Memorandum

TO: Dean Tagliaferro, USEPA
K.C. Mitkevicius, CENAE

cc: Holly Inglis, USEPA
Skip Hull, USEPA

FROM: Tom Czelusniak DATE: December 7, 2007

PROJECT: Pittsfield SSERC – TO4 W.O. NO.: 20124.001.098
SUBJECT: Summary Report – Subsurface Soil Sampling at Allendale School
DCN GE-120707-ADSH

This memorandum has been prepared to serve as a Summary Report for the collection and analysis of subsurface soil samples at Allendale School, located at 180 Connecticut Avenue in Pittsfield, Massachusetts. The United States Environmental Protection Agency (EPA) requested that Weston Solutions, Inc. (WESTON) collect soil samples in order to assess polychlorinated biphenyl (PCB) concentrations at depths of 1 to 3 feet and 3 to 6 feet below grade in the vegetated area in the southeast corner of the school grounds. This Report includes descriptions of the following:

- Objectives
- Rationale for selection of sampling locations
- Field sampling procedures and descriptions
- Current and historical analytical results

The activities described in this report were conducted in accordance with project-wide and area-specific planning documents. These planning documents include the following:

- Project Field Sampling Plan
- Project Quality Assurance Project Plan and Addendum (QAPP)
- Project Health and Safety Plan (HASP)
- Site Specific Health and Safety Plan

Objectives

The main objective of the sampling was to determine PCB concentrations in subsurface soils in the vegetated area in the southeast corner of the Allendale School grounds.

Rationale for Selection of Sampling Locations

Figure 1 depicts current site features. Figure 2 depicts the limits of previous soil removals near the southeastern corner of the property, previous subsurface soil sample locations in this area, and the locations of five subsurface soil borings conducted by WESTON on November 6, 2007 labeled as SSL-1 through SSL-5. A review of historic data indicated that PCB concentrations in all historic subsurface soil sample locations depicted on Figure 1 were less than 2 parts per million (ppm). Subsequent to historic Allendale School sampling activities, during a 2007 investigation of the adjacent General Electric (GE) owned Hill 78 Area Remainder Remedial Action Area (RAA), a sample collected on July 5, 2007 from 1 to 6 feet below grade at location RAA9-A13N (see Figure 2) contained PCBs at 150 ppm. WESTON's subsurface soil sample locations were selected to assess the area between previous subsurface sample locations and the adjoining boundaries of the Allendale School property.

