

**REMOVAL PROGRAM  
PRELIMINARY ASSESSMENT/  
SITE INVESTIGATION REPORT  
FOR THE  
CHARLES BATCHELDER SITE  
NEWTOWN, FAIRFIELD COUNTY, CONNECTICUT  
9, 10, and 17 APRIL 2012**

Prepared For:

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

CONTRACT NO. EP-W-05-042

TDD NO. 01-09-04-0012

TASK NO. 0543

DC NO. R-7092

Submitted By:

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

June 2012

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## I. Preliminary Assessment/Site Investigation Forms



## REMOVAL PRELIMINARY ASSESSMENT

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### Potential Responsible Parties

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**Owner:** Mr. Richard M. Coan (Trustee), of Coan, Lewendon, Royston, Deming & Gulliver  
**Address:** 495 Orange Street, New Haven, CT 06511      **Telephone:** (203) 624-4756  
**Operator:** CIFIC Environmental, Inc.  
**Address:** 7 Old Sherman Turnpike, Ste 201, Danbury, CT 06810      **Telephone:** (203) 743-9760

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### Site Access

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**Authorizing Person:** Mr. Richard M. Coan (Trustee), of Coan, Lewendon, Royston, Deming & Gulliver

**Date:** 14 March 2012       **Obtained**       **Verbal**  
**Telephone:** (203) 624-4756       **Not Obtained**       **Written**

**Authorizing Person:** James H. Maloney (CIFIC Environmental, Inc.)

**Date:** 27 March 2012       **Obtained**       **Verbal**  
**Telephone:** (203) 743-9760       **Not Obtained**       **Written**

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### Historical Preservation

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

#### Contacts Identified

**1) State Historical Preservation Officer (SHPO)**

**Name:** Mr. John W. Shannahan      **Telephone:** (203) 566-3005

**2) Tribal Historical Preservation Officer (THPO)**

**Name:**      **Telephone:** ( )

**Comments:**

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### Physical Site Characterization

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**Background Information:** The Charles Batchelder Site (the Site) is located at 46a Swamp Road in Newtown, Fairfield County, CT. The property is designated as Lot Number (No.) 3 of Block No. 1 on Town of Newtown Tax Assessor's Map No. 47. The geographic coordinates of the approximate center of the property are latitude 41° 21' 49" north and longitude 73° 15' 13" west. The 30.65-acre property is zoned M3 for manufacturing. The property is currently owned, along with neighboring property at 44 Swamp Road, by the Chapter 7 bankruptcy estate of the Charles Batchelder Company, Inc., which has been bankrupt since 1987. The current trustee is Mr. Richard M. Coan of Coan, Lewendon, Royston, Deming & Gulliver. The property is bordered to the north by railroad tracks owned and operated by the Housatonic Railroad, and to the northeast by industrial land operated by a lumber yard. The remainder of the property is bordered by wetlands identified as Pine Swamp. The Site is located in a mixed residential and industrial area.

## REMOVAL PRELIMINARY ASSESSMENT

The Site was a former aluminum smelting facility which was in operation from 1947 to 1987. The operations included smelting aluminum into secondary ingots, and using oil contaminated with polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs) to heat the facility buildings and run the smelters. A tank farm, with a combined capacity of approximately 270,000 gallons, was located on a portion of the Site. The tank farm was used to store the contaminated oil, and was reported to contain 1 to 2 inches of oil contamination at the surface. Between 1970 and 1975, a fire pond was constructed in the southeastern corner of the facility and subsequently accepted runoff and wastewater from the facility. A baghouse was installed in 1975 to precipitate metals out of effluent to the air. Since 1975, dust from the baghouses had been mixed with dross and stored in an on-site landfill and in open piles. Documentary evidence suggests that wastewater was also discharged to Pine Swamp, located south and east of the facility buildings.

In 1987 the plant was abandoned, leaving multiple open waste piles, miscellaneous drums (full and empty), a partially capped landfill, and an area of oil-saturated soil. Several remediation projects have resulted in the covering of the oil-contaminated soil with fill; the covering of some waste piles with geotextile fabric to prevent the dust from becoming airborne; the partial blocking of access to the facility buildings; and the removal of a lead-contaminated soil pile, asbestos-containing roofing shingles, drums, containers, and aboveground storage tanks (ASTs). A 6-foot fence topped with barbed wire, encircling the entire facility, was installed during a 1997 EPA Removal Action. The baghouse dust, still present in piles and in the landfill, contains high levels of copper, aluminum, lead, VOCs, and PCBs, and was determined by CT DEEP (formerly known as CT DEP) to be a respiratory hazard to landfill workers due to its copper and lead content. The soil of the tank farm area contains VOCs, PCBs, and metals, and was covered due to its PCB content. The two buildings are in severe disrepair and represent falling hazards. Numerous groundwater monitoring wells are present on Site. Reports from 1999 noted the presence of approximately 560,000 cubic feet (ft<sup>3</sup>) of dross and related waste in outdoor piles, approximately 50 gallons of unidentified waste with a petroleum odor, approximately 50 empty drums, and approximately 14 full drums, one of which was labeled "PCBs". It is unclear what actions have taken place since 1999.

**Description of Substances Possibly Present, Known or Alleged:** Baghouse dust, still present in piles and in the landfill, contains high levels of copper, aluminum, lead, VOCs, and PCBs.

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### Existing Analytical Data

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**( ) Real-Time Monitoring Data:**

**(X) Sampling Data:** Weston Solutions, Inc. 2000. *Final Site Inspection Prioritization Report, Charles Batchelder Company, Newtown, Connecticut, CERCLIS No. CTD981069180, TDD No. 00-05-0012.* 14 June.

Weston Solutions, Inc. 1997. *Chronological Summary Report for the Charles Batchelder Site, Newtown, Connecticut, 11 June through 16 October 1997.* November.

## REMOVAL PRELIMINARY ASSESSMENT

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### Potential Threat

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

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

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### Prior Response Activities

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PRP                       STATE             FEDERAL             OTHER

**Brief Description:** In 1997, EPA conducted a removal action at the Site, which included the removal of a lead-contaminated soil pile, asbestos-containing roofing shingles, drums, containers, and ASTs. In addition, a 6-foot fence topped with barbed wire, encircling the entire facility, was installed.

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### Priority for Site Investigation

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High                       Medium                      Low                       None   
**Comments:**

## REMOVAL PRELIMINARY ASSESSMENT

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### Report Generation

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<b>Originator:</b>	Bonnie Mace	<b>Date:</b>	8 May 2012
<b>Affiliation:</b>	Weston Solutions, Inc. (START)	<b>Telephone:</b>	(978) 552-2131
<b>TDD No.:</b>	01-09-04-0012	<b>Task No.:</b>	0543



**EPA REGION I  
REMOVAL SITE INVESTIGATION**

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**Inspection Information**

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**Site Name:** Charles Batchelder      **Address:** 46a Swamp Road  
**Town:** Newtown      **County:** Fairfield      **State:** Connecticut  
**Date of Inspection:** 9 April 2012      **Time of Inspection:** 1030 hours  
**Weather Conditions:** 59 ° Fahrenheit, Partly cloudy, Breezy  
**Date of Inspection:** 10 April 2012      **Time of Inspection:** 0800 hours  
**Weather Conditions:** 55 ° Fahrenheit, Mostly cloudy, Breezy  
**Date of Inspection:** 17 April 2012      **Time of Inspection:** 0900 hours  
**Weather Conditions:** 65 ° Fahrenheit, Mostly sunny  
**Site Status at Time of Inspection:**    ( ) ACTIVE    (X) INACTIVE  
**Comments:** The Site was the former location of an aluminum smelting facility, which ceased operations in 1987 following a declaration of bankruptcy.

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**Agencies/Personnel Performing Inspection**

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	<u><b>Names</b></u>	<u><b>Program</b></u>
<b>(X) EPA:</b>	Eric Vanderboom Dan Burgo	U.S. Environmental Protection Agency (EPA) Region I, Emergency Planning and Response Branch (EPRB), On-Scene Coordinator (OSC).
<b>(X) EPA Contractor:</b>	Eric Ackerman John Burton	Weston Solutions, Inc. (WESTON), Superfund Technical Assessment and Response Team III (START).
<b>( ) State:</b>		
<b>(X) Town:</b>	Rob Sibley	Town of Newtown, Deputy Director of Planning & Land Use.

**Current Owner Based on Field Interview:** Mr. Richard M. Coan of Coan, Lewendon, Royston, Deming & Gulliver

## REMOVAL SITE INVESTIGATION

Physical Site Characteristics		
Parameter	Quantities/Extent	
<input type="checkbox"/> Cylinders		
<input type="checkbox"/> Drums		
<input type="checkbox"/> Lagoons		
<input checked="" type="checkbox"/> Tanks	<input checked="" type="checkbox"/> Above	Two approximately 10,000-gallon aboveground storage tanks were observed in the former tank farm.
	<input type="checkbox"/> Below	
<input type="checkbox"/> Asbestos		
<input checked="" type="checkbox"/> Piles		Approximately 21 baghouse dust/dross/soil stockpiles are located throughout the Site
<input type="checkbox"/> Stained Soil		
<input type="checkbox"/> Sheens		
<input type="checkbox"/> Stressed Vegetation		
<input checked="" type="checkbox"/> Landfill		Dross and baghouse wastes were disposed of in an on-site landfill.
<input checked="" type="checkbox"/> Population in Vicinity		The nearest residence is located at 42 Swamp Road, approximately 230 feet (ft) west of the western fence boundary.
<input checked="" type="checkbox"/> Wells	<input type="checkbox"/> Drinking <input checked="" type="checkbox"/> Monitoring	Twenty-five overburden groundwater monitoring wells have reportedly been installed on the property.
<input type="checkbox"/> Other		

### Physical Site Observations

The Site was the former location of an aluminum smelting facility, which ceased operations in 1987 following a declaration of bankruptcy. There are numerous piles of baghouse dust containing dross (material that is skimmed from the top of molten aluminum) and metal debris present. Several dilapidated buildings exist on the property, two of which contain piles of baghouse dust and dross/debris. All buildings are structurally unsound.

The entrance driveway to the 30.65-acre industrial property is secured by a large, swinging gate along Swamp Road and a second chain-link gate. The remainder of the Site is surrounded by chain-link fencing that has been breached in several areas, as evidenced by all-terrain vehicle tracks, motorbike tracks, and footprints. The piles vary in volume/size, and all are exposed to the elements whether they are within buildings or not. The Site is covered by sparse scrub brush and trees, and there is debris and municipal trash covering many areas.

## REMOVAL SITE INVESTIGATION

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### Field Sampling and Analysis

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<b>Matrix/Analytical Parameter</b>	<b>Field Instrumentation</b>				
	<b>CGI/O<sub>2</sub></b>	<b>RAD</b>	<b>PID</b>	<b>FID</b>	<b>Other</b>
<b>Background Readings:</b>	0%/20.9%	10-15 µR/hr	0.0	-	
<b>Air:</b>	0%/20.9%	10-15 µR/hr	0.0	-	
<b>Soil:</b>	0%/20.9%	10-15 µR/hr	0.0	-	
<b>Piles:</b>	0%/20.9%	10-15 µR/hr	0.0	-	

µR/hr = microRoentgens per hour.

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### Field Quality Control Procedures

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**(X) SOP Followed**

**( ) Deviation From SOP**

**Comments:** START followed the protocol outlined in the document entitled, *Sampling and Analysis Plan for the Charles Batchelder Site, Newtown, Fairfield County, Connecticut*, dated March 2012.

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### Description of Sampling Conducted

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On 9 and 10 April 2012, START collected a total of 12 grab surface soil samples (including two field duplicates) from 10 locations, and 41 composite dross pile samples (including two field duplicates). All of the samples were sent to the EPA Office of Environmental Measurement and Evaluation (OEME) located in North Chelmsford, Massachusetts for analysis. Dross pile samples were analyzed for polychlorinated biphenyls (PCBs) and metals via screening methods; and the surface soil samples were analyzed for volatile organic compounds (VOCs), PCBs, and metals. In addition, five of the surface soil and dross pile samples were analyzed for confirmatory metals at OEME.

On 17 April 2012, OSC Dan Burgo collected two suspected asbestos-containing material (ACM) samples from the roof's building material. The samples were sent to EPA OEME for asbestos analysis.

## REMOVAL SITE INVESTIGATION

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### Analyses

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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 checked="" type="checkbox"/> SOURCE (Piles)	<input type="checkbox"/> DAS
<input type="checkbox"/> CYANIDE	<input type="checkbox"/> SEDIMENT	<input type="checkbox"/> SOW
<input type="checkbox"/> SVOC	<input type="checkbox"/> SOIL GAS	<input type="checkbox"/> FIELD
<input type="checkbox"/> TOXICITY		
<input type="checkbox"/> DIOXIN		
<input checked="" type="checkbox"/> ASBESTOS		
<input type="checkbox"/> OTHER		

Analytical results: [see attached]

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### Receptors

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#### Comments

**(X) Drinking Water:**

**(X) Private:** There are eight inactive on-site process wells, at least one of which (located just north of the main facility building) was formerly used for drinking water purposes by employees at the Batchelder facility. The nearest private well is located at 42 Swamp Road, approximately 230 ft west of the western fence boundary.

**( ) Municipal:**

**( ) Groundwater:**

**( ) Unrestricted Access:**

**(X) Population in Proximity:** The nearest residence is located at 42 Swamp Road, approximately 230 ft west of the western fence boundary.

**( ) Sensitive Ecosystem:**

**( ) Other:**

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### Additional Procedures for Site Determination

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**( ) Biological Evaluation**

**( ) ATSDR**

## REMOVAL SITE INVESTIGATION

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### Site Determination

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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.

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### Report Generation

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<b>Originator:</b>	Bonnie Mace	<b>Date:</b>	8 May 2012
<b>Affiliation:</b>	Weston Solutions, Inc. (START)	<b>Telephone:</b>	(978) 552-2131
<b>TDD No.:</b>	01-09-04-0012	<b>Task No.:</b>	0543

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## II. Narrative Chronology

## **Narrative Chronology**

### **Introduction**

The Charles Batchelder Site (the Site) is located at 46a Swamp Road in Newtown, Fairfield County, Connecticut (CT) (see Appendix A, Figure 1) [1]. The property is designated as Lot Number (No.) 3 of Block No. 1 on Town of Newtown Tax Assessor's Map No. 47. The geographic coordinates of the approximate center of the property are latitude 41° 21' 49" north and longitude 73° 15' 13" west. The 30.65-acre property is zoned M3 for manufacturing. The property is currently owned, along with neighboring property at 44 Swamp Road, by the Chapter 7 bankruptcy estate of the Charles Batchelder Company, Inc., which has been bankrupt since 1987. The current trustee is Mr. Richard M. Coan of Coan, Lewendon, Royston, Deming & Gulliver [2]. The property is bordered to the north by railroad tracks owned and operated by the Housatonic Railroad and to the northeast by industrial land operated by a lumber yard. The remainder of the property is bordered by wetlands identified as Pine Swamp. The Site is located in a mixed residential and industrial area (see Appendix A, Figure 2) [3].

At the request of the Connecticut Department of Energy and Environmental Protection (CT DEEP) and the Town of Newtown, the U.S. Environmental Protection Agency (EPA) and Weston Solutions, Inc. (WESTON®) Superfund Technical Assessment and Response Team III (START) personnel mobilized to the Site to conduct field activities as part of an EPA Preliminary Assessment/Site Investigation (PA/SI). The objectives of the PA/SI were to better characterize the volume and content of various piles of debris that remained on site and to determine if further actions, including removal activities, are warranted. Site activities included conducting air monitoring, collecting composite samples from the numerous piles, and collecting measurements from the various stockpiles to provide a volume estimate of piles.

### **Site Description**

The Site was the former location of an aluminum smelting facility, which ceased operations in 1987 following a declaration of bankruptcy. There are numerous piles of baghouse dust containing dross (material that is skimmed from the top of molten aluminum) and metal debris present. Several dilapidated buildings exist on the property, two of which contain piles of baghouse dust and dross/debris. All buildings are structurally unsound [2].

The entrance driveway to the industrial property is secured by a large, swinging gate along Swamp Road and a second chain-link gate. The remainder of the Site is surrounded by chain-link fencing that has been breached in several areas, as evidenced by all-terrain vehicle tracks, motorbike tracks, and footprints. The piles vary in volume/size, and all are exposed to the elements whether they are within buildings or not. The Site is covered by sparse scrub brush and trees, and there is debris and municipal trash covering many areas [2].

### **Site History and Background**

The Charles Batchelder Site was a former aluminum smelting facility which was in operation from 1947 to 1987. The operations included smelting aluminum into secondary ingots and using oil contaminated with polychlorinated biphenyls (PCBs) and volatile organic compounds

(VOCs) to heat the facility buildings and run the smelters. A tank farm, with a combined capacity of approximately 270,000 gallons, was located on a portion of the Site. The tank farm was used to store the contaminated oil, and was reported to contain 1 to 2 inches of oil contamination at the surface. Between 1970 and 1975, a fire pond was constructed in the southeastern corner of the facility and subsequently accepted runoff and wastewater from the facility. A baghouse was installed in 1975 to precipitate metals out of effluent to the air. Since 1975, dust from the baghouses had been mixed with dross and stored in an on-site landfill and in open piles. Documentary evidence suggests that wastewater was also discharged to Pine Swamp, located south and east of the facility buildings [2].

In 1987 the plant was abandoned, leaving multiple open waste piles, miscellaneous drums (full and empty), a partially capped landfill, and an area of oil-saturated soil. Several remediation projects have resulted in the covering of the oil-contaminated soil with fill; the covering of some waste piles with geotextile fabric to prevent the dust from becoming airborne; the partial blocking of access to the facility buildings; and the removal of a lead-contaminated soil pile, asbestos-containing roofing shingles, drums, containers, and aboveground storage tanks (ASTs) [2]. A 6-foot fence topped with barbed wire, encircling the entire facility, was installed during a 1997 EPA Removal Action [4]. The baghouse dust, still present in piles and in the landfill, contains high levels of copper, aluminum, lead, VOCs, and PCBs, and was determined by CT DEEP (formerly known as CT DEP) to be a respiratory hazard to landfill workers due to its copper and lead content. The soil of the tank farm area contains VOCs, PCBs, and metals, and was covered due to its PCB content. The two buildings on Site are in severe disrepair and represent falling hazards. Numerous groundwater monitoring wells are present on Site. Reports from 1999 noted the presence of approximately 560,000 cubic feet (ft<sup>3</sup>) of dross and related waste in outdoor piles, approximately 50 gallons of unidentified waste with a petroleum odor, approximately 50 empty drums, and approximately 14 full drums, one of which was labeled "PCBs". It is unclear what actions have taken place since 1999 [2].

### **Site Activities**

On 9 April 2012, START members Eric Ackerman and John Burton mobilized to the Site and met EPA On-Scene Coordinator (OSC) Eric Vanderboom. Personnel were on Site to collect surface soil samples from piles and soil locations that would be selected by OSC Vanderboom.

START member Burton conducted a tailgate Health and Safety meeting. Topics included trip hazards, dilapidated building/overhead hazards, and chemical hazards. EPA and START personnel signed the Health and Safety Plan (HASP) and tailgate meeting sign-in sheet. The Site HASP has been prepared as a separate document, entitled *Weston Solutions, Inc. Region I START Site Health and Safety Plan (HASP) for the Charles Batchelder Site, 46 Swamp Road, Newtown, Connecticut*.

START personnel prepared air monitoring equipment, including a MultiRAE Plus [with carbon monoxide (CO), hydrogen sulfide (H<sub>2</sub>S), volatile organic compound (VOC), oxygen (O<sub>2</sub>), and lower explosive level (LEL) sensors], and a Ludlum 19A Radiation meter (MicroR) [5-6]. Background levels were recorded as follows: LEL = 0%; O<sub>2</sub> = 20.9%; CO = 0 parts per million (ppm); H<sub>2</sub>S = 0 ppm; VOC = 0.0 ppm; and MicroR = 10-15 microRoentgens per hour (µR/hr). No readings above background were observed in ambient air.

EPA OSC Vanderboom and START members Ackerman and Burton donned Modified Level D personal protective equipment (PPE) and conducted a perimeter reconnaissance of the Site. EPA OSC Vanderboom informed the START members of the soil pile locations where samples would be collected and discussed the methods for collecting a representative sample from each baghouse dust/dross/soil stockpile (stockpile). EPA and START determined that for each stockpile to be sampled, a 10-point composite sample would be collected for metals and PCB analyses. For the larger stockpiles, the stockpile would be segregated into 25-foot sections, and a 10-point composite sample would be collected from each section. In the former tank farm area, surface soil samples would be collected for VOC, PCB, and metals analyses. Sampling activities were performed in accordance with the Site Sampling and Analysis Plan (SAP), which has been prepared by START as a separate document, entitled *Removal Program Site Sampling and Analysis Plan for the Charles Batchelder Preliminary Assessment/Site Investigation, Newtown, Connecticut*.

Upon completion of the Site reconnaissance, EPA and START personnel returned to the staging area. START personnel prepared sampling equipment, while OSC Vanderboom selected and designated sampling locations using pin flags.

OSC Vanderboom returned to the staging area and informed START personnel that a total of 21 stockpile locations had been selected and marked with pin flags. START members prepared equipment for the collection of samples from the largest stockpiles. START personnel used a 300-foot measuring tape to segregate the largest stockpile (P-18) into 11 25-foot sections that were labeled P-18A through P-18K (P-18A 0- to 25-feet, P-18B 25- to 50-feet, *etc.*) (see Appendix A, Figure 3). The other larger stockpile (P-19) was segregated into five 25-foot sections labeled P-19A through P-19E. EPA and START personnel collected 10-point composite samples from each section/segment of the exterior soil stockpiles.

START collected a total of 12 grab surface soil samples (including two field duplicates) from 10 locations (SS-01 through SS-10), and 35 composite dross pile samples (including one field duplicate) [7].

