ecology and environment, inc.
Global Environmental Specialists
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Seattle, Washington 98104
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MEMORANDUM

Date: March 28, 2011

To: Renee Nordeen, START-3 Project Manager, E & E, Seattle, WA

From: Bryan Vasser, START-3 Project Manager, E & E, Seattle, WA BV

Subject: Bremerton MGP Waste Release Emergency Removal Action
Bremerton, WA

Ref: Contract Number: EP-S7-06-02
Technical Direction Document Number: 10-10-0001

This memorandum describes sampling methodology, analytical protocol, and use of global positing system (GPS) equipment at the former Bremerton manufacturing gas plant (MGP) Waste Release Emergency Removal Action (ERA). The former Bremerton MGP is also known as Bremerton Gasworks. The purpose of the ERA was to determine the origin of contamination leaking from an exposed 12-inch pipe at the beach east of the Sesko property. Based on the direction of the pipe, it appears to originate on the Sesko Property. The contamination was noted, at first, as sheen on the surface water of the beach. Upon further investigation it was noted that the pipe appeared to contain, and be leaking, a thick, black, tarry substance similar to creosote. The ERA was completed by the potentially responsible party and their contractors.

A Site-specific Sampling Plan (SSSP) for the ERA was developed by the Superfund Technical Assessment and Response Team (START), and approved by the EPA On-Scene Coordinator (OSC), prior to field sampling. The SSSP was not finalized until after the sampling associated with the ERA had been conducted. The SSSP describes the sampling strategy and the analytical program used to investigate potential hazardous substance sources and potential targets. All deviations to the draft SSSP were pre-approved by the OSC during the field sampling event and the final SSSP was modified to include these deviations.

The ERA field sampling event was conducted on October 9 and 10, 2010. A total of 32 samples, consisting of 31 sediment samples, and one Quality Assurance (QA) (trip blank) sample, were collected for the ERA. No background samples were collected for this ERA. Sample types and methods of collection are described below. The chain-of-custody forms for all samples collected during the ERA are attached at the end of this memorandum. Photographic documentation of ERA field activities is also provided at the end of this memorandum.

Alphanumeric identification numbers were applied by the START to each sample location (e.g., GL01E02) as the sample location identifiers. Sample numbers (similar to EPA regional tracking numbers) were applied by START to each sample collected during the ERA. All sediment samples were collected in close proximity to the exposed 12-inch concrete pipe. Figure 1 depicts sample locations.

641378

Sampling Methodology

Rocks and other debris were removed as much as possible from the sample material before it was placed into sample containers. Samples were stored on ice in coolers continuously maintained under the custody of START personnel. Sampling methods for each sample type are discussed below.

Sediment Sampling

A total of 31 surface sediment samples (0 to 6 inches below ground surface) were collected from known areas of sediment deposition using dedicated stainless steel spoons. Collected material was homogenized thoroughly in dedicated stainless steel bowls and placed into pre-labeled sample containers. The Volatile Organic Compound (VOCs) aliquots were removed directly from the sampling locations using 5-gram Core-N-One ™ samplers prior to homogenization. All sediment samples consisted of dark brown-grayish, very fine to course grained sandy material. All of the sediment samples were collected below the average high tide line.

QA Sampling

QA samples (e.g., trip blank samples) were collected for this project. One VOC trip blank sample was collected from a deionized water source.

Analytical Protocol

The following samples were submitted to an Ecology and Environment, Inc. subcontract laboratory for analysis:

- **Semivolatile Organic Compounds (EPA Method 8260):** Thirty-one samples were submitted to Friedman Bruya of Seattle, Washington.
- **Volatile Organic Compounds (EPA Method 8270):** Thirty-one samples were submitted to Friedman Bruya of Seattle, Washington.
- **Static Sheen Test:** Thirty-one samples were submitted to Friedman Bruya of Seattle, Washington. The sheen test samples were originally submitted as "To be Determined".

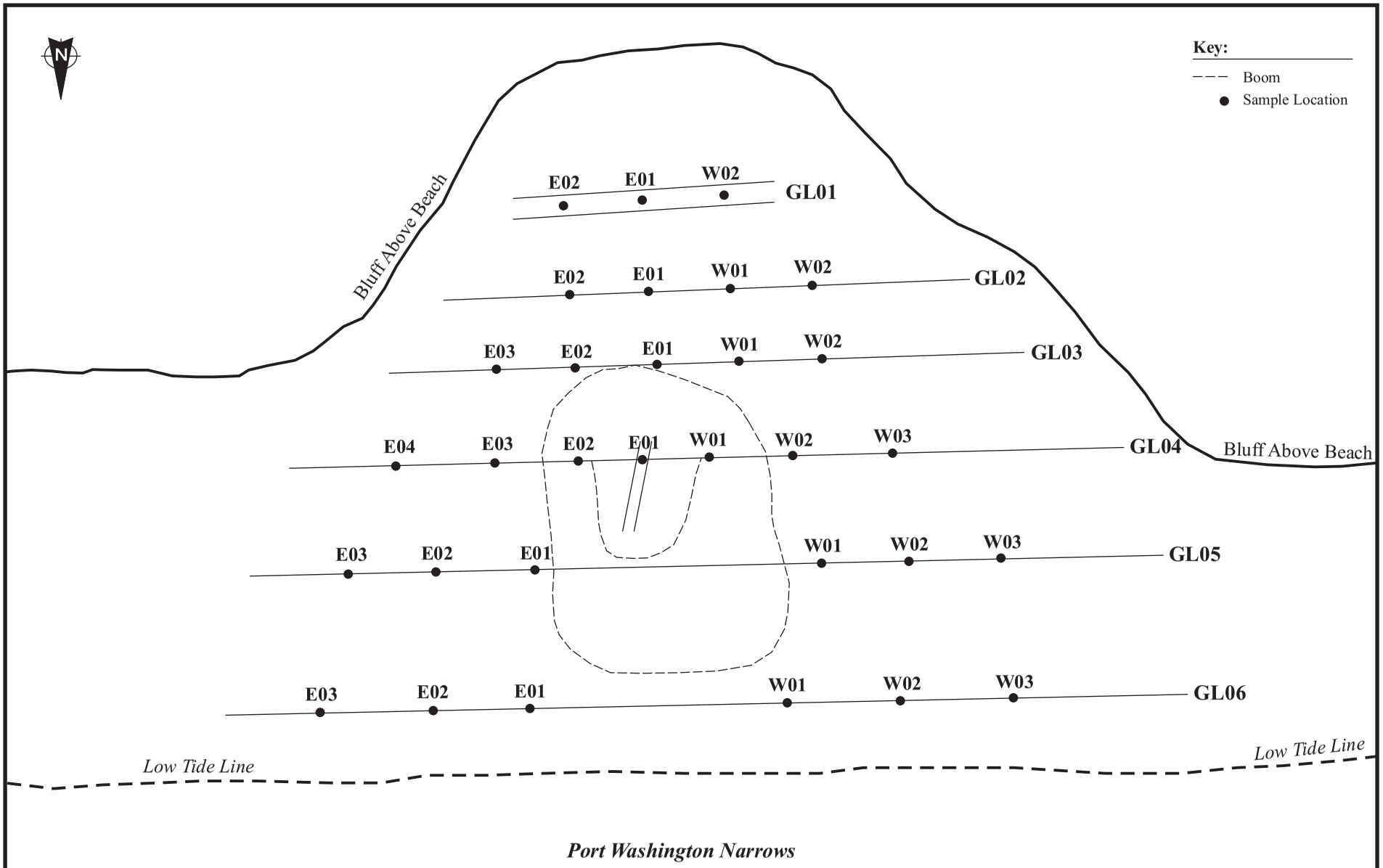
Analytical data forms containing ERA sample results are attached to this memorandum.

Global Positioning System

Trimble™ Pathfinder Professional GPS survey units and Corvallis™ data loggers were used by the START personnel to approximate the sample location coordinates of the ERA samples. The recorded GPS latitudes and longitudes of these samples are provided in a table at the end of this memorandum.

ATTACHMENTS

Figure 1
Chain-of-Custody Forms
Photographic Documentation
Analytical Data Forms
GPS Coordinates



ecology and environment, inc. International Specialists in the Environment Seattle, Washington	BREMERTON MGP WASTE RELEASE Bremerton, Washington	Figure 1 SEDIMENT SAMPLE LOCATIONS		
	Not to Scale	Date: 3/25/11	Drawn by: AES	10:START-3\10100004\fig 1

 010120

ME 10/11/10

VS4/C05/V1

CHAIN OF CUSTODY RECORD

Site #: 10JS
Contact Name: Bryan Vasser
Contact Phone: 206-419-3419

No: 10JS-10/11/10-0001

Cooler #: 2
Lab: Friedman and Bruya
Lab Phone: 206-285-8282

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
01 A	10109001	GL01E02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
B-D	10109001	GL01E02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
E	10109001	GL01E02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
02 A	10109002	GL01E01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
B-D	10109002	GL01E01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
E	10109002	GL01E01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
03 A	10109003	GL01W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
B	10109003	GL01W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
04 A	10109004	GL02E01	Semivolatiles (SVOAs)	Sediment	10/9/2010	1	Jar	None	Y
B-J	10109004	GL02E01	VOCs	Sediment	10/9/2010	9	ENCORE	None	Y
K	10109004	GL02E01	TO BE DETERMINED	Sediment	10/9/2010	1	Jar	None	Y
05 A	10109005	GL02E02	Semivolatiles (SVOAs)	Sediment	10/9/2010	1	Jar	None	N
B-D	10109005	GL02E02	VOCs	Sediment	10/9/2010	3	ENCORE	None	N
E	10109005	GL02E02	TO BE DETERMINED	Sediment	10/9/2010	1	Jar	None	N
06 A	10109006	GL03E03	Semivolatiles (SVOAs)	Sediment	10/9/2010	1	Jar	None	N
B	10109006	GL03E03	TO BE DETERMINED	Sediment	10/9/2010	1	Jar	None	N
07 A	10109007	GL02W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
B-D	10109007	GL02W01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
E	10109007	GL02W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N