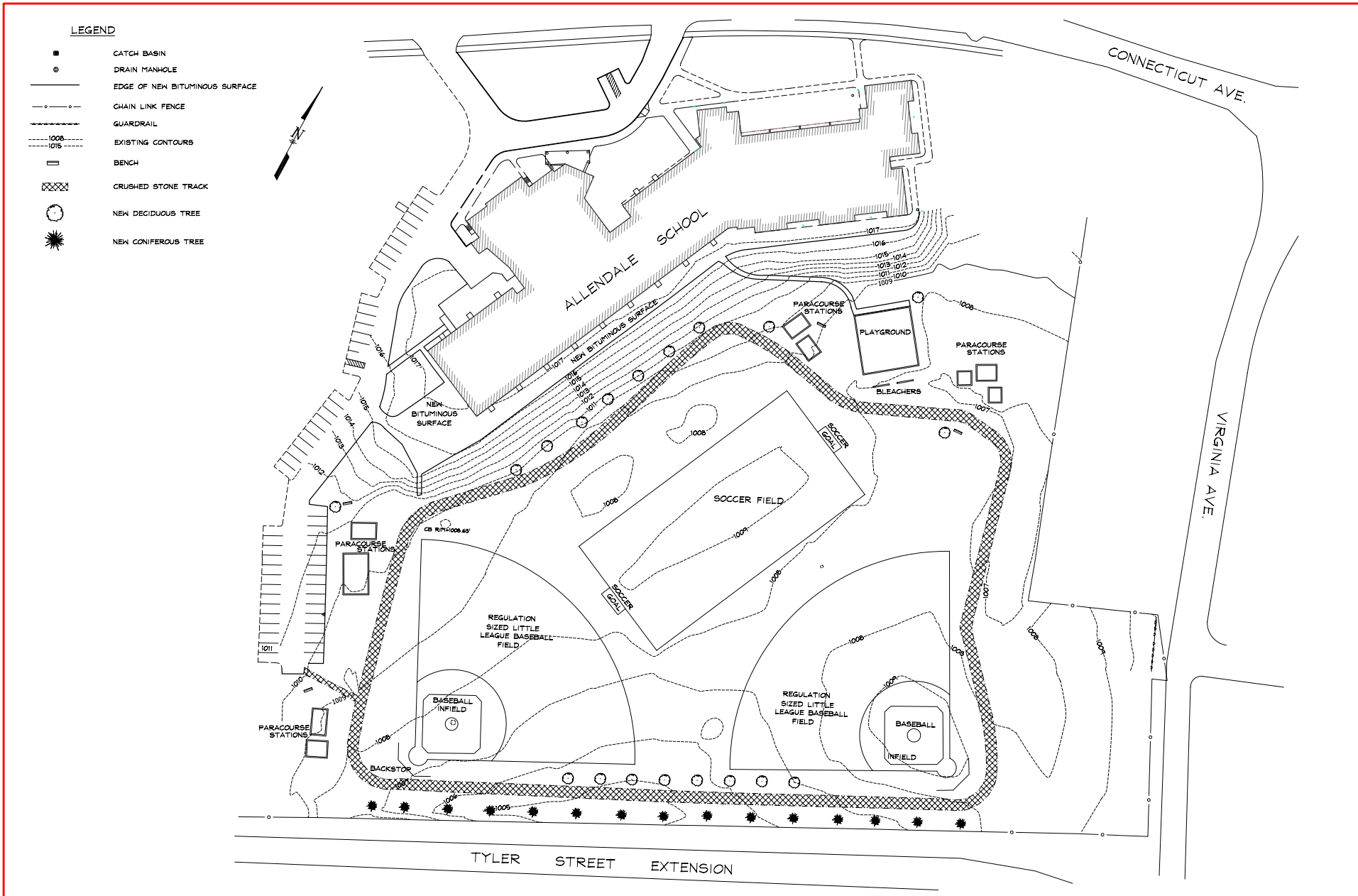
Field Sampling and Analytical Procedures

Soil sampling was conducted using a direct-push macro-core sampler and dedicated acetate liners. At each location, the macro-core sampler was driven to the desired depths (1 to 3 feet and 3 to 6 feet below grade), extracted, and the soil sample core removed in the acetate sleeve. Sample recoveries and soil sample descriptions are included in Table 1. For each depth interval, the entire soil sample core recovered was placed into a disposable plastic bowl, thoroughly homogenized with a disposable plastic scoop, and a sample aliquot was collected in a certified pre-cleaned 4 ounce amber sample jar for submission to the laboratory. The proposed sample locations were pre-surveyed by a licensed surveyor and marked with a wooden grade stake. All sample borings were completed at their pre-surveyed locations, with the exception of SSL-1, which had to be re-located approximately 10 feet to the east due to repeated refusal of the macro-core sampler at approximately 1.5 feet below grade at the proposed location. Location SSL-1 was re-surveyed by a licensed surveyor following collection.

The soil samples from locations SSL-1, -2, and -3 were submitted to the EPA Region 1 Office of Environmental Measurement & Evaluation in Chelmsford, Massachusetts for PCB analysis in accordance with EPA Method 8082 with a reporting limit of 0.1 ppm. The soil samples from locations SSL-4 and -5 were submitted for possible analysis pending the analytical results from locations SSL-1, -2, and -3. Quality assurance/quality control (QA/QC) samples were collected in accordance with the requirements outlined in the project QAPP and Addendum, and consisted of one field duplicate and one matrix spike/matrix spike duplicate.

Analytical Results

Current and historic analytical results for the subsurface soil sample locations depicted on Figure 2 are summarized in Table 2. Complete analytical results are included in Attachment 1. PCBs were detected in all samples ranging from a minimum of 0.09 ppm in sample SSL-1 (3-6), to a maximum of 33 ppm in sample SSL-3 (1-3). Since PCB concentrations do not exceed the residential standard of 2 ppm at location SSL-1 or the historic data point ASB-11, the samples from locations SSL-4 and SSL-5 were not analyzed.