START personnel utilized the Trimble™ Pathfinder Pro XRS Global Position System (GPS) unit to record sample locations and Site features (see Appendix A, Figure 3) [8]. In addition, START personnel photodocumented sample locations and Site features (see Appendix B, Photodocumentation Log).

On 10 April 2012, START members Eric Ackerman and John Burton mobilized to the Site to complete surface soil sample collection.

START member Burton conducted a tailgate Health and Safety meeting. Topics included trip hazards, dilapidated building/overhead hazards, and chemical hazards.

START personnel prepared air monitoring equipment, including a MultiRAE Plus, and MicroR. Background levels were recorded as follows: LEL = 0%; O<sub>2</sub> = 20.9%; CO = 0 ppm; H<sub>2</sub>S = 0 ppm; VOC = 0.0 ppm; and MicroR = 10-15 µR/hr. No readings above background were observed in ambient air.

START collected a total of six composite dross pile samples (including one field duplicate) from piles. All of the surface soil and dross pile samples were transported to the EPA Office of Environmental Measurement and Evaluation (OEME) located in North Chelmsford, Massachusetts for PCB and X-Ray Fluorescence (XRF) metals screening. Eleven of the surface soil samples were sent to OEME for VOC analysis. In addition, five of the surface soil and dross pile samples were sent to OEME for confirmatory metals analysis (see Appendix C, Chain-of-Custody Record).

On 17 April 2012, EPA OSC Dan Burgo mobilized to the Site to collect suspected asbestos-containing material (ACM) samples. EPA OSC Burgo collected two ACM samples (AS-0001 and AS-0002) from the roof's building material. The samples were sent to OEME for asbestos analysis via Polarized Light Microscopy (PLM) (see Appendix C, Chain-of-Custody Record).

From 25 April through 1 May 2012, START received the analytical results from OEME [9-13].

### **Analytical Data Summary**

No VOCs were detected in the surface soil and dross pile samples [9].

Three PCB Aroclors were detected in one or more of the surface soil and dross pile samples and include the following (maximum concentration and sample number in parentheses): Aroclor 1248 [250 milligrams per Kilogram (mg/Kg) in P-04A]; Aroclor 1254 (16.0 mg/Kg in P-04A); and Aroclor 1260 (7.6 mg/Kg in P-04A) (see Appendix D, Table 1) [10].

Nine metals were detected in one or more of the surface soil and dross pile samples that were field screened using XRF, and include the following (maximum concentration and sample number in parentheses): arsenic (64 mg/Kg in P-21A); barium (505 mg/Kg in SS-04); cadmium (179 mg/Kg in P-03A); chromium (1,523 mg/Kg in P-18H); copper (17,000 mg/Kg in P-14A); lead (2,667 mg/Kg in P-21B); nickel (905 mg/Kg in P-01A); silver (22 mg/Kg in P-04A); and zinc (31,900 mg/Kg in P-05A) (see Appendix D, Table 2) [11].

Seventeen metals were detected in one or more of the surface soil and dross pile samples that were submitted to OEME for confirmatory analysis, and include the following (maximum concentration and sample number in parentheses): aluminum (270,000 mg/Kg in P-20A); antimony (67 mg/Kg in P-19B); arsenic (12 mg/Kg in SS-01); barium (360 mg/Kg in P-20A); cadmium (72 mg/Kg in P-19B); calcium (14,000 mg/Kg in P-21B); chromium (890 mg/Kg in P-18A); cobalt (95 mg/Kg in P-19B); copper (14,000 mg/Kg in P-19B); iron (140,000 mg/Kg in P-19B); lead (2,500 mg/Kg in P-21B); magnesium (18,000 mg/Kg in P-18A); manganese (1,800 mg/Kg in P-19B); nickel (2,200 mg/Kg in P-19B); silver (12 mg/Kg in P-19B); vanadium (54 mg/Kg in P-18A); and zinc (12,000 mg/Kg in P-20A) (see Appendix D, Table 3) [12].

Trace levels of chrysotile asbestos were detected in the two ACM samples. The laboratory noted that the samples consisted of black, flat roofing material. Sample AS-001 contained approximately 15% fiberglass, and sample AS-002 contained approximately 15% cellulose. The trace of chrysotile detected in the two samples was on the surface of the samples, not within them [13].

## REFERENCES

- [1] U.S. Geological Survey (USGS). 1985. Newtown, Connecticut. (7.5-minute series topographic map).
- [2] Weston Solutions, Inc. 2000. *Final Site Inspection Prioritization Report, Charles Batchelder Company, Newtown, Connecticut, CERCLIS No. CTD981069180, TDD No. 00-05-0012*. 14 June.
- [3] Microsoft Corporation. 2010. Bing Maps Aerial.
- [4] Weston Solutions, Inc. 1997. *Chronological Summary Report for the Charles Batchelder Site, Newtown, Connecticut, 11 June through 16 October 1997*. November.
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- [11] U.S. Environmental Protection Agency. 21 April 2012. Office of Environmental Measurement and Evaluation. Laboratory Report. Project No. 12040017. [Batchelder Site – Newtown, CT, XRF Field Analytical Screening Results].
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## **REFERENCES (Concluded)**

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### III. Appendices

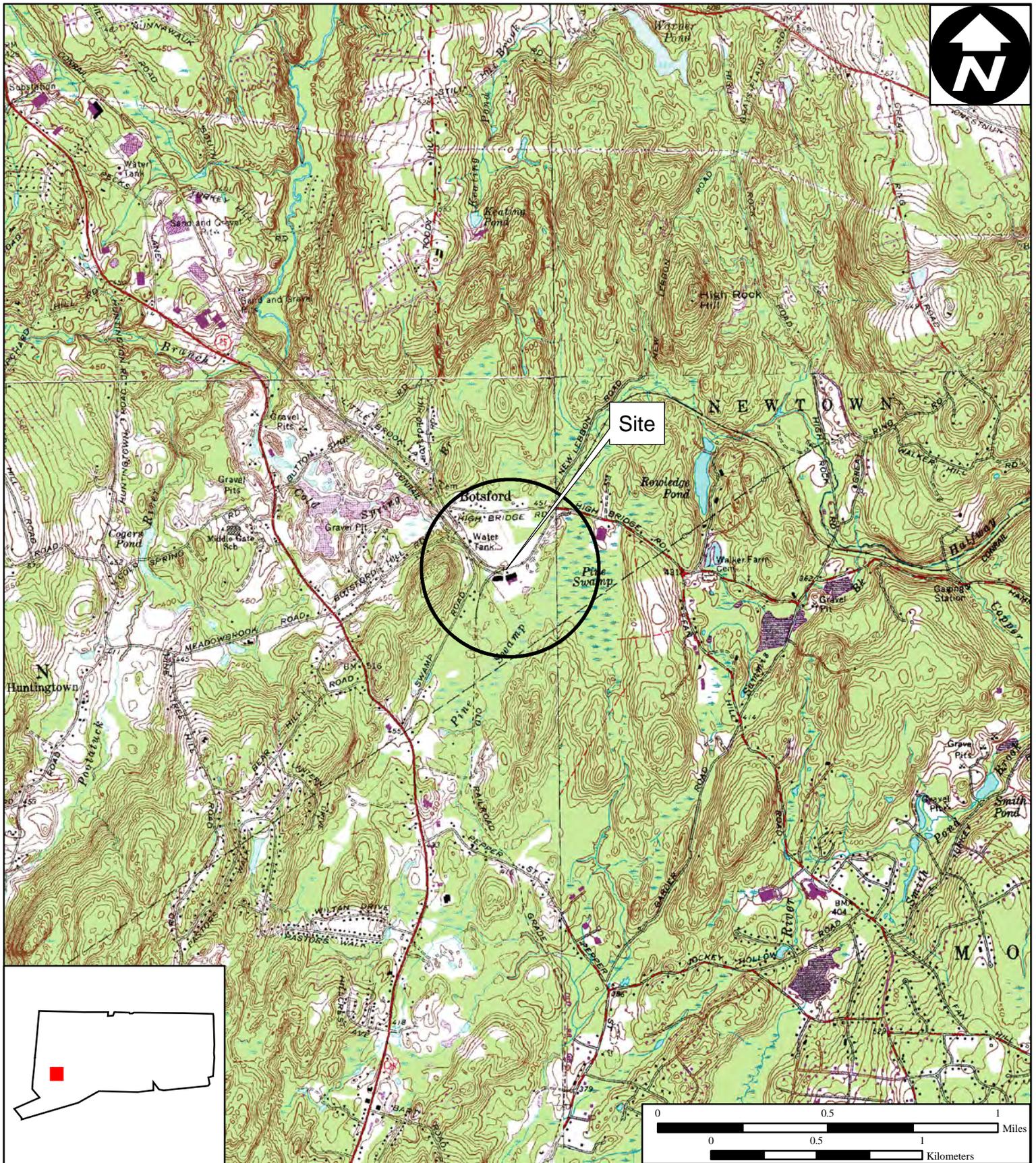
## Appendix A

### Figures

Figure 1 – Site Location Map

Figure 2 – Site Diagram

Figure 3 – Pile Location and Sample Location Map



**Figure 1**

**Site Location Map**

**Charles Batchelder  
46a Swamp Road  
Newtown, Connecticut**

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

TDD Number: 09-04-0012  
 Created by: G. Parrish  
 Created on: 12 April 2012  
 Modified by: B. Mace  
 Modified on: 9 May 2012

**Data Sources:**

Topos: MicroPath/USGS  
 Quadrangle Names: Newtown, CT  
 All other data: START



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Figure 2

Site Diagram

Charles Batchelder  
46a Swamp Road  
Newtown, Connecticut

EPA Region I  
Superfund Technical Assessment and  
Response Team (START) III  
Contract No. EP-W-05-042  
TDD Number: 09-04-0012  
Created by: G. Parrish  
Created on: 12 April 2012  
Modified by: B. Mace  
Modified on: 19 April 2012

LEGEND

 Approximate Site Boundary



0 150 300  
 Feet

**Data Sources:**

Imagery: Bing Maps Aerial (Microsoft Corp)  
Topos: MicroPath  
All other data: START



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**Figure 3**  
**Pile Location and**  
**Sample Location Map**  
**Charles Batchelder**  
**46a Swamp Road**  
**Newtown, Connecticut**

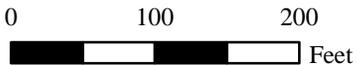
**EPA Region I**  
**Superfund Technical Assessment and**  
**Response Team (START) III**  
**Contract No. EP-W-05-042**  
**TDD Number: 09-04-0012**  
**Created by: G. Parrish**  
**Created on: 12 April 2012**  
**Modified by: B. Mace**  
**Modified on: 11 May 2012**

**LEGEND**

-  Approximate Site Boundary
-  Approximate Pile Area
-  Sample Locations

Note: Pile area (P-18) is approximately 1,955 square feet.





**Data Sources:**  
 Imagery: Bing Maps Aerial (Microsoft Corp)  
 Topos: MicroPath  
 All other data: START

## Appendix B

### Photodocumentation Log

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of piles P-01 and P-02. Photograph taken facing west.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-03. Photograph taken facing west.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-04. Photograph taken facing east.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S



**SCENE:** View of pile P-05. Photograph taken facing southwest.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-06. Photograph taken facing southwest.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of piles P-07 and P-08. Photograph taken facing southwest.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-09. Photograph taken facing west.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-10. Photograph taken facing south.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-11. Photograph taken facing south.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-12. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-13. Photograph taken facing east.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S



**SCENE:** View of pile P-14. Photograph taken facing east.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-15. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-16. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-17, located in a rusted 30-cubic-yard roll-off container. Photograph taken facing southeast.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S



**SCENE:** View of sample location P-18J. Photograph taken facing southeast.

**DATE:** 9 April 2012  
**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours  
**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of sample location P-18G. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of sample location P-18D. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of sample location P-18A. Photograph taken facing northeast.

**DATE:** 9 April 2012

**TIME:** 1430 hours

**PHOTOGRAPHER:** J. Burton

**CAMERA:** iPhone 4S



**SCENE:** View of sample locations P-19A through P-19D. Photograph taken facing east.

**DATE:** 9 April 2012

**TIME:** 1430 hours

**PHOTOGRAPHER:** J. Burton

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-19. Photograph taken facing east.

**DATE:** 9 April 2012

**PHOTOGRAPHER:** J. Burton

**TIME:** 1430 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-21. Photograph taken facing west.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0847 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-21. Photograph taken facing northwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0847 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-21. Photograph taken facing north.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0847 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of trespasser footprints near pile P-21.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0848 hours

**CAMERA:** iPhone 4S



**SCENE:** View of trespasser footprints near pile P-21.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0848 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-20. Photograph taken facing northeast.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0906 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-20. Photograph taken facing east.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0906 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-20. Photograph taken facing northeast.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0907 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-23. Photograph taken facing southwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0920 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-22. Photograph taken facing southwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0920 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-22. Photograph taken facing southwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 0921 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-18. Photograph taken facing west.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1103 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-18 and inner perimeter fence. Photograph taken facing west.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1104 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-18. Photograph taken facing west.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1104 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-18. Photograph taken facing northwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1104 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-18. Photograph taken facing northwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1105 hours

**CAMERA:** iPhone 4S



**SCENE:** View of pile P-18 spilling through the inner perimeter fence. Photograph taken facing northeast.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1106 hours

**CAMERA:** iPhone 4S

**PHOTODOCUMENTATION LOG**  
**Charles Batchelder Site • Newtown, Connecticut**



**SCENE:** View of pile P-18 and the fire pond. Photograph taken facing southwest.

**DATE:** 10 April 2012

**PHOTOGRAPHER:** E.Ackerman

**TIME:** 1106 hours

**CAMERA:** iPhone 4S

## Appendix C

### Chain-of-Custody Record





























## Appendix D

### Tables and Spreadsheets

Table 1 – Surface Soil PCB Screening Results

Table 2 – Surface Soil Metals Screening Results

Table 3 – Surface Soil Metals Confirmation Results

TABLE 1

**SURFACE SOIL PCB SCREENING RESULTS  
CHARLES BATCHELDER SITE  
NEWTOWN, CONNECTICUT  
Results in mg/Kg**

Sample Number	Sample Location	Aroclor-1248 (1/10)	Aroclor-1254 (1/10)	Aroclor-1260 (1/10)
R01-040912EV-0001	SS-01	ND	0.56	0.4
R01-040912EV-0002	SS-02	ND	ND	ND
R01-040912EV-0003	SS-03	6.3	5.5	0.60
R01-040912EV-0004	SS-04	ND	ND	ND
R01-040912EV-0005	SS-05	ND	0.35	0.31
R01-040912EV-0006	SS-06	19	9.2	0.99
R01-040912EV-0007	SS-07	ND	ND	ND
R01-040912EV-0008	SS-08	ND	ND	ND
R01-040912EV-0009	SS-09	1.9	9.2	1.3
R01-040912EV-0010	SS-10	24	7.1	0.51
R01-040912EV-0013	SS-13	30	12	1.4
R01-040912EV-0014	P-01A	22	12	1.3
R01-040912EV-0015	P-02A	4.8	2.8	0.40
R01-040912EV-0016	P-03A	6.7	6.7	1.0
R01-040912EV-0017	P-04A	250	16	7.6
R01-040912EV-0018	P-05A	16	9.0	1.2
R01-040912EV-0019	P-06A	4.0	3.2	0.57
R01-040912EV-0020	P-07A	4.0	3.2	0.48
R01-040912EV-0021	P-08A	49	12.0	1.3
R01-040912EV-0022	P-09A	5.2	2.0	0.37
R01-040912EV-0023	P-10A	24	4.0	0.84
R01-040912EV-0024	P-11A	36	5.0	1.6
R01-040912EV-0025	P-12A	40	5.5	1.8
R01-040912EV-0026	P-13A	28	4.2	2.1
R01-040912EV-0027	P-14A	29	2.3	1.2
R01-040912EV-0028	P-14B	36	4.0	1.6
R01-040912EV-0029	P-15A	27	6.1	1.4
R01-040912EV-0030	P-16A	17	3.8	0.79
R01-040912EV-0031	P-17A	9.1	3.4	0.34
R01-040912EV-0032	P-18A	1.2	0.27	ND
R01-040912EV-0033	P-18B	1.2	0.37	ND
R01-040912EV-0034	P-18C	0.79	ND	ND

TABLE 1

**SURFACE SOIL PCB SCREENING RESULTS  
CHARLES BATCHELDER SITE  
NEWTOWN, CONNECTICUT  
Results in mg/Kg**

Sample Number	Sample Location	Aroclor-1248 (1/10)	Aroclor-1254 (1/10)	Aroclor-1260 (1/10)
R01-040912EV-0035	P-18D	0.85	ND	ND
R01-040912EV-0036	P-18E	<b>1.6</b>	0.37	ND
R01-040912EV-0037	P-18F	<b>1.4</b>	0.33	ND
R01-040912EV-0038	P-18G	<b>1.6</b>	0.26	ND
R01-040912EV-0039	P-18H	<b>2.6</b>	0.54	ND
R01-040912EV-0040	P-18I	<b>6.5</b>	0.95	ND
R01-040912EV-0041	P-18J	<b>7.1</b>	<b>1.1</b>	ND
R01-040912EV-0042	P-18K	0.81	0.47	ND
R01-040912EV-0043	P-19A	<b>11</b>	<b>3.7</b>	0.49
R01-040912EV-0044	P-19B	<b>15</b>	<b>4.3</b>	0.65
R01-040912EV-0045	P-19C	<b>8.9</b>	<b>2.8</b>	0.48
R01-040912EV-0046	P-19D	0.44	0.37	ND
R01-040912EV-0047	P-19E	0.24	0.38	ND
R01-040912EV-0048	P-20A	<b>20</b>	<b>6.1</b>	<b>3.5</b>
R01-040912EV-0049	P-21A	<b>6.6</b>	<b>3.4</b>	<b>2.2</b>
R01-040912EV-0050	P-21B	<b>9.6</b>	<b>5.8</b>	0.83
R01-040912EV-0051	P-22A	<b>16</b>	<b>7.8</b>	<b>1.1</b>
R01-040912EV-0052	P-23A	<b>4.7</b>	<b>1.7</b>	<b>1.1</b>
R01-040912EV-0053	P-24A	<b>1.5</b>	0.43	ND
R01-040912EV-0054	P-25A	<b>6.5</b>	<b>2.4</b>	<b>1.5</b>

**NOTES:**

- 1) Soil samples analyzed using U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Region I EIASOP-FLDPCB2, PCBs in Soil Field Method (Fixed Lab).
- 2) Values in parentheses are Connecticut Department of Energy and Environmental Protection, Direct Exposure Criteria for Soil, Residential Criteria/Industrial-Commercial Criteria (CT DEEP DEC RC/CT DEEP DEC I-C). Units in milligrams per Kilogram (mg/Kg).  
**Bolded and shaded values exceed CT DEEP DEC RC and/or I-C Criteria.**
- 3) ND = Not detected.

