

Limited Subsurface Investigation

7850 E. Jefferson Avenue
Detroit, Michigan

Shamrock Acquisitions, LLC

April 25, 2017

ASTI ENVIRONMENTAL



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Limited Subsurface Investigation

7850 E. Jefferson Avenue
Detroit, Michigan

April 25, 2017

Prepared For:

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- A Site Photographs
- B Soil Boring Logs
- C Analytical Laboratory Results and Chain-of-Custody Documentation

1.0 INTRODUCTION

ASTI Environmental (ASTI) was retained by Shamrock Acquisitions, LLC to conduct a Limited Subsurface Investigation (LSI) of the property located at 7850 E. Jefferson Avenue in the City of Detroit, Wayne County, Michigan (Property). This LSI was prepared for the benefit of Shamrock Acquisitions, LLC and ASTI acknowledges that this party may rely upon the contents and conclusions presented in this report. The Property is located on the south side of E. Jefferson Avenue and approximately 580 feet east of Baldwin Street in the City of Detroit. The Property comprises approximately 2.75 acres of land and is identified as Parcel No. 17000017. A Site Location Map is provided as Figure 1.

The site investigation was conducted in accordance with ASTI's Proposal dated March 30, 2017.

2.0 PURPOSE AND PROPERTY HISTORY AND INFORMATION

2.1 Purpose

ASTI was provided with a Phase II ESA report completed at the Property by NTH Consultants, LTD (NTH) on October 12, 2007. The Phase II ESA was conducted to evaluate the following recognized environmental conditions (RECs) identified in NTH's Phase I ESA of the Property dated September 11, 2007.

- The Property formerly contained several structures, at least one of which had a basement. No information was available regarding the nature or source of the fill materials used to fill in the basements of the former structure(s).
- Review of available historical sources indicated that two storage tanks were present at the Property with no detailed information available as to the current status or removal of the tanks.
- Review of available historical sources indicated that the southern 1/3 of the Property was filled in sometime in the late 1800s or 1900s. In addition, fill soils containing debris were encountered during NTH's concurrent geotechnical investigation. No information was available as to the nature or source of the fill materials.

The Phase II ESA identified arsenic, chromium, and mercury in soil at concentrations above the Michigan Department of Environmental Quality's (MDEQ)'s Part 201 generic residential cleanup criteria (GRCC) for drinking water protection and groundwater surface water interface protection criteria. The Property was determined to be a "*facility*" as defined in Part 201 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended (Part 201). Based on the results of the Phase II ESA, NTH conducted a Baseline Environmental Assessment (BEA) of the Property in January 2008, which was affirmed on February 1, 2008. A Geophysical Survey was also conducted during the Phase II ESA and no underground storage tanks were identified.

The purpose of this LSI was to determine the current condition of the Property based on the RECs and potential due care obligations.

2.2 Historic Uses of the Property

Based on research, the Property contained a residential dwelling and outbuildings by 1888. The southern portion of the Property was filled in sometime in the late 1800's or early

1900's. By 1935 the northern portion of the Property contained a clubhouse building identified as the Colony Town Club and the southern portion of the Property contained a residential dwelling and associated outbuildings. By the mid 1940's the northern portion of the property was developed with a building used as a hospital and as a youth home. The Property has remained vacant since approximately 1977.

2.3 Current Uses of the Property

The Property is currently vacant with no obvious usage.

2.4 Existing Infrastructure Features

No structures are located at the Property. Utilities available to the Property include potable water, storm water, and sewer through the City of Detroit. Electric and natural gas services are available through DTE Energy.

3.0 SOIL BORING LOCATIONS

On April 7, 2017, ASTI advanced five soil borings (SB-1 through SB-5) at the Property using a direct-push Geoprobe® drill rig. The soil boring locations were spread out in a north-northwest/south-southeast orientation across the Property with two of the borings (SB-4 and SB-5) located within the filled in former riverbed on the southeastern portion of the Property. A soil sample was collected from each soil boring location for a total of five samples. A Sample Location Map is provided as Figure 2. Photographs of the completion of the soil borings are included as Attachment A. Boring/sample ID, boring/sample locations, and depth were as follows.

Boring/Sample ID	Boring/Sample Location	Depth of Boring
SB-1	Northwestern portion of the Property in regard to deposition of fill material	16 feet
SB-2	Central portion of the Property in regard to deposition of fill material	16 feet
SB-3	Central portion of the Property in regard to deposition of fill material	16 feet
SB-4	Southern portion of the Property within the area of a historical riverbed	16 feet
SB-5	Southern portion of the Property within the area of a historical riverbed	16 feet

4.0 SAMPLE COLLECTION PROCEDURES

The soil borings were advanced to 16 feet below ground surface (bgs) with a track-mounted, direct-push Geoprobe®. All down-hole equipment was decontaminated using an Alconox® wash and clean water rinse between borings to minimize the risk of cross contamination of samples. Soil encountered during field activities was characterized by ASTI's field personnel, examined for visual and/or olfactory evidence of impact, screened using a photoionization detector (PID), and recorded in a field logbook. Prior to sampling, the PID was calibrated to manufacturer specifications using 100 parts per million (ppm) isobutylene calibration gas. No PID readings were encountered in the field above 0 ppm as indicated in the soil boring logs provided as Attachment B.

All soil samples were collected into laboratory certified clean 4-ounce glass jars for analysis of 10 Michigan metals (arsenic, barium, cadmium, copper chromium, lead, mercury, selenium, silver, and zinc) and polynuclear aromatic hydrocarbons (PNAs), and 40-ml glass vials preserved in the field with methanol for volatile organic compounds (VOCs) analysis. All samples were cooled to 4°C, and submitted to Merit Laboratories, Inc. in East Lansing, Michigan under standard chain of custody procedures.

Soil were submitted for analysis of VOCs by US EPA Method 8260C, PNAs by US EPA Method 8270D, 10 Michigan metals by US EPA Method 7471B and/or 6020A.

Sample depth, location rationale, and analysis are provided in the following table.

Boring	Sample Matrix	Sample Depth	Rationale for sample location	Analysis
SB-1	Soil	0.5-1.5'	Presence of fill material with debris within sampling interval	VOCs, PNAs, & 10 Michigan metals
SB-2	Soil	6.5-7.5'	Presence of fill material with debris within sampling interval	VOCs, PNAs, & 10 Michigan metals
SB-3	Soil	9-10'	Presence of fill material with debris within sampling interval	VOCs, PNAs, & 10 Michigan metals
SB-4	Soil	7-8'	Presence of fill material with debris within sampling interval	VOCs, PNAs, & 10 Michigan metals
SB-5	Soil	5-6'	Presence of fill material with debris within sampling interval	VOCs, PNAs, & 10 Michigan metals

5.0 SOIL AND GROUNDWATER CHARACTERISTICS

The following sections describe the encountered soil and groundwater conditions during the investigation.

5.1 Soil

The subsurface lithology encountered in the soil borings, underlying surface cover (topsoil), generally consisted of fill materials varying in composition from sand to silty-clay and extended to depths between 4 feet and 13 feet bgs. The fill materials in SB-1 through SB-4 each contained varying amounts of debris consisting of brick, concrete, foundry sand, and slag. A native silty-clay stratum was encountered under the fill materials and extended to the explored depth of soil borings SB-1 through SB-4. The silty-clay stratum was also present in SB-5 and persisted to 14 feet bgs and was underlain by a well graded sand layer which was encountered to 16 feet bgs, the maximum explored depth of SB-5. No odors or staining were observed in the soil borings and no reading were detected on the PID.

5.2 Groundwater

No groundwater was encountered in soil boring SB-1. Groundwater was encountered in soil borings SB-2 through SB-5 between 8 feet and 12 feet bgs within sand layers or sand seams. The depth to groundwater was generally encountered at deeper depths towards the Detroit River. The likely groundwater flow direction is to the southeast based on surface gradient and observed depth to groundwater.

6.0 PATHWAY EVALUATION

The applicable pathways and associated GRCC for the Property under Part 201 of Michigan's *Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended* (Part 201) for soil are the soil drinking water protection (DWP), groundwater surface water interface protection (GSIP), direct contact (DC), soil volatilization to indoor air inhalation (SVIAI), and particulate soil inhalation (PSI).

7.0 ANALYTICAL RESULTS

Soil Analytical Results

Table 1 presents the laboratory analytical results for the soil samples in comparison to the applicable MDEQ Part 201 GRCC. The laboratory analytical reports and chain of custody records are provided in Attachment C.

The laboratory analytical results reported the metal mercury at concentrations exceeding the GRCC for GSIP in soil samples SB-1 (0.5-1.5'), SB-3 (9-10'), and SB-4 (7-8'). In addition, arsenic was detected at a concentration exceeding the GRCC for DWP and GSIP in soil sample SB-2 (6.5-7.5'). Lead was reported at a concentration exceeding the GRCC for DC in soil sample SB-1 (0.5-1.5'). No other metals were detected above the GRCC.