NOTES:

1. AS BUILT CONDITIONS SHOWN AT ALLENDALE SCHOOL ARE AS OF NOVEMBER 11, 1999.
2. HORIZONTAL AND VERTICAL CONTROL SUPPLIED BY BLASLAND, BOUCK AND LEE.
3. RESTORATION PLAN PROVIDED BY WHITE ENGINEERING, INC. PLAN ENTITLED "SITE RESTORATION PLAN AT ALLENDALE SCHOOL" AND DATED 6-14-99.

Hill engineers architects planners
50 Depot Street
Dalton, MA 01226
(413) 684-0925
41 Park Street
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REV.	DESCRIPTION	DR'N	CK'D	DATE
A	ISSUED FOR COMMENT	JR		11-20-07

WESTON SOLUTIONS, INC.
10 LYMAN STREET
PITTSFIELD, MA

DRAWING TITLE: FIGURE 1 SITE PLAN

PROJECT DESCRIPTION: ALLENDALE SCHOOL K11-7-29

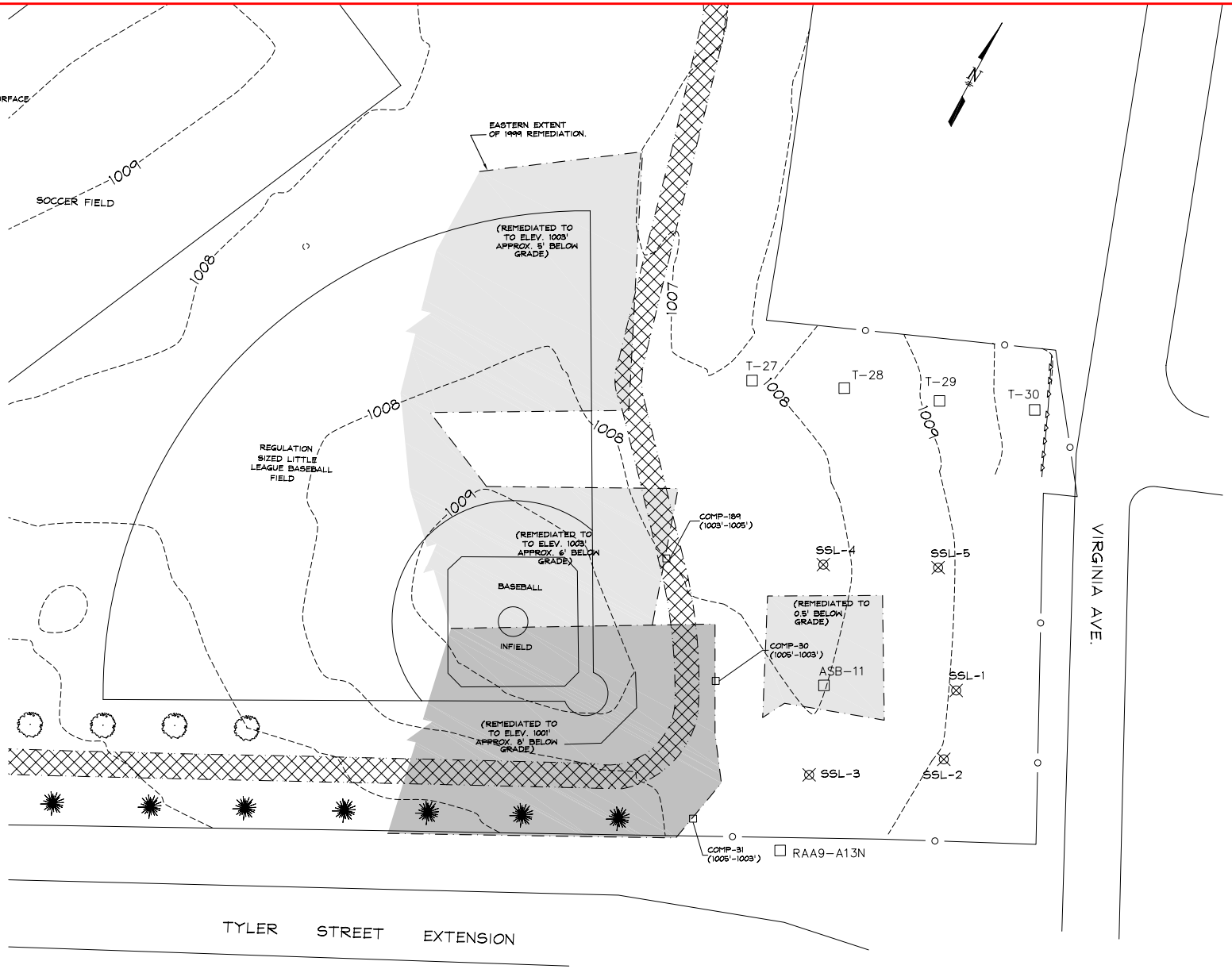
DRAWN BY	JR
DATE DRAWN	11-20-07
SCALE	1"=40'
APV'D BY	

