ND	ND	ND
Benzo(k)fluoranthene	500	ND	ND	ND	ND	ND	ND	ND
Benzoic Acid	500	ND	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	500	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethyl)ether	500	ND	ND	ND	ND	ND	ND	ND
bis(2-Ethylhexyl)phthalate	500	ND	ND	ND	810	ND	ND	ND
Butylbenzylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Carbazole	500	ND	ND	ND	ND	ND	ND	ND
Chlorobenzilate	500	ND	ND	ND	ND	ND	ND	ND
Chrysene	500	ND	ND	3,200	ND	ND	ND	ND
Di-n-butylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Di-n-octyl phthalate	500	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	500	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	500	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	500	ND	ND	ND	ND	ND	ND	ND
Dimethyl phthalate	500	ND	ND	ND	ND	ND	ND	ND
Dinoseb	500	ND	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	500	ND	ND	ND	ND	ND	ND	ND

DILUTION FACTOR:	1	1	1	1	1	1	1
PERCENT SOLIDS:	95	93	78	78	84	95	93
DATE SAMPLED:	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:	7/18/07	7/23/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07
DATE ANALYZED:	7/23/07	7/23/07	7/24/07	7/24/07	7/24/07	7/20/07	7/23/07

TABLE 5

SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
(micrograms/Kilogram)

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE NUMBER:		0299-0029	0299-0030	0299-0031	0299-0032	0299-0033	0299-0034	0299-0035
SAMPLE LOCATION:		SS-04 2'	SS-06 1'	SS-06 2'	SD-11 1'	SD-11 2'	SS-16 1'	SS-16 2'
LABORATORY NUMBER:		AA72312	AA72313	AA72314	AA72315	AA72316	AA72317	AA72318
COMPOUND	REPORTING LIMIT							
Fluoranthene	500	ND	ND	5,700	ND	ND	ND	ND
Fluorene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene	500	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	500	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	500	ND	ND	ND	ND	ND	ND	ND
Hexachloropropene	500	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	500	ND	ND	2,800	ND	ND	ND	ND
Isodrin	500	ND	ND	ND	ND	ND	ND	ND
Isophorone	500	ND	ND	ND	ND	ND	ND	ND
Isosafrole	500	ND	ND	ND	ND	ND	ND	ND
Kepone	500	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	500	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine	500	ND	ND	ND	ND	ND	ND	ND
N-nitroso-di-n-propylamine	500	ND	ND	ND	ND	ND	ND	ND
N-nitrosodimethylamine	500	ND	ND	ND	ND	ND	ND	ND
Naphthalene	500	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachloronitrobenzene	500	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	500	ND	ND	ND	ND	ND	ND	ND
Phenacetin	500	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	500	ND	ND	4,100	ND	ND	ND	ND
Phenol	500	ND	ND	ND	ND	ND	ND	ND
Pyrene	500	ND	ND	4,600	ND	ND	ND	ND
Pyridine	500	ND	ND	ND	ND	ND	ND	ND
Safrole	500	ND	ND	1,600	ND	ND	ND	ND
bis(-2-Chloroethoxy)methane	500	ND	ND	ND	ND	ND	ND	ND
DILUTION FACTOR:		1	1	1	1	1	1	1
PERCENT SOLIDS:		95	93	78	78	84	95	93
DATE SAMPLED:		7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07	7/11/07
DATE EXTRACTED:		7/18/07	7/23/07	7/18/07	7/18/07	7/18/07	7/18/07	7/18/07
DATE ANALYZED:		7/23/07	7/23/07	7/24/07	7/24/07	7/24/07	7/20/07	7/23/07

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).
ND = Not Detected.

TABLE 6
POLYCHLORINATED BIPHENYL ANALYTICAL RESULTS
mg/kg

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07
SAMPLE NUMBER:	0299-0001	0299-0002	0299-0003	0299-0004	0299-0005	0299-0006	0299-0007
LABORATORY NUMBER:	AA72284	AA72285	AA72286	AA72287	AA72288	AA72289	AA72290

COMPOUND RL

Aroclor-1242	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.20	ND	ND	ND	59	ND	ND
Aroclor-1254	0.20	28	0.31	1.9	36	1.3	0.7
Aroclor-1260	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1262	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.20	ND	ND	ND	ND	ND	ND

DATE SAMPLED:	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007
DATE EXTRACTED:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007
DATE ANALYZED:	7/16/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007