As indicated in Part 201 324.20101 (ei-iv), background concentrations for a hazardous substance may be demonstrated by complying with statewide default background levels, or having the hazardous substance listed in the 2005 Michigan background soil survey (Updated 2015) tables 2, 3, or 4 with representation of at least nine samples for the hazardous substance in the glacial lobe for the soil type sampled or through completion of a site-specific demonstration. The concentration in the 2005 Michigan background soil survey (Updated 2015) is the lesser of either two standard deviations of the mean for the soil type and glacial lobe or the uppermost value in the typical range of data for the hazardous substance in table 1. The Property is located within the Huron-Erie Glacial Lobe, which has 175 representative samples for sand which exceeds the minimum of nine samples. The following is a table of the comparison of the arsenic analytical result, sample soil type, and the glacial lobe background concentration and upper value of typical range.

Boring ID	Arsenic Result	Soil Type	Huron-Erie Lobe Concentration	Upper Value of Typical Range
SB-2 (6.5-7.5')	6,280	Sand	26,300	22,800

Based on a comparison of the data to the glacial lobe or upper value of the typical range concentration, the arsenic result for sample SB-2 is below the background concentration.

PNAs were reported in soil samples SB-1 and SB-3 at concentrations below the GRCC. No PNAs were reported in the remaining soil samples. No VOCs were detected in the soil samples.

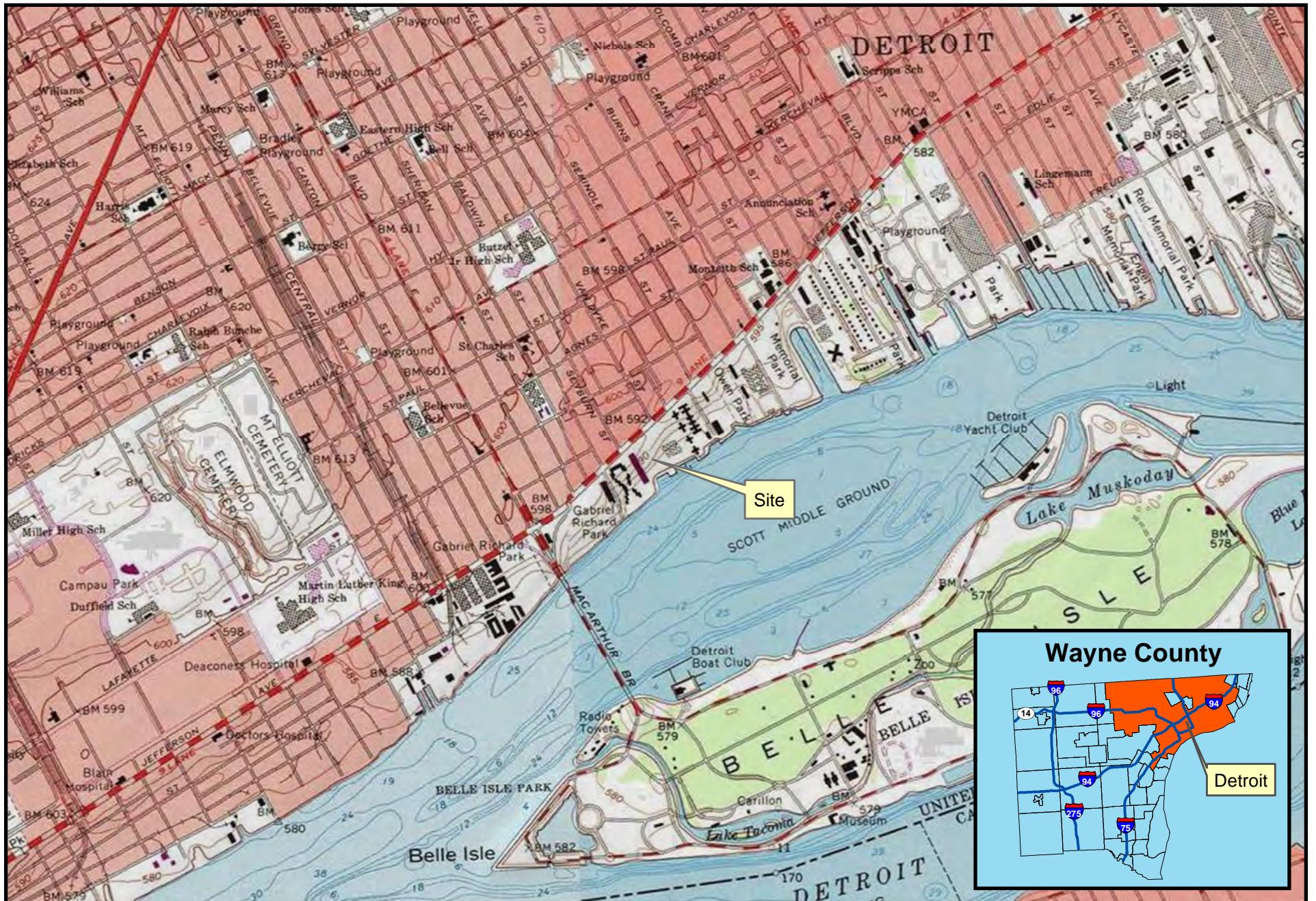
8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the laboratory analytical results for the soil samples collected at the Property, metals have been detected in soil samples at concentrations exceeding the GRCC for DWP, GSIP, and DC. Therefore, it is ASTI's opinion that the Property is a "facility" as defined in Part 201 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as Amended (Part 201). A Baseline Environmental Assessment (BEA) is not applicable for the current owner, but could be prepared for a new ownership entity.

ASTI recommends the preparation of a Due Care Plan to document the procedures Shamrock Acquisitions will follow to avoid exacerbation of or exposure to existing contamination during redevelopment and future use of the Property. Recommended response activities for proposed construction of a residential high rise will be summarized in a separate letter, but the letter should not be construed as a Due Care Plan.

FIGURES

- 1 Site Location Map
- 2 Soil Boring Location Map



7850 E. Jefferson Ave.

Detroit, MI

2,000 1,000 0

2,000
Feet



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Created for: Shamrock Acquisitions LLC
Created by: WAD, April 25, 2017, ASTI Project 9991

Figure 1 - Site Location Map



0 60 120 180
Approximate Scale in Feet

LEGEND
Property Line
Soil Boring

7850 E. Jefferson Ave.

Detroit, MI

Created for: Shamrock Acquisitions LLC
ASTI Project 10105, JMD, April 18, 2017

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Figure 2 - Soil Boring Location Map

TABLES

1 Summary of Soil Sample Analytical Results

Table 1 Summary of Soil Sample Analytical Results
7850 E. Jefferson Avenue, Detroit, MI
ASTI Project No. 10105