CAD CODE: SRV-1127-002.dwg

GRAPHIC SCALE: 0 40 80

PROJECT NUMBER: SRV-1127-002

DRAWING NUMBER	REV.
C-104	A



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REV.	DESCRIPTION	DRN	CK'D.	DATE
A	ISSUED FOR COMMENT	JR		11-20-07

WESTON SOLUTIONS, INC.
10 LYMAN STREET
PITTSFIELD, MA

DRAWING TITLE: FIGURE 2 "SUBSURFACE SOIL SAMPLE LOCATIONS"

PROJECT DESCRIPTION: ALLENDALE SCHOOL KII-7-29

DRAWN BY	JR
DATE DRAWN	11-20-07
SCALE	1"=20'
APV'D BY	

CAD CODE: SRV-1127-002.dwg

GRAPHIC SCALE: 0 20 40

PROJECT NUMBER: SRV-1127-002

DRAWING NUMBER	REV.
C-105	A

Table 1
Sub-surface Soil Descriptions

Location	Depth Interval (feet)	Recovery (inches)	Description
SSL-1	1-3	20	Medium to dark brown fine sand, silt, and organics
SSL-1	3-6	23	Medium to dark brown fine sand, silt, and organics
SSL-2	1-3	16	Grey fine sand with trace silt, gravel, and organics
SSL-2	3-6	36	Dark brown fine sand, silt, and organics
SSL-3	1-3	20	Grey to brown medium sand and gravel with some oxidation staining and several small brick fragments
SSL-3	3-6	30	22’ grey fine sand with trace silt and gravel over 4” dark brown organics over 4” grey fine sand with trace silt and gravel
SSL-4	1-3	18	Medium brown medium to fine sand with trace silt, gravel, and organics
SSL-4	3-6	20	Light brown fine sand with trace silt, gravel, and organics
SSL-5	1-3	18	Dark brown fine to medium sand with trace silt
SSL-5	3-6	30	Medium brown fine sand with trace gravel and silt

Table 2
Sub-surface Soil Sample Results

Location ID	Depth (feet)	Date	PCBs (ppm)
Historical Data			
T-27	1-2	2/91	0.13
	2-3	2/91	0.14
	3-4	2/91	0.016
T-28	1-2	2/91	<0.015
	2-3	2/91	<0.12
	3-4	2/91	<0.12
T-29	1-2	2/91	0.114
	2-3	2/91	<0.11
	3-4	2/91	<0.12
T-30	1-2	2/91	1.59
	2-3	2/91	<0.011
	3-4	2/91	<0.013
ASB-11	1-3	6/12/97	1.81
	3-5	6/12/97	0.72
	5-7	6/12/97	<0.041
COMP-30	+/- 3-5	8/2/99	0.54
COMP-31	+/- 3-5	8/2/99	0.34
COMP-189	+/- 3-5	8/23/99	0.063 J
RAA9-A13N	1-6	7/5/07	150
Current Data			
SSL-1	1-3	11/6/07	0.14
	3-6	11/6/07	0.09
SSL-2	1-3	11/6/07	3.1
	3-6	11/6/07	2.5
SSL-2D	1-3	11/6/07	3.1
SSL-3	1-3	11/6/07	33
	3-6	11/6/07	14

ppm – parts per million
J – estimated value

ATTACHMENT 1
LABORATORY ANALYTICAL RESULTS

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

EPA
Region 1, New England

Laboratory Report

November 19, 2007

Richard Hull - HBO
USEPA New England Region 1
One Congress Street
Boston, MA 02114 - 2023