SAMPLE LOCATION:	SS-08	SS-09	SS-10	SS-11	SS-12	SS-13	SS-14
SAMPLE NUMBER:	0299-0008	0299-0009	0299-0010	0299-0011	0299-0012	0299-0013	0299-0014
LABORATORY NUMBER:	AA72291	AA72292	AA72293	AA72294	AA72295	AA72296	AA72297

COMPOUND RL

Aroclor-1242	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.20	18	ND	ND	ND	ND	12
Aroclor-1254	0.20	ND	3.9	0.83	1.1	0.64	4.4
Aroclor-1260	0.20	ND	ND	0.44	0.55	0.64	ND
Aroclor-1262	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.20	ND	ND	ND	ND	ND	ND

DATE SAMPLED:	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007
DATE EXTRACTED:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007
DATE ANALYZED:	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

ND = Not Detected

RL = Reporting Limit

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).

TABLE 6
POLYCHLORINATED BIPHENYL ANALYTICAL RESULTS
mg/kg

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION:	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	SS-21
SAMPLE NUMBER:	0299-0015	0299-0016	0299-0017	0299-0018	0299-0019	0299-0020	0299-0021
LABORATORY NUMBER:	AA72298	AA72299	AA72300	AA72301	AA72302	AA72303	AA72304

COMPOUND RL

Aroclor-1242	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1260	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1262	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.20	ND	ND	ND	ND	ND	ND

DATE SAMPLED:	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007
DATE EXTRACTED:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007
DATE ANALYZED:	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/18/2007	7/16/2007	7/16/2007

SAMPLE LOCATION:	SS-22	SS-23	SS-24	SS-04 1'	SS-04 2'	SS-06 1'	SS-06 2'
SAMPLE NUMBER:	0299-022	0299-0023	0299-0024	0299-0028	0299-0029	0299-0030	0299-0031
LABORATORY NUMBER:	AA72305	AA72306	AA72307	AA72311	AA72312	AA72313	AA72314

COMPOUND RL

Aroclor-1242	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.20	ND	ND	ND	0.41	2.7	ND
Aroclor-1254	0.20	ND	ND	0.64	ND	ND	ND
Aroclor-1260	0.20	ND	ND	0.48	ND	ND	ND
Aroclor-1262	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.20	ND	ND	ND	ND	ND	ND

DATE SAMPLED:	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007
DATE EXTRACTED:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007
DATE ANALYZED:	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

ND = Not Detected

RL = Reporting Limit

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).

TABLE 6
POLYCHLORINATED BIPHENYL ANALYTICAL RESULTS
mg/kg

SITE: Birch Swamp
CASE: 07070016
LABORATORY: OEME

SAMPLE LOCATION:	SS-11 1'	SS-11 2'	SS-16 1'	SS-16 2'	SD-01	SD-02	SD-03
SAMPLE NUMBER:	0299-0032	0299-0033	0299-0034	0299-0035	0299-0025	0299-0026	0299-0027
LABORATORY NUMBER:	AA72315	AA72316	AA72317	AA72318	AA72308	AA72309	AA72310
COMPOUND	RL						
Aroclor-1242	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1248	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1254	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1260	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1262	0.20	ND	ND	ND	ND	ND	ND
Aroclor-1268	0.20	ND	ND	ND	ND	ND	ND
DATE SAMPLED:	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007	7/11/2007
DATE EXTRACTED:	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007	7/13/2007
DATE ANALYZED:	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007	7/16/2007

NOTE: RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

ND = Not Detected

RL = Reporting Limit

NOTE: Bolded and Shaded results exceed Rhode Island Residential Direct Exposure Criteria (RI-R-DEC).

TABLE 7
METALS ANALYTICAL RESULTS
(milligrams/kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION:	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	
SAMPLE NUMBER:	0299-0001	0299-0002	0299-0003	0299-0004	0299-0005	0299-0006	0299-0007	0299-0008	0299-0009	0299-0010	RI-R-DEC
LABORATORY NUMBER:	AA72284	AA72285	AA72286	AA72287	AA72288	AA72289	AA72290	AA72291	AA72292	AA792293	
SAMPLE DEPTH:	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	
DILUTION FACTOR:	1	1	1	1	2	1	2	10	1	1	