TABLE 2

**SURFACE SOIL METALS SCREENING RESULTS**  
**CHARLES BATCHELDER SITE**  
**NEWTOWN, CONNECTICUT**  
**Results in mg/Kg**

Sample Number	Sample Location	Arsenic (10/10)	Barium (4,700/140,000)	Cadmium (34/1,000)	Chromium (3,900/51,000)*	Copper (2,500/76,000)	Lead (500/1,000)	Nickel (1,400/7,500)	Silver (340/10,000)	Zinc (20,000/610,000)
R01-040912EV-0001	SS-01	<26	450	<9	275	327	491	52	<6	571
R01-040912EV-0002	SS-02	<12	437	<9	<39	134	74	<47	<6	317
R01-040912EV-0003	SS-03	<31	313	<b>37</b>	572	<b>2,533</b>	<b>665</b>	270	<6	4,190
R01-040912EV-0004	SS-04	<b>22</b>	505	<9	<37	223	166	52	<6	437
R01-040912EV-0005	SS-05	<14	491	<10	<38	136	124	<47	<6	267
R01-040912EV-0006	SS-06	<b>53</b>	271	<b>79</b>	1,455	<b>5,861</b>	<b>805</b>	682	<7	9,010
R01-040912EV-0007	SS-07	<b>12</b>	408	<10	<40	141	62	53	<6	606
R01-040912EV-0008	SS-08	<13	417	<9	<35	138	99	<47	<6	248
R01-040912EV-0009	SS-09	<b>62</b>	<46	<b>34</b>	321	<b>3,434</b>	<b>636</b>	342	<6	6,622
R01-040912EV-0010	SS-10	<36	143	<b>89</b>	1,056	<b>5,837</b>	<b>726</b>	712	<7	10,100
R01-040912EV-0013	SS-13	<b>36</b>	<45	<b>38</b>	309	<b>2,575</b>	<b>656</b>	198	<6	5,471
R01-040912EV-0014	P-01A	<57	<50	<b>132</b>	620	<b>6,690</b>	<b>1,682</b>	905	<7	14,200
R01-040912EV-0015	P-02A	<b>57</b>	<42	17	691	<b>10,700</b>	<b>1,291</b>	197	<5	<b>24,500</b>
R01-040912EV-0016	P-03A	<42	116	<b>179</b>	412	<b>4,043</b>	<b>1,295</b>	234	<6	13,000
R01-040912EV-0017	P-04A	<36	181	<b>70</b>	365	<b>4,444</b>	<b>863</b>	183	22	17,300
R01-040912EV-0018	P-05A	<b>57</b>	170	<b>159</b>	583	<b>4,873</b>	<b>1,003</b>	351	<6	<b>31,900</b>
R01-040912EV-0019	P-06A	<31	265	<b>61</b>	532	<b>5,340</b>	<b>736</b>	215	<6	12,900
R01-040912EV-0020	P-07A	<b>55</b>	<41	<9	427	<b>6,426</b>	<b>721</b>	371	<5	14,100
R01-040912EV-0021	P-08A	<32	136	<b>62</b>	446	<b>6,274</b>	<b>572</b>	288	<6	14,800
R01-040912EV-0022	P-09A	<b>32</b>	313	<b>44</b>	401	<b>4,039</b>	<b>590</b>	147	<6	8,605
R01-040912EV-0023	P-10A	<34	191	<b>57</b>	808	<b>6,680</b>	<b>732</b>	386	<6	12,900
R01-040912EV-0024	P-11A	<b>52</b>	178	<b>43</b>	552	<b>5,371</b>	<b>1,016</b>	185	<5	8,971
R01-040912EV-0025	P-12A	<34	186	<b>43</b>	539	<b>5,882</b>	<b>970</b>	269	<5	8,871
R01-040912EV-0026	P-13A	<29	<36	20	611	<b>5,003</b>	<b>759</b>	390	<5	7,908
R01-040912EV-0027	P-14A	<b>35</b>	50	21	609	<b>17,000</b>	<b>722</b>	221	<5	7,269
R01-040912EV-0028	P-14B	<30	<38	<b>41</b>	561	<b>6,489</b>	<b>829</b>	164	<5	7,166
R01-040912EV-0029	P-15A	<41	<46	<b>37</b>	632	<b>5,166</b>	<b>1,012</b>	343	<6	8,887
R01-040912EV-0030	P-16A	<32	163	24	1,202	<b>4,832</b>	<b>983</b>	192	<5	6,099
R01-040912EV-0031	P-17A	<34	46	19	874	<b>15,300</b>	<b>955</b>	205	<5	5,984
R01-040912EV-0032	P-18A	<29	<38	<8	1,088	<b>7,429</b>	<b>720</b>	239	<5	7,654
R01-040912EV-0033	P-18B	<32	53	<8	1,317	<b>7,974</b>	<b>902</b>	292	<5	8,530
R01-040912EV-0034	P-18C	<b>29</b>	84	<8	1,185	<b>6,459</b>	480	322	<5	4,807
R01-040912EV-0035	P-18D	<32	116	<9	1,341	<b>7,651</b>	<b>809</b>	354	<5	7,234
R01-040912EV-0036	P-18E	<b>36</b>	243	<9	1,464	<b>7,697</b>	<b>934</b>	304	<6	6,806
R01-040912EV-0037	P-18F	<26	<34	<7	1,443	<b>6,631</b>	<b>671</b>	271	<5	5,402
R01-040912EV-0038	P-18G	<31	<39	<8	1,430	<b>8,816</b>	<b>764</b>	289	<5	7,310
R01-040912EV-0039	P-18H	<b>37</b>	<36	<8	1,523	<b>6,658</b>	<b>931</b>	288	<5	5,134
R01-040912EV-0040	P-18I	<33	<36	12	1,204	<b>5,958</b>	<b>1,047</b>	211	<5	5,334
R01-040912EV-0041	P-18J	<28	98	9	1,252	<b>6,131</b>	<b>720</b>	242	7	4,703
R01-040912EV-0042	P-18K	<29	83	16	1,468	<b>6,689</b>	<b>762</b>	318	<6	6,232

TABLE 2

**SURFACE SOIL METALS SCREENING RESULTS  
CHARLES BATCHELDER SITE  
NEWTOWN, CONNECTICUT  
Results in mg/Kg**

Sample Number	Sample Location	Arsenic (10/10)	Barium (4,700/140,000)	Cadmium (34/1,000)	Chromium (3,900/51,000)*	Copper (2,500/76,000)	Lead (500/1,000)	Nickel (1,400/7,500)	Silver (340/10,000)	Zinc (20,000/610,000)
R01-040912EV-0043	P-19A	<b>38</b>	99	<b>44</b>	720	<b>5,014</b>	<b>590</b>	313	7	7,669
R01-040912EV-0044	P-19B	<35	196	<b>95</b>	869	<b>6,827</b>	<b>770</b>	405	<6	11,600
R01-040912EV-0045	P-19C	<b>60</b>	108	<b>39</b>	720	<b>6,729</b>	<b>784</b>	317	<5	10,600
R01-040912EV-0046	P-19D	<23	<39	<8	505	<b>6,958</b>	447	151	<5	8,181
R01-040912EV-0047	P-19E	<22	<37	<8	377	<b>7,803</b>	424	161	<5	8,138
R01-040912EV-0048	P-20A	<b>58</b>	133	15	575	<b>8,115</b>	<b>798</b>	143	<5	11,200
R01-040912EV-0049	P-21A	<b>64</b>	333	<b>52</b>	730	<b>5,972</b>	<b>1,338</b>	332	16	6,691
R01-040912EV-0050	P-21B	<72	379	33	794	<b>8,120</b>	<b>2,667</b>	352	<7	9,918
R01-040912EV-0051	P-22A	<b>51</b>	105	<b>149</b>	631	<b>6,942</b>	<b>925</b>	709	<7	14,200
R01-040912EV-0052	P-23A	<15	<27	<6	334	293	301	<30	<4	1,878
R01-040912EV-0053	P-24A	<b>38</b>	90	<8	1,175	<b>7,876</b>	<b>765</b>	326	<5	8,442
R01-040912EV-0054	P-25A	<49	378	<b>46</b>	741	<b>6,014</b>	<b>1,443</b>	293	7	7,068

**NOTES:**

- 1) Soil samples analyzed using U.S. EPA Office of Environmental Measurement and Evaluation (OEME) Region I SOP,FLDXRFN3, Environmental Metals Screening with the Niton XL 3t 600XRF.
- 2) Values in parentheses are Connecticut Department of Energy and Environmental Protection, Direct Exposure Criteria for Soil, Residential Criteria/Industrial-Commercial Criteria (CT DEEP DEC RC/CT DEEP DEC I-C). Units in milligrams per Kilogram (mg/Kg).  
**Bolded and shaded values exceed CT DEEP DEC RC and/or I-C Criteria.**
- 3) < = less than.
- 4) \* CT DEEP does not list DEC values for total chromium; therefore, total chromium results are compared to the CT DEP DEC values for trivalent chromium.

TABLE 3

**SURFACE SOIL METALS CONFIRMATION RESULTS  
CHARLES BATCHELDER SITE  
NEWTOWN, CONNECTICUT  
Results in mg/Kg**

SAMPLE LOCATION	SS-01	P-18A	P-19B	P-20A	P-21B	CT DEEP DEC RC	CT DEEP DEC I-C
SAMPLE NUMBER	R01-040912EV-0001	R01-040912EV-0032	R01-040912EV-0044	R01-040912EV-0048	R01-040912EV-0050		
SAMPLE DEPTH	0-3 inches						
<b>PARAMETER</b>							
Aluminum	17,000	230,000	190,000	270,000	130,000	NL	NL
Antimony	ND	<b>38</b>	<b>67</b>	<b>63</b>	<b>30</b>	27	8,200
Arsenic	<b>12</b>	ND	ND	ND	ND	10	10
Barium	78	320	200	360	280	4,700	140,000
Cadmium	3.1	20	<b>72</b>	<b>47</b>	<b>40</b>	34	1,000
Calcium	970	3,300	2,100	7,200	14,000	NL	NL
Chromium	33	890	760	630	550	3,900*	51,000*
Cobalt	12	20	95	ND	44	NL	NL
Copper	300	<b>9,300</b>	<b>14,000</b>	<b>9,100</b>	<b>7,600</b>	2,500	76,000
Iron	21,000	35,000	140,000	16,000	80,000	NL	NL
Lead	<b>540</b>	<b>1,100</b>	<b>1,500</b>	<b>1,800</b>	<b>2,500</b>	500	1,000
Magnesium	4,400	18,000	5,900	7,900	13,000	NL	NL
Manganese	270	1,500	1,800	780	1,100	NL	NL
Nickel	24	330	<b>2,200</b>	250	230	1,400	7,500
Silver	1.0	8.5	12	ND	8.0	340	10,000
Vanadium	34	54	40	43	41	470	14,000
Zinc	460	8,900	8,000	12,000	5,700	20,000	610,000

**NOTES:**

- 1) Samples analyzed by U.S. EPA Office of Environmental Measurement and Evaluation (OEME) USING EPA Region I SOP, EIASOP-INGDVICP1, Metals in Soil Medium Level by Inductively Coupled Plasma.
- 2) All results in Milligrams per Kilogram (mg/Kg).
- 3) CT DEEP DEC RC = Connecticut Department of Energy and Environmental Protection, Direct Exposure Criteria for Soil, Residential Criteria.  
CT DEEP DEC I-C = Connecticut Department of Energy and Environmental Protection, Direct Exposure Criteria for Soil, Industrial-Commercial Criteria.  
All criteria presented in Milligrams per Kilogram (mg/Kg).  
**Bolded and shaded results exceed CT DEP DEC RC or I-C.**
- 4) ND = Not Detected.
- 5) NL = Not Listed.
- 6) \* CT DEEP does not list DEC values for total chromium; therefore, total chromium results are compared to the CT DEP DEC values for trivalent chromium.

Appendix E  
Analytical Data



United States Environmental Protection Agency  
Office of Environmental Measurement & Evaluation  
60 Westview Street  
Lexington, MA 02421-3185

## Laboratory Report

April 21, 2012

Eric Vanderboom - Mail Code OSRR02-2  
US EPA New England R1

Project Number: 12040017  
Project: Batchelder Site - Newtown, CT  
Analysis: PCB's in Soil Field Method (Fixed Lab)  
Analyst: Paul Carroll

*Paul Carroll*  
4.21.12

### Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, FLDPCB2.SOP.

Concentrations of PCBs in soil were calculated using an external standard technique.

Analysis for PCB's performed by this field analytical technique is used for tentative identification and semi-quantitation of PCB's in soil, oil, and sediment samples.

Date Samples Received by the Laboratory: 4/11/12

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Results for soil samples are reported on a dry weight basis.

If you have any questions please call me at 617-918-8340.

Sincerely,

*Daniel Boudreau* 4/24/12  
Daniel Boudreau

Project # 12040017

PCB's in Soil Field Method (Fixed Lab)

		US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY Batchelder Site - Newtown, CT			
Client Sample ID	R01-040912EV-0001	R01-040912EV-0002	R01-040912EV-0003	R01-040912EV-0004	R01-040912EV-0005
Lab Sample ID	AB28714	AB28715	AB28716	AB28717	AB28718
Date of Collection	4/9/2012	4/9/2012	4/9/2012	4/9/2012	4/9/2012
Date of Extraction	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/12/2012
Date of Analysis	4/12/2012	4/12/2012	4/12/2012	4/12/2012	4/12/2012
Matrix	Soil	Soil	Soil	Soil	Soil
Compound	Conc. (RL) mg/Kg	Conc. (RL) mg/Kg	Conc. (RL) mg/Kg	Conc. (RL) mg/Kg	Conc. (RL) mg/Kg
Aroclor-1242	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)
Aroclor-1248	ND (0.20)	ND (0.20)	6.3 (0.24)	ND (0.20)	ND (0.20)
Aroclor-1254	0.56 (0.20)	ND (0.20)	5.5 (0.24)	ND (0.20)	0.35 (0.20)
Aroclor-1260	0.40 (0.20)	ND (0.20)	0.60 (0.24)	ND (0.20)	0.31 (0.20)
Aroclor-1262	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)
Aroclor-1268	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.20)	ND (0.20)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0006 AB28719 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0007 AB28720 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0008 AB28721 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0009 AB28722 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0010 AB28723 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.26)
Aroclor-1248	19 (0.22)	ND (0.20)	ND (0.20)	1.9 (0.48)	24 (2.6)
Aroclor-1254	9.2 (0.22)	ND (0.20)	ND (0.20)	9.2 (0.24)	7.1 (0.26)
Aroclor-1260	0.99 (0.22)	ND (0.20)	ND (0.20)	1.3 (0.24)	0.51 (0.26)
Aroclor-1262	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.26)
Aroclor-1268	ND (0.22)	ND (0.20)	ND (0.20)	ND (0.24)	ND (0.26)

US ENVIRONMENTAL PROTECTION AGENCY NEW ENGLAND LABORATORY Batchelder Site - Newtown, CT						
	R01-040912EV-0013 AB28724 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0014 AB28725 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0015 AB28726 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0016 AB28727 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0017 AB28728 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	
Aroclor-1242	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.26)
Aroclor-1248	30 (2.6)	22 (2.6)	4.8 (1.4)	6.7 (2.6)	250 ( 13)	
Aroclor-1254	12 (0.26)	12 (0.26)	2.8 (0.28)	6.7 (0.26)	16 (0.26)	
Aroclor-1260	1.4 (0.26)	1.3 (0.26)	0.40 (0.28)	1.0 (0.26)	7.6 (0.26)	
Aroclor-1262	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.26)	ND (0.26)	
Aroclor-1268	ND (0.26)	ND (0.26)	ND (0.28)	ND (0.26)	ND (0.26)	

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0018 AB28729 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0019 AB28730 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0020 AB28731 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0021 AB28732 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0022 AB28733 4/9/2012 4/12/2012 4/12/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.26)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)
Aroclor-1248	16 (2.6)	4.0 (0.48)	4.0 (0.52)	49 (2.2)	5.2 (0.44)
Aroclor-1254	9.0 (0.26)	3.2 (0.24)	3.2 (0.26)	12 (0.22)	2.0 (0.22)
Aroclor-1260	1.2 (0.26)	0.57 (0.24)	0.48 (0.26)	1.3 (0.22)	0.37 (0.22)
Aroclor-1262	ND (0.26)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)
Aroclor-1268	ND (0.26)	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.22)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0023 AB28734 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0024 AB28735 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0025 AB28736 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0026 AB28737 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0027 AB28738 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Atroclor-1242	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Atroclor-1248	24 (1.4)	36 (1.3)	40 (1.3)	28 (1.3)	29 (1.3)
Atroclor-1254	4.0 (0.28)	5.0 (0.26)	5.5 (0.26)	4.2 (0.26)	2.3 (0.26)
Atroclor-1260	0.84 (1.4) L	1.6 (1.3)	1.8 (1.3)	2.1 (1.3)	1.2 (1.3)
Atroclor-1262	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)
Atroclor-1268	ND (0.28)	ND (0.26)	ND (0.26)	ND (0.26)	ND (0.26)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0028 AB28739 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0029 AB28740 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0030 AB28741 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0031 AB28742 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0032 AB28743 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.26)	ND (0.24)	ND (0.34)	ND (0.26)	ND (0.26)
Aroclor-1248	36 (1.3)	27 (1.2)	17 (0.34)	9.1 (0.26)	1.2 (0.26)
Aroclor-1254	4.0 (0.26)	6.1 (0.24)	3.8 (0.34)	3.4 (0.26)	0.27 (0.26)
Aroclor-1260	1.6 (1.3)	1.4 (1.2)	0.79 (0.34)	0.34 (0.26)	ND (0.26)
Aroclor-1262	ND (0.26)	ND (0.24)	ND (0.34)	ND (0.26)	ND (0.26)
Aroclor-1268	ND (0.26)	ND (0.24)	ND (0.34)	ND (0.26)	ND (0.26)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0033 AB28744 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0053 AB28745 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0034 AB28746 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0035 AB28747 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0036 AB28748 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.26)	ND (0.26)	ND (0.3)	ND (0.26)	ND (0.22)
Aroclor-1248	1.2 (0.26)	1.5 (0.26)	0.79 (0.3)	0.85 (0.26)	1.6 (0.22)
Aroclor-1254	0.37 (0.26)	0.43 (0.26)	ND (0.3)	ND (0.26)	0.37 (0.22)
Aroclor-1260	ND (0.26)	ND (0.26)	ND (0.3)	ND (0.26)	ND (0.22)
Aroclor-1262	ND (0.26)	ND (0.26)	ND (0.3)	ND (0.26)	ND (0.22)
Aroclor-1268	ND (0.26)	ND (0.26)	ND (0.3)	ND (0.26)	ND (0.22)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0037 AB28749 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0038 AB28750 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0039 AB28751 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0040 AB28752 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0041 AB28753 4/9/2012 4/12/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.32)	ND (0.24)	ND (0.3)	ND (0.3)	ND (0.3)
Aroclor-1248	1.4 (0.32)	1.6 (0.24)	2.6 (0.3)	6.5 (0.3)	7.1 (0.3)
Aroclor-1254	0.33 (0.32)	0.26 (0.24)	0.54 (0.3)	0.95 (0.3)	1.1 (0.3)
Aroclor-1260	ND (0.32)	ND (0.24)	ND (0.3)	ND (0.3)	ND (0.3)
Aroclor-1262	ND (0.32)	ND (0.24)	ND (0.3)	ND (0.3)	ND (0.3)
Aroclor-1268	ND (0.32)	ND (0.24)	ND (0.3)	ND (0.3)	ND (0.3)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0042 AB28754 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0043 AB28755 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0044 AB28756 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0045 AB28757 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0046 AB28758 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Atroclor-1242	ND (0.3)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)
Atroclor-1248	0.81 (0.3)	11 (1.2)	15 (1.2)	8.9 (0.24)	0.44 (0.24)
Atroclor-1254	0.47 (0.3)	3.7 (0.24)	4.3 (0.24)	2.8 (0.24)	0.37 (0.24)
Atroclor-1260	ND (0.3)	0.49 (1.2) L	0.65 (1.2) L	0.48 (0.24)	ND (0.24)
Atroclor-1262	ND (0.3)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)
Atroclor-1268	ND (0.3)	ND (0.24)	ND (0.24)	ND (0.24)	ND (0.24)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0047 AB28759 4/9/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0048 AB28760 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0049 AB28761 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0050 AB28762 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0051 AB28763 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.20)	ND (0.24)
Aroclor-1248	0.24 (0.24)	20 (1.3)	6.6 (1.1)	9.6 (1.0)	16 (1.2)
Aroclor-1254	0.38 (0.24)	6.1 (0.26)	3.4 (0.22)	5.8 (0.20)	7.8 (0.24)
Aroclor-1260	ND (0.24)	3.5 (1.3)	2.2 (1.1)	0.83 (1.0) L	1.1 (1.2)
Aroclor-1262	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.20)	ND (0.24)
Aroclor-1268	ND (0.24)	ND (0.26)	ND (0.22)	ND (0.20)	ND (0.24)

**US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY  
Batchelder Site - Newtown, CT**

	R01-040912EV-0052 AB28764 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0054 AB28765 4/10/2012 4/13/2012 4/13/2012 Soil Conc. (RL) mg/Kg	R01-040912EV-0057 AB28767 4/10/2012 4/13/2012 4/13/2012 PE Soil Conc. (RL) mg/Kg
Aroclor-1242	ND (0.32)	ND (0.22)	ND (0.20)
Aroclor-1248	4.7 (0.64)	6.5 (0.44)	ND (0.20)
Aroclor-1254	1.7 (0.32)	2.4 (0.22)	0.27 (0.20)
Aroclor-1260	1.1 (0.64)	1.5 (0.44)	ND (0.20)
Aroclor-1262	ND (0.32)	ND (0.22)	ND (0.20)
Aroclor-1268	ND (0.32)	ND (0.22)	ND (0.20)

Qualifiers: RL = Reporting limit  
ND = Not Detected above Reporting limit  
NA = Not Applicable due to high sample dilutions or sample interferences  
J = Estimated value  
E = Estimated value exceeds the calibration range  
L = Estimated value is below the calibration range  
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.  
P = The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.  
C = The identification has been confirmed by GC/MS.  
A = Suspected Aldol condensation product.  
N = Tentatively identified compound.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
REGION 1  
OFFICE OF ENVIRONMENTAL MEASUREMENT & EVALUATION  
NORTH CHELMSFORD, MASSACHUSETTS 01863-2431

**MEMORANDUM**

**DATE:** 04/20/2012

**SUBJECT:** Batchelder Site, Newton, CT - XRF Field Analytical Screening Results

**FROM:** Scott Clifford, Chemist, *SC 4/26/12*

**TO:** Eric Vanderboom, OSC

**THRU:** Dan Boudreau, Chemistry Team Leader *DB 4/26/12*

**PROJECT NUMBER:** 12040017

**DATE OF ANALYSIS:** 04/12/2012 - 04/13/2012

**ANALYTICAL PROCEDURE:**

Soil samples were analyzed for Heavy Metals using Region 1's Standard Operating Procedure for Environmental Metals Screening (FLDXRFN3.SOP) with the Niton XL3t 600 XRF. Samples were collected in glass jars.

A homogenized portion of the sample was placed into a plastic XRF cup for analysis. XRF results should be viewed as semi-quantitative. Table 1 list target compounds and approximate quantitation limits, however for this survey, raw instrument data is reported to help guide the site investigation. Metals results reported below or close to the quantitation limits in the table are not as reliable as results well above quantitation limits.

**RESULTS:**

Results are reported in ppm.