Special Instructions: One week turn around time requested, with preliminary results on Friday 10/15/2010.
Percent moisture should be acquired from one of the 8-ounce jars.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Bryan Vasser	10-11-10	[illegible]	10/11/10	1615						

Samples received at 4 °C

 010120

ME 10/11/10

VS4/COS/V1

CHAIN OF CUSTODY RECORD

No: 10JS-10/11/10-0001

Site #: 10JS
Contact Name: Bryan Vasser
Contact Phone: 206-419-3419

Cooler #: 2
Lab: Friedman and Bruya
Lab Phone: 206-285-8282

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
08 A	10109008	GL02W02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109008	GL02W02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
09 A	10109009	GL03E01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109009	GL03E01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109009	GL03E01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
10 A	10109010	GL03E02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109010	GL03E02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109010	GL03E02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
11 A	10109011	GL03W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109011	GL03W01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109011	GL03W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
12 A	10109012	GL03W02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109012	GL03W02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109012	GL03W02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
13 A	10109013	GL04E01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109013	GL04E01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109013	GL04E01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
14 A	10109014	GL04E02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 BLD	10109014	GL04E02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N

Special Instructions: One week turn around time requested, with preliminary results on Friday 10/15/2010.
Percent moisture should be acquired from one of the 8-ounce jars.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Bryan Vasser	10-11-10	[illegible]	10/11/10	1615						

Samples received at 4 °C

 010120

VS4 / W05 / V1

CHAIN OF CUSTODY RECORD ME 10/11/10

No: 10JS-10/11/10-0001

Site #: 10JS
Contact Name: Bryan Vasser
Contact Phone: 206-419-3419

Cooler #: 2
Lab: Friedman and Bruya
Lab Phone: 206-285-8282

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
14 E	10109014	GL04E02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
15 A	10109015	GL04E03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
| B-D	10109015	GL04E03	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
| E	10109015	GL04E03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
16 A	10109016	GL04E04	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
| B	10109016	GL04E04	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
17 A	10109017	GL04W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	Y
| B-D	10109017	GL04W01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
| E	10109017	GL04W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	Y
18 A	10109018	GL04W02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
| B-D	10109018	GL04W02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
| E	10109018	GL04W02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
19 A	10109019	GL04W03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
| B-D	10109019	GL04W03	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
| E	10109019	GL04W03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
20 A	10109020	GL05E01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
| B-D	10109020	GL05E01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
| E	10109020	GL05E01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
21 A	10109021	GL05E02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N

Special Instructions: One week turn around time requested, with preliminary results on Friday 10/15/2010.
Percent moisture should be acquired from one of the 8-ounce jars.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Bryan Vasser	10-11-10	[illegible]	10/11/10	1615						

Samples received at 4 °C

010120

VS4/C05/V1

ME 10/11/10

CHAIN OF CUSTODY RECORD

Site #: 10JS
Contact Name: Bryan Vasser
Contact Phone: 206-419-3419

No: 10JS-10/11/10-0001

Cooler #: 2
Lab: Friedman and Bruya
Lab Phone: 206-285-8282

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
21 B-D	10109021	GL05E02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109021	GL05E02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
22 A	10109022	GL05E03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109022	GL05E03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
23 A	10109023	GL05W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1B B	10109023	GL05W01	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109023	GL05W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
24 A	10109024	GL05W02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B D	10109024	GL05W02	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109024	GL05W02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
25 A	10109025	GL05W03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B-D	10109025	GL05W03	VOCs	Sediment	10/10/2010	3	ENCORE	None	N
1 E	10109025	GL05W03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
26 A	10109026	GL06E01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109026	GL06E01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
27 A	10109027	GL06E02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109027	GL06E02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
28 A	10109028	GL06E03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109028	GL06E03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N

Special Instructions: One week turn around time requested, with preliminary results on Friday 10/15/2010.
Percent moisture should be acquired from one of the 8-ounce jars.

SAMPLES TRANSFERRED FROM CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Bryan Vasser	10-11-10	[illegible]	10/11/10	1615						

Samples received at 4 °C

7

010120

VS4/C05/V1

ME 10/11/10

CHAIN OF CUSTODY RECORD

Site #: 10JS
Contact Name: Bryan Vasser
Contact Phone: 206-419-3419

No: 10JS-10/11/10-0001
Cooler #: 2
Lab: Friedman and Bruya
Lab Phone: 206-285-8282

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	MS/MSD
29 A	10109029	GL06W01	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109029	GL06W01	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
30 A	10109030	GL06W02	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109030	GL06W02	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
31 A	10109031	GL06W03	Semivolatiles (SVOAs)	Sediment	10/10/2010	1	Jar	None	N
1 B	10109031	GL06W03	TO BE DETERMINED	Sediment	10/10/2010	1	Jar	None	N
32 A-C	10109032	TB01WT	VOCs	Filtered Water	10/11/2010	3	40 mL VOA	HCl	N

Special Instructions: One week turn around time requested, with preliminary results on Friday 10/15/2010.
Percent moisture should be acquired from one of the 8-ounce jars.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
	Bryan Vasser	10-11-10	[illegible]	10/11/10	1615						

Samples received at 4 °C

Photo 1 Oily water coming out of pipe.

Direction: Down *Date: 11/6/10* *Time: 1:00* *Taken by: RN*

Photo 2 Oily pipe being removed by excavator.

Direction: West *Date: 11/6/10* *Time: 1:43* *Taken by: RN*

Photo 3 Oily pipe in bin to be raised by crane.

Direction: Down *Date: 11/7/10* *Time: 12:37* *Taken by: BV*

ecology and environment, inc.
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: November 12, 2010

TO: Bryan Vasser, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Quality Assurance Review, Bremerton Gasworks ER Site, Bremerton, Washington**

REF: TDD: 10-10-0003 PAN: 002233.0607.01RZ

The data quality assurance review of 1 water and 20 sediment samples collected from the Bremerton Gasworks ER site in Bremerton, Washington, has been completed. Volatile Organic Compound (VOC) analysis (EPA Method 8260) was performed by Friedman and Bruya, Inc., Seattle, Washington.

The samples were numbered:

GL01E02	GL01E01	GL02E01	GL02E02	GL02W01
GL03E01	GL03E02	GL03W01	GL03W02	GL04E01
GL04E02	GL04E03	GL04W01	GL04W02	GL04W03
GL05E01	GL05E02	GL05W01	GL05W02	GL05W03
TB01WT				

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected between October 9 and 11, 2010, and were analyzed by October 14, 2010, therefore meeting QC criteria of less than 14 days between collection and analysis for soil/sediment and preserved water samples.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050 except acetone; associated acetone sample quantitation limits were rejected (R). All water Relative Standard Deviations (RSDs) were less than the QC limits of 30%.

4. **Continuing Calibration: Acceptable.**

All RRFs were greater than the QC limit of 0.050 except acetone; no additional actions were taken based on these outliers. All % differences were less than the QC limit of 25%.

5. Blanks: Acceptable.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank.

6. System Monitoring Compounds (SMCs): Acceptable.

All SMC recoveries were within QC limits.

7. Matrix Spike (MS)/MS Duplicate/Blank Spike (BS)/BS Duplicate Analysis: Acceptable.

Spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within QC limits.

8. Duplicate Analysis: Acceptable.

Laboratory spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits.

9. Internal Standards: Acceptable.

All internal standards were within $\pm$ 30 seconds of the continuing calibration internal standard retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts.

10. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL01E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-01
Date Analyzed:	10/13/10	Data File:	101317.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	93	42	152
Toluene-d8	91	36	149
4-Bromofluorobenzene	89	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.70	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL01E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-02
Date Analyzed:	10/13/10	Data File:	101318.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	42	152
Toluene-d8	88	36	149
4-Bromofluorobenzene	89	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	<0.5	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL02E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-04
Date Analyzed:	10/13/10	Data File:	101319.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	42	152
Toluene-d8	86	36	149
4-Bromofluorobenzene	86	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.72	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05 U	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL02E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-05
Date Analyzed:	10/13/10	Data File:	101320.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	88	42	152
Toluene-d8	84	36	149
4-Bromofluorobenzene	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05 U	m,p-Xylene	<0.1
Methylene chloride	0.73	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05 U	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL02W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-07
Date Analyzed:	10/13/10	Data File:	101321.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	83	42	152
Toluene-d8	84	36	149
4-Bromofluorobenzene	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.78	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL03E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-09
Date Analyzed:	10/14/10	Data File:	101325.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	81	42	152
Toluene-d8	81	36	149
4-Bromofluorobenzene	81	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.79	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05 U	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL03E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-10
Date Analyzed:	10/14/10	Data File:	101326.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	81	42	152
Toluene-d8	81	36	149
4-Bromofluorobenzene	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.78	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL03W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-11
Date Analyzed:	10/14/10	Data File:	101327.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	91	42	152
Toluene-d8	90	36	149
4-Bromofluorobenzene	90	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~ R	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.91	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05 U	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL03W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-12
Date Analyzed:	10/14/10	Data File:	101328.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	83	42	152
Toluene-d8	82	36	149
4-Bromofluorobenzene	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.77	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-13
Date Analyzed:	10/14/10	Data File:	101329.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	86	42	152
Toluene-d8	84	36	149
4-Bromofluorobenzene	83	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	0.12
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	1.0	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	0.036	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	0.64
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-14
Date Analyzed:	10/14/10	Data File:	101330.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	42	152
Toluene-d8	86	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	1.0	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04E03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-15
Date Analyzed:	10/14/10	Data File:	101331.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	84	42	152
Toluene-d8	84	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.90	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-17
Date Analyzed:	10/14/10	Data File:	101332.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	90	42	152
Toluene-d8	87	36	149
4-Bromofluorobenzene	86	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~ R	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.89	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-18
Date Analyzed:	10/14/10	Data File:	101333.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	87	42	152
Toluene-d8	85	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~ m-R	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.91	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL04W03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-19
Date Analyzed:	10/14/10	Data File:	101334.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	86	42	152
Toluene-d8	86	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~ R	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.80 low	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL05E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-20
Date Analyzed:	10/14/10	Data File:	101335.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	89	42	152
Toluene-d8	86	36	149
4-Bromofluorobenzene	87	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.77	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11/8/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL05E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-21
Date Analyzed:	10/14/10	Data File:	101336.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	87	42	152
Toluene-d8	87	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.88	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL05W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-23
Date Analyzed:	10/14/10	Data File:	101337.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	89	42	152
Toluene-d8	88	36	149
4-Bromofluorobenzene	88	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.92	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW R