INORGANIC ANALYTES		REPORTING METHOD		LIMIT											
Aluminum	ICP	40/20*	4,600	5,900	3,800	9,600	8,600	7,600	6,000	4,000	6,200	7,800	NL		
Antimony	ICP	10	ND	22	35	41	73	28	ND	ND	12	ND	10		
Arsenic	ICP	20	ND	ND	ND	24	ND	110	ND	ND	ND	ND	7		
Barium	ICP	3	70	220	260	170	820	1,900	220	700	110	46	5,500		
Beryllium	ICP	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4		
Cadmium	ICP	3	3.7	31	29	25	54	24	63	60	45	17	39		
Calcium	ICP	20	1,400	2,300	1,300	1,700	8,000	47,000	1,200	1,500	2,300	1,000	NL		
Chromium	ICP	3	45	49	70	32	67	64	39	75	39	22	1,400		
Cobalt	ICP	3	3.7	14	5.9	10	12	23	6.8	ND	7.2	10	NL		
Copper	ICP	3	300	1,500	5,400	1,700	8,900	2,800	260	1,400	5,300	230	3,100		
Iron	ICP	10	26,000	27,000	42,000	44,000	84,000	40,000	65,000	220,000	41,000	41,000	NL		
Lead	ICP	10	360	790	1,400	660	7,000	3,200	340	1,200	580	220	150		
Magnesium	ICP	20	1,500	2,000	1,200	3,200	2,400	2,900	1,800	1,300	2,000	2,400	NL		
Manganese	ICP	2	260	1,100	280	410	970	4,800	450	1,300	350	420	390		
Nickel	ICP	6	20	310	38	42	96	50	27	120	37	84	1,000		
Selenium	ICP	10/20*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	390		
Silver	ICP	3	ND	5.7	13	ND	29	4.0	ND	ND	4.5	ND	200		
Thallium	ICP	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5		
Vanadium	ICP	3	12	14	12	20	47	22	18	ND	15	16	550		
Zinc	ICP	3	390	2,000	780	1,400	2,700	6,000	590	3,500	1,100	260	6,000		

SAMPLE LOCATION:	SS-11	SS-12	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18	SS-19	SS-20	
SAMPLE NUMBER:	0299-0011	0299-0012	0299-0013	0299-0014	0299-0015	0299-0016	0299-0017	0299-0018	0299-0019	0299-0020	RI-R-DEC
LABORATORY NUMBER:	AA72294	AA72295	AA72296	AA72297	AA72298	AA72299	AA72300	AA72301	AA72302	AA72303	
SAMPLE DEPTH:	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	0-0.5 ft.	
DILUTION FACTOR:	2	1	1	1	1	1	1	1	1	1	

INORGANIC ANALYTES		REPORTING METHOD		LIMIT											
Aluminum	ICP	40/20*	13,000	11,000	4,400	7,400	12,000	7,700	9,300	8,200	6,900	3,100*	NL		
Antimony	ICP	9.8	42	19	ND	130	ND	ND	ND	19	ND	ND	10		
Arsenic	ICP	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7		
Barium	ICP	2.9	420	280	1,900	190	44	16	20	140	52	36	5,500		
Beryllium	ICP	0.98	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4		
Cadmium	ICP	2.9	39	17	7.4	15	ND	ND	ND	ND	ND	ND	39		
Calcium	ICP	20	4,400	4,300	9,700	3,700	1,400	650	700	1,100	510	2,800	NL		
Chromium	ICP	2.9	130	55	56	30	16	7.1	6.9	13	10	25	1,400		
Cobalt	ICP	2.9	24	14	9.4	5.7	8.1	ND	ND	5.5	3.1	ND	NL		
Copper	ICP	2.9	2,900	830	260	6,400	32	5.1	7.6	650	60	47	3,100		
Iron	ICP	9.8	81,000	42,000	24,000	26,000	18,000	6,400	5,500	9,500	12,000	14,000	NL		
Lead	ICP	9.8	2,500	1,000	2,700	4,400	44	21	36	840	340	160	150		
Magnesium	ICP	20	3,100	3,000	1,800	1,500	1,000	1,000	690	1,000	730	1,100	NL		
Manganese	ICP	2	740	510	400	250	520	170	85	170	180	140	390		
Nickel	ICP	5.9	100	43	18	29	9.8	ND	ND	20	11	11	1,000		
Selenium	ICP	10/20*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND*	390		
Silver	ICP	2.9	10	ND	ND	11	ND	ND	ND	ND	ND	ND	200		
Thallium	ICP	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5		
Vanadium	ICP	2.9	39	25	14	11	29	13	14	65	17	11	550		
Zinc	ICP	2.9	4,300	2,100	1,400	1,200	58	18	38	1,700	200	97	6,000		

NOTES:
ICP = Inductively Coupled
RI-R-DEC = Rhode Island Residential Direct Exposure Criteria.
ND = Not Detected.
NL = Not Listed.
All results in Milligrams per Kilogram (mg/Kg).
Bolded and shaded results exceed RI-R-DEC.
* Indicates Reporting Limit used to determine results.