**NOTES:**

< = Less than

File: K:\CHEMISTRY\REPORTS\FIELD\12040017FXRF.xls

Table1

<b>Batchelder Site, Newton, CT</b>	
<b>Target Analytes and Approximate Quantitation Limits</b>	
<b>Analyte</b>	<b>Approximate quantitation limit (ppm)</b>
Lead (Pb)	10
Arsenic (As)	20
Chromium (Cr)	40
Barium (Ba)	100
Cadmium (Cd)	15
Copper (Cu)	25
Zinc (Zn)	30
Silver (Ag)	15
Nickel (Ni)	50

Batchelder Site, Newton, CT - XRF Analytical Results									
04/12/12 - 04/13/12									
Results in ppm									
Sample #	Pb	As	Cr	Ba	Cd	Cu	Zn	Ag	Ni
R01-040912EV-0001	491	<26	275	450	<9	327	571	<6	52
R01-040912EV-0002	74	<12	<39	437	<9	134	317	<6	<47
R01-040912EV-0003	665	<31	572	313	37	2533	4190	<6	270
R01-040912EV-0004	166	22	<37	505	<9	223	437	<6	52
R01-040912EV-0005	124	<14	<38	491	<10	136	267	<6	<47
R01-040912EV-0006	805	53	1455	271	79	5861	9010	<7	682
R01-040912EV-0006 LAB DUPLICATE	742	41	1330	284	75	7492	8370	<7	1393
R01-040912EV-0007	62	12	<40	408	<10	141	606	<6	53
R01-040912EV-0008	99	<13	<35	417	<9	138	248	<6	47
R01-040912EV-0009	636	62	321	<46	34	3434	6622	<6	342
R01-040912EV-0010 (white specs)	726	<36	1056	143	89	5837	10,100	<7	712
R01-040912EV-0013	656	36	309	<45	38	2575	5471	<6	198
R01-040912EV-0014 (white specs)	1682	<57	620	<50	132	6690	14,200	<7	905
R01-040912EV-0015	1291	57	691	<42	17	10,700	24,500	<5	197
R01-040912EV-0016	1295	<42	412	116	179	4043	13,000	<6	234
R01-040912EV-0017	863	<36	365	181	70	4444	17,300	22	183
R01-040912EV-0018	1003	57	583	170	159	4873	31,900	<6	351
R01-040912EV-0019 (white specs)	736	<31	532	265	61	5340	12,900	<6	215
R01-040912EV-0020 (white specs)	721	55	427	<41	<9	6426	14,100	<5	371
R01-040912EV-0021	572	<32	446	136	62	6274	14,800	<6	288
R01-040912EV-0022	590	32	401	313	44	4039	8605	<6	147
R01-040912EV-0023	732	<34	808	191	57	6680	12,900	<6	386
R01-040912EV-0024	1016	52	552	178	43	5371	8971	<5	185
R01-040912EV-0025 (white specs)	970	<34	539	186	43	5,882	8871	<5	269
R01-040912EV-0026	759	<29	611	<36	20	5003	7908	<5	390
R01-040912EV-0027	722	35	609	50	21	17,000	7269	<5	221
R01-040912EV-0028	829	<30	561	<38	41	6489	7166	<5	164
R01-040912EV-0029	1012	<41	632	<46	37	5166	8887	<6	343
R01-040912EV-0030	983	<32	1202	163	24	4832	6099	<5	192
R01-040912EV-0031	955	<34	874	46	19	15,300	5984	<5	205
R01-040912EV-0032	720	<29	1088	<38	<8	7429	7654	<5	239
R01-040912EV-0033	902	<32	1317	53	<8	7974	8530	<5	292
R01-040912EV-0033 LAB DUPLICATE	698	<27	1260	<37	<8	7412	7884	<5	249
R01-040912EV-0034	480	29	1185	84	<8	6459	4807	<5	322
R01-040912EV-0035	809	<32	1341	116	<9	7651	7234	<5	354
R01-040912EV-0036	934	36	1464	243	<9	7697	6806	<6	304
R01-040912EV-0037	671	<26	1443	<34	<7	6631	5402	<5	271
R01-040912EV-0038	764	<31	1430	<39	<8	8816	7310	<5	289
R01-040912EV-0039	931	37	1523	<36	<8	6658	5134	<5	288
R01-040912EV-0040	1047	<33	1204	<36	12	5958	5334	<5	211
R01-040912EV-0041	720	<28	1252	98	9	6131	4703	<5	242
R01-040912EV-0042	762	<29	1468	83	16	6689	6232	7	318
R01-040912EV-0043	590	38	720	99	44	5014	7669	<6	313
R01-040912EV-0044	770	<35	869	196	95	6827	11,600	7	405
R01-040912EV-0045	784	60	720	108	39	6729	10,600	<6	317





Laboratory Report

May 09, 2012

Eric Vanderboom - Mail Code OSRR02-2  
US EPA New England R1

Project Number: 12040017  
Project: Batchelder Site - Newtown, CT  
Analysis: PCBs Medium Level in Soils and Sediments  
Analyst: Paul Carrall

*Reviewed  
5.9.12*

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, PESTSOIL3.SOP.

The SOP is based on EPA SW-846 Method 8082

The analysis was performed using high resolution capillary column chromatography on an Agilent 6890 Series gas chromatograph equipped with dual electron capture detectors. The 30 meter dual capillary column system consists of a J&W DB-5 and J&W DB-1701, both with 0.25mm ID and 0.25 micron film thickness.

The results are reported on a dry weight basis.

Date Samples Received by the Laboratory : 04/11/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

*Daniel N. Boudreau 5/10/12*  
Daniel N. Boudreau  
Chemistry Team Leader

<b>Qualifiers:</b>	<b>RL</b>	Reporting limit
	<b>ND</b>	Not Detected above Reporting limit
	<b>NA</b>	Not Applicable due to high sample dilutions or sample interferences
	<b>J</b>	Estimated value
	<b>E</b>	Estimated value exceeds the calibration range
	<b>L</b>	Estimated value is below the calibration range
	<b>B</b>	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
	<b>P</b>	The confirmation value exceeded 35% difference and is less than 100%. The lower value is reported.
	<b>C</b>	The identification has been confirmed by GC/MS.
	<b>R</b>	No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

PCBs Medium Level in Soils and Sediments

Client Sample ID: R01-040912EV-0001  
Date of Collection: 4/9/2012  
Date of Extraction: 4/21/12  
Date of Analysis: 4/25/12  
Dry Weight Extracted: 5.17 grams  
Wet Weight Extracted: 5.65 grams

Lab Sample ID: AB28714  
Matrix: Soil  
Final Volume: 5 mL  
Percent Solids: 92%  
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	0.10	
11104-28-2	Aroclor-1221	ND	0.10	
11141-16-5	Aroclor-1232	ND	0.10	
53469-21-9	Aroclor-1242	ND	0.10	
12672-29-6	Aroclor-1248	ND	0.10	
11097-69-1	Aroclor-1254	ND	0.10	
11096-82-5	Aroclor-1260	0.44	0.10	
11100-14-4	Aroclor-1262	ND	0.10	
37324-23-5	Aroclor-1268	ND	0.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	79	36 - 131
Decachlorobiphenyl	96	30 - 165

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

PCBs Medium Level in Soils and Sediments

Client Sample ID: R01-040912EV-0032  
 Date of Collection: 4/9/2012  
 Date of Extraction: 4/21/12  
 Date of Analysis: 4/25/12  
 Dry Weight Extracted: 3.67 grams  
 Wet Weight Extracted: 5.27 grams

Lab Sample ID: AB28743  
 Matrix: Soil  
 Final Volume: 5 mL  
 Percent Solids: 70%  
 Extract Dilution: 2

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	0.27	
11104-28-2	Aroclor-1221	ND	0.27	
11141-16-5	Aroclor-1232	ND	0.27	
53469-21-9	Aroclor-1242	ND	0.27	
12672-29-6	Aroclor-1248	6.6	0.27	E
11097-69-1	Aroclor-1254	1.9	0.27	
11096-82-5	Aroclor-1260	ND	0.27	
11100-14-4	Aroclor-1262	ND	0.27	
37324-23-5	Aroclor-1268	ND	0.27	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	88	36 - 131
Decachlorobiphenyl	100	30 - 165

Comments: The Aroclor pattern for 1248 is weathered, and was not an exact match, as was the case for the rest of the samples that were ID'd with Aroclor 1248 in this sample delivery group. The closest match was 1248 but could also possibly be a weathered 1242.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

PCBs Medium Level in Soils and Sediments

Client Sample ID: R01-040912EV-0044  
Date of Collection: 4/9/2012  
Date of Extraction: 4/21/12  
Date of Analysis: 4/25/12  
Dry Weight Extracted: 4.14 grams  
Wet Weight Extracted: 5.34 grams

Lab Sample ID: AB28756  
Matrix: Soil  
Final Volume: 5 mL  
Percent Solids: 78%  
Extract Dilution: 1

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	1.20	
11104-28-2	Aroclor-1221	ND	1.20	
11141-16-5	Aroclor-1232	ND	1.20	
53469-21-9	Aroclor-1242	ND	1.20	
12672-29-6	Aroclor-1248	26	1.20	E
11097-69-1	Aroclor-1254	9.0	1.20	
11096-82-5	Aroclor-1260	1.2	1.20	L
11100-14-4	Aroclor-1262	ND	1.20	
37324-23-5	Aroclor-1268	ND	1.20	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	110	36 - 131
Decachlorobiphenyl	130	30 - 165

Comments: The Aroclor pattern for 1248 is weathered, and was not an exact match, as was the case for the rest of the samples that were ID'd with Aroclor 1248 in this sample delivery group. The closest match was 1248 but could also possibly be a weathered 1242.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

PCBs Medium Level in Soils and Sediments

Client Sample ID: R01-040912EV-0048  
Date of Collection: 4/10/2012  
Date of Extraction: 4/21/12  
Date of Analysis: 4/25/12  
Dry Weight Extracted: 3.92 grams  
Wet Weight Extracted: 5.13 grams

Lab Sample ID: AB28760  
Matrix: Soil  
Final Volume: 5 mL  
Percent Solids: 76%  
Extract Dilution: 10

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	1.30	
11104-28-2	Aroclor-1221	ND	1.30	
11141-16-5	Aroclor-1232	ND	1.30	
53469-21-9	Aroclor-1242	ND	1.30	
12672-29-6	Aroclor-1248	24	1.30	
11097-69-1	Aroclor-1254	7.2	1.30	
11096-82-5	Aroclor-1260	2.8	1.30	
11100-14-4	Aroclor-1262	ND	1.30	
37324-23-5	Aroclor-1268	ND	1.30	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	100	36 - 131
Decachlorobiphenyl	180	30 - 165

Comments: The Aroclor pattern for 1248 is weathered, and was not an exact match, as was the case for the rest of the samples that were ID'd with Aroclor 1248 in this sample delivery group. The closest match was 1248 but could also possibly be a weathered 1242.

The decachlorobiphenyl surrogate recovery exceeds the QC limit. Surrogate recovery for tetrachloroxylene is within specification.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**PCBs Medium Level in Soils and Sediments**

Client Sample ID: R01-040912EV-0050  
Date of Collection: 4/10/2012  
Date of Extraction: 4/21/12  
Date of Analysis: 4/25/12  
Dry Weight Extracted: 4.62 grams  
Wet Weight Extracted: 5.15 grams

Lab Sample ID: AB28762  
Matrix: Soil  
Final Volume: 5 mL  
Percent Solids: 90%  
Extract Dilution: 10

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	1.10	
11104-28-2	Aroclor-1221	ND	1.10	
11141-16-5	Aroclor-1232	ND	1.10	
53469-21-9	Aroclor-1242	ND	1.10	
12672-29-6	Aroclor-1248	12	1.10	
11097-69-1	Aroclor-1254	3.6	1.10	
11096-82-5	Aroclor-1260	ND	1.10	
11100-14-4	Aroclor-1262	ND	1.10	
37324-23-5	Aroclor-1268	ND	1.10	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	110	36 - 131
Decachlorobiphenyl	130	30 - 165

Comments: The Aroclor pattern for 1248 is weathered, and was not an exact match, as was the case for the rest of the samples that were ID'd with Aroclor 1248 in this sample delivery group. The closest match was 1248 but could also possibly be a weathered 1242.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**Laboratory Blank**

Client Sample ID: N/A  
 Date of Collection: N/A  
 Date of Extraction: 4/21/12  
 Date of Analysis: 4/25/12  
 Dry Weight Extracted: 5.42 grams  
 Wet Weight Extracted: 5.42 grams

Lab Sample ID: N/A  
 Matrix: Soil  
 Final Volume: 5 mL  
 Percent Solids: 100%  
 Extract Dilution: 1

<u>CAS Number</u>	<u>Compound</u>	<u>Concentration mg/Kg</u>	<u>RL mg/Kg</u>	<u>Qualifier</u>
12674-11-2	Aroclor-1016	ND	0.09	
11104-28-2	Aroclor-1221	ND	0.09	
11141-16-5	Aroclor-1232	ND	0.09	
53469-21-9	Aroclor-1242	ND	0.09	
12672-29-6	Aroclor-1248	ND	0.09	
11097-69-1	Aroclor-1254	ND	0.09	
11096-82-5	Aroclor-1260	ND	0.09	
11100-14-4	Aroclor-1262	ND	0.09	
37324-23-5	Aroclor-1268	ND	0.09	

<b>Surrogate Compounds</b>	<b>Recoveries (%)</b>	<b>QC Ranges</b>
2,4,5,6-Tetrachloro-m-xylene	47	36 - 131
Decachlorobiphenyl	58	30 - 165

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
 NEW ENGLAND LABORATORY

PCB MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Batchelder Site - Newtown, CT

Sample ID: AB28714

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Aroclor-1254	0.62	ND	0.64	103.23	70 - 130

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION mg/Kg	MSD % REC	RPD %	QC LIMITS RPD
Aroclor-1254	0.63	0.64	101.59	2	50

Samples in Batch: AB28714, AB28743, AB28756, AB28760, AB28762

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

LABORATORY DUPLICATE RESULTS

Batchelder Site - Newtown, CT

Sample ID: AB28714

PARAMETER	SAMPLE RESULT mg/Kg	SAMPLE DUPLICATE RESULT mg/Kg	PRECISION RPD %	QC LIMITS
Aroclor-1016	ND	ND	ND	50
Aroclor-1221	ND	ND	ND	50
Aroclor-1232	ND	ND	ND	50
Aroclor-1242	ND	ND	ND	50
Aroclor-1248	ND	ND	ND	50
Aroclor-1254	ND	ND	ND	50
Aroclor-1260	0.44	0.45	2.2	50
Aroclor-1262	ND	ND	ND	50
Aroclor-1268	ND	ND	ND	50



United States Environmental Protection Agency  
Office of Environmental Measurement & Evaluation  
11 Technology Drive  
North Chelmsford, MA 01863-2431

Laboratory Report

April 24, 2012

Eric Vanderboom - Mail Code OSRR02-2  
US EPA New England R1

Project Number: 12040017  
Project: Batchelder Site - Newtown, CT  
Analysis: Metals in Soil Medium Level by ICP  
EPA Chemist: Janet Paquin  
JP 4/24/12

**Analytical Procedure:**

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.  
Samples were analyzed following the EPA Region I SOP, EIASOP-INGDVICP1.

Samples were prepared following the EPA Region I SOP, EIASOP-INGMETALSPREP7

Preparation and analysis SOP's are based on "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition, Revision 2, Final Update III, Methods 3050B and 6010B," respectively. Samples were analyzed using a Perkin Elmer 4300 Dual View Inductively Coupled Plasma - Optical Emission Spectrometer.

Samples were prepared and analyzed by ESAT contractors working at the USEPA New England Laboratory.

Date Samples Received by the Laboratory: 04/11/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340

Sincerely,

  
Daniel N. Boudreau  
Chemistry Team Leader

## Laboratory Qualifiers:

<b>RL</b>	Reporting limit
<b>ND</b>	Not Detected above reporting limit
<b>NA</b>	Not Applicable
<b>NC</b>	Not calculated since analyte concentration is ND
<b>J1</b>	Estimated value due to MS recovery outside acceptance criteria
<b>J2</b>	Estimated value due to LFB result outside acceptance criteria
<b>J3</b>	Estimated value due to RPD result outside acceptance criteria
<b>J4</b>	Estimated value due to LCS result outside acceptance criteria
<b>B</b>	Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 10 times the concentration in the blank.
<b>R</b>	No recovery was calculated since the analyte concentration is greater than four times the spike level.

Sample results are reported in mg/Kg, dry weight basis.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-040912EV-0001	Lab Sample ID:	AB28714
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	17000	11	
7440-36-0	Antimony	ND	2.0	J1
7440-38-2	Arsenic	12	2.0	
7440-39-3	Barium	78	2.0	
7440-41-7	Beryllium	ND	0.80	
7440-43-9	Cadmium	3.1	1.0	
7440-70-2	Calcium	970	10	
7440-47-3	Chromium	33	2.0	
7440-48-4	Cobalt	12	2.0	
7440-50-8	Copper	300	2.0	J1
7439-89-6	Iron	21000	4.0	
7439-92-1	Lead	540	2.0	
7439-95-4	Magnesium	4400	10	
7439-96-5	Manganese	270	2.0	J1
7440-02-0	Nickel	24	2.0	
7782-49-2	Selenium	ND	4.0	J2
7440-22-4	Silver	1.0	1.0	
7440-28-0	Thallium	ND	2.0	
7440-62-2	Vanadium	34	2.0	
7440-66-6	Zinc	460	2.0	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-040912EV-0032	Lab Sample ID:	AB28743
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	6
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	230000	70	
7440-36-0	Antimony	38	13	
7440-38-2	Arsenic	ND	13	
7440-39-3	Barium	320	13	
7440-41-7	Beryllium	ND	5.1	
7440-43-9	Cadmium	20	6.4	
7440-70-2	Calcium	3300	64	
7440-47-3	Chromium	890	13	
7440-48-4	Cobalt	20	13	J3
7440-50-8	Copper	9300	13	
7439-89-6	Iron	35000	25	J3
7439-92-1	Lead	1100	13	
7439-95-4	Magnesium	18000	64	
7439-96-5	Manganese	1500	13	
7440-02-0	Nickel	330	13	
7782-49-2	Selenium	ND	25	J2
7440-22-4	Silver	8.5	6.4	
7440-28-0	Thallium	ND	13	
7440-62-2	Vanadium	54	13	
7440-66-6	Zinc	8900	13	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-040912EV-0044	Lab Sample ID:	AB28756
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	6
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	190000	72	
7440-36-0	Antimony	67	13	
7440-38-2	Arsenic	ND	13	
7440-39-3	Barium	200	13	
7440-41-7	Beryllium	ND	5.2	
7440-43-9	Cadmium	72	6.5	
7440-70-2	Calcium	2100	65	
7440-47-3	Chromium	760	13	
7440-48-4	Cobalt	95	13	
7440-50-8	Copper	14000	13	
7439-89-6	Iron	140000	26	
7439-92-1	Lead	1500	13	
7439-95-4	Magnesium	5900	65	
7439-96-5	Manganese	1800	13	
7440-02-0	Nickel	2200	13	
7782-49-2	Selenium	ND	26	J2
7440-22-4	Silver	12	6.5	
7440-28-0	Thallium	ND	13	
7440-62-2	Vanadium	40	13	
7440-66-6	Zinc	8000	13	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-040912EV-0048	Lab Sample ID:	AB28760
Date of Collection:	4/10/2012	Matrix:	Soil
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	7
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	270000	85	
7440-36-0	Antimony	63	16	
7440-38-2	Arsenic	ND	16	
7440-39-3	Barium	360	16	
7440-41-7	Beryllium	ND	6.2	
7440-43-9	Cadmium	47	7.8	
7440-70-2	Calcium	7200	78	
7440-47-3	Chromium	630	16	
7440-48-4	Cobalt	ND	16	
7440-50-8	Copper	9100	16	
7439-89-6	Iron	16000	31	
7439-92-1	Lead	1800	16	
7439-95-4	Magnesium	7900	78	
7439-96-5	Manganese	780	16	
7440-02-0	Nickel	250	16	
7782-49-2	Selenium	ND	31	J2
7440-22-4	Silver	ND	7.8	
7440-28-0	Thallium	ND	16	
7440-62-2	Vanadium	43	16	
7440-66-6	Zinc	12000	16	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Metals in Soil Medium Level by ICP

Client Sample ID:	R01-040912EV-0050	Lab Sample ID:	AB28762
Date of Collection:	4/10/2012	Matrix:	Soil
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	6
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration mg/Kg	RL mg/Kg	Qualifier
7429-90-5	Aluminum	130000	70	
7440-36-0	Antimony	30	13	
7440-38-2	Arsenic	ND	13	
7440-39-3	Barium	280	13	
7440-41-7	Beryllium	ND	5.1	
7440-43-9	Cadmium	40	6.4	
7440-70-2	Calcium	14000	64	
7440-47-3	Chromium	550	13	
7440-48-4	Cobalt	44	13	
7440-50-8	Copper	7600	13	
7439-89-6	Iron	80000	25	
7439-92-1	Lead	2500	13	
7439-95-4	Magnesium	13000	64	
7439-96-5	Manganese	1100	13	
7440-02-0	Nickel	230	13	
7782-49-2	Selenium	ND	25	J2
7440-22-4	Silver	8.0	6.4	
7440-28-0	Thallium	ND	13	
7440-62-2	Vanadium	41	13	
7440-66-6	Zinc	5700	13	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**Laboratory Reagent Blank**

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Water
Date of Digestion:	4/18/2012	Final Volume:	50 mL
Date of Analysis:	4/19/2012	Digestate Dilution:	1
Volume Digested:	N/A	pH:	N/A

CAS Number	Parameter	Concentration ug/L	RL ug/L	Qualifier
7429-90-5	Aluminum	ND	110	
7440-36-0	Antimony	ND	20	
7440-38-2	Arsenic	ND	20	
7440-39-3	Barium	ND	20	
7440-41-7	Beryllium	ND	8.0	
7440-43-9	Cadmium	ND	10	
7440-70-2	Calcium	ND	100	
7440-47-3	Chromium	ND	20	
7440-48-4	Cobalt	ND	20	
7440-50-8	Copper	ND	20	
7439-89-6	Iron	ND	40	
7439-92-1	Lead	ND	20	
7439-95-4	Magnesium	ND	100	
7439-96-5	Manganese	ND	20	
7440-02-0	Nickel	ND	20	
7782-49-2	Selenium	ND	40	
7440-22-4	Silver	ND	10	
7440-28-0	Thallium	ND	20	
7440-62-2	Vanadium	ND	20	
7440-66-6	Zinc	ND	20	

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**METALS MATRIX SPIKE (MS) RESULTS**

Batchelder Site - Newtown, CT

Sample ID: AB28714

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Antimony	98.0	ND	44.0	45	75 - 125
Arsenic	98.0	12	97.5	87	75 - 125
Barium	98.0	78	158	82	75 - 125
Beryllium	39.2	ND	36.1	92	75 - 125
Cadmium	49.0	3.1	46.3	88	75 - 125
Chromium	98.0	33	124	93	75 - 125
Cobalt	98.0	12	102	92	75 - 125
Copper	98.0	300	361	62	75 - 125
Lead	98.0	540	519	R	75 - 125
Manganese	98.0	270	337	68	75 - 125
Nickel	98.0	24	111	89	75 - 125
Selenium	98.0	ND	81.4	83	75 - 125
Silver	19.6	1.0	19.6	95	75 - 125
Thallium	98.0	ND	87.7	90	75 - 125
Vanadium	98.0	34	125	93	75 - 125
Zinc	98.0	460	453	R	75 - 125

Comments:

Samples in Batch: AB28714, AB28743, AB28756, AB28760, AB28762

US ENVIRONMENTAL PROTECTION AGENCY  
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Laboratory Duplicate Results

Batchelder Site - Newtown, CT

Sample ID: AB28743

PARAMETER	SAMPLE RESULT	SAMPLE DUPLICATE RESULT	PRECISION RPD	QC LIMITS
	mg/Kg	mg/Kg	%	
Aluminum	230000	230000	0	30
Antimony	38	32	17	30
Arsenic	ND	ND	NC	30
Barium	320	270	17	30
Beryllium	ND	5.2	NC	30
Cadmium	20	20	0	30
Calcium	3300	3300	0	30
Chromium	890	840	6	30
Cobalt	20	37	60	30
Copper	9300	9600	3	30
Iron	35000	22000	46	30
Lead	1100	1000	10	30
Magnesium	18000	18000	0	30
Manganese	1500	1300	14	30
Nickel	330	320	3	30
Selenium	ND	ND	NC	30
Silver	8.5	7.5	12	30
Thallium	ND	ND	NC	30
Vanadium	54	65	18	30
Zinc	8900	8200	8	30

Comments: The beryllium RPD could not be calculated since the sample result is nondetect (ND).