MW 11/8/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL05W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-24
Date Analyzed:	10/14/10	Data File:	101338.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	89	42	152
Toluene-d8	88	36	149
4-Bromofluorobenzene	86	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.87	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

MW R

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	GL05W03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/13/10	Lab ID:	010120-25
Date Analyzed:	10/14/10	Data File:	101339.D
Matrix:	Soil	Instrument:	GCMS5
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	94	42	152
Toluene-d8	87	36	149
4-Bromofluorobenzene	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5 U	1,3-Dichloropropane	<0.05 U
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
~~Acetone~~	~~<0.5~~ R	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Methylene chloride	0.89 ~~1q~~	o-Xylene	<0.05
Methyl t-butyl ether (MTBE)	<0.05 U	Styrene	<0.05
trans-1,2-Dichloroethene	<0.05	Isopropylbenzene	<0.05
1,1-Dichloroethane	<0.05	Bromoform	<0.05
2,2-Dichloropropane	<0.05	n-Propylbenzene	<0.05
cis-1,2-Dichloroethene	<0.05	Bromobenzene	<0.05
Chloroform	<0.05	1,3,5-Trimethylbenzene	<0.05
2-Butanone (MEK)	<0.5	1,1,2,2-Tetrachloroethane	<0.05
1,2-Dichloroethane (EDC)	<0.05	1,2,3-Trichloropropane	<0.05
1,1,1-Trichloroethane	<0.05	2-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	4-Chlorotoluene	<0.05
Carbon tetrachloride	<0.05	tert-Butylbenzene	<0.05
Benzene	<0.03	1,2,4-Trimethylbenzene	<0.05
Trichloroethene	<0.03	sec-Butylbenzene	<0.05
1,2-Dichloropropane	<0.05	p-Isopropyltoluene	<0.05
Bromodichloromethane	<0.05	1,3-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,4-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dichlorobenzene	<0.05
cis-1,3-Dichloropropene	<0.05	1,2-Dibromo-3-chloropropane	<0.5
Toluene	<0.05	1,2,4-Trichlorobenzene	<0.25
trans-1,3-Dichloropropene	<0.05	Hexachlorobutadiene	<0.25
1,1,2-Trichloroethane	<0.05	Naphthalene	<0.05
2-Hexanone	<0.5	1,2,3-Trichlorobenzene	<0.25

VM 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	TB01WT	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-32
Date Analyzed:	10/12/10	Data File:	101225.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	63	127
Toluene-d8	96	60	129
4-Bromofluorobenzene	111	51	145

Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1
Chloromethane	<10
Vinyl chloride	<0.2
Bromomethane	<1
Chloroethane	<1
Trichlorofluoromethane	<1
~~Acetone~~	~~<10~~
1,1-Dichloroethene	<1
Methylene chloride	<5
Methyl t-butyl ether (MTBE)	<1
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
2,2-Dichloropropane	<1
cis-1,2-Dichloroethene	<1
Chloroform	<1
2-Butanone (MEK)	<10
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
1,1-Dichloropropene	<1
Carbon tetrachloride	<1
Benzene	<0.35
Trichloroethene	<1
1,2-Dichloropropane	<1
Bromodichloromethane	<1
Dibromomethane	<1
4-Methyl-2-pentanone	<10
cis-1,3-Dichloropropene	<1
Toluene	<1
trans-1,3-Dichloropropene	<1
1,1,2-Trichloroethane	<1
2-Hexanone	<10

Compounds:	Concentration ug/L (ppb)
1,3-Dichloropropane	<1
Tetrachloroethene	<1
Dibromochloromethane	<1
1,2-Dibromoethane (EDB)	<1
Chlorobenzene	<1
Ethylbenzene	<1
1,1,1,2-Tetrachloroethane	<1
m,p-Xylene	<2
o-Xylene	<1
Styrene	<1
Isopropylbenzene	<1
Bromoform	<1
n-Propylbenzene	<1
Bromobenzene	<1
1,3,5-Trimethylbenzene	<1
1,1,2,2-Tetrachloroethane	<1
1,2,3-Trichloropropane	<1
2-Chlorotoluene	<1
4-Chlorotoluene	<1
tert-Butylbenzene	<1
1,2,4-Trimethylbenzene	<1
sec-Butylbenzene	<1
p-Isopropyltoluene	<1
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
1,2-Dibromo-3-chloropropane	<10
1,2,4-Trichlorobenzene	<1
Hexachlorobutadiene	<1
Naphthalene	<1
1,2,3-Trichlorobenzene	<1

MW
11/8/10

ecology and environment, inc.
International Specialists in the Environment
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: November 12, 2010

TO: Bryan Vasser, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Quality Assurance Review, Bremerton Gasworks ER Site, Bremerton, Washington**

REF: TDD: 10-10-0003 PAN: 002233.0607.01RZ

The data quality assurance review of 32 sediment samples collected from the Bremerton Gasworks ER site in Bremerton, Washington, has been completed. Semivolatile Organic Compound (SVOC; EPA Method 8270) and SVOC TCLP (EPA Methods 1311/.8270) analyses were performed by Friedman and Bruya, Inc., Seattle, Washington.

The samples were numbered:

GL01E02	GL01E01	GL01W01	GL02E01	GL02E02
GL03E03	GL02W01	GL02W02	GL03E01	GL03E02
GL03W01	GL03W02	GL04E01	GL04E02	GL04E03
GL04E04	GL04W01	GL04W02	GL04W03	GL05E01
GL05E02	GL05E03	GL05W01	GL05W02	GL05W03
GL06E01	GL06E02	GL06E03	GL06W01	GL06W02
GL06W03	Site Composite			

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were collected on October 9 or 10, 2010, were extracted by October 22, 2010, and were analyzed by October 26, 2010, therefore meeting holding time criteria of less than 14 days between collection and extraction and less than 40 days between extraction and analysis.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Satisfactory.**

All average Relative Response Factors (RRFs) were greater than the QC limit of 0.050. All Relative Standard Deviations (RSDs) were less than the QC limit of 30% except benzoic acid, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, and benzo(b)fluoranthene. Associated positive results were qualified as estimated quantities with an unknown bias (JK).

4. Continuing Calibration: Acceptable.

All RRFs were greater than the QC limit of 0.050. All % differences were less than the QC limit of 25 % except several outliers with high recoveries. No actions were taken based on these outliers as they were not detected in associated samples.

5. Blanks: Satisfactory.

A method blank was analyzed for each 20 sample batch per matrix. There were no detections in any method blank except diethyl phthalate in several method blanks; associated sample results less than 10 times the positive blank results were qualified as not detected (U).

6. System Monitoring Compounds (SMCs): Acceptable.

All SMC recoveries were within QC limits except in some method blanks (some SMCs had high recoveries; no action was taken as there were no detections in the method blanks except diethyl phthalate in the TCLP method blank) and when diluted out due to high native sample concentrations (no actions were taken based on these outliers).

7. Blank Spike (BS)/BS Duplicate Analysis: Acceptable.

All spike analyses were performed per SDG or per matrix per concentration level, whichever was more frequent. All recoveries were within the QC limits except some high recoveries; no actions were required since the associated analytes were not detected in the associated samples.

8. Duplicate Analysis: Acceptable.

Spike duplicate analysis was performed per SDG or per matrix per concentration level, whichever was more frequent. All spike duplicate results were within QC limits except a few outliers that were not detected in the associated samples; no action was taken based on these outliers.

9. Internal Standards: Acceptable.

All internal standards (IS) were within $\pm$ 30 seconds of the continuing calibration IS retention times. All area counts were within 50 % to 200 % of the continuing calibration area counts except some high recoveries associated with sample quantitation limits only (no action was taken based on these outliers) and a blank spike with one outlier (no action was taken based on the blank spike outlier).

10. Precision and Bias Determination: Not Performed.

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

11. Performance Evaluation Sample Analysis: Not Provided.

Performance evaluation samples were not provided to the laboratory.

12. Overall Assessment of Data for Use

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

J - The associated numerical value is an estimated quantity because the reported concentrations were less than the sample quantitation limits or because quality control criteria limits were not met.

K - The associated result has a likely unknown bias.

R - The sample results are rejected (analyte may or may not be present) due to gross deficiencies in quality control criteria. Any reported value is unusable. Resampling and/or reanalysis is necessary for verification.

U - The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.