TABLE 7

METALS ANALYTICAL RESULTS
(milligrams/kilogram)

SITE: Birch Swamp
CASE: 07070015
LABORATORY: OEME

SAMPLE LOCATION:	SS-21	SS-22	SS-23	SS-24	SD-01	SD-02	SD-03	SS-04 1'	SS-04 2'	SS-06 1'	
SAMPLE NUMBER:	0299-0021	0299-0022	0299-0023	0299-0024	0299-0025	0299-0026	0299-0027	0299-0028	0299-0029	0299-0030	RI-R-DEC
LABORATORY NUMBER:	AA72304	AA72305	AA72306	AA72307	AA72308	AA72309	AA72310	AA72311	AA72312	AA72313	
SAMPLE DEPTH:	0 - 0.5 ft.	0-0.5 ft.	0 - 0.5 ft.	0-0.5 ft.	0 - 0.5 ft.	0 - 0.5 ft.	0-0.5 ft.	1 ft.	2 ft.	1 ft.	
DILUTION FACTOR:	1	1	1	1	1	1	1	1	1	1	

INORGANIC ANALYTES		REPORTING METHOD	REPORTING LIMIT											
Aluminum	ICP	40/20*	7,200*	3,900*	9,700*	11,000*	3,900*	5,700*	9,600*	12,000*	12,000*	8,600*	NL	
Antimony	ICP	10	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	10	
Arsenic	ICP	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	
Barium	ICP	3	27	26	300	190	20	25	42	40	61	410	5,500	
Beryllium	ICP	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	
Cadmium	ICP	3	ND	ND	ND	13	ND	ND	ND	ND	3.3	7.8	39	
Calcium	ICP	20	1,800	85,000	31,000	3,400	720	1,400	880	640	870	1,200	NL	
Chromium	ICP	3	6.2	12	22	38	4.0	7.2	12	19	28	40	1,400	
Cobalt	ICP	3	ND	ND	6.3	12	ND	3.4	3.2	12	12	6.3	NL	
Copper	ICP	3	6.1	30	86	460	ND	ND	4.0	69	250	210	3,100	
Iron	ICP	10	7,500	8,500	41,000	36,000	2,900	7,900	6,400	29,000	27,000	16,000	NL	
Lead	ICP	10	26	120	960	650	ND	11	ND	28	84	250	150	
Magnesium	ICP	20	860	1,100	1,500	3,600	590	1,000	900	4,300	4,400	2,200	NL	
Manganese	ICP	2	130	140	270	420	64	120	82	370	420	240	390	
Nickel	ICP	6	ND	7.2	20	42	ND	ND	ND	20	24	17	1,000	
Selenium	ICP	10/20*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	ND*	390	
Silver	ICP	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.4	200	
Thallium	ICP	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.5	
Vanadium	ICP	3	15	10	26	19	5.8	13	15	19	23	17	550	
Zinc	ICP	3	23	69	370	1,800	5.7	16	11	94	240	440	6,000	

SAMPLE LOCATION:	SS-06 2'	SS-11 1'	SS-11 2'	SS-16 1'	SS-16 2'	
SAMPLE NUMBER:	0299-0031	0299-0032	0299-0033	0299-0034	0299-0035	RI-R-DEC
LABORATORY NUMBER:	AA72314	AA72315	AA72316	AA72317	AA72318	
SAMPLE DEPTH:	2 ft.	1 ft.	2 ft.	1 ft.	2 ft.	
DILUTION FACTOR:	1	1	1	1	1	