Project Number: 07110014
Project: GE Allendale School - Pittsfield, MA
Analysis: PCBs in Soils and Sediments Low Level
Analyst: Paul Carroll 11.19.07

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, PESTSOIL2.SOP.

Date Samples Received by the Laboratory: 11/8/07

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 11/27/07
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
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.
R	No recovery was calculated since the analyte concentration is greater than four times the spike level.

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NEW ENGLAND LABORATORY

GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-1 (1-3)	Lab Sample ID:	AA76703
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	77%
Dry Weight Extracted:	9.38 grams	Extract Dilution:	1
Wet Weight Extracted:	12.18 grams		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	0.05	
11104-28-2	Aroclor-1221	ND	0.05	
11141-16-5	Aroclor-1232	ND	0.05	
53469-21-9	Aroclor-1242	ND	0.05	
12672-29-6	Aroclor-1248	ND	0.05	
11097-69-1	Aroclor-1254	**0.09**	0.05	
11096-82-5	Aroclor-1260	**0.05**	0.05	
11100-14-4	Aroclor-1262	ND	0.05	
37324-23-5	Aroclor-1268	ND	0.05	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	95	19 - 109
Decachlorobiphenyl	96	36 - 122

Comments:

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GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-1 (3-6)	Lab Sample ID:	AA76704
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	68%
Dry Weight Extracted:	7.26 grams	Extract Dilution:	1
Wet Weight Extracted:	10.69 grams		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	0.07	
11104-28-2	Aroclor-1221	ND	0.07	
11141-16-5	Aroclor-1232	ND	0.07	
53469-21-9	Aroclor-1242	ND	0.07	
12672-29-6	Aroclor-1248	ND	0.07	
11097-69-1	Aroclor-1254	**0.09**	0.07	
11096-82-5	Aroclor-1260	ND	0.07	
11100-14-4	Aroclor-1262	ND	0.07	
37324-23-5	Aroclor-1268	ND	0.07	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	92	19 - 109
Decachlorobiphenyl	96	36 - 122

Comments:

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PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-2 (1-3)	Lab Sample ID:	AA76705
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	84%
Dry Weight Extracted:	8.83 grams	Extract Dilution:	20
Wet Weight Extracted:	10.53 grams		

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	ND	1.20	
11097-69-1	Aroclor-1254	ND	1.20	
11096-82-5	Aroclor-1260	**3.1**	1.20	
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	NA	19 - 109
Decachlorobiphenyl	NA	36 - 122

Comments: NA - Surrogate recoveries could not be determined due to dilutions that were required to quantify target analytes.

The following 5 samples (AA76705 -> AA76709) from this project all contained an Aroclor pattern (in addition to Aroclor 1260) that was in the same retetion time window as Aroclor 1254, however there was no match to Aroclor 1254. Both technical chlordane and chlorinated pesticides retention standards were analyzed and no match to pesticides were observed. It would appear that these multiple peaks are Aroclor congeners that are from Aroclor 1254 but are so weathered that the pattern does not match Aroclor 1254.

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GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-2D (1-3)	Lab Sample ID:	AA76706
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	84%
Dry Weight Extracted:	8.98 grams	Extract Dilution:	20
Wet Weight Extracted:	10.66 grams		

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	ND	1.10	
11097-69-1	Aroclor-1254	ND	1.10	
11096-82-5	Aroclor-1260	**3.1**	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	NA	19 - 109
Decachlorobiphenyl	NA	36 - 122

Comments: NA - Surrogate recoveries could not be determined due to dilutions that were required to quantify target analytes.

