Phase I Audits at Commercial and Industrial Facilities (Denver, CO, Tulsa, OK, Portland, OR, and Midwestern states) – Completed various Phase I audits for commercial and industrial facilities.

Subsurface Investigation of a Landfill Area for City of Indianapolis (Indianapolis, IN) — Completed a subsurface investigation of a landfill area proposed for use as a stormwater reservoir. The investigation included the completion of soil borings and monitoring wells, sediment sampling along a creek and within ponds, and a survey of the sampling points.

Subsurface Investigation of Proposed Stormwater Sewer Line for City of Indianapolis (Indianapolis, IN) — Completed a subsurface investigation of a proposed stormwater sewer line. The investigation included the completion of soil borings and installation of temporary monitoring wells to evaluate potential risks that construction workers might encounter during excavation.



Keith Christofferson

PROFILE

Keith Christofferson has seven years of experience performing field activities and case management duties. Field activities involve soil boring and monitoring well installation and abandonment, soil classification and sampling, groundwater sampling, free product monitoring, vacuum truck extraction events, excavation oversight, and well surveying.

Keith is responsible for conducting site investigations and Baseline Environmental Assessments, technical report writing and proposal generation, and client and regulatory agency interfacing. His duties include preparing health and safety plans; contractor coordination; interpreting analytical results; regulatory notification and reporting; scope of work preparation; budget management; and completing third-party review work for insurance claims. Keith is experienced with MDEQ, Remediation Division, Part 213 and Part 201 reporting, preparing corrective action work plans, site characterization and remediation reports, groundwater monitoring and free product recovery reports, Due Care Plans, and RBCA evaluations.

REPRESENTATIVE PROJECTS

Petroleum Bulk Storage Facilities (Michigan) – Serves as case manager assisting with investigation, ongoing monitoring, and remediation of several petroleum bulk storage terminals, pipelines, and pumping stations. Responsible for project, budget, and task management, work plan and invoice approval, coordination with client and contractors, and report preparation. Provided oversight of soil boring/monitoring well advancement/installation, coordination of contractors, and groundwater sampling activities. Completed remedial investigation and risk assessment reports, RCBA evaluations, Due Care Plans, and groundwater and free product monitoring reports.

Retail Service Stations (Michigan) – Assists with investigation, monitoring, and remediation. Provided oversight of soil boring/monitoring well advancement/installation and excavations, contractor coordination, groundwater sampling activities, vacuum truck extraction events, and site surveys. Completed regulatory reports including routine groundwater and free product monitoring reports, initial and final assessment reports, closure reports, and Phase I and Phase II environmental site assessment and site divestment assessment reports.

POSITION

Staff environmental scientist

PROFESSIONAL HISTORY

Staff consultant at PM Environmental, Inc.

EDUCATION

BS, environmental studies and applications – Michigan State University

TRAINING

Loss Prevention System (LPS)

OSHA HAZWOPER – initial, refresher, and supervisor

First Aid and Adult CPR/AED – American Red Cross

Phase I Environmental Site Assessments – GES

Safe Transportation of Hazardous Materials – DOT

Hazardous Waste and Non-Hazardous Training -- RCRA

WorkSafe Training – American Petroleum Institute (API)

Pipeline Operator Qualification Certification – DOT

Life-Saving Rules / Golden Rules / Safe System of Work – Shell

Smith System Defensive Driving Course





APPENDIX C 2013 PHASE II ENVIRONMENTAL SITE ASSESSMENT



PHASE II ENVIRONMENTAL SITE ASSESSMENT UNDEVELOPED LAND 1406 AVON ROAD ROCHESTER HILLS, MICHIGAN

DATE: AUGUST 5, 2013

PREPARED FOR:

SUNOCO LOGISTICS PARTNERS, L.P. 7155 INKSTER ROAD TAYLOR, MI 48180

PREPARED BY:

GROUNDWATER & ENVIRONMENTAL SERVICES, INC. 10381 CITATION DRIVE, SUITE 500 BRIGHTON, MI 48116



PHASE II ENVIRONMENTAL SITE ASSESSMENT UNDEVELOPED LAND 1406 AVON ROAD ROCHESTER HILLS, MICHIGAN

PREPARED FOR:

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PREPARED BY:

GROUNDWATER & ENVIRONMENTAL SERVICES, INC. 10381 CITATION DRIVE, SUITE 500 BRIGHTON, MI 48116

DATE: AUGUST 5, 2013

16/10	FISH
(Signature) WE Keith Christofferson	(Signature) Robert Elliott
(Type Name)	(Type Name)
Staff Environmental Scientist	Senior Project Manager
(Title)	(Title)



TABLE OF CONTENTS

		Page
1.0	INTRODUCTION	1
2.0	SUBSURFACE INVESTIGATION ACTIVITIES	1
2.1	QUALITY ASSURANCE/QUALITY CONTROL	1
2.2	DRILLING AND SAMPLE COLLECTION	2
2.3	GENERAL SITE CHARACTERISTICS	3
3.0	FINDINGS	3
4.0	CONCLUSIONS	4
5.0	QUALIFICATIONS AND LIMITATIONS	4

LIST OF FIGURES

Figure 1 - Site Location Map

Figure 2 - Site Map

Figure 3 – Soil Sample Location Map

LIST OF TABLES

TABLE 1 - Soil Analytical Data

TABLE 2 - Groundwater Analytical Data

LIST OF APPENDICES

Appendix A - Soil Boring Logs

Appendix B - Laboratory Analytical Reports



1.0 INTRODUCTION

Based on the recommendations of the Phase I Environmental Site Assessment findings, Groundwater & Environmental Services, Inc. (GES) was requested by Sunoco Logistics Partners, L.P. (Sunoco Logistics) to complete a Phase II Environmental Site Assessment (ESA) at the undeveloped property located at 1406 Avon Road in Rochester Hills, Michigan (herein referred to as "the Site"; see Figures 1 and 2).

GES completed a Phase I ESA for the Site and identified the following recognized environmental condition (REC):

Information obtained from the City of Rochester Hills indicated the Property was reportedly used
to dump and bury trees and unknown household refuse. Based on the reported historical dumping
activities and the potential to have impacted the Property, the historical dumping is considered a
REC.

2.0 SUBSURFACE INVESTIGATION ACTIVITIES

Prior to the completion of the soil borings, a ground penetrating radar (GPR) survey was completed on Site to attempt to identify subsurface anomalies and underground utilities at the proposed soil boring locations before advancement. No anomalies were identified with the GPR survey at the boring locations.

The soil boring locations were completed in an approximate one (1) acre grid pattern to assess the approximate 12-acre Site with the advancement of 12 soil borings (SB-1 to SB-12). Subsurface drilling activities were completed on July 22, 2013 through July 24, 2013. Prior to drilling activities, public and private utility mark-outs were completed. In addition, thick overgrown vegetation was cleared in order to accommodate the equipment necessary for completing the subsurface investigation.

The subsurface investigation activities also consisted of the installation of seven (7) temporary monitoring wells, TW-1 through TW-7, in order to investigate the historic dumping operations.

The locations of soil borings and temporary monitoring wells are depicted on Figure 3.

2.1 Quality Assurance/Quality Control

The investigation employed a quality assurance/quality control (QA/QC) program including:

- On-going maintenance and inspection of field equipment;
- · Field calibration of equipment used in the field;
- Decontamination of drilling and sampling equipment between boreholes;
- Record keeping on field forms;
- · Soil sampling following standard operating procedures; and
- Standard chain-of-custody protocol.



2.2 Drilling and Sample Collection

GES conducted subsurface investigation activities including advancing soil borings and installing temporary groundwater monitoring wells. The following is a description of methodologies utilized by GES while conducting investigation activities.

Soil Borings

The soil borings were drilled by Terra Probe Environmental, Inc. of Ottawa Lake, Michigan, under GES supervision. Soil borings were advanced to a maximum depth of 15 feet bgs using a hand auger and GeoProbe methods. Each soil boring location was cleared using a hand auger to a maximum depth of five (5) feet bgs prior to advancement direct push technology. Soil samples were collected continuously to the terminus of each borehole. The lithology from each soil boring interval was recorded on a soil boring log.

Each soil sample was screened for the presence of volatile organic compounds (VOCs) by using a photoionization detector (PID). Background PID readings were collected at the time the soil samples were collected. Sample PID readings ranged from 0.0 to a maximum of 12.5 parts-per-million (ppm). Refer to the boring logs contained in Appendix A for PID field-screening information.

The soil sample collection equipment was subject to an Alconox detergent rinse followed by a potable water rinse prior to advancement of each soil boring. New acetate liners were installed in the sampler prior to the collection of each sample.

Upon completion of the soil borings, each borehole was abandoned by backfilling with native soils and hydrated bentonite pellets and refinishing the surface to match the surrounding surface.

The soil sample with the highest PID reading or above the apparent water table was selected for laboratory analysis. Each sample was issued an identification number, labeled, logged onto a chain-of-custody form, and placed on ice for preservation in an insulated cooler. The samples were submitted to Fibertec Laboratory (Fibertec) of Holt, Michigan for analysis of VOCs by 8260, semi-volatile organic compounds (SVOCs) by 8270, polychlorinated biphenyls (PCBs), pesticides and Michigan 10 Metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, and zinc).

Temporary Monitoring Well Installation

Temporary monitoring well locations were selected based on the depth groundwater was observed in the soil boring.

Groundwater samples from temporary monitoring wells were collected via a peristaltic pump and transferred into laboratory-provided sample containers. Each sample was issued an identification number, labeled, logged onto a chain-of-custody form, and placed on ice for preservation in an insulated cooler.

The temporary monitoring wells were constructed of one-inch diameter, flush-jointed Schedule 40 polyvinyl chloride (PVC). The screened section of the temporary monitoring well was constructed using a five feet long section of 0.010-inch slotted Schedule 40 PVC. Subsequent to the groundwater collection, the temporary monitoring well was pulled, the hole was then backfilled with native soil and hydrated bentonite pellets, and refinished the surface to match the surrounding surface.



Groundwater Sample Collection

The groundwater samples collected from the temporary monitoring wells were collected via a peristaltic pump and transferred into laboratory-provided sample containers. The groundwater sample was issued an identification number, labeled, logged onto a chain-of-custody form, and placed on ice for preservation in an insulated cooler. The groundwater samples were submitted to Fibertec for laboratory analysis of VOCs by 8260, SVOCs by 8270, and PCB/pesticides.

2.3 General Site Characteristics

Topography

Based on the review of the USGS topographical map (Figure 1 – Site Location Map), the elevation of the Site is approximately 743 feet above sea level. Wet, low lying areas with standing water were observed on the eastern and southern portion of the Site. The regional groundwater flow direction is anticipated to be generally to the east/southeast.

Geology and Groundwater

Based on discrete soil samples collected during Site investigation activities, geology encountered consisted primarily of brown and light brown, fine to medium grained sand and silt to approximately six (6) feet bgs and is underlain by a gray/brown sand and silt to 15 feet bgs, the maximum depth explored.

Groundwater was encountered in the soil borings at depths ranging from 0.5' to 12' bgs.

Refer to Appendix A for copies of the soil boring logs.

3.0 FINDINGS

The investigation results are summarized as follows:

Soil Analytical Results

A soil sample was collected from each of the 12 soil borings. Contaminants of concern (COC) were reported below laboratory method detection limits (MDLs) in each soil sample for VOCs, SVOCs, PCBs, and pesticides. However, arsenic was detected at concentrations above the MDEQ Statewide Default Background Level of 5,800 µg/kg in the SB-4 (0-1') (150,000 µg/kg) and SB-12 (6-7') (10,000 µg/kg) soil samples. The remaining soil samples did not contain metal concentrations above the MDEQ Statewide Default Background Levels.

Groundwater Analytical Results

Groundwater samples were collected from each of the seven (7) temporary monitoring wells that were installed. COCs were reported below laboratory MDLs in each groundwater sample except for benzo(a)antracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, and chrysene in TW-1 and TW-2 located on the northeast portion of the Site, which exceed MDEQ Residential Groundwater Contact Criteria.



The laboratory reporting limits for aldrin, bis (2-chloroisopropyl) ether, dibenzo(a,h)anthracene, fluoranthene, heptachlor, hexachlorobenzene, hexachlorobutadiene, and indeno(1,2,3-cd)pyrene for select groundwater samples were reported higher than the MDEQ Residential Drinking Water, Groundwater Surface Water Interface Protection, or Groundwater Contact Criteria. However, no detectable concentration of these compounds was identified in the groundwater samples.

Tables 1 and 2 summarize the analytical results for soil and groundwater samples, respectively. A copy of the laboratory analytical reports is provided in Appendix B.

4.0 CONCLUSIONS

Based on results of the subsurface investigation, arsenic concentrations were identified in soil samples that exceed MDEQ Statewide Default Background Levels and select SVOC COCs were identified in groundwater samples that exceed MDEQ Residential Groundwater Contact Criteria. Therefore, the Site is considered a "Facility" per the Natural Resources and Environmental Protection Action (NREPA) Act 451 of 1994 - Part 201.

The term "Facility" means any area, place, or property where a hazardous substance in excess of the concentrations that satisfy the cleanup criteria for unrestricted residential use has been released, deposited, disposed of, or otherwise comes to be located. A possible release may have occurred at the Site when it was utilized as a dump.

The MDEQ defines a "Release", but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a hazardous substance into the environment, or the abandonment or discarding of barrels, containers, and other closed receptacles containing a hazardous substance.

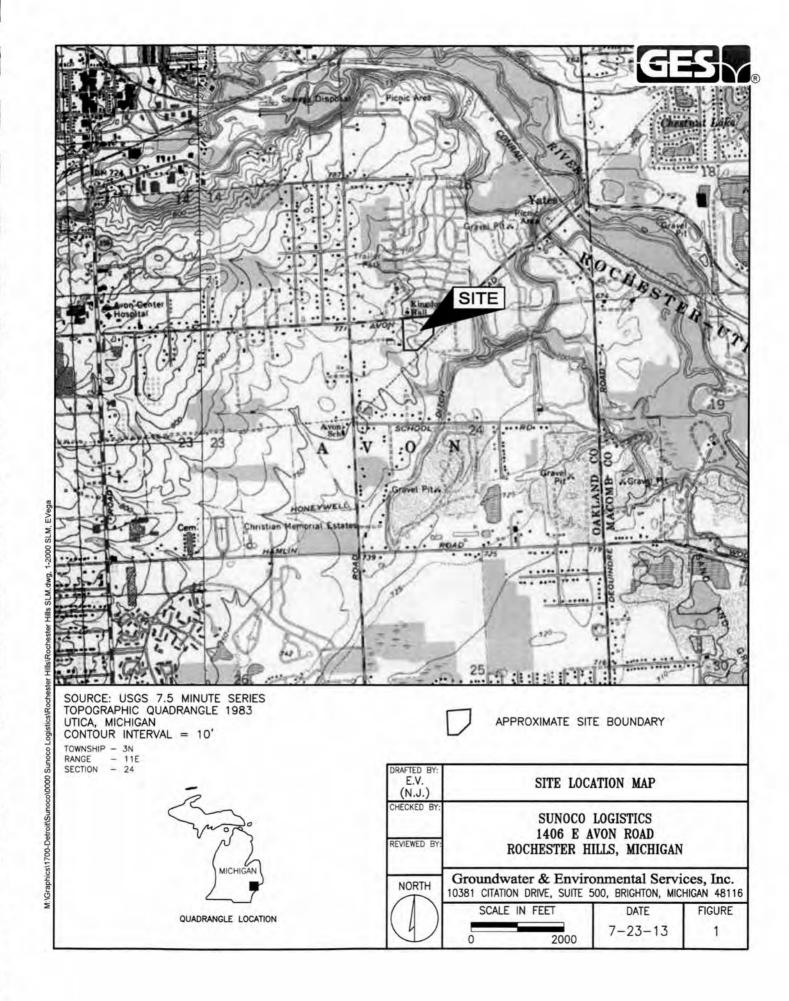
GES recommends the completion of a Baseline Environmental Assessment (BEA) because the BEA process protects the purchaser of contaminated property from becoming liable to clean up the property. A BEA must be conducted prior to or within 45 days after becoming the owner or operator. Conducted means the All Appropriate Inquiry (AAI) or Phase I report, the field work, and sample analysis are all completed, and the BEA report is written. The BEA must be submitted to the MDEQ within 6 months after the earlier date of becoming the owner, operator, or of foreclosure.

5.0 QUALIFICATIONS AND LIMITATIONS

This Report was prepared pursuant to the Agreement between Sunoco Logistics and GES, dated July 19, 2013. All uses of this Report are subject to, and deemed acceptance of, the conditions and restrictions contained in the referenced Agreement.



FIGURES













Order: Page: Date: 57114 63 of 68 07/26/13

Client Identification: Groundwater an

Groundwater and Environmental Services, Inc.

Sample Description: SB-6 (1-2)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

13

Collect Date:

07/24/13

Client Project No:

Sample Matrix: Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample No:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	iquot ID: 571	114-013	Matrix: Soil/Solid		Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	27	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
23.1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
25. 1,4-Dichlorobenzene	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
27. 1,1-Dichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
28. 1,2-Dichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
32 1,2-Dichloropropane	U		μg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
33. cis-1,3-Dichloropropene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
34. trans-1,3-Dichloropropene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
35 Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
36. Ethylene Dibromide	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
37, 2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
38. Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
39. Methyl lodide	U	-	µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
41. 4-Methyl-2-pentanone	U	7	µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
43. Naphthalene	U	100	µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
45. Styrene	U	TO H	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
46. 1,1,1,2-Tetrachloroethane	Ü		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
48. Tetrachloroethene	Ù		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
51.1,1,1-Trichloroethane	U	6	µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
52 1,1,2-Trichloroethane	U	/	µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
53 Trichloroethene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
54. Trichlorofluoromethane	U	/	µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
55.1,2,3-Trichloropropane	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
57. 1,2,4-Trimethylbenzene	U	-	µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A	
59. Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A	

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 64 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

NA

Sample No:

13

Collect Date:

07/24/13

Client Project No:

Soil/Solid

Collect Time:

10:55

Sample Comments: Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Sample Matrix:

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) AI	iquot ID: 571	114-013	Matrix: Soil	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
60. Xylenes	Ü		µg/kg	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/MS (EPA 3546/EPA 8270C)				Al	iquot ID: 571	14-013A	Matrix: Soil	Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
2 Acenaphthylene	U	U μg/k		330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
3. Aniline	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
5 Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
13 Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
15 Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
21. 2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
27. Diethyl Phthalate	U	1	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
28 Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
29.2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
33. 2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



57114 Order: Page: Date:

65 of 68 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

13

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	70C)	A	liquot ID: 571	114-013A	Matrix: Soi	nalyst: GAN			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35 Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
36. Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
43. 2-Methylnaphthalene	_ u		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
44. 2-Methylphenol (NN)	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
47. 3-Nitroaniline	U	-5	µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
48. 4-Nitroaniline	U		μg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
49. Nitrobenzene	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/26/13	S713G25C
50. 2-Nitrophenol	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
51.4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
55. Pentachlorophenol	U	- 3	µg/kg	800	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
61.2.4,6-Trichlorophenol	Ú.		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C



Order: Page: Date: 57114 66 of 68 07/26/13

Client Identification: G

Groundwater and

Environmental Services, Inc.

Sample Description:

TRIP BLANK

14

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collec

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 571	114-014			nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
2 Acrylonitrile	U		µg/L	2.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
3. Benzene	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
4. Bromobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
5 Bromochloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
7. Bromoform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
8. Bromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
9.2-Butanone	U		µg/L	25	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
13. Carbon Disulfide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
14 Carbon Tetrachloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
15, Chlorobenzene	_ U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
16. Chloroethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
17. Chloroform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
18. Chloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
22 Dibromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
25.1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
26. Dichlorodifluoromethane	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
27.1,1-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
29.1,1-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
30. cis-1,2-Dichloroethene	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
35. Ethylbenzene	U	r i	μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
37.2-Hexanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
39. Methyl lodide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 67 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

SXL-1406 Avon Road

Sample Description:

TRIP BLANK

Chain of Custody:

127338

Client Project Name: Client Project No:

Sample No: Sample Matrix: 14

Collect Date:

07/24/13

Sample Comments:

Definitions:

Ground Water

Collect Time:

NA

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	PA 8260B)	Al	iquot ID: 571	14-014	Matrix: Gro	Inalyst: JPL			
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. Methylene Chloride	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
41.2-Methylnaphthalene (NN)	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
42.4-Methyl-2-pentanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
43 MTBE	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
44. Naphthalene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
45. n-Propylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
46. Styrene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
47. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
48. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
49. Tetrachloroethene	U	1	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
50. Toluene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
51. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
52 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
53.1,1,2-Trichloroethane	u		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
54. Trichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
55 Trichlorofluoromethane	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
56.1,2,3-Trichloropropane	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
57. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
58. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
59.1,3,5-Trimethylbenzene	U	-	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
60. Vinyl Chloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
61. Xylenes	U		µg/L	3.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B



Analytical Laboratory Report Laboratory Project Number: 57114

Order: Page: Date: 57114 68 of 68 07/26/13

Definitions/ Qualifiers:

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- *: Value reported is outside QA limits

Exception Summary:

L- : Recovery in the associated laboratory sample (LCS) exceeds the lower control limit. Results may be blased low.



Accreditation Number

E-10395



Analytical Laboratory

1914 Holloway Drive Holt, MI 48842 Phone: 517 699 0345 Fax: 517 699 0388

emall: lab@fiberlec.us

8660 S. Mackinaw Trail Cadillac, MI 49601 Phone: 231 775 8368 Fax: 231 775 8584 Industrial Hyglene Services, Inc. 1914 Holloway Drive Holl, MI 48842 Phone: 517 699 0345 Fax: 517 699 0382

email: asbestos@fibertec.us

Geoprobe 11766 E. Grand River Brighton, MI 48116 Phone: 810 220 3300 Fax: 810 220 3311 Chain of Custody # 127339
PAGE___of__

Client N	lame:	6ES					П					PARAMETERS		Turnaround	Matrix Code	Deliverables
	t Person:	FVD	El	liot		900				Ms		2/2		24 hour RUSH (surcharge applies) 48 hour RUSH (surcharge	S Soil GW Ground Wa	11
rojeci	Nome/ N	romber:				o over anyone		z e	274	Al Ha	7. 76	10/10		applies) 72 hour RUSH (surcharge applies) Standard (5-7 bus, days)	A Air SW Surface War OOil www.waste.wate X Other: Spec	□ Level 4
QUOTE						100	Z	3 3	30	0 3	1	20		Other, Specify		□ EDD
	se Order	#				×	Ó	S	× :	3	1	12	1111			
Lab Sample	Date	Tim		lient nple#	Client Sample Descriptor	MATRIX	# OF CONTAINERS	PRESERVED (Y/N)	980	Bace	4	1	441	Remarks:	FES Drilling Services	
	7/24	13 /60	5	58-5	5 (0-1)	5	2	VX	X	Y	X	X				
	- 1	165	O	TW-	7	Ch	17	VX	X	X	X		11 24 24			
G		145	5	58-4	(b-1)	5	2	UX	X	Y	X	X				
	7-7	160		TN		6N	7	1	X	X	X					
		141	5	5B-	1 (6-7)	3	2	1	7	X	X	X	10 3 3 3			
		174		TW-3		6W	4	1 X	/ X	X	Y					
		13		SB-	2 (6-7)	\$	2	Y	CIX	4.	X	14				
		123	50	5B-8	3 (6-7)	5	2	X	Y	X	X	X				
	1	105.	3	58-0		5	7	YX	X	14	X	X				
	7/24/	13 114	10	TV-4		Gh	17	X	1	X	X					
Comm												_				
D . II	1	1	20							1-		()	11	7		
Kelingu	isher sy:	1 8	tim			7	ale/ T	/3	8	Rec 30	eive	Jues !	Mille	ter	-	
Reling	shed By:	1	1		-	9	194		13		erve	2002	61.	101		
Relingu	ished By:	1/	1	en		D	ate/T		2_	Rec	eive	d By Caboro	bry: / fel	ung		
LARTIC	ONLY:											/				
Fiberte	c project	number:		4	1					/	/	1	111			OOM
Tempe	rature at	king: Receipt:	3.0	50						_			14	COC Revis	sion: February, 2013	ICE



Analytical Laboratory

1914 Holloway Drive Holf, MI 48842

Phone: 517 699 0345 Fax: 517 699 0388 email: lab@fibertec.us 8660 S. Mackinaw Trail Cadillac, M1 49601 Phone: 231 775 8368

Fax: 231 775 8584

Industrial Hygiene Services, Inc.

1914 Holloway Drive

Holf, MI 48842 Phone: 517 699 0345

Fax: 517 699 0382 email: asbestos@fibertec.us Geoprobe

11766 E. Grand River Brighton, MI 48116

Phone: 810 220 3300 Fax: 810 220 3311 Chain of Custody #

127338

PAGE ___ of ___

Client Name: GES		PARAMETEI	RS	Turnaround	Matrix Code	Deliverables
Contact Person: Sob Elliot Project Name/ Number: QUOTE# Purchase Order# Cab Capple Time Sample # Client Sample Descriptor		MX 5 8200 SUCS 8270 RB/Potribes RB/Potribes		24 hour RUSH (surcharge applies) 48 hour RUSH (surcharge applies) 72 hour RUSH (surcharge applies) Standard (5-7 bus, days) Other: Specify	\$ Soil Gw Ground Water A Air SW Surface Water O Oil ww Waste Water P Wipe X Other: Specify FES Drilling Services	Level 2 Level 3 Level 4
7/24/13 945 58-9 (4-5)	5 2 V	YXXXX				
7/24/13 905 58-10 (2-3)	\$ 2 y	XXXX				
7/24/13 1055 SB-6 (1-2)	\$24	XXXXX				
7/24/13 - Tip Blak	114	XXXXX				
Comments:		\cap		12.1		
Relinquished by:	Date/ Time		19	111/2-	- 5	
Kan Stry		15830 Alem	M	Vec		
Relity of the day:	Date STIPPE	13 Received by	5/11	alil 1		
kelinquished By:	Date/ Time		gyory:	m 7		
LAB USE ONLY:						
Fibertec project number:						
Laboratory Tracking: Temperature at Receipt: 3.0 <				COC 8-12-	ion: February, 2013	MOn



Order: Page: Date: 57114 19 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description:

TW-6

Chain of Custody:

127339

Client Project Name:

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:00

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	PA 8260B)	A	liquot ID: 571	14-004	Matrix: Ground Water Analyst: JP				
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
43 Naphthalene	Ü		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
44. n-Propylbenzene	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
45. Styrene	U	2.0	μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
49. Toluene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
51.1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
53. Trichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
55.1,2,3-Trichloropropane	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
56.1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
57. 1,2,4-Trimethylbenzene	U		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
58, 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
59 Vinyl Chloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
60. Xylenes	U		µg/L	3.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 8	270C)	A	liquot ID: 571	114-004B	Matrix: Gro	Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
2 Acenaphthylene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
3 Aniline	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
4. Anthracene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
11. Benzyl Alcohol	ט		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
16.4-Bromophenyl Phenylether (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

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Order: Page: Date:

57114 20 of 68 07/26/13

Groundwater and Client Identification:

Environmental Services, Inc.

Sample Description: TW-6 Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:00

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C	EPA 82	70C)	A	iquot ID: 571	114-004B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
19. 4-Chloro-3-methylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
20.2-Chloronaphthalene	U	J,L-	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		µg/L	5,0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
23. Chrysene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
25. Dibenzofuran	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
27. Diethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
28. Dimethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
29. 2,4-Dimethylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
31. 2,4-Dinitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
33. 2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
34. Di-n-octyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
35. Fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
36. Fluorene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	υ		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
41. Isophorone	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
43. 2-Methylnaphthalene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
44. 2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/L	10	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
49. Nitrobenzene	U		µg/L	3.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
50.2-Nitrophenol	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
51. 4-Nitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
55. Pentachlorophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
56 Phenanthrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

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Page: Date:

57114 21 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-6

Chain of Custody.

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:00

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by	GC/MS (EPA 3510C/	EPA 82	270C)	Aliquot ID: 57114-004B			Matrix: Ground Water Analyst: G		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
57, Phenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
58 Pyrene	Ü		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
59. Pyridine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
61. 2,4,5-Trichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
62.2,4,6-Trichlorophenol	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C



Order: Page: Date:

57114 22 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc. Sample Description:

SB-1 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

14:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)			Al	iquot ID: 571	114-005A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	16		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/	MS (EPA 0200.2-M/EPA 60	20A)		Aliquot ID: 57114-005A			Matrix: Soil/Solid A		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Arsenic	3700		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
2 Barium	11000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
3. Cadmium	81		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A	
4. Chromium	8100		µg/kg	500	40	07/26/13	PT13G26A	07/26/13	T213G26A	
5. Copper	7700		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
6. Lead	4600		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
7. Selenium	Ų		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A	
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
9. Zinc	21000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	

Mercury by CVAAS (EPA 7471B)	Mercury by CVAAS (EPA 7471B)			Aliquot ID: 57114-005A			Matrix: Soi	Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	9.1	07/26/13	PM13G26A	07/26/13	M613G26A

Organochlorine Pesticides (EPA 35	46/EPA 8081B)			Al	iquot ID: 571	14-005A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	Ü		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7. 4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8.4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13 Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 23 of 68 07/26/13

Client Identification: Groundwater and Client Project Name: SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description:

SB-1 (6-7)

Soil/Solid

Chain of Custody:

Collect Date:

Collect Time:

127339

Client Project No:

NA

Sample No: Sample Matrix:

07/24/13 14:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	Aliquot ID: 57114-005A			Matrix: Soil/Solid		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch	
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
19. Toxaphene (NN)	U	100	µg/kg	390	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082	4)		Al	iquot ID: 571	14-005A	Matrix: Soil	nalyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
3. Aroclor-1232	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
5 Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A

Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (E	PA 503	85/EPA 826	0B) AI	iquot ID: 571	114-005	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	Ù		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7 Bromoform	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9. 2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	υ		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	300	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19. 2-Chlorotoluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 24 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: SB-1 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Soil/Solid

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Collect Time:

14:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 571	114-005	Matrix: Soi	/Solid A	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21.1.2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	30	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23.1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	Ü		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25.1,4-Dichlorobenzene	U	1000	µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27.1,1-Dichloroethane	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28. 1,2-Dichloroethane	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U	1	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		μg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34. trans-1,3-Dichloropropene	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35. Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38. Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	Ü		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45. Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47. 1,1,2,2-Tetrachloroethane	U		μg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51. 1,1,1-Trichloroethane	U	-	µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	U		µg/kg	59	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57. 1,2,4-Trimethylbenzene	U	8	µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 25 of 68 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description: SB-1 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

14:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	(OB) AI	iquot ID: 571	114-005	Matrix: Soil	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	ate Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3546/E	PA 82	70C)	A	liquot ID: 571	114-005A	Matrix: Soi	l/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
8. Benzo(b)fluoranthene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
15. Bis(2-ethylhexyl)phthalate (NN)	U	1	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
21.2-Chlorophenol	U	100	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
22 4-Chlorophenyl Phenylether	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
25 Dibenzofuran	U	600	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
31. 2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
34 Di-n-octyl Phthalate	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

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Order: Page: Date:

57114 26 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description:

SB-1 (6-7)

5

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

14:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/M	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-005A	Matrix: Soi	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35. Fluoranthene	Ú		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
36. Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
37 Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
38 Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
43, 2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
47.3-Nitroaniline	Ü	00	µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
51.4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
55 Pentachlorophenol	U		µg/kg	800	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
58 Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B



Order: Page: Date:

57114 27 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description:

TW-5

Chain of Custody:

127339

Client Project Name: Client Project No:

NA

Sample No: Sample Matrix:

Ground Water

Collect Date:

07/24/13

Sample Comments:

Definitions:

Collect Time:

17:40

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	MS (EPA 50	30B/EF	PA 8260B)	Al	iquot ID: 571	114-006	Matrix: Ground Water		Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		μg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
2 Acrylonitrile	U		µg/L	2.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
3. Benzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
4. Bromobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
5. Bromochloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
7. Bromoform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
8. Bromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
9. 2-Butanone	U		µg/L	25	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
13. Carbon Disulfide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
14. Carbon Tetrachloride	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
15. Chlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
16. Chloroethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
17. Chloroform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
18. Chloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
22 Dibromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
26. Dichlorodifluoromethane	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
31. trans-1.2-Dichloroethene	U		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
33. cis-1,3-Dichloropropene	U		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
34 trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
35 Ethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
37. 2-Hexanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
39. Methyl lodide	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

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Order: Page: Date:

57114 28 of 68 07/26/13

Groundwater and Client Identification:

Environmental Services, Inc.

Sample Description: TW-5 Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

6 Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Ground Water

Collect Time:

17:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	GC/MS (EPA 50	30B/EF	PA 8260B)	A	iquot ID: 571	14-006	Matrix: Ground Water Analyst: JPL		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. Methylene Chloride	Ú		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
42 MTBE	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
43. Naphthalene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
45. Styrene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
47. 1,1,2,2-Tetrachloroethane	Ü		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
49. Toluene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
51. 1,1,1-Trichloroethane	- U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
53. Trichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
55.1,2,3-Trichloropropane	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
57. 1,2,4-Trimethylbenzene	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
59. Vinyl Chloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
60. Xylenes	U		µg/L	3.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

Base/Neutral/Acid Semivolatiles by GC/MS	(EPA 3510C/	EPA 82	270C)	Al	iquot ID: 571	14-006A	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
2 Acenaphthylene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
3. Aniline	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
4. Anthracene	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 29 of 68 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description:

Sample Matrix:

TW-5

Chain of Custody:

127339

Client Project Name: Client Project No: SXL-1406 Avon Road

Sample No:

Collect Date:

Date.

07/24/13

Sample Comments:

Definitions:

Ground Water

Collect Time:

17:40

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 82	70C)	Al	iquot ID: 571	14-006A	Matrix: Ground Water Analyst: GAN		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
16. 4-Bromophenyl Phenylether (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
19.4-Chloro-3-methylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
20. 2-Chloronaphthalene	U	J,L-	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
21.2-Chlorophenol	U	The same	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
23, Chrysene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	Ü		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
25 Dibenzofuran	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
27. Diethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
28. Dimethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
29. 2,4-Dimethylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
31.2,4-Dinitrophenol	υ		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
33, 2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
34. Di-n-octyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
35. Fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
36. Fluorene	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
41. Isophorone	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
43.2-Methylnaphthalene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
44.2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/L	10	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
47. 3-Nitroaniline	U	100	µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
49. Nitrobenzene	U		µg/L	3.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
50. 2-Nitrophenol	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
51. 4-Nitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 30 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description:

TW-5

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Ground Water

Collect Time:

17:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by 0	GC/MS (EPA 3510C)	EPA 8	270C)	A	liquot ID: 571	14-006A	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
54. N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
55. Pentachlorophenol	U	000	µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
56 Phenanthrene	Ú		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
57. Phenol	U		µg/L	5,0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
58. Pyrene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
59. Pyridine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
61.2,4,5-Trichlorophenol	U		µg/L	5,0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
62 2,4,6-Trichlorophenol	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C



Order: Page: Date: 57114 31 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-2 (6-7)

Chain of Custody.

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

7

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

13:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)		Aliquot ID: 57114-007A			Matrix: Soil/Solid		nalyst: BMG		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	13		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/	MS (EPA 0200.2-M/EPA 60	20A)		Al	Aliquot ID: 57114-007A		Matrix: Soil/Solid		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch	
1. Arsenic	2600		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
2 Barium	7200		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
3. Cadmium	51	-	µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A	
4. Chromium	4000		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A	
5 Copper	4000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
6. Lead	2800		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
7. Selenium	U		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A	
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
9. Zinc	14000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	

Mercury by CVAAS (EPA 7471B)	Mercury by CVAAS (EPA 7471B)			Al	iquot ID: 571	14-007A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Mercury	U		µg/kg	50	8.7	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 35	46/EPA 8081B)			Al	iquot ID: 571	14-007A	Matrix: Soil/Solid A		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
7.4,4'-DDD	U	1993	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
8.4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
13 Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
15. Endrin Aldehyde	U	150	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

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Order: Page: Date: 57114 32 of 68 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-2 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

VILLE CONTROL CONTROL NOCAL CONTROL FOR FOR FOR FOR

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

.....

13:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)		Al	iquot ID: 571	14-007A	Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis D	ate Analysis Batch	
18. Methoxychlor	U	µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
19. Toxaphene (NN)	U	µg/kg	380	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

Polychlorinated Biphenyls (PCBs	polor-1016 U µg/kg polor-1221 U µg/kg polor-1232 U µg/kg polor-1242 U µg/kg polor-1248 U µg/kg U µg/kg			Aliquot ID: 57114-007A			Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
3. Aroclor-1232	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
5 Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
7. Aroclor-1260	Ü	لجوار	µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A	

Volatile Organic Compounds (VOCs)) by GC/MS, 5035 (E	PA 50	35/EPA 826	OB) A	liquot ID: 571	14-007	Matrix: Soil	I/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonítrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	.50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9. 2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15 Chlorobenzene	U	200	µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	290	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U	133	µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trall Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 33 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: SB-2 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

13:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	OB) AI	iquot ID: 571	14-007	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	29	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27.1,1-Dichloroethane	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28. 1,2-Dichloroethane	Ü		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cís-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U	-	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34. trans-1,3-Dichloropropene	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35. Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38. Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	110	1,0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41.4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45, Styrene	U	000	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50. 1,2,4-Trichlorobenzene	υ		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51.1,1,1-Trichloroethane	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	U	991	µg/kg	57	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55.1,2,3-Trichloropropane	U		μg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56.1,2,3-Trimethylbenzene (NN)	U	-	μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58.1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U	100	µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Soil/Solid

Order: Page: Date:

57114 34 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description: SB-2 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date: Collect Time: 07/24/13

Client Project No:

Sample Matrix: NA

13:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) Al	iquot ID: 571	14-007	Matrix: Soi	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/N	S (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-007A	Matrix: Soil	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
9. Benzo(ghi)perylene	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
13. Bis(2-chloroethyl)ether	0	200	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
15. Bis(2-ethylhexyl)phthalate (NN)	U	300	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
17. Butyl Benzyl Phthalate	U	303	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
18. Carbazole (NN)	υ		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
20. 2-Chloronaphthalene	U	1 -	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
21.2-Chlorophenol	U	F-33	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
22.4-Chlorophenyl Phenylether	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
24. Dibenzo(a,h)anthracene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
25 Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
26.2,4-Dichlorophenol	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
31.2,4-Dinitrophenol	U	-	µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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RSN: 57114-130726170511



Order: Page: Date: 57114 35 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-2 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

13:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 82	70C)	Al	iquot ID: 571	14-007A	Matrix: Soi	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
36. Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
39. Hexachlorocyclopentadiene	U	2	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
40. Indeno(1,2,3-cd)pyrene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
43. 2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
44.2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
46. 2-Nitroaniline	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
47. 3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
55 Pentachlorophenol	U		µg/kg	800	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
81.2,4,6-Trichlorophenol	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B



Order: Page: Date:

57114 36 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-8 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

12:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 57114-008A			Matrix: Soi	Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
1. Percent Moisture (Water Content) (NN)	18		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/	senic 2600 μg/k urium 5200 μg/k udmium 69 μg/k			A	iquot ID: 571	14-008A	Matrix: Soil	/Solid A	nalyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	2600		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
2 Barium	5200		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
3. Cadmium	69	100	µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A
4. Chromium	2500		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A
5 Copper	4600	-	µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
6 Lead	2700		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
7. Selenium	U	100	µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
9. Zinc	18000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	114-008A	Matrix: Soil	/Solid A	nalyst: JLP
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U	5 111	µg/kg	50	9.3	07/26/13	PM13G26A	07/26/13	M613G26A

Organochlorine Pesticides (EPA 35	546/EPA 8081B)			Al	iquot ID: 571	14-008A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3 beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7. 4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8.4,4'-DDE	U	J.L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11 Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13 Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 37 of 68 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description: SB-8 (6-7)

Soil/Solid

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Collect Time:

12:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample Matrix:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 571	14-008A	-008A Matrix: Soil		Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
18. Methoxychlor	U		μg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
19. Toxaphene (NN)	U	1	µg/kg	410	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082	A)		Al	iquot ID: 571	14-008A	Matrix: Soil	/Solid A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U	3 1	µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
3 Aroclor-1232	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
5 Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
8 Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A

Volatile Organic Compounds (VOCs)) by GC/MS, 5035 (E	PA 50	35/EPA 826	OB) AI	iquot ID: 571	14-008	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3 Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9.2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	Ü	-	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13 Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	Ü		µg/kg	300	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	Ü		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	Ü		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19, 2-Chlorotoluene	U		µg/kg	.50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E, Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 38 of 68 07/26/13

Groundwater and Client Identification:

Environmental Services, Inc.

Sample Description:

SB-8 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

12:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	UB) A	iquot ID: 57	114-008	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21, 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	30	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		μg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27.1,1-Dichloroethane	U	501	µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28. 1,2-Dichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29.1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U	150	µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34 trans-1,3-Dichloropropene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35. Ethylbenzene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		μg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37. 2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38. Isopropylbenzene	U		μg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41. 4-Methyl-2-pentanone	Ü		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45 Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46.1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47.1,1,2,2-Tetrachloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U	100	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51.1,1,1-Trichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53 Trichloroethene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55.1,2,3-Trichloropropane	U		μg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56. 1,2,3-Trimethylbenzene (NN)	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57.1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58.1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 39 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-8 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

12:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 57	114-008	Matrix: Soi	Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis D	ate Analysis Batch
60 Xylenes	U	_	un/kn	150	10	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-008A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/25/13	S713G25B
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
3. Aniline	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
4. Anthracene	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
5 Azobenzene (NN)	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
9. Benzo(ghi)perylene	-U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
14. Bis(2-chloroisopropyl) Ether	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
21. 2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/25/13	S713G25B
34. Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 40 of 68 07/26/13

Client Identification: Grounds

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-8 (6-7)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

12:30

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-008A	Matrix: Soi	/Solid /	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
36. Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
40. Indeno(1,2,3-cd)pyrene	υ		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
43. 2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
47. 3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
49. Nitrobenzene	Ü	3.34	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
53. N-Nitrosodi-n-propylamine	U	100	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
55. Pentachlorophenol	U		µg/kg	810	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
57. Phenol	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

RSN: 57114-130726170511



Order: Page: Date: 57114 41 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				A	iquot ID: 57	14-009A	Matrix: Soil	//Solid A	nalyst: BMG
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	7.0		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/N	MS (EPA 0200.2-M/EPA 60	20A)		Aliquot ID: 57114-009A			Matrix: Soil/Solid A		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Arsenic	2100		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
2 Barium	37000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
3. Cadmium	140		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A	
4. Chromium	4800		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A	
5. Copper	5100	-	µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
6. Lead	24000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
7. Selenium	U		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A	
8. Silver	U		μg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
9. Zinc	24000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	14-009A	Matrix: Soil	Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
1. Mercury	66		µg/kg	50	9.3	07/26/13	PM13G26A	07/26/13	M613G26A

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 571	14-009A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	Ü		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7.4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8. 4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U	200	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13 Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15 Endrin Aldehyde	U	100	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 42 of 68 07/26/13

Client Identification:

NA

Groundwater and

Sample Description: SB-6 (1-2)

Soil/Solid

Chain of Custody:

127339

Client Project Name:

Environmental Services, Inc. SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample Matrix:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 571	quot ID: 57114-009A		Matrix: Soil/Solid	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	te Analysis Batch
18. Methoxychlor	U		μg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
19. Toxaphene (NN)	U		µg/kg	360	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	A)		Al	iquot ID: 571	14-009A	Matrix: Soil	/Solid A	Analyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
2 Aroclor-1221	Ü		μg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
3. Aroclor-1232	U		μg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
4. Aroclor-1242	U		μg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
5. Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
8. Aroclor-1262 (NN)	Ü		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A

Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (E	PA 503	35/EPA 826	0B) Al	iquot ID: 571	14-009	Matrix: Soil	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batc
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonítrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	Ų		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9.2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15 Chlorobenzene	υ		μg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		μg/kg	270	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		μg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	Ü		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 43 of 68 07/26/13

Client Identification:

NA

Groundwater and Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 571	14-009	Matrix: Soil	/Solid A	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	27	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	Ų		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25.1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27. 1,1-Dichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28. 1,2-Dichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29. 1,1-Dichloroethene	U	130	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34 trans-1,3-Dichloropropene	U		μg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35 Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38, Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39 Methyl lodide	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41. 4-Methyl-2-pentanone	U	-	µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43 Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45 Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46.1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47.1,1,2,2-Tetrachloroethane	Ü		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50.1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51.1,1,1-Trichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56.1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57.1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58.1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59 Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 44 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

9

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) AI	liquot ID: 571	114-009	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
60 Xvienes	Ü		ua/ka	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/M	S (EPA 3546/E	PA 827	70C)	A	iquot ID: 571	14-009A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/26/13	S713G25C
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
3. Aniline	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
16.4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
29.2,4-Dimethylphenol	0		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
33.2,6-Dinitrotoluene (NN)	U	100	μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
34. Di-n-octyl Phthalate	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 45 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2) Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Soil/Solid

Collect Time:

10:55

Sample Comments:

Sample Matrix: Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/M	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-009A	Matrix: Soi	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
36. Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
43.2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
44.2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
48. 4-Nitroaniline	u		μg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
55 Pentachlorophenol	U		µg/kg	800	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
59. Pyridine	U	- 1	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
60. 2,4,5-Trichlorophenol	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C



Order: Page: Date:

57114 46 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description:

TW-4

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

10

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 35	35A/EPA 8081B)			Al	iquot ID: 571	14-010B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
2 alpha-BHC (NN)	Ú		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
4. delta-BHC	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
7.4,4'-DDD	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
8.4,4'-DDE	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
10. Dieldrin	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
11. Endosulfan I	U		µg/L	0.030	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
12 Endosulfan II	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
14. Endrin	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
15 Endrin Aldehyde	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
16. Heptachlor	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
17, Heptachlor Epoxide	U	1 30	µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
18. Methoxychlor	U		µg/L	0.50	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
19. Toxaphene (NN)	U		µg/L	1.0	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	Aroclor-1016 U μg/l Aroclor-1221 U μg/l Aroclor-1232 U μg/l Aroclor-1242 U μg/l			Al	Aliquot ID: 57114-010B			Matrix: Ground Water A		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
2 Aroclor-1221	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
3 Aroclor-1232	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
4. Aroclor-1242	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
5 Aroclor-1248	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
6. Aroclor-1254	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
7. Aroclor-1260	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
8. Aroclor-1262 (NN)	U		μg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	
9. Aroclor-1268 (NN)	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B	

Volatile Organic Compounds (VOCs) by GC/MS (EPA 503	BOB/ER	PA 8260B)	Al	Aliquot ID: 57114-010			Matrix: Ground Water Analyst: JPL		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Acetone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B	
2 Acrylonitrile	U		µg/L	2.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B	
3. Benzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B	

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Order: Page: Date: 57114 47 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: TW-4

Chain of Custody:

127339

Client Project Name: Client Project No:

NA

Sample No:

10

Collect Date:

07/24/13

Sample Comments:

Definitions:

Sample Matrix:

Ground Water

Collect Time:

11:40

itions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	IMS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 571	114-010	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
4. Bromobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
5. Bromochloromethane	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
7, Bromoform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
8. Bromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
9. 2-Butanone	U		µg/L	25	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
10. n-Butylbenzene	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
13 Carbon Disulfide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
15. Chlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
16. Chloroethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
17. Chloroform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
18. Chloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
19.2-Chlorotoluene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
22 Dibromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
23.1,2-Dichlorobenzene	U	34	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
25.1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
31. trans-1,2-Dichloroethene	U	331	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
34 trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
35. Ethylbenzene	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
37. 2-Hexanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
38. Isopropylbenzene	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
39. Methyl lodide	Ü		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
40. Methylene Chloride	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
41.4-Methyl-2-pentanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
42 MTBE	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 48 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

SXL-1406 Avon Road

Sample Description: TW-4

Chain of Custody:

Sample No: 10 Collect Date:

127339 07/24/13

Client Project No:

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Client Project Name:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) b	y GC/MS (EPA 50	30B/E	PA 8260B)	A	iquot ID: 571	14-010	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
43. Naphthalene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
45. Styrene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
46.1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
47. 1,1,2,2-Tetrachloroethane	U	-	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
48. Tetrachloroethene	Ü		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
49. Toluene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
51.1,1,1-Trichloroethane	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
53. Trichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
54. Trichlorofluoromethane	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
59. Vinyl Chloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
60. Xylenes	U		µg/L	3.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 82	270C)	Al	iquot ID: 571	14-010B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
2 Acenaphthylene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
3. Aniline	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
4. Anthracene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
16. 4-Bromophenyl Phenylether (NN)	υ		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 49 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-4

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No: 10

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C)	EPA 82	70C)	Al	iquot ID: 571	14-010B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
19. 4-Chloro-3-methylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
20. 2-Chloronaphthalene	U	J,L-	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
22.4-Chlorophenyl Phenylether	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
23. Chrysene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
25 Dibenzofuran	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
27. Diethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
28. Dimethyl Phthalate	- U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
29. 2,4-Dimethylphenol	Ü		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
31, 2,4-Dinitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
33, 2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
34 Di-n-octyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
35 Fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
36. Fluorene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U	Marin C	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
41. Isophorone	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
43.2-Methylnaphthalene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
44. 2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/L	10	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
49. Nitrobenzene	U		µg/L	3.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
50. 2-Nitrophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
51.4-Nitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
54 N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
55 Pentachlorophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
56 Phenanthrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

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Order: Page: Date:

57114 50 of 68 07/26/13

Groundwater and Client Identification:

Environmental Services, Inc.

Sample Description:

TW-4 10

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by	GC/MS (EPA 3510C/	EPA 82	270C)	Al	iquot ID: 571	114-010B	Matrix: Ground Water Analyst: GAN		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
57. Phenol	Ú		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
58 Pyrene	Ü		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
59. Pyridine	Ü		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
60. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
61. 2,4,5-Trichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
62 2,4,6-Trichlorophenol	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C



Order: Page: Date: 57114 51 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

Sample Matrix:

SB-9 (4-5)

Soil/Solid

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No: 11

Collect Date:

07/24/13 09:45

Client Project No: Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 57114-011A			Matrix: Soil	nalyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	14		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/	MS (EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 571	14-011A	Matrix: Soil	/Solid A	nalyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	3600		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
2 Barium	13000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
3. Cadmium	120		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A
4. Chromium	6700		µg/kg	500	40	07/26/13	PT13G26A	07/26/13	T213G26A
5, Copper	9500		μg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
6. Lead	4800		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
7. Selenium	260		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
9. Zinc	31000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A

Mercury by CVAAS (EPA 7471B)	Mercury by CVAAS (EPA 7471B)			Aliquot ID: 57114-011A			Matrix: Soil	Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	8.8	07/26/13	PM13G26A	07/26/13	M613G26A

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 571	114-011A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3 beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5,0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7. 4,4'-DDD	U	-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8.4,4'-DDE	U	J.L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15. Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

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Order: Page: Date:

57114 52 of 68 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

SB-9 (4-5) Sample Description:

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date: Collect Time: 07/24/13

09:45

Client Project No: Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample Matrix:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Soil/Solid

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 571	14-011A	Matrix: Soil	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
19. Toxaphene (NN)	U	-34	µg/kg	390	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	4)		Aliquot ID: 57114-011A			Matrix: Soil/Solid A		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
3 Aroclor-1232	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
5. Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	
9. Aroclor-1268 (NN)	U	200	µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A	

Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) AI	iquot ID: 571	14-011	Matrix: Soil	/Solid A	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9. 2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13 Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14 Carbon Tetrachloride	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		μg/kg	290	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trall Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 53 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

SB-9 (4-5)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Sample Description:

Collect Date:

07/24/13

Client Project No:

NA

Soil/Solid

Collect Time:

09:45

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample Matrix:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 571	114-011	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U	***	µg/kg	29	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23.1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27.1,1-Dichloroethane	U	9	µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28.1,2-Dichloroethane	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29.1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34. trans-1,3-Dichloropropene	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35, Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38, Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41, 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45 Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46.1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49 Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50.1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51.1,1,1-Trichloroethane	U	9.0	µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	U		µg/kg	58	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55. 1,2,3-Trichloropropane	U	7 6	µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56.1,2,3-Trimethylbenzene (NN)	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57.1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58.1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U	-	μg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date:

57114 54 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: SB-9 (4-5)

Chain of Custody:

127338

Client Project Name: Client Project No:

Sample No: Sample Matrix: 11 Soil/Solid Collect Date:

07/24/13

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Collect Time:

09:45

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)

Aliquot ID: 57114-011

Matrix: Soil/Solid

Analyst: CCD

Dilution Prep Batch Analysis Date Analysis Batch Parameter(s) Result Units Reporting Limit Prep Date 60. Xylenes U µg/kg 1.0 07/25/13 V913G25A 07/25/13 V913G25A

Base/Neutral/Acid Semivolatiles by GC/MS	S (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-011A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
6. Benzo(a)anthracene	Ų		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
16.4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
20.2-Chloronaphthalene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
23 Chrysene	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/26/13	S713G25C
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
27. Diethyl Phthalate	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
28 Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
29, 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
33, 2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
34. Di-n-octyl Phthalate	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C

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Order: Page: Date: 57114 55 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-9 (4-5)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

11

Collect Time:

09:45

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	114-011A	Matrix: Soi	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
35 Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
36 Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
41 Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
42 2-Methyl-4,6-dinitrophenol (NN)	U		μg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
43, 2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
44.2-Methylphenol (NN)	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
46. 2-Nitroaniline	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
53 N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
55 Pentachlorophenol	U		µg/kg	800	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
56. Phenanthrene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
58 Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C



Order: Page: Date: 57114 56 of 68 07/26/13

Client Identification: Ground

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-10 (2-3)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

12

Collect Time:

09:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 57114-012A			Matrix: Soil	Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Percent Moisture (Water Content) (NN)	19		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Michigan 10 Elements by ICP/I	MS (EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 571	14-012A	Matrix: Soil	/Solid A	nalyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	3000		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
2 Barium	11000		μg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
3. Cadmium	120		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A
4. Chromium	4600		μg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A
5. Copper	8800		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
6. Lead	4500		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
7. Selenium	260		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
9. Zinc	26000	600	µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	14-012A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch	
1. Mercury	U		µg/kg	.50	9.8	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 571	114-012A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5. gamma-BHC (NN)	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7.4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8. 4,4'-DDE	U	J.L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15. Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	Ü		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

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Order: Page: Date:

57114 57 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: SB-10 (2-3)

Soil/Solid

Chain of Custody:

127338

Client Project Name:

Sample No: Sample Matrix: 12

Collect Date: Collect Time:

07/24/13 09:05

Client Project No: Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Aliquot ID: 57114-012A			Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
19. Toxaphene (NN)	U		µg/kg	410	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

Polychlorinated Biphenyls (PCBs)	Declor-1016 U µg/kg Declor-1221 U µg/kg Declor-1232 U µg/kg Declor-1242 U µg/kg Declor-1248 U µg/kg Declor-1254 U µg/kg			Al	Aliquot ID: 57114-012A			Matrix: Soil/Solid A	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
2 Aroclor-1221	U		μg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
3. Aroclor-1232	Ų		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
5 Aroclor-1248	Ü	-	µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
6. Aroclor-1254	U		μg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
7. Aroclor-1260	Ü		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
8. Aroclor-1262 (NN)	Ü		μg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
9. Aroclor-1268 (NN)	U	150	µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A

Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (E	PA 503	35/EPA 826	OB) AI	iquot ID: 571	14-012	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U	196	µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9. 2-Butanone	U	-	µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	310	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17, Chloroform	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19, 2-Chlorotoluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20, Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

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Order: Page: Date:

57114 58 of 68 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

Sample Description: SB-10 (2-3)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No: 12 Collect Date: Collect Time: 07/24/13

09:05

Client Project No: Sample Comments:

Sample Matrix: Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Soil/Solid

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	iquot ID: 571	114-012	Matrix: Soi	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	31	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25.1,4-Dichlorobenzene	U	-	µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27.1,1-Dichloroethane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28. 1,2-Dichloroethane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29.1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33 cis-1,3-Dichloropropene	U	700	µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34 trans-1,3-Dichloropropene	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35 Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36 Ethylene Dibromide	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38. Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U	233	µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45 Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47. 1, 1, 2, 2-Tetrachloroethane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51. 1.1,1-Trichloroethane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	Ü		µg/kg	62	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

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Order: Page: Date:

57114 9 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-7

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:50

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	GC/MS (EPA 50	30B/EF	PA 8260B)	Al	iquot ID: 571	14-002	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
43. Naphthalene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
45. Styrene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
47.1,1,2,2-Tetrachloroethane	U		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
49. Toluene	U	9	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
51.1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
53. Trichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
55.1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
57. 1,2,4-Trimethylbenzene	U	1	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
58.1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
59. Vinyl Chloride	U	6-5	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
60. Xylenes	U		µg/L	3.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 8	270C)	A	iquot ID: 571	14-002B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
2 Acenaphthylene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
3. Aniline	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
4. Anthracene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
7. Benzo(a)pyrene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
9 Benzo(ghi)perylene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
16. 4-Bromophenyl Phenylether (NN)	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

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Order: Page: Date:

57114 10 of 68 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description: TW-7

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:50

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C	EPA 8	270C)	Al	iquot ID: 571	14-002B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
19.4-Chloro-3-methylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
20. 2-Chloronaphthalene	U	J,L-	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
23. Chrysene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
24. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
25. Dibenzofuran	U		µg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
26.2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
27. Diethyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
28. Dimethyl Phthalate	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
29.2,4-Dimethylphenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
31, 2,4-Dinitrophenol	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
33.2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
34. Di-n-octyl Phthalate	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
35. Fluoranthene	U		µg/L	1.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
36. Fluorene	U		μg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
41. Isophorone	U	120	µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
43. 2-Methylnaphthalene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
44. 2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/L	10	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
49. Nitrobenzene	U		µg/L	3.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
50. 2-Nitrophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
51. 4-Nitrophenol	U	337	µg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
55 Pentachlorophenol	U		μg/L	20	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
56. Phenanthrene	U		µg/L	2.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114

11 of 68 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description: TW-7

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No: Sample Matrix: 2

Collect Date:

07/24/13

Client Project No: Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Ground Water

Collect Time:

16:50

Base/Neutral/Acid Semivolatiles by	GC/MS (EPA 3510C/	EPA 82	270C)	Al	iquot ID: 571	114-002B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
57. Phenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
58 Pyrene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
59. Pyridine	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
61.2.4,5-Trichlorophenol	U		µg/L	5.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C
62 2,4,6-Trichlorophenol	U		μg/L	4.0	1.0	07/25/13	PS13G25F	07/26/13	S713G25C



Order: Page: Date:

57114 12 of 68 07/26/13

Client Identification:

Groundwater and SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description:

SB-4 (0-1)

Chain of Custody:

127339

Client Project Name: Client Project No:

Sample No: Sample Matrix:

Soil/Solid

Collect Date: Collect Time: 07/24/13 14:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Al	iquot ID: 571	14-003A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	19		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725	

Michigan 10 Elements by ICP/I	MS (EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 571	14-003A	Matrix: Soil	/Solid /	Analyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	150000		µg/kg	500	100	07/26/13	PT13G26A	07/26/13	T213G26A
2 Barium	54000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
3. Cadmium	110		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A
4. Chromium	4400		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A
5. Copper	6500	150	µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
6. Lead	3700		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
7. Selenium	U		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
9. Zinc	20000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	114-003A	Matrix: Soil	Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	8.5	07/26/13	PM13G26A	07/26/13	M613G26A

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 571	114-003A	Matrix: Soi	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4 delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	Ú		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7. 4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8. 4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9. 4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15. Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	Ú		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date: 57114 13 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

res Inc

Sample Description: SB-4 (0-1)

Soil/Solid

Chain of Custody:

Collect Time:

127339

Client Project Name: Client Project No:

NA

Sample No: Sample Matrix:

Collect Date:

07/24/13 14:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 571	14-003A	Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	te Analysis Batch	
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
19. Toxaphene (NN)	U	2007	µg/kg	410	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	4)		Al	iquot ID: 571	14-003A	Matrix: Soil	/Solid /	Analyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
3. Aroclor-1232	U	. 5	µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
5 Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
6. Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	60B) A	iquot ID: 571	14-003	Matrix: Soi	/Solid A	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3 Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	Ŋ		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9.2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	310	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	U		µg/kg	50	1,0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 14 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description: SB-4 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

3

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

14:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample No:

Definitions: Q: 0

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	iquot ID: 571	14-003	Matrix: Soil	I/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	31	1.0	07/25/13	V913G25A	07/25/13	V913G25A
22 Dibromomethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
23.1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
26. Dichlorodifluoromethane	U		μg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
27. 1,1-Dichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
28.1,2-Dichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
29.1,1-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
32 1,2-Dichloropropane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
33. cis-1,3-Dichloropropene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
34 trans-1,3-Dichloropropene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
35. Ethylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
36. Ethylene Dibromide	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
37.2-Hexanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
38. Isopropylbenzene	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
39. Methyl lodide	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
40. Methylene Chloride	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/25/13	V913G25A	07/25/13	V913G25A
42 MTBE	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
43. Naphthalene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
44. n-Propylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
45. Styrene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
46.1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
47. 1,1,2,2-Tetrachloroethane	U	150	µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
48. Tetrachloroethene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
49. Toluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/25/13	V913G25A	07/25/13	V913G25A
51.1,1,1-Trichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
52 1,1,2-Trichloroethane	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
53. Trichloroethene	U.		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
56.1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
58. 1,3,5-Trimethylbenzene	U		μg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
59. Vinyl Chloride	U		µg/kg	40	1.0	07/25/13	V913G25A	07/25/13	V913G25A

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Order: Page: Date: 57114 15 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-4 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

14:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	60B) A	Aliquot ID: 57114-003		Matrix: Soil/Solid		Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis D	ate Analysis Batch	
60. Xvlenes	U		ua/ka	150	1.0	07/25/13	V913G25A	07/25/1	3 V913G25A	

Base/Neutral/Acid Semivolatiles by GC/N	ase/Neutral/Acid Semivolatiles by GC/MS (EPA 3546/EPA 8270C)			Al	iquot ID: 571	14-003A	Matrix: Soil/Solid A		nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
5 Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
9. Benzo(ghi)perylene	U	- 1	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
11, Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
13. Bis(2-chloroethyl)ether	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
17. Butyl Benzyl Phthalate	U	639	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
18. Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
21.2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
28 Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
34. Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 16 of 68 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-4 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No: 3 Collect Date:

07/24/13

Client Project No:

Sample Matrix: Soil/Solid Collect Time: 14:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-003A	Matrix: Soil/Solid A		nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batcl
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
36. Fluorene	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
39. Hexachlorocyclopentadiene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
40. Indeno(1,2,3-cd)pyrene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
41, Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
42.2-Methyl-4,6-dinitrophenol (NN)	U		μg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
43, 2-Methylnaphthalene	U	0.0	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
46. 2-Nitroaniline	υ		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
47. 3-Nitroaniline	Ų		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
48. 4-Nitroaniline	u		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
50. 2-Nitrophenol	Ú		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
51, 4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
55. Pentachlorophenol	U		µg/kg	820	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
61.2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B



Order: Page: Date: 57114 17 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-6

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:00

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 353	35A/EPA 8081B)			AI	iquot ID: 571	14-004B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
3. beta-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
4. delta-BHC	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
7. 4,4'-DDD	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
8.4,4'-DDE	U		μg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
9. 4,4'-DDT	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
10. Dieldrin	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
11. Endosulfan I	U		μg/L	0.030	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
12 Endosulfan II	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
14. Endrin	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
15. Endrin Aldehyde	U		μg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
16. Heptachlor	U		μg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
18. Methoxychlor	U		µg/L	0.50	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
19. Toxaphene (NN)	U		µg/L	1.0	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs	(EPA 3535A/EPA 8082	2A)		A	iquot ID: 571	114-004B	Matrix: Gro	und Water A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
2 Aroclor-1221	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
3 Aroclor-1232	Ü		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
4. Aroclor-1242	Ü		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
5 Aroclor-1248	U	181	µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
6. Aroclor-1254	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
7. Aroclor-1260	Ü		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
8. Aroclor-1262 (NN)	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
9. Aroclor-1268 (NN)	U	-	µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B

Volatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260B)				Aliquot ID: 57114-004			Matrix: Ground Water Analyst: JPL		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
2 Acrylonitrile	U		µg/L	2.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
3. Benzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

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Order: Page: Date:

57114 18 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-6 Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:00

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 571	14-004	Matrix: Gro	und Water A	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
4. Bromobenzene	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
5. Bromochloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
7. Bromoform	U	150	µg/L	1.0	1,0	07/25/13	VB13G25B	07/25/13	VB13G25B
8. Bromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
9.2-Butanone	U		µg/L	25	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
13. Carbon Disulfide	Ü		µg/L	5,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
15. Chlorobenzene	U		µg/L	1,0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
16. Chloroethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
17. Chloroform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
18. Chloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
21.1,2-Dibromo-3-chloropropane (SIM) (N	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
22 Dibromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
23.1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
25.1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
26 Dichlorodifluoromethane	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
28.1,2-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
29.1,1-Dichloroethene	Ü		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
30. cis-1,2-Dichloroethene	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
33 cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
34. trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
35 Ethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
37. 2-Hexanone	U.		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
38 Isopropylbenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
39. Methyl lodide	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
40. Methylene Chloride	U		μg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
41. 4-Methyl-2-pentanone	.U.		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
42 MTBE	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

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12

Soil/Solid

Order: Page: Date: 57114 59 of 68 07/26/13

Client Identification: G

Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-10 (2-3) Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Collect Time:

09:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis,

The Contraction of the Contracti

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	60B) A	3) Aliquot ID: 57114-012			Matrix: Soil/Solid		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	e Analysis Batch	
60. Xylenes	U		µg/kg	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A	

Base/Neutral/Acid Semivolatiles by GC/M	IS (EPA 3546/E	PA 82	70C)	Al	iquot ID: 571	14-012A	Matrix: Soi	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
2 Acenaphthylene	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
7. Benzo(a)pyrene	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
9. Benzo(ghi)perylene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
15. Bis(2-ethylhexyl)phthalate (NN)	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
18 Carbazole (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
21.2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
22 4-Chlorophenyl Phenylether	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
24 Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
25. Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
27 Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
28 Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
31.2,4-Dinitrophenol	U	-	µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
33, 2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: 57114 Page: 60 of 68 Date: 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-10 (2-3)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

09:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/I	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 571	14-012A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
36. Fluorene	Ú		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
38. Hexachlorobutadiene	Ú		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
41. Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
43.2-Methylnaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
47.3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
51.4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
54. N-Nitrosodiphenylamine	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
55. Pentachlorophenol	U		µg/kg	820	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
56. Phenanthrene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
57. Phenol	U	1	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
59. Pyridine	U	U	µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
60. 2,4,5-Trichlorophenol	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C
61, 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/26/13	S713G25C

DCSID: G-610.13 (03/21/11)



Order: Page: Date: 57114 61 of 68 07/26/13

Client Identification: G

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No:

13

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87))			A	liquot ID: 57	114-013A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	7.2		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725	

Michigan 10 Elements by ICP/I	MS (EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 571	114-013A	Matrix: Soil	/Solid A	nalyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	2100		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
2 Barium	39000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
3. Cadmium	140		µg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A
4. Chromium	4700		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A
5. Copper	5400		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
6. Lead	16000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A
7. Selenium	U		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A
8. Silver	U		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A
9. Zinc	25000	180	µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	114-013A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Mercury	74		µg/kg	50	9.8	07/26/13	PM13G26A	07/26/13	M613G26A	

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Organochlorine Pesticides (EPA 3	546/EPA 8081B)			A	liquot ID: 571	114-013A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3 beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		μg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7.4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8.4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15. Endrin Aldehyde	Ü		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 62 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-6 (1-2)

Chain of Custody:

127338

Client Project Name:

SXL-1406 Avon Road

Sample No: 13

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

10:55

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	Aliquot ID: 57114-013A		Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	
19 Toxaphene (NN)	U		ug/kg	360	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B	

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	4)		Al	iquot ID: 571	14-013A	Matrix: Soil	/Solid A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
3. Aroclor-1232	U	13	µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
4. Aroclor-1242	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
5. Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
6: Aroclor-1254	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
7. Aroclor-1260	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A
9. Aroclor-1268 (NN)	U	1-0	µg/kg	330	10	07/25/13	PS13G25A	07/26/13	SB13G26A

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) AI	iquot ID: 571	14-013	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U	-	µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4 Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5. Bromochloromethane	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	110	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9.2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15 Chlorobenzene	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	270	1.0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	54	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19.2-Chlorotoluene	U		μg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G

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Order: 5 Page: 4 Date: 0

57075 4 of 44 07/26/13

Client Identification: Groundwater and

Groundwater and Environmental Services, Inc. Sample Description: SB-7 (5-6)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

1

Collect Date:

07/23/13

Client Project No:

A Sample Matrix:

Soil/Solid

Collect Time:

11:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample No:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) Al	iquot ID: 570	75-001	Matrix: Soil	/Solid /	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	28	1.0	07/24/13	V913G24B	07/24/13	V913G24B
22 Dibromomethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
25.1,4-Dichlorobenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
27. 1,1-Dichloroethane	U	1	µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
28. 1,2-Dichloroethane	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
29. 1,1-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
32 1,2-Dichloropropane	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
33. cis-1,3-Dichloropropene	U	-	µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
34 trans-1,3-Dichloropropene	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
35. Ethylbenzene	U		µg/kg	.50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
36. Ethylene Dibromide	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
37.2-Hexanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
38. Isopropylbenzene	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
39. Methyl lodide	U		µg/kg	110	1.0	07/24/13	V913G24B	07/24/13	V913G24B
40. Methylene Chloride	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
42 MTBE	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
43. Naphthalene	U	200	µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
44. n-Propylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
45 Styrene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
47.1,1,2,2-Tetrachloroethane	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
48. Tetrachloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
49. Toluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
51.1,1.1-Trichloroethane	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
52 1,1,2-Trichloroethane	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
53. Trichloroethene	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
55. 1,2,3-Trichloropropane	U		µg/kg	110	1.0	07/24/13	V913G24B	07/24/13	V913G24B
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
57. 1,2,4-Trimethylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
58. 1,3,5-Trimethylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
59. Vinyl Chloride	U		µg/kg	40	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trall Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 5 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description: SB-7 (5-6) Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

11:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) A	iquot ID: 570	75-001	Matrix: Soil	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	te Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/24/13	V913G24B	07/24/13	V913G24B

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 570	75-001A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
2 Acenaphthylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
3. Aniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
4. Anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
5 Azobenzene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
12 Bis(2-chloroethoxy)methane	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
13. Bis(2-chloroethyl)ether	U	-	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
14. Bis(2-chloroisopropyl) Ether	Ų		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
18. Carbazole (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
21. 2-Chlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
23. Chrysene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
24. Dibenzo(a,h)anthracene	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
25. Dibenzofuran	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
26. 2,4-Dichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
27 Diethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
29. 2,4-Dimethylphenol	U.		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
32 2,4-Dinitrotoluene (NN)	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
34. Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date: 57075 6 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: SB-7 (5-6)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

11:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 570	75-001A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35. Fluoranthene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
36. Fluorene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
37. Hexachlorobenzene	U	كسا	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
39. Hexachlorocyclopentadiene	U	-30	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
41. Isophorone	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
43. 2-Methylnaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
44. 2-Methylphenol (NN)	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
47. 3-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
49. Nitrobenzene	U	3	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
53 N-Nitrosodi-n-propylamine	U	-	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
55 Pentachlorophenol	U		µg/kg	800	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
56. Phenanthrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
57. Phenol	U	11.1	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
58. Pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
59. Pyridine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B



Order: Page: Date:

57075 7 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample No:

Sample Description: TW-2

2

Chain of Custody: Collect Date:

07/23/13

127337

Client Project Name: Client Project No:

SXL-1406 Avon Road NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 35	35A/EPA 8081B)			Al	iquot ID: 570	75-002B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
2 alpha-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
3 beta-BHC (NN)	U		µg/L	0.011	1,1	07/24/13	PS13G24F	07/24/13	SC13G24B
4. delta-BHC	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
5. gamma-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
6. Chlordane (NN)	Ú		µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
7.4,4'-DDD	Ú	200	µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
8. 4,4'-DDE	U		μg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
9.4,4'-DDT	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
10. Dieldrin	Ú		μg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
11. Endosulfan I	U		µg/L	0.030	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
12 Endosulfan II	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
13. Endosulfan Sulfate	U	_	µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
14 Endrin	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
15. Endrin Aldehyde	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
16. Heptachlor	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
17. Heptachlor Epoxide	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
18. Methoxychlor	U		µg/L	0.50	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
19. Toxaphene (NN)	U		µg/L	1.0	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B

Polychlorinated Biphenyls (PCBs)	(EPA 3535A/EPA 808	2A)		Al	liquot ID: 570	75-002B	Matrix: Gro	und Water A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
2 Aroclor-1221	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
3. Aroclor-1232	U		µg/L	0.22	1,1	07/24/13	PS13G24F	07/25/13	SA13G25B
4. Aroclor-1242	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
5 Aroclor-1248	Ü		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
6. Aroclor-1254	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
7. Aroclor-1260	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
8. Aroclor-1262 (NN)	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
9. Aroclor-1268 (NN)	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B

Volatile Organic Compounds (VOCs) by GC/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 570	75-002	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
2 Acrylonitrile	Ü		µg/L	2.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
3. Benzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date: 57075 8 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-2

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 570	75-002	Matrix: Gro	und Water	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
4. Bromobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
5. Bromochloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
7. Bromoform	U		µg/L	1,0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
8, Bromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
9. 2-Butanone	U		µg/L	25	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
11. sec-Butylbenzene	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
13. Carbon Disulfide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
15. Chlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
16. Chloroethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
17. Chloroform	U	1	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
18. Chloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
22 Dibromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
25. 1,4-Dichlorobenzene	u		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
30. cis-1,2-Dichloroethene	Ü		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
32 1,2-Dichloropropane	U	-	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
33. cis-1,3-Dichloropropene	U.		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
34. trans-1,3-Dichloropropene	U	-	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
35. Ethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
36. Ethylene Dibromide	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
37.2-Hexanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
39. Methyl lodide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
40. Methylene Chloride	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
42 MTBE	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 9 of 44 07/26/13

Groundwater and Client Identification:

Environmental Services, Inc.