UJ - The material was analyzed for, but not detected. The reported detection limit is estimated because quality control criteria were not met.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL01E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-01 1/10
Date Analyzed:	10/25/10	Data File:	102506.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	83	30	118
Phenol-d6	74	30	118
Nitrobenzene-d5	77	10	180
2-Fluorobiphenyl	60	40	130
2,4,6-Tribromophenol	78	16	116
Terphenyl-d14	82	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<3
Bis(2-chloroethyl) ether	<0.3
2-Chlorophenol	<3
1,3-Dichlorobenzene	<0.3
1,4-Dichlorobenzene	<0.3
1,2-Dichlorobenzene	<0.3
Benzyl alcohol	<0.3
Bis(2-chloroisopropyl) ether	<0.3
2-Methylphenol	<3
Hexachloroethane	<0.3
N-Nitroso-di-n-propylamine	<0.3
3-Methylphenol + 4-Methylphenol	<3
Nitrobenzene	<0.3
Isophorone	<0.3
2-Nitrophenol	<3
2,4-Dimethylphenol	<3
Benzoic acid	<30
Bis(2-chloroethoxy)methane	<0.3
2,4-Dichlorophenol	<3
1,2,4-Trichlorobenzene	<0.3
Naphthalene	<0.3
Hexachlorobutadiene	<1.5
4-Chloroaniline	<30
4-Chloro-3-methylphenol	<3
2-Methylnaphthalene	<0.3
Hexachlorocyclopentadiene	<0.9
2,4,6-Trichlorophenol	<3
2,4,5-Trichlorophenol	<3
2-Chloronaphthalene	<0.3
2-Nitroaniline	<1.5
Dimethyl phthalate	<0.3
Acenaphthylene	<0.3
2,6-Dinitrotoluene	<0.3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<45
Acenaphthene	<0.3
2,4-Dinitrophenol	<9
Dibenzofuran	<0.3
2,4-Dinitrotoluene	<1.5
4-Nitrophenol	<3
Diethyl phthalate	<0.3
Fluorene	<0.3
4-Chlorophenyl phenyl ether	<0.3
N-Nitrosodiphenylamine	<0.3
4-Nitroaniline	<45
4,6-Dinitro-2-methylphenol	<9
4-Bromophenyl phenyl ether	<0.3
Hexachlorobenzene	<0.3
Pentachlorophenol	<3
Phenanthrene	<0.3
Anthracene	<0.3
Carbazole	<0.3
Di-n-butyl phthalate	<0.3
Fluoranthene	0.57
Pyrene	0.83
Benzyl butyl phthalate	<0.3
Benz(a)anthracene	0.35
Chrysene	0.32
Bis(2-ethylhexyl) phthalate	<3
Di-n-octyl phthalate	<0.3
Benzo(a)pyrene	<0.3
Benzo(b)fluoranthene	0.32
Benzo(k)fluoranthene	<0.3
Indeno(1,2,3-cd)pyrene	<0.3
Dibenz(a,h)anthracene	<0.3
Benzo(g,h,i)perylene	<0.3

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MM 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL01E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-02 1/100
Date Analyzed:	10/14/10	Data File:	101410.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	30	118
Phenol-d6	61	30	118
Nitrobenzene-d5	63	10	180
2-Fluorobiphenyl	73	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	80	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U	3-Nitroaniline	<450 U
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	5.9
Naphthalene	<3	Pyrene	9.7
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3 U
4-Chloroaniline	<300	Benz(a)anthracene	<3
4-Chloro-3-methylphenol	<30	Chrysene	<3
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	3.1
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	5.0 JK
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3 U
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	<3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL01W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-03 1/100
Date Analyzed:	10/14/10	Data File:	101414.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	72	30	118
Phenol-d6	71	30	118
Nitrobenzene-d5	78	10	180
2-Fluorobiphenyl	67	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	79	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U	3-Nitroaniline	<450 U
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	5.0
Naphthalene	<3	Pyrene	9.8
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3 U
4-Chloroaniline	<300	Benz(a)anthracene	4.6
4-Chloro-3-methylphenol	<30	Chrysene	3.1
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30 U
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3 U
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	3.9
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	5.5 JK
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	3.3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3 U
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3 U
2,6-Dinitrotoluene	<3		

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL02E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-04 1/100
Date Analyzed:	10/14/10	Data File:	101411.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	57	30	118
Phenol-d6	66	30	118
Nitrobenzene-d5	65	10	180
2-Fluorobiphenyl	73	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	80	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	14
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	12
Naphthalene	<3	Pyrene	21
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	5.9
4-Chloro-3-methylphenol	<30	Chrysene	5.7
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	5.0
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	8.2
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	3.7
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	3.7
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL02E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-05 1/50
Date Analyzed:	10/25/10	Data File:	102508.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	90	30	118
Phenol-d6	90	30	118
Nitrobenzene-d5	96	10	180
2-Fluorobiphenyl	68	40	130
2,4,6-Tribromophenol	60	16	116
Terphenyl-d14	98	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<15
Bis(2-chloroethyl) ether	<1.5
2-Chlorophenol	<15
1,3-Dichlorobenzene	<1.5
1,4-Dichlorobenzene	<1.5
1,2-Dichlorobenzene	<1.5
Benzyl alcohol	<1.5
Bis(2-chloroisopropyl) ether	<1.5
2-Methylphenol	<15
Hexachloroethane	<1.5
N-Nitroso-di-n-propylamine	<1.5
3-Methylphenol + 4-Methylphenol	<15
Nitrobenzene	<1.5
Isophorone	<1.5
2-Nitrophenol	<15
2,4-Dimethylphenol	<15
Benzoic acid	<150
Bis(2-chloroethoxy)methane	<1.5
2,4-Dichlorophenol	<15
1,2,4-Trichlorobenzene	<1.5
Naphthalene	<1.5
Hexachlorobutadiene	<7.5
4-Chloroaniline	<150
4-Chloro-3-methylphenol	<15
2-Methylnaphthalene	<1.5
Hexachlorocyclopentadiene	<4.5
2,4,6-Trichlorophenol	<15
2,4,5-Trichlorophenol	<15
2-Chloronaphthalene	<1.5
2-Nitroaniline	<7.5
Dimethyl phthalate	<1.5
Acenaphthylene	<1.5
2,6-Dinitrotoluene	<1.5

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<230
Acenaphthene	<1.5
2,4-Dinitrophenol	<45
Dibenzofuran	<1.5
2,4-Dinitrotoluene	<7.5
4-Nitrophenol	<15
Diethyl phthalate	<1.5
Fluorene	<1.5
4-Chlorophenyl phenyl ether	<1.5
N-Nitrosodiphenylamine	<1.5
4-Nitroaniline	<230
4,6-Dinitro-2-methylphenol	<45
4-Bromophenyl phenyl ether	<1.5
Hexachlorobenzene	<1.5
Pentachlorophenol	<15
Phenanthrene	<1.5
Anthracene	<1.5
Carbazole	<1.5
Di-n-butyl phthalate	<1.5
Fluoranthene	1.9
Pyrene	2.4
Benzyl butyl phthalate	<1.5
Benz(a)anthracene	<1.5
Chrysene	<1.5
Bis(2-ethylhexyl) phthalate	<15
Di-n-octyl phthalate	<1.5
Benzo(a)pyrene	<1.5
Benzo(b)fluoranthene	<1.5
Benzo(k)fluoranthene	<1.5
Indeno(1,2,3-cd)pyrene	<1.5
Dibenz(a,h)anthracene	<1.5
Benzo(g,h,i)perylene	<1.5

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL03E03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-06 1/10
Date Analyzed:	10/25/10	Data File:	102507.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	96	30	118
Phenol-d6	88	30	118
Nitrobenzene-d5	91	10	180
2-Fluorobiphenyl	68	40	130
2,4,6-Tribromophenol	94	16	116
Terphenyl-d14	98	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<3	3-Nitroaniline	<45
Bis(2-chloroethyl) ether	<0.3	Acenaphthene	<0.3
2-Chlorophenol	<3	2,4-Dinitrophenol	<9
1,3-Dichlorobenzene	<0.3	Dibenzofuran	<0.3
1,4-Dichlorobenzene	<0.3	2,4-Dinitrotoluene	<1.5
1,2-Dichlorobenzene	<0.3	4-Nitrophenol	<3
Benzyl alcohol	<0.3	Diethyl phthalate	<0.3
Bis(2-chloroisopropyl) ether	<0.3	Fluorene	<0.3
2-Methylphenol	<3	4-Chlorophenyl phenyl ether	<0.3
Hexachloroethane	<0.3	N-Nitrosodiphenylamine	<0.3
N-Nitroso-di-n-propylamine	<0.3	4-Nitroaniline	<45
3-Methylphenol + 4-Methylphenol	<3	4,6-Dinitro-2-methylphenol	<9
Nitrobenzene	<0.3	4-Bromophenyl phenyl ether	<0.3
Isophorone	<0.3	Hexachlorobenzene	<0.3
2-Nitrophenol	<3	Pentachlorophenol	<3
2,4-Dimethylphenol	<3	Phenanthrene	<0.3
Benzoic acid	<30	Anthracene	<0.3
Bis(2-chloroethoxy)methane	<0.3	Carbazole	<0.3
2,4-Dichlorophenol	<3	Di-n-butyl phthalate	<0.3
1,2,4-Trichlorobenzene	<0.3	Fluoranthene	0.34
Naphthalene	<0.3	Pyrene	0.53
Hexachlorobutadiene	<1.5	Benzyl butyl phthalate	<0.3
4-Chloroaniline	<30	Benz(a)anthracene	<0.3
4-Chloro-3-methylphenol	<3	Chrysene	<0.3
2-Methylnaphthalene	<0.3	Bis(2-ethylhexyl) phthalate	<3
Hexachlorocyclopentadiene	<0.9	Di-n-octyl phthalate	<0.3
2,4,6-Trichlorophenol	<3	Benzo(a)pyrene	<0.3
2,4,5-Trichlorophenol	<3	Benzo(b)fluoranthene	0.31
2-Chloronaphthalene	<0.3	Benzo(k)fluoranthene	<0.3
2-Nitroaniline	<1.5	Indeno(1,2,3-cd)pyrene	<0.3
Dimethyl phthalate	<0.3	Dibenz(a,h)anthracene	<0.3
Acenaphthylene	<0.3	Benzo(g,h,i)perylene	<0.3
2,6-Dinitrotoluene	<0.3		