Parameters	Statewide Default Background Levels*	Groundwater		Residential Surface Water Interface Protection Criteria*		Residential Soil Volatilization to Indoor Air Inhalation Criteria*		Residential Finite Source Inhalation for 5 Meter Source Thickness		Residential Particulate Soil Inhalation Criteria*		Residential Direct Contact Criteria*		SB-1 0.5-1.5' 04/07/2017	SB-2 6.5-7.5' 04/07/2017	SB-3 9-10' 04/07/2017	SB-4 7-8' 04/07/2017	Dup1-S SB-4 04/07/2017
		Residential Drinking Water Protection Criteria*	Surface Water Protection Criteria*	Volatilization to Indoor Air Inhalation Criteria*	Residential Soil Volatilization for 5 Meter Source Thickness	Residential Finite Source Inhalation for 5 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria*	Residential Direct Contact Criteria*	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	04/07/2017 µg/kg	
Total Arsenic	5,800	4,600	4,600	NLV	NLV	720,000	7,600	3,630	6,280	2,360	980	400						
Total Barium	75,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	285,000	42,700	99,400	50,500	79,500						
Total Cadmium	1,200	6,000	(G, X)	NLV	NLV	1,700,000	550,000	420	<200	<200	<200	<200						
Total Chromium	18,000	30,000	3,300	NLV	NLV	260,000	2,500,000	7,620	12,100	5,670	5,990	8,110						
Total Copper	32,000	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	27,100	14,200	6,580	14,100	16,000						
Total Lead	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	212,000	14,700	37,700	44,600	8,100						
Lead, Fine	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	165,000	~	~	~	~						
Lead, Course	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	217,000	~	~	~	~						
Lead, Total Calculated	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	160,000	187	68	190	215	101					
Total Mercury	130	1,700	50 (M)	48,000	52,000	20,000,000	160,000	187	68	190	215	101						
Total Selenium	410	4,000	400	NLV	NLV	130,000,000	2,600,000	<400	<400	<400	<400	<400						
Total Silver	1,000	4,500	100 (M)	NLV	NLV	6,700,000	2,500,000	<200	<200	<200	<200	<200						
Total Zinc	47,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	189,000	26,500	41,300	31,200	21,100						
Acenaphthene	NA	300,000	8,700	190,000,000	81,000,000	14,000,000,000	41,000,000	<330	<330	<330	<330	<330						
Acenaphthylene	NA	5,900	ID	1,600,000	2,200,000	2,300,000,000	1,600,000	<330	<330	<330	<330	<330						
Anthracene	NA	41,000	ID	1,000,000,000 (D)	1,400,000,000	67,000,000,000	230,000,000	<330	<330	<330	<330	<330						
Benz(a)anthracene	NA	NLL	NLL	NLV	NLV	ID	20,000	500	<330	660	<330	<330						
Benz(a)pyrene	NA	NLL	NLL	ID	ID	1,500,000	2,000	530	<330	630	<330	<330						
Benz(b)fluoranthene	NA	NLL	NLL	ID	ID	20,000	930	<330	1,040	<330	<330	<330						
Benz(g,h,i)perylene	NA	NLL	NLL	NLV	NLV	800,000,000	2,500,000	<330	<330	<330	<330	<330						
Benz(k)fluoranthene	NA	NLL	NLL	NLV	NLV	ID	200,000	1,000	<330	1,120	<330	<330						
Chrysene	NA	NLL	NLL	ID	ID	2,000,000	530	<330	700	<330	<330	<330						
Dibenz(a,h)anthracene	NA	NLL	NLL	NLV	NLV	ID	2,000	<330	<330	<330	<330	<330						
Fluoranthene	NA	730,000	5,500	1,000,000,000 (D)	740,000,000	9,300,000,000	46,000,000	950	<330	1,250	<330	<330						
Fluorene	NA	390,000	5,300	580,000,000	130,000,000	9,300,000,000	27,000,000	<330	<330	<330	<330	<330						
Indeno(1,2,3-cd)pyrene	NA	NLL	NLL	NLV	NLV	ID	20,000	<330	<330	<330	<330	<330						
2-Methylnaphthalene	NA	57,000	4,200	2,700,000	1,500,000	670,000,000	8,100,000	<330	<330	<330	<330	<330						
Naphthalene	NA	35,000	730	250,000	300,000	200,000,000	16,000,000	<330	<330	<330	<330	<330						
Phenanthrene	NA	56,000	2,100	2,800,000	160,000	6,700,000	1,600,000	610	<330	1,070	<330	<330						
Pyrene	NA	480,000	ID	1,000,000,000 (D)	650,000,000	6,700,000,000	29,000,000	890	<330	1,660	<330	<330						
Polychlorinated biphenyls	NA	NLL	NLL	3,000,000	7,900,000	5,200,000	4,000 (T)	~	~	~	~	~						
Acetone	NA	15,000	34,000	290,000,000 (C)	130,000,000	390,000,000,000	23,000,000	<1,000	<1,000	<1,000	<1,000	<1,000						
Acrylonitrile	NA	100	100	6,600	5,100	46,000,000	16,000	<100	<100	<100	<100	<100						
Benzene	NA	100	4,000 (X)	1,600	34,000	380,000,000	180,000	<70	<60	<60	<70	<80						
Bromobenzene	NA	550	NA	310,000	450,000	530,000,000	540,000	<100	<100	<100	<100	<100						
Bromo-chloromethane	-	-	-	-	-	-	-	<100	<100	<100	<100	<100						
Bromodichloromethane	NA	1,600 (W)	ID	1,200	9,700	84,000,000	110,000	<100	<100	<100	<100	<100						
Bromoform	NA	1,600 (W)	ID	150,000	900,000	2,800,000,000	820,000	<100	<100	<100	<100	<100						
Bromomethane	NA	200	700	860	57,000	330,000,000	320,000	<300	<200	<200	<300	<300						
2-Butanone	NA	260,000	44,000	54,000,000 (C)	29,000,000	29,000,000	120,000,000 (C,DD)	<990	<870	<920	<1,000	<1,100						
Carbon disulfide	NA	16,000	ID	76,000	7,900,000	47,000,000,000	7,200,000 (C,DD)	<300	<300	<300	<300	<400						
Carbon tetrachloride	NA	100	900 (X)	190	12,000	130,000,000	96,000	<70	<60	<60	<70</							

Table 1 Summary of Soil Sample Analytical Results
7850 E. Jefferson Avenue, Detroit, MI
ASTI Project No. 10105

Parameters	Statewide Default Background Levels*	Residential Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Residential Soil Volatilization to Indoor Air Inhalation Criteria*	Residential Finite Source Inhalation for 5 Meter Source Thickness	Residential Particulate Soil Inhalation Criteria*	Residential Direct Contact Criteria*	SB-5 5-6' 04/07/2017 µg/kg	Meth Blank 04/07/2017 µg/kg
Total Arsenic	5,800	4,600	4,600	NLV	NLV	720,000	7,600	2,350	~
Total Barium	75,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	33,200	~
Total Cadmium	1,200	6,000	(G, X)	NLV	NLV	1,700,000	550,000	460	~
Total Chromium	18,000	30,000	3,300	NLV	NLV	260,000	2,500,000	5,010	~
Total Copper	32,000	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	133,000	~
Total Lead	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	69,000	~
Lead, Fine	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	~	~
Lead, Course	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	~	~
Lead, Total Calculated	21,000	700,000	(G, X)	NLV	NLV	100,000,000	400,000	~	~
Total Mercury	130	1,700	50 (M)	48,000	52,000	20,000,000	160,000	<50	~
Total Selenium	410	4,000	400	NLV	NLV	130,000,000	2,600,000	<400	~
Total Silver	1,000	4,500	100 (M)	NLV	NLV	6,700,000	2,500,000	<200	~
Total Zinc	47,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	293,000	~
Acenaphthene	NA	300,000	8,700	190,000,000	81,000,000	14,000,000,000	41,000,000	<330	~
Acenaphthylene	NA	5,900	ID	1,600,000	2,200,000	2,300,000,000	1,600,000	<330	~
Anthracene	NA	41,000	ID	1,000,000,000 (D)	1,400,000,000	67,000,000,000	230,000,000	420	~
Benzo (a) anthracene	NA	NLL	NLL	NLV	NLV	ID	20,000	820	~
Benzo (a) pyrene	NA	NLL	NLL	NLV	NLV	1,500,000	2,000	760	~
Benzo (b) fluoranthene	NA	NLL	NLL	ID	ID	ID	20,000	1,290	~
Benzo (g,h,i) perylene	NA	NLL	NLL	NLV	NLV	800,000,000	2,500,000	410	~
Benzo (k) fluoranthene	NA	NLL	NLL	NLV	NLV	ID	200,000	1,390	~
Chrysene	NA	NLL	NLL	ID	ID	ID	2,000,000	810	~
Dibenz (a,h) anthracene	NA	NLL	NLL	NLV	NLV	ID	2,000	<330	~
Fluoranthene	NA	730,000	5,500	1,000,000,000 (D)	740,000,000	9,300,000,000	46,000,000	1,900	~
Fluorene	NA	390,000	5,300	580,000,000	130,000,000	9,300,000,000	27,000,000	<330	~
Indeno (1,2,3-cd) pyrene	NA	NLL	NLL	NLV	NLV	ID	20,000	420	~
2-Methylnaphthalene	NA	57,000	4,200	2,700,000	1,500,000	670,000,000	8,100,000	<330	~
Naphthalene	NA	35,000	730	250,000	300,000	200,000,000	16,000,000	<330	~
Phenanthrene	NA	56,000	2,100	2,800,000	160,000	6,700,000	1,600,000	1,640	~
Pyrene	NA	480,000	ID	1,000,000,000 (D)	650,000,000	6,700,000,000	29,000,000	2,340	~
Polychlorinated biphenyls	NA	NLL	NLL	3,000,000	7,900,000	5,200,000	4,000 (T)	<330	~
Acetone	NA	15,000	34,000	290,000,000 (C)	130,000,000	390,000,000,000	23,000,000	<1,000	<1,000
Acrylonitrile	NA	100	100	6,600	5,100	46,000,000	16,000	<100	<100
Benzene	NA	100	4,000 (X)	1,600	34,000	380,000,000	180,000	<70	<50
Bromobenzene	NA	550	NA	310,000	450,000	530,000,000	540,000	<100	<100
Bromochloromethane	-	-	-	-	-	-	-	<100	<100
Bromodichloromethane	NA	1,600 (W)	ID	1,200	9,700	84,000,000	110,000	<100	<100
Bromoform	NA	1,600 (W)	ID	150,000	900,000	2,800,000,000	820,000	<100	<100
Bromomethane	NA	200	700	860	57,000	330,000,000	320,000	<300	<200
2-Butanone	NA	260,000	44,000	54,000,000 (C)	29,000,000	29,000,000	120,000,000 (C,DD)	<1,100	<750
Carbon disulfide	NA	16,000	ID	76,000	7,900,000	47,000,000,000	7,200,000 (C,DD)	<400	<300
Carbon tetrachloride	NA	100	900 (X)	190	12,000	130,000,000	96,000	<70	<50
Chlorobenzene	NA	2,000	500	120,000	990,000	4,700,000,000	4,300,000 (C)	<70	<50
Chloroethane	NA	8,600	22,000	2,900,000 (C)	30,000,000	280,000,000	2,600,000 (C)	<400	<300
Chloroform	NA	1,600 (W)	7,000 (X)	7,200	120,000	1,300,000,000	1,200,000	<70	<50
Chloromethane	NA	5,200	ID	2,300	410,000	4,900,000,000	1,600,000 (C)	<400	<300
cis-1,2-Dichloroethene	NA	1,400	12,000	22,000	420,000	2,300,000,000	2,500,000 (C)	<70	<50
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	<70	<50
Cyclohexane	-	-	-	-	-	-	-	<70	<50
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	<400	<300
Dibromochloromethane	NA	1,600 (W)	ID	3,900	24,000	130,000,000	110,000	<100	<100
Dibromomethane	NA	1,600	NA	ID	ID	2,500,000 (C)	<400	<300	-
1,2-Dichlorobenzene	NA	14,000	280	11,000,000 (C)	39,000,000	52,000,000	19,000,000 (C)	<100	<100
1,3-Dichlorobenzene	NA	170	680	26,000	79,000	110,000	200,000 (C)	<100	<100
1,4-Dichlorobenzene	NA	1,700	360	19,000	77,000	110,000	400,000	<100	<100
Dichlorodifluoromethane	NA	95,000	ID	900,000	550,000,000	3,300,000,000,000	52,000,000 (C)	<400	<300
1,1-Dichloroethane	NA	18,000	15,000	230,000	5,900,000	33,000,000,000	27,000,000 (C)	<70	<50
1,2-Dichloroethane	NA	100	7,200 (X)	2,100	11,000	120,000,000	91,000	<70	<50
1,1-Dichloroethene	NA	140	2,600	62	5,300	62,000,000	200,000	<70	<50
1,2-Dichloropropane	NA	100	4,600 (X)	4,000	50,000	270,000,000	140,000	<70	<50
Diethyl ether	NA	200	ID	28,000,000 (C)	150,000,000	800,000,000,000	110,000,000 (C)	<300	<200
Ethyl benzene	NA	1,500	360	87,000	1,000,000	10,000,000,000	22,000,000 (C)	<70	<50
Ethylene Dibromide	NA	20	110	670	1700	14,000,000	92	<30	<20
Hexachloroethane	NA	430	1,800 (X)	40,000	930,000	230,000,000	230,000	<400	<300
2-Hexanone	NA	20,000	NA	990,000	1,100,000	2,700,000,000	32,000,000 (C)	<4,000	<3,000
Isopropylbenzene	NA	91,000	3,200	400,000 (C)	1,700,000	5,800,000,000	25,000,000 (C)	<400	<300
Iodomethane	-	-	-	-	-	-	-	<100	<100
4-Methyl-2-pentanone	NA	36,000	ID	37,000,000 (C)	45,000,000	140,000,000,000	56,000,000 (C)	<4,000	<3,000
Methyl (tert)butyl ether	NA	800	140,000 (X)	9,900,000 (C)	39,000,000	200,00			