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Laboratory Fortified Blank (LFB) Results

Batchelder Site - Newtown, CT

PARAMETER	LFB AMOUNT SPIKED ug/L	LFB RESULT ug/L	LFB RECOVERY %	QC LIMITS %
Aluminum	1000	975	98	85 - 115
Antimony	1000	896	90	85 - 115
Arsenic	1000	866	87	85 - 115
Barium	1000	949	95	85 - 115
Beryllium	400	356	89	85 - 115
Cadmium	500	444	89	85 - 115
Calcium	10000	9500	95	85 - 115
Chromium	1000	969	97	85 - 115
Cobalt	1000	927	93	85 - 115
Copper	1000	989	99	85 - 115
Iron	1000	968	97	85 - 115
Lead	1000	907	91	85 - 115
Magnesium	10000	9540	95	85 - 115
Manganese	1000	950	95	85 - 115
Nickel	1000	906	91	85 - 115
Selenium	1000	804	80	85 - 115
Silver	200	186	93	85 - 115
Thallium	1000	893	89	85 - 115
Vanadium	1000	978	98	85 - 115
Zinc	1000	845	85	85 - 115

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Solid Laboratory Control Sample (LCS) Results**

Batchelder Site - Newtown, CT

PARAMETER	LCS RESULTS mg/Kg	CONTROL LIMITS mg/Kg
Aluminum	10100	3950 - 12800
Antimony	97.5	2 - 186
Arsenic	91.0	77.8 - 111
Barium	169	140 - 193
Beryllium	54.8	47.8 - 67.4
Cadmium	55.6	50.3 - 70.7
Calcium	5970	5110 - 7180
Chromium	74.1	57.6 - 83.2
Cobalt	99.0	84.9 - 119
Copper	84.6	66.7 - 92.4
Iron	14000	6330 - 18700
Lead	92.7	75.5 - 108
Magnesium	2690	1960 - 3190
Manganese	283	233 - 332
Nickel	55.1	47.7 - 67.5
Selenium	76.9	69.2 - 104
Silver	35.4	22.8 - 46.1
Thallium	115	93.9 - 145
Vanadium	63.6	41.9 - 72
Zinc	129	115 - 165

Comments:



United States Environmental Protection Agency  
Office of Environmental Measurement & Evaluation  
11 Technology Drive  
North Chelmsford, MA 01863-2431

Laboratory Report

April 24, 2012

Eric Vanderboom - Mail Code OSRR02-2  
US EPA New England R1

Project Number: 12040017

Project: Batchelder Site - Newtown, CT

Analysis: VOAs in Soil High Level Method

Analyst: Joseph Montanaro

*Q* 04/24/12

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England Laboratory SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-VOAGCMS9.

Samples were analyzed by GC/MS. Samples were introduced to the GC via a Tekmar preconcentrator and an Archon auto-sampler. The analysis SOP is based on US EPA Method 8260B, revision 2.0, 1996 and Method 5035A, draft revision 1, 2002, from SW-846.

Date Samples Received by the Laboratory: 04/11/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

*Daniel N. Boudreau* 4/25/12

Daniel N. Boudreau  
Chemistry Team Leader

Qualifiers: RL = Reporting limit  
ND = Not Detected above Reporting limit  
NA = Not Applicable due to high sample dilutions or sample interferences  
NC = Not calculated since analyte concentration is ND.  
J = Estimated value  
E = Estimated value exceeds the calibration range  
L = Estimated value is below the calibration range  
B = Analyte is associated with the lab blank or trip blank contamination. Values are qualified when the observed concentration of the contamination in the sample extract is less than 5 times the concentration in the blank.  
R = No recovery was calculated since the analyte concentration is greater than four times the spike level.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0001	Lab Sample ID:	AB28701
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	90%
Dry Weight Extracted:	10.464 grams	Extract Dilution:	50
Wet Weight Extracted:	11.627 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	53	
71-55-6	1,1,1-Trichloroethane	ND	53	
79-34-5	1,1,2,2-Tetrachloroethane	ND	53	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	53	
79-00-5	1,1,2-Trichloroethane	ND	53	
75-35-4	1,1-Dichloroethylene	ND	53	
563-58-6	1,1-Dichloropropene	ND	53	
75-34-3	1,1-dichloroethane	ND	53	
87-61-6	1,2,3-Trichlorobenzene	ND	53	
96-18-4	1,2,3-Trichloropropane	ND	53	
120-82-1	1,2,4-Trichlorobenzene	ND	53	
95-63-6	1,2,4-Trimethylbenzene	ND	53	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	53	
106-93-4	1,2-Dibromoethane	ND	53	
95-50-1	1,2-Dichlorobenzene	ND	53	
107-06-2	1,2-Dichloroethane	ND	53	
78-87-5	1,2-Dichloropropane	ND	53	
108-67-8	1,3,5-Trimethylbenzene	ND	53	
541-73-1	1,3-Dichlorobenzene	ND	53	
142-28-9	1,3-Dichloropropane	ND	53	
106-46-7	1,4-Dichlorobenzene	ND	53	
594-20-7	2,2-Dichloropropane	ND	53	
78-93-3	2-Butanone (MEK)	ND	53	
95-49-8	2-Chlorotoluene	ND	53	
591-78-6	2-Hexanone	ND	53	
67-64-1	2-Propanone (acetone)	ND	53	
106-43-4	4-Chlorotoluene	ND	53	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	53	
107-13-1	Acrylonitrile	ND	53	
71-43-2	Benzene	ND	53	
108-86-1	Bromobenzene	ND	53	
74-97-5	Bromochloromethane	ND	53	
75-27-4	Bromodichloromethane	ND	53	
75-25-2	Bromoform	ND	53	
74-83-9	Bromomethane	ND	53	
75-15-0	Carbon Disulfide	ND	53	
56-23-5	Carbon tetrachloride	ND	53	
108-90-7	Chlorobenzene	ND	53	
75-00-3	Chloroethane	ND	53	

67-66-3	Chloroform	ND	53
74-87-3	Chloromethane	ND	53
124-48-1	Dibromochloromethane	ND	53
74-95-3	Dibromomethane	ND	53
75-71-8	Dichlorodifluoromethane	ND	53
60-29-7	Ethyl Ether	ND	53
100-41-4	Ethylbenzene	ND	53
87-68-3	Hexachlorobutadiene	ND	53
98-82-8	Isopropylbenzene	ND	53
108-38-3/106-42-:	M/P Xylene	ND	110
1634-04-4	Methyl-t-Butyl Ether	ND	53
75-09-2	Methylene Chloride	ND	53
104-51-8	N-Butylbenzene	ND	53
103-65-1	N-Propylbenzene	ND	53
91-20-3	Naphthalene	ND	53
95-47-6	Ortho Xylene	ND	53
99-87-6	Para-Isopropyltoluene	ND	53
135-98-8	Sec-Butylbenzene	ND	53
100-42-5	Styrene	ND	53
98-06-6	Tert-Butylbenzene	ND	53
127-18-4	Tetrachloroethylene	ND	53
109-99-9	Tetrahydrofuran	ND	53
108-88-3	Toluene	ND	53
156-60-5	Trans-1,2-Dichloroethylene	ND	53
79-01-6	Trichloroethylene	ND	53
75-69-4	Trichlorofluoromethane	ND	53
108-05-4	Vinyl Acetate	ND	53
75-01-4	Vinyl Chloride	ND	53
10061-01-5	c-1,3-dichloropropene	ND	53
156-59-2	cis-1,2-Dichloroethylene	ND	53
10061-02-6	t-1,3-Dichloropropene	ND	53

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	98	78 - 111
1,2-Dichloroethane-D4	111	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane-D4	109	74 - 136
Toluene-D8	100	85 - 118
1,4-Bromofluorobenzene	97	78 - 111

Comments: Laboratory blank is reported in ug/L.

Laboratory blank is associated with samples AB28701 (MS/MS and Duplicate Studies) - AB28707.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0002	Lab Sample ID:	AB28702
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	92%
Dry Weight Extracted:	8.470 grams	Extract Dilution:	50
Wet Weight Extracted:	9.207 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	63	
71-55-6	1,1,1-Trichloroethane	ND	63	
79-34-5	1,1,2,2-Tetrachloroethane	ND	63	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	63	
79-00-5	1,1,2-Trichloroethane	ND	63	
75-35-4	1,1-Dichloroethylene	ND	63	
563-58-6	1,1-Dichloropropene	ND	63	
75-34-3	1,1-dichloroethane	ND	63	
87-61-6	1,2,3-Trichlorobenzene	ND	63	
96-18-4	1,2,3-Trichloropropane	ND	63	
120-82-1	1,2,4-Trichlorobenzene	ND	63	
95-63-6	1,2,4-Trimethylbenzene	ND	63	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	63	
106-93-4	1,2-Dibromoethane	ND	63	
95-50-1	1,2-Dichlorobenzene	ND	63	
107-06-2	1,2-Dichloroethane	ND	63	
78-87-5	1,2-Dichloropropane	ND	63	
108-67-8	1,3,5-Trimethylbenzene	ND	63	
541-73-1	1,3-Dichlorobenzene	ND	63	
142-28-9	1,3-Dichloropropane	ND	63	
106-46-7	1,4-Dichlorobenzene	ND	63	
594-20-7	2,2-Dichloropropane	ND	63	
78-93-3	2-Butanone (MEK)	ND	63	
95-49-8	2-Chlorotoluene	ND	63	
591-78-6	2-Hexanone	ND	63	
67-64-1	2-Propanone (acetone)	ND	63	
106-43-4	4-Chlorotoluene	ND	63	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	63	
107-13-1	Acrylonitrile	ND	63	
71-43-2	Benzene	ND	63	
108-86-1	Bromobenzene	ND	63	
74-97-5	Bromochloromethane	ND	63	
75-27-4	Bromodichloromethane	ND	63	
75-25-2	Bromoform	ND	63	
74-83-9	Bromomethane	ND	63	
75-15-0	Carbon Disulfide	ND	63	
56-23-5	Carbon tetrachloride	ND	63	
108-90-7	Chlorobenzene	ND	63	
75-00-3	Chloroethane	ND	63	

67-66-3	Chloroform	ND	63
74-87-3	Chloromethane	ND	63
124-48-1	Dibromochloromethane	ND	63
74-95-3	Dibromomethane	ND	63
75-71-8	Dichlorodifluoromethane	ND	63
60-29-7	Ethyl Ether	ND	63
100-41-4	Ethylbenzene	ND	63
87-68-3	Hexachlorobutadiene	ND	63
98-82-8	Isopropylbenzene	ND	63
108-38-3/106-42-	M/P Xylene	ND	130
1634-04-4	Methyl-t-Butyl Ether	ND	63
75-09-2	Methylene Chloride	ND	63
104-51-8	N-Butylbenzene	ND	63
103-65-1	N-Propylbenzene	ND	63
91-20-3	Naphthalene	ND	63
95-47-6	Ortho Xylene	ND	63
99-87-6	Para-Isopropyltoluene	ND	63
135-98-8	Sec-Butylbenzene	ND	63
100-42-5	Styrene	ND	63
98-06-6	Tert-Butylbenzene	ND	63
127-18-4	Tetrachloroethylene	ND	63
109-99-9	Tetrahydrofuran	ND	63
108-88-3	Toluene	ND	63
156-60-5	Trans-1,2-Dichloroethylene	ND	63
79-01-6	Trichloroethylene	ND	63
75-69-4	Trichlorofluoromethane	ND	63
108-05-4	Vinyl Acetate	ND	63
75-01-4	Vinyl Chloride	ND	63
10061-01-5	c-1,3-dichloropropene	ND	63
156-59-2	cis-1,2-Dichloroethylene	ND	63
10061-02-6	t-1,3-Dichloropropene	ND	63

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	113	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0003	Lab Sample ID:	AB28703
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	74%
Dry Weight Extracted:	6.218 grams	Extract Dilution:	50
Wet Weight Extracted:	8.403 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	98	
71-55-6	1,1,1-Trichloroethane	ND	98	
79-34-5	1,1,2,2-Tetrachloroethane	ND	98	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	98	
79-00-5	1,1,2-Trichloroethane	ND	98	
75-35-4	1,1-Dichloroethylene	ND	98	
563-58-6	1,1-Dichloropropene	ND	98	
75-34-3	1,1-dichloroethane	ND	98	
87-61-6	1,2,3-Trichlorobenzene	ND	98	
96-18-4	1,2,3-Trichloropropane	ND	98	
120-82-1	1,2,4-Trichlorobenzene	ND	98	
95-63-6	1,2,4-Trimethylbenzene	ND	98	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	98	
106-93-4	1,2-Dibromoethane	ND	98	
95-50-1	1,2-Dichlorobenzene	ND	98	
107-06-2	1,2-Dichloroethane	ND	98	
78-87-5	1,2-Dichloropropane	ND	98	
108-67-8	1,3,5-Trimethylbenzene	ND	98	
541-73-1	1,3-Dichlorobenzene	ND	98	
142-28-9	1,3-Dichloropropane	ND	98	
106-46-7	1,4-Dichlorobenzene	ND	98	
594-20-7	2,2-Dichloropropane	ND	98	
78-93-3	2-Butanone (MEK)	ND	98	
95-49-8	2-Chlorotoluene	ND	98	
591-78-6	2-Hexanone	ND	98	
67-64-1	2-Propanone (acetone)	ND	98	
106-43-4	4-Chlorotoluene	ND	98	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	98	
107-13-1	Acrylonitrile	ND	98	
71-43-2	Benzene	ND	98	
108-86-1	Bromobenzene	ND	98	
74-97-5	Bromochloromethane	ND	98	
75-27-4	Bromodichloromethane	ND	98	
75-25-2	Bromoform	ND	98	
74-83-9	Bromomethane	ND	98	
75-15-0	Carbon Disulfide	ND	98	
56-23-5	Carbon tetrachloride	ND	98	
108-90-7	Chlorobenzene	ND	98	
75-00-3	Chloroethane	ND	98	

67-66-3	Chloroform	ND	98
74-87-3	Chloromethane	ND	98
124-48-1	Dibromochloromethane	ND	98
74-95-3	Dibromomethane	ND	98
75-71-8	Dichlorodifluoromethane	ND	98
60-29-7	Ethyl Ether	ND	98
100-41-4	Ethylbenzene	ND	98
87-68-3	Hexachlorobutadiene	ND	98
98-82-8	Isopropylbenzene	ND	98
108-38-3/106-42-	M/P Xylene	ND	200
1634-04-4	Methyl-t-Butyl Ether	ND	98
75-09-2	Methylene Chloride	ND	98
104-51-8	N-Butylbenzene	ND	98
103-65-1	N-Propylbenzene	ND	98
91-20-3	Naphthalene	ND	98
95-47-6	Ortho Xylene	ND	98
99-87-6	Para-Isopropyltoluene	ND	98
135-98-8	Sec-Butylbenzene	ND	98
100-42-5	Styrene	ND	98
98-06-6	Tert-Butylbenzene	ND	98
127-18-4	Tetrachloroethylene	ND	98
109-99-9	Tetrahydrofuran	ND	98
108-88-3	Toluene	ND	98
156-60-5	Trans-1,2-Dichloroethylene	ND	98
79-01-6	Trichloroethylene	ND	98
75-69-4	Trichlorofluoromethane	ND	98
108-05-4	Vinyl Acetate	ND	98
75-01-4	Vinyl Chloride	ND	98
10061-01-5	c-1,3-dichloropropene	ND	98
156-59-2	cis-1,2-Dichloroethylene	ND	98
10061-02-6	t-1,3-Dichloropropene	ND	98

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	114	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID: R01-0040912EV-0004  
Date of Collection: 4/9/2012  
Date of Extraction: 4/12/12  
Date of Analysis: 4/12/12  
Dry Weight Extracted: 8.291 grams  
Wet Weight Extracted: 9.316 grams

Lab Sample ID: AB28704  
Matrix: Soil  
Volume Purged: 5 mL  
Percent Solids: 89%  
Extract Dilution: 50  
pH: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	66	
71-55-6	1,1,1-Trichloroethane	ND	66	
79-34-5	1,1,2,2-Tetrachloroethane	ND	66	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	66	
79-00-5	1,1,2-Trichloroethane	ND	66	
75-35-4	1,1-Dichloroethylene	ND	66	
563-58-6	1,1-Dichloropropene	ND	66	
75-34-3	1,1-dichloroethane	ND	66	
87-61-6	1,2,3-Trichlorobenzene	ND	66	
96-18-4	1,2,3-Trichloropropane	ND	66	
120-82-1	1,2,4-Trichlorobenzene	ND	66	
95-63-6	1,2,4-Trimethylbenzene	ND	66	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	66	
106-93-4	1,2-Dibromoethane	ND	66	
95-50-1	1,2-Dichlorobenzene	ND	66	
107-06-2	1,2-Dichloroethane	ND	66	
78-87-5	1,2-Dichloropropane	ND	66	
108-67-8	1,3,5-Trimethylbenzene	ND	66	
541-73-1	1,3-Dichlorobenzene	ND	66	
142-28-9	1,3-Dichloropropane	ND	66	
106-46-7	1,4-Dichlorobenzene	ND	66	
594-20-7	2,2-Dichloropropane	ND	66	
78-93-3	2-Butanone (MEK)	ND	66	
95-49-8	2-Chlorotoluene	ND	66	
591-78-6	2-Hexanone	ND	66	
67-64-1	2-Propanone (acetone)	ND	66	
106-43-4	4-Chlorotoluene	ND	66	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	66	
107-13-1	Acrylonitrile	ND	66	
71-43-2	Benzene	ND	66	
108-86-1	Bromobenzene	ND	66	
74-97-5	Bromochloromethane	ND	66	
75-27-4	Bromodichloromethane	ND	66	
75-25-2	Bromoform	ND	66	
74-83-9	Bromomethane	ND	66	
75-15-0	Carbon Disulfide	ND	66	
56-23-5	Carbon tetrachloride	ND	66	
108-90-7	Chlorobenzene	ND	66	
75-00-3	Chloroethane	ND	66	

67-66-3	Chloroform	ND	66
74-87-3	Chloromethane	ND	66
124-48-1	Dibromochloromethane	ND	66
74-95-3	Dibromomethane	ND	66
75-71-8	Dichlorodifluoromethane	ND	66
60-29-7	Ethyl Ether	ND	66
100-41-4	Ethylbenzene	ND	66
87-68-3	Hexachlorobutadiene	ND	66
98-82-8	Isopropylbenzene	ND	66
108-38-3/106-42-:	M/P Xylene	ND	130
1634-04-4	Methyl-t-Butyl Ether	ND	66
75-09-2	Methylene Chloride	ND	66
104-51-8	N-Butylbenzene	ND	66
103-65-1	N-Propylbenzene	ND	66
91-20-3	Naphthalene	ND	66
95-47-6	Ortho Xylene	ND	66
99-87-6	Para-Isopropyltoluene	ND	66
135-98-8	Sec-Butylbenzene	ND	66
100-42-5	Styrene	ND	66
98-06-6	Tert-Butylbenzene	ND	66
127-18-4	Tetrachloroethylene	ND	66
109-99-9	Tetrahydrofuran	ND	66
108-88-3	Toluene	ND	66
156-60-5	Trans-1,2-Dichloroethylene	ND	66
79-01-6	Trichloroethylene	ND	66
75-69-4	Trichlorofluoromethane	ND	66
108-05-4	Vinyl Acetate	ND	66
75-01-4	Vinyl Chloride	ND	66
10061-01-5	c-1,3-dichloropropene	ND	66
156-59-2	cis-1,2-Dichloroethylene	ND	66
10061-02-6	t-1,3-Dichloropropene	ND	66

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	114	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID: R01-0040912EV-0005  
Date of Collection: 4/9/2012  
Date of Extraction: 4/12/12  
Date of Analysis: 4/12/12  
Dry Weight Extracted: 9.855 grams  
Wet Weight Extracted: 10.830 grams