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL02W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-07 1/100
Date Analyzed:	10/14/10	Data File:	101415.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	61	30	118
Phenol-d6	60	30	118
Nitrobenzene-d5	64	10	180
2-Fluorobiphenyl	71	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	69	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U	3-Nitroaniline	<450 U
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	5.5
Benzoic acid	<300	Anthracene	<3 U
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	13
Naphthalene	<3	Pyrene	23
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3 U
4-Chloroaniline	<300	Benz(a)anthracene	7.6
4-Chloro-3-methylphenol	<30	Chrysene	7.5
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30 U
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3 U
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	7.0
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	11
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3 U OK
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	5.5
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3 U
Acenaphthylene	<3	Benzo(g,h,i)perylene	5.5
2,6-Dinitrotoluene	<3		

MW 11/12/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL02W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-08 1/100
Date Analyzed:	10/16/10	Data File:	101528.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	43	30	118
Phenol-d6	61	30	118
Nitrobenzene-d5	72	10	180
2-Fluorobiphenyl	32 ds	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	72	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	3.2
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	6.3
Naphthalene	<3	Pyrene	11
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	3.9
4-Chloro-3-methylphenol	<30	Chrysene	4.0
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	<3
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	4.7
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	<3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL03E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-09 1/100
Date Analyzed:	10/14/10	Data File:	101413.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	30	118
Phenol-d6	63	30	118
Nitrobenzene-d5	59	10	180
2-Fluorobiphenyl	63	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	72	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450 U
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	3.0
Anthracene	<3 U
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	7.0
Pyrene	13
Benzyl butyl phthalate	<3 U
Benz(a)anthracene	4.4
Chrysene	4.9
Bis(2-ethylhexyl) phthalate	<30 U
Di-n-octyl phthalate	<3
Benzo(a)pyrene	3.9
Benzo(b)fluoranthene	6.5 UJK
Benzo(k)fluoranthene	<3
Indeno(1,2,3-cd)pyrene	3.0
Dibenz(a,h)anthracene	<3 U
Benzo(g,h,i)perylene	<3

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL03E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-10 1/100
Date Analyzed:	10/16/10	Data File:	101527.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	30	118
Phenol-d6	58	30	118
Nitrobenzene-d5	73	10	180
2-Fluorobiphenyl	39 J, ds	40	130
2,4,6-Tribromophenol	0 J, ds	16	116
Terphenyl-d14	67	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	~~<30 J~~ 45 U
2,4,6-Trichlorophenol	~~<30 J~~ 150
2,4,5-Trichlorophenol	~~<30 J~~ 150
2-Chloronaphthalene	~~<3 J~~ 15
2-Nitroaniline	~~<15 J~~ 75
Dimethyl phthalate	~~<3 J~~ 15
Acenaphthylene	~~<3 J~~ 15
2,6-Dinitrotoluene	~~<3 J~~ 15

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	~~<450 J~~ 2,300 U
Acenaphthene	~~<3 J~~ 15
2,4-Dinitrophenol	~~<90 J~~ 450
Dibenzofuran	~~<3 J~~ 15
2,4-Dinitrotoluene	~~<15 J~~ 75
4-Nitrophenol	~~<30 J~~ 150
Diethyl phthalate	~~<3 J~~ 15
Fluorene	~~<3 J~~ 15
4-Chlorophenyl phenyl ether	~~<3 J~~ 15
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	<3
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	4.2
Pyrene	6.7
Benzyl butyl phthalate	<3 U
Benz(a)anthracene	<3
Chrysene	<3
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	<3
Benzo(b)fluoranthene	3.5 UJK
Benzo(k)fluoranthene	<3
Indeno(1,2,3-cd)pyrene	<3
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	<3

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL03W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-11 1/500
Date Analyzed:	10/16/10	Data File:	101529.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	30	118
Phenol-d6	40	30	118
Nitrobenzene-d5	55	10	180
2-Fluorobiphenyl	40	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	65	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<150 U
Bis(2-chloroethyl) ether	<15
2-Chlorophenol	<150
1,3-Dichlorobenzene	<15
1,4-Dichlorobenzene	<15
1,2-Dichlorobenzene	<15
Benzyl alcohol	<15
Bis(2-chloroisopropyl) ether	<15
2-Methylphenol	<150
Hexachloroethane	<15
N-Nitroso-di-n-propylamine	<15
3-Methylphenol + 4-Methylphenol	<150
Nitrobenzene	<15
Isophorone	<15
2-Nitrophenol	<150
2,4-Dimethylphenol	<150
Benzoic acid	<1,500
Bis(2-chloroethoxy)methane	<15
2,4-Dichlorophenol	<150
1,2,4-Trichlorobenzene	<15
Naphthalene	<15
Hexachlorobutadiene	<75
4-Chloroaniline	<1,500
4-Chloro-3-methylphenol	<150
2-Methylnaphthalene	<15
Hexachlorocyclopentadiene	<45
2,4,6-Trichlorophenol	<150
2,4,5-Trichlorophenol	<150
2-Chloronaphthalene	<15
2-Nitroaniline	<75
Dimethyl phthalate	<15
Acenaphthylene	<15
2,6-Dinitrotoluene	<15

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<2,300 U
Acenaphthene	<15
2,4-Dinitrophenol	<450
Dibenzofuran	<15
2,4-Dinitrotoluene	<75
4-Nitrophenol	<150
Diethyl phthalate	<15
Fluorene	<15
4-Chlorophenyl phenyl ether	<15
N-Nitrosodiphenylamine	<15
4-Nitroaniline	<2,300
4,6-Dinitro-2-methylphenol	<450
4-Bromophenyl phenyl ether	<15
Hexachlorobenzene	<15
Pentachlorophenol	<150
Phenanthrene	18
Anthracene	<15 U
Carbazole	<15
Di-n-butyl phthalate	<15
Fluoranthene	42
Pyrene	72
Benzyl butyl phthalate	<15 U
Benz(a)anthracene	24
Chrysene	24
Bis(2-ethylhexyl) phthalate	<150 U
Di-n-octyl phthalate	<15 U
Benzo(a)pyrene	17
Benzo(b)fluoranthene	32
Benzo(k)fluoranthene	<15 U JK
Indeno(1,2,3-cd)pyrene	16
Dibenz(a,h)anthracene	<15
Benzo(g,h,i)perylene	<15

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL03W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-12 1/100
Date Analyzed:	10/14/10	Data File:	101416.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	30	118
Phenol-d6	68	30	118
Nitrobenzene-d5	71	10	180
2-Fluorobiphenyl	64	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	71	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	3.3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	8.3
Naphthalene	<3	Pyrene	15
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	6.6
4-Chloro-3-methylphenol	<30	Chrysene	4.4
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	5.4
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	8.5
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	4.3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	4.0
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-13 1/100
Date Analyzed:	10/14/10	Data File:	101417.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	30	118
Phenol-d6	72	30	118
Nitrobenzene-d5	72	10	180
2-Fluorobiphenyl	71	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	73	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	5.3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	14
Naphthalene	<3	Pyrene	25
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	9.4
4-Chloro-3-methylphenol	<30	Chrysene	6.9
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	7.6
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	12
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	6.2
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	6.1
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-14 1/100
Date Analyzed:	10/14/10	Data File:	101418.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	30	118
Phenol-d6	68	30	118
Nitrobenzene-d5	69	10	180
2-Fluorobiphenyl	56	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	64	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30 U	3-Nitroaniline	<450 U
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	10
Naphthalene	<3	Pyrene	19
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3 U
4-Chloroaniline	<300	Benz(a)anthracene	8.1
4-Chloro-3-methylphenol	<30	Chrysene	5.8
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30 U
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3 U
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	6.6
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	10 JK
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3 U
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	5.6
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3 U
Acenaphthylene	<3	Benzo(g,h,i)perylene	5.3
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04E03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-15 1/100
Date Analyzed:	10/15/10	Data File:	101506.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	54	30	118
Phenol-d6	55	30	118
Nitrobenzene-d5	73	10	180
2-Fluorobiphenyl	65	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	75	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	<3
Naphthalene	<3	Pyrene	4.5
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	<3
4-Chloro-3-methylphenol	<30	Chrysene	<3
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	<3
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	<3
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	<3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3
2,6-Dinitrotoluene	<3		

MW 1H270

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04E04	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-16 1/50
Date Analyzed:	10/26/10	Data File:	102610.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	75	30	118
Phenol-d6	67	30	118
Nitrobenzene-d5	83	10	180
2-Fluorobiphenyl	47	40	130
2,4,6-Tribromophenol	37	16	116
Terphenyl-d14	70	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<15
Bis(2-chloroethyl) ether	<1.5
2-Chlorophenol	<15
1,3-Dichlorobenzene	<1.5
1,4-Dichlorobenzene	<1.5
1,2-Dichlorobenzene	<1.5
Benzyl alcohol	<1.5
Bis(2-chloroisopropyl) ether	<1.5
2-Methylphenol	<15
Hexachloroethane	<1.5
N-Nitroso-di-n-propylamine	<1.5
3-Methylphenol + 4-Methylphenol	<15
Nitrobenzene	<1.5
Isophorone	<1.5
2-Nitrophenol	<15
2,4-Dimethylphenol	<15
Benzoic acid	<150
Bis(2-chloroethoxy)methane	<1.5
2,4-Dichlorophenol	<15
1,2,4-Trichlorobenzene	<1.5
Naphthalene	<1.5
Hexachlorobutadiene	<7.5
4-Chloroaniline	<150
4-Chloro-3-methylphenol	<15
2-Methylnaphthalene	<1.5
Hexachlorocyclopentadiene	<4.5
2,4,6-Trichlorophenol	<15
2,4,5-Trichlorophenol	<15
2-Chloronaphthalene	<1.5
2-Nitroaniline	<7.5
Dimethyl phthalate	<1.5
Acenaphthylene	<1.5
2,6-Dinitrotoluene	<1.5

