

Michael Stampfler
Emergency Financial Manager
City of Pontiac
47450 Woodward Avenue
Pontiac, Michigan 48342

Subject:
Off-site Subsurface Investigation Summary Report
MLC – Former Pontiac Employee Development Center
65 East University Drive
Pontiac, Michigan
Facility ID: 0-0015260

Dear Mr. Stampfler,

On behalf of Motors Liquidation Company (MLC) and per Section 4 of the Limited Right of Access Agreement executed between MLC and the City of Pontiac, ARCADIS US, Inc. (ARCADIS) is presenting this Off-site Subsurface Investigation Summary Report for field activities completed at the City of Pontiac Property (see Figure 1). The field activities were completed as part of the ongoing investigation for the open Leaking Underground Storage Tank (UST) release listed for the Former Pontiac Employee Development Center located at 65 East University Drive in Pontiac, Michigan (herein referred to as the Site).

On November 17, 2010, ARCADIS installed two permanent monitoring wells (MW-19 and MW-20) on the City of Pontiac Property to screen for potential migration of contaminants identified on the western portion of the Former Pontiac Employee Development Center Site (Figure 1). The monitoring well installation was completed using hollow stem auger drilling methods. Drilling services were provided by Terra Probe Environmental of Ottawa Lake, Michigan (Terra Probe). The monitoring wells were constructed of 2-inch PVC, 0.010 slot screen with 2-inch threaded PVC riser. A sand pack was placed around the screens followed by a foot of hydrated bentonite pellets. Boring and well construction logs are provided in Attachment 1.

A photoionization detector (PID) was used to screen soil samples for volatile organic compounds (VOCs) during the drilling activities. PID readings did not indicate the presence of VOCs at either of the monitoring well locations. During the monitoring

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Brighton
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ENVIRONMENT

Date:
January 24, 2011

Contact:
Brad Saunders

Phone:
810.225.1904

Email:
Brad.Saunders@arcadis-us.com

Our ref:
B0064486.0001

well installation activities, ARCADIS collected a soil sample from each location; MW-19 (4-5') and MW-20 (4.5-5.5'). Soil samples were to be collected based on visual observations and PID readings. Since no staining or odors were observed and there were no PID readings, soil samples were collected from the unsaturated vadose zone (the zone between the land surface and water table) consistent with standard investigation practices. Soil samples were submitted for analysis to Merit Laboratories (Merit), in Lansing, Michigan, an accredited laboratory. Target analytical constituents were selected based on identified contaminants at the Former Pontiac Employee Development Center Site. The samples were analyzed for VOCs in accordance with United States Environmental Protection Agency (USEPA) Method 8260, semi-volatile organic compounds (SVOCs) in accordance with USEPA Method 8270, and lead in accordance with USEPA Method 6020. Analytical results for MW-19 and MW-20 indicate VOC and SVOC concentrations were not detected above the method detection limits. Lead concentrations were detected at 2.24 milligrams/kilogram (mg/kg) and 7.69 mg/kg at MW-19 and MW-20, respectively. Detected concentrations of lead were typical of background and well below the Michigan Department of Environmental Quality (MDEQ) Generic Residential and Commercial I Risk-Based Screening Level (RBSL) of 700 mg/kg. The boring and well construction logs are provided in Attachment 1, and the laboratory analytical results for soil are summarized in Attachment 2.

On December 2, 2010, ARCADIS collected groundwater samples from Monitoring Wells MW-19 and MW-20 using low-flow sampling techniques in compliance with the MDNRE Operational Memorandum #2, Sampling and Analysis Guidance, dated October 22, 2004. Temperature, pH, turbidity, oxidation reduction potential (ORP), and specific electrical conductivity were monitored during purging to determine stabilization of the groundwater. Groundwater samples were collected and submitted to Merit for analysis of VOCs in accordance with USEPA Method 8260, SVOCs in accordance with USEPA Method 8270, and lead in accordance with USEPA Method 6020. Analytical results indicate VOC, SVOC, and lead concentrations were not detected above the method detection limits. The laboratory analytical results for groundwater are provided in Attachment 3.