INORGANIC ANALYTES		REPORTING METHOD	REPORTING LIMIT											
Aluminum	ICP	40/20*	6,800*	8,300*	11,000*	4,600*	3,600*	NL						
Antimony	ICP	9.8	ND	ND	ND	ND	ND	10						
Arsenic	ICP	20	ND	ND	ND	ND	ND	7						
Barium	ICP	2.9	74	63	260	9.1	8.8	5,500						
Beryllium	ICP	0.98	ND	ND	ND	ND	ND	0.4						
Cadmium	ICP	2.9	ND	ND	ND	ND	ND	39						
Calcium	ICP	20	1,300	2,500	890	470	480	NL						
Chromium	ICP	2.9	16	6.3	8.1	4.7	5.3	1,400						
Cobalt	ICP	2.9	5.3	ND	ND	ND	ND	NL						
Copper	ICP	2.9	36	51	9.8	ND	ND	3,100						
Iron	ICP	9.8	11,000	8,000	7,900	5,000	5,800	NL						
Lead	ICP	9.8	76	84	15	ND	ND	150						
Magnesium	ICP	20	940	450	800	880	900	NL						
Manganese	ICP	2	210	45	62	120	87	390						
Nickel	ICP	5.9	100	ND	ND	ND	ND	1,000						
Selenium	ICP	10/20*	ND*	ND*	ND*	ND*	ND*	390						
Silver	ICP	2.9	ND	ND	ND	ND	ND	200						
Thallium	ICP	20	ND	ND	ND	ND	ND	5.5						
Vanadium	ICP	2.9	16	15	16	7.0	7.2	550						
Zinc	ICP	2.9	120	240	38	9.9	9.0	6,000						

NOTES:

ICP = Inductively Coupled

RI-R-DEC = Rhode Island Residential Direct Exposure (Criteria).

ND = Not Detected.

NL = Not Listed.

All results in Milligrams per Kilogram (mg/Kg).

Bolded and shaded results exceed RI-R-DEC.

* Indicates Reporting Limit used to determine results.

Appendix C

Chain-of-Custody Record

Charge Stenlin

Sampler Signatures:

Weston Solutions, Inc. (START III)
3 Riverside Drive Andover, MA 01810
EPA Contract Number: EP-W-05-042

CHAIN OF CUSTODY RECORD

Site #: 0299

Contact Name: Bonnie Mace
Contact Phone: 978-552-2131

No: 0299-07/11/07-0001

Lab: EPA OEME

Lab Contact: Doris Guzman

Lab Phone: 617-918-8490

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont.	Container	Preservative	Sample Time	Depth	Depth_to	Depth Units	MS/MSD
	0299-0001	SS-01	Metals	Soil	7/11/2007	1	4 oz jar	4 C	13:48	0	6	inches	N
	0299-0001	SS-01	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	13:48	0	6	inches	N
	0299-0001	SS-01	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	13:48	0	6	inches	N
	0299-0002	SS-02	Metals	Soil	7/11/2007	1	4 oz jar	4 C	13:45	0	6	inches	N
	0299-0002	SS-02	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	13:45	0	6	inches	N
	0299-0002	SS-02	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	13:45	0	6	inches	N
	0299-0003	SS-03	Metals	Soil	7/11/2007	1	4 oz jar	4 C	13:45	0	6	inches	N
	0299-0003	SS-03	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	13:45	0	6	inches	N
	0299-0003	SS-03	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	13:45	0	6	inches	N
	0299-0004	SS-04	Metals	Soil	7/11/2007	1	4 oz jar	4 C	13:55	0	6	inches	N
	0299-0004	SS-04	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	13:55	0	6	inches	N
	0299-0004	SS-04	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	13:55	0	6	inches	N
	0299-0005	SS-05	Metals	Soil	7/11/2007	1	4 oz jar	4 C	13:50	0	6	inches	N
	0299-0005	SS-05	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	13:50	0	6	inches	N
	0299-0005	SS-05	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	13:50	0	6	inches	N
	0299-0006	SS-06	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:15	0	6	inches	N
	0299-0006	SS-06	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:15	0	6	inches	N
	0299-0006	SS-06	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:15	0	6	inches	N
	0299-0007	SS-07	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:05	0	6	inches	N

SAMPLES TRANSFERRED FROM

Special Instructions: Please fax results to QSC Mia Pasquerella (Fax No. 617-918-0120), Email - pasquerella.mia@epa.gov.