Sample Description: TW-2

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

2 Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	GC/MS (EPA 50	30B/E	PA 8260B)	A	liquot ID: 570	75-002	Matrix: Gro	und Water	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
43. Naphthalene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
45. Styrene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
47. 1,1,2,2-Tetrachloroethane	Ü		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
49. Toluene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
51.1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
53. Trichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
55.1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
59. Vinyl Chloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
60. Xylenes	U		µg/L	3.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 8	270C)	A	liquot ID: 570	75-002B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
2 Acenaphthylene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
3. Aniline	U		µg/L	4.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
4. Anthracene	U		μg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
5. Azobenzene (NN)	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
6. Benzo(a)anthracene	2.2		µg/L	1.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
7. Benzo(a)pyrene	2.6		µg/L	1.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
8. Benzo(b)fluoranthene	3.6		µg/L	1,1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
9. Benzo(ghi)perylene	2.1		µg/L	1.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
10. Benzo(k)fluoranthene	1.3		µg/L	1,1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
11. Benzyl Alcohol	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
13. Bis(2-chloroethyl)ether	U		µg/L	1.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
14. Bis(2-chloroisopropyl) Ether	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
16. 4-Bromophenyl Phenylether (NN)	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
17. Butyl Benzyl Phthalate	U		µg/L	5.3	1,1	07/24/13	PS13G24C	07/25/13	S713G24B

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Order: Page: Date:

57075 10 of 44 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: TW-2

Sample Matrix:

Chain of Custody:

127337

Client Project Name: Client Project No:

NA

Sample No:

Collect Date:

07/23/13

Sample Comments:

Definitions:

Ground Water

Collect Time:

11:40

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C/	EPA 8	270C)	Al	iquot ID: 570	75-002B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18. Carbazole (NN)	U		µg/L	5,0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
19. 4-Chloro-3-methylphenol	U		µg/L	5.0	1,1	07/24/13	PS13G24C	07/25/13	S713G24B
20. 2-Chloronaphthalene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
21.2-Chlorophenol	U		µg/L	5,0	1,1	07/24/13	PS13G24C	07/25/13	S713G24B
22 4-Chlorophenyl Phenylether	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
23 Chrysene	2.4		µg/L	1,1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
24. Dibenzo(a,h)anthracene	U		µg/L	2.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
25. Dibenzofuran	U	0.8	µg/L	4.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
26. 2,4-Dichlorophenol	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
27. Diethyl Phthalate	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
28. Dimethyl Phthalate	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
29.2,4-Dimethylphenol	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
30. Di-n-butyl Phthalate	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
31.2,4-Dinitrophenol	U		µg/L	21	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
32 2,4-Dinitrotoluene (NN)	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
33. 2,6-Dinitrotoluene (NN)	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
34. Di-n-octyl Phthalate	U		μg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
35. Fluoranthene	4.4		µg/L	1.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
36. Fluorene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
37. Hexachlorobenzene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
38 Hexachlorobutadiene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
39. Hexachlorocyclopentadiene	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.1	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
41. Isophorone	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	21	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
43. 2-Methylnaphthalene	U		µg/L	5,0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
44.2-Methylphenol (NN)	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
45.3&4-Methylphenol (NN)	U	P	µg/L	10	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
46. 2-Nitroaniline	U		µg/L	20	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
47.3-Nitroaniline	U		µg/L	20	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
48. 4-Nitroaniline	U		µg/L	21	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
49. Nitrobenzene	U	- 1	µg/L	3.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
50. 2-Nitrophenol	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
51. 4-Nitrophenol	U		µg/L	21	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
52 N-Nitrosodimethylamine	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
54 N-Nitrosodiphenylamine	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
55 Pentachlorophenol	U		µg/L	21	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
56 Phenanthrene	U		µg/L	2.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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2

Order: Page: Date: 57075 11 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-2

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

11:40

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by	GC/MS (EPA 3510C/	EPA 8	270C)	A	liquot ID: 570	75-002B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
57.Phenol	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
58. Pyrene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
59 Pyridine	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
61.2,4,5-Trichlorophenol	U		µg/L	5.3	1.1	07/24/13	PS13G24C	07/25/13	S713G24B
62.2,4,6-Trichlorophenol	U		µg/L	4.0	1.1	07/24/13	PS13G24C	07/25/13	S713G24B

RSN: 57075-130726170107



Order: Page: Date: 57075 12 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-3 (13-14)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

10:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				A	iquot ID: 570	75-003A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	19		%	0.1	1.0	07/24/13	MC130724	07/25/13	MC130724	

genic 2300 µg/kg rium 6600 µg/kg dmium 69 µg/kg romium 2900 µg/kg pper 5100 µg/kg ad 2800 µg/kg			Al	iquot ID: 570	75-003A	Matrix: Soil/Solid		Analyst: JLH	
Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
2300		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A	
6600		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
69		µg/kg	50	20	07/25/13	PT13G25B	07/25/13	T213G25A	
2900		µg/kg	500	20	07/25/13	PT13G25B	07/25/13	T213G25A	
5100		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
2800		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
270		µg/kg	200	20	07/25/13	PT13G25B	07/25/13	T213G25A	
U		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A	
23000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
	Result 2300 6600 69 2900 5100 2800 270	Result Q 2300 6600 69 2900 5100 2800 270	Result Q Units 2300 µg/kg 6600 µg/kg 69 µg/kg 2900 µg/kg 5100 µg/kg 2800 µg/kg 270 µg/kg	Result Q Units Reporting Limit 2300 µg/kg 100 6600 µg/kg 1000 69 µg/kg 50 2900 µg/kg 500 5100 µg/kg 1000 2800 µg/kg 1000 270 µg/kg 200 U µg/kg 100	Result Q Units Reporting Limit Dilution 2300 μg/kg 100 20 6600 μg/kg 1000 20 69 μg/kg 50 20 2900 μg/kg 500 20 5100 μg/kg 1000 20 2800 μg/kg 1000 20 270 μg/kg 200 20 U μg/kg 100 20	Result Q Units Reporting Limit Dilution Prep Date 2300 µg/kg 100 20 07/25/13 6600 µg/kg 1000 20 07/25/13 69 µg/kg 50 20 07/25/13 2900 µg/kg 500 20 07/25/13 5100 µg/kg 1000 20 07/25/13 2800 µg/kg 1000 20 07/25/13 270 µg/kg 200 20 07/25/13 U µg/kg 100 20 07/25/13	Result Q Units Reporting Limit Dilution Prep Date Prep Batch 2300 µg/kg 100 20 07/25/13 PT13G25B 6600 µg/kg 1000 20 07/25/13 PT13G25B 69 µg/kg 50 20 07/25/13 PT13G25B 2900 µg/kg 500 20 07/25/13 PT13G25B 5100 µg/kg 1000 20 07/25/13 PT13G25B 2800 µg/kg 1000 20 07/25/13 PT13G25B 270 µg/kg 200 20 07/25/13 PT13G25B U µg/kg 100 20 07/25/13 PT13G25B	Result Q Units Reporting Limit Dilution Prep Date Prep Batch Analysis Date 2300 µg/kg 100 20 07/25/13 PT13G25B 07/25/13 6600 µg/kg 1000 20 07/25/13 PT13G25B 07/25/13 69 µg/kg 50 20 07/25/13 PT13G25B 07/25/13 2900 µg/kg 500 20 07/25/13 PT13G25B 07/25/13 5100 µg/kg 1000 20 07/25/13 PT13G25B 07/25/13 2800 µg/kg 1000 20 07/25/13 PT13G25B 07/25/13 270 µg/kg 200 20 07/25/13 PT13G25B 07/25/13 U µg/kg 100 20 07/25/13 PT13G25B 07/25/13	

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 570	75-003A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Mercury	U	500	µg/kg	50	8.3	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 570	75-003A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
4. delta-BHC	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
5. gamma-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
7. 4,4'-DDD	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
8.4,4'-DDE	U	J,L-	μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
9.4,4'-DDT	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
10. Dieldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
11. Endosulfan I	Ü	1	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
12 Endosulfan II	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
14. Endrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
16. Heptachlor	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 13 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-3 (13-14)

Soil/Solid

Chain of Custody:

Collect Time:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

10:15

Client Project No: Sample Comments:

Sample Matrix: Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 57075-003A		Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch	
18. Methoxychlor	U		µg/kg	50	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
19. Toxaphene (NN)	U	33.7	µg/kg	410	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082	A)		Aliquot ID: 57075-003A			Matrix: Soil/Solid		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
2 Aroclor-1221	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
3, Aroclor-1232	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
4. Aroclor-1242	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
5. Aroclor-1248	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
6 Aroclor-1254	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
7. Aroclor-1260	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
8. Aroclor-1262 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
9. Aroclor-1268 (NN)	Ü		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 503	35/EPA 826	0B) A	iquot ID: 570	75-003	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/24/13	V913G24B	07/24/13	V913G24B
2 Acrylonitrile	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
3. Benzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
4. Bromobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
5 Bromochloromethane	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
6. Bromodichloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
7. Bromoform	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
8. Bromomethane	U		µg/kg	200	1.0	07/24/13	V913G24B	07/24/13	V913G24B
9.2-Butanone	U		µg/kg	750	1.0	07/24/13	V913G24B	07/24/13	V913G24B
10. n-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
12 tert-Butylbenzene	U		μg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
13. Carbon Disulfide	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
14 Carbon Tetrachloride	Ü		μg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
15. Chlorobenzene	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
16. Chloroethane	U		μg/kg	310	1.0	07/24/13	V913G24B	07/24/13	V913G24B
17. Chloroform	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
18. Chloromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
20. Dibromochloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 14 of 44 07/26/13

Client Identification:

NA

Groundwater and Environmental Services, Inc.

Sample Description: SB-3 (13-14)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

10:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/	MS, 5035 (E	PA 50	35/EPA 826	0B) A	iquot ID: 570	75-003	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		μg/kg	31	1.0	07/24/13	V913G24B	07/24/13	V913G24B
22 Dibromomethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
23. 1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
27. 1,1-Dichloroethane	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
28. 1,2-Dichloroethane	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
29.1,1-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
32 1,2-Dichloropropane	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
33. cis-1,3-Dichloropropene	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
34. trans-1,3-Dichloropropene	U		μg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
35. Ethylbenzene	U		μg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
36. Ethylene Dibromide	U		μg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
37.2-Hexanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
38. Isopropylbenzene	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
39. Methyl lodide	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
40. Methylene Chloride	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
41. 4-Methyl-2-pentanone	U	200	µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
42 MTBE	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
43. Naphthalene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
44. n-Propylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
45. Styrene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
46. 1,1,1,2-Tetrachloroethane	Ų		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
47. 1,1,2,2-Tetrachloroethane	U	337	µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
48. Tetrachloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
49. Toluene	U	200	µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
51.1,1,1-Trichloroethane	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
52.1,1,2-Trichloroethane	U		µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
53. Trichloroethene	U	100	µg/kg	62	1.0	07/24/13	V913G24B	07/24/13	V913G24B
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
55. 1,2,3-Trichloropropane	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
56. 1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
58.1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
59. Vinyl Chloride	U		µg/kg	40	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57075 15 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description: SB-3 (13-14)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

3

Collect Date:

07/23/13

Client Project No:

NA Sample Matrix:

Soil/Solid

Collect Time:

10:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample No:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	(OB) AI	iquot ID: 570	75-003	Matrix: Soil/Solid		Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
60. Xylenes	u		µg/kg	150	1.0	07/24/13	V913G24B	07/24/13	V913G24B	

Base/Neutral/Acid Semivolatiles by GC/N	MS (EPA 3546/E	PA 827	70C)	A	iquot ID: 570	75-003A	Matrix: Soil	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
2 Acenaphthylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
3 Aniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
4. Anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
8. Benzo(b)fluoranthene	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
13. Bis(2-chloroethyl)ether	U	1000	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
16.4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
18. Carbazole (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
20. 2-Chloronaphthalene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
21.2-Chlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
23. Chrysene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
24. Dibenzo(a,h)anthracene	U	-	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
25 Dibenzofuran	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
26.2,4-Dichlorophenol	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
29. 2,4-Dimethylphenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
34. Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 16 of 44 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-3 (13-14)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

10:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	70C)	Al	iquot ID: 570	75-003A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35 Fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
36. Fluorene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
41. Isophorone	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
43.2-Methylnaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
44. 2-Methylphenol (NN)	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
45.3&4-Methylphenol (NN)	U	91	µg/kg	660	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
46.2-Nitroaniline	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
47.3-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
48. 4-Nitroaniline	U		μg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
49. Nitrobenzene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
51. 4-Nitrophenol	U	100	µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
53. N-Nitrosodi-n-propylamine	U	100	µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
55. Pentachlorophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
56. Phenanthrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
57. Phenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
58. Pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
59. Pyridine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B
61. 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/25/13	S713G24B



Order: Page: Date:

57075 17 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

TW-1

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

10:30

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 35)	chlorine Pesticides (EPA 3535A/EPA 8081B)			Al	iquot ID: 570	75-004B	Matrix: Gro	und Water	analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	0		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
2 alpha-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
3. beta-BHC (NN)	U	_	µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
4. delta-BHC	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
5. gamma-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
6. Chlordane (NN)	U		µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
7. 4,4'-DDD	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
8.4,4'-DDE	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
9.4,4'-DDT	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
10. Dieldrin	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
11. Endosulfan I	U		µg/L	0.030	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
12 Endosulfan II	Ü		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
13. Endosulfan Sulfate	U		µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
14. Endrin	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
15. Endrin Aldehyde	U		µg/L	0.020	1,1	07/24/13	PS13G24F	07/24/13	SC13G24B
16. Heptachlor	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
17. Heptachlor Epoxide	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
18. Methoxychlor	U		µg/L	0.50	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
19. Toxaphene (NN)	U	-1	µg/L	1.0	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B

Polychlorinated Biphenyls (PCBs)	(EPA 3535A/EPA 808	2A)		Al	iquot ID: 570	75-004B	Matrix: Ground Water		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	Ü		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
2 Aroclor-1221	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
3. Aroclor-1232	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
4. Aroclor-1242	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
5. Aroclor-1248	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
6. Aroclor-1254	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
7. Aroclor-1260	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
8. Aroclor-1262 (NN)	U		µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	
9. Aroclor-1268 (NN)	U	100	µg/L	0.22	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B	

Volatile Organic Compounds ((VOCs) by GC/MS (EPA 503	30B/EF	PA 8260B)	Al	Aliquot ID: 57075-004			Matrix: Ground Water		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Acetone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A	
2 Acrylonitrile	U		µg/L	2.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A	
3. Benzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A	

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



TW-1

Order: Page: Date:

57075 18 of 44 07/26/13

Client Identification:

Groundwater and

Sample Description:

Chain of Custody:

127337

Client Project Name:

Environmental Services, Inc. SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

10:30

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 570	75-004	Matrix: Gro	und Water	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batcl
4. Bromobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
5. Bromochloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
7. Bromoform	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
8. Bromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
9.2-Butanone	U		µg/L	25	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
10. n-Butylbenzene	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
13. Carbon Disulfide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
15 Chlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
16. Chloroethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
17. Chloroform	U	-	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
18. Chloromethane	U		μg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
19.2-Chlorotoluene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
22 Dibromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
25.1,4-Dichlorobenzene	U		µg/L	1.0	1,0	07/24/13	VB13G24A	07/24/13	VB13G24A
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
27.1,1-Dichloroethane	U	-	µg/L	1.0	1,0	07/24/13	VB13G24A	07/24/13	VB13G24A
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
29. 1,1-Dichloroethene	U	-	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
31, trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
33. cis-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
34 trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
35 Ethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
37. 2-Hexanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
39. Methyl lodide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
40. Methylene Chloride	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
42 MTBE	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57075 19 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-1

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

NA

Sample No:

Sample Matrix:

Collect Date:

07/23/13

Client Project No:

Sample Comments:

Definitions:

Ground Water

Collect Time:

10:30

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	GC/MS (EPA 50	30B/EF	PA 8260B)	A	iquot ID: 570	75-004	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
43. Naphthalene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
45, Styrene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
46.1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
49. Toluene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
51.1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
52 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
53. Trichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
55.1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
56. 1,2,3-Trimethylbenzene (NN)	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
59. Vinyl Chloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
60. Xylenes	U		µg/L	3.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

Base/Neutral/Acid Semivolatiles by GC/N	IS (EPA 3510C/	EPA 82	270C)	A	iquot ID: 570	75-004B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
2 Acenaphthylene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
3 Aniline	U		µg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
4. Anthracene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
5 Azobenzene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
6. Benzo(a)anthracene	2.1		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
7. Benzo(a)pyrene	2.9		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
8. Benzo(b)fluoranthene	4.0		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
9. Benzo(ghi)perylene	2.3		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
10. Benzo(k)fluoranthene	1.5		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
11. Benzyl Alcohol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
14. Bis(2-chloroisopropyl) Ether	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
16. 4-Bromophenyl Phenylether (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
17. Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B

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Order: Page: Date:

57075 20 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

SXL-1406 Avon Road

Sample Description: TW-1

Chain of Custody:

127337

Client Project Name:

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

10:30

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C/	EPA 8	270C)	Al	iquot ID: 570	75-004B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
19.4-Chloro-3-methylphenol	U	7	µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
20. 2-Chloronaphthalene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
21. 2-Chlorophenol	U	1	µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
22 4-Chlorophenyl Phenylether	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
23. Chrysene	2.4		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
24. Dibenzo(a,h)anthracene	U		µg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
25. Dibenzofuran	U		µg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
26.2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
27. Diethyl Phthalate	υ		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
28. Dimethyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
29. 2,4-Dimethylphenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
30. Di-n-butyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
31.2,4-Dinitrophenol	U	5-2	µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
32 2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
33.2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
34. Di-n-octyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
35. Fluoranthene	4.1	-	µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
36. Fluorene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
39. Hexachlorocyclopentadiene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S613G25A
41. Isophorone	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
43. 2-Methylnaphthalene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
44. 2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
45.3&4-Methylphenol (NN)	U	-	µg/L	10	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
46, 2-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
47.3-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
48. 4-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
49. Nitrobenzene	U		µg/L	3.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
50. 2-Nitrophenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
51. 4-Nitrophenol	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
54. N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
55. Pentachlorophenol	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
56. Phenanthrene	U		µg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 21 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description: TW-1

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

10:30

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by 0	C/MS (EPA 3510C/	EPA 82	270C)	Aliquot ID: 57075-004B			Matrix: Ground Water Analyst: GAN		
Parameter(s)	Result	a	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
57. Phenol	U		μg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
58. Pyrene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
59. Pyridine	U		µg/L	5,0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
61.2,4,5-Trichlorophenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
62 2,4,6-Trichlorophenol	U		µg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B



Order: Page: Date: 57075 22 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-12(6-7)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

13:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Aliquot ID: 57075-005A			Matrix: Soi	Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis D	ate Analysis Batch
1. Percent Moisture (Water Content) (NN)	17		%	0.1	1.0	07/24/13	MC130724	07/25/13	MC130724

Michigan 10 Elements by ICP/I	MS (EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 570	75-005A	Matrix: Soi	/Solid A	nalyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	10000		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
2. Barium	16000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
3. Cadmium	98		μg/kg	.50	20	07/25/13	PT13G25B	07/25/13	T213G25A
4. Chromium	4300		μg/kg	500	20	07/25/13	PT13G25B	07/25/13	T213G25A
5. Copper	7600		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
6. Lead	3800		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
7. Selenium	270		µg/kg	200	20	07/25/13	PT13G25B	07/25/13	T213G25A
8. Silver	U		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
9, Zinc	25000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 570	75-005A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch	
t. Mercury	U		µg/kg	50	8.4	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 354	6/EPA 8081B)			Al	iquot ID: 570	75-005A	Matrix: Soil	/Solid A	Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
3 beta-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
4 delta-BHC	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
5. gamma-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
6. Chlordane (NN)	U		µg/kg	25	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
7.4,4'-DDD	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
8. 4,4'-DDE	U	J,L-	μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
9.4,4'-DDT	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
10. Dieldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
11. Endosulfan I	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
12 Endosulfan II	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
14 Endrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
16. Heptachlor	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	

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Order: Page: Date: 57075 23 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description:

SB-12(6-7)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No: 5

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

13:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis,

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 570	75-005A Matrix: Soi		I/Solid Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18 Methoxychlor	U		µg/kg	50	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
19 Toxaphene (NN)	U		ua/ka	400	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B

Polychlorinated Biphenyls (PCBs)	clor-1016 U μg/l clor-1221 U μg/l clor-1232 U μg/l clor-1242 U μg/l clor-1248 U μg/l			Al	Aliquot ID: 57075-005A			Matrix: Soil/Solid	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
2 Aroclor-1221	Ú		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
3. Aroclor-1232	U	-31	µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
4 Aroclor-1242	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
5 Aroclor-1248	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
6, Aroclor-1254	Ú		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
7. Aroclor-1260	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
8. Aroclor-1262 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
9. Aroclor-1268 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A

Volatile Organic Compounds (VOCs)	by GC/MS, 5035 (E	PA 503	35/EPA 826	OB) AI	iquot ID: 570	75-005	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
1. Acetone	U		µg/kg	1000	1.0	07/24/13	V913G24B	07/24/13	V913G24B
2 Acrylonitrile	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
3 Benzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
4. Bromobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
5. Bromochloromethane	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
6. Bromodichloromethane	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
7. Bromoform	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
8. Bromomethane	U		µg/kg	200	1.0	07/24/13	V913G24B	07/24/13	V913G24B
9. 2-Butanone	U		µg/kg	750	1.0	07/24/13	V913G24B	07/24/13	V913G24B
10. n-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
13 Carbon Disulfide	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
14. Carbon Tetrachloride	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
15. Chlorobenzene	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
16. Chloroethane	U		μg/kg	300	1.0	07/24/13	V913G24B	07/24/13	V913G24B
17. Chloroform	U		μg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
18. Chloromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
20. Dibromochloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B

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Order: Page: Date: 57075 24 of 44 07/26/13

Client Identification: Groundwater and

NA

Environmental Services, Inc.

Sample Description: SB-12(6-7)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

13:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 570	75-005	Matrix: Soil	/Solid /	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	30	1.0	07/24/13	V913G24B	07/24/13	V913G24B
22 Dibromomethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
23.1,2-Dichlorobenzene	U	E-S	µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
25.1,4-Dichlorobenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
27. 1,1-Dichloroethane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
28.1,2-Dichloroethane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
29. 1,1-Dichloroethene	U	100	µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
30. cis-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
32.1,2-Dichloropropane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
33. cis-1,3-Dichloropropene	U	TO S	µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
34. trans-1,3-Dichloropropene	U		μg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
35 Ethylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
36. Ethylene Dibromide	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
37.2-Hexanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
38. Isopropylbenzene	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
39. Methyl lodide	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
40. Methylene Chloride	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
41. 4-Methyl-2-pentanone	U	30	µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
42 MTBE	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
43. Naphthalene	U	-	µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
44. n-Propylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
45. Styrene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
46.1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
47. 1,1,2,2-Tetrachloroethane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
48. Tetrachloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
49. Toluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
51.1,1,1-Trichloroethane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
52 1,1,2-Trichloroethane	U		µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
53. Trichloroethene	U	134	µg/kg	60	1.0	07/24/13	V913G24B	07/24/13	V913G24B
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
55.1,2,3-Trichloropropane	U		µg/kg	120	1.0	07/24/13	V913G24B	07/24/13	V913G24B
56.1,2,3-Trimethylbenzene (NN)	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
58. 1,3,5-Trimethylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
59. Vinyl Chloride	U		µg/kg	40	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 25 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description:

SB-12(6-7)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix: NA

Soil/Solid

Collect Time:

13:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B			(OB) A	iquot ID: 570	75-005	Matrix: Soi	Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/24/13	V913G24B	07/24/13	V913G24B

Base/Neutral/Acid Semivolatiles by GC/M	se/Neutral/Acid Semivolatiles by GC/MS (EPA 3546/EPA 8270C)			A	liquot ID: 570	75-005A	Matrix: Soil/Solid A		nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
1. Acenaphthene	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
2 Acenaphthylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
3 Aniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
4. Anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
17. Butyl Benzyl Phthalate	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
18. Carbazole (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
20. 2-Chloronaphthalene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
21. 2-Chlorophenol	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
22 4-Chlorophenyl Phenylether	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
23. Chrysene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
24. Dibenzo(a,h)anthracene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
25 Dibenzofuran	U	5	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
26.2,4-Dichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
29.2,4-Dimethylphenol	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
31.2,4-Dinitrophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

DCSID: G-610.13 (03/21/11)

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

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Order: Page: Date: 57075 26 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-12(6-7)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

13:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/I	MS (EPA 3546/E	PA 82	70C)	Al	iquot ID: 570	75-005A	Matrix: Soi	Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35 Fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
36. Fluorene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
41. Isophorone	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
43. 2-Methylnaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
45.3&4-Methylphenol (NN)	U		μg/kg	660	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
47.3-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
48. 4-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
49. Nitrobenzene	U	-	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
50, 2-Nitrophenol	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
51. 4-Nitrophenol	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
55. Pentachlorophenol	U		µg/kg	800	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
56. Phenanthrene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
57. Phenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
58 Pyrene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
59. Pyridine	U	98	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
60. 2,4,5-Trichlorophenol	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
61.2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A



Order: Page: Date: 57075 27 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-11(1-2)

Soil/Solid

Chain of Custody:

Collect Time:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13 15:10

Client Project No: Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Sample Matrix:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				A	liquot ID: 570	75-006A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	22		%	0.1	1.0	07/24/13	MC130724	07/25/13	MC130724	

Michigan 10 Elements by ICP/MS (E	PA 0200.2-M/EPA 60	20A)		A	liquot ID: 570	75-006A	Matrix: Soil/Solid		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Arsenic	3400		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A	
2 Barium	23000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
3. Cadmium	160	-	µg/kg	50	20	07/25/13	PT13G25B	07/25/13	T213G25A	
4. Chromium	7000		µg/kg	500	20	07/25/13	PT13G25B	07/25/13	T213G25A	
5. Copper	5800		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
6. Lead	8000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	
7. Selenium	U		µg/kg	200	20	07/25/13	PT13G25B	07/25/13	T213G25A	
8. Silver	U		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A	
9. Zinc	19000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A	

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 570	75-006A	Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Mercury	υ		µg/kg	50	9.9	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 35	346/EPA 8081B)			A	iquot ID: 570	75-006A	Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aldrin	U		µg/kg	- 20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
2 alpha-BHC (NN)	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
3. beta-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
4. delta-BHC	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
5. gamma-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
6. Chlordane (NN)	U		μg/kg	25	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
7.4,4'-DDD	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
8.4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
9.4,4'-DDT	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
10. Dieldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
11.Endosulfan I	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
12 Endosulfan II	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
13 Endosulfan Sulfate	U	. 3	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
14. Endrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
16. Heptachlor	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
17. Heptachlor Epoxide	Û		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 28 of 44 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Volatile Ossania Companyada (VOCa) bu CCIME FOR FOR FOR FOR PARA

Sample Description: SB-11(1-2)

Chain of Custody:

127337

Client Project Name:

NA

Sample No: Sample Matrix:

Soil/Solid

Collect Date: Collect Time:

Matalan Callicated

07/23/13

Azabati CCD

15:10

Client Project No: Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	Niquot ID: 57075-006A		Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
18. Methoxychlor	U		μg/kg	50	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
19. Toxaphene (NN)	Ü		µg/kg	430	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	A)		Al	Aliquot ID: 57075-006A			Matrix: Soil/Solid	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
2 Aroclor-1221	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
3 Aroclor-1232	Ü		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
4. Aroclor-1242	Ü		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
5 Aroclor-1248	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
6. Aroclor-1254	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
7. Aroclor-1260	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
8. Aroclor-1262 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
9. Aroclor-1268 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A

Volatile Organic Compounds (VOCs	by GC/MS, 5035 (E	PA 50	35/EPA 826	(OB) A	iquot ID: 570	75-006	Matrix: Soi	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U	1	µg/kg	1000	1.0	07/24/13	V913G24B	07/24/13	V913G24B
2 Acrylonitrile	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
3. Benzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
4. Bromobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
5 Bromochloromethane	Ü		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
6. Bromodichloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
7. Bromoform	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
8. Bromomethane	U		µg/kg	200	1.0	07/24/13	V913G24B	07/24/13	V913G24B
9. 2-Butanone	Ų		µg/kg	750	1.0	07/24/13	V913G24B	07/24/13	V913G24B
10. n-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
13 Carbon Disulfide	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
14 Carbon Tetrachloride	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
15 Chlorobenzene	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
16. Chloroethane	U		µg/kg	320	1.0	07/24/13	V913G24B	07/24/13	V913G24B
17. Chloroform	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
18 Chloromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
19. 2-Chlorotoluene	Ų		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
20. Dibromochloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B

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All ----- ID. F707F 000



Order: Page: Date: 57075 29 of 44 07/26/13

Client Identification: Ground

Groundwater and Environmental Services, Inc.

Sample Description:

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

NA

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

SB-11(1-2)

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 570	75-006	Matrix: Soil	/Solid	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/kg	32	1.0	07/24/13	V913G24B	07/24/13	V913G24B
22 Dibromomethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
23. 1,2-Dichlorobenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
24.1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
25.1,4-Dichlorobenzene	U	200	µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
27, 1,1-Dichloroethane	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
28.1,2-Dichloroethane	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
29.1,1-Dichloroethene	U		µg/kg	.50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
30. cis-1,2-Dichloroethene	U		µg/kg	.50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
31. trans-1,2-Dichloroethene	U	10	µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
32.1,2-Dichloropropane	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
33. cis-1,3-Dichloropropene	U	9999	µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
34. trans-1,3-Dichloropropene	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
35. Ethylbenzene	U	5300	µg/kg	.50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
36. Ethylene Dibromide	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
37.2-Hexanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
38. Isopropylbenzene	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
39. Methyl lodide	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
40. Methylene Chloride	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
42 MTBE	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
43. Naphthalene	υ		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
44. n-Propylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
45 Styrene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
46.1,1,1,2-Tetrachloroethane	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
47. 1,1,2,2-Tetrachloroethane	U	119	µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
48. Tetrachloroethene	Ü		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
49. Toluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
50.1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
51.1,1,1-Trichloroethane	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
52 1,1,2-Trichloroethane	U		μg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
53. Trichloroethene	U		µg/kg	64	1.0	07/24/13	V913G24B	07/24/13	V913G24B
54. Trichlorofluoromethane	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
55.1,2,3-Trichloropropane	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
56. 1,2,3-Trimethylbenzene (NN)	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
57. 1,2,4-Trimethylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
58. 1,3,5-Trimethylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
59. Vinyl Chloride	U		µg/kg	40	1.0	07/24/13	V913G24B	07/24/13	V913G24B

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Order: Page: Date:

57075 30 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-11(1-2)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) A	Aliquot ID: 57075-006		Matrix: Soil/Solid		Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	te Analysis Batch	
60. Xylenes	U		µg/kg	150	1.0	07/24/13	V913G24B	07/24/13	V913G24B	

Base/Neutral/Acid Semivolatiles by GC/MS (EPA 3546/EPA 8270C)		70C)	Al	iquot ID: 570	75-006A	Matrix: Soil/Solid		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
2 Acenaphthylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
3. Aniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
4. Anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
& Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
9. Benzo(ghi)perylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
11. Benzyl Alcohol	U	637	µg/kg	3300	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
17. Butyl Benzyl Phthalate	Ų		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
18. Carbazole (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
19. 4-Chloro-3-methylphenol	u	-	µg/kg	280	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
21.2-Chlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
22 4-Chlorophenyl Phenylether	Ü		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
23. Chrysene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
25. Dibenzofuran	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
26.2,4-Dichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
29.2,4-Dimethylphenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
31.2,4-Dinitrophenol	U		µg/kg	850	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
33, 2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
34. Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A

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T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 31 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc. Sample Description: SB-11(1-2)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/M	AS (EPA 3546/E	PA 827	70C)	A	Aliquot ID: 57075-006A		Matrix: Soil/Solid		nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35 Fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
36. Fluorene	υ		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
37. Hexachlorobenzene	U	225	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
39 Hexachlorocyclopentadiene	Ų		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
40. Indeno(1,2,3-cd)pyrene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
41. Isophorone	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
42.2-Methyl-4,6-dinitrophenol (NN)	U		μg/kg	850	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
43.2-Methylnaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
44, 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
46. 2-Nitroaniline	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
47.3-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
48. 4-Nitroaniline	U		µg/kg	850	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
49. Nitrobenzene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
51.4-Nitrophenol	.U	-	µg/kg	850	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
54. N-Nitrosodiphenylamine	υ		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
55. Pentachlorophenol	U		µg/kg	850	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
56. Phenanthrene	υ		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
57. Phenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
58. Pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
59. Pyridine	U	1	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
61.2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A



Order: Page: Date: 57075 32 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: TW-3

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:10

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 35	rganochlorine Pesticides (EPA 3535A/EPA 8081B)				iquot ID: 570	75-007B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
2 alpha-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
3. beta-BHC (NN)	U	- 2	µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
4. delta-BHC	U		μg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
5 gamma-BHC (NN)	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
6. Chlordane (NN)	U		µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
7. 4,4'-DDD	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
8. 4,4'-DDE	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
9. 4,4'-DDT	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
10. Dieldrin	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
11. Endosulfan I	U		µg/L	0.030	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
12 Endosulfan II	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
13. Endosulfan Sulfate	U		µg/L	0.050	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
14. Endrin	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
15 Endrin Aldehyde	U		µg/L	0.020	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
16. Heptachlor	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
17. Heptachlor Epoxide	U		µg/L	0.011	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
18. Methoxychlor	U		μg/L	0.50	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B
19. Toxaphene (NN)	U		µg/L	1.0	1.1	07/24/13	PS13G24F	07/24/13	SC13G24B

Polychlorinated Biphenyls (PCBs) (F	olychlorinated Biphenyls (PCBs) (EPA 3535A/EPA 8082A)					75-007B	Matrix: Ground Water Analyst: TMC		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
2 Aroclor-1221	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
3. Aroclor-1232	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
4 Aroclor-1242	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
5 Aroclor-1248	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
6. Aroclor-1254	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
7. Aroclor-1260	U		µg/L	0.21	1,1	07/24/13	PS13G24F	07/25/13	SA13G25B
8. Aroclor-1262 (NN)	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B
9. Aroclor-1268 (NN)	U		µg/L	0.21	1.1	07/24/13	PS13G24F	07/25/13	SA13G25B

Volatile Organic Compounds (VOCs) by GC/MS (EPA 503	0B/EF	PA 8260B)	Al	iquot ID: 570	75-007	Matrix: Gro	und Water	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
2 Acrylonitrile	U		µg/L	2.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
3 Benzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

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Order: Page: Date: 57075 33 of 44 07/26/13

Client Identification: Groundy

Groundwater and Environmental Services, Inc.