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GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-3 (1-3)	Lab Sample ID:	AA76708
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	86%
Dry Weight Extracted:	8.57 grams	Extract Dilution:	50
Wet Weight Extracted:	10.00 grams		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	3.00	
11104-28-2	Aroclor-1221	ND	3.00	
11141-16-5	Aroclor-1232	ND	3.00	
53469-21-9	Aroclor-1242	ND	3.00	
12672-29-6	Aroclor-1248	ND	3.00	
11097-69-1	Aroclor-1254	ND	3.00	
11096-82-5	Aroclor-1260	**33**	3.00	
11100-14-4	Aroclor-1262	ND	3.00	
37324-23-5	Aroclor-1268	ND	3.00	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	NA	19 - 109
Decachlorobiphenyl	NA	36 - 122

Comments: NA - Surrogate recoveries could not be determined due to dilutions that were required to quantify target analytes.

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GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-2 (3-6)	Lab Sample ID:	AA76707
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	76%
Dry Weight Extracted:	7.94 grams	Extract Dilution:	10
Wet Weight Extracted:	10.42 grams		

CAS Number	Compound	Concentration mg/Kg	RL mg/Kg	Qualifier
12674-11-2	Aroclor-1016	ND	0.65	
11104-28-2	Aroclor-1221	ND	0.65	
11141-16-5	Aroclor-1232	ND	0.65	
53469-21-9	Aroclor-1242	ND	0.65	
12672-29-6	Aroclor-1248	ND	0.65	
11097-69-1	Aroclor-1254	ND	0.65	
11096-82-5	Aroclor-1260	**2.5**	0.65	
11100-14-4	Aroclor-1262	ND	0.65	
37324-23-5	Aroclor-1268	ND	0.65	

Surrogate Compounds	Recoveries (%)	QC Ranges
2,4,5,6-Tetrachloro-m-xylene	84	19 - 109
Decachlorobiphenyl	104	36 - 122

Comments:

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GE Allendale School - Pittsfield, MA

PCBs in Soils and Sediments Low Level

Client Sample ID:	SSL-3 (3-6)	Lab Sample ID:	AA76709
Date of Collection:	11/6/2007	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	78%
Dry Weight Extracted:	8.84 grams	Extract Dilution:	20
Wet Weight Extracted:	11.28 grams		

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	ND	1.20	
11097-69-1	Aroclor-1254	ND	1.20	
11096-82-5	Aroclor-1260	**14**	1.20	
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	NA	19 - 109
Decachlorobiphenyl	NA	36 - 122

Comments: NA - Surrogate recoveries could not be determined due to dilutions that were required to quantify target analytes.

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GE Allendale School - Pittsfield, MA

Laboratory Blank

Client Sample ID:	N/A	Lab Sample ID:	N/A
Date of Collection:	N/A	Matrix	Soil
Date of Extraction:	11/9/07	Final Volume:	5 mL
Date of Analysis:	11/14/07	Percent Solids:	100%
Dry Weight Extracted:	5.20 grams	Extract Dilution:	1
Wet Weight Extracted:	5.20 grams		

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	ND	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	86	19 - 109
Decachlorobiphenyl	86	36 - 122

Comments:

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

GE Allendale School - Pittsfield, MA

Sample ID: AA76709

PARAMETER	SPIKE ADDED mg/Kg	SAMPLE CONCENTRATION mg/Kg	MS CONCENTRATION mg/Kg	MS % REC	QC LIMITS (% REC)
Aroclor-1260	0.40	14	NA	NA	70 - 130

PARAMETER	MSD SPIKE ADDED	MSD CONCENTRATION mg/Kg	MSD % REC	RPD %	QC LIMITS RPD
Aroclor-1260	0.39	NA	NA	0	50

Samples in Batch: AA76703, AA76704, AA76705, AA76706, AA76707, AA76708, AA76709

Comments: NA - Matrix Spike recoveries could not be determined due to dilutions that were required to quantify target analytes.

US ENVIRONMENTAL PROTECTION AGENCY
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LABORATORY DUPLICATE RESULTS

GE Allendale School - Pittsfield, MA

Sample ID: AA76709

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	14	16	13	50
Aroclor-1262	ND	ND	ND	50
Aroclor-1268	ND	ND	ND	50