ATTACHMENTS

Attachment A

Photo Log

PHOTO LOG

7850 E. Jefferson Avenue, Detroit, Michigan

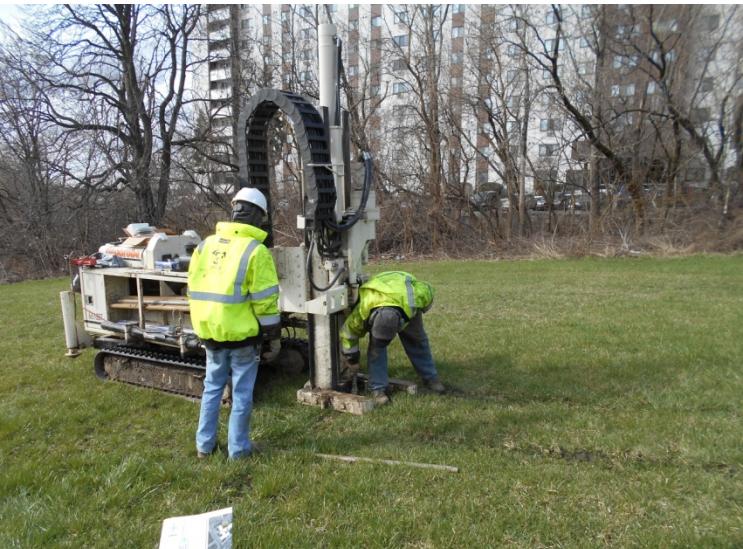
	<p>Photo 1. Advancement of soil boring SB-1</p>
	<p>Photo 2. Advancement of soil boring SB-2</p>
	<p>Photo 3. Advancement of soil boring SB-3</p>

PHOTO LOG

7850 E. Jefferson Avenue, Detroit, Michigan

	<p>Photo 4. Urban debris in a core from soil boring SB-3</p>
	<p>Photo 5. Advancement of soil boring SB-4</p>
	<p>Photo 6. Advancement of soil boring SB-5</p>

Attachment B

Soil Boring Logs

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, MI 48116

SOIL BORING LOG

Proj. Name:	7850 E. Jefferson Avenue
Proj. Number:	10105

Boring Data	
Boring ID:	SB-1
Total Depth:	16'

Site Address:	7850 E. Jefferson Avenue Detroit, Michigan
---------------	---

Date Completed:	4/7/2017
-----------------	----------

Drilled by:	ERG
Method:	Geoprobe
Geologist:	Jeremy Efros, CPG

MW Data	
Size:	NA
Type:	NA
Screen Length:	NA
Well Depth:	NA
GW Depth (▼):	NA

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	6"	SILTY fine to medium SAND, trace to some roots, dark brown, moist, medium dense (FILL)	0.0	
6"	3'	SAND, fine to coarse grained, trace gravel, brick, and concrete, brown, moist, loose (FILL)	0.0	Soil at 0.5-1.5'
3'	4'	Brick and concrete	0.0	
4'	16'	SILTY CLAY, trace fine to coarse grained sand and gravel, brown, stiff (CL)	0.0	
		End of Boring		

Notes:

ppm = parts per million

bgs = below ground surface

Unified Soil Classification System Symbols:

CL = Clay

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, MI 48116

SOIL BORING LOG

Proj. Name:	7850 E. Jefferson Avenue
Proj. Number:	10105

Boring Data	
Boring ID:	SB-2
Total Depth:	16'

Site Address:	7850 E. Jefferson Avenue Detroit, Michigan
---------------	---

Date Completed:	4/7/2017
-----------------	----------

Drilled by:	ERG
Method:	Geoprobe
Geologist:	Jeremy Efros, CPG

MW Data	
Size:	NA
Type:	NA
Screen Length:	NA
Well Depth:	NA
GW Depth (▼):	12' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	8"	SILTY fine to medium SAND, trace to some roots, dark brown, moist, loose (FILL)	0.0	
8"	6.5'	SILTY CLAY, trace fine to coarse grained sand, gravel, and organics, brown, stiff (FILL)	0.0	
6.5'	7.5'	SAND, fine to coarse grained, trace to some slag, trace gravel, dark brown, moist, loose (FILL)	0.0	Soil at 6.5-7.5'
7.5'	8'	SILTY CLAY, trace fine to coarse grained sand, gravel, and organics, brown, stiff (FILL)	0.0	
8'	16'	SILTY CLAY, trace fine to coarse sand and gravel, wet fine to coarse grained sand seam at 12' bgs, brown with occasional gray mottles, stiff (CL)	0.0	
		End of Boring		

Notes:

ppm = parts per million

bgs = below ground surface

Unified Soil Classification System Symbols:

CL = Clay

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, MI 48116

SOIL BORING LOG

Proj. Name:	7850 E. Jefferson Avenue
Proj. Number:	10105

Boring Data	
Boring ID:	SB-3
Total Depth:	16'

Site Address:	7850 E. Jefferson Avenue
---------------	--------------------------

Date Completed:	4/7/2017
-----------------	----------

Detroit, Michigan

Drilled by:	ERG
Method:	Geoprobe
Geologist:	Jeremy Efros, CPG

MW Data	
Size:	NA
Type:	NA
Screen Length:	NA
Well Depth:	NA
GW Depth (▼):	12' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	6"	SILTY fine to medium SAND, trace to some roots, dark brown, moist, loose (FILL)	0.0	
6"	1'	SILTY CLAY, trace fine to coarse grained sand, brown, stiff (FILL)	0.0	
1'	9'	SAND, fine to coarse grained, trace to some gravel, trace silt, cobbles, concrete, and brick, brown, moist, loose (FILL)	0.0	
9'	10'	SAND, fine to coarse grained, trace to some gravel, trace silt, cobbles, concrete, brick, and foundry sand, brown, moist, loose (FILL)	0.0	Soil at 9-10'
10'	12'	SILTY CLAY, trace fine to coarse grained sand, brown, stiff (FILL)	0.0	
12'	13'	SAND, fine to coarse grained, trace to some gravel, trace concrete, brown, wet, loose (FILL)	0.0	
13'	16'	SILTY CLAY, trace fine to coarse sand and gravel, brown, stiff (CL) End of Boring	0.0	