Sample Description:

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No: 7

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

TW-3

Collect Time:

16:10

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 570	75-007	Matrix: Ground Water Analyst: JPL		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
4. Bromobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
5. Bromochloromethane	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
7. Bromoform	U	PE	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
8. Bromomethane	U		μg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
9. 2-Butanone	U		µg/L	25	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
13. Carbon Disulfide	U	10	µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
15. Chlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
16. Chloroethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
17. Chloroform	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
18. Chloromethane	U		μg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
19. 2-Chlorotoluene	U	- 1	µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
21.1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
22 Dibromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
25.1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
28.1,2-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
32 1,2-Dichloropropane	Ü		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
33. cis-1,3-Dichloropropene	U		µg/L	1,0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
34. trans-1,3-Dichloropropene	Ü		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
35. Ethylbenzene	U	700	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
37.2-Hexanone	Ü		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
39. Methyl lodide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
40. Methylene Chloride	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
42 MTBE	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 34 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description: TW-3

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

NA

Sample No:

Sample Matrix:

Collect Date:

07/23/13

Client Project No: Sample Comments:

Definitions:

Ground Water

Collect Time:

16:10

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

olatile Organic Compounds (VOCs) by GC/MS (EPA 5030B/EPA 8260			PA 8260B)	Al	iquot ID: 570	75-007	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
43 Naphthalene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
44. n-Propylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
45 Styrene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1,0	07/24/13	VB13G24A	07/24/13	VB13G24A
48. Tetrachloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
49. Toluene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
50.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
51.1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
52.1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
53. Trichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
55.1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
56. 1,2,3-Trimethylbenzene (NN)	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
57.1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
58. 1,3,5-Trimethylbenzene	u		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
59. Vinyl Chloride	u		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
60. Xylenes	U		µg/L	3.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

ase/Neutral/Acid Semivolatiles by GC/MS (EPA 3510C/EPA 8270C)				A	iquot ID: 570	75-007B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acenaphthene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
2 Acenaphthylene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
3. Anilíne	U		µg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
4. Anthracene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
5. Azobenzene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
6. Benzo(a)anthracene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
7. Benzo(a)pyrene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
8. Benzo(b)fluoranthene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
9. Benzo(ghi)perylene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
10. Benzo(k)fluoranthene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
11. Benzyl Alcohol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
12 Bis(2-chloroethoxy)methane	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
13. Bis(2-chloroethyl)ether	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
14. Bis(2-chloroisopropyl) Ether	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
15. Bis(2-ethylhexyl)phthalate (NN)	U	500	µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
16.4-Bromophenyl Phenylether (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
17, Butyl Benzyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57075 35 of 44 07/26/13

Client Identification: Groundwater a

Groundwater and Environmental Services, Inc.

Sample Description:

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No: 7

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

TW-3

Collect Time:

16:10

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3510C/	EPA 8	270C)	Al	iquot ID: 570	75-007B	Matrix: Gro	und Water	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
18. Carbazole (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
19. 4-Chloro-3-methylphenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
20.2-Chloronaphthalene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
21. 2-Chlorophenol	Ú		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
22 4-Chlorophenyl Phenylether	U		μg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
23. Chrysene	U		μg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
24. Dibenzo(a,h)anthracene	U		μg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
25. Dibenzofuran	U		μg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
26. 2,4-Dichlorophenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
27. Diethyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
28. Dimethyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
29. 2,4-Dimethylphenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
30. Di-n-butyl Phthalate	U		μg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
31.2,4-Dinitrophenol	Ü		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
32.2,4-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
33.2,6-Dinitrotoluene (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
34. Di-n-octyl Phthalate	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
35. Fluoranthene	U		µg/L	1.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
36. Fluorene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
37. Hexachlorobenzene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
38. Hexachlorobutadiene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
39. Hexachlorocyclopentadiene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
40. Indeno(1,2,3-cd)pyrene	U		µg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
41. Isophorone	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
42 2-Methyl-4,6-dinitrophenol (NN)	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
43. 2-Methylnaphthalene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
44. 2-Methylphenol (NN)	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
45.3&4-Methylphenol (NN)	U		µg/L	10	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
46. 2-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
47. 3-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
48. 4-Nitroaniline	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
49. Nitrobenzene	U.		µg/L	3.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
50. 2-Nitrophenol	U		μg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
51. 4-Nitrophenol	Ü		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
52 N-Nitrosodimethylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
53. N-Nitrosodi-n-propylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
54. N-Nitrosodiphenylamine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
55. Pentachlorophenol	U		µg/L	20	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
56. Phenanthrene	U		µg/L	2.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B

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Order: Page: Date:

57075 36 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc. SXL-1406 Avon Road

Sample Description:

TW-3

Chain of Custody:

127337

Client Project Name: Client Project No:

NA

Sample No: Sample Matrix:

Ground Water

Collect Date: Collect Time: 07/23/13 16:10

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by	GC/MS (EPA 3510C/	EPA 82	270C)	Al	iquot ID: 570	75-007B	Matrix: Gro	Matrix: Ground Water A	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
57. Phenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
58. Pyrene	U		μg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
59. Pyridine	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
60.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
61.2,4,5-Trichlorophenol	U		µg/L	5.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B
62.2,4,6-Trichlorophenol	U		µg/L	4.0	1.0	07/24/13	PS13G24C	07/25/13	S713G24B



Order: Page: Date:

57075 37 of 44 07/26/13

Groundwater and Client Identification: Environmental Services, Inc. Client Project Name:

Sample Description: SB-11(1-2) DUP

Chain of Custody:

127337

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Al	iquot ID: 570	75-008A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	20		%	0.1	1.0	07/24/13	MC130724	07/25/13	MC130724	

Michigan 10 Elements by ICP/MS (EPA 03	200.2-M/EPA 60	20A)		Aliquot ID: 57075-008A			Matrix: Soil/Solid		Analyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	3100		μg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
2 Barium	21000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
3. Cadmium	150		µg/kg	50	20	07/25/13	PT13G25B	07/25/13	T213G25A
4. Chromium	7700		μg/kg	500	20	07/25/13	PT13G25B	07/25/13	T213G25A
5. Copper	6800		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
6. Lead	11000		μg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
7. Selenium	200		µg/kg	200	20	07/25/13	PT13G25B	07/25/13	T213G25A
8. Silver	U		μg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
9. Zinc	21000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A

Mercury by CVAAS (EPA 7471B)				Al	liquot ID: 570	75-008A	Matrix: Soi	Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	8.8	07/26/13	PM13G26A	07/26/13	M613G26A

eter(s) Result Q Units			Al	iquot ID: 570	75-008A	Matrix: Soil	/Solid A	nalyst: GAN
Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
U	u i	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
u		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	25	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U	J,L-	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U	84	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
	Result U U U U U U U U U U U U U	Result Q U U U U U U U U U U U U U U U U U U U	Result Q Units U	Result Q Units Reporting Limit U µg/kg 20 U µg/kg 25 U µg/kg 20 U µg/kg	Result Q Units Reporting Limit Dilution U µg/kg 20 5.0 U µg/kg 20 5.0 U µg/kg 20 5.0 U µg/kg 20 5.0 U µg/kg 25 5.0 U µg/kg 20 5.0 U µg/kg 2	Result Q Units Reporting Limit Dilution Prep Date U µg/kg 20 5.0 07/24/13 U µg/kg 25 5.0 07/24/13 U µg/kg 20 5.0 07/24/13 U µg/kg 20 <t< td=""><td>Result Q Units Reporting Limit Dilution Prep Date Prep Batch U µg/kg 20 5.0 07/24/13 PS13G24E U µg/kg 25 5.0 07/24/13 PS13G24E U µg/kg 25 5.0 07/24/13 PS13G24E U µg/kg 20 5.0 07/24/13 PS13G24E </td></t<> <td>Result Q Units Reporting Limit Dilution Prep Date Prep Batch Analysis Date U µg/kg 20 5.0 07/24/13 PS13G24E 07/25/13 U µg/kg 25 5.0 07/24/13 PS13G24E 07/25/13 U µg/kg 20 5.0 07/24/13 PS13G24E 07/25/13</td>	Result Q Units Reporting Limit Dilution Prep Date Prep Batch U µg/kg 20 5.0 07/24/13 PS13G24E U µg/kg 25 5.0 07/24/13 PS13G24E U µg/kg 25 5.0 07/24/13 PS13G24E U µg/kg 20 5.0 07/24/13 PS13G24E	Result Q Units Reporting Limit Dilution Prep Date Prep Batch Analysis Date U µg/kg 20 5.0 07/24/13 PS13G24E 07/25/13 U µg/kg 25 5.0 07/24/13 PS13G24E 07/25/13 U µg/kg 20 5.0 07/24/13 PS13G24E 07/25/13

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368

F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

RSN: 57075-130726170107



Order: Page: Date: 57075 38 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-11(1-2) DUP

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Aliquot ID: 57075-008A			Matrix: Soil	Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
18. Methoxychlor	U	+	μg/kg	50	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
19. Toxaphene (NN)	U		µg/kg	420	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B

Polychlorinated Biphenyls (PCBs) (I	EPA 3546/EPA 8082	A)		Al	iquot ID: 570	75-008A	Matrix: Soil/Solid A		Analyst: TMC	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aroclor-1016	U	6.5	µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
2 Aroclor-1221	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
3. Aroclor-1232	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
4. Aroclor-1242	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
5 Aroclor-1248	U	F	µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
6. Aroclor-1254	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
7. Aroclor-1260	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
8. Aroclor-1262 (NN)	U		μg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	
9. Aroclor-1268 (NN)	U	0.5	µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A	

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	0B) A	liquot ID: 570	75-008	Matrix: Soi	I/Solid A	analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/24/13	V913G24B	07/24/13	V913G24B
2 Acrylonitrile	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
3. Benzene	U		μg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
4. Bromobenzene	Ų		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
5. Bromochloromethane	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
6. Bromodichloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
7. Bromoform	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
8. Bromomethane	U		µg/kg	200	1.0	07/24/13	V913G24B	07/24/13	V913G24B
9. 2-Butanone	U		µg/kg	750	1.0	07/24/13	V913G24B	07/24/13	V913G24B
10. n-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
13. Carbon Disulfide	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
14. Carbon Tetrachloride	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
15. Chlorobenzene	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
16. Chloroethane	U		µg/kg	310	1.0	07/24/13	V913G24B	07/24/13	V913G24B
17. Chloroform	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
18. Chloromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
19.2-Chlorotoluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
20. Dibromochloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 39 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

SXL-1406 Avon Road

SB-11(1-2) DUP Sample Description:

Chain of Custody:

127337

Client Project Name:

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time: 15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS, 5035 (E	PA 50	35/EPA 826	0B) Al	iquot ID: 570	75-008	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batc
21.1,2-Dibromo-3-chloropropane (SIM) (N	.0		µg/kg	31	1.0	07/24/13	V913G24B	07/24/13	V913G24B
22 Dibromomethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
23.1,2-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
24. 1,3-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
25. 1,4-Dichlorobenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
26. Dichlorodifluoromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
27. 1,1-Dichloroethane	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
28. 1,2-Dichloroethane	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
29.1,1-Dichloroethene	Ų		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
30. cis-1,2-Dichloroethene	U		μg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
31. trans-1,2-Dichloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
32.1,2-Dichloropropane	U		μg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
33. cis-1,3-Dichloropropene	U	-	µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
34 trans-1,3-Dichloropropene	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
35. Ethylbenzene	U.		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
36. Ethylene Dibromide	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
37. 2-Hexanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
38. Isopropylbenzene	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
39. Methyl lodide	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
40. Methylene Chloride	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
41. 4-Methyl-2-pentanone	U		µg/kg	2500	1.0	07/24/13	V913G24B	07/24/13	V913G24B
42 MTBE	U	-	µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
43. Naphthalene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
44. n-Propylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
45 Styrene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
46. 1,1,1,2-Tetrachloroethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
47. 1,1,2,2-Tetrachloroethane	U	-	µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
48. Tetrachloroethene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
49. Toluene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
50. 1,2,4-Trichlorobenzene	U		µg/kg	330	1.0	07/24/13	V913G24B	07/24/13	V913G24B
51.1,1,1-Trichloroethane	U	-	µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
52 1,1,2-Trichloroethane	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
53. Trichloroethene	U		µg/kg	63	1.0	07/24/13	V913G24B	07/24/13	V913G24B
54. Trichlorofluoromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
55.1,2,3-Trichloropropane	U		µg/kg	130	1.0	07/24/13	V913G24B	07/24/13	V913G24B
56. 1,2,3-Trimethylbenzene (NN)	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
57. 1,2,4-Trimethylbenzene	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
58. 1,3,5-Trimethylbenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
59. Vinyl Chloride	U		µg/kg	40	1.0	07/24/13	V913G24B	07/24/13	V913G24B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 40 of 44 07/26/13

Client Identification:

Groundwater and

NA

Environmental Services, Inc.

Sample Description: SB-11(1-2) DUP

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

olatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)				0B) Al	iquot ID: 570	75-008	Matrix: Soil	Analyst: CCD	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	te Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/24/13	V913G24B	07/24/13	V913G24B

Base/Neutral/Acid Semivolatiles by GC/M	S (EPA 3546/E	PA 82	70C)	Al	iquot ID: 570	75-008A	Matrix: Soil	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
1. Acenaphthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
2 Acenaphthylene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
3. Aniline	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
4. Anthracene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
8. Benzo(b)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
9. Benzo(ghi)perylene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
11. Benzyl Alcohol	U		µg/kg	3300	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
15. Bis(2-ethylhexyl)phthalate (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
17. Butyl Benzyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
18. Carbazole (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
19. 4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
20.2-Chloronaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
21.2-Chlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
23. Chrysene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
25. Dibenzofuran	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
26.2,4-Dichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
27. Diethyl Phthalate	U	186	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
28 Dimethyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
29.2,4-Dimethylphenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
30. Di-n-butyl Phthalate	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
31. 2,4-Dinitrophenol	U	999	µg/kg	840	1,0	07/24/13	PS13G24A	07/24/13	S713G24A
32 2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
33.2,6-Dinitrotoluene (NN)	U		µg/kg	330	1,0	07/24/13	PS13G24A	07/24/13	S713G24A
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 41 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description:

SB-11(1-2) DUP

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

15:10

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/I	MS (EPA 3546/E	PA 827	70C)	A	iquot ID: 570	75-008A	Matrix: Soi	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
35 Fluoranthene	U	1	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
36. Fluorene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
37. Hexachlorobenzene	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
41. Isophorone	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	840	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
43. 2-Methylnaphthalene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
46. 2-Nitroaniline	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
47. 3-Nitroaniline	U		µg/kg	830	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
48. 4-Nitroaniline	U		µg/kg	840	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
49. Nitrobenzene	U	200	µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
51.4-Nitrophenol	U	-	µg/kg	840	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
55. Pentachlorophenol	U		µg/kg	840	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
56. Phenanthrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
57. Phenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
58. Pyrene	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
59. Pyridine	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
60.2,4,5-Trichlorophenol	U		μg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A
61.2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/24/13	PS13G24A	07/24/13	S713G24A



Order: Page: Date:

57075 42 of 44 07/26/13

Client Identification: Client Project Name: Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: TRIP BLANK

Chain of Custody: Collect Date:

127337 07/23/13

Client Project No:

NA

Sample No: Sample Matrix:

Ground Water

Collect Time:

NA

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 570	75-009	Matrix: Gro	und Water	Analyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
2 Acrylonitrile	U		µg/L	2.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
3. Benzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
4. Bromobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
5. Bromochloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
7. Bromoform	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
8. Bromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
9.2-Butanone	U		µg/L	25	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
11. sec-Butylbenzene	U	1	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
13 Carbon Disulfide	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
14 Carbon Tetrachloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
15. Chlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
16. Chloroethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
17. Chloroform	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
18. Chloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
22 Dibromomethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
23.1,2-Dichlorobenzene	U	001	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
24.1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
25.1,4-Dichlorobenzene	U	3 7	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
27, 1,1-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
29.1,1-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
32 1,2-Dichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
33. cis-1,3-Dichloropropene	U	2	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
34 trans-1,3-Dichloropropene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
35. Ethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
36. Ethylene Dibromide	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
37. 2-Hexanone	U	80	µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
39. Methyl lodide	U	377	µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57075 43 of 44 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

TRIP BLANK

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

NA

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by	GC/MS (EPA 50	30B/E	A 8260B)	Al	iquot ID: 570	75-009	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
40. Methylene Chloride	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
41.2-Methylnaphthalene (NN)	U		µg/L	5,0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
42 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
43. MTBE	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
44. Naphthalene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
45. n-Propylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
46. Styrene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
47.1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
48. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
49. Tetrachloroethene	U		μg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
50. Toluene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
51.1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
52 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
53. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
54. Trichloroethene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
55 Trichlorofluoromethane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
56. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
57. 1,2,3-Trimethylbenzene (NN)	U	-	µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
58. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
59.1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
60. Vinyl Chloride	U		µg/L	1.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A
61. Xylenes	U	- 1	µg/L	3.0	1.0	07/24/13	VB13G24A	07/24/13	VB13G24A



Analytical Laboratory Report Laboratory Project Number: 57075

Order: Page: Date: 57075 44 of 44 07/26/13

Definitions/ Qualifiers:

- A: Spike recovery or precision unusable due to dilution.
- B: The analyte was detected in the associated method blank.
- E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
- J: The concentration is an estimated value.
- M: Modified Method
- U: The analyte was not detected at or above the reporting limit.
- X: Matrix Interference has resulted in a raised reporting limit or distorted result.
- W: Results reported on a wet-weight basis.
- *: Value reported is outside QA limits

Exception Summary:

L- : Recovery in the associated laboratory sample (LCS) exceeds the lower control limit. Results may be biased low.



Accreditation Number

E-10395



Analytical Laboratory

1914 Holloway Drive Holt, MI 48842 Phone: 517 699 0345 Fax: 517 699 0388 email: lab@fibertec.us 8660 S. Mackinaw Trail Cadillac, MI 49601 Phone: 231 775 8368 Fax: 231 775 8584 Industrial Hyglene Services, Inc. 1914 Holloway Drive Holt, MI 48842 Phone: 517 699 0345 Fax: 517 699 0382

email: asbestos@fibertec.us

Geoprobe 11766 E. Grand River Brighton, MI 48116 Phone: 810 220 3300 Fax: 810 220 3311 Chain of Custody # 127337 PAGE __of __

ient Name: 6E				П					P	ARAMETE	RS		Turnaround	Matrix Code	Deliverables
ontact Person: SX Dject Name/ Numb SX UOTE# Irchase Order#	er:	n Royd, Rochester Hills, MI	SEE RIGHT COR	CONTAINERS	111	2760	JCS \$ 270	rgan 10 Metals	Muhab Ands	B/Ashcidus			24 hour RUSH (surcharge applies) 48 hour RUSH (surcharge applies) 72 hour RUSH (surcharge applies) Standard (5-7 bus, days) Other: Specify	S Soil GWGround Water A Air SW Surface Water O Oll WW Waste Water X Other: Specify	Level 2 Level 3 Level 4
mple # Date	Client Time Sample	# Client Sample Descriptor	MATRIX	# OF C	PRESER	1853	800	(Mes	RE	FR			Remarks:	FES Drilling Services	
7/23/13	1115	58-7 (5-6)	5	2	1/2	()	()	Y .	X	X					
7/23/13	1140	TW-Z	GN	6	1	1	x	Q.	X	8					
1/23/13	1015	SB-3 (13-14)	- 5	2	XX		rx		8	X	3 15				
1 1	1030	Th-1	GW	6	1	n	8	U	X	X					
7/23/13	1310	58-12 (6-7)	- 5	2	1	4	8 3	_		X					
7/23/13	1510	8B-11 (1-Z)	- 5	2	y x	1	*	8	x	X					
7/23/13	1610	TN-3	GW	6	YX		x		X	Y	- 1				
7/23/13	1510	SB-11 (1-2 DUP)	- 5	2	4 1		r .	X	x	X		181			
7/23/13	-	Top Blank -	1	1	1	4	4		X	×					
mments; E-Mail ses	ults in POF	and EDD format to selliot	t l gesonl	ine.	(OM	1 4	al .	Kza	LAS.	lelli eg	esodia	egion			
nquished by:	Am	2		23/1		180	00 R	ece	10	By:	M	1	12	7/24/13	2
inquished By:	M	(C)	Do	ite/fi	me I	0	R	ecei	ived	By Laboro	2	1	aluly		
B USE ONLY: perfec project numb aboratory Tracking: apperature at Rece	21		& COND	UTIC	NIC	0	NI D				1	<u> </u>	COC Revisi	ion: February, 2013 RCV	OON



Friday, July 26, 2013

Fibertec Project Number:

57114

Project Identification:

SXL-1406 Avon Road Rochester Hills, MI/

Submittal Date:

07/25/2013

Mr. Bob Elliott

Groundwater and Environmental Services, Inc.

10381 Citation Drive

Suite 500

Brighton, MI 48116

Dear Mr. Elliott,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh Laboratory Director

DPS/kc

Enclosures



Order: Page: Date: 57114 2 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description: SB-5 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA Sample Matrix:

Soil/Solid

Collect Time:

16:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)				Al	iquot ID: 57	114-001A	Matrix: Soi	Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	e Analysis Batch
1. Percent Moisture (Water Content) (NN)	18		%	0.1	1.0	07/25/13	MC130725	07/26/13	MC130725

Arsenic 2200 μg/l 2 Barium 4300 μg/l				Al	iquot ID: 571	14-001A	Matrix: Soil/Solid		Analyst: JLH	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Arsenic	2200		µg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
2 Barium	4300		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
3 Cadmium	U	-01	μg/kg	50	20	07/26/13	PT13G26A	07/26/13	T213G26A	
4. Chromium	2600		µg/kg	500	20	07/26/13	PT13G26A	07/26/13	T213G26A	
5 Copper	4400		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
6. Lead	2400		μg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	
7. Selenium	U		µg/kg	200	20	07/26/13	PT13G26A	07/26/13	T213G26A	
8. Silver	U		μg/kg	100	20	07/26/13	PT13G26A	07/26/13	T213G26A	
9. Zinc	14000		µg/kg	1000	20	07/26/13	PT13G26A	07/26/13	T213G26A	

Mercury by CVAAS (EPA 7471B)				Al	iquot ID: 571	14-001A	Matrix: Soil	/Solid	Analyst: JLP
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Mercury	U		µg/kg	50	9.6	07/26/13	PM13G26A	07/26/13	M613G26A

. Aldrin U 2 alpha-BHC (NN) U 3 beta-BHC (NN) U 4 delta-BHC U 5 gamma-BHC (NN) U 5 Chlordane (NN) U				A	Aliquot ID: 57114-001A			Matrix: Soil/Solid	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
3 beta-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
4. delta-BHC	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/kg	25	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
7. 4,4'-DDD	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
8.4,4'-DDE	U	J,L-	µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
9, 4,4'-DDT	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
10. Dieldrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
11. Endosulfan I	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
12 Endosulfan II	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
13. Endosulfan Sulfate	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
14. Endrin	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
15 Endrin Aldehyde	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
16. Heptachlor	Ü		μg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trall Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 3 of 68 07/26/13

Client Identification:

Groundwater and

Environmental Services, Inc.

Sample Description:

SB-5 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

16:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA	3546/EPA 8081B)			Al	iquot ID: 571	14-001A	Matrix: Soil	/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
18. Methoxychlor	U		µg/kg	50	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B
19. Toxaphene (NN)	U		µg/kg	410	5.0	07/25/13	PS13G25D	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082	4)		Al	iquot ID: 571	14-001A	Matrix: Soil	/Solid A	Analyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
2 Aroclor-1221	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
3. Aroclor-1232	U		μg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
4. Aroclor-1242	U		μg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
5. Aroclor-1248	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
6. Aroclor-1254	Ü		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
7. Aroclor-1260	ti		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
8. Aroclor-1262 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A
9. Aroclor-1268 (NN)	U		µg/kg	330	10	07/25/13	PS13G25A	07/25/13	SB13G25A

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (E	PA 50	35/EPA 826	(OB) A	iquot ID: 571	14-001	Matrix: Soi	/Solid /	Analyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/25/13	V913G25A	07/25/13	V913G25A
2 Acrylonitrile	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
3. Benzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
4. Bromobenzene	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
5 Bromochloromethane	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
6. Bromodichloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A
7. Bromoform	U		µg/kg	120	1.0	07/25/13	V913G25A	07/25/13	V913G25A
8. Bromomethane	U		µg/kg	200	1.0	07/25/13	V913G25A	07/25/13	V913G25A
9.2-Butanone	U		µg/kg	750	1.0	07/25/13	V913G25A	07/25/13	V913G25A
10. n-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
13. Carbon Disulfide	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
14. Carbon Tetrachloride	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
15. Chlorobenzene	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
16. Chloroethane	U		µg/kg	310	1,0	07/25/13	V913G25A	07/25/13	V913G25A
17. Chloroform	U		µg/kg	61	1.0	07/25/13	V913G25A	07/25/13	V913G25A
18. Chloromethane	U		µg/kg	250	1.0	07/25/13	V913G25A	07/25/13	V913G25A
19. 2-Chlorotoluene	U		µġ/kg	50	1.0	07/25/13	V913G25A	07/25/13	V913G25A
20. Dibromochloromethane	U		µg/kg	100	1.0	07/25/13	V913G25A	07/25/13	V913G25A

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date:

57114 4 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: SB-5 (0-1)

Chain of Custody:

127339

Client Project Name: Client Project No:

NA

Sample No: Sample Matrix:

Soil/Solid

Collect Date: Collect Time: 07/24/13 16:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis,

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B) Aliquot ID: 57114-001 Matrix: Soil/Solid Analyst: CCD Prep Date Parameter(s) Result Q Reporting Limit Dilution Prep Batch Analysis Date Analysis Batch Units 21.1,2-Dibromo-3-chloropropane (SIM) (N U µg/kg 1.0 07/25/13 V913G25A 07/25/13 V913G25A 22 Dibromomethane U µg/kg 250 1.0 07/25/13 V913G25A 07/25/13 V913G25A 23. 1,2-Dichlorobenzene U µg/kg 100 1.0 07/25/13 V913G25A 07/25/13 V913G25A 24.1,3-Dichlorobenzene U µg/kg 100 1.0 07/25/13 V913G25A 07/25/13 V913G25A U 100 25. 1,4-Dichlorobenzene 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 26. Dichlorodifluoromethane U 250 07/25/13 V913G25A V913G25A µg/kg 1.0 07/25/13 U 27. 1,1-Dichloroethane 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg £1 28, 1,2-Dichloroethane µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A U 29.1,1-Dichloroethene µg/kg 50 1.0 07/25/13 V913G25A 07/25/13 V913G25A U 30 cis-1.2-Dichloroethene V913G25A V913G25A µg/kg 50 1.0 07/25/13 07/25/13 U 50 31. trans-1,2-Dichloroethene 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 32 1,2-Dichloropropane U µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A 33. cis-1,3-Dichloropropene U µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A 34. trans-1,3-Dichloropropene U µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A 35. Ethylbenzene U µg/kg 50 1.0 07/25/13 V913G25A 07/25/13 V913G25A 36. Ethylene Dibromide U µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A 37.2-Hexanone 11 2500 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 38. Isopropylbenzene U 250 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 39. Methyl lodide U µg/kg 120 1.0 07/25/13 V913G25A 07/25/13 V913G25A 40. Methylene Chloride U µg/kg 100 1.0 07/25/13 V913G25A 07/25/13 V913G25A 41. 4-Methyl-2-pentanone U 2500 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 42 MTBE U 250 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 43. Naphthalene 330 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 44. n-Propylbenzene U 100 07/25/13 V913G25A µg/kg 1.0 V913G25A 07/25/13 U 1.0 V913G25A 45. Styrene µg/kg 50 07/25/13 V913G25A 07/25/13 46. 1,1,1,2-Tetrachloroethane U µg/kg V913G25A 07/25/13 V913G25A 100 1.0 07/25/13 U V913G25A 07/25/13 V913G25A 47.1,1,2,2-Tetrachloroethane µg/kg 61 1.0 07/25/13 48. Tetrachloroethene U µg/kg 50 1.0 07/25/13 V913G25A 07/25/13 V913G25A 49. Toluene U 50 V913G25A V913G25A µg/kg 1.0 07/25/13 07/25/13 50. 1,2,4-Trichlorobenzene U 330 07/25/13 V913G25A 07/25/13 V913G25A µg/kg 1.0 51.1,1,1-Trichloroethane U 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg U V913G25A 52 1.1.2-Trichloroethane µg/kg 61 1.0 07/25/13 V913G25A 07/25/13 53. Trichloroethene 61 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg U V913G25A 54. Trichlorofluoromethane V913G25A 07/25/13 100 07/25/13 µg/kg 1.0 55.1,2,3-Trichloropropane U 120 1.0 07/25/13 V913G25A 07/25/13 V913G25A µg/kg V913G25A 56.1,2,3-Trimethylbenzene (NN) U 100 1.0 07/25/13 V913G25A 07/25/13 µg/kg 57. 1,2,4-Trimethylbenzene U 07/25/13 V913G25A V913G25A µg/kg 100 1.0 07/25/13 58. 1,3,5-Trimethylbenzene U µg/kg 100 1.0 07/25/13 V913G25A 07/25/13 V913G25A 59. Vinyl Chloride U V913G25A 07/25/13 V913G25A µg/kg 40 1.0 07/25/13

> 1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail

Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601

T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 5 of 68 07/26/13

Client Identification: Ground

Groundwater and

NA

Environmental Services, Inc.

Sample Description:

SB-5 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

1

Collect Date:

07/24/13

Client Project No:

Sample Matrix:

Soil/Solid

Collect Time:

16:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds	(VOCs) by GC/MS, 5035 (E	PA 503	35/EPA 826	0B) A	liquot ID: 571	14-001	Matrix: Soil	/Solid A	nalyst: CCD
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
60. Xylenes	U		µg/kg	150	1.0	07/25/13	V913G25A	07/25/13	V913G25A

Base/Neutral/Acid Semivolatiles by GC/M	S (EPA 3546/E	PA 827	(OC)	A	iquot ID: 571	14-001A	Matrix: Soil	/Solid A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1, Acenaphthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
2 Acenaphthylene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
3. Aniline	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
4. Anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
5. Azobenzene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
6. Benzo(a)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
7. Benzo(a)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
8. Benzo(b)fluoranthene	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
9. Benzo(ghi)perylene	U	-	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
10. Benzo(k)fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
11. Benzyl Alcohol	Ų		µg/kg	3300	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
12 Bis(2-chloroethoxy)methane	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
13. Bis(2-chloroethyl)ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
14. Bis(2-chloroisopropyl) Ether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
15. Bis(2-ethylhexyl)phthalate (NN)	U	1-1	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
16. 4-Bromophenyl Phenylether (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
17. Butyl Benzyl Phthalate	U	7	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
18. Carbazole (NN)	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
19.4-Chloro-3-methylphenol	U		µg/kg	280	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
20. 2-Chloronaphthalene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
21. 2-Chlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
22 4-Chlorophenyl Phenylether	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
23. Chrysene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
24. Dibenzo(a,h)anthracene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
25 Dibenzofuran	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
26. 2,4-Dichlorophenol	U		μg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
27. Diethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
28. Dimethyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
29.2,4-Dimethylphenol	U	-6	µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
30. Di-n-butyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
31. 2,4-Dinitrophenol	U		μg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
32.2,4-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
33. 2,6-Dinitrotoluene (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
34 Di-n-octyl Phthalate	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B

1914 Holloway Drive 11766 E. Grand River 8660 S. Mackinaw Trail Holt, MI 48842 Brighton, MI 48116 Cadillac, MI 49601 T: (517) 699-0345 T: (810) 220-3300 T: (231) 775-8368



Order: Page: Date: 57114 6 of 68 07/26/13

Client Identification: Grou

Groundwater and Environmental Services, Inc.

Sa

Sample Description: SB-5 (0-1)

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

16:05

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Base/Neutral/Acid Semivolatiles by GC/	MS (EPA 3546/E	PA 827	(OC)	Al	iquot ID: 571	14-001A	Matrix: Soi	l/Solid	Analyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Dat	e Analysis Batch
35. Fluoranthene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
36, Fluorene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
37. Hexachlorobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
38. Hexachlorobutadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
39. Hexachlorocyclopentadiene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
40. Indeno(1,2,3-cd)pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
41 Isophorone	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
42.2-Methyl-4,6-dinitrophenol (NN)	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
43. 2-Methylnaphthalene	Ú		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
44. 2-Methylphenol (NN)	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
45.3&4-Methylphenol (NN)	U		µg/kg	660	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
46. 2-Nitroaniline	Ü		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
47.3-Nitroaniline	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
48. 4-Nitroaniline	U		μg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
49. Nitrobenzene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
50. 2-Nitrophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
51.4-Nitrophenol	U		µg/kg	830	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
52 N-Nitrosodimethylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
53. N-Nitrosodi-n-propylamine	U		µg/kg	330	1,0	07/25/13	PS13G25A	07/25/13	S713G25B
54. N-Nitrosodiphenylamine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
55. Pentachlorophenol	U		µg/kg	820	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
56. Phenanthrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
57. Phenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
58. Pyrene	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
59. Pyridine	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
60. 2,4,5-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B
61, 2,4,6-Trichlorophenol	U		µg/kg	330	1.0	07/25/13	PS13G25A	07/25/13	S713G25B



Order: Page: Date:

57114 7 of 68 07/26/13

Client Identification:

Groundwater and

SXL-1406 Avon Road

Environmental Services, Inc.