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<230
Acenaphthene	<1.5
2,4-Dinitrophenol	<45
Dibenzofuran	<1.5
2,4-Dinitrotoluene	<7.5
4-Nitrophenol	<15
Diethyl phthalate	<1.5
Fluorene	<1.5
4-Chlorophenyl phenyl ether	<1.5
N-Nitrosodiphenylamine	<1.5
4-Nitroaniline	<230
4,6-Dinitro-2-methylphenol	<45
4-Bromophenyl phenyl ether	<1.5
Hexachlorobenzene	<1.5
Pentachlorophenol	<15
Phenanthrene	<1.5
Anthracene	<1.5
Carbazole	<1.5
Di-n-butyl phthalate	<1.5
Fluoranthene	1.5
Pyrene	2.2
Benzyl butyl phthalate	<1.5
Benz(a)anthracene	<1.5
Chrysene	<1.5
Bis(2-ethylhexyl) phthalate	<15
Di-n-octyl phthalate	<1.5
Benzo(a)pyrene	<1.5
Benzo(b)fluoranthene	<1.5
Benzo(k)fluoranthene	<1.5
Indeno(1,2,3-cd)pyrene	<1.5
Dibenz(a,h)anthracene	<1.5
Benzo(g,h,i)perylene	<1.5

JMW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-17 1/100
Date Analyzed:	10/15/10	Data File:	101514.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	71	30	118
Phenol-d6	71	30	118
Nitrobenzene-d5	68	10	180
2-Fluorobiphenyl	68	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	83	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	3.3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	4.7
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	15
Pyrene	26
Benzyl butyl phthalate	<3
Benz(a)anthracene	9.6
Chrysene	9.8
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	9.6
Benzo(b)fluoranthene	13
Benzo(k)fluoranthene	3.5
Indeno(1,2,3-cd)pyrene	7.2
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	7.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-18 1/500
Date Analyzed:	10/15/10	Data File:	101520.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	30	118
Phenol-d6	45	30	118
Nitrobenzene-d5	80	10	180
2-Fluorobiphenyl	70	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	70	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<150
Bis(2-chloroethyl) ether	<15
2-Chlorophenol	<150
1,3-Dichlorobenzene	<15
1,4-Dichlorobenzene	<15
1,2-Dichlorobenzene	<15
Benzyl alcohol	<15
Bis(2-chloroisopropyl) ether	<15
2-Methylphenol	<150
Hexachloroethane	<15
N-Nitroso-di-n-propylamine	<15
3-Methylphenol + 4-Methylphenol	<150
Nitrobenzene	<15
Isophorone	<15
2-Nitrophenol	<150
2,4-Dimethylphenol	<150
Benzoic acid	<1,500
Bis(2-chloroethoxy)methane	<15
2,4-Dichlorophenol	<150
1,2,4-Trichlorobenzene	<15
Naphthalene	<15
Hexachlorobutadiene	<75
4-Chloroaniline	<1,500
4-Chloro-3-methylphenol	<150
2-Methylnaphthalene	<15
Hexachlorocyclopentadiene	<45
2,4,6-Trichlorophenol	<150
2,4,5-Trichlorophenol	<150
2-Chloronaphthalene	<15
2-Nitroaniline	<75
Dimethyl phthalate	<15
Acenaphthylene	<15
2,6-Dinitrotoluene	<15

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<2,300
Acenaphthene	<15
2,4-Dinitrophenol	<450
Dibenzofuran	<15
2,4-Dinitrotoluene	<75
4-Nitrophenol	<150
Diethyl phthalate	<15
Fluorene	<15
4-Chlorophenyl phenyl ether	<15
N-Nitrosodiphenylamine	<15
4-Nitroaniline	<2,300
4,6-Dinitro-2-methylphenol	<450
4-Bromophenyl phenyl ether	<15
Hexachlorobenzene	<15
Pentachlorophenol	<150
Phenanthrene	<15
Anthracene	<15
Carbazole	<15
Di-n-butyl phthalate	<15
Fluoranthene	26
Pyrene	40
Benzyl butyl phthalate	<15
Benz(a)anthracene	16
Chrysene	16
Bis(2-ethylhexyl) phthalate	<150
Di-n-octyl phthalate	<15
Benzo(a)pyrene	<15
Benzo(b)fluoranthene	21
Benzo(k)fluoranthene	<15
Indeno(1,2,3-cd)pyrene	<15
Dibenz(a,h)anthracene	<15
Benzo(g,h,i)perylene	<15

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MW 11/12/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL04W03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-19 1/100
Date Analyzed:	10/15/10	Data File:	101516.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	78	30	118
Phenol-d6	72	30	118
Nitrobenzene-d5	72	10	180
2-Fluorobiphenyl	73	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	81	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	6.0
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	18
Pyrene	30
Benzyl butyl phthalate	<3
Benz(a)anthracene	9.7
Chrysene	10
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	8.1
Benzo(b)fluoranthene	14
Benzo(k)fluoranthene	3.1
Indeno(1,2,3-cd)pyrene	6.8
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	6.5

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MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-20 1/100
Date Analyzed:	10/16/10	Data File:	101521.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	60	30	118
Phenol-d6	70	30	118
Nitrobenzene-d5	66	10	180
2-Fluorobiphenyl	59	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	80	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	4.7
Naphthalene	<3	Pyrene	7.7
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	3.3
4-Chloro-3-methylphenol	<30	Chrysene	3.3
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	<3
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	4.2
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	<3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3
2,6-Dinitrotoluene	<3		

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MW 11/2/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-21 1/100
Date Analyzed:	10/15/10	Data File:	101517.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	70	30	118
Phenol-d6	67	30	118
Nitrobenzene-d5	76	10	180
2-Fluorobiphenyl	62	40	130
2,4,6-Tribromophenol	55	16	116
Terphenyl-d14	78	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	6.9
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	19
Pyrene	34
Benzyl butyl phthalate	<3
Benz(a)anthracene	11
Chrysene	11
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	9.6
Benzo(b)fluoranthene	13
Benzo(k)fluoranthene	3.1
Indeno(1,2,3-cd)pyrene	<3
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	5.7

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MW 1/12/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05E03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-22 1/100
Date Analyzed:	10/15/10	Data File:	101515.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	29 ds ds	30	118
Phenol-d6	38	30	118
Nitrobenzene-d5	78	10	180
2-Fluorobiphenyl	69	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	84	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	<3
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	6.0
Pyrene	9.0
Benzyl butyl phthalate	<3
Benz(a)anthracene	4.4
Chrysene	5.6
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	5.0
Benzo(b)fluoranthene	8.3 JK
Benzo(k)fluoranthene	<3
Indeno(1,2,3-cd)pyrene	5.4
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	5.4

MW 11/2/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-23 1/100
Date Analyzed:	10/15/10	Data File:	101518.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	30	118
Phenol-d6	66	30	118
Nitrobenzene-d5	79	10	180
2-Fluorobiphenyl	69	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	90	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	4.3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	17
Anthracene	4.5
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	29
Pyrene	50
Benzyl butyl phthalate	<3
Benz(a)anthracene	16
Chrysene	16
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	14
Benzo(b)fluoranthene	21 JK
Benzo(k)fluoranthene	5.7
Indeno(1,2,3-cd)pyrene	11
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	11

JW 1/12/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-24 1/100
Date Analyzed:	10/16/10	Data File:	101522.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	56	30	118
Phenol-d6	58	30	118
Nitrobenzene-d5	74	10	180
2-Fluorobiphenyl	68	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	81	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	4.2
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	9.8
Naphthalene	<3	Pyrene	16
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	6.7
4-Chloro-3-methylphenol	<30	Chrysene	6.8
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	6.0
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	9.9 JK
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	5.3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	5.1
2,6-Dinitrotoluene	<3		

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL05W03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-25 1/500
Date Analyzed:	10/16/10	Data File:	101523.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	0 ds	30	118
Phenol-d6	35	30	118
Nitrobenzene-d5	75	10	180
2-Fluorobiphenyl	0 ds ds	40	130
2,4,6-Tribromophenol	0 ds ds	16	116
Terphenyl-d14	80	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<150	3-Nitroaniline	<2,300
Bis(2-chloroethyl) ether	<15	Acenaphthene	<15
2-Chlorophenol	<150	2,4-Dinitrophenol	<450
1,3-Dichlorobenzene	<15	Dibenzofuran	<15
1,4-Dichlorobenzene	<15	2,4-Dinitrotoluene	<75
1,2-Dichlorobenzene	<15	4-Nitrophenol	<150
Benzyl alcohol	<15	Diethyl phthalate	<15
Bis(2-chloroisopropyl) ether	<15	Fluorene	<15
2-Methylphenol	<150	4-Chlorophenyl phenyl ether	<15
Hexachloroethane	<15	N-Nitrosodiphenylamine	<15
N-Nitroso-di-n-propylamine	<15	4-Nitroaniline	<2,300
3-Methylphenol + 4-Methylphenol	<150	4,6-Dinitro-2-methylphenol	<450
Nitrobenzene	<15	4-Bromophenyl phenyl ether	<15
Isophorone	<15	Hexachlorobenzene	<15
2-Nitrophenol	<150	Pentachlorophenol	<150
2,4-Dimethylphenol	<150	Phenanthrene	<15
Benzoic acid	<1,500	Anthracene	<15
Bis(2-chloroethoxy)methane	<15	Carbazole	<15
2,4-Dichlorophenol	<150	Di-n-butyl phthalate	<15
1,2,4-Trichlorobenzene	<15	Fluoranthene	35
Naphthalene	<15	Pyrene	51
Hexachlorobutadiene	<75	Benzyl butyl phthalate	<15
4-Chloroaniline	<1,500	Benz(a)anthracene	19
4-Chloro-3-methylphenol	<150	Chrysene	20
2-Methylnaphthalene	<15	Bis(2-ethylhexyl) phthalate	<150
Hexachlorocyclopentadiene	<45	Di-n-octyl phthalate	<15
2,4,6-Trichlorophenol	<150	Benzo(a)pyrene	17
2,4,5-Trichlorophenol	<150	Benzo(b)fluoranthene	25
2-Chloronaphthalene	<15	Benzo(k)fluoranthene	<15
2-Nitroaniline	<75	Indeno(1,2,3-cd)pyrene	<15
Dimethyl phthalate	<15	Dibenz(a,h)anthracene	<15
Acenaphthylene	<15	Benzo(g,h,i)perylene	<15
2,6-Dinitrotoluene	<15		