In conclusion, contaminants present at the Former Pontiac Employee Development Center Site were not detected in samples obtained from the borings and monitoring wells completed on the City of Pontiac Property.

If you have any questions, please contact me at 810.225.1904 or at
Brad.Saunders@arcadis-us.com.

Sincerely,

ARCADIS G&M of Michigan, LLC



Brad Saunders
Principal Engineer

Copies:

Robert Hare, MLC

Attachments:

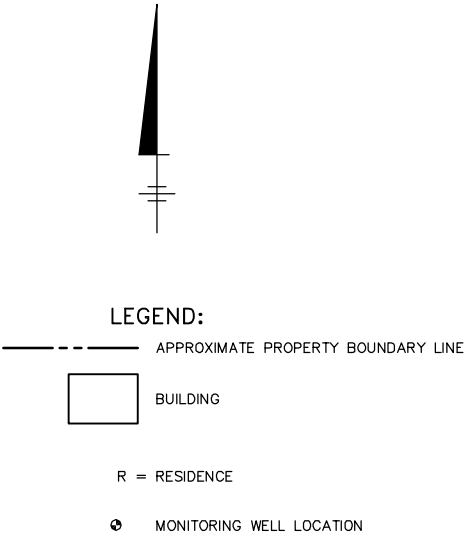
Figure 1 – Site Map

Attachment 1 – Boring and Wells Construction Logs

Attachment 2 – Laboratory Analytical Results – Soil

Attachment 3 – Laboratory Analytical Results – Groundwater

Figure



NOTE:
BASE MAP INFORMATION SUPPLIED BY RECENT GOOGLE
EARTH AERIAL.

MOTORS LIQUIDATION COMPANY FORMER PONTIAC EMPLOYEE DEVELOPMENT CENTER 65 E. UNIVERSITY DRIVE PONTIAC, MICHIGAN 48342	
SITE MAP	
	FIGURE 1

Attachment 1

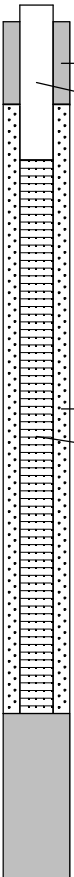
Boring and Wells Construction Logs

Date Start/Finish: 11/17/2010 Drilling Company: Terra Probe Driller's Name: Joe Fojtik Drilling Method: Geoprobe / Hollow Stem Auger Sampling Method: Hand Auger & 4' Macrocore Rig Type: 6620 DT Geoprobe	Northing: 417483.14 Easting: 13412718.40 Casing Elevation: 917.380081 Borehole Depth: 20' bgs Surface Elevation: 917.77 Descriptions By: Amber Dmytro	Well/Boring ID: MW-19 Client: Motors Liquidation Company Location: MLC - Former Pontiac Employment Development Center
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
					0.0	FILL		ASPHALT FILL: Sand, gravel and brick.	
					0.0			CLAY, medium plasticity, some silt, stiff to medium stiff, brown (10YR 5/3). Note: roots throughout.	
915		1	0-5'	5.0	0.0	CL			
					0.0				
					0.0				
					0.0	SP		SAND, very fine to fine some medium, trace coarse; poorly sorted; dry; yellowish brown (10YR 5/4). Soils moist to wet at 5' bgs.	
5		2	5-8'	2.9	0.0			CLAY and silt, medium plasticity, little medium sand to small pebble, subangular to subrounded; stiff; dry to moist; no dilatancy; gray (10YR 5/1). Note: some wet seams, rapid dilatancy, trace very fine to fine sand seams.	
					0.0				
910									
					0.0				
10		3	8-12'	3.0	0.0				
					0.0				
905					0.0	CL			
		4	12-16'	2.9	0.0				
15					0.0				
					0.0				
900		5	16-20'	2.9	0.0				
					0.0				
20								End of boring at 20' bgs.	