Sample Description: TW-7

Chain of Custody:

127339

Client Project Name:

NA

Sample No: Sample Matrix:

Collect Date:

07/24/13

Client Project No: Sample Comments:

Definitions:

Ground Water

Collect Time:

16:50

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Organochlorine Pesticides (EPA 353	35A/EPA 8081B)			Al	iquot ID: 571	14-002B	Matrix: Gro	und Water A	nalyst: GAN
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aldrin	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
2 alpha-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
3 beta-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
4. delta-BHC	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
5 gamma-BHC (NN)	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
6. Chlordane (NN)	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
7.4,4'-DDD	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
8.4,4'-DDE	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
9.4,4'-DDT	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
10. Dieldrin	U		μg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
11. Endosulfan I	U		µg/L	0.030	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
12 Endosulfan II	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
13 Endosulfan Sulfate	U		µg/L	0.050	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
14 Endrin	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
15 Endrin Aldehyde	U		µg/L	0.020	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
16. Heptachlor	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
17. Heptachlor Epoxide	U		µg/L	0.011	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
18. Methoxychlor	U		µg/L	0.50	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B
19. Toxaphene (NN)	Ü		µg/L	1.0	1.1	07/25/13	PS13G25G	07/26/13	SC13G25B

Polychlorinated Biphenyls (PCBs)	(EPA 3535A/EPA 8082	2A)		Al	iquot ID: 571	14-002B	Matrix: Gro	und Water A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/L	0.20	1,0	07/25/13	PS13G25C	07/25/13	SA13G25B
2 Aroclor-1221	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
3 Aroclor-1232	U		µg/L	0.20	1,0	07/25/13	PS13G25C	07/25/13	SA13G25B
4. Aroclor-1242	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
5 Aroclor-1248	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
6. Aroclor-1254	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
7. Aroclor-1260	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
8. Aroclor-1262 (NN)	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B
9. Aroclor-1268 (NN)	U		µg/L	0.20	1.0	07/25/13	PS13G25C	07/25/13	SA13G25B

Volatile Organic Compounds ((VOCs) by GC/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 571	14-002	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	Ü		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
2 Acrylonitrile	U		µg/L	2.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
3. Benzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

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Order: Page: Date: 57114 8 of 68 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Sample Description: TW-7

Chain of Custody:

127339

Client Project Name:

SXL-1406 Avon Road

Sample No: 2

Collect Date:

07/24/13

Client Project No:

NA

Sample Matrix:

Ground Water

Collect Time:

16:50

Sample Comments:

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC	/MS (EPA 50	30B/E	PA 8260B)	Al	iquot ID: 571	14-002	Matrix: Gro	und Water A	nalyst: JPL
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
4. Bromobenzene	U	1	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
5. Bromochloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
6. Bromodichloromethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
7. Bromoform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
8. Bromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
9.2-Butanone	U		µg/L	25	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
10. n-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
11. sec-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
12 tert-Butylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
13. Carbon Disulfide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
15. Chlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
16. Chloroethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
17. Chloroform	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
18. Chloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
19.2-Chlorotoluene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
20. Dibromochloromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
21. 1,2-Dibromo-3-chloropropane (SIM) (N	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
22 Dibromomethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
23.1,2-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
25.1,4-Dichlorobenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
27.1,1-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
28.1,2-Dichloroethane	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
29.1,1-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
32 1,2-Dichloropropane	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
33. cis-1,3-Dichloropropene	U	3.55	µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
34. trans-1,3-Dichloropropene	U		μg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
35. Ethylbenzene	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
36 Ethylene Dibromide	U		µg/L	1.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
37. 2-Hexanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
38. Isopropylbenzene	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
39. Methyl lodide	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
40. Methylene Chloride	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
41. 4-Methyl-2-pentanone	U		µg/L	50	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B
42 MTBE	U		µg/L	5.0	1.0	07/25/13	VB13G25B	07/25/13	VB13G25B

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TABLES





Soil Sample ID	Date	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (ng/kg)	Total Xylenes (ng/kg)	MTBE (µg/kg)	Isopropyl Benzene (ug/kg)	Naphthalene (Hg/kg)	1,1 Dichloroethane (µg/kg)	1,1 Dichloroethene jug/kg)	,1,1,1 Trichloroethane (µg/kg)	1,1,1,2-Tetrachioroethane (µg/kg)	1,1,2,2,-Tetrachloroethane (ag/kg)	1,1,2-Trichloraethane [ug/kg]	,2,3-Trichloropropane ,ug/kg)	1,2,3-T rimethylbenzene µg/kg)	1.2.4-Trichlorobenzene (µg/kg)	1.2.4-Trimethylbenzene µg/kg)	(,2-Dibromo-3-chloropropane
	Soil Vol to Indoor Air	1,600	250,000	87,000	150,000	5,900,000	390,000	250,000	230,000	62	250,000	6,200	4,300	4,600	NA	NA.	1,100,000	110,000	1,200
	dential Direct Contact dential DW Protection	180,000	250,000 16,000	1,500	150,000 5,600	1,500,000 800	91,000	2.E+07 35,000	-890,000 18,000	200,000	460,000	440,000 1,500	53,000	180,000	830,000	NA	990,000	110,000	1,200
	MI SGSIP - Soil	4,000	5,400 NA	360 NA	820 NA	140,000 NA	3,200 NA	730 NA	15,000 NA	2,600 NA	4,000 1,800 NA	ID NA	170 1,600 NA	6,600 NA	840 NA NA	NA NA NA	4,200 5,900 NA	2,100 570 NA	ID NA
SB-1 (6-7)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<59	<50	<59	<100	<59	<59	<120	<100	<330	<100	<30
SB-2 (6-7)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<57	<50	<57	<100	<57	<57	<110	<100	<330	<100	<29
SB-3 (13-14)	07/23/2013	<50	<50	<50	<150	<250	<250	<330	<62	<50	<62	<100	<62	<62	<120	<100	<330	<100	<31
SB-4 (0-1)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<61	<50	-<61	<100	<61	<61	<120	<100	<330	<100	<31
SB-5 (0-1)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<61	<50	<61	<100	<61	<61	<120	<100	<330	<100	<31
SB-6 (1-2)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<54	<50	<54	<100	<54	<54	<110	<100	<330	<100	<27
SB-7 (5-6)	07/23/2013	<50	<50	<50	<150	<250	<250	<330	<57	<50	<57	<100	<57	≤57	<110	<100	<330	<100	<28
SB-8 (6-7)	07/24/2013 —	<50	<50	<50	×150-	<250	<250	<330	<61	<50	<61	<100	<61	<61	<120	<100	<330	<100	<30
SB-9 (4-5)	07/24/2013	<50	<50	<50	≤150	<250	<250	<330	<58	<50	<58	<100	<58	<58	<120	<100	<330	<100	<29
SB-10 (2-3)	07/24/2013	<50	<50	<50	<150	<250	<250	<330	<62	<50	<62	<100	<62	<62	<120	<100	<330	<100	<31
SB-11 (1-2) DUP	07/23/2013	<50	<50	<50	<150	<250	<250	<330	<63	<50	<63	<100	<63	<63	<130	<100	<330	<100	<31
SB-11 (1-2)	07/23/2013	<50	<50	<50	<150	<250	<250	<330	<64	<50	<64	<100	<64	<64	<130	<100	<330	<100	<32
SB-12 (6-7)	07/23/2013	<50	<50	<50	<150	<250	<250	<330	<60	<50	<60	<100	<60	<60	<120	<100	<330	<100	<30



Soil Sample ID	Date	1,2-DiBromoethane (µg/kg)	1,2-Dichlorobenzene (µg/kg)	1,2-DiChloroethane (µg/kg)	1.2-Dichloropropane (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	2,4,5-Trichlorophenol (µg/kg)	2.4.6-Trichlorophenol [µg/kg]	2,4-Dichlorophenol (µg/kg)	2,4-Dimethylphenol (µg/kg)	2,4-Dinitrophenol (ug/kg)	2,4-Dinitrotoluene (µg/kg)	2,6-Dinitrololuene [µg/kg]	-Butanone MEK) pg/kg)	2-Chloronapthalene µg/kg)	2-Chlorophenol (ug/kg)	2-Chlorotoluene [µg/kg]	-Hesanone .pg/kg)	2-Methylnaphthalene (ng/kg)
	oil Vol to Indoor Air	670	210,000	2,100	4,000	94,000	NA	NA	NA.	NA	NA	NA	NA	27,000,000	NA	NA	270,000	990,000	4,700,000
	Iential Direct Contact Iential DW Protection	92	210,000 14,000	91,000	140,000	94,000	2.E+10 39,000,000	7.E+08 2,400,000	7.E+08 1,500,000	1.E+07 7.400	NA NA	48,000	NA NA	3,E+07 260,000	6.E+07 620,000	1.E+09	500,000	2,500,000	8,100,000
Wi KCSI	MI SGSIP - Soil	110	280	7,200	4,600	1,100	NA NA	330	330	7,600	NA NA	NA.	NA NA	44,000	NA_	900,000 360	3,300 ID	20,000 ID	57,000 4,200
MI Statewide De	fault Background Levels	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA
SB-1 (6-7)	07/24/2013	<59	<100	<59	<59	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-2 (6-7)	07/24/2013	<57	<100	<57	<57	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-3 (13-14)	07/23/2013	<62	<100	<62	<62	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-4 (0-1)	07/24/2013	<61	<100	<61	<61	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-5 (0-1)	07/24/2013	<61	<100	<61	<61	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-6 (1-2)	07/24/2013	<54	<100	<54	<54	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-7 (5-6)	07/23/2013	<57	<100	<57	<57	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-8 (6-7)	07/24/2013	<61	<100	<61	<61	<100	<330	<330	<330	<330	<830	<330	<330	-750	<330	<330	<50	<2500	<330
SB-9 (4-5)	07/24/2013	<58	<100	<58	<58	<100	<330	<3.30	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-10 (2-3)	07/24/2013	<62	<100	<62	<62	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330
SB-11 (1-2) DUP	07/23/2013	<63	<100	<63	<63	<100	<330	<330	<330	<330	<840	<330	<330	<750	<330	<330	<50	<2500	<330
SB-11 (1-2)	07/23/2013	<64	<100	<64	<64	<100	<330	<330	<330	<330	<850	<330	<330	<750	<330	<330	<50	<2500	<330
SB-12 (6-7)	07/23/2013	<60	<100	<60	<60	<100	<330	<330	<330	<330	<830	<330	<330	<750	<330	<330	<50	<2500	<330



Soil Sample ID	Date	2-Methylphenal (ng/kg)	2-Nitroaniline (µg/kg)	2-Nitrophenol (µg/kg)	3+4 Methyl Phenol (µg/kg)	3-Nitroaniine [µg/kg]	4,4-DDD jug/kg)	1,4-DDE (192 ¹ kg)	4,4-DDT µg/kg)	t,6-Dinitro-2-methylphenol µg/kg)	⊢Bromophenyl phenyl ether µg/kg)	t-Chlora-3-methylphenol µg/kg)	HChlorophenyl-phenylether µg/kg)	+Methyl-2-pentanone MIBK ug/kg	-Nitroaniline µg/kg)	+Nitrophenol (µg/kg)	Acenaphthene µg/kg)	censphthylene µg/kg)	Acetone (µg/kg)
	soil Vol to Indoor Air	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.	NA	2,700,000	NA.	NA	2.E+08	1,600,000	1.E+08
10000	lential Direct Contact	NA	N4 -	6.E+08	NA.	-NA	NA.	NA .	NA	NA.	NA:	5.E+09	NA	2,700,000	NA .	NA	4.E+07	1,600,000	2.E+07
MI Resi	dential DW Protection	NA.	NA	400,000	NA.	NA	NA.	NA	NA	NA	NA	5,800,000	NA.	36,000	NA	NA	300,000	5,900	15,000
MI Statewide De	MI SGSIP - Soil fault Background Levels	NA NA	NA NA	ID NA	NA NA	NA NA	NLL NA	NLL NA	NLL NA	NA NA	NA NA	280 NA	NA NA	<u>ID</u>	NA NA	NA	8,700	ID	34,000
SB-1 (6-7)	07/24/2013	<330	<330	<330	<660	<830	<20	NA <20 ·	NA <20	<830	<330	NA <280	<330	NA -2500	NA <830	NA <830	NA <330	NA <330	NA <1000
SB-2 (6-7)	07/24/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-3 (13-14)	07/23/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
	13-11								l est	4050	-554	-200	550	1000	430	×830	~550	V330	1000
SB-4 (0-1)	07/24/2013	<330	<330	<330	<660	<830	<20	<20	<20.	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-5 (0-1)	07/24/2013	<330	<330	<330	<660	<830	≤20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-6 (1-2)	07/24/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-7 (5-6)	07/23/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-8 (6-7)	07/24/2013	<330	<330.	<330	<660.	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-9 (4-5)	07/24/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-10 (2-3)	07/24/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000
SB-11 (1-2) DUP	07/23/2013	<330	<330	<330	<660	<830	<20	<20	<20	<840	<330	<280	<330	<2500	<840	<840	<330	<330	<1000
SB-11 (1-2)	07/23/2013	<330	<330	<330	<660	<830	<20	<20	<20	<850	<330	<280	<330	<2500	<850	<850	<330	<330	<1000
SB-12 (6-7)	07/23/2013	<330	<330	<330	<660	<830	<20	<20	<20	<830	<330	<280	<330	<2500	<830	<830	<330	<330	<1000



Soil Sample 1D	Date	Acrylonitrile (µg/kg)	Aldrin (ug/kg)	alpha-Endosulfan (ug/kg)	aipha-Hexachlorocyclohexane (ug/kg)	Andline (ug/kg)	Anthracene (µg/kg)	Aroclor 1016 [µg/kg]	Arocior 1221 (µg/kg)	Aroclor 1232 [sg/kg]	Arocior 1242 jug/kg)	Aroclor 1248 (#g/kg)	Aroclor 1254 µg/kg)	Arocior 1260 µg/kg)	krócier 1262 µg/kg)	Aroclor 1268 (rg/kg)	Arsenic µg/kg)	kobenzene µg/kg)	3arium µg/kg)
	oil Vol to Indoor Air	6,600	NA	NA	NA	NA.	1.E+09	3.E+09	3.E+09	3.E+09	3.E+09	3.E+09	3.E+09	3.E+09	3.E+09	3.E+09	NA.	630,000	NA.
	dential Direct Contact dential DW Protection	.16,000	N.4	NA	NA.	330.000	2.E+08	4,000,000	4,000,000	4,000,000	4,000,000	4.000,000	4,000,000	4,000,000	4,000,000	4,000,000	7,600	140,000	4.E+07
MUKesi	MI SGSIP - Soil	100	NA NLL	NA NA	NA III	1,100	41,000	NA	NA	NA	NA.	NA.	NA	NA	NA	NA	4,600	4,200	1,300,00
MI Statewide De	fault Background Levels	NA	NA	NA NA	ID NA	330 NA	ID NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	4,600 5,800	ID NA	(G) 75,000
SB-1 (6-7)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,700	<330	11,000
SB-2 (6-7)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,600	<330	7,200
SB-3 (13-14)	07/23/2013	<100	-<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,300	<330	6,600
SB-4 (0-1)	07/24/2013	<100	<20	<20	<20	<330.	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	150,000	<330	54,000
SB-5 (0-1)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,200	<330	4,300
SB-6 (1-2)	.07/24/2013	<100	-<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,100	<330	37,000
SB-7 (5-6)	07/23/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,800	<330	6,900
SB-8 (6-7)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	2,600	<330	5,200
SB-9 (4-5)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,600	<330	13,000
SB-10 (2-3)	07/24/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	.<330	<330	<330	<330	3,000	<330	11,000
SB-11 (1-2) DUP	07/23/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,100	<330	21,000
SB-11 (1-2)	07/23/2013	<100	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	3,400	<330	23,000
SB-12 (6-7)	07/23/2013	<(00	<20	<20	<20	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	<330	10,000	<330	16,000





Soil Sample ID	Date	Benzo(a)anthracene (µg/kg)	Benzo(a)pyrene (µg/kg)	Benzo(b)fluoranthene (µg/kg)	Benzo(g.h.i)perylene (s.g.k.g)	Benzo(k)fluoranthene (µg/kg)	Benzyl alcohol (11g/kg)	beta-Endosulfan (ug/kg)	beta-Hexachlorocyclobexane (µg/kg)	Bis (2 - Chloroethoxy) methane (µg/kg)	Bis (2-Chloroethyl) ether (µg/kg)	Bis (2-Chloroisopropyl) ether (11g/kg)	Bis(2-Ethylhexyl) phthalate [µg/kg]	Bromobenzene (µg/kg)	Bromochioromethane (µg/kg)	Bromodichloro-methane (#g/kg)	Bromoform [µg/kg]	Bromomethane [µg/kg]	Butyl benzyl phthalate (ug/kg)
00.000.000.000	soil Vol to Indoor Air	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,300	NA	310,000	NA	1,200	150,000	860	NA.
	dential Direct Contact dential DW Protection	20,000	2,000	20,000	2,500,000	200,000	5,800,000	NA .	N/A	2,800,000	13,000	13,000	2,800,000	540,000	NA	110,000	820.000	320,000	310,000
MI Resi	MI SGSIP - Soil	NA NLL	NA NLL	NA NLL	NA NLL	NA NLL	200,000 NA	NA NA	37 ID	NA NA	NA NA	100	NA NLL	550 NA	NA NA	1,600 ID	1,600 ID	200 700	310,000 120,000
MI Statewide De	fault Background Levels	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA.	NA	NA	NA	NA.	NA
SB-1 (6-7)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-2 (6-7)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<110	<100	<110	<200	<330
SB-3 (13-14)	07/23/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-4 (0-1)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-5 (0-1)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-6 (1-2)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<110	<100	<110	<200	<330
SB-7 (5-6)	07/23/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<110	<100	<110	<200	<330
SB-8 (6-7)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-9 (4-5)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-10 (2-3)	07/24/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330
SB-11 (1-2) DUP	07/23/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<130	<100	<130	<200	<330
SB-11 (1-2)	07/23/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<130	<100	<130	<200	<330
SB-12 (6-7)	07/23/2013	<330	<330	<330	<330	<330	<3300	<20	<20	<330	<330	<330	<330	<100	<120	<100	<120	<200	<330



Soil Sample ID	Date	Cadmium (µg/kg)	Carbazole (µg/kg)	Carbon disulfide (ug/kg)	Carbon Tetrachloride (µg/kg)	Chlordane (ug/kg)	Chlorobenzene (µg/kg)	Chloroethane (µg/kg)	Chloroform (ug/kg)	Chloromethane (#g/kg)	Chromium (µg/kg)	Chrysene (µg/kg)	cis-1, 2-Dichloroethene (µg/kg)	cis-1,3-Dichloropropene µg/kg)	Copper pg/kg)	lelta-Hexachlorocyclohexane µg/kg)	Di-n-Butylphthalate (µg/kg)	Di-n-octylphthalate pg/kg)	Dibenzo(a,h)anthracene µg/kg)
	oil Vol to Indoor Air	NA	NA	76,000	190	NA	120,000	950,000	7,200	2,300	NA	NA	22,000	NA	NA	NA.	NA	NA	NA.
	dential Direct Contact dential DW Protection	550,000	530,000 9,400	280,000	96,000	NA -	260,000	950,000	1,200,000	1.100,000	2,500,000	2,000,000	640,000	NA	2.E+07	NA -	8.E+08	6,900,000	2,000
MI PLESS	MI SGSIP - Soil	(GX)	1,100	16,000 ID	900	NA NLL	2,000 500	8,600 22,000	7,000	5,200 ID	30,000	NA NLL	1,400	NA.	5,800,000	NA.	760,000,000	-	NA
MI Statewide De	fault Background Levels	1,200	NA	NA NA	NA NA	NA	NA	NA	NA.	NA.	NA 18,000	NA.	NA	NA NA	(G) 32,000	NA NA	11,000 NA	ID NA	NLL NA
SB-1 (6-7)	07/24/2013	81	<330	<250	<59	<25	<59	<300	<59	<250	8,100	<330	<50.	<59	7,700	<20	<330	<330	<330
SB-2 (6-7)	07/24/2013.	51	<330	<250	<57	<25	<57	<290	<57	<250	4,000	<330	<50	<57	4,000	<20	<330	<330	<330
SB-3 (13-14)	07/23/2013	69	<330	<250	<62	<25	<62	<310	<62	<250	2,900	<330	<50	<62	5,100	<20	<330	<330	<330
SB-4 (0-1)	07/24/2013	110	<330	<250	<61	<25	<61	<310	<61	<250.	4,400	<330	<50	<61	6,500	<20	<330	<330	<330
SB-5 (0-1)	07/24/2013	<50	<330	<250	<61	<25	≤61	<310	<61	<250	2,600	<330	<50	<61	4,400	<20	<330	<330	<330
SB-6 (1-2)	07/24/2013	140	<330	<250	<54	<25	<54	<270	<54	<250	4,800	<330	<50	<54	5,100	<20	<330	<330	<330
SB-7 (5-6)	07/23/2013	55	<330	<250	<57	<25	<57	<280	<57	<250	4,300	<330.	<50	<57	4,500	<20	<330	<330	<330
SB-8 (6-7)	07/24/2013	69	<330	<250	≪61	<25	-<61	<300	≪61	<250	2,500	<330	<50	<61	4,600	<20	<330	<330	<330
SB-9 (4-5)	07/24/2013	120	<330	<250	<58	<25	<58	<290	<58	<250	6,700	<330	<50	<58	9,500	<20	<330	<330	<330
SB-10 (2-3)	07/24/2013.	120	<330	<250	<62	<25	<62	<310	<62	<250	4,600	<330	<50	<62	8,800	<20	<330	<330	<330
SB-11 (1-2) DUP	07/23/2013	150	<330	<250	<:63	<25	<63	<310	<63	<250	7,700	<330	<50	<63	6,800	<20	<330	<330	<330
SB-11 (1-2)	07/23/2013	160	<330	<250	<64	<25	<64	<320	<64	<250	7,000	<330	<50	<64	5,800	<20	<330	<330	<330.
SB-12 (6-7)	07/23/2013	98	<330	<250	<60	<25	<60	<300	<60	<250	4,300	<330	<50	<60	7,600	<20	<330	<330	<330





Soil Sample ID	Date	Dibenzofuran (µg/kg)	Dibromochloro-methane (µg/kg)	Dibromomethane (нg/kg)	Dichlorodifluoromethane (µg/kg)	Dieldrin (µg/kg)	Diethyl phthalate (µg/kg)	Dimethylphthalate (нg/kg)	Endosulfan sulfate (µg/kg)	Endrin (µg/kg)	Endrin aldehyde (µg/kg)	Fluoranthene (µg/kg)	Fluorene (µg/kg)	gamma-Hexachlorocyclohexa (lindane) (µg/kg)	Heptachlor (µg/kg)	Hexachlorobenzene [µg/kg]	Hexachlorobutadiene (µg/kg)	Hexachlorocyclopentadiene (ag/kg)
	Soil Vol to Indoor Air	NA	3,900	NA	900,000	NA	NA	NA	NA	NA	NA	1.E+09	6.E+08	NA	NA	41,000	130,000	30,000
	dential Direct Contact dential DW Protection	NA:	110,000	2,000,000	1,000,000	NA.	740,000	790.000	NA.	NA .	NA NA	5.E+07	3.E+07	NA.	NA	8,900	100,000	720,000
MI Kesi	MI SGSIP - Soil	NA 1,700	1,600 ID	1,600 NA	95;000 ID	NA NLL	2,200	790,000 NA	NA NA	NA NLL	NA NA	730,000 5,500	390,000 5,300	NA 20	NA NLL	350	26,000	320,000 ID
MI Statewide De	fault Background Levels	NA	NA	NA.	NA NA	NA	NA	NA	NA NA	NA	NA NA	NA.	NA.	NA NA	NA	NA	91 NA	NA.
SB-1 (6-7)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-2 (6-7)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-3 (13-14)	07/23/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-4 (0-1)	07/24/2013	<3.30	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-5 (0-1)	07/24/2013	<3.30	<100	≤250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-6 (1-2)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-7 (5-6)	07/23/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-8 (6-7)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-9 (4-5)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<3,30	<330	<330
SB-10 (2-3)	07/24/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-11 (1-2) DUP	07/23/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-11 (1-2)	07/23/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330
SB-12 (6-7)	07/23/2013	<330	<100	<250	<250	<20	<330	<330	<20	<20	<20	<330	<330	<20	<20	<330	<330	<330



Soil Sample ID	Date	Indeno(1,2,3-cd)py rene (µg/kg)	lodomethane (µg/kg)	Isophorone (µg/kg)	Lend pg/kg)	m-Dichlorobenzene jug/kg)	Mercury (Hg/kg)	Methoxychior (µg/kg)	Methyl Acetate (µg/kg)	Methylene Chloride (µg/kg)	a-Butylbenzene pg/kg)	N-Nitrosodi-n-propylamine pg/kg)	a-Nitrosodimethylamine	v-Nitrosodiphenylamine µg/kg)	n-propylbenzene Jug/kg)	Nitrobenzene ag/kg	≻Dichlorobenzene µg/kg)	Penfachlorophenol (µg/kg)
MI Res. S	oil Vel to Indoor Air	NA	NA	NA	NA	NA	48,000	NA	NA	45,000	NA	NA	NA.	NA	NA	91,000	19,000	NA
	ential Direct Contact	20,000	NA	2,400,000	400,000	170,000	160,000	NA.	NA.	1,300,000	2,500,000	1,200	NA.	1,700,000	2,500,000	100,000	400,000	9.E+07
MI Resid	ential DW Protection	NA	NA.	15,000	700,000	170	1,700	16,000	NA	100	1,600	330	5,400,000	5,400	1,600	330	1,700	22,000
MI Statemark Dad	MI SGSIP - Soil sult Background Levels	NLL NA	NA NA	26,000 NA	(GX) 21,000	680 NA	NA 130	NA NA	NLL NA	30,000 NA	<u>ID</u>	NA.	NA.	NA.	<u>ID</u>	3,600	360	(GX)
SB-1 (6-7)	07/24/2013	<330	<120	NA <330	4,600	<100	<50	<50	NA <20	NA <100	NA <50	NA <330	NA <330	NA <330	NA 100	NA 220	NA <100	NA <800
30-1 (0-1)	07/24/2013	-559	4120	V330	4,000	>100	- 50	50	20	<100	50.	<330	V330	<330	<100	<330	<100	<800
SB-2 (6-7)	07/24/2013	<330	<110	<330	2,800	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<800
SB-3 (13-14)	07/23/2013	<330	<120	<330	2,800	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<830
SB-4 (0-1)	07/24/2013	<330	<120	<330	3,700	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<820
SB-5 (0-1)	07/24/2013	<330	<120	<330	2,400	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<820
SB-6 (1-2)	07/24/2013	<330	<110	<330	24,000	<100	66	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<800
SB-7 (5-6)	07/23/2013	<330	<110	<330	4,300	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<800
SB-8 (6-7)	07/24/2013	<330	<120	<330	2,700	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<810
SB-9 (4-5)	07/24/2013	<330	<120	<330	4,800	<100	<50	<50	<20	<100	≺50	<330	<330	<330	<100	<330	<100	<800
SB-10 (2-3)	07/24/2013	<330	<120	<330	4,500	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<820
SB-11 (I-2) DUP	07/23/2013	<330	≤130	<330	11,000	≺100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<840
SB-11 (1-2)	07/23/2013	<330	<130	<330	8,000	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<850
SB-12 (6-7)	07/23/2013	<330	<120	<330	3,800	<100	<50	<50	<20	<100	<50	<330	<330	<330	<100	<330	<100	<800





Soil Sample ID	Date	Phenanthrene (µg/hg)	Phenol (#g/kg)	Pyrene (ng/kg)	Pyridine (µg/kg)	sec-Butylbenzene (µg/kg)	Selenium (µg/kg)	Silver (#g/kg)	Styrene (197kg.)	tert-Butylbenzene (112/kg)	Tetrachloroethene (µg/kg)	Toxaphene (ug/kg)	trans-1, 2-Dichloroethene (µg/kg)	trans-1,3-Dichloropropene (µg/kg)	Trichloroethene (µg/kg)	Trichlorofluoromethane (µg/kg)	Vinyl Chloride pg/kg)	Zinc (µg/kg)
	oil Vol to Indoor Air		NA	1.E+09	1,000	NA	NA	NA	250,000	NA	11,000	NA	23,000	NA	7,100	560,000	270	NA
	dential Direct Contact dential DW Protection	1,600,000 56,000	1.E+10 88,000,000	3.E+07 480,000	37,000 400	1,600	2,600,000	2,500,000	400,000	2,500,000	88,000	NA .	1,400,000	NA	500,000	560,000	3,800	2.E+08
MI Kesi	MI SGSIP - Soil	2,100	9,000	480,000 ID	NA.	ID_	4,000	4,500	2,700	1,600 ID	1,200	NA 8,200	2,000 30,000	NA NA	4,000	52,000 NA	40 260	2,400,000
MI Statewide De	fault Background Levels	NA	NA	NA	NA	NA.	410	1,000	NA	NA NA	NA.	NA NA	NA NA	NA	NA.	NA NA	NA.	(G) 47,000
SB-1 (6-7)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<390	<50	<59	<59	<100	<40	21,000
SB-2 (6-7)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<380	<50	<57	<57	<100	<40	14,000
SB-3 (13-14)	07/23/2013	<330	<330	<330	<330	<50	270	<100	<50	<50	<50	<410	<50	<62	<62	<100	<40	23,000
SB-4 (0-1)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<410	<50	<61	<61	<100	<40	20,000
SB-5 (0-1)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<410	<50	<61	<61	<100	<40	14,000
SB-6 (1-2)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<360	<50	<54	<54	<100	<40	24,000
SB-7 (5-6)	07/23/2013	<330	<330	<330	<330	<50	240	<100	<50	<50	<50	<380	<50	<57	<57	<100	<40	13,000
SB-8 (6-7)	07/24/2013	<330	<330	<330	<330	<50	<200	<100	<50	<50	<50	<410	<50	<61	≤61	<100	<40	18,000
SB-9 (4-5)	07/24/2013	<330	<330	<330	<330	<50	260	<100	<50	<50	<50	<390	<50	<58	<58	<100	<40	31,000
SB-10 (2-3)	07/24/2013	<330	<330	<330	<330	<50	260	<100	<50	<50	<50	<410	<50	<62	<62	<100	<40	26,000
SB-11 (1-2) DUP	07/23/2013	<330	<330	<330	<330	<50	200	<100	<50	≺50	<50	<420	<50	<63	<63	<100	<40	21,000
SB-11 (1-2)	07/23/2013	<330	<330	<330	<330	<50	<200	<100	<50	-50	<50	<430	<50	<64	<64	<100	<40	19,000
SB-12 (6-7)	07/23/2013	<330	<330	<330	<330	<50	270	<100	<50	<50	<50	<400	<50	<60	<60	<100	<40	25,000

= Less than the method detection limit of#

µg/kg - Micrograms/Kilogram MTBE = Methyl Tertiary Butyl Ether

Exceeds regulatory limit MI Res. Soil Vol to Indoor Air. Exceeds regulatory limit MI SGSIP - Soil. Bold

Underline

Shaded Exceeds regulatory limit MI Residential DW Protection. Italics Exceeds regulatory limit MI Residential Direct Contact. NA. = Not Available or Not Analyzed for that specific compound



Monitoring Well	Date	Benzene (ag/L.)	Tolnene (µg/1.)	Ethylbenzene (µg/L,)	Total Xylenes (µg/L.)	МТВЕ (иg/L)	Isopropyl Benzene (µg/L.)	Naphthalene (µg/L.)	1,1 Dichloroethane (μg/L)	1,1 Dichloroethene (ug/L.)	1,1,1 Trichloroethane (ng/L)	l,1,1,2-Tetrachloroethane (μg/L)	1,1,2,2,-Tetrachloroethane (µg/L)	1,1,2-Trichloroethane (µg/L)	1,2,3-Trichloropropane (µg/L)	1,2,3-Trimethylbenzene (µg/L.)	1,2,4-Trichlorobenzene (µg/L.)	1,2,4-Trimethylbenzene (µg/L.)
	GC GDW	11,000	530,000 790	170,000 74	190,000 280	610,000 40	56,000 800	31,000 520	2,400,000 880	7	1,300,000 200	30,000 77	4,700 8,5	21,000	84,000 42	NA NA	19,000 70	56,000 63
	GVII - Residential I	5,600	530,000	110,000	190,000	47,000,000	56,000	31,000	1,000,000	200	660,000	15,000	12,000	17,000	NA.	NA.	300,000	56,000
	MI - GSI	200	270	18	41	7100 (X)	28	11	740	130	89	ID	78 (X)	330 (X)	NA.	NA.	99 (X)	17
MI Statewide D	efault Background Levels	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA .	NA	NA	NA	NA	NA	NA.	NA.
TRIP BLANK	07/23/2013 07/24/2013	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<3.0 <3.0	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<5.0 <5.0	<1.0 <1.0
TW-I	07/23/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	∹1,0	<5.0	<1.0
TW-2	07/23/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1,0	<1.0	<1.0	<1.0	<5.0	<1.0
TW-3	07/23/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1,0	<1.0	<1.0	<1.0	<1,0	<1,0	<1.0	<1,0	<5.0	<1.0
TW-4	07/24/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1,0	<1.0	<1.0	<1.0	<5.0	<1.0
TW-5	07/24/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1,0	<1,0	<5.0	<1,0
TW-6	07/24/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1,0	<5.0	<1.0
TW-7	07/24/2013	<1.0	<1.0	<1.0	<3.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1,0	<1,0	<1,0	<1.0	<5.0	<1.0



Monitoring Well	Date	1,2-Dibromo-3-chloropropane (µg/L.)	1,2-DiBromoethane (µg/L)	1,2-Dichlorobenzene (µg/L)	1,2-DiChloroethane (µg/L)	1.2-Dichloropropane (µg/L)	1,3,5-Trimethylbenzene (ug/L)	2.4,≲-Trichlorophenol (µg/L)	2,4,6-Trichlorophenol (µg/L)	2,4-Dichlorophenol (Hg/L)	2,4-Dimethylphenol (µg/L,)	2,4-Dinitrophenol (ug/L.)	2,4-Dinitrotoluene (µg/L)	2.6-Dinitrotoluene (ug/L)	2-Butanone (MEK) (ug/L)	2-Chloronapthalene [µg/L]	2-Chlorophenol gg/L,)	2-Chlorotoluene (µg/L)
1	GC GDW	390 0.2	25 0.05	160,000	19,000	16,000	61,000 72	730,000	120,000	48,000,000 73,000	520,000 370	NA NA	8,600 7.7	NA NA	240,000,000 /3,000	6,700 1,800	94,000,000 45,000	44,000 150
	GVII - Residential I	1,200	2,400	160,000	9,600	16,000	61,000	NA	NA	NA NA	NA.	NA	NA.	NA	240,000,000	NA.	NA NA	220,000
	MI-GSI	ID	5.7	13.	360	230	45	NA.	5,000	11,000	380	NA	NA.	NA	2,200	NA	18,000	ID
Mt Statewide De	efault Background Levels	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA.	NA	NA	NA	NA.	NA
TRIP BLANK	07/23/2013 07/24/2013	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0	<1.0 <1.0	<1.0 <1.0	91	101	0 4	1	-	1	1.	<25 <25	12	7	<5.0 <5.0
TW-I	07/23/2013	<1.0	≤1.0	<1.0	0,1>	<1.0	<1.0	<5	<4	<5	<5.0	<20	<5.0	<5.0	<25	<5.0	<5	<5.0
rw-2	07/23/2013	<1.0	<1,0	≤1.0	<1.0	<1.0	<1.0	<5.3	<4	<5	<5.0	<21	<5.3	<5,3	<25	<5,0	<5	<5.0
TW-3	07/23/2013	<1.0	<1.0	≤1.0	<1.0	<1.0	<1.0	-45	<4	<5	<5.0	<20	<5.0	<5.0	<25	<5.0	<5	<5,0
TW-4	07/24/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5	<4	<5	<5.0	<20	<5.0	<5.0	<25	<5.0	<5	<5.0
FW-5	07/24/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5	<4	<5	<5.0	<20	<5.0	<5.0	<25	<5.0	<5	<5.0
TW-6	07/24/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5	<4	<5	<5.0	<20	<5.0	<5.0	⊲5	<5.0	<5	<5.0
TW-7	07/24/2013	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5	<4	<5	<5.0	<20	<5.0	<5.0	<25	<5.0	<5	<5.0