Notes:

ppm = parts per million

bgs = below ground surface

Unified Soil Classification System Symbols:

CL = Clay

ASTI Environmental
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Brighton, MI 48116

SOIL BORING LOG

Proj. Name:	7850 E. Jefferson Avenue
Proj. Number:	10105

Boring Data	
Boring ID:	SB-4
Total Depth:	16'

Site Address:	7850 E. Jefferson Avenue
---------------	--------------------------

Date Completed:	4/7/2017
-----------------	----------

Detroit, Michigan

Drilled by:	ERG
Method:	Geoprobe
Geologist:	Jeremy Efros, CPG

MW Data	
Size:	NA
Type:	NA
Screen Length:	NA
Well Depth:	NA
GW Depth (▼):	8' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	6"	SILTY fine to medium SAND, trace to some roots, dark brown, moist, medium dense (FILL)	0.0	
6"	6.5'	SILTY CLAY, trace fine to coarse sand and gravel, frequent silty sand seams, brown, medium stiff (FILL)	0.0	
6.5'	8'	SAND, fine to coarse grained, trace gravel, slag, and roots, black, moist, medium dense (FILL)	0.0	Soil at 7-8'
8'	10.5'	SAND, fine to medium grained, trace gravel and organics, occasional silty sand seams, brown to dark brown, wet, loose (FILL)	0.0	
10.5'	14'	SAND, fine to medium grained, trace to some silt, trace gravel, brown, wet, medium dense (SW)	0.0	
14'	16'	SILTY CLAY, trace fine to coarse sand and gravel, gray, medium stiff (CL)	0.0	
		End of Boring		

Notes:

ppm = parts per million

bgs = below ground surface

Unified Soil Classification System Symbols:

CL = Clay

SW = Well graded sand

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, MI 48116

SOIL BORING LOG

Proj. Name:	7850 E. Jefferson Avenue
Proj. Number:	10105

Boring Data	
Boring ID:	SB-5
Total Depth:	16'

Site Address:	7850 E. Jefferson Avenue Detroit, Michigan
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Date Completed:	4/7/2017
-----------------	----------

Drilled by:	ERG
Method:	Geoprobe
Geologist:	Jeremy Efros, CPG

MW Data	
Size:	NA
Type:	NA
Screen Length:	NA
Well Depth:	NA
GW Depth (▼):	8' bgs

Depth		Description	PID (ppm)	Sample Depth
From	To			
0	6"	SILTY fine to medium SAND, trace to some roots, dark brown, moist, medium dense (FILL)	0.0	
6"	3.5'	SILTY CLAY, trace fine to coarse grained sand and gravel, brown, medium stiff (FILL)	0.0	
3.5'	6'	SILTY fine SAND, trace clay, medium to coarse grained sand, gravel, brick, and organics, brown, moist, medium dense (FILL)	0.0	Soil at 5-6'
6'	12'	SILTY fine SAND, trace organics, occasional silty clay seams, brown, moist to wet at 8' bgs, medium dense (FILL)	0.0	
12'	14'	SILTY CLAY, trace fine to coarse grained sand and gravel, brown, stiff (CL)	0.0	
14'	16'	SAND, fine grained, some silt, trace gravel, brown, wet, medium dense (SW)	0.0	
		End of Boring		

Notes:

ppm = parts per million

bgs = below ground surface

Unified Soil Classification System Symbols:

CL = Clay

SW = Well graded sand

Attachment C

Analytical Laboratory Results and Chain-of-Custody Documentation



Analytical Laboratory Report

Supplemental Report

Report ID: S80482.01(02)
Generated on 04/19/2017

Report to

Attention: Brian Kuberski
ASTI Environmental
10448 Citation Dr.
Suite 100
Brighton, MI 48116

Phone: 810-225-2800 FAX: 810-225-3800
Email: bkuberski@asti-env.com

Additional Contacts: Brad Buswell, George Kandler, Jeremy Efros

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Laverty (johnlaverty@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S80482.01-S80482.07
Project: 10105 / 7850 E. Jefferson
Collected Date: 04/07/2017
Submitted Date/Time: 04/10/2017 13:25
Sampled by: Jeremy Efros
P.O. #:

Table of Contents

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Laboratory Certifications (Page 3)
Qualifier Descriptions (Page 3)
Glossary of Abbreviations (Page 3)
Method Summary (Page 4)
Sample Summary (Page 5)

A handwritten signature in black ink, appearing to read "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

Supplemental Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Report Narrative

Fine and coarse lead added to sample .01 per client request



Analytical Laboratory Report

Supplemental Report

Laboratory Certifications

Authority	Certification ID
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Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods



Analytical Laboratory Report

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Method Summary

Method	Version
SM2540B	Standard Method 2540 B 20th Edition
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3550C	SW 846 Method 3550C Revision 3 February 2007
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Supplemental Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S80482.01	SB-1 (0.5-1.5')	Soil	04/07/17 09:40
S80482.02	SB-2 (6.5-7.5')	Soil	04/07/17 10:10
S80482.03	SB-3 (9-10')	Soil	04/07/17 10:50
S80482.04	SB-4 (7-8')	Soil	04/07/17 11:40
S80482.05	SB-5 (5-6')	Soil	04/07/17 12:15
S80482.06	Meth Blank	Methanol	04/07/17 00:01
S80482.07	Dup1-S	Soil	04/07/17 00:01



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.01
Sample Tag: SB-1 (0.5-1.5')
Collected Date/Time: 04/07/2017 09:40
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
----------	---------	-------	----	--------	---------------	------	-------	-------

Extraction / Prep.

Lead, Coarse Digestion*	Completed			SW3050B	04/19/17 11:00	CCM
Lead, Fine and Coarse Prep*	Completed			SW3050B	04/19/17 11:00	CCM
Lead, Fine Digestion*	Completed			SW3050B	04/19/17 11:00	CCM
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER
PNA Extraction	Completed			SW3550C	04/11/17 17:55	EMR

Inorganics

Total Solids*	84	%	1	SM2540B	04/11/17 09:25	JBL
Total Solids*	85	%	1	SM2540B	04/19/17 11:00	CCM

Metals

% Coarse by Weight*	85	%		SW6020A	04/19/17 11:00	CCM
% Fine by Weight*	15	%		SW6020A	04/19/17 11:00	CCM
Arsenic	3.63	mg/kg	0.20	SW6020A	04/12/17 15:07	PER 7440-38-2
Barium	285	mg/kg	1.0	SW6020A	04/12/17 15:07	PER 7440-39-3
Cadmium	0.42	mg/kg	0.20	SW6020A	04/12/17 15:07	PER 7440-43-9
Chromium	7.62	mg/kg	0.50	SW6020A	04/12/17 15:07	PER 7440-47-3
Copper	27.1	mg/kg	0.50	SW6020A	04/12/17 15:07	PER 7440-50-8
Lead, Coarse	165	mg/kg	0.20	SW6020A	04/19/17 13:46	CCM 7439-92-1
Lead, Fine	518	mg/kg	0.20	SW6020A	04/19/17 13:48	CCM
Lead, Total Calculated	217	mg/kg		SW6020A	04/19/17 14:01	CCM 7439-92-1C
Lead	212	mg/kg	0.20	SW6020A	04/12/17 15:07	PER 7439-92-1
Mercury	0.187	mg/kg	0.050	SW7471B	04/13/17 14:52	JRH 7439-97-6
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 15:07	PER 7782-49-2
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 15:07	PER 7440-22-4
Zinc	189	mg/kg	0.50	SW6020A	04/12/17 15:07	PER 7440-66-6

Organics - Semi-Volatiles

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	83-32-9
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	208-96-8
Anthracene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	120-12-7
Benzo(a)anthracene	500	ug/kg	330	SW8270D	04/12/17 20:48	PL	56-55-3
Benzo(a)pyrene	530	ug/kg	330	SW8270D	04/12/17 20:48	PL	50-32-8
Benzo(b)fluoranthene	930	ug/kg	330	SW8270D	04/12/17 20:48	PL	205-99-2
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	191-24-2
Benzo(k)fluoranthene	1,000	ug/kg	330	SW8270D	04/12/17 20:48	PL	207-08-9
Chrysene	530	ug/kg	330	SW8270D	04/12/17 20:48	PL	218-01-9
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	53-70-3
Fluoranthene	950	ug/kg	330	SW8270D	04/12/17 20:48	PL	206-44-0

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.01 (continued)