[illegible]

CHAIN OF CUSTODY RECORD

Site #: 0299
Contact Name: Bonnie Mace
Contact Phone: 978-552-2131

No: 0299-07/11/07-0001
Lab: EPA OEME
Lab Contact: Doris Guzman
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Sample Time	Depth	Depth_to	Depth Units	MS/MSD
	0299-0007	SS-07	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:05	0	6	inches	N
	0299-0007	SS-07	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:05	0	6	inches	N
	0299-0008	SS-08	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:07	0	6	inches	N
	0299-0008	SS-08	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:07	0	6	inches	N
	0299-0008	SS-08	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:07	0	6	inches	N
	0299-0009	SS-09	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:35	0	6	inches	N
	0299-0009	SS-09	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:35	0	6	inches	N
	0299-0009	SS-09	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:35	0	6	inches	N
	0299-0010	SS-10	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:40	0	6	inches	N
	0299-0010	SS-10	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:40	0	6	inches	N
	0299-0010	SS-10	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:40	0	6	inches	N
	0299-0011	SS-11	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:45	0	6	inches	N
	0299-0011	SS-11	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:45	0	6	inches	N
	0299-0011	SS-11	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:45	0	6	inches	N
	0299-0012	SS-12	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:50	0	6	inches	N
	0299-0012	SS-12	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:50	0	6	inches	N
	0299-0012	SS-12	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:50	0	6	inches	N
	0299-0013	SS-13	Metals	Soil	7/11/2007	2	4 oz jar	4 C	14:59	0	6	inches	Y
	0299-0013	SS-13	SVOC and PCBs	Soil	7/11/2007	2	8 oz jar	4 C	14:59	0	6	inches	Y

Special Instructions: Please fax results to OSC Mia Pasquerella (Fax No. 617-918-0120). Email - pasquerella.mia@epa.gov.

**SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #**

[illegible]

No: 0299-07/11/07-0001

Lab: EPA OEME

Contact Name: Bonnie Mace

Contact Phone: 978-552-2131

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Sample Time	Depth	Depth_to	Depth Units	MS/MSD
	0299-0013	SS-13	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:59	0	6	inches	Y
	0299-0014	SS-14	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:05	0	6	inches	N
	0299-0014	SS-14	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:05	0	6	inches	N
	0299-0014	SS-14	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:05	0	6	inches	N
	0299-0015	SS-15	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:45	0	6	inches	N
	0299-0015	SS-15	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:45	0	6	inches	N
	0299-0015	SS-15	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:45	0	6	inches	N
	0299-0016	SS-16	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:50	0	6	inches	N
	0299-0016	SS-16	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:50	0	6	inches	N
	0299-0016	SS-16	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:50	0	6	inches	N
	0299-0017	SS-17	Metals	Soil	7/11/2007	1	4 oz jar	4 C	16:14	0	6	inches	N
	0299-0017	SS-17	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	16:14	0	6	inches	N
	0299-0017	SS-17	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	16:14	0	6	inches	N
	0299-0018	SS-18	Metals	Soil	7/11/2007	1	4 oz jar	4 C	16:10	0	6	inches	N
	0299-0018	SS-18	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	16:10	0	6	inches	N
	0299-0018	SS-18	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	16:10	0	6	inches	N
	0299-0019	SS-19	Metals	Soil	7/11/2007	1	4 oz jar	4 C	16:08	0	6	inches	N
	0299-0019	SS-19	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	16:08	0	6	inches	N
	0299-0019	SS-19	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	16:08	0	6	inches	N

SAMPLES TRANSFERRED FROM

Special Instructions: Please fax results to OSC Mia Pasquerella (Fax No. 617-918-0120), Email - pasquerella.mia@epa.gov.

[illegible]

No: 0299-07/11/07-0001

CUSTODY
Site #: 0299

Lab: EPA OEME
Lab Contact: Doris Guzman
Lab Phone: 617-918-8490

Site #: 0299
Contact Name: Bonnie Mace
Contact Phone: 978-552-2131

Weston Solutions, Inc. (START III)
3 Riverside Drive Andover, MA 01810
EPA Contract Number: EP-W-05-042