Monitoring Well	Басе	2-Hexanone (pg/L)	2-Methylnaphthalene (µg/L)	2-Methylphenol (µg/L.)	2-Nitroaniline (ng/L)	2-Nitrophenol (µg/L)	3+4 Methyl Phenol (ug/L)	3-Nitroaniline (µg/L)	4,4-DDB (H/L)	4,4-DDE (ug/L)	4.4-DDT (µg/L)	4.6-Dinitro-2-methylphenol (µg/L)	4-Bromophenyl phenyl ether (ug/L)	4-Chloro-3-methylphenol (ug/L)	4-Chlorophenyl-phenylether (pg/L)	4-Methyl-2-pentanone (MIBK) (µg/L)	4-Nitroaniline (ug/L)	4-Nitrophenol (µg/L)
	GC GDW	5,200,000	25,900 260	NA NA	NA NA	79,000,000 20,000	NA NA	NA NA	NA 9.7	NA 4.3	NA	NA NA	NA NA	79,000,000 150,000	NA NA	13,000,000	NA NA	NA NA
	GVII - Residential I		25,000 (S)	NA.	NA	NA NA	NA	NA	NA	NA.	NA.	NA.	NA.	NA.	NA NA	20,000,000	NA.	NA NA
	MI - GSI	ID.	19	NA	NA	ID	NA	NA	NA.	NA.	0.02	NA	NA	7,400	NA	ID.	NA	NA:
MI Statewide D	efault Background Levels	NA .	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA NA	NA.	NA
TRIP BLANK	07/23/2013 07/24/2013	<50 <50	<5.0 <5.0		Ď				13		-		27	1	Ť	<50 <50		- 8-
TW-I	07/23/2013	<50	<5.0	<5	<20	<5	<10	<20	<0.020	<0.020	<0.020	<20	<5.0	-<5	<5	<50	<20	<20
TW-2	07/23/2013	<50	<5.0	<5	<20	<5.3	<10	<20	<0.020	<0.020	<0.020	⊲1	<5.0	<5	<5	<50	<21	<21
TW-3	07/23/2013	<50	<5.0	<5	<20	<5	<10	<20	<0.020	<0.020	<0.020	<20	<5.0	<5	<5	<50	<20	<20
TW-4	07/24/2013	<50	<5.0	<5	<20	.65	<10	<20	<0.020	< 0.020	<0.020	<20	<5.0	<5	<5	<50	<20	<20
TW-5	07/24/2013	<50	<5.0	<5	<20	<5	<10	<20	1	-	3.	<20	<5.0	<5	<5	<50	<20	<20
TW-6	07/24/2013	<50	<5.0	<5	<20	<5	<10	<20	<0.020	<0.020	<0.020	<20	<5.0	<5	<5	<50	<20	<20
TW-7	07/24/2013	<50	<5.0	<5	<20	<5	<10	<20	<0.020	<0.020	<0.020	<20	<5.0	<5	<5	<50	<20	<20



Montroring Well	Date	Acenaphthene (µg/L)	Acenaphthylene (µg/L.)	Acetone (pg/L.)	Aerylonitrile (μg/L)	Aldrin (pg/L)	aipha-Endosulfan (ug/L)	alpha-Hexachlorocyclobexane (ng/L)	Aniline (ug/L.)	Anthracene (µg/L.)	Aroclor 1016 (Hg/L)	Aroctor 1221 (ng/L)	Aroctor 1232 (µg/L.)	Aroclor 1242 (Hg/L.)	Aracior 1248 (sg/L)	Arodor 1254 (#g/L)	Araclar 1260 (ng/L.)	Aroclor 1262 (µg/L)
	GC GDW	4,200 1,300	3,900 52	730	14,000	NA 0.098	NA NA	NA 0.43	140,000	43	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
-	GVII - Residential I	4,200	3,900	1.E+09	34,000	NA.	NA	NA	NA	43	NA	NA	NA:	NA	NA.	NA.	NA NA	NA.
	MI-GSI	38	ID.	1,700	2	10.0	NA	ID	4	ID	NA.	NA	NA	NA	NA	NA	NA.	NA
MI Statewide D	efault Background Levels	NA	NA	NA	NA	NA	NA NA	NA	NA.	NA	NA	NA .	NA	NA	NA	NA	NA	NA
TRIP BLANK	07/23/2013 07/24/2013	9	3.	<50 <50	<2.0 <2.0	2	1 2		4		3			~	-	1		
TW-I	07/23/2013	<5.0	<5.0	<50	<2.0	≤0.011	<0.030	<0.011	<4,0	<5.0	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
TW-2	07/23/2013	<5.0	<5.0	<50	<2.0	<0.011	<0.030	<0.011	<4.0	<5.0	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
TW-3	07/23/2013	<5.0	<5.0	<50	<2.0	≤0,011	< 0.030	≤0.011	<4.0	<5.0	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
TW-4	07/24/2013	<5.0	<5.0	<50	<2.0	≤0.011	< 0.030	<0.011	<4.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	≤0,2
TW-5	07/24/2013	<5.0	<5.0	<50	<2.0	1.1	-		<4.0	<5.0	13			- ~	191		13.	-
TW-6	07/24/2013	<5.0	<5.0	<50	<2.0	<0.011	<0.030	<0.011	<4.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TW-7	07/24/2013	<5.0	<5.0	<50	<2.0	<0.011	< 0.030	<0.011	<4.0	<5.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2



Monitoring Well	Date	Arotlor 1268 (ug/L.)	Azobenzene (pg/L)	Benzo(a)anthracene (µg/L)	Benzo(a)pyrene (µg/L)	Benzo(b)Auoranthene (µg/L)	Benzo(g.h.i)perylene (µg/L)	Benzo(k)fluoranthene (µg/L)	Benzyl alcodol (11g/L.)	beta-Endosulfan (µg/L)	beta-Hexachlorocyclohexane (µg/L)	Bis (2 - Chloroethoxy) methane (ng/L)	Bis (2-Chloroeihyl) ether (µg/L)	Bis (2-Chloroisopropyl) ether (42/L.)	Bis(2-Ethythexyl) phthalate (µg/L)	Bromobenzene (µg/L.)	Bromochloromethane (µg/L)	Bromodichloro-methane (µg/L)
	GC GDW	NA NA	1,600 23	9.4	1 5	1.5	1	1	44,000,000 10,000	NA NA	NA 0.88	NA NA	NA NA	5,700	320 6	12,000	NA NA	14,000
-	GVII - Residential I	NA.	6,400	NA	NA	NA	NA.	NA.	NA	NA	NA	NA	NA.	38,000	NA	180,000	NA	4,800
	MI - GSI	NA	<u>ID</u>	ID	ID	ID	ID.	NA.	NA.	NA	ID_	NA	NA	1	25	NA.	NA	ID
	efault Background Levels	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TRIP BLANK	07/23/2013 07/24/2013		1		5	3	100	-3	., 5.8	10.7	7.	1.0	7	100	-57	<1.0 <1.0	<1.0 <1.0	<1,0 <1,0
rw-t	07/23/2013	<0.22	<5.0	2.1	2.9	4.0	2.3	1.5	<5.0	<0.020	<0.011	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0
TW-2	07/23/2013	<0.22	<5.0	2.2	2.6	3.6	2,1	1.3	<5,3	<0.020	<0.011	<5.0	<5.0	≤1.1	<5.3	<1.0	<1,0	<1,0
TW-3	07/23/2013	<0.21	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.020	<0.011	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0
TW-4	07/24/2013	<0.2	<5,0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.020	<0.011	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0
TW-5	07/24/2013	+	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	-	~	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0
TW-6	07/24/2013	<0.2	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<0.020	<0.011	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0
TW-7	07/24/2013	<0.2	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	< 0.020	<0.011	<5.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0



Monitoring Well	Date	Bromoform (µg/L)	Bromomethane (µg/L.)	Butyl benzyl phthalate (μg/L.)	Carbazole (ug/L.)	Carbon disulfide (µg/L.)	Carbon Tetrachloride (μg/L.)	Chlordane (µg/L)	Chlorobenzene (ug/L)	Chloroethane (ug/L)	Chloroform (µg/L)	Chloromethane (µg/L)	Chrysene (µg/L)	cis-1, 2-Dichloroethene (µg/L.)	cis-1,3-Dichloropropene (ug/L)	delta-Hexachlorocyclohexane (ug/L.)	Di-n-Butyiphthalate (µg/L)
	GC GDW	140,000 80	70,000	2,700 1,200	7,400 85	1,200,000 800	4,600	NA 2	86,000 /00	440,000	150,000	490,000 260	1.6	200,000 70	NA NA	NA NA	11,000,000 880,000
	GVII - Residential I	470,000	4,000	NA	NA	250,000	370	NA	210,000	5,700,000	28,000	8,600	NA	93,000	NA:	NA	NA:
	MI - GSI	ID	35	67	10	<u>ID</u>	45	2	25	1.100	350	ID	ID	620	NA	NA	9,700
	fault Background Levels	NA	NA	NA	NA	NA .	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.
TRIP BLANK	07/23/2013 07/24/2013	<1.0 <1,0	<5.0 <5.0	14	4.5	<5.0 <5.0	<1.0 <1.0	(A	<1,0 <1,0	<5.0 <5.0	<1.0 <1.0	<5.0 <5.0		<1,0 <1,0	<1,0 <1,0	0	91
rw-1	07/23/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<0.050	<1.0	<5.0	<1.0	<5.0	2.4	<1.0	<1.0	<0.011	<5.
rw-2	07/23/2013	<1.0	<5.0	<5.3	<5.0	<5.0	<1.0	<0,050	<1.0	<5.0	<1.0	<5.0	2.4	<1,0	∹1,0	<0.011	<5.3
rw-3	07/23/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<0.050	<1.0	<5.0	<1.0	<5.0	≪1.0	<1.0	<1.0	< 0.011	<5
TW-4	07/24/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<0.050	<1.0	<5.0	<1.0	<5.0	<1,0	<1,0	<1.0	<0,011	<5
TW-5	07/24/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	1.81	<1.0	<5.0	<1.0	<5.0	<1.0	<1.0	<1.0	0.00	<5
CW-6	07/24/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<0.050	<1.0	<5.0	<1.0	<5,0	<1,0	≤1.0	<1.0	<0.011	<5
ΓW-7	07/24/2013	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	< 0.050	<1.0	<5.0	≪1.0	<5.0	<1.0	<1.0	<1.0	< 0.011	<5



Monitoring Well	Date	Di-n-octylphthalate (μg/L.)	Dibenzo(a,h)anthracene (µg/L.)	Dibenzofuran (11g/L.)	Dibromochlore-methane (µg/L)	Dibromomethane (µg/L)	Dichlorodifluoromethane (ug/L)	Dieldrin (ug/L)	Diethyl phthalate (µg/L)	Dinethylphthalate (µg/L)	Endosulfan sulfate (µg/L)	Endrin (1:g/L.)	Endrin aldehyde (182/L.)	Fluoranthene (1g/L)	Fluorene (rg/L)	gamma-Hexachlorocyclobe (lindane) (µg/L)	Heptachlor (µg/1.)
	GC GDW	130	2 2	NA //D	18,000	530,000	300,000 1,700	NA 0.11	1,100,000 5,500	4,200,000 73,000	NA NA	NA 2	NA NA	210 210	2,000 880	NA NA	NA 0.4
	GVII - Residential I	NA.	NA.	NA.	14,000	NA.	220.000	NA	NA	NA.	NA	NA.	NA.	210	2,000	NA NA	NA.
	MI - GSI	ID	ID.	4	ID.	NA.	<u>ID</u>	0.02	110	NA.	NA	ID	NA	1.6	12	0.03	0.01 (M 0.0018
	fault Background Levels	NA	NA .	- NA	NA NA	NA:	NA.	NA	NA	NA	NA	NA.	NA	NA .	NA	NA	NA.
TRIP BLANK	07/23/2013 07/24/2013		es.	100	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	5	T S	â		7	1000	1		1	10
TW-1	07/23/2013	<5.0	<2.0	<4.0	<5.0	<5.0	<5.0	<0.020	<5.0	<5.0	< 0.050	<0.020	<0,020	4.1	<5.0	<0.011	≤0.011
rw-2	07/23/2013	<5.3	<2.1	<4.0	<5.0	<5.0	<5.0	<0.020	<5.0	<5.0	<0.050	<0.020	<0.020	4.4	<5.0	<0.011	≤0.011
TW-3	07/23/2013	<5.0	<2.0	<4.0	<5.0	<5.0	<5.0	< 0.020	<5.0	<5.0	<0.050	<0.020	<0.020	<1.0	<5.0	110.0>	<0.011
rw-4	07/24/2013	<5.0	<2.0	<4.0	<5.0	<5.0	<5.0	<0.020	<5.0	<5.0	<0.050	<0.020	<0.020	<1,0	<5,0	<0.011	<0.011
ΓW-5	07/24/2013	<5.0	<2.0	<4.0	<5,0	<5.0	<5.0	3	<5.0	<5.0	*	(+	-	<1.0	<5.0	18	-
TW-6	07/24/2013	<5.0	<2,0	-04,0	<5.0	<5.0	<5.0	<0.020	<5.0	<5.0	<0.050	<0.020	<0.020	<1.0	<5.0	<0.011	<0.011
rw-7	07/24/2013	<5.0	<2.0	<4.0	<5.0	<5.0	<5.0	<0.020	<5.0	<5.0	< 0.050	< 0.020	< 0.020	<1.0	<5.0	<0.011	<0.011



Table 2 Groundwater Analytical Data Sunoco Logistics 1406 E Avon Road Rochester Hills, MI 48307

Monitoring Well	Date	Heptachlor epoxide (μg/L.)	Hexachlorobenzene (µg/L)	Hexachiorobutadiene (µg/L)	Hexachlorocyclopentadiene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	lodomethane (µg/L.)	Isophorone (ug/L)	m-Dichlorobenzene (μg/L)	Methoxychlor (µg/L)	Methylene Chloride (pg/L)	n-Butylbenzene (µg/L)	N-Nitrosodi-n-propylamine (µg/L)	N-Nitrosodimethylamine (µg/L)	N-Nitrosodiphenylamine (µg/L)	n-propylbenzene (µg/L.)	Nitrobenzene (µg/L.)
GC NA GDW 0.2 GVII-Residential 1 NA			4.6	400 /5	1,600	2 2	NA NA	990,000	2,000	NA 40	220,000	5,900 80	360	NA.	35,000 270	15,000	11,000
	NA.	440	1,500	130	NA:	NA.	NA	NA	NA	220,000	NA	NA	NA.	NA	NA	280,000	
	MI - GSI	D	0.2 (M); 0.0003	0.053	ID.	ID	NA.	1300 (X)	28	NA.	1500 (X)	ID.	NA	NA	NA.	ID.	180 (X)
	fault Background Levels	NA	NA	NA	NA.	NA	NA .	NA	NA	NA	NA:	NA	NA	NA.	NA:	NA	NA
TRIP BLANK	07/23/2013 07/24/2013	Test	3		E		<5.0 <5.0	88	<1.0		<5.0 <5.0	<1.0 <1.0	6.0	9-	1	<1.0 <1.0	1.
TW-1	07/23/2013	<0.011	≤5.0	≤5.0	<5.0	<2.0	<5.0	<5.0	<1.0	<0.50	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<3.0
TW-2	07/23/2013	<0.011	≤5.0	< <u>5.0</u>	<5.3	<2.1	<5.0	<5.0	<1.0	<0.50	<5.0	<1.0	<5.0	<5.3	<5.0	<1.0	<3.0
TW-3	07/23/2013	<0.011	≤5.0	≤5.0	<5.0	<2.0	<5,0	<5.0	<1.0	<0.50	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<3.0
TW-4	07/24/2013	<0.011	≤5.0	≤5.0	<5,0	<2.0	<5.0	<5.0	<1.0	<0.50	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<3.0
TW-5	07/24/2013	1.5	<u><5.0</u>	<u><5.0</u>	<5.0	<2.0	<5.0	<5.0	<1.0	133	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<3.0
TW-6	07/24/2013	<0,011	≤5.0	≤5.0	<5,0	<2.0	<5.0	<5.0	<1.0	<0.50	<5.0	<1.0	<5.0	<5.0	<5.0.	<1.0	-<3.0
TW-7	07/24/2013	< 0.011	≤5.0	≤5.0	<5.0	<2.0	<5.0	<5.0	<1.0	< 0.50	<5.0	<1.0	<5.0	<5.0	<5.0	<1.0	<3.0



Table 2 Groundwater Analytical Data Sunoco Logistics 1406 E Avon Road Rochester Hills, MI 48307

Monitoring Well	Date	p-Dichlorobenzene (µg/L.)	Pentachlorophenol (µg/L)	Phenandurene (µg/L)	Phenol (µg/L)	Pyrene (µg/L)	Pyridine (ug/L.)	sec-Butylbenzene (µg/L.)	Styrene (µg/L.)	lert-Butylbenzene (µg/L)	Tetrachloroethene (µg/L,)	Toxaphene (нg/L)	trans–1, 2-Dichloroethene (µg/L)	trans-1,3-Dichloropropene (µg/L.)	Trichloroethene (µg/L)	Trichlorofluoromethane (µg/L)	Vinyl Chloride (ng/L)
	GC GDW	6,400	NA 1,000	1,000 52	NA 4,400,000	140	94,000	4,400 80	9,700	8,900 80	12,000	NA NA	220,000	NA NA	22,000	1,100,000 2,600	1,000
	GVII - Residential [16,000	NA	1.000	NA	140	5,500	NA:	170,000	NA.	25,000	NA.	R5,000	NA	15,000	1,100,000	001,1
	MI - GSI	JZ	(GX)	2.0 (M): 1.4	450	ID.	NA.	ID_	80 (X)	ID	60 (X)	1.0 (M): 6.8E- 5	1.500	NA	200	NA.	13 (X)
	fault Background Levels	NA	NA	NA.	NA	NA	NA	NA	NA	NA	. NA	NA	NA	NA	- NA	NA	NA
TRIP BLANK	07/23/2013 07/24/2013	<1.0	1		a l	1		<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0		<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0	<1.0 <1.0
FW-I	07/23/2013	<1.0	<20	<2.0	<5	<5.0	<5,0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TW-2	07/23/2013	<1.0	<21	<2.0	<5	<5.0	<5.0	<1.0	<1,0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TW-3	07/23/2013	<1.0	<20	<2.0	<5	<5.0	<5.0	<1,0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TW-4	07/24/2013	<1.0	<20	<2.0	<5	<5.0	<5.0	<1.0	<1,0	-<1,0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TW-5	07/24/2013	<1.0	<20	<2.0	<5	<5.0	<5.0	<1,0	<1.0	<1,0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0
TW-6	07/24/2013	<1.0	<20	<2.0	<5	<5.0	<5,0	<1,0	<1,0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	≤1,0	<1.0
TW-7	07/24/2013	<1.0	<20	<2.0	<5	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

= Less than the method detection limit of # = Micrograms/Liter

µg/L

Bold Exceeds regulatory limit MI - GSI.

Shaded Exceeds regulatory limit MI - GSI. MTBE - Methyl Tertiary Butyl Ether

Exceeds regulatory limit GVII - Residential I.

Italics Exceeds regulatory limit GDW,

= Not Available or Not Analyzed for that specific compound NA



APPENDIX A

Soil Boring Logs



ID NO. SB-1 / TW-5

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: PROJECT: TOTAL DEPTH: 15' NA ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 7' CASING EL .: NA WELL DIA .: JOB NO. 1703420 BOREHOLE DIA .: NA NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger 7/24/13 Dates Drilled: Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: PID 10.9 eV Lamp (ppm) Geoprobe Field Screening:

Depth (feet)	Sample Interval		Blow Counts	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-		0.0		100%	Sand: fine grained sand with some roots, loose,	Sand	SW	
2-		0.0		100%	damp, dark brown			
2		0.0		100%	Sand: fine grained sand, trace gravel, some roots, loose, damp, reddish brown			
640		0.0		100%				
4-		0.0		100%	Sand: fine grained sand, trace gravel, some roots, loose, damp, light brown			
6-	SB-1	0.0		100%	Sand: fine grained sand, moist, loose, brown			
	(6-7)'	0.0		100%				(3)
8-		0.0		100%	Sand: fine grained sand, wet, loose, brown		A _a	Native Backfill
		0.0		100%	Sand: fine grained sand, silt, firm, moist, brown		SM	
10 -		0.0		100%				
		0.0		100%				
12 -		0.0		100%				
		0.0		100%				
14 –		0.0		100%	Sand: fine grained sand, silt, firm, moist, gray			
		0.0		100%				

Location:
Northing/Latitude:
Easting/Longitude:

Vertical Datum:

Horizontal Datum:

General Comments:

TW-5 set 7'-12' with 1" PVC screen

Symbol Key:

Apparent Water Level 💌

Lab Sample Location

SB-1 / TW-5

p. 1 of 1



ID NO. SB-2

Groundwater & Environmental Services, Inc.

Page 1 of 1

PROJECT: Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV.: NA TOTAL DEPTH: 15'
ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 7' CASING EL.: NA
JOB NO. 1703420 BOREHOLE DIA.: NA WELL DIA.: NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger
Dates Drilled: 7/24/13 Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-		0.0		100%	Sand: fine grained sand, loose, damp, dark brown	Sand	SP	
2-		0.0		100%	Sand: fine grained sand, loose, damp, brown			
		0.0		100%				
4-		0.0		100%				
		0.0		100%				
6-	CD 1	0.0		100%	Sand: fine grained sand, loose, moist, brown			
	(6-7)	SB-1 (6-7)' 0.0		100%				
8-		0.0		100%	Sand: fine grained sand, loose, wet, brown			Native Backfill
		0.0		100%	Sand: fine grained sand, silt, firm, moist, brown		SM	
10 -		0.0		100%				
		0.0		100%				
12-		0.0		100%	Sand: fine grained sand, silt, firm, moist, gray			
		0.0		100%				
14 -		0.0		100%				
15		0.0		100%				

Location:	General Comments:	Symbol Key:		
Northing/Latitude:		Apparent Water Level 🗶		
Easting/Longitude:		Lab Sample Location		
Horizontal Datum:				
Vertical Datum:		SB-2 p. 1 of 1		



ID NO. SB-3 / TW-1

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road PROJECT: SURFACE ELEV .: NA TOTAL DEPTH: 15' ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 1.0 CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: WELL DIA .: NA NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger 7/23/13 Dates Drilled: Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval		Blow	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-						12.00	∥sw	11252
		1.3		100%	Sand: sand, organics, wet, brown	Sand	0	
2-		1.6		100%	Sand: medium to coarse grained sand, saturated, brown			
		1,8		100%	Sand: medium to coarse			
		1,8		100%	grained sand, some gravel, saturated, brown			
4-		2.4		100%	Sand: coarse grained sand, some gravel, loose, saturated, brown			
6-		2.5		100%	Sand: medium to coarse grained sand, loose, saturated, brown			
,		2.6		100%	Sand: medium to coarse grained sand, some gravel, loose, saturated, brown			Native Backfill
8-		2.7		100%	Sand: coarse grained sand, some gravel, loose, saturated, brown			Native Dackilli
10 -		3.1		100%	Sand: fine grained sand, saturated, loose, gray			
10-		3.1		100%	Sand: fine grained sand, saturated,firm, gray			
12-		2.8		100%	Sand: fine grained sand, wet, firm, gray			
	00.5	3.5		100%				
14 -	SB-3 (13-14)	2.9	_4	100%				
1		3.6		100%				

Location: Northing/Latitude: Easting/Longitude:

Vertical Datum:

Horizontal Datum:

General Comments: TW-1 set 0'-5' with 1" PVC screen Symbol Key:

Apparent Water Level 💌 Lab Sample Location

p. 1 of 1

SB-3 / TW-1



ID NO. SB-4 / TW-6

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: PROJECT: TOTAL DEPTH: 15' NA WATER DEPTH ADDRESS: 1406 E. Avon Road, Rochester Hills, MI 4 CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger
Dates Drilled: 7/24/13 Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval		Blow	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-	SB-4 (0-1)'	3.2		100%	Sand: fine grained sand, trace grave, trace roots, moist, reddish brown	Sand	SP	
2-		0.0		100%	Sand: fine grained sand, silt, moist, brown		SM	
		0.0		100%				
4-		0.0		100%				
		0.0		100%	Sand: fine grained sand, silt, wet, brown			
6-		0.0		100%				
		0.0		100%	Sand: fine grained sand, silt, firm, moist, gray			
8-		0.0		100%				Native Backfill
		0.0		100%				
10-		0.0		100%				
		0.0		100%				
12-		0.0		100%				念
		0.0		100%				
14-		0.0		100%				
		0.0	10	100%				

	ca		

Northing/Latitude: Easting/Longitude:

Horizontal Datum: Vertical Datum: General Comments:

TW-6 set 0'-5' with 1" PVC screen

Symbol Key:

Apparent Water Level
Lab Sample Location

Lab Gample Location

SB-4/TW-6

p. 1 of 1



Depth Sample Field

BORING LOG

ID NO. SB-5 / TW-7

Groundwater & Environmental Services, Inc.

Blow

Rec-

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: PROJECT: NA TOTAL DEPTH: 15' ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 0.5 CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA.: WELL DIA .: NA NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger 7/24/13 Dates Drilled: 5' Discrete Macrotube Sampling Method:

Soil Class. System: USCS Drilling Company: Terra Probe

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

(feet)	Interval		Counts	overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAIL
0-	SB-5 (0-1)'	2.4		100%	Sand: sand, trace roots, loose, saturated, brown	Sand	SP	1
2-		0.0		100%				
		0.0		100%				
4-		0.0		100%	Sand: sand, loose, saturated, brown		1	
4		0.0		100%	Sand: medium to fine grained sand, loose, wet, brown			
6-		0.0		100%				
		0.0		100%				
8-		0.0		100%				Native Backfill
		0.0		100%			6	
10 -		0.0		100%				
		0.0		100%	Silty Sand: silt, fine grained sand, loose, moist, gray	Silty Sand	SM	
12 -		0,0		100%	T.			7
		0.0		100%	T.			
14-		0.0		100%	T.			
		0.0		100%	F			

Location:	General Comments:	Symbol Key:
Northing/Latitude:	TW-7 set 0'-5' with 1" PVC	Apparent Water Level 💌
Easting/Longitude:		Lab Sample Location
Horizontal Datum:		
Vertical Datum:		SB-5/TW-7 p. 1 of 1



ID NO. SB-6 / TW-4

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: PROJECT: NA TOTAL DEPTH: 15' WATER DEPTH ADDRESS: 1406 E. Avon Road, Rochester Hills, MI 12' CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger
Dates Drilled: 7/24/13 Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval	Field Screen	Blow Counts	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-					Sand: medium grained	Sand	SP	
H	SB-6	3.5		100%	sand, trace gravel, damp, dark brown			
2-	(1-2)	12.5		100%	Control to the state of			
		0.0		100%	Sand: sand, loose, damp, brown			念
4-		0.0		100%				
i.		0.0		100%				
6-		0.0		100%				
		0.0		100%				
8-		0.0		100%				Native Backfill
f		0,0		100%				
10 -		0.0		100%				
Ĩ.		0.0		100%				
12-		0.0		100%	Sand: sand, loose, wet, brown			
12		0.0		100%	Sand: sand, loose, saturated, brown			
		0.0		100%	Clay; clay, some silt, semi- plastic, gray	Clay	CL	
14 -		0.0		100%	Sand: fine graind sand, silt with some clay, firm	Sand	SM	5.5

Location:
Northing/Latitude:
Easting/Longitude:
Horizontal Datum:

Vertical Datum:

General Comments: TW-4 set 10'-15' with 1" PVC screen Symbol Key:

Apparent Water Level

Lab Sample Location

SB-6 / TW-4 p. 1 of 1



ID NO. SB-7 / TW-2

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: PROJECT: NA TOTAL DEPTH: 15' ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 0' CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA

Drilling Method: Logged By: R. Sleeper Direct Push / Hand Auger 7/23/13 Dates Drilled: Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Field Screening: Drill Rig Type: Geoprobe PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval	Sample Field Blow Rec- nterval Screen Counts overy SAMPLE LITHOLOGY		SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS		
0-		2.9		100%	Topsoil: top soil, saturated, black	Topsoil	Top Soil		
		2.9		100%	Topsoil: top soil, some sand, saturated, black				
2-		3.0		100%	Sand: fine grained sand, loose, saturated, brown	Sand	sw		
4-		3.3		100%	Sand: medium to coarse grained sand, some gravel, loose, saturated, brown				
	SB-7	3.6		100%					
6-	(5-6)	6.0		100%					
		5.2		100%	Gravel: gravel, some sand, saturated	Gravel	GW		
8-		3.8		100%	Sand: fine grained sand, silt, firm, wet, brown	Sand	SM	Native Backfill	
		3.3		100%	Silt: silt, firm, saturated, gray	Silt	ML		
10-		4.0		100%					
		3.4		100%					
12 -		3.2		100%	Silt: silt, hard, wet, gray				
		3.3		100%	다. 다.				
14-		2.7		100%					
	-	2.8		100%					

Location:

Northing/Latitude: Easting/Longitude Horizontal Datum:

Vertical Datum:

General Comments:

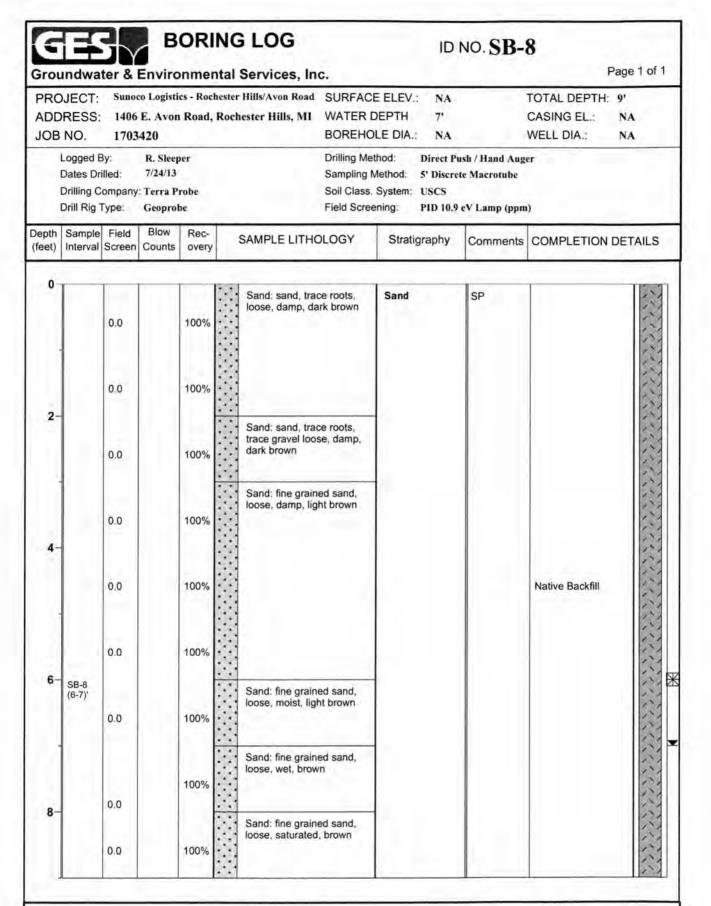
TW-2 set 0'-5' with 1" PVC screen

Symbol Key:

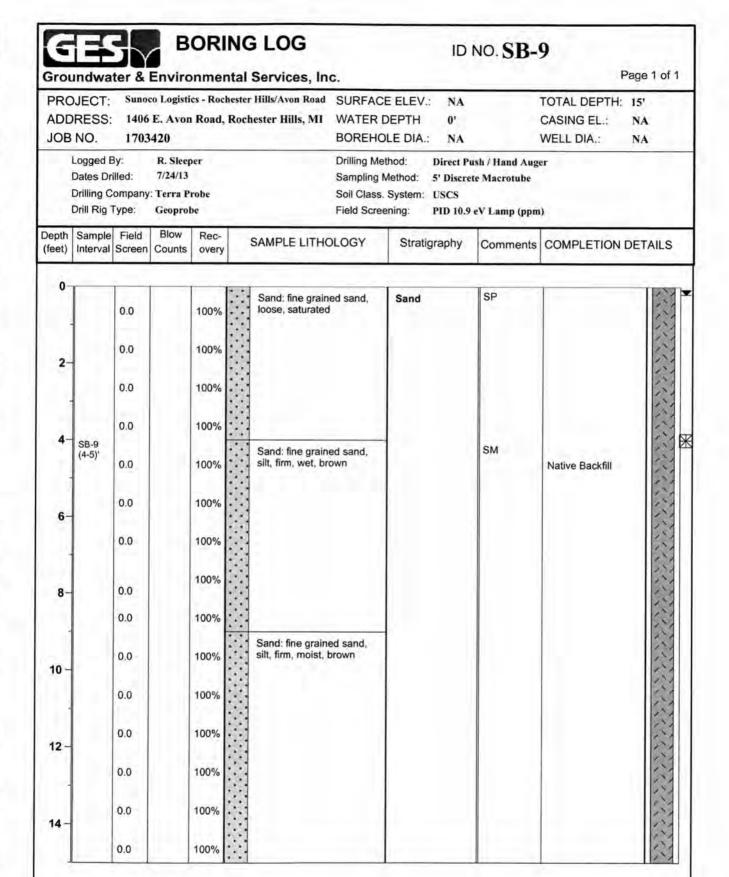
Apparent Water Level 💌 Lab Sample Location

SB-7 / TW-2

p. 1 of 1



Location:	General Comments:	Symbol Key:
Northing/Latitude:		Apparent Water Level 💌
Easting/Longitude:		Lab Sample Location
Horizontal Datum:		
Vertical Datum:		SB-8 p. 1 of 1



General Comments:	Symbol Key:			
	Apparent Water Level 💌			
	Lab Sample Location			
	SB-9 p. 1 of 1			
	General Comments:			

BORING LOG ID NO. SB-10 Page 1 of 1 Groundwater & Environmental Services, Inc. Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: TOTAL DEPTH: 15' PROJECT: NA ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 0 CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger 7/24/13 Dates Drilled: Sampling Method: 5' Discrete Macrotube Soil Class. System: USCS Drilling Company: Terra Probe Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm) Blow Depth Field Sample Rec-SAMPLE LITHOLOGY Stratigraphy Comments COMPLETION DETAILS (feet) Interval Screen Counts overy SP Sand: medium to fine Sand grained sand, trace 0.0 100% roots/organics, saturated Sand: medium to fine 100% 0.0 grained sand, loose, 2 SB-10 saturated (2-3) 0.0 100% Sand: fine grained sand, loose, saturated SM Sand: fine grained sand, 0.0 100% silt, loose, saturated 100% 0.0 100% 0.0 6 0.0 100% Sand: fine grained sand, silt, loose, moist 100% Native Backfill 0.0 8 Sand: fine grained sand, silt, moist, brown 100% 0.0 0.0 100% 10 100% 0.0 100% 0.0 12 0.0 100% 0.0 100% 14 0.0 100%

Location:	General Comments:	Symbol Key:
Northing/Latitude:		Apparent Water Level 💌
Easting/Longitude:		Lab Sample Location
Horizontal Datum:		
Vertical Datum:		SB-10 p. 1 of 1



ID NO. SB-11 / TW-3

Groundwater & Environmental Services, Inc.