Sample Tag: SB-1 (0.5-1.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Fluorene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/12/17 20:48	PL	91-20-3	
Phenanthrene	610	ug/kg	330	SW8270D	04/12/17 20:48	PL	85-01-8	
Pyrene	890	ug/kg	330	SW8270D	04/12/17 20:48	PL	129-00-0	
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:15	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	107-13-1	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	75-27-4	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	75-25-2	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	990	SW5035A/8260C	04/11/17 23:15	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	108-90-7	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	75-00-3	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	67-66-3	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	30	SW5035A/8260C	04/11/17 23:15	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/11/17 23:15	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:15	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:15	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	1634-04-4	
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	75-09-2	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.01 (continued)

Sample Tag: SB-1 (0.5-1.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:15	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	135-98-8	
Styrene*	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:15	JML	109-99-9	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	440	SW5035A/8260C	04/11/17 23:15	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	440	SW5035A/8260C	04/11/17 23:15	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:15	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	70	SW5035A/8260C	04/11/17 23:15	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:15	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.02
Sample Tag: SB-2 (6.5-7.5')
Collected Date/Time: 04/07/2017 10:10
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH		
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER		
PNA Extraction	Completed			SW3550C	04/12/17 19:49	EMR		
Inorganics								
Total Solids*	89	%	1	SM2540B	04/11/17 09:25	JBL		
Metals								
Arsenic	6.28	mg/kg	0.20	SW6020A	04/12/17 13:45	PER	7440-38-2	
Barium	42.7	mg/kg	1.0	SW6020A	04/12/17 13:45	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:45	PER	7440-43-9	
Chromium	12.1	mg/kg	0.50	SW6020A	04/12/17 13:45	PER	7440-47-3	
Copper	14.2	mg/kg	0.50	SW6020A	04/12/17 13:45	PER	7440-50-8	
Lead	14.7	mg/kg	0.20	SW6020A	04/12/17 13:45	PER	7439-92-1	
Mercury	0.068	mg/kg	0.050	SW7471B	04/13/17 15:01	JRH	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 13:45	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:45	PER	7440-22-4	
Zinc	26.5	mg/kg	0.50	SW6020A	04/12/17 13:45	PER	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	205-99-2	
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	191-24-2	
Benzo(k)fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	207-08-9	
Chrysene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	85-01-8	
Pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:06	PL	129-00-0	
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:36	JML	67-64-1	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.02 (continued)

Sample Tag: SB-2 (6.5-7.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	107-13-1	
Benzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	75-27-4	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	75-25-2	
Bromomethane	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:36	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	870	SW5035A/8260C	04/11/17 23:36	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	108-90-7	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	75-00-3	
Chloroform	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	67-66-3	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:36	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	20	SW5035A/8260C	04/11/17 23:36	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:36	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:36	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:36	JML	1634-04-4	
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:36	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	135-98-8	
Styrene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	79-34-5	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.02 (continued)

Sample Tag: SB-2 (6.5-7.5')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Tetrachloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:36	JML	109-99-9	
Toluene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	380	SW5035A/8260C	04/11/17 23:36	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	380	SW5035A/8260C	04/11/17 23:36	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:36	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:36	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:36	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.03
Sample Tag: SB-3 (9-10')
Collected Date/Time: 04/07/2017 10:50
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Extraction / Prep.								
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH		
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER		
PNA Extraction	Completed			SW3550C	04/12/17 19:49	EMR		
Inorganics								
Total Solids*	89	%	1	SM2540B	04/11/17 09:25	JBL		
Metals								
Arsenic	2.36	mg/kg	0.20	SW6020A	04/12/17 14:36	PER	7440-38-2	
Barium	99.4	mg/kg	1.0	SW6020A	04/12/17 14:36	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	04/12/17 14:36	PER	7440-43-9	
Chromium	5.67	mg/kg	0.50	SW6020A	04/12/17 14:36	PER	7440-47-3	
Copper	6.58	mg/kg	0.50	SW6020A	04/12/17 14:36	PER	7440-50-8	
Lead	37.7	mg/kg	0.20	SW6020A	04/12/17 14:36	PER	7439-92-1	
Mercury	0.190	mg/kg	0.050	SW7471B	04/13/17 14:54	JRH	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 14:36	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 14:36	PER	7440-22-4	
Zinc	41.3	mg/kg	0.50	SW6020A	04/12/17 14:36	PER	7440-66-6	
Organics - Semi-Volatiles								
Polynuclear Aromatics								
Acenaphthene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	208-96-8	
Anthracene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	120-12-7	
Benzo(a)anthracene	660	ug/kg	330	SW8270D	04/15/17 03:05	PL	56-55-3	
Benzo(a)pyrene	630	ug/kg	330	SW8270D	04/15/17 03:05	PL	50-32-8	
Benzo(b)fluoranthene	1,040	ug/kg	330	SW8270D	04/15/17 03:05	PL	205-99-2	p
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	191-24-2	
Benzo(k)fluoranthene	1,120	ug/kg	330	SW8270D	04/15/17 03:05	PL	207-08-9	p
Chrysene	700	ug/kg	330	SW8270D	04/15/17 03:05	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	53-70-3	
Fluoranthene	1,250	ug/kg	330	SW8270D	04/15/17 03:05	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/15/17 03:05	PL	91-20-3	
Phenanthrene	1,070	ug/kg	330	SW8270D	04/15/17 03:05	PL	85-01-8	
Pyrene	1,660	ug/kg	330	SW8270D	04/15/17 03:05	PL	129-00-0	

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.03 (continued)

Sample Tag: SB-3 (9-10')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:56	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	107-13-1	
Benzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	75-27-4	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	75-25-2	
Bromomethane	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:56	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	920	SW5035A/8260C	04/11/17 23:56	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	108-90-7	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	75-00-3	
Chloroform	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	67-66-3	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:56	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	20	SW5035A/8260C	04/11/17 23:56	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/11/17 23:56	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:56	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 23:56	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:56	JML	1634-04-4	
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 23:56	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	135-98-8	
Styrene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	98-06-6	
1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	630-20-6	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.03 (continued)

Sample Tag: SB-3 (9-10')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 23:56	JML	109-99-9	
Toluene	130	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	410	SW5035A/8260C	04/11/17 23:56	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	410	SW5035A/8260C	04/11/17 23:56	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 23:56	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	60	SW5035A/8260C	04/11/17 23:56	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 23:56	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.04
Sample Tag: SB-4 (7-8')
Collected Date/Time: 04/07/2017 11:40
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			SW3550C	04/12/17 11:17	PLB
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER
PNA Extraction	Completed			SW3550C	04/12/17 19:49	EMR

Inorganics

Total Solids*	84	%	1	SM2540B	04/11/17 09:25	JBL
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Metals

Arsenic	0.98	mg/kg	0.20	SW6020A	04/12/17 13:49	PER	7440-38-2
Barium	50.5	mg/kg	1.0	SW6020A	04/12/17 13:49	PER	7440-39-3
Cadmium	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:49	PER	7440-43-9
Chromium	5.99	mg/kg	0.50	SW6020A	04/12/17 13:49	PER	7440-47-3
Copper	14.1	mg/kg	0.50	SW6020A	04/12/17 13:49	PER	7440-50-8
Lead	44.6	mg/kg	0.20	SW6020A	04/12/17 13:49	PER	7439-92-1
Mercury	0.215	mg/kg	0.050	SW7471B	04/13/17 14:56	JRH	7439-97-6
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 13:49	PER	7782-49-2
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:49	PER	7440-22-4
Zinc	31.2	mg/kg	0.50	SW6020A	04/12/17 13:49	PER	7440-66-6

Organics - PCBs/Pesticides**PCB List**

PCB-1016	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	12674-11-2
PCB-1242	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	53469-21-9
PCB-1221	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	11104-28-2
PCB-1232	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	11141-16-5
PCB-1248	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	12672-29-6
PCB-1254	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	11097-69-1
PCB-1260	Not detected	ug/kg	330	SW8082A	04/12/17 17:35	JAN	11096-82-5

Organics - Semi-Volatiles**Polynuclear Aromatics**

Acenaphthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	83-32-9
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	208-96-8
Anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	120-12-7
Benzo(a)anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	56-55-3
Benzo(a)pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	50-32-8
Benzo(b)fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	205-99-2
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	191-24-2
Benzo(k)fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	207-08-9
Chrysene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	218-01-9
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	53-70-3



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.04 (continued)

Sample Tag: SB-4 (7-8')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Fluoranthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	85-01-8	
Pyrene	Not detected	ug/kg	330	SW8270D	04/13/17 23:24	PL	129-00-0	
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/12/17 00:17	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	107-13-1	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	75-27-4	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	75-25-2	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	1,000	SW5035A/8260C	04/12/17 00:17	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	108-90-7	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	75-00-3	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	67-66-3	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	30	SW5035A/8260C	04/12/17 00:17	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:17	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	3,000	SW5035A/8260C	04/12/17 00:17	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	3,000	SW5035A/8260C	04/12/17 00:17	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	1634-04-4	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.04 (continued)