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MW 11-2-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06E01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-26 1/100
Date Analyzed:	10/26/10	Data File:	102609.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	59	30	118
Phenol-d6	58	30	118
Nitrobenzene-d5	59	10	180
2-Fluorobiphenyl	38 ds	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	60	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	<3
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	7.6
Naphthalene	<3	Pyrene	11
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	4.3
4-Chloro-3-methylphenol	<30	Chrysene	4.2
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	3.5
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	4.6
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	<3
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	<3
2,6-Dinitrotoluene	<3		

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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06E02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-27 1/100
Date Analyzed:	10/15/10	Data File:	101519.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	68	30	118
Phenol-d6	66	30	118
Nitrobenzene-d5	76	10	180
2-Fluorobiphenyl	71	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	81	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<30	3-Nitroaniline	<450
Bis(2-chloroethyl) ether	<3	Acenaphthene	<3
2-Chlorophenol	<30	2,4-Dinitrophenol	<90
1,3-Dichlorobenzene	<3	Dibenzofuran	<3
1,4-Dichlorobenzene	<3	2,4-Dinitrotoluene	<15
1,2-Dichlorobenzene	<3	4-Nitrophenol	<30
Benzyl alcohol	<3	Diethyl phthalate	<3
Bis(2-chloroisopropyl) ether	<3	Fluorene	<3
2-Methylphenol	<30	4-Chlorophenyl phenyl ether	<3
Hexachloroethane	<3	N-Nitrosodiphenylamine	<3
N-Nitroso-di-n-propylamine	<3	4-Nitroaniline	<450
3-Methylphenol + 4-Methylphenol	<30	4,6-Dinitro-2-methylphenol	<90
Nitrobenzene	<3	4-Bromophenyl phenyl ether	<3
Isophorone	<3	Hexachlorobenzene	<3
2-Nitrophenol	<30	Pentachlorophenol	<30
2,4-Dimethylphenol	<30	Phenanthrene	7.6
Benzoic acid	<300	Anthracene	<3
Bis(2-chloroethoxy)methane	<3	Carbazole	<3
2,4-Dichlorophenol	<30	Di-n-butyl phthalate	<3
1,2,4-Trichlorobenzene	<3	Fluoranthene	12
Naphthalene	<3	Pyrene	20
Hexachlorobutadiene	<15	Benzyl butyl phthalate	<3
4-Chloroaniline	<300	Benz(a)anthracene	7.6
4-Chloro-3-methylphenol	<30	Chrysene	7.8
2-Methylnaphthalene	<3	Bis(2-ethylhexyl) phthalate	<30
Hexachlorocyclopentadiene	<9	Di-n-octyl phthalate	<3
2,4,6-Trichlorophenol	<30	Benzo(a)pyrene	7.1
2,4,5-Trichlorophenol	<30	Benzo(b)fluoranthene	11
2-Chloronaphthalene	<3	Benzo(k)fluoranthene	<3
2-Nitroaniline	<15	Indeno(1,2,3-cd)pyrene	5.5
Dimethyl phthalate	<3	Dibenz(a,h)anthracene	<3
Acenaphthylene	<3	Benzo(g,h,i)perylene	5.3
2,6-Dinitrotoluene	<3		

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JMW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06E03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-28 1/100
Date Analyzed:	10/15/10	Data File:	101508.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	48	30	118
Phenol-d6	47	30	118
Nitrobenzene-d5	72	10	180
2-Fluorobiphenyl	67	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	79	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	<3
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	3.6
Pyrene	6.1
Benzyl butyl phthalate	<3
Benz(a)anthracene	<3
Chrysene	3.6
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	3.1
Benzo(b)fluoranthene	4.6 JK
Benzo(k)fluoranthene	<3
Indeno(1,2,3-cd)pyrene	<3
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	<3

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06W01	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-29 1/100
Date Analyzed:	10/15/10	Data File:	101509.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	50	30	118
Phenol-d6	55	30	118
Nitrobenzene-d5	77	10	180
2-Fluorobiphenyl	75	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	80	30	144

Compounds:	Concentration mg/kg (ppm)
Phenol	<30
Bis(2-chloroethyl) ether	<3
2-Chlorophenol	<30
1,3-Dichlorobenzene	<3
1,4-Dichlorobenzene	<3
1,2-Dichlorobenzene	<3
Benzyl alcohol	<3
Bis(2-chloroisopropyl) ether	<3
2-Methylphenol	<30
Hexachloroethane	<3
N-Nitroso-di-n-propylamine	<3
3-Methylphenol + 4-Methylphenol	<30
Nitrobenzene	<3
Isophorone	<3
2-Nitrophenol	<30
2,4-Dimethylphenol	<30
Benzoic acid	<300
Bis(2-chloroethoxy)methane	<3
2,4-Dichlorophenol	<30
1,2,4-Trichlorobenzene	<3
Naphthalene	<3
Hexachlorobutadiene	<15
4-Chloroaniline	<300
4-Chloro-3-methylphenol	<30
2-Methylnaphthalene	<3
Hexachlorocyclopentadiene	<9
2,4,6-Trichlorophenol	<30
2,4,5-Trichlorophenol	<30
2-Chloronaphthalene	<3
2-Nitroaniline	<15
Dimethyl phthalate	<3
Acenaphthylene	<3
2,6-Dinitrotoluene	<3

Compounds:	Concentration mg/kg (ppm)
3-Nitroaniline	<450
Acenaphthene	<3
2,4-Dinitrophenol	<90
Dibenzofuran	<3
2,4-Dinitrotoluene	<15
4-Nitrophenol	<30
Diethyl phthalate	<3
Fluorene	<3
4-Chlorophenyl phenyl ether	<3
N-Nitrosodiphenylamine	<3
4-Nitroaniline	<450
4,6-Dinitro-2-methylphenol	<90
4-Bromophenyl phenyl ether	<3
Hexachlorobenzene	<3
Pentachlorophenol	<30
Phenanthrene	<3
Anthracene	<3
Carbazole	<3
Di-n-butyl phthalate	<3
Fluoranthene	4.5
Pyrene	7.7
Benzyl butyl phthalate	<3
Benz(a)anthracene	3.5
Chrysene	3.3
Bis(2-ethylhexyl) phthalate	<30
Di-n-octyl phthalate	<3
Benzo(a)pyrene	3.2
Benzo(b)fluoranthene	5.1
Benzo(k)fluoranthene	<3
Indeno(1,2,3-cd)pyrene	<3
Dibenz(a,h)anthracene	<3
Benzo(g,h,i)perylene	<3

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MW 1/12/10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06W02	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-30 1/500
Date Analyzed:	10/16/10	Data File:	101525.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	0 ds	30	118
Phenol-d6	0 ds	30	118
Nitrobenzene-d5	60	10	180
2-Fluorobiphenyl	40	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	65	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<150	3-Nitroaniline	<2,300
Bis(2-chloroethyl) ether	<15	Acenaphthene	<15
2-Chlorophenol	<150	2,4-Dinitrophenol	<450
1,3-Dichlorobenzene	<15	Dibenzofuran	<15
1,4-Dichlorobenzene	<15	2,4-Dinitrotoluene	<75
1,2-Dichlorobenzene	<15	4-Nitrophenol	<150
Benzyl alcohol	<15	Diethyl phthalate	<15
Bis(2-chloroisopropyl) ether	<15	Fluorene	<15
2-Methylphenol	<150	4-Chlorophenyl phenyl ether	<15
Hexachloroethane	<15	N-Nitrosodiphenylamine	<15
N-Nitroso-di-n-propylamine	<15	4-Nitroaniline	<2,300
3-Methylphenol + 4-Methylphenol	<150	4,6-Dinitro-2-methylphenol	<450
Nitrobenzene	<15	4-Bromophenyl phenyl ether	<15
Isophorone	<15	Hexachlorobenzene	<15
2-Nitrophenol	<150	Pentachlorophenol	<150
2,4-Dimethylphenol	<150	Phenanthrene	<15
Benzoic acid	<1,500	Anthracene	<15
Bis(2-chloroethoxy)methane	<15	Carbazole	<15
2,4-Dichlorophenol	<150	Di-n-butyl phthalate	<15
1,2,4-Trichlorobenzene	<15	Fluoranthene	16
Naphthalene	<15	Pyrene	28
Hexachlorobutadiene	<75	Benzyl butyl phthalate	<15
4-Chloroaniline	<1,500	Benz(a)anthracene	<15
4-Chloro-3-methylphenol	<150	Chrysene	<15
2-Methylnaphthalene	<15	Bis(2-ethylhexyl) phthalate	<150
Hexachlorocyclopentadiene	<45	Di-n-octyl phthalate	<15
2,4,6-Trichlorophenol	<150	Benzo(a)pyrene	<15
2,4,5-Trichlorophenol	<150	Benzo(b)fluoranthene	15 JK
2-Chloronaphthalene	<15	Benzo(k)fluoranthene	<15
2-Nitroaniline	<75	Indeno(1,2,3-cd)pyrene	<15
Dimethyl phthalate	<15	Dibenz(a,h)anthracene	<15
Acenaphthylene	<15	Benzo(g,h,i)perylene	<15
2,6-Dinitrotoluene	<15		

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	GL06W03	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/12/10	Lab ID:	010120-31 1/500
Date Analyzed:	10/16/10	Data File:	101526.D
Matrix:	Soil	Instrument:	GCMS3
Units:	mg/kg (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	0 ds	30	118
Phenol-d6	0 ds	30	118
Nitrobenzene-d5	65	10	180
2-Fluorobiphenyl	45	40	130
2,4,6-Tribromophenol	0 ds	16	116
Terphenyl-d14	90	30	144