Page 1 of 1

Sunoco Logistics - Rochester Hills/Avon Road PROJECT: SURFACE ELEV .: NA TOTAL DEPTH: 15' ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 0' CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA

Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger
Dates Drilled: 7/23/13 Sampling Method: 5' Discrete Macrotube

Drilling Company: Terra Probe Soil Class. System: USCS

Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm)

Depth (feet)	Sample Interval		Blow Counts	Rec- overy	SAMPLE LITHOLOGY	Stratigraphy	Comments	COMPLETION DETAILS
0-					Sand: sand, some	Sand	SP	
	SB-11	0.0		100%	organics, saturated, dark brown			
2-	(1-2)'	2.6		100%	Sand: fine grained sand, loose, saturated, brown			
		0.0		100%				3
4-		0.0		100%				
		0.0		100%				
6-		0.0		100%				
		0.0		100%	Sand: fine grained sand, silt, firm, wet, brown		SM	
8-		0.0		100%	Sand: fine grained sand, silt, firm, wet, gray			Native Backfill
		0.0		100%	Sand: fine grained sand, silt, wet, gray			
10 -		0.0		100%				
1		0.0		100%	Sand: fine grained sand, silt, moist, gray			
12-		0.0		100%				
		0.0		100%				
14-		0.0		100%	Sand: fine grained sand, silt, damp, gray			
		0.0	11.2	100%		-		

Location:

Northing/Latitude: Easting/Longitude: Horizontal Datum:

Vertical Datum:

General Comments:

TW-3 set 0'-5' with 1" PVC screen

Symbol Key:

Apparent Water Level
Lab Sample Location

SB-11 / TW-3

p. 1 of 1

BORING LOG ID NO. SB-12 Page 1 of 1 Groundwater & Environmental Services, Inc. PROJECT: Sunoco Logistics - Rochester Hills/Avon Road SURFACE ELEV .: NA TOTAL DEPTH: 15' ADDRESS: 1406 E. Avon Road, Rochester Hills, MI WATER DEPTH 1 CASING EL .: NA JOB NO. 1703420 BOREHOLE DIA .: NA WELL DIA .: NA Logged By: R. Sleeper Drilling Method: Direct Push / Hand Auger 7/23/13 Dates Drilled: Sampling Method: 5' Discrete Macrotube Drilling Company: Terra Probe Soil Class. System: USCS Drill Rig Type: Geoprobe Field Screening: PID 10.9 eV Lamp (ppm) Blow Sample Field Rec-SAMPLE LITHOLOGY Stratigraphy Comments COMPLETION DETAILS (feet) Interval Screen Counts overy 0 SP Sand Sand: top soil with some 100% sand, loose, moist, dark 1.0 brown Sand: sand, trace gravel, 1.2 100% loose, wet, brown 2 Sand: sand, trace gravel, 100% 1.2 loose, saturated, brown Sand: medium to coarse 100% grained sand, some 1.3 gravel, saturated, brown 0.9 100% 1.5 100% 6 SB-12 SM Sand: fine grained sand, (6-7) silt, firm, saturated, brown 1.6 100% 100% Native Backfill 1.5 8 1.5 100% 100% 1.2 10 Sand: fine grained sand, silt, firm, saturated, gray 100% 1.5 1.5 100% 12 Sand: fine grained sand, silt, firm, wet, brown 100% 1.4 Sand: fine grained sand, silt, firm, moist, brown 100% 1.2 14 Sand: fine grained sand, 1.3 100% silt, hard, damp, brown

Location:	General Comments:	Symbol Key:			
Northing/Latitude:		Apparent Water Level 🛫			
Easting/Longitude:		Lab Sample Location			
Horizontal Datum:					
Vertical Datum:		SB-12 p. 1 of 1			



APPENDIX B

Laboratory Analytical Reports



Friday, July 26, 2013

Fibertec Project Number: 5

57075

Project Identification:

SXL-1406 Avon Road Rochester Hills, MI/

Submittal Date:

07/24/2013

Mr. Bob Elliott

Groundwater and Environmental Services, Inc.

10381 Citation Drive

Suite 500

Brighton, MI 48116

Dear Mr. Elliott,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted nave been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note samples will be disposed of 30 days after reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Daryl P. Strandbergh Laboratory Director

DPS/kc

Enclosures



Analytical Laboratory Report Laboratory Project Number: 57075 Laboratory Sample Number: 57075-001

Order: Page: Date:

57075 2 of 44 07/26/13

Client Identification:

Groundwater and Environmental Services, Inc.

Sample Description:

SB-7 (5-6)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

11:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Dry Weight Determination (ASTM D 2974-87)			A	iquot ID: 570	75-001A	Matrix: Soil/Solid		Analyst: BMG	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Percent Moisture (Water Content) (NN)	12		%	0.1	1.0	07/24/13	MC130724	07/25/13	MC130724	

Michigan 10 Elements by ICP/MS	(EPA 0200.2-M/EPA 60	20A)		Al	iquot ID: 570	75-001A	Matrix: Soil	/Solid /	Analyst: JLH
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Arsenic	2800		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
2 Barium	6900		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
3. Cadmium	55		µg/kg	50	20	07/25/13	PT13G25B	07/25/13	T213G25A
4. Chromium	4300		µg/kg	500	20	07/25/13	PT13G25B	07/25/13	T213G25A
5, Copper	4500		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
6. Lead	4300		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A
7, Selenium	240		µg/kg	200	20	07/25/13	PT13G25B	07/25/13	T213G25A
8. Silver	U		µg/kg	100	20	07/25/13	PT13G25B	07/25/13	T213G25A
9. Zinc	13000		µg/kg	1000	20	07/25/13	PT13G25B	07/25/13	T213G25A

Mercury by CVAAS (EPA 7471B)				Aliquot ID: 57075-001A			Matrix: Soil/Solid		Analyst: JLP	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Mercury	U		µg/kg	50	8.3	07/26/13	PM13G26A	07/26/13	M613G26A	

Organochlorine Pesticides (EPA 3	546/EPA 8081B)			Al	iquot ID: 570	75-001A	Matrix: Soil/Solid A		Analyst: GAN	
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch	
1. Aldrin	U	Ti .	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
2 alpha-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
3. beta-BHC (NN)	Ų		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
4. delta-BHC	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
5 gamma-BHC (NN)	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
6. Chlordane (NN)	U		µg/kg	25	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
7. 4,4'-DDD	U	-	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
8.4,4'-DDE	U	J.L-	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
9.4,4'-DDT	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
10. Dieldrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
11. Endosulfan I	U		μg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
12 Endosulfan II	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
13. Endosulfan Sulfate	U	100	µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
14. Endrin	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
15. Endrin Aldehyde	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
16. Heptachlor	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	
17. Heptachlor Epoxide	U		µg/kg	20	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B	

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F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584



Analytical Laboratory Report Laboratory Project Number: 57075 Laboratory Sample Number: 57075-001

Order: Page: Date:

57075 3 of 44 07/26/13

Client Identification: Groundwater and

Environmental Services, Inc.

Volatile Organic Compounds (VOCs) by GC/MS 5025 /EDA 5025/EDA 9260B)

Sample Description:

SB-7 (5-6)

Chain of Custody:

127337

Client Project Name:

SXL-1406 Avon Road

Sample No:

Collect Date:

07/23/13

Analyst: CCD

Client Project No:

NA

Sample Matrix:

Soil/Solid

Collect Time:

Matrix Soll/Solid

11:15

Sample Comments:

Soil results have been calculated and reported on a dry weight basis unless otherwise noted.

Definitions:

Q: Qualifier (see definitions at end of report) NA: Not Applicable NN: Parameter not included in NELAC Scope of Analysis.

Aliquet ID: 57075-001

Organochlorine Pesticides (EPA	3546/EPA 8081B)	Aliquot ID: 57075-001A			Matrix: Soil/Solid		Analyst: GAN		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Da	te Analysis Batch
18. Methoxychlor	U		µg/kg	50	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B
19. Toxaphene (NN)	U		µg/kg	380	5.0	07/24/13	PS13G24E	07/25/13	SC13G24B

Polychlorinated Biphenyls (PCBs)	(EPA 3546/EPA 8082A	A)		Al	iquot ID: 570	75-001A	Matrix: Soil	/Solid A	nalyst: TMC
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Aroclor-1016	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
2 Aroclor-1221	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
3. Aroclor-1232	U	200	µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
4. Aroclor-1242	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
5. Aroclor-1248	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
6. Aroclor-1254	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
7. Aroclor-1260	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
8, Aroclor-1262 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A
9. Aroclor-1268 (NN)	U		µg/kg	330	5.0	07/26/13	PS13G26A	07/26/13	SB13G26A

Volatile Organic Compounds (VOCs) by GC/MS, 5035 (EPA 5035/EPA 8260B)			0B) A	Aliquot ID: 57075-001			Matrix: Soil/Solid A		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Prep Date	Prep Batch	Analysis Date	Analysis Batch
1. Acetone	U		µg/kg	1000	1.0	07/24/13	V913G24B	07/24/13	V913G24B
2 Acrylonitrile	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
3. Benzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
4. Bromobenzene	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
5. Bromochloromethane	U		µg/kg	110	1.0	07/24/13	V913G24B	07/24/13	V913G24B
6. Bromodichloromethane	U		μg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B
7. Bromoform	U		µg/kg	110	1.0	07/24/13	V913G24B	07/24/13	V913G24B
8. Bromomethane	U		µg/kg	200	1.0	07/24/13	V913G24B	07/24/13	V913G24B
9. 2-Butanone	Ü		µg/kg	750	1.0	07/24/13	V913G24B	07/24/13	V913G24B
10. n-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
11. sec-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
12 tert-Butylbenzene	U		µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
13. Carbon Disulfide	υ	300	µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
14. Carbon Tetrachloride	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
15. Chlorobenzene	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
16. Chloroethane	U		µg/kg	280	1.0	07/24/13	V913G24B	07/24/13	V913G24B
17. Chloroform	U		µg/kg	57	1.0	07/24/13	V913G24B	07/24/13	V913G24B
18. Chloromethane	U		µg/kg	250	1.0	07/24/13	V913G24B	07/24/13	V913G24B
19. 2-Chlorotoluene	U	93	µg/kg	50	1.0	07/24/13	V913G24B	07/24/13	V913G24B
20. Dibromochloromethane	U		µg/kg	100	1.0	07/24/13	V913G24B	07/24/13	V913G24B

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F: (517) 699-0388 F: (810) 220-3311 F: (231) 775-8584

STATE OF MICHIGAN TRANSMITTAL

TO: Paul Owens
2 DEQ-PD
3 Warren
4
FOR ACTION AS INDICATED
SIGNATURE REPLY-MY SIGNATURE NOTE AND FORWAR APPROVAL REPLY-COPY TO ME NOTE AND FILE ACTION PLEASE SUMMARIZE NOTE AND RETURN COMMENTS PLEASE INVESTIGATE PLEASE PHONE ME INFORMATION FORWARDED PER REQUEST PLEASE SEE ME
REMARKS: Paul, This one's yours!
yours.
FROM Phonde Kla 9-21-11

989-894-6248

FORM 10575



Joe Walczak

INTEROFFICE COMMUNICATION

TO:

Rhonda Klann, Supervisor

Remediation Division, Saginaw Bay District Office

FROM:

Joseph Walczak, Brownfield Assessment Program Manager

Remediation Division, Superfund Section

DATE:

September 15, 2011

SUBJECT:

Brownfield Redevelopment Assessment Report for the Tree Farm

Property, Rochester Hills, Michigan MIB000000166

I have enclosed, for your files, one copy of the Brownfield Redevelopment Assessment Report for the Tree Farm Property in Rochester Hills, Michigan. Please forward this report to appropriate staff.

I have forwarded a copy of the report to Ms. Karen Ramsey, Legal Projects Specialist, at the city of Highland Park for their files.

If you have any questions concerning this report, please contact me at 517-335-2151.

Enclosure

cc: Teresa Ducsay, MDEQ

Site File



BROWNFIELD REDEVELOPMENT ASSESSMENT REPORT

FOR

TREE FARM

1406 EAST AVON ROAD ROCHESTER HILLS, MICHIGAN 48307

MIB000000166

SEPTEMBER 01, 2011

REPORT PREPARED BY:

DATE: 09-01-11

Teresa Ducsay, Investigation Team Leader Site Assessment and Site Management Unit

REVIEWED AND APPROVED BY:

DATE: 9-14-201

Daria W. Devantier, Unit Chief Site Assessment and Site Management Unit

Michigan Department of Environmental Quality Remediation Division Superfund Section P.O. Box 30426 Lansing, Michigan 48909



TABLE OF CONTENTS

INTRODUCT PROPERTY Prope Prope PROCEDUR Recor Geopl Samp Samp	SUMMARY		
Camp	Surficial Soil Samples9		
Soil Boring Samples			
	Surface Water Samples		
DISCUSSIO	N23		
BIBLIOGRAI	PHY26		
	FIGURES		
FIGURE 1 FIGURE 2 FIGURE 3 FIGURE 4 FIGURE 5	Property Location Property Features Surficial Soil Sample Locations Soil Boring Sample Locations Surface Water and Sediment Sample Locations		
	TABLES		
TABLE 1 TABLE 2 TABLE 3 TABLE 4 TABLE 5 TABLE 6 TABLE 7 TABLE 8	Surficial Soil Sample Descriptions Surficial Soil Sample Data Summary Soil Boring Lithology and Sample Log Soil Boring Sample Data Summary Surface Water Sample Descriptions Surface Water Sample Data Summary Sediment Sample Descriptions Sediment Sample Data Summary		
	APPENDICES		
APPENDIX APPENDIX APPENDIX APPENDIX APPENDIX	A Historical Data Searches B BFRA Property Photographs C Geophysical Survey D Chemical Analysis of BFRA Data		

EXECUTIVE SUMMARY

The Michigan Department of Environmental Quality (MDEQ) conducts Brownfield Redevelopment Assessments (BFRAs) to assist local communities with redevelopment projects by providing environmental assessment information. BFRAs are conducted by the MDEQ to satisfy the Site Specific Assessment task of its 128(a) Brownfield Cooperative Agreement with the United States Environmental Protection Agency. The BFRAs provide information on brownfield properties where potential environmental contamination may be acting as an impediment to future redevelopment activities. They also provide information to determine if a property is a facility as defined in Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201) and provide recommendations for addressing issues during redevelopment. A facility is defined as any area, place, or property that contains a hazardous substance at a concentration that exceeds Generic Residential Cleanup Criteria established in Section 20120a(1)(a) or (17) of Part 201. File and data searches and environmental sample collection and analyses are used to obtain the needed information to make the determination and recommendations. This report presents the findings of the Tree Farm property BFRA.

This BFRA report is written for the purpose of providing information on the property that will encourage redevelopment in a way that ensures protection of the public health, safety, welfare, and the environment. This information is intended for use by the local unit of government, the MDEQ, potential developers, and any other stakeholders who may become involved in the future redevelopment of the property. The report includes a summary of the property background, assessment procedures, results, conclusions, and recommendations. The conclusion as to whether the property is a facility as defined in Part 201 is made by comparison of sample concentrations of hazardous substances to the Generic Residential Cleanup Criteria established under Part 201. This report also compares the sample concentrations to other Generic Nonresidential Cleanup Criteria to provide additional information to promote appropriate redevelopment activities.

On January 25, 2011, a request and application were submitted to the MDEQ by Mr. William Ford, a City Attorney and Chief of Staff for the city of Highland Park to request a BFRA of the Tree Farm property. The property is owned by the city of Highland Park and is located at 1406 East Avon Road in Rochester Hills, Michigan. The property meets the definition of a brownfield based on its potential for being contaminated due to buried waste present on the property. Previous uses of the property include a tree farm according to the city of Highland Park. Based on historical plat maps obtained, the city of Highland Park has owned the property since about 1947. The 1925 plat map of the parcel listed Robert Lowe as the owner of the property.

The request by Mr. William Ford resulted in the MDEQ conducting a BFRA of the property. This BFRA included file and historic information searches, a reconnaissance inspection of the property, a geophysical survey of subsurface conditions, the collection

of surficial soil, subsurface soil, surface water, and sediment samples, Global Positioning System (GPS) data collection of sample locations and property features, and the collection of site feature photographs.

The reconnaissance inspection was conducted on March 28, 2011, and included the team leader, a geologist, and a representative from the gas company to locate the high pressure gas line that runs through the property. The geophysical survey, specifically an electromagnetic (EM) survey with an EM61, was completed during the week of April 11, 2011, to aid in designing the field sampling plan. The field sampling event was conducted on April 26 and 27, 2011, and included the collection of fifteen surficial soil, fifteen soil boring, four surface water, and four sediment samples. Photographs of general property conditions were taken along with GPS data to determine sample and feature locations.

Analysis of the soil samples detected the presence of antimony, arsenic, barium, benzo(b)fluoranthene, benzo(a)pyrene, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, iron, lead, manganese, mercury, molybdenum, phenanthrene, selenium, silver, trichloroethylene, vanadium, and zinc at concentrations greater than the Generic Residential Cleanup Criteria. The contaminants in the surficial soils on the Tree Farm property include: arsenic, benzo(b)fluoranthene, benzo(a)pyrene, and lead at concentrations above Part 201 Soil Residential Direct Contact Criteria; chromium (total) at a concentration above Part 201 Residential Particulate Soil Inhalation Criteria; antimony, arsenic, chromium (total), cobalt, iron, lead, manganese, molybdenum, and vanadium at concentrations exceeding Part 201 Soil Residential Drinking Water Protection Criteria; and arsenic, barium, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, manganese, mercury, phenanthrene, selenium, silver, and zinc at concentrations exceeding Part 201 Soil Groundwater Surface Water Interface (GSI) Protection Criteria. The contaminants in the deep soils on the Tree Farm property include: arsenic, benzo(a)pyrene, and lead at concentrations above Part 201 Soil Residential Direct Contact Criteria; antimony, arsenic, cadmium, chromium (total), cobalt, iron, lead, manganese, molybdenum, and trichloroethylene at concentrations exceeding Part 201 Soil Residential Drinking Water Protection Criteria: and arsenic. barium, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, lead. manganese, mercury, phenanthrene, selenium, silver, and zinc at concentrations exceeding Part 201 Soil GSI Protection Criteria. Due to the elevated levels of contaminants above Part 201 Generic Residential Cleanup Criteria, MDEQ staff has determined that the Tree Farm property does meet the definition of a facility as defined in Part 201.

Based on the findings of the BFRA, MDEQ staff recommends that the following issues should be addressed before or during the redevelopment of the Tree Farm property:

Action should be taken to abate the potential threat caused by the presence of contaminants exceeding Residential Cleanup Criteria in the soils by mitigation of these contaminants or restricting access to the contaminated areas. Arsenic, benzo(b)fluoranthene, benzo(a)pyrene, and lead were detected in the soil samples

at concentrations which exceed the Residential Direct Contact Criteria and chromium (total) was detected at a concentration above Part 201 Residential Particulate Soil Inhalation Criteria. In some cases, further evaluation of certain inorganic analytes found at levels above default background levels may show that some of these inorganic analytes may be naturally occurring at those levels, thereby eliminating the need for mitigation. The full extent of the contamination should be determined and appropriate precautions implemented to prevent exposure during redevelopment.

The "due care" obligations must be met as specified in Section 7a of Part 201 during redevelopment activities. These obligations include not exacerbating the existing contamination; assure there are no unacceptable exposures, and taking reasonable precautions against the reasonably foreseeable activities of third parties.

Further information concerning Part 201 Cleanup Criteria, due care provisions, and remedial and/or removal activities may be obtained from the MDEQ Remediation Division, Southeast Michigan District Office at 586-753-3700.

INTRODUCTION

The Michigan Department of Environmental Quality (MDEQ) was contracted via a cooperative agreement (CA) with the United States Environmental Protection Agency (U.S. EPA) to conduct Brownfield Redevelopment Assessments (BFRAs). BFRAs are performed to fulfill the Site Specific Assessment (SSA) task in the Section 128(a) CA. The Section 128(a) CA was entered into between the MDEQ and the U.S. EPA as a result of the "Small Business Liability Relief and Brownfield Revitalization Act" amendments to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Title 42 of the United States Code, Section 9601). A BFRA was requested for the Tree Farm property by Mr. William Ford, for the city of Highland Park, to assist in their redevelopment plans for the property.

A Brownfield property is a real property, usually an abandoned, idled, or under-utilized industrial or commercial property, or a portion thereof, where the presence or potential presence of a hazardous substance, pollutant, or contaminant may be acting as an impediment to expansion, redevelopment, or reuse of the property. Properties targeted for the SSA task are those brownfield properties that have an active potential for expansion, redevelopment, or reuse.

BFRAs are intended to provide information on such properties where potential environmental contamination may be acting as an impediment to future redevelopment activities. MDEQ staff conducts environmental investigations of brownfield properties to determine the types and locations of past and present activities, potential relevant migration pathways of concern, types and concentrations of potential contaminants, and the need for remedial and/or removal actions on the property. These findings are summarized in this BFRA report along with the determination of whether the property meets the definition of a facility as defined in Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201). A facility is an area that contains a hazardous substance at a concentration that exceeds Residential Cleanup Criteria established in Section 20120a(1)(a) or (17) of Part 201.

As part of the BFRA, property specific exposure pathways are evaluated for potential exposure routes and relevancy with regard to Part 201. These pathways are evaluated to determine the potential risks posed by elevated levels of hazardous substances in those pathways. As stated in Part 201, a relevant pathway means an exposure pathway that is reasonable and relevant because there is a reasonable potential for exposure to a hazardous substance to occur to a human or non-human receptor from a source or release of a hazardous substance. The components of an exposure pathway are a source or release of a hazardous substance, an exposure point, an exposure route, and, if the exposure point is not the source or point of release, a transport medium. The existence of an exposure control measure, exposure barrier or other

similar feature, such as a municipal water supply, does not automatically make an exposure pathway irrelevant.

A BFRA of the Tree Farm property was conducted in accordance with the CA with the U.S. EPA. The BFRA included file and information searches, a reconnaissance inspection of the property, a geophysical survey of subsurface conditions, the collection of surficial soil, subsurface soil, surface water, and sediment samples, Global Positioning System (GPS) data collection of sample locations and property features, the collection of site feature photographs, data evaluation, and the compilation of all this data into this report.

PROPERTY BACKGROUND

Property Description

The Tree Farm property is located at 1406 East Avon Road, Rochester Hills, Michigan, Oakland County, Township 3 North, Range 11 East, Section 24. It should be noted that Avon Township in Oakland County became the city of Rochester Hills on November 20, 1984. The latitude is 42°40′01″ north and the longitude is 83°06′24″ west. The property encompasses approximately 43.3 acres and is an irregular shaped parcel. The property includes a smaller parcel (0.73 acres) along with a larger parcel (42.57 acres). The common address for the large parcel is 1406 East Avon Road, while the smaller parcel does not have a common address. The property is located in a rural area with residential and commercial properties in the area. The Southeast Oakland County Resource Recovery Authority is adjacent to the parcel to the east, there are residential properties boarding the parcel to the south and west, and a residential property located at the northeast corner of the property adjacent to the entrance drive. The property is bordered on the north by East Avon Road with a large mobile home park across the street, located on the north side of East Avon Road. See Figure 1 for the Property Location map.

Property History

A variety of current and historical information and databases, including property file information, historical aerial photographs, Sanborn® maps, and the Polk's City Directory were used to identify previous uses of the property. A major portion of this historical informational search included procuring much of this information from Environmental Data Resources Inc.'s (EDR) historical data packages. These EDR historical reports are provided in Appendix A.

According to the BFRA application information received for the Tree Farm property from the city of Highland Park, the historical use of the property is unknown. The application described the current use of the property as vacant and unoccupied.

Historical aerial photos of the property indicated disturbed/barren soil areas in 1975 and 1980, which may indicate either dumping and/or digging activities occurred during these time periods. There appears to be some buildings present on the property in the 1937, 1940, and 1949 aerial photos. There is a very large building (possibly a barn) with a very small building adjacent to it, located on the east side of the property with a long entrance drive; this appears to be located on the smaller of the two parcels. There is a shorter drive to buildings (possibly a house and/or a garage) on the west side of the property. The 1956 and 1957 aerial photos have additional roads going south along the western boundary of the property and east-west across the middle of the property; and the large building/ barn is no longer visible (only the building footprint), but there is a large area of

surface disturbance near the southeast corner of the parcel along the Honeywell Ditch. Most of the roads/drives on the property are no longer visible in the 1961 and 1964 aerial photos except for the drive along the east side of the property and no surface disturbance is visible. The 1967 aerial photo is similar, but even the small building on the east side of the property is not visible. The 1972 aerial photo has two large areas of surface disturbance and two small ones.

Based on the historical Utica Quadrangle topographic map from 1968 there appears to be a power line and/or pipeline that runs through the property and an unimproved road runs south near the east side of the property into the location of the former large building. The Utica Quadrangle topographic map photorevised in 1973 and 1983 extends the unimproved road west across the property.

The 1966 plat map of the property listed the owner as Highland Park City. The 1947 plat map lists the owner of the property as city of Highland Park (43.3 acres) and the small parcel is not separated out. The Land Ownership Atlas of Avon Township from 1925 listed Robert Lowe as the owner of property encompassing 44 acres. The Land Ownership Atlas of Avon Township from 1908 listed Mrs. S. K. Shaff as the owner of the property encompassing 46 acres. The Land Ownership Atlas of Avon Township from 1886 listed E. Pearsall as the owner of the property encompassing 55 acres. The Land Ownership Atlas of Avon Township from 1872 listed W. M. Bronson as the owner of the property encompassing 42 acres.

Previous uses of the property include a tree farm, according to the city of Highland Park, and a woodfill area based on a map obtained from the Stan's Trucking Incorporated Landfill site file in the MDEQ, Remediation Division, Superfund Section. The map has identified the Tree Farm property as the Highland Park Woodfill and has a 'received' date stamp of November 30, 1981. Based on historical plat maps of the parcel, the city of Highland Park has owned the property since about 1947.

A BFRA was requested for the Tree Farm property by Mr. William Ford, for the city of Highland Park, to assist in their redevelopment plans for the property. This request resulted in the investigation of this property under the BFRA program. The property has the potential for being contaminated based on physical indicators of buried waste being present, such as buried debris protruding through the ground surface and uprooted trees with waste present in the roots and soil. Previous uses of the property include a tree farm and a woodfill area. Redevelopment plans for the Tree Farm property are dependent upon the results of this investigation as the expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The Tree Farm property is located in a rural area with both residential and commercial properties in the area.

PROCEDURES AND RESULTS

Reconnaissance Inspection Observations

A BFRA property reconnaissance was conducted at the Tree Farm property on March 28, 2011. The purpose of the reconnaissance was to gather information to be used in development of the BFRA sampling plan, to determine appropriate health and safety requirements, and to determine potential sampling locations. The team documented the features, known and potential source areas, and debris types located throughout the property and identified the environmental concerns associated with each area of concern. During this inspection, a representative from the gas company located an underground high pressure gas line that runs through the property.

Known/suspected areas of potential concern included the following based on the field observations from the property reconnaissance:

- Potentially impacted soils indicated by disturbed soils in historical aerial photos;
- Debris present concrete rubble, asphalt pieces, household appliances, tires, and a rusty drum exposed along the edge of an apparent fill area;
- 55-gallon oil drum that appears to have leaked onto the ground surface;
- Uprooted trees with waste (glass, metal, etc.) bound into the roots and soil.

On April 25, 2011, a sampling inspection reconnaissance was conducted at the Tree Farm property for the purpose of locating the actual sample locations prior to collection of the samples. This reconnaissance was also conducted to determine whether there were any changes in the conditions or features of the property.

Based on the reconnaissance of the Tree Farm property, there is debris present (household appliances, tires, concrete rubble) and uprooted trees with waste bound into the roots and soil in areas that appeared to have surface disturbance in the 2005 aerial photo. There is an area in the northeast corner of the parcel which has rows of trees and depressions/divots where trees were removed (an indication of a tree farm). There remains a large building footprint and two openings to an underground concrete vault (likely a septic tank) on the east side of the property. Also, there is a 55-gallon oil drum that appears to have leaked near the building footprint. There is a buried gas pipeline and an electrical power line that run diagonally through the property from near the southwest corner to the northeast corner of the parcel. Near the middle of the property, the pipeline shifts away from the power line, from a northeasterly direction to a northerly direction, to a marker located adjacent to Avon Road. The Honeywell Ditch runs along

the southeast corner of the property and there is an approximately 24 inch clay pipe discharging into the ditch with a steady flow of water. The parcel is not fenced, but vehicular access to the property is restricted by a locked gate at the entrance drive off Avon Road. Historical aerial photos of the parcel indicated areas of surface disturbed on the property, which may be an indication that dumping or digging activities had occurred at the property.

See Figure 2 for the Property Features map. Photographs of the Tree Farm property were taken during the BFRA and are provided in Appendix B.

Geophysical Survey Results

A MDEQ geologist conducted a geophysical survey of the property during the week of April 11, 2011. The subsurface investigation was conducted with an electromagnetic (EM) survey utilizing a Geonics EM61-Mark 2 unit, and completed prior to the field sampling, to aid in the determination of sampling locations. Physical conditions of the Tree Farm property suggested the possibility of subsurface structures in two large fill areas with debris protruding through the ground surface and exposed debris along the bank of the two fill areas.

The survey results indicated the presence of a significant amount of buried metal across the western fill area with numerous larger objects detected across the area. The survey results for the eastern fill area indicate that the most of the buried metal is located in the northeast portion of this area and the area appears to have received more construction debris as concrete and rebar were observed. The geophysical survey report and figures are provided in Appendix C.

Sampling Procedures

The field sampling event was conducted on April 26 and 27, 2011, and included the collection of 15 surficial soil, 15 soil boring, and 4 surface water/sediment samples from suspected areas of contamination at the Tree Farm property. The sample locations were surveyed in utilizing a Trimble model GeoXH GPS unit.

The samples were collected in order to:

- Determine the concentrations of U.S. EPA Target Compound List compounds (organic compounds) and Target Analyte List analytes (inorganic elements) which may be present at the property.
- Identify potential contamination in shallow and subsurface soils and surface water/sediment on the property.

- Identify potential contaminant source areas.
- Ascertain potential contaminant migration pathways from possible source areas.
- Identify health and safety concerns, including threats posed to nearby residential populations, future workers or occupants, or natural resources associated with the different sample media.
- Evaluate and determine whether the Tree Farm property is a facility in accordance with the definition found in Part 201, Section 20101(o).

Standard MDEQ sample collection, preservation, and decontamination procedures, as outlined in the work plan, were followed for all samples. Sample collection and preservation followed the MDEQ Remediation and Redevelopment Division (RRD) Operational Memorandum 2, Attachments 4-6. Soil samples analyzed for volatile organic compounds (VOCs) were field preserved with methanol. Soil samples collected for other analyses were not chemically preserved. Water samples analyzed for VOCs were field preserved with hydrochloric acid. Water samples analyzed for semi-volatile organic (SVOC)/pesticide/polychlorinated biphenyl (PCB) compounds were not field preserved. Water samples analyzed for total metals were field preserved with nitric acid to a hydrogen ionization potential (pH) of less than two and water samples analyzed for amenable cyanide were field preserved with sodium hydroxide to a pH of more than twelve.

The MDEQ quality assurance/quality control procedures as outlined in the Quality Assurance Project Plan for Site Assessment and Brownfield Activities were followed (MDEQ, 2003). Upon collection of the samples, all samples were labeled and placed in insulated sample shipment coolers. The interior of the shipment coolers were kept at a temperature of approximately 4° Celsius with ice and delivered to the MDEQ Environmental Laboratory. Samples were transported by the Team Leader to the MDEQ Environmental Laboratory for analysis.

Sample Analysis

Soil and water samples were analyzed for organic compounds and inorganic analytes, consistent with the MDEQ RRD Operational Memorandum 2, Attachment 1, by the MDEQ Environmental Laboratory utilizing the following methods:

	Analytical Method		
Compound/Analyte	Soil	Water	
Volatile Organics	8260	8260	
Semi-volatile Organics	8270	8270	
Pesticides	8081	8081	
PCBs	8082	8082	
Antimony, Arsenic, Barium,	6020	6020	
Beryllium, Cadmium, Chromium,	,		
Cobalt, Copper, Lead, Manganese,		·	
Molybdenum, Nickel, Selenium,			
Silver, Thallium, Vanadium, Zinc			
Cyanide	ASTM D 751	ASTM D 751	
Iron	6010	6010	
Mercury	7471	7470	

It should be noted that with regard to the chromium analyses, the samples were analyzed for total chromium only. Upon analysis, laboratory results were sent to the Team Leader and processed for this report. Laboratory analytical data for all the sample analyses are provided in Appendix D.

Sample Analytical Results Compared to Criteria

Contaminant concentrations in samples exceeding the Generic Cleanup Criteria (Criteria) promulgated pursuant to Part 201 are noted in the attached summary tables and will be described in the following sections. The current Part 201 Criteria are provided in Appendix E. Sample contaminant concentrations were rounded to two significant figures whenever laboratory results were reported in more than two significant figures. This is to allow for comparison of laboratory results to Criteria, which are presented in two significant figures. RRD Operational Memorandum 1 states that Criteria "should be compared to analytical data presented in two significant figures."

The attached summary tables show all sample Criteria exceedances. However, not all Criteria may be applicable. An applicable criterion is a cleanup criterion for a relevant pathway. A pathway that is not relevant will not have applicable Criteria. A pathway evaluation will be completed in the Discussion section. If an exposure pathway is not listed below, it means that no exceedances of Criteria in that pathway were found.

As noted above regarding the chromium analyses, only total chromium was analyzed. Per Part 201 rules, the total chromium concentrations are compared to the hexavalent chromium criterion. The default values for hardness and pH were used to determine the "G" footnoted Groundwater Surface Water Interface (GSI) Criteria. These are a hardness value of 150 and a pH of 7.

Background samples for the surficial soil and soil boring samples were collected from an area near the northwest corner of the Tree Farm property that seemed undisturbed or impacted by waste disposal. However, they were not collected in a statistical manner to determine a property specific background, but to determine the potential for migration of contaminants on to the property and the potential for naturally occurring elevated levels of contaminants. Any sample concentrations of naturally occurring inorganic analytes above Criteria but equal to or below statewide default background levels are not considered exceedances of Part 201 Criteria in this report.

Surficial Soil Samples

The intent of the surficial soil sampling was to identify potentially contaminated surficial soil or source areas, to determine the potential for possible contaminant migration, and to determine health and safety concerns, including threats posed to nearby residential populations, future workers or occupants, and resources associated with the surficial soils at the property. To accomplish this sampling task, 15 surficial soil samples were collected during the BFRA. All samples were collected using stainless steel trowels from depths ranging from 0 to 10 inches below the ground surface according to the procedures outlined in the work plan.

See Figure 3 for a map showing surficial soil sample locations. For a description of the surficial soil sample locations and the sample characteristics, refer to Table 1. Table 2 provides a summary of the surficial soil sample analytical results that exceed Part 201 Criteria and lists the Criteria exceedances.

Analysis of the surficial soil samples collected during the BFRA detected the presence of organic compounds and inorganic analytes at concentrations above Part 201 Criteria. The following lists the Criteria exceedances for surficial soil samples and the compounds/analytes and samples with concentrations in excess of Criteria. The full extent of the contaminants in the surficial soils was not delineated during the BFRA of the Tree Farm property.

Exceedances above the Soil Residential Drinking Water Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Residential Drinking Water Criteria.

Antimony was detected in SS-06 at a concentration of 8.1 parts per million (ppm) and SS-07 at a concentration of 8.6 ppm, which exceed the 4.3 ppm Criterion.

<u>Arsenic</u> was detected in SS-04 at a concentration of 12 ppm, SS-06 at a concentration of 15 ppm, SS-07 at a concentration of 15 ppm, SS-09 at a concentration of 12 ppm, and SS-11 at a concentration of 7.0 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Chromium (total)</u> was detected in SS-06 at a concentration of 31 ppm, SS-07 at a concentration of 390 ppm, SS-12 at a concentration of 33 ppm, SS-14 at a concentration of 86 ppm, and SS-15 at a concentration of 34 ppm, which exceed the 30 ppm Criterion.

<u>Cobalt</u> was detected in SS-06 at a concentration of 8.1 ppm, SS-07 at a concentration of 65 ppm, SS-10 at a concentration of 7.6 ppm, and SS-11 at a concentration of 9.1 ppm, which exceed the 0.8 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Iron</u> was detected in SS-02 at a concentration of 16,000 ppm, SS-02-DUP at a concentration of 16,000 ppm, SS-04 at a concentration of 13,000 ppm, SS-05 at a concentration of 17,000 ppm, SS-06 at a concentration of 27,000 ppm, SS-07 at a concentration of 56,000 ppm, SS-08 at a concentration of 16,000 ppm, SS-09 at a concentration of 15,000 ppm, SS-10 at a concentration of 19,000 ppm, SS-11 at a concentration of 26,000 ppm, SS-12 at a concentration of 16,000 ppm, SS-13 at a concentration of 17,000 ppm, SS-14 at a concentration of 30,000 ppm, and SS-15 at a concentration of 24,000 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 12,000 ppm.

<u>Lead</u> was detected in SS-06 at a concentration of 900 ppm and SS-07 at a concentration of 1,400 ppm, which exceed the 700 ppm Criterion and the statewide default background level of 21 ppm.