Sample Tag: SB-4 (7-8')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:17	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	135-98-8	
Styrene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/12/17 00:17	JML	109-99-9	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	450	SW5035A/8260C	04/12/17 00:17	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	450	SW5035A/8260C	04/12/17 00:17	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:17	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:17	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:17	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.05
Sample Tag: SB-5 (5-6')
Collected Date/Time: 04/07/2017 12:15
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			SW3550C	04/12/17 11:17	PLB
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER
PNA Extraction	Completed			SW3550C	04/12/17 19:49	EMR

Inorganics

Total Solids*	82	%	1	SM2540B	04/11/17 09:25	JBL
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Metals

Arsenic	2.35	mg/kg	0.20	SW6020A	04/12/17 13:51	PER	7440-38-2
Barium	33.2	mg/kg	1.0	SW6020A	04/12/17 13:51	PER	7440-39-3
Cadmium	0.46	mg/kg	0.20	SW6020A	04/12/17 13:51	PER	7440-43-9
Chromium	5.01	mg/kg	0.50	SW6020A	04/12/17 13:51	PER	7440-47-3
Copper	133	mg/kg	0.50	SW6020A	04/12/17 13:51	PER	7440-50-8
Lead	69.0	mg/kg	0.20	SW6020A	04/12/17 13:51	PER	7439-92-1
Mercury	Not detected	mg/kg	0.050	SW7471B	04/13/17 14:57	JRH	7439-97-6
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 13:51	PER	7782-49-2
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:51	PER	7440-22-4
Zinc	293	mg/kg	0.50	SW6020A	04/12/17 13:51	PER	7440-66-6

Organics - PCBs/Pesticides**PCB List**

PCB-1016	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	12674-11-2
PCB-1242	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	53469-21-9
PCB-1221	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	11104-28-2
PCB-1232	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	11141-16-5
PCB-1248	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	12672-29-6
PCB-1254	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	11097-69-1
PCB-1260	Not detected	ug/kg	330	SW8082A	04/12/17 17:46	JAN	11096-82-5

Organics - Semi-Volatiles**Polynuclear Aromatics**

Acenaphthene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	83-32-9
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	208-96-8
Anthracene	420	ug/kg	330	SW8270D	04/13/17 23:43	PL	120-12-7
Benzo(a)anthracene	820	ug/kg	330	SW8270D	04/13/17 23:43	PL	56-55-3
Benzo(a)pyrene	760	ug/kg	330	SW8270D	04/13/17 23:43	PL	50-32-8
Benzo(b)fluoranthene	1,290	ug/kg	330	SW8270D	04/13/17 23:43	PL	205-99-2
Benzo(ghi)perylene	410	ug/kg	330	SW8270D	04/13/17 23:43	PL	191-24-2
Benzo(k)fluoranthene	1,390	ug/kg	330	SW8270D	04/13/17 23:43	PL	207-08-9
						lp	

I-Matrix interference with internal standard

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.05 (continued)

Sample Tag: SB-5 (5-6')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Chrysene	810	ug/kg	330	SW8270D	04/13/17 23:43	PL	218-01-9	I
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	53-70-3	I
Fluoranthene	1,900	ug/kg	330	SW8270D	04/13/17 23:43	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	420	ug/kg	330	SW8270D	04/13/17 23:43	PL	193-39-5	I
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/13/17 23:43	PL	91-20-3	
Phenanthrene	1,640	ug/kg	330	SW8270D	04/13/17 23:43	PL	85-01-8	
Pyrene	2,340	ug/kg	330	SW8270D	04/13/17 23:43	PL	129-00-0	I
Polynuclear Aromatics (Replicate 01)								
Acenaphthene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	208-96-8	
Anthracene	380	ug/kg	330	SW8270D	04/14/17 22:27	PL	120-12-7	
Benzo(a)anthracene	720	ug/kg	330	SW8270D	04/14/17 22:27	PL	56-55-3	
Benzo(a)pyrene	600	ug/kg	330	SW8270D	04/14/17 22:27	PL	50-32-8	
Benzo(b)fluoranthene	1,010	ug/kg	330	SW8270D	04/14/17 22:27	PL	205-99-2	p
Benzo(ghi)perylene	350	ug/kg	330	SW8270D	04/14/17 22:27	PL	191-24-2	
Benzo(k)fluoranthene	1,090	ug/kg	330	SW8270D	04/14/17 22:27	PL	207-08-9	p
Chrysene	690	ug/kg	330	SW8270D	04/14/17 22:27	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	53-70-3	
Fluoranthene	1,580	ug/kg	330	SW8270D	04/14/17 22:27	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/14/17 22:27	PL	91-20-3	
Phenanthrene	1,540	ug/kg	330	SW8270D	04/14/17 22:27	PL	85-01-8	
Pyrene	1,810	ug/kg	330	SW8270D	04/14/17 22:27	PL	129-00-0	
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/12/17 00:37	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	107-13-1	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	75-27-4	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	75-25-2	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:37	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	1,100	SW5035A/8260C	04/12/17 00:37	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	108-90-7	
Chloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	75-00-3	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	67-66-3	
Chloromethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	156-59-2	

I-Matrix interference with internal standard

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.05 (continued)

Sample Tag: SB-5 (5-6')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:37	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	30	SW5035A/8260C	04/12/17 00:37	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	4,000	SW5035A/8260C	04/12/17 00:37	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	4,000	SW5035A/8260C	04/12/17 00:37	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:37	JML	1634-04-4	
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:37	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	135-98-8	
Styrene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/12/17 00:37	JML	109-99-9	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	460	SW5035A/8260C	04/12/17 00:37	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	460	SW5035A/8260C	04/12/17 00:37	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/12/17 00:37	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	95-63-6	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.05 (continued)

Sample Tag: SB-5 (5-6')

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,3,5-Trimethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	70	SW5035A/8260C	04/12/17 00:37	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:37	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.06
Sample Tag: Meth Blank
Collected Date/Time: 04/07/2017 00:01
Matrix: Methanol
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 20:12	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	107-13-1	
Benzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	108-86-1	
Bromoform	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	74-97-5	
Bromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	75-27-4	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	75-25-2	
Bromoform*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	75-25-2	
Bromomethane	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 20:12	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	750	SW5035A/8260C	04/11/17 20:12	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	108-90-7	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	75-00-3	
Chloroform	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	67-66-3	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 20:12	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	20	SW5035A/8260C	04/11/17 20:12	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 20:12	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	3,000	SW5035A/8260C	04/11/17 20:12	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 20:12	JML	1634-04-4	
Methylene chloride	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	300	SW5035A/8260C	04/11/17 20:12	JML	91-20-3	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.06 (continued)

Sample Tag: Meth Blank

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
n-Butylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	135-98-8	
Styrene*	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	1,000	SW5035A/8260C	04/11/17 20:12	JML	109-99-9	
Toluene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	330	SW5035A/8260C	04/11/17 20:12	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	330	SW5035A/8260C	04/11/17 20:12	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	100	SW5035A/8260C	04/11/17 20:12	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	50	SW5035A/8260C	04/11/17 20:12	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/11/17 20:12	JML	1330-20-7	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.07
Sample Tag: Dup1-S
Collected Date/Time: 04/07/2017 00:01
Matrix: Soil
COC Reference: 102419

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	5.4	IR
1	4oz Glass	None	Yes	5.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
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Extraction / Prep.

Extraction, PCB	Completed			SW3550C	04/12/17 11:17	PLB
Mercury Digestion	Completed			SW7471B	04/13/17 12:00	JRH
Metal Digestion	Completed			SW3050B	04/12/17 10:00	PER
PNA Extraction	Completed			SW3550C	04/12/17 19:49	EMR

Inorganics

Total Solids*	78	%	1	SM2540B	04/11/17 09:25	JBL
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Metals

Arsenic	0.40	mg/kg	0.20	SW6020A	04/12/17 13:53	PER	7440-38-2
Barium	79.5	mg/kg	1.0	SW6020A	04/12/17 13:53	PER	7440-39-3
Cadmium	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:53	PER	7440-43-9
Chromium	8.11	mg/kg	0.50	SW6020A	04/12/17 13:53	PER	7440-47-3
Copper	16.0	mg/kg	0.50	SW6020A	04/12/17 13:53	PER	7440-50-8
Lead	8.10	mg/kg	0.20	SW6020A	04/12/17 13:53	PER	7439-92-1
Mercury	0.101	mg/kg	0.050	SW7471B	04/13/17 14:59	JRH	7439-97-6
Selenium	Not detected	mg/kg	0.40	SW6020A	04/12/17 13:53	PER	7782-49-2
Silver	Not detected	mg/kg	0.20	SW6020A	04/12/17 13:53	PER	7440-22-4
Zinc	21.1	mg/kg	0.50	SW6020A	04/12/17 13:53	PER	7440-66-6

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	12674-11-2
PCB-1242	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	53469-21-9
PCB-1221	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	11104-28-2
PCB-1232	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	11141-16-5
PCB-1248	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	12672-29-6
PCB-1254	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	11097-69-1
PCB-1260	Not detected	ug/kg	330	SW8082A	04/12/17 17:57	JAN	11096-82-5