	Remarks: bgs = below ground surface Soil sample MW-19-11172010 (4-5) collected for laboratory analysis Groundwater encountered at 5' bgs. No staining or odor detected.
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Date Start/Finish: 11/17/2010 Drilling Company: Terra Probe Driller's Name: Joe Fojtik Drilling Method: Geoprobe / Hollow Stem Auger Sampling Method: Hand Auger & 4' Macrocore Rig Type: 6620 DT Geoprobe	Northing: 417546.01 Easting: 13412698.09 Casing Elevation: 917.45 Borehole Depth: 16' bgs Surface Elevation: 917.92 Descriptions By: Amber Dmytro	Well/Boring ID: MW-20 Client: Motors Liquidation Company Location: MLC - Former Pontiac Employment Development Center
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DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0									
					0.0	FILL		ASPHALT FILL: Sand and brick.	 Bentonite Pellets (0.5-2' bgs) Sch-40 PVC Riser Sand Pack (2-13' bg) 2" Sch-40 PVC 10 Slot Well Screen (3-13' bgs)
915		1	0-5'	5.0	0.0	SP		SAND, very fine, some fine, some silt, trace clay; poorly sorted; dry; yellowish brown (10YR 5/6).	
					0.0	CL		CLAY, medium plasticity, some silt, little very fine sand; dry; stiff to medium stiff; brown (10YR 5/3).	
5		2	5-8'	2.3	0.0	SP		SAND, very fine to fine, some medium, little coarse to granule, trace small pebble, subangular to subrounded; poorly sorted; moist to wet; yellowish brown (10YR 5/4).	
					0.0			CLAY, high plasticity, little silt; dry to moist; medium stiff; grayish brown (10YR 5/2).	
910					0.0	SP		SAND, very fine to medium, some coarse, little very coarse to granule; poorly sorted; wet; yellowish brown (10YR 5/6).	
10		3	8-12'	3.3	0.0			CLAY and silt, medium plasticity, little medium sand to small pebble, subangular to subrounded; dry to moist; stiff; gray (10YR 5/1). NOTE: some wet seams, rapid dilatancy.	
905		4	12-16'	2.4	0.0	CL / ML			
15					0.0				
								End of boring at 16' bgs.	
900									
20									

 Infrastructure, environment, buildings	Remarks: bgs = below ground surface Soil sample MW-20-11172010 (4.5-5.5) collected for laboratory analysis Groundwater encountered at 5.6' bgs. No staining or odor detected.
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Attachment 2

Laboratory Analytical Results – Soil



Analytical Laboratory Report

Report ID: S46765.01(01)
Generated on 12/02/2010

Report to

Attention: Brad Saunders/Allyn Begnache
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: brad.saunders@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S46765.01-S46765.04
Project: Pontiac EDC - MLC
Collected Date: 11/17/2010
Submitted Date/Time: 11/18/2010 15:10
Sampled by: Amber Dmytro
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

A handwritten signature in cursive script that reads "Violetta F. Murshak".

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46765.01	MW-19_11172010 (4-5)	Soil	11/17/2010 10:00
S46765.02	MW-20_11172010 (4.5-5.5)	Soil	11/17/2010 13:35
S46765.03	WS-WC(11172010)	Soil	11/17/2010 14:30
S46765.04	WL-WC(11172010)	Liquid	11/17/2010 14:55



Analytical Laboratory Report

Lab Sample ID: S46765.01
Sample Tag: MW-19_11172010 (4-5)
Collected Date/Time: 11/17/2010 10:00
Matrix: Soil
COC Reference: 57647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

BNA Extraction	Completed			3550B	11/23/10 13:10	DLR		
Metal Digestion	Completed			3050B	12/01/10 12:00	SLS		

Inorganics

Total Solids	85	%	1	Std M 2540 B	11/19/10 12:00	DJS		
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Metals

Lead	2.24	mg/kg	0.30	6020	12/01/10 16:31	SLS		
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Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Acenaphthylene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Anthracene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4-Chloroaniline	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2-Chlorophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Chrysene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
p,m-Cresol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
o-Cresol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Dibenzofuran	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
1,2-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
1,3-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
1,4-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	11/29/10 14:41	PL		
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Diethyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		



Analytical Laboratory Report

Lab Sample ID: S46765.01 (continued)