Manganese was detected in SS-07 at a concentration of 510 ppm, SS-10 at a concentration of 450 ppm, SS-11 at a concentration of 940 ppm, SS-12 at a concentration of 720 ppm, SS-14 at a concentration of 1,600 ppm, and SS-15 at a concentration of 720 ppm, which exceed the 1 ppm Criterion and the statewide default background level of 440 ppm.

Molybdenum was detected in SS-06 at a concentration of 6.9 ppm, SS-07 at a concentration of 33 ppm, SS-09 at a concentration of 1.7 ppm, SS-10 at a concentration of 1.6 ppm, and SS-15 at a concentration of 1.6 ppm, which exceed the 1.5 ppm Criterion.

<u>Vanadium</u> was detected in SS-14 at a concentration of 83 ppm, which exceeds the 72 ppm Criterion.

Exceedances above the Soil Nonresidential Drinking Water Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Residential Drinking Water Criteria.

Antimony was detected in SS-06 at a concentration of 8.1 parts per million (ppm) and SS-07 at a concentration of 8.6 ppm, which exceed the 4.3 ppm Criterion.

<u>Arsenic</u> was detected in SS-04 at a concentration of 12 ppm, SS-06 at a concentration of 15 ppm, SS-07 at a concentration of 15 ppm, SS-09 at a concentration of 12 ppm, and SS-11 at a concentration of 7.0 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Chromium (total)</u> was detected in SS-06 at a concentration of 31 ppm, SS-07 at a concentration of 390 ppm, SS-12 at a concentration of 33 ppm, SS-14 at a concentration of 86 ppm, and SS-15 at a concentration of 34 ppm, which exceed the 30 ppm Criterion.

Cobalt was detected in SS-06 at a concentration of 8.1 ppm, SS-07 at a concentration of 65 ppm, SS-10 at a concentration of 7.6 ppm, and SS-11 at a concentration of 9.1 ppm, which exceed the 2.0 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Iron</u> was detected in SS-02 at a concentration of 16,000 ppm, SS-02-DUP at a concentration of 16,000 ppm, SS-04 at a concentration of 13,000 ppm, SS-05 at a concentration of 17,000 ppm, SS-06 at a concentration of 27,000 ppm, SS-07 at a concentration of 56,000 ppm, SS-08 at a concentration of 16,000 ppm, SS-09 at a concentration of 15,000 ppm, SS-10 at a concentration of 19,000 ppm, SS-11 at a concentration of 26,000 ppm, SS-12 at a concentration of 16,000 ppm, SS-13 at a concentration of 17,000 ppm, SS-14 at a concentration of 30,000 ppm, and SS-15 at a concentration of 24,000 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 12,000 ppm.

<u>Lead</u> was detected in SS-06 at a concentration of 900 ppm and SS-07 at a concentration of 1,400 ppm, which exceed the 700 ppm Criterion and the statewide default background level of 21 ppm.

Manganese was detected in SS-07 at a concentration of 510 ppm, SS-10 at a concentration of 450 ppm, SS-11 at a concentration of 940 ppm, SS-12 at a concentration of 720 ppm, SS-14 at a concentration of 1,600 ppm, and SS-15 at a concentration of 720 ppm, which exceed the 1 ppm Criterion and the statewide default background level of 440 ppm.

Molybdenum was detected in SS-06 at a concentration of 6.9 ppm and SS-07 at a concentration of 33 ppm, which exceed the 4.2 ppm Criterion.

Exceedances above the Soil Groundwater Surface Water Interface Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Groundwater Surface Water Interface Criteria.

<u>Arsenic</u> was detected in SS-04 at a concentration of 12 ppm, SS-06 at a concentration of 15 ppm, SS-07 at a concentration of 15 ppm, SS-09 at a concentration of 12 ppm, and SS-11 at a concentration of 7.0 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Barium</u> was detected in SS-06 at a concentration of 790 ppm and SS-07 at a concentration of 830 ppm, which exceed the 440 ppm Criterion and the statewide default background level of 75 ppm.

<u>Cadmium</u> was detected in SS-07 at a concentration of 4.6 ppm, which exceeds the 3.6 ppm Criterion and the statewide default background level of 1.2 ppm.

<u>Chromium (total)</u> was detected in SS-01 at a concentration of 9.1 ppm, SS-02 at a concentration of 13 ppm, SS-02-DUP at a concentration of 14 ppm, SS-03 at a concentration of 11 ppm, SS-04 at a concentration of 17 ppm, SS-05 at a concentration of 14 ppm, SS-06 at a concentration of 31 ppm, SS-07 at a concentration of 390 ppm, SS-08 at a concentration of 17 ppm, SS-09 at a concentration of 18 ppm, SS-10 at a concentration of 16 ppm, SS-11 at a concentration of 26 ppm, SS-12 at a concentration of 33 ppm, SS-13 at a concentration of 21 ppm, SS-14 at a concentration of 86 ppm, and SS-15 at a concentration of 34 ppm, which exceed the 3.3 ppm Criterion.

<u>Cobalt</u> was detected in SS-06 at a concentration of 8.1 ppm, SS-07 at a concentration of 65 ppm, SS-10 at a concentration of 7.6 ppm, and SS-11 at a concentration of 9.1 ppm, which exceed the 2.0 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Copper</u> was detected in SS-06 at a concentration of 120 ppm and SS-07 at a concentration of 160 ppm, which exceed the 75 ppm Criterion and the statewide default background level of 32 ppm.

<u>Cyanide</u> was detected in SS-06 at a concentration of 1.0 ppm and SS-07 at a concentration of 4.0 ppm, which exceed the 0.1 ppm Criterion and the statewide default background level of 0.39 ppm.

<u>Fluoranthene</u> was detected in SS-06 at a concentration of 26,000 parts per billion (ppb) and SS-07 at a concentration of 32,000 ppb, which exceed the 5,500 ppb Criterion.

<u>Manganese</u> was detected in SS-07 at a concentration of 510 ppm, SS-10 at a concentration of 450 ppm, SS-11 at a concentration of 940 ppm, SS-12 at a concentration of 720 ppm, SS-14 at a concentration of 1,600 ppm, and SS-15 at a concentration of 720 ppm, which exceed the 56 ppm Criterion and the statewide default background level of 440 ppm.

Mercury was detected in SS-06 at a concentration of 0.37 ppm, SS-07 at a concentration of 0.50 ppm, and SS-09 at a concentration of 0.17 ppm, which exceed the 0.05 ppm Criterion and the statewide default background level of 0.13 ppm.

<u>Phenanthrene</u> was detected in SS-06 at a concentration of 21,000 ppb and SS-07 at a concentration of 15,000 ppb, which exceed the 2,100 ppb Criterion.

<u>Selenium</u> was detected in SS-04 at a concentration of 0.75 ppm, SS-07 at a concentration of 1.7 ppm, and SS-09 at a concentration of 0.75 ppm, which exceed the 0.4 ppm Criterion and the statewide default background level of 0.41 ppm.

<u>Silver</u> was detected in SS-07 at a concentration of 1.9 ppm, which exceeds the 0.1 ppm Criterion and the statewide default background level of 1 ppm.

Zinc was detected in SS-05 at a concentration of 210 ppm, SS-06 at a concentration of 1,400 ppm, and SS-07 at a concentration of 760 ppm, which exceed the 170 ppm Criterion and the statewide default background level of 47 ppm.

Exceedances above the Residential Particulate Soil Inhalation Criteria:

These Criteria represent concentrations of hazardous substances in soils at Residential locations considered to be hazardous through particulate inhalation of the soil.

<u>Chromium (total)</u> was detected in SS-07 at a concentration of 390 ppm, which exceeds the 260 ppm Criterion.

Exceedances above the Nonresidential Particulate Soil Inhalation Criteria:

These Criteria represent concentrations of hazardous substances in soils at Nonresidential locations considered to be hazardous through particulate inhalation of the soil.

<u>Chromium (total)</u> was detected in SS-07 at a concentration of 390 ppm, which exceeds the 240 ppm Criterion.

<u>Manganese</u> was detected in SS-14 at a concentration of 1,600 ppm, which exceeds the 1,500 ppm Criterion and the statewide default background level of 440 ppm.

Exceedances above the Soil Residential Direct Contact Criteria:

These Criteria represent concentrations of hazardous substances in soils at Residential locations considered to be hazardous through dermal contact and ingestion of the soil.

<u>Arsenic</u> was detected in SS-04 at a concentration of 12 ppm, SS-06 at a concentration of 15 ppm, SS-07 at a concentration of 15 ppm, and SS-09 at a concentration of 12 ppm, which exceed the 7.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Benzo(b)fluoranthene</u> was detected in SS-07 at a concentration of 25,000 ppb, which exceeds the 20,000 ppb Criterion.

<u>Benzo(a)pyrene</u> was detected in SS-07 at a concentration of 17,000 ppb, which exceeds the 2,000 ppb Criterion.

<u>Lead</u> was detected in SS-06 at a concentration of 900 ppm and SS-07 at a concentration of 1,400 ppm, which exceed the 400 ppm Criterion and the statewide default background level of 21 ppm.

Exceedances above the Soil Nonresidential Direct Contact Criteria:

These Criteria represent concentrations of hazardous substances in soils at Nonresidential locations considered to be hazardous through dermal contact and ingestion of the soil.

Benzo(a)pyrene was detected in SS-07 at a concentration of 17,000 ppb, which exceeds the 8,000 ppb Criterion.

<u>Lead</u> was detected in SS-07 at a concentration of 1,400 ppm, which exceeds the 900 ppm Criterion and the statewide default background level of 21 ppm.

Soil Boring Samples

The intent of the soil boring sampling was to identify potential contamination in the deep soils, to determine if any downward migration of contamination has occurred from probable source areas, and to determine potential health and safety concerns, including threats posed to nearby residential populations, future workers or occupants, or resources associated with the deep soils at the property. To accomplish this sampling task, 15 soil boring samples were collected from 15 separate boring locations during the BFRA. All samples were collected utilizing a Geoprobe® rig with a high density polyethylene lined Macro-Core® sampler from depths ranging from 0 to 15 feet below the ground surface according to the procedures outlined in the work plan. These procedures included screening the core with a photoionization detector to help determine the presence of volatile organic compounds and potential sampling points within the cores. All soil boring boreholes were properly abandoned following an approved standard operating procedure. This procedure entailed slowly filling the abandoned borehole with bentonite chips to within six inches of the surface then topping off the borehole with immediate surrounding material.

See Figure 4 for a map showing soil boring sample locations. A description of the soil boring locations, lithology, and sample characteristics can be found in Table 3. Table 4 provides a summary of the soil boring sample analytical results that exceed Part 201 Criteria and lists the Criteria exceedances.

Analysis of the soil boring samples collected during the BFRA detected the presence of organic compounds and inorganic analytes at concentrations above Part 201 Criteria. The following lists the Criteria exceedances for soil boring samples and the compounds/ analytes and samples with concentrations in excess of Criteria. The full extent of the contaminants in the deep soils was not delineated during the BFRA of the Tree Farm property.

Exceedances above the Soil Residential Drinking Water Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Residential Drinking Water Criteria.

Antimony was detected in SB-06 at a concentration of 6.1 ppm and SB-07 at a concentration of 25 ppm, which exceed the 4.3 ppm Criterion.

<u>Arsenic</u> was detected in SB-04 at a concentration of 7.2 ppm, SB-05 at a concentration of 7.5 ppm, SB-06 at a concentration of 15 ppm, and SB-07 at a concentration of 31 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Cadmium</u> was detected in SB-06 at a concentration of 8.4 ppm and SB-07 at a concentration of 14 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 1.2 ppm.

<u>Chromium (total)</u> was detected in SB-06 at a concentration of 47 ppm, SB-07 at a concentration of 100 ppm, and SB-14 at a concentration of 33 ppm, which exceed the 30 ppm Criterion.

<u>Cobalt</u> was detected in SB-07 at a concentration of 11 ppm, which exceeds the 0.8 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Iron</u> was detected in SB-05 at a concentration of 19,000 ppm, SB-06 at a concentration of 45,000 ppm, SB-07 at a concentration of 120,000 ppm, SB-08 at a concentration of 15,000 ppm, SB-09 at a concentration of 13,000 ppm, SB-10 at a concentration of 17,000 ppm, SB-12 at a concentration of 14,000 ppm, SB-14 at a concentration of 19,000 ppm, and SB-15 at a concentration of 20,000 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 12,000 ppm.

<u>Lead</u> was detected in SB-06 at a concentration of 840 ppm and SB-07 at a concentration of 4,200 ppm, which exceed the 700 ppm Criterion and the statewide default background level of 21 ppm.

Manganese was detected in SB-04 at a concentration of 530 ppm, SB-07 at a concentration of 650 ppm, SB-14 at a concentration of 810 ppm, and SB-15 at a concentration of 720 ppm, which exceed the 1.0 ppm Criterion and the statewide default background level of 440 ppm.

Molybdenum was detected in SB-05 at a concentration of 2.2 ppm, SB-06 at a concentration of 9.5 ppm, SB-07 at a concentration of 8.7 ppm, and SB-15 at a concentration of 1.6 ppm, which exceed the 1.5 ppm Criterion.

<u>Trichloroethylene</u> was detected in SB-06 at a concentration of 260 ppb, which exceeds the 100 ppb Criterion.

Exceedances above the Soil Nonresidential Drinking Water Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Nonresidential Drinking Water Protection Criteria.

Antimony was detected in SB-06 at a concentration of 6.1 ppm and SB-07 at a concentration of 25 ppm, which exceed the 4.3 ppm Criterion.

Arsenic was detected in SB-04 at a concentration of 7.2 ppm, SB-05 at a concentration of 7.5 ppm, SB-06 at a concentration of 15 ppm, and SB-07 at a concentration of 31 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Cadmium</u> was detected in SB-06 at a concentration of 8.4 ppm and SB-07 at a concentration of 14 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 1.2 ppm.

<u>Chromium (total)</u> was detected in SB-06 at a concentration of 47 ppm, SB-07 at a concentration of 100 ppm, and SB-14 at a concentration of 33 ppm, which exceed the 30 ppm Criterion.

<u>Cobalt</u> was detected in SB-07 at a concentration of 11 ppm, which exceeds the 2.0 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Iron</u> was detected in SB-05 at a concentration of 19,000 ppm, SB-06 at a concentration of 45,000 ppm, SB-07 at a concentration of 120,000 ppm, SB-08 at a concentration of 15,000 ppm, SB-09 at a concentration of 13,000 ppm, SB-10 at a concentration of 17,000 ppm, SB-12 at a concentration of 14,000 ppm, SB-14 at a concentration of 19,000 ppm, and SB-15 at a concentration of 20,000 ppm, which exceed the 6.0 ppm Criterion and the statewide default background level of 12,000 ppm.

<u>Lead</u> was detected in SB-06 at a concentration of 840 ppm and SB-07 at a concentration of 4,200 ppm, which exceed the 700 ppm Criterion and the statewide default background level of 21 ppm.

<u>Manganese</u> was detected in SB-04 at a concentration of 530 ppm, SB-07 at a concentration of 650 ppm, SB-14 at a concentration of 810 ppm, and SB-15 at a concentration of 720 ppm, which exceed the 1.0 ppm Criterion and the statewide default background level of 440 ppm.

Molybdenum was detected in SB-06 at a concentration of 9.5 ppm and SB-07 at a concentration of 8.7 ppm, which exceed the 4.2 ppm Criterion.

<u>Trichloroethylene</u> was detected in SB-06 at a concentration of 260 ppb, which exceeds the 100 ppb Criterion.

Exceedances above the Soil Groundwater Surface Water Interface Protection Criteria:

These Criteria represent concentrations of hazardous substances in soils that may leach from the soil into groundwater at concentrations in the groundwater exceeding generic Groundwater Surface Water Interface Criteria.

<u>Arsenic</u> was detected in SB-04 at a concentration of 7.2 ppm, SB-05 at a concentration of 7.5 ppm, SB-06 at a concentration of 15 ppm, and SB-07 at a concentration of 31 ppm, which exceed the 4.6 ppm Criterion and the statewide default background level of 5.8 ppm.

<u>Barium</u> was detected in SB-07 at a concentration of 950 ppm, which exceeds the 440 ppm Criterion and the statewide default background level of 75 ppm.

<u>Cadmium</u> was detected in SB-06 at a concentration of 8.4 ppm and SB-07 at a concentration of 14 ppm, which exceed the 3.6 ppm Criterion and the statewide default background level of 1.2 ppm.

Chromium (total) was detected in SB-01 at a concentration of 4.7 ppm, SB-02 at a concentration of 10 ppm, SB-03 at a concentration of 8.9 ppm, SB-04 at a concentration of 8.3 ppm, SB-05 at a concentration of 16 ppm, SB-06 at a concentration of 47 ppm, SB-07 at a concentration of 100 ppm, SB-08 at a concentration of 9.9 ppm, SB-09 at a concentration of 12 ppm, SB-10 at a concentration of 15 ppm, SB-11 at a concentration of 8.9 ppm, SB-12 at a concentration of 19 ppm, SB-13 at a concentration of 7.3 ppm, SB-14 at a concentration of 33 ppm, and SB-15 at a concentration of 29 ppm, which exceed the 3.3 ppm Criterion.

<u>Cobalt</u> was detected in SB-07 at a concentration of 11 ppm, which exceeds the 2.0 ppm Criterion and the statewide default background level of 6.8 ppm.

<u>Copper</u> was detected in SB-06 at a concentration of 240 ppm and SB-07 at a concentration of 450 ppm, which exceed the 75 ppm Criterion and the statewide default background level of 32 ppm.

<u>Cyanide</u> was detected in SB-06 at a concentration of 0.8 ppm, SB-07 at a concentration of 0.7 ppm, SB-12 at a concentration of 0.4 ppm, and SB-13 at a concentration of

0.4 ppm, which exceed the 0.1 ppm Criterion and the statewide default background level of 0.39 ppm.

<u>Fluoranthene</u> was detected in SB-06 at a concentration of 19,000 ppb and SB-07 at a concentration of 17,000 ppb, which exceed the 5,500 ppb Criterion.

<u>Lead</u> was detected in SB-07 at a concentration of 4,200 ppm, which exceeds the 2,800 ppm Criterion and the statewide default background level of 21 ppm.

<u>Manganese</u> was detected in SB-04 at a concentration of 530 ppm, SB-07 at a concentration of 650 ppm, SB-14 at a concentration of 810 ppm, and SB-15 at a concentration of 720 ppm, which exceed the 56 ppm Criterion and the statewide default background level of 440 ppm.

Mercury was detected in SB-06 at a concentration of 0.16 ppm and SB-07 at a concentration of 1.2 ppm, which exceed the 0.05 ppm Criterion and the statewide default background level of 0.13 ppm.

<u>Phenanthrene</u> was detected in SB-06 at a concentration of 11,000 ppb and SB-07 at a concentration of 9,900 ppb, which exceed the 2,100 ppb Criterion.

<u>Selenium</u> was detected in SB-06 at a concentration of 1.8 ppm and SB-07 at a concentration of 2.2 ppm, which exceed the 0.4 ppm Criterion and the statewide default background level of 0.41 ppm.

<u>Silver</u> was detected in SB-06 at a concentration of 1.1 ppm and SB-07 at a concentration of 3.3 ppm, which exceed the 0.1 ppm Criterion and the statewide default background level of 1.0 ppm.

<u>Zinc</u> was detected in SB-06 at a concentration of 600 ppm and SB-07 at a concentration of 1,300 ppm, which exceed the 170 ppm Criterion and the statewide default background level of 47 ppm.

Exceedances above the Soil Residential Direct Contact Criteria:

These Criteria represent concentrations of hazardous substances in soils at Residential locations considered to be hazardous through dermal contact and ingestion of the soil.

<u>Arsenic</u> was detected in SB-06 at a concentration of 15 ppm and SB-07 at a concentration of 31 ppm, which exceed the 7.6 ppm Criterion and the statewide default background level of 5.8 ppm.

Benzo(a)pyrene was detected in SB-06 at a concentration of 6,700 ppm and SB-07 at a concentration of 11,000 ppb, which exceed the 2,000 ppb Criterion.

<u>Lead</u> was detected in SB-06 at a concentration of 840 ppm and SB-07 at a concentration of 4,200 ppm, which exceed the 400 ppm Criterion and the statewide default background level of 21 ppm.

Exceedances above the Soil Nonresidential Direct Contact Criteria:

These Criteria represent concentrations of hazardous substances in soils at Nonresidential locations considered to be hazardous through dermal contact and ingestion of the soil.

Benzo(a)pyrene was detected in SB-07 at a concentration of 11,000 ppb, which exceeds the 8,000 ppb Criterion.

<u>Lead</u> was detected in SB-07 at a concentration of 4,200 ppm, which exceeds the 900 ppm Criterion and the statewide default background level of 21 ppm.

Surface Water Samples

The intent of the surface water sampling was to identify potential contamination in the surface water, to determine whether contaminants had migrated from the property into the Honeywell Ditch and/or surface drainage area on the property; and to determine potential health and safety concerns, including threats posed to nearby residential populations, future workers or occupants, or resources associated with the surface water in the area of the property. To accomplish this sampling task, four surface water samples (plus one duplicate sample) were collected from the Honeywell Ditch, a discharge pipe flowing into the Honeywell Ditch, and the surface drainage between the two fill areas, according to the procedures outlined in the work plan. Samplers collected samples from the most downstream location first, and then moved upstream. This was done to eliminate the possibility of contaminating the downstream sample locations by the migration of disturbed sediments from the upstream sampling locations.

The background sample, SW-01, was collected from the Honeywell Ditch, upstream of the fill areas on the Tree Farm property. SW-02 and SW-02-DUP were collected from the water flowing out of a 2-foot diameter, clay, discharge pipe located along the north bank of the Honeywell Ditch on the Tree Farm property. SW-03 was collected from the Honeywell Ditch, downstream of the discharge pipe, near the southeast corner of the property. SW-04 was collected from the surface drainage between the two fill areas. Surface water sample locations are shown in Figure 5.

Surface water samples, SW-01, SW-03, and SW-04, were collected by completely immersing the sample bottles into the water, while SW-02 and SB-02 DUP were collected from the flowing water out of the discharge pipe. The metals analysis samples

were not field filtered, and all inorganic and volatile samples were properly preserved and placed on ice in the sampling coolers. Each water sample was collected before the sediment sample at each location to minimize disturbing the water quality. During sampling, the temperature, pH, conductivity, oxidation reduction potential, and total dissolved solids were measured. A description of the surface water sample locations and sample characteristics are found in Table 5.

The laboratory results for surface water samples collected during the BFRA were compared to two of Part 201 Criteria for groundwater, specifically the Groundwater Surface Water Interface (GSI) Criteria and the Groundwater Contact Criteria. No surface water contaminant concentrations exceeded these Groundwater Criteria. The full extent of any possible contaminants in the surface water was not delineated during the BFRA of the Tree Farm property.

Sediment Samples

The intent of the sediment sampling was to identify potential contamination in the sediment, to determine whether contaminants had migrated from the property into the Honeywell Ditch and/or surface drainage area on the property; and to determine potential health and safety concerns, including threats posed to nearby residential populations, future workers or occupants, or resources associated with the sediments in the area of the property. To accomplish this sampling task, four sediment samples were collected from the Honeywell Ditch, at the discharge pipe which flows into the Honeywell Ditch, and the surface drainage between the two fill areas, according to the procedures outlined in the work plan. Samplers collected samples from the most downstream location first, and then moved upstream. This was done to eliminate the possibility of contaminating the downstream sample locations by the migration of disturbed sediments from the upstream sampling locations.

The background sample, SD-01 was collected from the Honeywell Ditch, upstream of the fill areas on the Tree Farm property. SD-02 was collected at the base of the discharge pipe located along the north bank of the Honeywell Ditch that flows from the Tree Farm property. SD-03 was collected from the Honeywell Ditch, downstream of the discharge pipe, near the southeast corner of the property. SD-04 was collected from the surface drainage between the two fill areas. Sediment sample locations are shown in Figure 5.

Field staff collected samples with a 2-inch diameter high density polyethylene Macro-Core[®] liner or a stainless steel spoon. Staff pushed the Macro-Core[®] liner into a sampling location or in the case of sample SD-02, collected the sample with a stainless steel spoon. After pulling the corer out of the sediment and dislodging the sample into a disposable aluminum pan, staff examined the sample and logged its attributes on a field data sheet. Samples were collected in accordance with procedures described in the

work plan for the Tree Farm property. A description of the sediment sample locations and sample characteristics are found in Table 7.

Analysis of the sediment samples collected during the BFRA detected the presence of one inorganic analyte and two pesticides compounds at concentrations exceeding Part 201 Sediment Screening Levels. These exceedances occurred only in sample SD-04, in the surface drainage area between the two fill areas. Since the MDEQ has not yet established generic Sediment Cleanup Criteria, only screening values and regional background values are used in this evaluation. Table 8 provides a summary of the sediment sample analytical results that exceeded Part 201 Sediment Screening Levels or Part 201 Soil Criteria (GSI Protection and Direct Contact) used as screening levels. Shaded cells in the table indicate those screening levels exceeded by the sample concentrations".

The MDEQ's sediments characterization guidance noted above bases some of its screening levels on a U.S. EPA guide for assessing sediment contamination, which includes recommendations for the use of sediment background values. That guide states that exceedances of sediment quality guidelines provide evidence for contamination, but "it should be recognized that all or a portion of the exceedances may be associated with elevated background concentrations."

Only sediment sample SD-04 contained hazardous substances exceeding Part 201 Sediment Screening Levels or Part 201 Soil Criteria used as screening levels. However, hazardous substance concentrations exceeding screening levels are not considered Cleanup Criteria and such results can only be used in a subjective manner. Screening level exceedances cannot be used to determine facility status, for example. Nevertheless, two pesticide compounds and the inorganic analyte arsenic exceeded the screening levels as follows:

- 4-4'-DDD detected above screening levels at a concentration of 49 ppb.
- 4-4'-DDE detected above screening levels at a concentration of 56 ppb.
- Arsenic detected above screening levels at a concentration of 11 ppm.

DISCUSSION

MDEQ staff conducted a BFRA of the Tree Farm property in accordance with the CA with the U.S. EPA and according to the approved work plan. The BFRA included file and information searches, reconnaissance inspections of the property, a geophysical survey of subsurface conditions, the collection and analyses of surficial soil, subsurface soil, surface water, and sediment samples, GPS data collection of sample locations and property features, and the collection of site feature photographs, data evaluation, and the compilation of all this data into this report.

Analysis of the soil samples collected during the BFRA of the Tree Farm property detected the presence of antimony, arsenic, barium, benzo(b)fluoranthene, benzo(a)pyrene, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, iron, lead, manganese, mercury, molybdenum, phenanthrene, selenium, silver, trichloroethylene, vanadium, and zinc at concentrations greater than the Generic Residential Cleanup Criteria. Because these contaminants were detected at concentrations in excess of Generic Residential Cleanup Criteria, the Tree Farm property does meet the definition of a facility under Part 201.

The contaminants in the surficial soils on the Tree Farm property include: arsenic, benzo(b)fluoranthene, benzo(a)pyrene, and lead at concentrations above Part 201 Soil Residential Direct Contact Criteria; chromium (total) at a concentration above Part 201 Residential Particulate Soil Inhalation Criteria; antimony, arsenic, chromium (total), cobalt, iron, lead, manganese, molybdenum, and vanadium at concentrations exceeding Part 201 Soil Residential Drinking Water Protection Criteria; and arsenic, barium, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, manganese, mercury, phenanthrene, selenium, silver, and zinc at concentrations exceeding Part 201 Soil GSI Protection Criteria.

Arsenic was detected in SS-04, SS-06, SS-07, and SS-09 at concentrations that range from 12 to 15 ppm, benzo(b)fluoranthene was detected in SS-07 at a concentration of 25,000 ppb, benzo(a)pyrene was detected in SS-07 at a concentration of 17,000 ppb, lead was detected in SS-06 and SS-07, at the concentrations of 900 ppm and 1,400 ppm, respectively, which all exceed their Direct Contact Criteria. Both SS-06 and SS-07 were collected in the area of the property that contained uprooted trees revealing waste entangled in the roots and soil. This area is noted on Figure 2, the Property Features map, and the Surficial Soil Sample Locations are noted on Figure 3. Chromium (total) was detected in all of the surficial soil samples with a concentration range of 9.1 ppm to 390 ppm. The highest concentration of chromium (total) was detected in SS-07 at a concentration of 390 ppm, which exceeds the Residential and Nonresidential Particulate Soil Inhalation Criteria.

The contaminants in the deep soils on the Tree Farm property include: arsenic, benzo(a)pyrene, and lead at concentrations above Part 201 Soil Residential Direct Contact Criteria; antimony, arsenic, cadmium, chromium (total), cobalt, iron, lead, manganese, molybdenum, and trichloroethylene at concentrations exceeding Part 201 Soil Residential Drinking Water Protection Criteria; and arsenic, barium, cadmium, chromium (total), cobalt, copper, cyanide, fluoranthene, lead, manganese, mercury, phenanthrene, selenium, silver, and zinc at concentrations exceeding Part 201 Soil GSI Protection Criteria. Arsenic was detected in SB-06 and SB-07 at the concentrations of 15 ppm and 31 ppm, respectively; benzo(a)pyrene was detected in SB-06 and SB-07 at the concentrations of 6,700 ppb and 11,000 ppb, and lead was detected in SB-06 and SB-07, at the concentrations of 840 ppm and 4,200 ppm, respectively, which all exceed their Direct Contact Criteria. Chromium (total) was detected in SB-06, SB-07, and SB-14 at concentration ranges of 33 ppm to 100 ppm, with the highest concentrations detected in SB-06 and SB-07. Both SB-06 and SB-07 were collected in the area of the property that contained uprooted trees revealing waste entangled in the roots and soil. The area of uprooted trees is noted on Figure 2, the Property Features map, and the Soil Boring Sample Locations are noted on Figure 4.

Analysis of the surface water samples collected during the BFRA of the Tree Farm property were compared to two of Part 201 Criteria for groundwater, specifically the Groundwater Surface Water Interface (GSI) Criteria and the Groundwater Contact Criteria, but no surface water contaminant concentrations exceeded these Groundwater Criteria.

Analysis of the sediment samples collected during the BFRA of the Tree Farm property detected the presence of 4-4'-DDD, 4-4'-DDE, and arsenic at concentrations exceeding sediment screening levels. These contaminants were detected in SD-04, which was collected from the surface drainage area between the two large fill areas on the south side of the Tree Farm property.

Based on the findings of the BFRA investigation, the following issues should be addressed before or during the redevelopment of the Tree Farm property:

• Action should be taken to abate the potential threat caused by the presence of contaminants exceeding Residential Cleanup Criteria in the soils by mitigation of these contaminants or restricting access to the contaminated areas. Arsenic, benzo(b)fluoranthene, benzo(a)pyrene, and lead were detected in the surficial soil samples at concentrations which exceed the Residential Direct Contact Criteria. The extent of these contaminants should be determined and proper action should be taken to mitigate the soils. In some cases, further evaluation of certain inorganic analytes found at levels above default background levels may show that some of the inorganic analytes may be naturally occurring at those levels, thereby eliminating the need for mitigation.

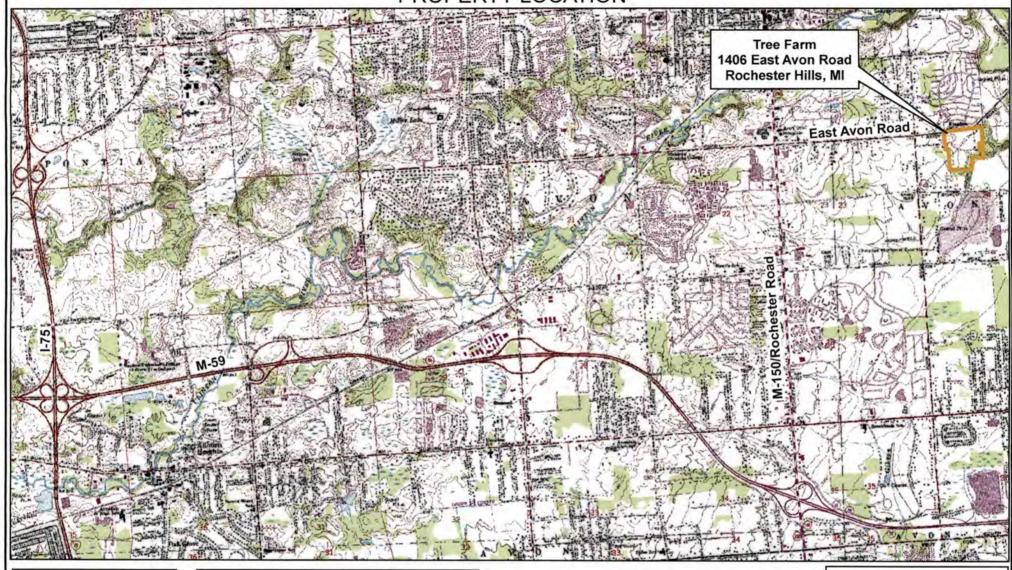
- Contaminants were detected in the shallow and deep soil samples that exceeded both the Drinking Water Protection Criteria and the GSI Protection Criteria.
 Future redevelopment activities should be conducted in a manner that will not cause additional or adverse leaching of the contaminants in the soils into the groundwater.
- Due to the concentration of chromium (total) detected in the surficial soils at levels above Part 201 Residential Particulate Soil Inhalation Criteria, specific dust control methods should be instituted during redevelopment so that health and safety concerns related to ingestion or inhalation of dust containing contaminants are controlled.
- A more detailed study of the background levels of naturally occurring inorganic analytes in the area may be conducted to determine whether these levels on the property are of concern and if a site-specific background should be substituted for the calculated Cleanup Criteria.
- The contaminants of concern should be considered with respect to responsibilities that may exist under Part 201. The nature of any response activity that may be required is dependent on the intended use of the property and the party's liability under Part 201. A person who is liable for the contamination is required to achieve cleanup of the property consistent with the Cleanup Criteria. The relevant Criteria are a function of the intended property use, such as residential, commercial, or industrial. A non-liable developer is not required to implement a cleanup to achieve the appropriate Cleanup Criteria. However, a non-liable party must comply with the "due care" obligations specified in Section 7a of Part 201. These obligations include not exacerbating the existing contamination, exercising due care to assure there are not unacceptable exposures, and taking reasonable precautions against the reasonably foreseeable activities of third parties.
- Further information concerning Part 201 Cleanup Criteria, due care provisions, Southeast Michigan District Office at 586-753-3700.

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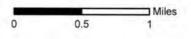


FIG LE 1 PROPERTY LOCATION



Tree Farm
1406 East Avon Road
Rochester Hills, MI 48307
T3N R11E Section 24
Oakland County
MIB000000166
Parcel Numbers:
70-15-24-100-20
70-15-24-100-21

Directions to Property:
From Lansing take I-69 east to
I-75 (Exit 133), go south to
M-59 (Exit 77A), go east to
M-150 North/Rochester Road (Exit 46),
Turn left and go north to East Avon Road,
Turn right and go east to Tree Farm Property
Located on the right (south) side of road.
1406 East Avon Road, Rochester Hills, MI



Compiled by: Teresa Ducsay - June 2011 Source: Michigan Geographic Data Library





FIGURE 2 PROPERTY FEATURES



Legend

Buried Pipeline

Power Line

Historical Areas of Surface Disturbance

Property Boundary

Tree Farm
1406 East Avon Road
Rochester Hills, MI 48307
T3N R11E Section 24
Oakland County
MIB000000166





Compiled by: Teresa Ducsay - June 2011 Sources: Michigan Geographic Data Library and Global Positioning System Data

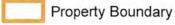
FIGURE 3 SURFICIAL SOIL SAMPLE LOCATIONS



Tree Farm
1406 East Avon Road
ochester Hills, MI 48307
T3N R11E Section 24
Oakland County
MIB000000166

Legend

⊙ SS-01 - Surficial Soil 01







Compiled by: Teresa Ducsay - June 2011 Sources: Michigan Geographic Data Library and Global Positioning System Data