Lab Sample ID: AB28705  
Matrix: Soil  
Volume Purged: 5 mL  
Percent Solids: 91%  
Extract Dilution: 50  
pH: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	56	
71-55-6	1,1,1-Trichloroethane	ND	56	
79-34-5	1,1,2,2-Tetrachloroethane	ND	56	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	56	
79-00-5	1,1,2-Trichloroethane	ND	56	
75-35-4	1,1-Dichloroethylene	ND	56	
563-58-6	1,1-Dichloropropene	ND	56	
75-34-3	1,1-dichloroethane	ND	56	
87-61-6	1,2,3-Trichlorobenzene	ND	56	
96-18-4	1,2,3-Trichloropropane	ND	56	
120-82-1	1,2,4-Trichlorobenzene	ND	56	
95-63-6	1,2,4-Trimethylbenzene	ND	56	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	56	
106-93-4	1,2-Dibromoethane	ND	56	
95-50-1	1,2-Dichlorobenzene	ND	56	
107-06-2	1,2-Dichloroethane	ND	56	
78-87-5	1,2-Dichloropropane	ND	56	
108-67-8	1,3,5-Trimethylbenzene	ND	56	
541-73-1	1,3-Dichlorobenzene	ND	56	
142-28-9	1,3-Dichloropropane	ND	56	
106-46-7	1,4-Dichlorobenzene	ND	56	
594-20-7	2,2-Dichloropropane	ND	56	
78-93-3	2-Butanone (MEK)	ND	56	
95-49-8	2-Chlorotoluene	ND	56	
591-78-6	2-Hexanone	ND	56	
67-64-1	2-Propanone (acetone)	ND	56	
106-43-4	4-Chlorotoluene	ND	56	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	56	
107-13-1	Acrylonitrile	ND	56	
71-43-2	Benzene	ND	56	
108-86-1	Bromobenzene	ND	56	
74-97-5	Bromochloromethane	ND	56	
75-27-4	Bromodichloromethane	ND	56	
75-25-2	Bromoform	ND	56	
74-83-9	Bromomethane	ND	56	
75-15-0	Carbon Disulfide	ND	56	
56-23-5	Carbon tetrachloride	ND	56	
108-90-7	Chlorobenzene	ND	56	
75-00-3	Chloroethane	ND	56	

67-66-3	Chloroform	ND	56
74-87-3	Chloromethane	ND	56
124-48-1	Dibromochloromethane	ND	56
74-95-3	Dibromomethane	ND	56
75-71-8	Dichlorodifluoromethane	ND	56
60-29-7	Ethyl Ether	ND	56
100-41-4	Ethylbenzene	ND	56
87-68-3	Hexachlorobutadiene	ND	56
98-82-8	Isopropylbenzene	ND	56
108-38-3/106-42-	M/P Xylene	ND	110
1634-04-4	Methyl-t-Butyl Ether	ND	56
75-09-2	Methylene Chloride	ND	56
104-51-8	N-Butylbenzene	ND	56
103-65-1	N-Propylbenzene	ND	56
91-20-3	Naphthalene	ND	56
95-47-6	Ortho Xylene	ND	56
99-87-6	Para-Isopropyltoluene	ND	56
135-98-8	Sec-Butylbenzene	ND	56
100-42-5	Styrene	ND	56
98-06-6	Tert-Butylbenzene	ND	56
127-18-4	Tetrachloroethylene	ND	56
109-99-9	Tetrahydrofuran	ND	56
108-88-3	Toluene	ND	56
156-60-5	Trans-1,2-Dichloroethylene	ND	56
79-01-6	Trichloroethylene	ND	56
75-69-4	Trichlorofluoromethane	ND	56
108-05-4	Vinyl Acetate	ND	56
75-01-4	Vinyl Chloride	ND	56
10061-01-5	c-1,3-dichloropropene	ND	56
156-59-2	cis-1,2-Dichloroethylene	ND	56
10061-02-6	t-1,3-Dichloropropene	ND	56

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	97	78 - 111
1,2-Dichloroethane-D4	115	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID: R01-0040912EV-0006  
Date of Collection: 4/9/2012  
Date of Extraction: 4/12/12  
Date of Analysis: 4/12/12  
Dry Weight Extracted: 7.126 grams  
Wet Weight Extracted: 8.483 grams

Lab Sample ID: AB28706  
Matrix: Soil  
Volume Purged: 5 mL  
Percent Solids: 84%  
Extract Dilution: 50  
pH: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	80	
71-55-6	1,1,1-Trichloroethane	ND	80	
79-34-5	1,1,2,2-Tetrachloroethane	ND	80	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	80	
79-00-5	1,1,2-Trichloroethane	ND	80	
75-35-4	1,1-Dichloroethylene	ND	80	
563-58-6	1,1-Dichloropropene	ND	80	
75-34-3	1,1-dichloroethane	ND	80	
87-61-6	1,2,3-Trichlorobenzene	ND	80	
96-18-4	1,2,3-Trichloropropane	ND	80	
120-82-1	1,2,4-Trichlorobenzene	ND	80	
95-63-6	1,2,4-Trimethylbenzene	ND	80	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	80	
106-93-4	1,2-Dibromoethane	ND	80	
95-50-1	1,2-Dichlorobenzene	ND	80	
107-06-2	1,2-Dichloroethane	ND	80	
78-87-5	1,2-Dichloropropane	ND	80	
108-67-8	1,3,5-Trimethylbenzene	ND	80	
541-73-1	1,3-Dichlorobenzene	ND	80	
142-28-9	1,3-Dichloropropane	ND	80	
106-46-7	1,4-Dichlorobenzene	ND	80	
594-20-7	2,2-Dichloropropane	ND	80	
78-93-3	2-Butanone (MEK)	ND	80	
95-49-8	2-Chlorotoluene	ND	80	
591-78-6	2-Hexanone	ND	80	
67-64-1	2-Propanone (acetone)	ND	80	
106-43-4	4-Chlorotoluene	ND	80	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	80	
107-13-1	Acrylonitrile	ND	80	
71-43-2	Benzene	ND	80	
108-86-1	Bromobenzene	ND	80	
74-97-5	Bromochloromethane	ND	80	
75-27-4	Bromodichloromethane	ND	80	
75-25-2	Bromoform	ND	80	
74-83-9	Bromomethane	ND	80	
75-15-0	Carbon Disulfide	ND	80	
56-23-5	Carbon tetrachloride	ND	80	
108-90-7	Chlorobenzene	ND	80	
75-00-3	Chloroethane	ND	80	

67-66-3	Chloroform	ND	80
74-87-3	Chloromethane	ND	80
124-48-1	Dibromochloromethane	ND	80
74-95-3	Dibromomethane	ND	80
75-71-8	Dichlorodifluoromethane	ND	80
60-29-7	Ethyl Ether	ND	80
100-41-4	Ethylbenzene	ND	80
87-68-3	Hexachlorobutadiene	ND	80
98-82-8	Isopropylbenzene	ND	80
108-38-3/106-42-:	M/P Xylene	ND	160
1634-04-4	Methyl-t-Butyl Ether	ND	80
75-09-2	Methylene Chloride	ND	80
104-51-8	N-Butylbenzene	ND	80
103-65-1	N-Propylbenzene	ND	80
91-20-3	Naphthalene	ND	80
95-47-6	Ortho Xylene	ND	80
99-87-6	Para-Isopropyltoluene	ND	80
135-98-8	Sec-Butylbenzene	ND	80
100-42-5	Styrene	ND	80
98-06-6	Tert-Butylbenzene	ND	80
127-18-4	Tetrachloroethylene	ND	80
109-99-9	Tetrahydrofuran	ND	80
108-88-3	Toluene	ND	80
156-60-5	Trans-1,2-Dichloroethylene	ND	80
79-01-6	Trichloroethylene	ND	80
75-69-4	Trichlorofluoromethane	ND	80
108-05-4	Vinyl Acetate	ND	80
75-01-4	Vinyl Chloride	ND	80
10061-01-5	c-1,3-dichloropropene	ND	80
156-59-2	cis-1,2-Dichloroethylene	ND	80
10061-02-6	t-1,3-Dichloropropene	ND	80

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	97	78 - 111
1,2-Dichloroethane-D4	114	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID:	R01-0040912EV-0007	Lab Sample ID:	AB28707
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	94%
Dry Weight Extracted:	10.328 grams	Extract Dilution:	50
Wet Weight Extracted:	10.987 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	52	
71-55-6	1,1,1-Trichloroethane	ND	52	
79-34-5	1,1,2,2-Tetrachloroethane	ND	52	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	52	
79-00-5	1,1,2-Trichloroethane	ND	52	
75-35-4	1,1-Dichloroethylene	ND	52	
563-58-6	1,1-Dichloropropene	ND	52	
75-34-3	1,1-dichloroethane	ND	52	
87-61-6	1,2,3-Trichlorobenzene	ND	52	
96-18-4	1,2,3-Trichloropropane	ND	52	
120-82-1	1,2,4-Trichlorobenzene	ND	52	
95-63-6	1,2,4-Trimethylbenzene	ND	52	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	52	
106-93-4	1,2-Dibromoethane	ND	52	
95-50-1	1,2-Dichlorobenzene	ND	52	
107-06-2	1,2-Dichloroethane	ND	52	
78-87-5	1,2-Dichloropropane	ND	52	
108-67-8	1,3,5-Trimethylbenzene	ND	52	
541-73-1	1,3-Dichlorobenzene	ND	52	
142-28-9	1,3-Dichloropropane	ND	52	
106-46-7	1,4-Dichlorobenzene	ND	52	
594-20-7	2,2-Dichloropropane	ND	52	
78-93-3	2-Butanone (MEK)	ND	52	
95-49-8	2-Chlorotoluene	ND	52	
591-78-6	2-Hexanone	ND	52	
67-64-1	2-Propanone (acetone)	ND	52	
106-43-4	4-Chlorotoluene	ND	52	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	52	
107-13-1	Acrylonitrile	ND	52	
71-43-2	Benzene	ND	52	
108-86-1	Bromobenzene	ND	52	
74-97-5	Bromochloromethane	ND	52	
75-27-4	Bromodichloromethane	ND	52	
75-25-2	Bromoform	ND	52	
74-83-9	Bromomethane	ND	52	
75-15-0	Carbon Disulfide	ND	52	
56-23-5	Carbon tetrachloride	ND	52	
108-90-7	Chlorobenzene	ND	52	
75-00-3	Chloroethane	ND	52	

67-66-3	Chloroform	ND	52
74-87-3	Chloromethane	ND	52
124-48-1	Dibromochloromethane	ND	52
74-95-3	Dibromomethane	ND	52
75-71-8	Dichlorodifluoromethane	ND	52
60-29-7	Ethyl Ether	ND	52
100-41-4	Ethylbenzene	ND	52
87-68-3	Hexachlorobutadiene	ND	52
98-82-8	Isopropylbenzene	ND	52
108-38-3/106-42-	M/P Xylene	ND	100
1634-04-4	Methyl-t-Butyl Ether	ND	52
75-09-2	Methylene Chloride	ND	52
104-51-8	N-Butylbenzene	ND	52
103-65-1	N-Propylbenzene	ND	52
91-20-3	Naphthalene	ND	52
95-47-6	Ortho Xylene	ND	52
99-87-6	Para-Isopropyltoluene	ND	52
135-98-8	Sec-Butylbenzene	ND	52
100-42-5	Styrene	ND	52
98-06-6	Tert-Butylbenzene	ND	52
127-18-4	Tetrachloroethylene	ND	52
109-99-9	Tetrahydrofuran	ND	52
108-88-3	Toluene	ND	52
156-60-5	Trans-1,2-Dichloroethylene	ND	52
79-01-6	Trichloroethylene	ND	52
75-69-4	Trichlorofluoromethane	ND	52
108-05-4	Vinyl Acetate	ND	52
75-01-4	Vinyl Chloride	ND	52
10061-01-5	c-1,3-dichloropropene	ND	52
156-59-2	cis-1,2-Dichloroethylene	ND	52
10061-02-6	t-1,3-Dichloropropene	ND	52

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	97	78 - 111
1,2-Dichloroethane-D4	116	74 - 136
Toluene-D8	101	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID:	R01-0040912EV-0008	Lab Sample ID:	AB28708
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	91%
Dry Weight Extracted:	8.964 grams	Extract Dilution:	50
Wet Weight Extracted:	9.851 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	61	
71-55-6	1,1,1-Trichloroethane	ND	61	
79-34-5	1,1,2,2-Tetrachloroethane	ND	61	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	61	
79-00-5	1,1,2-Trichloroethane	ND	61	
75-35-4	1,1-Dichloroethylene	ND	61	
563-58-6	1,1-Dichloropropene	ND	61	
75-34-3	1,1-dichloroethane	ND	61	
87-61-6	1,2,3-Trichlorobenzene	ND	61	
96-18-4	1,2,3-Trichloropropane	ND	61	
120-82-1	1,2,4-Trichlorobenzene	ND	61	
95-63-6	1,2,4-Trimethylbenzene	ND	61	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	61	
106-93-4	1,2-Dibromoethane	ND	61	
95-50-1	1,2-Dichlorobenzene	ND	61	
107-06-2	1,2-Dichloroethane	ND	61	
78-87-5	1,2-Dichloropropane	ND	61	
108-67-8	1,3,5-Trimethylbenzene	ND	61	
541-73-1	1,3-Dichlorobenzene	ND	61	
142-28-9	1,3-Dichloropropane	ND	61	
106-46-7	1,4-Dichlorobenzene	ND	61	
594-20-7	2,2-Dichloropropane	ND	61	
78-93-3	2-Butanone (MEK)	ND	61	
95-49-8	2-Chlorotoluene	ND	61	
591-78-6	2-Hexanone	ND	61	
67-64-1	2-Propanone (acetone)	ND	61	
106-43-4	4-Chlorotoluene	ND	61	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	61	
107-13-1	Acrylonitrile	ND	61	
71-43-2	Benzene	ND	61	
108-86-1	Bromobenzene	ND	61	
74-97-5	Bromochloromethane	ND	61	
75-27-4	Bromodichloromethane	ND	61	
75-25-2	Bromoform	ND	61	
74-83-9	Bromomethane	ND	61	
75-15-0	Carbon Disulfide	ND	61	
56-23-5	Carbon tetrachloride	ND	61	
108-90-7	Chlorobenzene	ND	61	
75-00-3	Chloroethane	ND	61	

67-66-3	Chloroform	ND	61
74-87-3	Chloromethane	ND	61
124-48-1	Dibromochloromethane	ND	61
74-95-3	Dibromomethane	ND	61
75-71-8	Dichlorodifluoromethane	ND	61
60-29-7	Ethyl Ether	ND	61
100-41-4	Ethylbenzene	ND	61
87-68-3	Hexachlorobutadiene	ND	61
98-82-8	Isopropylbenzene	ND	61
108-38-3/106-42-:	M/P Xylene	ND	120
1634-04-4	Methyl-t-Butyl Ether	ND	61
75-09-2	Methylene Chloride	ND	61
104-51-8	N-Butylbenzene	ND	61
103-65-1	N-Propylbenzene	ND	61
91-20-3	Naphthalene	ND	61
95-47-6	Ortho Xylene	ND	61
99-87-6	Para-Isopropyltoluene	ND	61
135-98-8	Sec-Butylbenzene	ND	61
100-42-5	Styrene	ND	61
98-06-6	Tert-Butylbenzene	ND	61
127-18-4	Tetrachloroethylene	ND	61
109-99-9	Tetrahydrofuran	ND	61
108-88-3	Toluene	ND	61
156-60-5	Trans-1,2-Dichloroethylene	ND	61
79-01-6	Trichloroethylene	ND	61
75-69-4	Trichlorofluoromethane	ND	61
108-05-4	Vinyl Acetate	ND	61
75-01-4	Vinyl Chloride	ND	61
10061-01-5	c-1,3-dichloropropene	ND	61
156-59-2	cis-1,2-Dichloroethylene	ND	61
10061-02-6	t-1,3-Dichloropropene	ND	61

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	114	74 - 136
Toluene-D8	99	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	1
Wet Weight Extracted:	N/A	pH:	~6

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	
71-55-6	1,1,1-Trichloroethane	ND	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1.0	
79-00-5	1,1,2-Trichloroethane	ND	1.0	
75-35-4	1,1-Dichloroethylene	ND	1.0	
563-58-6	1,1-Dichloropropene	ND	1.0	
75-34-3	1,1-dichloroethane	ND	1.0	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	
96-18-4	1,2,3-Trichloropropane	ND	1.0	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	1.0	
106-93-4	1,2-Dibromoethane	ND	1.0	
95-50-1	1,2-Dichlorobenzene	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	1.0	
78-87-5	1,2-Dichloropropane	ND	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	
541-73-1	1,3-Dichlorobenzene	ND	1.0	
142-28-9	1,3-Dichloropropane	ND	1.0	
106-46-7	1,4-Dichlorobenzene	ND	1.0	
594-20-7	2,2-Dichloropropane	ND	1.0	
78-93-3	2-Butanone (MEK)	ND	1.0	
95-49-8	2-Chlorotoluene	ND	1.0	
591-78-6	2-Hexanone	ND	1.0	
67-64-1	2-Propanone (acetone)	ND	1.0	
106-43-4	4-Chlorotoluene	ND	1.0	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	1.0	
107-13-1	Acrylonitrile	ND	1.0	
71-43-2	Benzene	ND	1.0	
108-86-1	Bromobenzene	ND	1.0	
74-97-5	Bromochloromethane	ND	1.0	
75-27-4	Bromodichloromethane	ND	1.0	
75-25-2	Bromoform	ND	1.0	
74-83-9	Bromomethane	ND	1.0	
75-15-0	Carbon Disulfide	ND	1.0	
56-23-5	Carbon tetrachloride	ND	1.0	
108-90-7	Chlorobenzene	ND	1.0	
75-00-3	Chloroethane	ND	1.0	

67-66-3	Chloroform	ND	1.0
74-87-3	Chloromethane	ND	1.0
124-48-1	Dibromochloromethane	ND	1.0
74-95-3	Dibromomethane	ND	1.0
75-71-8	Dichlorodifluoromethane	ND	1.0
60-29-7	Ethyl Ether	ND	1.0
100-41-4	Ethylbenzene	ND	1.0
87-68-3	Hexachlorobutadiene	ND	1.0
98-82-8	Isopropylbenzene	ND	1.0
108-38-3/106-42-:	M/P Xylene	ND	2.0
1634-04-4	Methyl-t-Butyl Ether	ND	1.0
75-09-2	Methylene Chloride	ND	1.0
104-51-8	N-Butylbenzene	ND	1.0
103-65-1	N-Propylbenzene	ND	1.0
91-20-3	Naphthalene	ND	1.0
95-47-6	Ortho Xylene	ND	1.0
99-87-6	Para-Isopropyltoluene	ND	1.0
135-98-8	Sec-Butylbenzene	ND	1.0
100-42-5	Styrene	ND	1.0
98-06-6	Tert-Butylbenzene	ND	1.0
127-18-4	Tetrachloroethylene	ND	1.0
109-99-9	Tetrahydrofuran	ND	1.0
108-88-3	Toluene	ND	1.0
156-60-5	Trans-1,2-Dichloroethylene	ND	1.0
79-01-6	Trichloroethylene	ND	1.0
75-69-4	Trichlorofluoromethane	ND	1.0
108-05-4	Vinyl Acetate	ND	1.0
75-01-4	Vinyl Chloride	ND	1.0
10061-01-5	c-1,3-dichloropropene	ND	1.0
156-59-2	cis-1,2-Dichloroethylene	ND	1.0
10061-02-6	t-1,3-Dichloropropene	ND	1.0

Surrogate Compounds	Recoveries (%)	QC Ranges
1,2-Dichloroethane-D4	116	74 - 136
Toluene-D8	100	85 - 118
1,4-Bromofluorobenzene	95	78 - 111

Comments: Laboratory blank is reported in ug/L.