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Sample Time	Depth	Depth_to Units	MS/MSD
	0299-0020	SS-20	Metals	Soil	7/11/2007	1	4 oz jar	4 C	12:40	0	6 inches	N
	0299-0020	SS-20	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	12:40	0	6 inches	N
	0299-0020	SS-20	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	12:40	0	6 inches	N
	0299-0021	SS-21	Metals	Soil	7/11/2007	1	4 oz jar	4 C	12:41	0	6 inches	N
	0299-0021	SS-21	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	12:41	0	6 inches	N
	0299-0021	SS-21	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	12:41	0	6 inches	N
	0299-0022	SS-22	Metals	Soil	7/11/2007	1	4 oz jar	4 C	12:36	0	6 inches	N
	0299-0022	SS-22	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	12:36	0	6 inches	N
	0299-0022	SS-22	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	12:36	0	6 inches	N
	0299-0023	SS-23	Metals	Soil	7/11/2007	1	4 oz jar	4 C	12:50	0	6 inches	N
	0299-0023	SS-23	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	12:50	0	6 inches	N
	0299-0023	SS-23	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	12:50	0	6 inches	N
	0299-0024	SS-24	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:50	0	6 inches	N
	0299-0024	SS-24	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:50	0	6 inches	N
	0299-0024	SS-24	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:50	0	6 inches	N
	0299-0025	SD-01	Metals	Sediment	7/11/2007	1	4 oz jar	4 C	17:10	0	6 inches	Y
	0299-0025	SD-01	SVOC and PCBs	Sediment	7/11/2007	1	8 oz jar	4 C	17:10	0	6 inches	Y

Special Instructions: Please fax results to OSC Mia Pasquerella (Fax No. 617-818-0120). Email - pasquerella.mia@epa.gov.

SAMPLES TRANSFERRED FROM	CHAIN OF CUSTODY #

[illegible]

Björn Cheryl Klenin
(START III)

CHAIN OF CUSTODY RECORD

Site #: 0299

Contact Name: Bonnie Mace

Contact Phone: 978-552-2131

3 Riverside Drive Andover, MA 01810

EPA Contract Number: EP-W-05-042

No: 0299-07/11/07-0001

Lab: EPA OEME

Lab Contact: Doris Guzman

Lab. Phone: 617-918-8490

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Sample Time	Depth	Depth_to	Depth Units	MS/MSD
	0299-0025	SD-01	VOCs	Sediment	7/11/2007	1	40 ml VOA Vial	Methanol	17:10	0	6	inches	Y
	0299-0026	SD-02	Metals	Sediment	7/11/2007	1	4 oz jar	4 C	17:32	0	6	inches	N
	0299-0026	SD-02	SVOC and PCBs	Sediment	7/11/2007	1	8 oz jar	4 C	17:32	0	6	inches	N
	0299-0026	SD-02	VOCs	Sediment	7/11/2007	1	40 ml VOA Vial	Methanol	17:32	0	6	inches	N
	0299-0027	SD-03	Metals	Sediment	7/11/2007	2	4 oz jar	4 C	17:55	0	6	inches	N
	0299-0027	SD-03	SVOC and PCBs	Sediment	7/11/2007	2	8 oz jar	4 C	17:55	0	6	inches	N
	0299-0027	SD-03	VOCs	Sediment	7/11/2007	1	40 ml VOA Vial	Methanol	17:55	0	6	inches	N
	0299-0028	SS-04 1'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:01		1	feet	N
	0299-0028	SS-04 1'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:01		1	feet	N
	0299-0028	SS-04 1'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:01		1	feet	N
	0299-0029	SS-04 2'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:14		2	feet	N
	0299-0029	SS-04 2'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:14		2	feet	N
	0299-0029	SS-04 2'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:14		2	feet	N
	0299-0030	SS-06 1'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:30		1	feet	N

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

For more information: Please fax results to QSC Mia Pasquierella (Fax No. 617-918-0120). Email - pasquierella.mia@epa.gov.

[illegible]

Cheryl Klenin
(START III)

CHAIN OF CUSTODY RECORD

Site #: 0299
Contact Name: Bonnie Mace
Contact Phone: 978-552-2131

No: 0299-07/11/07-0001
Lab: EPA OEME
Lab Contact: Doris Guzman
Lab Phone: 617-918-8490