Sample Tag: MW-19_11172010 (4-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Dimethyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
2,4-Dinitrophenol	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
1,2-Diphenylhydrazine	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Fluorene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Hexachlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Hexachloroethane	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Isophorone	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Naphthalene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
3-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
4-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
Nitrobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2-Nitrophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
4-Nitrophenol	Not detected	ug/kg	800	8270C	11/29/10 14:41	PL		
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Pentachlorophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Phenanthrene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Phenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Pyrene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
1,2,4-Trichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 14:41	PL		
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Acetone	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:07	WAT		
Methyl iodide	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
Carbon disulfide	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:07	WAT		
Dichlorodifluoromethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Chloromethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Bromomethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Chloroethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		



Analytical Laboratory Report

Lab Sample ID: S46765.01 (continued)

Sample Tag: MW-19_11172010 (4-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Methylene chloride	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:07	WAT		
Chloroform	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	8260B/5035	11/23/10 01:07	WAT		
2-Hexanone	Not detected	ug/kg	3,000	8260B/5035	11/23/10 01:07	WAT		
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Benzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Trichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
Dibromomethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Toluene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	11/23/10 01:07	WAT		M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
o-Xylene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Styrene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
Isopropylbenzene	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
Bromoform	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
Bromobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:07	WAT		
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:07	WAT		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S46765.01 (continued)

Sample Tag: MW-19_11172010 (4-5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:07	WAT		
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:07	WAT		
1,2,4-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:07	WAT		
1,2,3-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:07	WAT		
Naphthalene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:07	WAT		
2-Methylnaphthalene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:07	WAT		



Analytical Laboratory Report

Lab Sample ID: S46765.02
Sample Tag: MW-20_11172010 (4.5-5.5)
Collected Date/Time: 11/17/2010 13:35
Matrix: Soil
COC Reference: 57647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.6	IR
1	40ml Glass	MeOH	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

BNA Extraction	Completed			3550B	11/23/10 13:10	DLR		
Metal Digestion	Completed			3050B	12/01/10 12:00	SLS		

Inorganics

Total Solids	83	%	1	Std M 2540 B	11/19/10 12:00	DJS		
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Metals

Lead	7.69	mg/kg	0.30	6020	12/01/10 16:33	SLS		
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Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Acenaphthylene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Anthracene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Benzo(a)anthracene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Benzo(b)fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Benzo(k)fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Benzo(ghi)perylene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Benzo(a)pyrene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
bis(2-Chloroethoxy)methane	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
bis(2-Chloroethyl)ether	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
bis(2-Chloroisopropyl)ether	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
bis(2-Ethylhexyl)phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4-Bromophenyl phenyl ether	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Butyl benzyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4-Chloroaniline	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2-Chloronaphthalene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4-Chloro-3-methylphenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2-Chlorophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4-Chlorophenyl phenyl ether	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Chrysene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
p,m-Cresol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
o-Cresol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Dibenzo(ah)anthracene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Dibenzofuran	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
di-n-Butyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
1,2-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
1,3-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
1,4-Dichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
3,3'-Dichlorobenzidine	Not detected	ug/kg	2,000	8270C	11/29/10 15:14	PL		
2,4-Dichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Diethyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		



Analytical Laboratory Report

Lab Sample ID: S46765.02 (continued)

Sample Tag: MW-20_11172010 (4.5-5.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
2,4-Dimethylphenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Dimethyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4,6-Dinitro-2-methylphenol	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
2,4-Dinitrophenol	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
2,4-Dinitrotoluene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2,6-Dinitrotoluene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
1,2-Diphenylhydrazine	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
di-n-Octyl phthalate	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Fluoranthene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Fluorene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Hexachlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Hexachlorobutadiene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Hexachlorocyclopentadiene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Hexachloroethane	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Isophorone	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2-Methylnaphthalene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Naphthalene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
3-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
4-Nitroaniline	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
Nitrobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2-Nitrophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
4-Nitrophenol	Not detected	ug/kg	800	8270C	11/29/10 15:14	PL		
N-Nitrosodiphenylamine	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
N-Nitrosodi-n-propylamine	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Pentachlorophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Phenanthrene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Phenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Pyrene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
1,2,4-Trichlorobenzene	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2,4,5-Trichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
2,4,6-Trichlorophenol	Not detected	ug/kg	300	8270C	11/29/10 15:14	PL		
Organics - Volatiles								
Volatile Organics 5035								
Diethyl ether	Not detected	ug/kg	300	8260B/5035	11/23/10 01:27	WAT		
Acetone	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:27	WAT		
Methyl iodide	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
Carbon disulfide	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	8260B/5035	11/23/10 01:27	WAT		
Acrylonitrile	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
2-Butanone (MEK)	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:27	WAT		
Dichlorodifluoromethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
Chloromethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
Vinyl chloride	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Bromomethane	Not detected	ug/kg	300	8260B/5035	11/23/10 01:27	WAT		
Chloroethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
Trichlorofluoromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		