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<150 U	3-Nitroaniline	<2,300 U
Bis(2-chloroethyl) ether	<15	Acenaphthene	<15
2-Chlorophenol	<150	2,4-Dinitrophenol	<450
1,3-Dichlorobenzene	<15	Dibenzofuran	<15
1,4-Dichlorobenzene	<15	2,4-Dinitrotoluene	<75
1,2-Dichlorobenzene	<15	4-Nitrophenol	<150
Benzyl alcohol	<15	Diethyl phthalate	<15
Bis(2-chloroisopropyl) ether	<15	Fluorene	<15
2-Methylphenol	<150	4-Chlorophenyl phenyl ether	<15
Hexachloroethane	<15	N-Nitrosodiphenylamine	<15
N-Nitroso-di-n-propylamine	<15	4-Nitroaniline	<2,300
3-Methylphenol + 4-Methylphenol	<150	4,6-Dinitro-2-methylphenol	<450
Nitrobenzene	<15	4-Bromophenyl phenyl ether	<15
Isophorone	<15	Hexachlorobenzene	<15
2-Nitrophenol	<150	Pentachlorophenol	<150
2,4-Dimethylphenol	<150	Phenanthrene	36
Benzoic acid	<1,500	Anthracene	<15 U
Bis(2-chloroethoxy)methane	<15	Carbazole	<15
2,4-Dichlorophenol	<150	Di-n-butyl phthalate	<15
1,2,4-Trichlorobenzene	<15	Fluoranthene	110
Naphthalene	<15	Pyrene	160
Hexachlorobutadiene	<75	Benzyl butyl phthalate	<15 U
4-Chloroaniline	<1,500	Benz(a)anthracene	69
4-Chloro-3-methylphenol	<150	Chrysene	80
2-Methylnaphthalene	<15	Bis(2-ethylhexyl) phthalate	<150 U
Hexachlorocyclopentadiene	<45	Di-n-octyl phthalate	<15 U
2,4,6-Trichlorophenol	<150	Benzo(a)pyrene	76
2,4,5-Trichlorophenol	<150	Benzo(b)fluoranthene	110 JK
2-Chloronaphthalene	<15	Benzo(k)fluoranthene	32
2-Nitroaniline	<75	Indeno(1,2,3-cd)pyrene	72
Dimethyl phthalate	<15	Dibenz(a,h)anthracene	<15 U
Acenaphthylene	<15	Benzo(g,h,i)perylene	60
2,6-Dinitrotoluene	<15		

MW 11-12-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D

Client Sample ID:	Site Composite	Client:	Ecology and Environment, Inc.
Date Received:	10/11/10	Project:	10JS-10/11/10-0001, F&BI 010120
Date Extracted:	10/22/10	Lab ID:	010120-11/23/25/31
Date Analyzed:	10/22/10	Data File:	102216.D
Matrix:	TCLP Extract	Instrument:	GCMS3
Units:	ug/L (ppb)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	77	30	118
Phenol-d6	46	30	118
Nitrobenzene-d5	85	10	180
2-Fluorobiphenyl	86	40	130
2,4,6-Tribromophenol	83	16	116
Terphenyl-d14	136	30	144

Compounds:	Concentration ug/L (ppb)
Phenol	<10
Bis(2-chloroethyl) ether	<1
2-Chlorophenol	<10
1,3-Dichlorobenzene	<1
1,4-Dichlorobenzene	<1
1,2-Dichlorobenzene	<1
Benzyl alcohol	<1
Bis(2-chloroisopropyl) ether	<1
2-Methylphenol	<10
Hexachloroethane	<1
N-Nitroso-di-n-propylamine	<1
3-Methylphenol + 4-Methylphenol	<10
Nitrobenzene	<1
Isophorone	<1
2-Nitrophenol	<10
2,4-Dimethylphenol	<10
Benzoic acid	<100
Bis(2-chloroethoxy)methane	<1
2,4-Dichlorophenol	<10
1,2,4-Trichlorobenzene	<1
Naphthalene	<1
Hexachlorobutadiene	<1
4-Chloroaniline	<3
4-Chloro-3-methylphenol	<10
2-Methylnaphthalene	<1
Hexachlorocyclopentadiene	<3
2,4,6-Trichlorophenol	<10
2,4,5-Trichlorophenol	<10
2-Chloronaphthalene	<1
2-Nitroaniline	<1
Dimethyl phthalate	<1
Acenaphthylene	1.2
2,6-Dinitrotoluene	<1

Compounds:	Concentration ug/L (ppb)
3-Nitroaniline	<3
Acenaphthene	3.1
2,4-Dinitrophenol	<30
Dibenzofuran	<1
2,4-Dinitrotoluene	<1
4-Nitrophenol	<10
Diethyl phthalate	1.5 fb, lc
Fluorene	<1
4-Chlorophenyl phenyl ether	<1
N-Nitrosodiphenylamine	<1
4-Nitroaniline	<10
4,6-Dinitro-2-methylphenol	<30
4-Bromophenyl phenyl ether	<1
Hexachlorobenzene	<1
Pentachlorophenol	<10
Phenanthrene	1.6
Anthracene	<1
Carbazole	<1
Di-n-butyl phthalate	<1
Fluoranthene	2.6
Pyrene	3.3
Benzyl butyl phthalate	<1
Benz(a)anthracene	<1
Chrysene	<1
Bis(2-ethylhexyl) phthalate	<10
Di-n-octyl phthalate	<1
Benzo(a)pyrene	<1
Benzo(b)fluoranthene	<1
Benzo(k)fluoranthene	<1
Indeno(1,2,3-cd)pyrene	<1
Dibenz(a,h)anthracene	<1
Benzo(g,h,i)perylene	<1

MW 11-12-10

ecology and environment, inc.
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720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: November 12, 2010

TO: Bryan Vasser, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-3 Chemist, E & E, Seattle, Washington

SUBJ: **Inorganic Data Quality Assurance Review, Bremerton Gasworks ER Site, Bremerton, Washington**

REF: TDD: 10-10-0003 PAN: 002233.0607.01RZ

The data quality assurance review of 31 sediment samples collected from the Bremerton Gasworks ER site in Bremerton, Washington has been completed. The analysis of soil samples for sheen was performed by Friedman and Bruya, Inc., Seattle, Washington.

The samples were numbered:

GL01E02	GL01E01	GL01W01	GL02E01	GL02E02
GL03E03	GL02W01	GL02W02	GL03E01	GL03E02
GL03W01	GL03W02	GL04E01	GL04E02	GL04E03
GL04E04	GL04W01	GL04W02	GL04W03	GL05E01
GL05E02	GL05E03	GL05W01	GL05W02	GL05W03
GL06E01	GL06E02	GL06E03	GL06W01	GL06W02
GL06W03				

Data Qualifications:

The samples were maintained at < 6°C. No QC requirements are specified for sheen analysis.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/02/10
Date Received: 10/11/10
Project: 10JS-10/11/10-0001, F&BI 010120
Date Extracted: NA
Date Analyzed: 10/19/10

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR SHEEN

Sample ID Laboratory ID	Sheen Present (Y/N)
GL01E02 010120-01	N
GL01E01 010120-02	N
GL01W01 010120-03	N
GL02E01 010120-04	N
GL02E02 010120-05	N
GL03E03 010120-06	N
GL02W01 010120-07	N
GL02W02 010120-08	N
GL03E01 010120-09	N
GL03E02 010120-10	N
GL03W01 010120-11	N
GL03W02 010120-12	N

MW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/02/10
Date Received: 10/11/10
Project: 10JS-10/11/10-0001, F&BI 010120
Date Extracted: NA
Date Analyzed: 10/19/10

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR SHEEN

Sample ID Laboratory ID	Sheen Present (Y/N)
GL04E01 010120-13	N
GL04E02 010120-14	N
GL04E03 010120-15	N
GL04E04 010120-16	N
GL04W01 010120-17	N
GL04W02 010120-18	N
GL04W03 010120-19	N
GL05E01 010120-20	N
GL05E02 010120-21	N
GL05E03 010120-22	N
GL05W01 010120-23	N
GL05W02 010120-24	N

JMW 11-8-10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 11/02/10
Date Received: 10/11/10
Project: 10JS-10/11/10-0001, F&BI 010120
Date Extracted: NA
Date Analyzed: 10/19/10

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR SHEEN

Sample ID Laboratory ID	Sheen Present (Y/N)
GL05W03 010120-25	N
GL06E01 010120-26	N
GL06E02 010120-27	N
GL06E03 010120-28	N
GL06W01 010120-29	N
GL06W02 010120-30	N
GL06W03 010120-31	N

MW 11-8-10

GPS Positions for ER Data

STATION ID	Latitude	Longitude
GL06W01	47.578571	-122.642190
GL06W02	47.578605	-122.642257
GL06W03	47.578614	-122.642339
GL05W01	47.578531	-122.642232
GL06E01	47.578512	-122.642001
GL06E02	47.578484	-122.641934
GL06E03	47.578463	-122.641856
GL05E01	47.578446	-122.642055
GL05E02	47.578419	-122.641993
GL05E03	47.578391	-122.641922
GL04E01	47.578446	-122.642177
GL04E02	47.578401	-122.642097
GL04E03	47.578368	-122.642046
GL04E04	47.578335	-122.641993
GL03E03	47.578315	-122.642079
GL03E02	47.578348	-122.642138
GL03E01	47.578375	-122.642210
GL03W01	47.578435	-122.642278
GL03W02	47.578477	-122.642353
GL04W02	47.578509	-122.642307
GL04W01	47.578484	-122.642246
GL04W03	47.578541	-122.642366
GL05W02	47.578558	-122.642282
GL05W03	47.578577	-122.642353
WN05SD	47.578727	-122.643349
WN04SD	47.578714	-122.643187
WN03SD	47.578683	-122.642784
WN02SD	47.578596	-122.642482
WN01SD	47.578440	-122.642241