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Sample Time	Depth	Depth_to	Depth Units	MS/MSD
	0299-0030	SS-06 1'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:30		1	feet	N
	0299-0030	SS-06 1'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:30		1	feet	N
	0299-0031	SS-06 2'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	14:43		2	feet	N
	0299-0031	SS-06 2'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	14:43		2	feet	N
	0299-0031	SS-06 2'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	14:43		2	feet	N
	0299-0032	SS-11 1'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:06		1	feet	N
	0299-0032	SS-11 1'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:06		1	feet	N
	0299-0032	SS-11 1'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:06		1	feet	N
	0299-0033	SS-11 2'	Metals	Soil	7/11/2007	2	4 oz jar	4 C	15:12		2	feet	Y
	0299-0033	SS-11 2'	SVOC and PCBs	Soil	7/11/2007	2	8 oz jar	4 C	15:12		2	feet	Y
	0299-0033	SS-11 2'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:12		2	feet	Y
	0299-0034	SS-16 1'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:52		1	feet	N
	0299-0034	SS-16 1'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:52		1	feet	N
	0299-0034	SS-16 1'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:52		1	feet	N
	0299-0035	SS-16 2'	Metals	Soil	7/11/2007	1	4 oz jar	4 C	15:54		2	feet	N
	0299-0035	SS-16 2'	SVOC and PCBs	Soil	7/11/2007	1	8 oz jar	4 C	15:54		2	feet	N
	0299-0035	SS-16 2'	VOCs	Soil	7/11/2007	1	40 ml VOA Vial	Methanol	15:54		2	feet	N
	0299-0060	PE-VLM0342	VOCs	Aqueous	7/11/2007	1	40 ml VOA Vial	Methanol	17:00				N

Special Instructions: Please fax results to OSC Mia Pasquerella (Fax No. 617-918-0120), Email - pasquerella.mia@epa.gov.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

[illegible]

Cheryl Hendlin

CHAIN OF CUSTODY RECORD

Site #: 0299

Contact Name: Bonnie Mace

Contact Phone: 978-552-2131

No: 0299-07/11/07-0001

Lab: EPA OEME

Lab Contact: Doris Guzman

Lab Phone: 617-918-8490

[illegible]

Special Instructions: Please fax results to OSC Mia Pasquerella (Fax No. 617-918-0120). Email - pasquerella.mia@epa.gov.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

[illegible]

Appendix D

Photodocumentation Log

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of sediment sample location SD-01. Photograph taken facing southeast.

DATE: 11 July 2007

PHOTOGRAPHER: Cheryl Henlin

TIME: 1701 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of sediment sample location SD-02. Photograph taken facing southeast.

DATE: 11 July 2007

PHOTOGRAPHER: Cheryl Henlin

TIME: 1720 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of sediment sample location SD-03. Photograph taken facing east.

DATE: 11 July 2007

PHOTOGRAPHER: Cheryl Henlin

TIME: 1742 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of open field with trailer. Photograph taken facing northeast.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1003 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-15. Photograph taken facing north.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1004 hours

CAMERA: Nikon CoolPix 3100

TOP



SCENE: View of soil sample location SS-16. Photograph taken facing northeast.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1006 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-17. Photograph taken facing northeast.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1007 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of surface soil sample location SS-18. Photograph taken facing northwest.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1007 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-19 with stressed vegetation. Photograph taken facing north.

DATE: 12 July 2007

TIME: 1009 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100



SCENE: View of the entrance to the wetland area. Photograph taken facing east.

DATE: 12 July 2007

TIME: 1010 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-14 with stressed vegetation. Photograph taken facing northwest.

DATE: 12 July 2007

TIME: 1012 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100



SCENE: View of surface soil sample location SS-13. Photograph taken facing south.

DATE: 12 July 2007

TIME: 1013 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of soil sample locations SS-11 and SS-12 with stressed vegetation. Photograph taken facing south.

DATE: 12 July 2007

TIME: 1014 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100



SCENE: View of surface soil sample location SS-10, outside the foundation wall. Photograph taken facing north.

DATE: 12 July 2007

TIME: 1014 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-09. Photograph taken facing east.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1015 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of the former foundation area. Photograph taken facing northwest.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1024 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-23 with drum carcasses. Photograph taken facing south.

DATE: 12 July 2007

TIME: 1024 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100



SCENE: View of surface soil sample location SS-22, located on the access road. Photograph taken facing west.

DATE: 12 July 2007

TIME: 1025 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of surface soil sample location SS-21, located on the access road. Photograph taken facing southeast.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1027 hours

CAMERA: Nikon CoolPix 3100



SCENE: View of surface soil sample location SS-20, located on the access road. Photograph taken facing northeast.

DATE: 12 July 2007

PHOTOGRAPHER: Bonnie Mace

TIME: 1028 hours

CAMERA: Nikon CoolPix 3100

PHOTOGRAPHY LOG SHEET
Birch Swamp • Warren, Rhode Island



SCENE: View of the entrance to the access road from Birch Swamp Road. Photograph taken facing east.

DATE: 12 July 2007

TIME: 1030 hours

PHOTOGRAPHER: Bonnie Mace

CAMERA: Nikon CoolPix 3100