Analytical Laboratory Report

Lab Sample ID: S46765.02 (continued)
Sample Tag: MW-20_11172010 (4.5-5.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
1,1-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Methylene chloride	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
trans-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,1-Dichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
cis-1,2-Dichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Tetrahydrofuran	Not detected	ug/kg	1,000	8260B/5035	11/23/10 01:27	WAT		
Chloroform	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Bromochloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,1,1-Trichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	4,000	8260B/5035	11/23/10 01:27	WAT		
2-Hexanone	Not detected	ug/kg	4,000	8260B/5035	11/23/10 01:27	WAT		
Carbon tetrachloride	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Benzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,2-Dichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Trichloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,2-Dichloropropane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Bromodichloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
Dibromomethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
cis-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Toluene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
trans-1,3-Dichloropropene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,1,2-Trichloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Tetrachloroethene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
trans-1,4-Dichloro-2-butene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Dibromochloromethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,2-Dibromoethane	Not detected	ug/kg	30	8260B/5035	11/23/10 01:27	WAT		M
Chlorobenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,1,1,2-Tetrachloroethane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
Ethylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
p,m-Xylene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
o-Xylene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Styrene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
Isopropylbenzene	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
Bromoform	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,2,3-Trichloropropane	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
n-Propylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
Bromobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,3,5-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
tert-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
1,2,4-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
sec-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		
p-Isopropyltoluene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,3-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,4-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,2-Dichlorobenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
1,2,3-Trimethylbenzene	Not detected	ug/kg	100	8260B/5035	11/23/10 01:27	WAT		
n-Butylbenzene	Not detected	ug/kg	70	8260B/5035	11/23/10 01:27	WAT		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S46765.02 (continued)
Sample Tag: MW-20_11172010 (4.5-5.5)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Volatiles (continued)								
Volatile Organics 5035 (continued)								
Hexachloroethane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	400	8260B/5035	11/23/10 01:27	WAT		
1,2,4-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:27	WAT		
1,2,3-Trichlorobenzene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:27	WAT		
Naphthalene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:27	WAT		
2-Methylnaphthalene	Not detected	ug/kg	500	8260B/5035	11/23/10 01:27	WAT		



Analytical Laboratory Report

Lab Sample ID: S46765.03
Sample Tag: WS-WC(11172010)
Collected Date/Time: 11/17/2010 14:30
Matrix: Soil
COC Reference: 57647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

TCLP Zero Headspace Ext.	Completed			1311	11/23/10 17:00	WAR		
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Inorganics

Flashpoint for Solids	Not detected	mm/sec	2.2	1030	11/22/10 10:34	DJS		
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Organics - Volatiles

TCLP Volatiles

Benzene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	500	
Carbon tetrachloride	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	500	
Chlorobenzene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	100,000	
Chloroform	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	6,000	
1,4-Dichlorobenzene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	7,500	
1,2-Dichloroethane	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	500	
1,1-Dichloroethene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	700	
2-Butanone (MEK)	Not detected	ug/L	1,000	8260B	12/01/10 20:53	JGH	200,000	
Tetrachloroethene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	700	
Trichloroethene	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	500	
Vinyl chloride	Not detected	ug/L	100	8260B	12/01/10 20:53	JGH	200	



Analytical Laboratory Report

Lab Sample ID: S46765.04
Sample Tag: WL-WC(11172010)
Collected Date/Time: 11/17/2010 14:55
Matrix: Liquid
COC Reference: 57647

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.6	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

TCLP Zero Headspace Ext.	Completed			1311	11/23/10 17:00	WAR		
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Inorganics