Laboratory blank is associated with samples AB28708 - AB28713.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0009	Lab Sample ID:	AB28709
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	77%
Dry Weight Extracted:	5.943 grams	Extract Dilution:	50
Wet Weight Extracted:	7.718 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	99	
71-55-6	1,1,1-Trichloroethane	ND	99	
79-34-5	1,1,2,2-Tetrachloroethane	ND	99	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	99	
79-00-5	1,1,2-Trichloroethane	ND	99	
75-35-4	1,1-Dichloroethylene	ND	99	
563-58-6	1,1-Dichloropropene	ND	99	
75-34-3	1,1-dichloroethane	ND	99	
87-61-6	1,2,3-Trichlorobenzene	ND	99	
96-18-4	1,2,3-Trichloropropane	ND	99	
120-82-1	1,2,4-Trichlorobenzene	ND	99	
95-63-6	1,2,4-Trimethylbenzene	ND	99	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	99	
106-93-4	1,2-Dibromoethane	ND	99	
95-50-1	1,2-Dichlorobenzene	ND	99	
107-06-2	1,2-Dichloroethane	ND	99	
78-87-5	1,2-Dichloropropane	ND	99	
108-67-8	1,3,5-Trimethylbenzene	ND	99	
541-73-1	1,3-Dichlorobenzene	ND	99	
142-28-9	1,3-Dichloropropane	ND	99	
106-46-7	1,4-Dichlorobenzene	ND	99	
594-20-7	2,2-Dichloropropane	ND	99	
78-93-3	2-Butanone (MEK)	ND	99	
95-49-8	2-Chlorotoluene	ND	99	
591-78-6	2-Hexanone	ND	99	
67-64-1	2-Propanone (acetone)	ND	99	
106-43-4	4-Chlorotoluene	ND	99	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	99	
107-13-1	Acrylonitrile	ND	99	
71-43-2	Benzene	ND	99	
108-86-1	Bromobenzene	ND	99	
74-97-5	Bromochloromethane	ND	99	
75-27-4	Bromodichloromethane	ND	99	
75-25-2	Bromoform	ND	99	
74-83-9	Bromomethane	ND	99	
75-15-0	Carbon Disulfide	ND	99	
56-23-5	Carbon tetrachloride	ND	99	
108-90-7	Chlorobenzene	ND	99	
75-00-3	Chloroethane	ND	99	

67-66-3	Chloroform	ND	99
74-87-3	Chloromethane	ND	99
124-48-1	Dibromochloromethane	ND	99
74-95-3	Dibromomethane	ND	99
75-71-8	Dichlorodifluoromethane	ND	99
60-29-7	Ethyl Ether	ND	99
100-41-4	Ethylbenzene	ND	99
87-68-3	Hexachlorobutadiene	ND	99
98-82-8	Isopropylbenzene	ND	99
108-38-3/106-42-	M/P Xylene	ND	200
1634-04-4	Methyl-t-Butyl Ether	ND	99
75-09-2	Methylene Chloride	ND	99
104-51-8	N-Butylbenzene	ND	99
103-65-1	N-Propylbenzene	ND	99
91-20-3	Naphthalene	ND	99
95-47-6	Ortho Xylene	ND	99
99-87-6	Para-Isopropyltoluene	ND	99
135-98-8	Sec-Butylbenzene	ND	99
100-42-5	Styrene	ND	99
98-06-6	Tert-Butylbenzene	ND	99
127-18-4	Tetrachloroethylene	ND	99
109-99-9	Tetrahydrofuran	ND	99
108-88-3	Toluene	ND	99
156-60-5	Trans-1,2-Dichloroethylene	ND	99
79-01-6	Trichloroethylene	ND	99
75-69-4	Trichlorofluoromethane	ND	99
108-05-4	Vinyl Acetate	ND	99
75-01-4	Vinyl Chloride	ND	99
10061-01-5	c-1,3-dichloropropene	ND	99
156-59-2	cis-1,2-Dichloroethylene	ND	99
10061-02-6	t-1,3-Dichloropropene	ND	99

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	94	78 - 111
1,2-Dichloroethane-D4	115	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0010	Lab Sample ID:	AB28710
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	76%
Dry Weight Extracted:	4.701 grams	Extract Dilution:	50
Wet Weight Extracted:	6.186 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	120	
71-55-6	1,1,1-Trichloroethane	ND	120	
79-34-5	1,1,2,2-Tetrachloroethane	ND	120	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	120	
79-00-5	1,1,2-Trichloroethane	ND	120	
75-35-4	1,1-Dichloroethylene	ND	120	
563-58-6	1,1-Dichloropropene	ND	120	
75-34-3	1,1-dichloroethane	ND	120	
87-61-6	1,2,3-Trichlorobenzene	ND	120	
96-18-4	1,2,3-Trichloropropane	ND	120	
120-82-1	1,2,4-Trichlorobenzene	ND	120	
95-63-6	1,2,4-Trimethylbenzene	ND	120	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	120	
106-93-4	1,2-Dibromoethane	ND	120	
95-50-1	1,2-Dichlorobenzene	ND	120	
107-06-2	1,2-Dichloroethane	ND	120	
78-87-5	1,2-Dichloropropane	ND	120	
108-67-8	1,3,5-Trimethylbenzene	ND	120	
541-73-1	1,3-Dichlorobenzene	ND	120	
142-28-9	1,3-Dichloropropane	ND	120	
106-46-7	1,4-Dichlorobenzene	ND	120	
594-20-7	2,2-Dichloropropane	ND	120	
78-93-3	2-Butanone (MEK)	ND	120	
95-49-8	2-Chlorotoluene	ND	120	
591-78-6	2-Hexanone	ND	120	
67-64-1	2-Propanone (acetone)	ND	120	
106-43-4	4-Chlorotoluene	ND	120	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	120	
107-13-1	Acrylonitrile	ND	120	
71-43-2	Benzene	ND	120	
108-86-1	Bromobenzene	ND	120	
74-97-5	Bromochloromethane	ND	120	
75-27-4	Bromodichloromethane	ND	120	
75-25-2	Bromoform	ND	120	
74-83-9	Bromomethane	ND	120	
75-15-0	Carbon Disulfide	ND	120	
56-23-5	Carbon tetrachloride	ND	120	
108-90-7	Chlorobenzene	ND	120	
75-00-3	Chloroethane	ND	120	

67-66-3	Chloroform	ND	120
74-87-3	Chloromethane	ND	120
124-48-1	Dibromochloromethane	ND	120
74-95-3	Dibromomethane	ND	120
75-71-8	Dichlorodifluoromethane	ND	120
60-29-7	Ethyl Ether	ND	120
100-41-4	Ethylbenzene	ND	120
87-68-3	Hexachlorobutadiene	ND	120
98-82-8	Isopropylbenzene	ND	120
108-38-3/106-42-:	M/P Xylene	ND	240
1634-04-4	Methyl-t-Butyl Ether	ND	120
75-09-2	Methylene Chloride	ND	120
104-51-8	N-Butylbenzene	ND	120
103-65-1	N-Propylbenzene	ND	120
91-20-3	Naphthalene	ND	120
95-47-6	Ortho Xylene	ND	120
99-87-6	Para-Isopropyltoluene	ND	120
135-98-8	Sec-Butylbenzene	ND	120
100-42-5	Styrene	ND	120
98-06-6	Tert-Butylbenzene	ND	120
127-18-4	Tetrachloroethylene	ND	120
109-99-9	Tetrahydrofuran	ND	120
108-88-3	Toluene	ND	120
156-60-5	Trans-1,2-Dichloroethylene	ND	120
79-01-6	Trichloroethylene	ND	120
75-69-4	Trichlorofluoromethane	ND	120
108-05-4	Vinyl Acetate	ND	120
75-01-4	Vinyl Chloride	ND	120
10061-01-5	c-1,3-dichloropropene	ND	120
156-59-2	cis-1,2-Dichloroethylene	ND	120
10061-02-6	t-1,3-Dichloropropene	ND	120

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	97	78 - 111
1,2-Dichloroethane-D4	117	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID: R01-0040912EV-0011  
Date of Collection: 4/9/2012  
Date of Extraction: 4/12/12  
Date of Analysis: 4/12/12  
Dry Weight Extracted: 6.637 grams  
Wet Weight Extracted: 8.094 grams

Lab Sample ID: AB28711  
Matrix: Soil  
Volume Purged: 5 mL  
Percent Solids: 82%  
Extract Dilution: 50  
pH: N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	86	
71-55-6	1,1,1-Trichloroethane	ND	86	
79-34-5	1,1,2,2-Tetrachloroethane	ND	86	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	86	
79-00-5	1,1,2-Trichloroethane	ND	86	
75-35-4	1,1-Dichloroethylene	ND	86	
563-58-6	1,1-Dichloropropene	ND	86	
75-34-3	1,1-dichloroethane	ND	86	
87-61-6	1,2,3-Trichlorobenzene	ND	86	
96-18-4	1,2,3-Trichloropropane	ND	86	
120-82-1	1,2,4-Trichlorobenzene	ND	86	
95-63-6	1,2,4-Trimethylbenzene	ND	86	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	86	
106-93-4	1,2-Dibromoethane	ND	86	
95-50-1	1,2-Dichlorobenzene	ND	86	
107-06-2	1,2-Dichloroethane	ND	86	
78-87-5	1,2-Dichloropropane	ND	86	
108-67-8	1,3,5-Trimethylbenzene	ND	86	
541-73-1	1,3-Dichlorobenzene	ND	86	
142-28-9	1,3-Dichloropropane	ND	86	
106-46-7	1,4-Dichlorobenzene	ND	86	
594-20-7	2,2-Dichloropropane	ND	86	
78-93-3	2-Butanone (MEK)	ND	86	
95-49-8	2-Chlorotoluene	ND	86	
591-78-6	2-Hexanone	ND	86	
67-64-1	2-Propanone (acetone)	ND	86	
106-43-4	4-Chlorotoluene	ND	86	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	86	
107-13-1	Acrylonitrile	ND	86	
71-43-2	Benzene	ND	86	
108-86-1	Bromobenzene	ND	86	
74-97-5	Bromochloromethane	ND	86	
75-27-4	Bromodichloromethane	ND	86	
75-25-2	Bromoform	ND	86	
74-83-9	Bromomethane	ND	86	
75-15-0	Carbon Disulfide	ND	86	
56-23-5	Carbon tetrachloride	ND	86	
108-90-7	Chlorobenzene	ND	86	
75-00-3	Chloroethane	ND	86	

67-66-3	Chloroform	ND	86
74-87-3	Chloromethane	ND	86
124-48-1	Dibromochloromethane	ND	86
74-95-3	Dibromomethane	ND	86
75-71-8	Dichlorodifluoromethane	ND	86
60-29-7	Ethyl Ether	ND	86
100-41-4	Ethylbenzene	ND	86
87-68-3	Hexachlorobutadiene	ND	86
98-82-8	Isopropylbenzene	ND	86
108-38-3/106-42-:	M/P Xylene	ND	170
1634-04-4	Methyl-t-Butyl Ether	ND	86
75-09-2	Methylene Chloride	ND	86
104-51-8	N-Butylbenzene	ND	86
103-65-1	N-Propylbenzene	ND	86
91-20-3	Naphthalene	ND	86
95-47-6	Ortho Xylene	ND	86
99-87-6	Para-Isopropyltoluene	ND	86
135-98-8	Sec-Butylbenzene	ND	86
100-42-5	Styrene	ND	86
98-06-6	Tert-Butylbenzene	ND	86
127-18-4	Tetrachloroethylene	ND	86
109-99-9	Tetrahydrofuran	ND	86
108-88-3	Toluene	ND	86
156-60-5	Trans-1,2-Dichloroethylene	ND	86
79-01-6	Trichloroethylene	ND	86
75-69-4	Trichlorofluoromethane	ND	86
108-05-4	Vinyl Acetate	ND	86
75-01-4	Vinyl Chloride	ND	86
10061-01-5	c-1,3-dichloropropene	ND	86
156-59-2	cis-1,2-Dichloroethylene	ND	86
10061-02-6	t-1,3-Dichloropropene	ND	86

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	96	78 - 111
1,2-Dichloroethane-D4	115	74 - 136
Toluene-D8	100	85 - 118

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

VOAs in Soil High Level Method

Client Sample ID:	R01-0040912EV-0012	Lab Sample ID:	AB28712
Date of Collection:	4/9/2012	Matrix:	Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	N/A
Dry Weight Extracted:	N/A	Extract Dilution:	50
Wet Weight Extracted:	N/A	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	
71-55-6	1,1,1-Trichloroethane	ND	50	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	
79-00-5	1,1,2-Trichloroethane	ND	50	
75-35-4	1,1-Dichloroethylene	ND	50	
563-58-6	1,1-Dichloropropene	ND	50	
75-34-3	1,1-dichloroethane	ND	50	
87-61-6	1,2,3-Trichlorobenzene	ND	50	
96-18-4	1,2,3-Trichloropropane	ND	50	
120-82-1	1,2,4-Trichlorobenzene	ND	50	
95-63-6	1,2,4-Trimethylbenzene	ND	50	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	50	
106-93-4	1,2-Dibromoethane	ND	50	
95-50-1	1,2-Dichlorobenzene	ND	50	
107-06-2	1,2-Dichloroethane	ND	50	
78-87-5	1,2-Dichloropropane	ND	50	
108-67-8	1,3,5-Trimethylbenzene	ND	50	
541-73-1	1,3-Dichlorobenzene	ND	50	
142-28-9	1,3-Dichloropropane	ND	50	
106-46-7	1,4-Dichlorobenzene	ND	50	
594-20-7	2,2-Dichloropropane	ND	50	
78-93-3	2-Butanone (MEK)	ND	50	
95-49-8	2-Chlorotoluene	ND	50	
591-78-6	2-Hexanone	ND	50	
67-64-1	2-Propanone (acetone)	ND	50	
106-43-4	4-Chlorotoluene	ND	50	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	50	
107-13-1	Acrylonitrile	ND	50	
71-43-2	Benzene	ND	50	
108-86-1	Bromobenzene	ND	50	
74-97-5	Bromochloromethane	ND	50	
75-27-4	Bromodichloromethane	ND	50	
75-25-2	Bromoform	ND	50	
74-83-9	Bromomethane	ND	50	
75-15-0	Carbon Disulfide	ND	50	
56-23-5	Carbon tetrachloride	ND	50	
108-90-7	Chlorobenzene	ND	50	
75-00-3	Chloroethane	ND	50	

67-66-3	Chloroform	ND	50
74-87-3	Chloromethane	ND	50
124-48-1	Dibromochloromethane	ND	50
74-95-3	Dibromomethane	ND	50
75-71-8	Dichlorodifluoromethane	ND	50
60-29-7	Ethyl Ether	ND	50
100-41-4	Ethylbenzene	ND	50
87-68-3	Hexachlorobutadiene	ND	50
98-82-8	Isopropylbenzene	ND	50
108-38-3/106-42-	M/P Xylene	ND	100
1634-04-4	Methyl-t-Butyl Ether	ND	50
75-09-2	Methylene Chloride	ND	50
104-51-8	N-Butylbenzene	ND	50
103-65-1	N-Propylbenzene	ND	50
91-20-3	Naphthalene	ND	50
95-47-6	Ortho Xylene	ND	50
99-87-6	Para-Isopropyltoluene	ND	50
135-98-8	Sec-Butylbenzene	ND	50
100-42-5	Styrene	ND	50
98-06-6	Tert-Butylbenzene	ND	50
127-18-4	Tetrachloroethylene	ND	50
109-99-9	Tetrahydrofuran	ND	50
108-88-3	Toluene	ND	50
156-60-5	Trans-1,2-Dichloroethylene	ND	50
79-01-6	Trichloroethylene	ND	50
75-69-4	Trichlorofluoromethane	ND	50
108-05-4	Vinyl Acetate	ND	50
75-01-4	Vinyl Chloride	ND	50
10061-01-5	c-1,3-dichloropropene	ND	50
156-59-2	cis-1,2-Dichloroethylene	ND	50
10061-02-6	t-1,3-Dichloropropene	ND	50

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	95	78 - 111
1,2-Dichloroethane-D4	117	74 - 136
Toluene-D8	100	85 - 118

Comments: Methanol blank sample is reported in ug/L.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

**Batchelder Site - Newtown, CT**

**VOAs in Soil High Level Method**

Client Sample ID:	R01-0040912EV-0055	Lab Sample ID:	AB28713
Date of Collection:	4/9/2012	Matrix:	PE Soil
Date of Extraction:	4/12/12	Volume Purged:	5 mL
Date of Analysis:	4/12/12	Percent Solids:	100%
Dry Weight Extracted:	5.000 grams	Extract Dilution:	50
Wet Weight Extracted:	5.000 grams	pH:	N/A

CAS Number	Compound	Concentration ug/Kg	RL ug/Kg	Qualifier
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	
71-55-6	1,1,1-Trichloroethane	<b>8100</b>	500	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	
76-13-1	1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	
79-00-5	1,1,2-Trichloroethane	<b>3600</b>	50	
75-35-4	1,1-Dichloroethylene	ND	50	
563-58-6	1,1-Dichloropropene	ND	50	
75-34-3	1,1-dichloroethane	ND	50	
87-61-6	1,2,3-Trichlorobenzene	<b>3800</b>	50	
96-18-4	1,2,3-Trichloropropane	ND	50	
120-82-1	1,2,4-Trichlorobenzene	<b>5200</b>	500	
95-63-6	1,2,4-Trimethylbenzene	ND	50	
96-12-8	1,2-Dibromo-3-Chloropropane	ND	50	
106-93-4	1,2-Dibromoethane	<b>3200</b>	50	
95-50-1	1,2-Dichlorobenzene	<b>1700</b>	50	
107-06-2	1,2-Dichloroethane	ND	50	
78-87-5	1,2-Dichloropropane	<b>4600</b>	500	
108-67-8	1,3,5-Trimethylbenzene	ND	50	
541-73-1	1,3-Dichlorobenzene	<b>3700</b>	50	
142-28-9	1,3-Dichloropropane	ND	50	
106-46-7	1,4-Dichlorobenzene	<b>2800</b>	50	
594-20-7	2,2-Dichloropropane	ND	50	
78-93-3	2-Butanone (MEK)	ND	50	
95-49-8	2-Chlorotoluene	ND	50	
591-78-6	2-Hexanone	<b>4000</b>	500	
67-64-1	2-Propanone (acetone)	<b>4600</b>	500	
106-43-4	4-Chlorotoluene	ND	50	
108-10-1	4-Methyl-2-Pentanone(MIBK)	ND	50	
107-13-1	Acrylonitrile	ND	50	
71-43-2	Benzene	<b>5400</b>	500	
108-86-1	Bromobenzene	ND	50	
74-97-5	Bromochloromethane	ND	50	
75-27-4	Bromodichloromethane	<b>3600</b>	50	
75-25-2	Bromoform	ND	50	
74-83-9	Bromomethane	ND	50	
75-15-0	Carbon Disulfide	ND	50	
56-23-5	Carbon tetrachloride	ND	50	
108-90-7	Chlorobenzene	<b>4800</b>	500	
75-00-3	Chloroethane	ND	50	

67-66-3	Chloroform	ND	50
74-87-3	Chloromethane	ND	50
124-48-1	Dibromochloromethane	ND	50
74-95-3	Dibromomethane	ND	50
75-71-8	Dichlorodifluoromethane	ND	50
60-29-7	Ethyl Ether	ND	50
100-41-4	Ethylbenzene	4900	50
87-68-3	Hexachlorobutadiene	ND	50
98-82-8	Isopropylbenzene	6000	500
108-38-3/106-42-	M/P Xylene	6300	100
1634-04-4	Methyl-t-Butyl Ether	ND	50
75-09-2	Methylene Chloride	ND	50
104-51-8	N-Butylbenzene	ND	50
103-65-1	N-Propylbenzene	ND	50
91-20-3	Naphthalene	ND	50
95-47-6	Ortho Xylene	1300	50
99-87-6	Para-Isopropyltoluene	ND	50
135-98-8	Sec-Butylbenzene	ND	50
100-42-5	Styrene	4400	500
98-06-6	Tert-Butylbenzene	ND	50
127-18-4	Tetrachloroethylene	3500	50
109-99-9	Tetrahydrofuran	ND	50
108-88-3	Toluene	6300	500
156-60-5	Trans-1,2-Dichloroethylene	5500	500
79-01-6	Trichloroethylene	8400	500
75-69-4	Trichlorofluoromethane	ND	50
108-05-4	Vinyl Acetate	ND	50
75-01-4	Vinyl Chloride	ND	50
10061-01-5	c-1,3-dichloropropene	ND	50
156-59-2	cis-1,2-Dichloroethylene	ND	50
10061-02-6	t-1,3-Dichloropropene	ND	50

Surrogate Compounds	Recoveries (%)	QC Ranges
1,4-Bromofluorobenzene	103	78 - 111
1,2-Dichloroethane-D4	115	74 - 136
Toluene-D8	100	85 - 118

Comments: A number of compounds are reported from a five-hundred fold dilution.

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

VOA MATRIX SPIKE (MS) / MATRIX SPIKE DUPLICATE (MSD) RECOVERY

Batchelder Site - Newtown, CT

Sample ID: AB28701

PARAMETER	SPIKE ADDED ug/Kg	SAMPLE CONCENTRATION ug/Kg	MS CONCENTRATION ug/Kg	MS % REC	QC LIMITS (% REC)
1,1,1,2-Tetrachloroethane	1,066	ND	1000	94	70 - 130
1,1,1-Trichloroethane	1,066	ND	1200	110	70 - 130
1,1,2,2-Tetrachloroethane	1,066	ND	1200	110	70 - 130
1,1,2-Trichloro-1,2,2-Trifluoroetha	1,066	ND	1300	120	70 - 130
1,1,2-Trichloroethane	1,066	ND	1100	100	70 - 130
1,1-Dichloroethylene	1,066	ND	1200	110	80 - 138
1,1-Dichloropropene	1,066	ND	1100	100	70 - 130
1,1-dichloroethane	1,066	ND	1200	110	70 - 130
1,2,3-Trichlorobenzene	1,066	ND	1200	110	70 - 130
1,2,3-Trichloropropane	1,066	ND	1100	100	70 - 130
1,2,4-Trichlorobenzene	1,066	ND	1200	110	70 - 130
1,2,4-Trimethylbenzene	1,066	ND	1200	110	70 - 130
1,2-Dibromo-3-Chloropropane	1,066	ND	950	89	70 - 130
1,2-Dibromoethane	1,066	ND	1100	100	70 - 130
1,2-Dichlorobenzene	1,066	ND	1100	100	70 - 130
1,2-Dichloroethane	1,066	ND	1200	110	70 - 130
1,2-Dichloropropane	1,066	ND	1100	100	70 - 130
1,3,5-Trimethylbenzene	1,066	ND	1100	100	70 - 130
1,3-Dichlorobenzene	1,066	ND	1100	100	70 - 130
1,3-Dichloropropane	1,066	ND	1200	110	70 - 130
1,4-Dichlorobenzene	1,066	ND	1100	100	70 - 130
2,2-Dichloropropane	1,066	ND	1000	94	70 - 130
2-Butanone (MEK)	1,066	ND	1100	100	70 - 130
2-Chlorotoluene	1,066	ND	1100	100	70 - 130
2-Hexanone	1,066	ND	1300	120	70 - 130
2-Propanone (acetone)	1,066	ND	1200	110	70 - 130
4-Chlorotoluene	1,066	ND	1100	100	70 - 130
4-Methyl-2-Pentanone(MIBK)	1,066	ND	1100	100	70 - 130
Acrylonitrile	1,066	ND	1200	110	70 - 130
Benzene	1,066	ND	1100	100	87 - 125
Bromobenzene	1,066	ND	1100	100	70 - 130
Bromochloromethane	1,066	ND	1200	110	70 - 130
Bromodichloromethane	1,066	ND	1200	110	70 - 130
Bromoform	1,066	ND	950	89	70 - 130
Bromomethane	1,066	ND	1300	120	70 - 130
Carbon Disulfide	1,066	ND	1200	110	70 - 130
Carbon tetrachloride	1,066	ND	1200	110	70 - 130
Chlorobenzene	1,066	ND	1200	110	78 - 131
Chloroethane	1,066	ND	1300	120	70 - 130
Chloroform	1,066	ND	1200	110	70 - 130
Chloromethane	1,066	ND	1100	100	70 - 130
Dibromochloromethane	1,066	ND	980	92	70 - 130
Dibromomethane	1,066	ND	1100	100	70 - 130
Dichlorodifluoromethane	1,066	ND	1200	110	70 - 130
Ethyl Ether	1,066	ND	1100	100	70 - 130
Ethylbenzene	1,066	ND	1100	100	70 - 130
Hexachlorobutadiene	1,066	ND	1200	110	70 - 130
Isopropylbenzene	1,066	ND	1200	110	70 - 130
M/P Xylene	2,132	ND	2300	110	70 - 130