Organics - Semi-Volatiles

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	83-32-9
Acenaphthylene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	208-96-8
Anthracene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	120-12-7
Benzo(a)anthracene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	56-55-3
Benzo(a)pyrene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	50-32-8
Benzo(b)fluoranthene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	205-99-2
Benzo(ghi)perylene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	191-24-2
Benzo(k)fluoranthene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	207-08-9
Chrysene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	218-01-9
Dibenzo(ah)anthracene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	53-70-3



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.07 (continued)

Sample Tag: Dup1-S

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Fluoranthene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	206-44-0	
Fluorene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	193-39-5	
2-Methylnaphthalene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	91-57-6	
Naphthalene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	85-01-8	
Pyrene	Not detected	ug/kg	330	SW8270D	04/14/17 00:01	PL	129-00-0	
Organics - Volatiles								
Volatile Organics 5035								
Acetone	Not detected	ug/kg	2,000	SW5035A/8260C	04/12/17 00:57	JML	67-64-1	
Acrylonitrile	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	107-13-1	
Benzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	71-43-2	
Bromobenzene	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	108-86-1	
Bromochloromethane	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	74-97-5	
Bromodichloromethane	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	75-27-4	
Bromoform*	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	75-25-2	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:57	JML	74-83-9	
2-Butanone (MEK)*	Not detected	ug/kg	1,100	SW5035A/8260C	04/12/17 00:57	JML	78-93-3	
Carbon disulfide	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	75-15-0	
Carbon tetrachloride	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	56-23-5	
Chlorobenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	108-90-7	
Chloroethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	75-00-3	
Chloroform	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	67-66-3	
Chloromethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	74-87-3	
cis-1,2-Dichloroethene*	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	156-59-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	10061-01-5	
Cyclohexane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	110-82-7	
1,2-Dibromo-3-chloropropane*	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	96-12-8	
Dibromochloromethane	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	124-48-1	
Dibromomethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	74-95-3	
1,2-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	106-46-7	
Dichlorodifluoromethane	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	75-71-8	
1,1-Dichloroethane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	75-34-3	
1,2-Dichloroethane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	107-06-2	
1,1-Dichloroethene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	75-35-4	
1,2-Dichloropropane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	78-87-5	
Diethyl ether	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:57	JML	60-29-7	
Ethylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	100-41-4	
1,2-Dibromoethane*	Not detected	ug/kg	30	SW5035A/8260C	04/12/17 00:57	JML	106-93-4	M
Hexachloroethane	Not detected	ug/kg	500	SW5035A/8260C	04/12/17 00:57	JML	67-72-1	
2-Hexanone*	Not detected	ug/kg	4,000	SW5035A/8260C	04/12/17 00:57	JML	591-78-6	
Isopropylbenzene	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	98-82-8	
Methyl iodide	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	74-88-4	
4-Methyl-2-pentanone (MIBK)*	Not detected	ug/kg	4,000	SW5035A/8260C	04/12/17 00:57	JML	108-10-1	
tert-Methyl butyl ether (MTBE)*	Not detected	ug/kg	300	SW5035A/8260C	04/12/17 00:57	JML	1634-04-4	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S80482.07 (continued)

Sample Tag: Dup1-S

Analysis	Results	Units	RL	Method	Run Date/Time	Tech	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Methylene chloride	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	75-09-2	
2-Methylnaphthalene*	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	91-57-6	
Naphthalene*	Not detected	ug/kg	400	SW5035A/8260C	04/12/17 00:57	JML	91-20-3	
n-Butylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	104-51-8	
n-Propylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	103-65-1	
p-Isopropyltoluene	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	99-87-6	
sec-Butylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	135-98-8	
Styrene*	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	100-42-5	
tert-Butylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	98-06-6	
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	630-20-6	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	79-34-5	
Tetrachloroethene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	127-18-4	
Tetrahydrofuran*	Not detected	ug/kg	2,000	SW5035A/8260C	04/12/17 00:57	JML	109-99-9	
Toluene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	108-88-3	
trans-1,2-Dichloroethene*	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	156-60-5	
trans-1,3-Dichloropropene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	10061-02-6	
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	110-57-6	
1,2,3-Trichlorobenzene	Not detected	ug/kg	500	SW5035A/8260C	04/12/17 00:57	JML	87-61-6	
1,2,4-Trichlorobenzene	Not detected	ug/kg	500	SW5035A/8260C	04/12/17 00:57	JML	120-82-1	
1,1,1-Trichloroethane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	71-55-6	
1,1,2-Trichloroethane	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	79-00-5	
Trichloroethene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	79-01-6	
Trichlorofluoromethane	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	75-69-4	
1,2,3-Trichloropropane*	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	96-18-4	
1,2,3-Trimethylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	526-73-8	
1,2,4-Trimethylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	95-63-6	
1,3,5-Trimethylbenzene	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	108-67-8	
Vinyl chloride	Not detected	ug/kg	80	SW5035A/8260C	04/12/17 00:57	JML	75-01-4	
Total Xylenes	Not detected	ug/kg	200	SW5035A/8260C	04/12/17 00:57	JML	1330-20-7	



Merit
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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

102419

REPORT TO

CONTACT NAME Jeremy Efros / Brian Kuberski
COMPANY ASTI Environmental
ADDRESS 10448 Citation Drive #100
CITY Brighton STATE MI ZIP CODE 48116
PHONE NO. 810-360-9710 FAX NO. _____ P.O. NO. _____
E-MAIL ADDRESS jefros@asti-env.com/bkuberski@asti-env.com
QUOTE NO. _____

PROJECT NO./NAME 10105/ 7850 E Jefferson SAMPLER(S) - PLEASE PRINT SIGN NAME JER

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER _____

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	----------------	---------------------	-------------------	---------

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							Certifications	Project Locations	Special Instructions
	DATE	TIME				None	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER			
50482.01	4/7/17	0940	SB-1 (0.5-1.5')	S	2	1				1			X		
.02		1010	SB-2 (6.5-7.5')	S	2	1				1			X		
.03		1050	SB-3 (9-10')	S	2	1				1			X		
.04		1140	SB-4 (7-8')	S	2	1				1			X		
.05	✓	1215	SB-5 (5-6')	S	2	1				1			X		
.06	—	—	Meth Blane	S	1					1			X		
.07	4/7/17	—	Dapl-s	S	2	1				1			X		

RELINQUISHED BY: SIGNATURE/ORGANIZATION	Jeremy Efros ASTI Environmental	Sampler	DATE <u>4/10/17</u>	TIME <u>1220</u>
RECEIVED BY: SIGNATURE/ORGANIZATION	Brian Kuberski ASTI Environmental		DATE <u>4/10/17</u>	TIME <u>1225</u>
RELINQUISHED BY: SIGNATURE/ORGANIZATION	Brian Kuberski ASTI Environmental		DATE <u>4/10/17</u>	TIME <u>1225</u>
RECEIVED BY: SIGNATURE/ORGANIZATION	Sam Smith ASTI Environmental		DATE <u>4/10/17</u>	TIME <u>1325</u>

RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME		
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME		
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS	NOTES:	TEMP. ON ARRIVAL
SEAL NO.	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS		5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

ASTI ENVIRONMENTAL
ENVIRONMENTAL INVESTIGATION, REMEDIATION, COMPLIANCE AND
RESTORATION PROJECTS THROUGHOUT THE GREAT LAKES SINCE 1985.

OUR SERVICES INCLUDE:

- **ASBESTOS, LEAD, MOLD, AND RADON ASSESSMENTS**
- **BROWNFIELD/GREYFIELD REDEVELOPMENT ASSISTANCE**
- **DEVELOPMENT INCENTIVES AND GRANT MANAGEMENT**
- **ECOLOGICAL ASSESSMENTS AND RESTORATION**
- **ENVIRONMENTAL ASSESSMENTS AND IMPACT STATEMENTS**
- **ENVIRONMENTAL OPPORTUNITIES ASSESSMENT**
- **GIS MAPPING**
- **HAZARD MITIGATION PLANNING**
- **MINING AND RECLAMATION ASSISTANCE**
- **REMEDIATION IMPLEMENTATION, OPERATION AND MAINTENANCE**
- **PHASE I ESA AND ENVIRONMENTAL DUE DILIGENCE ASSESSMENTS**
- **REGULATORY COMPLIANCE AND PERMITTING**
- **SOIL AND GROUNDWATER ASSESSMENTS**
- **SOIL AND GROUNDWATER REMEDIATION**
- **STORAGE TANK COMPLIANCE AND CLOSURE**
- **THREATENED AND ENDANGERED SPECIES SURVEYS**
- **WATERSHED AND STORMWATER MANAGEMENT PROGRAMS**
- **WETLAND DELINEATION, PERMITTING, MITIGATION AND BANKING**