Flash Point	Not detected	oF	180	ASTM D3278	11/23/10 14:56	DJS	<140	
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Organics - Volatiles

TCLP Volatiles

Benzene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	500	
Carbon tetrachloride	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	500	
Chlorobenzene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	100,000	
Chloroform	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	6,000	
1,4-Dichlorobenzene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	7,500	
1,2-Dichloroethane	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	500	
1,1-Dichloroethene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	700	
2-Butanone (MEK)	Not detected	ug/L	1,000	8260B	12/01/10 21:13	JGH	200,000	
Tetrachloroethene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	700	
Trichloroethene	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	500	
Vinyl chloride	Not detected	ug/L	100	8260B	12/01/10 21:13	JGH	200	



C.O.C. PAGE # _____ OF _____

INVOICE TO

CHAIN OF CUSTODY RECORD

PLEASE NOTE: SIGNING ACKNOWLEDGES ACCEPTANCE OF TERMS & CONDITIONS ON REVERSE SIDE

Attachment 3

Laboratory Analytical Results –
Groundwater



Analytical Laboratory Report

Report ID: S46979.01(01)
Generated on 12/16/2010

Report to

Attention: Brad Saunders/Allyn Begnache
Arcadis
10559 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-229-8594 FAX: 810-229-8837
Email: brad.saunders@arcadis-us.com

Report produced by

Merit Laboratories
2680 East Lansing Drive
East Lansing, MI 48823

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

Report Summary

Lab Sample ID(s): S46979.01-S46979.03
Project: Pontiac EDC - MLC
Collected Date: 12/02/2010
Submitted Date/Time: 12/03/2010 15:45
Sampled by: Michael Mathiah
P.O. #:

Report Notes

Results relate only to items tested as received by the laboratory.
Methods may be modified for improved performance.
Results reported on a dry weight basis where applicable.
"Not detected" indicates that parameter was not found at a level equal to or greater than the RL.
Report shall not be reproduced except in full, without the written approval of Merit Laboratories.

Laboratory Certifications:

Michigan DNRE (#9956), Ohio EPA (#CL0002), NELAC NY (#11814), NELAC FL (#E871045), WBENC (#2005110032)
Some analytes reported may not be certified. Full certification lists are available upon request.

Violetta F. Murshak
Laboratory Director



Analytical Laboratory Report

Sample Summary (3 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46979.01	MW-19 (120210)	Groundwater	12/02/2010 11:25
S46979.02	MW-20 (120210)	Groundwater	12/02/2010 10:25
S46979.03	TB-01 (120210)	Groundwater	12/02/2010



Analytical Laboratory Report

Lab Sample ID: S46979.01
Sample Tag: MW-19 (120210)
Collected Date/Time: 12/02/2010 11:25
Matrix: Groundwater
COC Reference: 59293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

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

BNA Extraction	Completed			3510C	12/08/10 20:46	DLR		
Metal Digestion	Completed			3015A	12/07/10 09:00	SLS		

Metals

Lead, Dissolved	Not detected	mg/L	0.003	200.8	12/08/10 12:14	SLS	7439-92-1	
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Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	85-68-7	
4-Chloroaniline	Not detected	ug/L	10	8270C	12/14/10 18:42	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	59-50-7	
2-Chlorophenol	Not detected	ug/L	10	8270C	12/14/10 18:42	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	7005-72-3	
Chrysene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	218-01-9	
p,m-Cresol	Not detected	ug/L	20	8270C	12/14/10 18:42	PL	3/4-Cresol	
o-Cresol	Not detected	ug/L	10	8270C	12/14/10 18:42	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	12/14/10 18:42	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	4	8270C	12/14/10 18:42	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	12/14/10 18:42	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S46979.01 (continued)