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Methyl-t-Butyl Ether	1,066	ND	1200	110	70 - 130
Methylene Chloride	1,066	ND	1200	110	70 - 130
N-Butylbenzene	1,066	ND	1200	110	70 - 130
N-Propylbenzene	1,066	ND	1200	110	70 - 130
Naphthalene	1,066	ND	1300	120	70 - 130
Ortho Xylene	1,066	ND	1200	110	70 - 130
Para-Isopropyltoluene	1,066	ND	1200	110	70 - 130
Sec-Butylbenzene	1,066	ND	1200	110	70 - 130
Styrene	1,066	ND	1100	100	70 - 130
Tert-Butylbenzene	1,066	ND	1200	110	70 - 130
Tetrachloroethylene	1,066	ND	1100	100	70 - 130
Tetrahydrofuran	1,066	ND	1100	100	70 - 130
Toluene	1,066	ND	1200	110	66 - 150
Trans-1,2-Dichloroethylene	1,066	ND	1200	110	70 - 130
Trichloroethylene	1,066	ND	1100	100	78 - 102
Trichlorofluoromethane	1,066	ND	1300	120	70 - 130
Vinyl Acetate	1,066	ND	1000	94	70 - 130
Vinyl Chloride	1,066	ND	1100	100	70 - 130
c-1,3-dichloropropene	1,066	ND	1000	94	70 - 130
cis-1,2-Dichloroethylene	1,066	ND	1200	110	70 - 130
t-1,3-Dichloropropene	1,066	ND	970	91	70 - 130

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Sample ID: AB28701

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION ug/Kg	MSD % REC	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	1,066.0	1000	94	0	40
1,1,1-Trichloroethane	1,066.0	1200	110	0	40
1,1,2,2-Tetrachloroethane	1,066.0	1100	100	10	40
1,1,2-Trichloro-1,2,2-Trifluoroetha	1,066.0	1200	110	9	40
1,1,2-Trichloroethane	1,066.0	1100	100	0	40
1,1-Dichloroethylene	1,066.0	1200	110	0	52
1,1-Dichloropropene	1,066.0	1100	100	0	40
1,1-dichloroethane	1,066.0	1200	110	0	40
1,2,3-Trichlorobenzene	1,066.0	1200	110	0	40
1,2,3-Trichloropropane	1,066.0	1100	100	0	40
1,2,4-Trichlorobenzene	1,066.0	1200	110	0	40
1,2,4-Trimethylbenzene	1,066.0	1100	100	10	40
1,2-Dibromo-3-Chloropropane	1,066.0	930	87	2	40
1,2-Dibromoethane	1,066.0	1100	100	0	40
1,2-Dichlorobenzene	1,066.0	1100	100	0	40
1,2-Dichloroethane	1,066.0	1100	100	10	40
1,2-Dichloropropane	1,066.0	1100	100	0	40
1,3,5-Trimethylbenzene	1,066.0	1100	100	0	40
1,3-Dichlorobenzene	1,066.0	1100	100	0	40
1,3-Dichloropropane	1,066.0	1100	100	10	40
1,4-Dichlorobenzene	1,066.0	1100	100	0	40
2,2-Dichloropropane	1,066.0	1000	94	0	40
2-Butanone (MEK)	1,066.0	980	92	8	40
2-Chlorotoluene	1,066.0	1100	100	0	40
2-Hexanone	1,066.0	1200	110	9	40
2-Propanone (acetone)	1,066.0	1000	94	16	40
4-Chlorotoluene	1,066.0	1100	100	0	40
4-Methyl-2-Pentanone(MIBK)	1,066.0	1100	100	0	40
Acrylonitrile	1,066.0	1100	100	10	40
Benzene	1,066.0	1100	100	0	24
Bromobenzene	1,066.0	1100	100	0	40
Bromochloromethane	1,066.0	1200	110	0	40
Bromodichloromethane	1,066.0	1100	100	10	40
Bromoform	1,066.0	940	88	1	40
Bromomethane	1,066.0	1200	110	9	40
Carbon Disulfide	1,066.0	1200	110	0	40
Carbon tetrachloride	1,066.0	1100	100	10	40
Chlorobenzene	1,066.0	1100	100	10	34
Chloroethane	1,066.0	1200	110	9	40
Chloroform	1,066.0	1200	110	0	40
Chloromethane	1,066.0	1100	100	0	40
Dibromochloromethane	1,066.0	980	92	0	40
Dibromomethane	1,066.0	1100	100	0	40
Dichlorodifluoromethane	1,066.0	1200	110	0	40
Ethyl Ether	1,066.0	1100	100	0	40
Ethylbenzene	1,066.0	1100	100	0	40
Hexachlorobutadiene	1,066.0	1300	120	9	40
Isopropylbenzene	1,066.0	1100	100	10	40
M/P Xylene	2,132.0	2200	100	10	40
Methyl-t-Butyl Ether	1,066.0	1100	100	10	40
Methylene Chloride	1,066.0	1200	110	0	40
N-Butylbenzene	1,066.0	1200	110	0	40
N-Propylbenzene	1,066.0	1100	100	10	40
Naphthalene	1,066.0	1300	120	0	40

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Ortho Xylene	1,066.0	1100	100	10	40
Para-Isopropyltoluene	1,066.0	1200	110	0	40
Sec-Butylbenzene	1,066.0	1200	110	0	40
Styrene	1,066.0	1100	100	0	40
Tert-Butylbenzene	1,066.0	1100	100	10	40
Tetrachloroethylene	1,066.0	1100	100	0	40
Tetrahydrofuran	1,066.0	1100	100	0	40
Toluene	1,066.0	1100	100	10	33
Trans-1,2-Dichloroethylene	1,066.0	1100	100	10	40
Trichloroethylene	1,066.0	1100	100	0	27
Trichlorofluoromethane	1,066.0	1200	110	9	40
Vinyl Acetate	1,066.0	1000	94	0	40
Vinyl Chloride	1,066.0	1100	100	0	40
c-1,3-dichloropropene	1,066.0	980	92	2	40
cis-1,2-Dichloroethylene	1,066.0	1200	110	0	40
t-1,3-Dichloropropene	1,066.0	940	88	3	40

Comments:

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Laboratory Duplicate Results

Batchelder Site - Newtown, CT

Sample ID: AB28701

PARAMETER	SAMPLE RESULT	SAMPLE DUPLICATE RESULT	PRECISION RPD	QC LIMITS
	ug/Kg	ug/Kg	%	
1,1,1,2-Tetrachloroethane	ND	ND	ND	40
1,1,1-Trichloroethane	ND	ND	ND	40
1,1,2,2-Tetrachloroethane	ND	ND	ND	40
1,1,2-Trichloro-1,2,2-Trifluoroeth:	ND	ND	ND	40
1,1,2-Trichloroethane	ND	ND	ND	40
1,1-Dichloroethylene	ND	ND	ND	40
1,1-Dichloropropene	ND	ND	ND	40
1,1-dichloroethane	ND	ND	ND	40
1,2,3-Trichlorobenzene	ND	ND	ND	40
1,2,3-Trichloropropane	ND	ND	ND	40
1,2,4-Trichlorobenzene	ND	ND	ND	40
1,2,4-Trimethylbenzene	ND	ND	ND	40
1,2-Dibromo-3-Chloropropane	ND	ND	ND	40
1,2-Dibromoethane	ND	ND	ND	40
1,2-Dichlorobenzene	ND	ND	ND	40
1,2-Dichloroethane	ND	ND	ND	40
1,2-Dichloropropane	ND	ND	ND	40
1,3,5-Trimethylbenzene	ND	ND	ND	40
1,3-Dichlorobenzene	ND	ND	ND	40
1,3-Dichloropropane	ND	ND	ND	40
1,4-Dichlorobenzene	ND	ND	ND	40
2,2-Dichloropropane	ND	ND	ND	40
2-Butanone (MEK)	ND	ND	ND	40
2-Chlorotoluene	ND	ND	ND	40
2-Hexanone	ND	ND	ND	40
2-Propanone (acetone)	ND	ND	ND	40
4-Chlorotoluene	ND	ND	ND	40
4-Methyl-2-Pentanone(MIBK)	ND	ND	ND	40
Acrylonitrile	ND	ND	ND	40
Benzene	ND	ND	ND	40
Bromobenzene	ND	ND	ND	40
Bromochloromethane	ND	ND	ND	40
Bromodichloromethane	ND	ND	ND	40
Bromoform	ND	ND	ND	40
Bromomethane	ND	ND	ND	40
Carbon Disulfide	ND	ND	ND	40
Carbon tetrachloride	ND	ND	ND	40
Chlorobenzene	ND	ND	ND	40
Chloroethane	ND	ND	ND	40
Chloroform	ND	ND	ND	40
Chloromethane	ND	ND	ND	40
Dibromochloromethane	ND	ND	ND	40
Dibromomethane	ND	ND	ND	40
Dichlorodifluoromethane	ND	ND	ND	40
Ethyl Ether	ND	ND	ND	40
Ethylbenzene	ND	ND	ND	40
Hexachlorobutadiene	ND	ND	ND	40
Isopropylbenzene	ND	ND	ND	40
M/P Xylene	ND	ND	ND	40
Methyl-t-Butyl Ether	ND	ND	ND	40

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Methylene Chloride	ND	ND	ND	40
N-Butylbenzene	ND	ND	ND	40
N-Propylbenzene	ND	ND	ND	40
Naphthalene	ND	ND	ND	40
Ortho Xylene	ND	ND	ND	40
Para-Isopropyltoluene	ND	ND	ND	40
Sec-Butylbenzene	ND	ND	ND	40
Styrene	ND	ND	ND	40
Tert-Butylbenzene	ND	ND	ND	40
Tetrachloroethylene	ND	ND	ND	40
Tetrahydrofuran	ND	ND	ND	40
Toluene	ND	ND	ND	40
Trans-1,2-Dichloroethylene	ND	ND	ND	40
Trichloroethylene	ND	ND	ND	40
Trichlorofluoromethane	ND	ND	ND	40
Vinyl Acetate	ND	ND	ND	40
Vinyl Chloride	ND	ND	ND	40
c-1,3-dichloropropene	ND	ND	ND	40
cis-1,2-Dichloroethylene	ND	ND	ND	40
t-1,3-Dichloropropene	ND	ND	ND	40

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**Laboratory Fortified Blank (LFB) Results**

Batchelder Site - Newtown, CT

PARAMETER	LFB AMOUNT SPIKED ug/Kg	LFB RESULT ug/Kg	LFB RECOVERY %	QC LIMITS %
1,1,1,2-Tetrachloroethane	20	19.2	96	60 - 140
1,1,1-Trichloroethane	20	21.9	110	60 - 140
1,1,2,2-Tetrachloroethane	20	21.7	109	60 - 140
1,1,2-Trichloro-1,2,2-Trifluoroeth.	20	20.1	101	60 - 140
1,1,2-Trichloroethane	20	21.4	107	60 - 140
1,1-Dichloroethylene	20	22.2	111	7 - 148
1,1-Dichloropropene	20	21.1	106	60 - 140
1,1-dichloroethane	20	21.7	109	60 - 140
1,2,3-Trichlorobenzene	20	22.6	113	60 - 140
1,2,3-Trichloropropane	20	20.2	101	60 - 140
1,2,4-Trichlorobenzene	20	22.3	112	60 - 140
1,2,4-Trimethylbenzene	20	21.2	106	60 - 140
1,2-Dibromo-3-Chloropropane	20	18.4	92	60 - 140
1,2-Dibromoethane	20	20.7	104	60 - 140
1,2-Dichlorobenzene	20	20.4	102	60 - 140
1,2-Dichloroethane	20	21.2	106	60 - 140
1,2-Dichloropropane	20	21.6	108	60 - 140
1,3,5-Trimethylbenzene	20	20.9	105	60 - 140
1,3-Dichlorobenzene	20	20.5	103	60 - 140
1,3-Dichloropropane	20	21.0	105	60 - 140
1,4-Dichlorobenzene	20	20.5	103	60 - 140
2,2-Dichloropropane	20	19.9	100	60 - 140
2-Butanone (MEK)	20	23.0	115	60 - 140
2-Chlorotoluene	20	20.6	103	60 - 140
2-Hexanone	20	25.8	129	60 - 140
2-Propanone (acetone)	20	25.7	129	60 - 140
4-Chlorotoluene	20	20.6	103	60 - 140
4-Methyl-2-Pentanone(MIBK)	20	21.7	109	60 - 140
Acrylonitrile	20	21.7	109	60 - 140
Benzene	20	20.7	104	39 - 119
Bromobenzene	20	20.2	101	60 - 140
Bromochloromethane	20	21.0	105	60 - 140
Bromodichloromethane	20	21.4	107	60 - 140
Bromoform	20	18.6	93	60 - 140
Bromomethane	20	21.4	107	60 - 140
Carbon Disulfide	20	21.5	108	60 - 140
Carbon tetrachloride	20	21.8	109	60 - 140
Chlorobenzene	20	21.8	109	48 - 131
Chloroethane	20	20.7	104	60 - 140
Chloroform	20	21.4	107	60 - 140
Chloromethane	20	19.4	97	60 - 140
Dibromochloromethane	20	19.2	96	60 - 140
Dibromomethane	20	20.4	102	60 - 140
Dichlorodifluoromethane	20	19.4	97	60 - 140
Ethyl Ether	20	20.2	101	60 - 140
Ethylbenzene	20	21.2	106	60 - 140
Hexachlorobutadiene	20	21.9	110	60 - 140
Isopropylbenzene	20	20.9	105	60 - 140
M/P Xylene	40	41.8	105	60 - 140
Methyl-t-Butyl Ether	20	20.9	105	60 - 140
Methylene Chloride	20	21.5	108	60 - 140
N-Butylbenzene	20	21.9	110	60 - 140
N-Propylbenzene	20	20.7	104	60 - 140

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Naphthalene	20	23.8	119	60 - 140
Ortho Xylene	20	21.2	106	60 - 140
Para-Isopropyltoluene	20	21.4	107	60 - 140
Sec-Butylbenzene	20	21.2	106	60 - 140
Styrene	20	21.0	105	60 - 140
Tert-Butylbenzene	20	21.0	105	60 - 140
Tetrachloroethylene	20	19.9	100	60 - 140
Tetrahydrofuran	20	20.7	104	60 - 140
Toluene	20	21.2	106	43 - 136
Trans-1,2-Dichloroethylene	20	21.0	105	60 - 140
Trichloroethylene	20	20.1	101	37 - 130
Trichlorofluoromethane	20	21.3	107	60 - 140
Vinyl Acetate	20	18.8	94	60 - 140
Vinyl Chloride	20	20.3	102	60 - 140
c-1,3-dichloropropene	20	19.2	96	60 - 140
cis-1,2-Dichloroethylene	20	21.7	109	60 - 140
t-1,3-Dichloropropene	20	18.9	95	60 - 140

Comments:

US ENVIRONMENTAL PROTECTION AGENCY  
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LABORATORY FORTIFIED DUPLICATE (LFB Dup) RECOVERY

COMPOUND	LFB Dup CONCENTRATION ug/Kg	LFB Dup RECOVERY %	RPD %	QC LIMITS RPD
1,1,1,2-Tetrachloroethane	18.7	94	3	50
1,1,1-Trichloroethane	22.9	115	5	50
1,1,2,2-Tetrachloroethane	19.5	98	11	50
1,1,2-Trichloro-1,2,2-Trifluoroetha	15.8	79	24	50
1,1,2-Trichloroethane	20.8	104	3	50
1,1-Dichloroethylene	22.4	112	1	52
1,1-Dichloropropene	20.9	105	1	50
1,1-dichloroethane	22.8	114	5	50
1,2,3-Trichlorobenzene	22.1	111	2	50
1,2,3-Trichloropropane	20.6	103	2	50
1,2,4-Trichlorobenzene	22.2	111	0	50
1,2,4-Trimethylbenzene	22.0	110	4	50
1,2-Dibromo-3-Chloropropane	17.2	86	7	50
1,2-Dibromoethane	20.5	103	1	50
1,2-Dichlorobenzene	21.2	106	4	50
1,2-Dichloroethane	21.0	105	1	50
1,2-Dichloropropane	20.8	104	4	50
1,3,5-Trimethylbenzene	21.6	108	3	50
1,3-Dichlorobenzene	21.1	106	3	50
1,3-Dichloropropane	20.9	105	1	50
1,4-Dichlorobenzene	21.3	107	4	50
2,2-Dichloropropane	17.0	85	16	50
2-Butanone (MEK)	17.4	87	28	50
2-Chlorotoluene	21.3	107	3	50
2-Hexanone	18.4	92	34	50
2-Propanone (acetone)	18.9	95	31	50
4-Chlorotoluene	21.2	106	3	50
4-Methyl-2-Pentanone(MIBK)	19.3	97	12	50
Acrylonitrile	21.9	110	1	50
Benzene	21.1	106	2	50
Bromobenzene	20.9	105	3	50
Bromochloromethane	22.4	112	7	50
Bromodichloromethane	21.0	105	2	50
Bromoform	17.9	90	4	50
Bromomethane	17.5	88	20	50
Carbon Disulfide	22.0	110	2	50
Carbon tetrachloride	21.5	108	1	50
Chlorobenzene	21.8	109	0	34
Chloroethane	16.5	83	23	50
Chloroform	22.9	115	7	50
Chloromethane	15.8	79	21	50
Dibromochloromethane	18.5	93	4	50
Dibromomethane	20.9	105	2	50
Dichlorodifluoromethane	15.4	77	23	50
Ethyl Ether	20.6	103	2	50
Ethylbenzene	21.2	106	0	50
Hexachlorobutadiene	21.4	107	2	50
Isopropylbenzene	21.7	109	4	50
M/P Xylene	41.9	105	0	50
Methyl-t-Butyl Ether	20.6	103	1	50
Methylene Chloride	23.1	116	7	50
N-Butylbenzene	21.4	107	2	50
N-Propylbenzene	21.4	107	3	50
Naphthalene	24.4	122	3	50
Ortho Xylene	20.9	105	1	50
Para-Isopropyltoluene	21.8	109	2	50

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Sec-Butylbenzene	21.6	108	2	50
Styrene	21.2	106	1	50
Tert-Butylbenzene	21.7	109	3	50
Tetrachloroethylene	23.2	116	15	50
Tetrahydrofuran	20.3	102	2	50
Toluene	21.4	107	1	50
Trans-1,2-Dichloroethylene	22.6	113	7	50
Trichloroethylene	21.3	107	6	27
Trichlorofluoromethane	16.8	84	24	50
Vinyl Acetate	13.0	65	37	50
Vinyl Chloride	16.6	83	20	50
c-1,3-dichloropropene	18.2	91	5	50
cis-1,2-Dichloroethylene	22.8	114	5	50
t-1,3-Dichloropropene	17.4	87	8	50

Samples in Batch: AB28701, AB28702, AB28703, AB28704, AB28705, AB28706, AB28707,  
AB28708, AB28709, AB28710, AB28711, AB28712, AB28713



United States Environmental Protection Agency  
Office of Environmental Measurement & Evaluation  
11 Technology Drive  
North Chelmsford, MA 01863-2431

Laboratory Report

April 30, 2012

Eric Vanderboom - Mail Code OSRR02-2  
US EPA New England R1

Project Number: 12040028  
Project: Batchelder Site - Newtown, CT  
Analysis: Bulk Asbestos Analysis by PLM  
Analyst: Scott Clifford

Analytical Procedure:

All samples were received and logged in by the laboratory according to the USEPA New England SOP for Sample Log-in.

Sample preparation and analysis was done following the EPA Region I SOP, EIASOP-INGASBSD2.

Analytical Method: Polarized Light Microscope (PLM) with Dispersion Staining.  
All quantities are estimated volume percent.

Date Samples Received by the Laboratory: 04/20/2012

Data were reviewed in accordance with the internal verification procedures described in the EPA New England OEME Chemistry QA Plan.

Results relate only to the items tested or to the samples as received by the Laboratory. This analytical report shall not be reproduced except in full, without written approval of the laboratory.

Report may contain multiple sections and each section will be numbered independently.

If you have any questions please call me at 617-918-8340 .

Sincerely,

 4/30/12

Daniel N Boudreau  
Chemistry Team Leader

US ENVIRONMENTAL PROTECTION AGENCY  
NEW ENGLAND LABORATORY

Batchelder Site - Newtown, CT

Bulk Asbestos Analysis by PLM

Client Sample ID: AS-0001  
Date of Collection: 4/17/2012  
Date of Extraction: 4/26/12  
Date of Analysis: 4/26/12

Lab Sample ID: AB28941  
Matrix: Asbestos

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	Trace	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Sample consisted of black, flat, roofing material.

~15% fiberglass.

The trace of chrysotile found was on the surface of the sample; not within it.

Client Sample ID: AS-0002  
Date of Collection: 4/17/2012  
Date of Extraction: 4/26/12  
Date of Analysis: 4/26/12

Lab Sample ID: AB28942  
Matrix: Asbestos

CAS Number	Compound	Concentration %	RL %	Qualifier
	Actinolite	ND	1.0	
	Amosite	ND	1.0	
	Anthophyllite	ND	1.0	
	Chrysotile	Trace	1.0	
	Crocidolite	ND	1.0	
	Tremolite	ND	1.0	

Comments: Sample consisted of black, flat, roofing material.

~15% cellulose

The trace of chrysotile found was on the surface of the sample; not within it.

US ENVIRONMENTAL PROTECTION AGENCY  
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Batchelder Site - Newtown, CT

Laboratory Blank for Bulk Asbestos

Client Sample ID: N/A  
Date of Collection: N/A  
Date of Extraction: 4/26/12  
Date of Analysis: 4/26/12

Lab Sample ID: N/A  
Matrix: Asbestos

<u>CAS Number</u>	<u>Compound</u>	<u>Concentration</u> <u>%</u>	<u>RL</u> <u>%</u>	<u>Qualifier</u>
	Actinolite	ND		
	Amosite	ND		
	Anthophyllite	ND		
	Chrysotile	ND		
	Crocidolite	ND		
	Tremolite	ND		

Comments:

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