Sample Tag: MW-19 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	12/14/10 18:42	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/L	25	8270C	12/14/10 18:42	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	117-84-0	
Fluoranthene	Not detected	ug/L	1	8270C	12/14/10 18:42	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	8270C	12/14/10 18:42	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	12/14/10 18:42	PL	193-39-5	
Isophorone	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	91-57-6	
Naphthalene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	91-20-3	
2-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 18:42	PL	88-74-4	
3-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 18:42	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 18:42	PL	100-01-6	
Nitrobenzene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	88-75-5	
4-Nitrophenol	Not detected	ug/L	25	8270C	12/14/10 18:42	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	87-86-5	
Phenanthrene	Not detected	ug/L	2	8270C	12/14/10 18:42	PL	85-01-8	
Phenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	108-95-2	
Pyrene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	12/14/10 18:42	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	4	8270C	12/14/10 18:42	PL	88-06-2	
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	8260B	12/15/10 20:06	WAT	60-29-7	
Acetone	Not detected	ug/L	50	8260B	12/15/10 20:06	WAT	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	12/15/10 20:06	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	30	8260B	12/15/10 20:06	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	75-09-2	



Analytical Laboratory Report

Lab Sample ID: S46979.01 (continued)

Sample Tag: MW-19 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	12/15/10 20:06	WAT	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	12/15/10 20:06	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	12/15/10 20:06	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	12/15/10 20:06	WAT		
o-Xylene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:06	WAT	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S46979.01 (continued)

Sample Tag: MW-19 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	12/15/10 20:06	WAT	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46979.02
Sample Tag: MW-20 (120210)
Collected Date/Time: 12/02/2010 10:25
Matrix: Groundwater
COC Reference: 59293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	4.3	IR
2	40ml Glass	HCL	Yes	4.3	IR
1	125ml Plastic	HNO3	Yes	4.3	IR

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

BNA Extraction	Completed			3510C	12/08/10 20:46	DLR		
Metal Digestion	Completed			3015A	12/07/10 09:00	SLS		

Metals

Lead, Dissolved	Not detected	mg/L	0.003	200.8	12/08/10 12:17	SLS	7439-92-1	
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Organics - Semi-Volatiles

Semi-Volatile Organics - MDEQ

Acenaphthene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	208-96-8	
Anthracene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	56-55-3	
Benzo(b)fluoranthene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	191-24-2	
Benzo(a)pyrene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	111-91-1	
bis(2-Chloroethyl)ether	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	111-44-4	
bis(2-Chloroisopropyl)ether	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	117-81-7	
4-Bromophenyl phenyl ether	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	101-55-3	
Butyl benzyl phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	85-68-7	
4-Chloroaniline	Not detected	ug/L	10	8270C	12/14/10 19:16	PL	106-47-8	
2-Chloronaphthalene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	91-58-7	
4-Chloro-3-methylphenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	59-50-7	
2-Chlorophenol	Not detected	ug/L	10	8270C	12/14/10 19:16	PL	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	7005-72-3	
Chrysene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	218-01-9	
p,m-Cresol	Not detected	ug/L	20	8270C	12/14/10 19:16	PL	3/4-Cresol	
o-Cresol	Not detected	ug/L	10	8270C	12/14/10 19:16	PL	95-48-7	
Dibenzo(ah)anthracene	Not detected	ug/L	2	8270C	12/14/10 19:16	PL	53-70-3	
Dibenzofuran	Not detected	ug/L	4	8270C	12/14/10 19:16	PL	132-64-9	
di-n-Butyl phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	84-74-2	
1,2-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	95-50-1	
1,3-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	106-46-7	
3,3'-Dichlorobenzidine	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	91-94-1	
2,4-Dichlorophenol	Not detected	ug/L	10	8270C	12/14/10 19:16	PL	120-83-2	
Diethyl phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	84-66-2	
2,4-Dimethylphenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	105-67-9	
Dimethyl phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S46979.02 (continued)

Sample Tag: MW-20 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Semi-Volatile Organics - MDEQ (continued)								
4,6-Dinitro-2-methylphenol	Not detected	ug/L	20	8270C	12/14/10 19:16	PL	534-52-1	
2,4-Dinitrophenol	Not detected	ug/L	25	8270C	12/14/10 19:16	PL	51-28-5	
2,4-Dinitrotoluene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	121-14-2	
2,6-Dinitrotoluene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	606-20-2	
1,2-Diphenylhydrazine	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	122-66-7	
di-n-Octyl phthalate	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	117-84-0	
Fluoranthene	Not detected	ug/L	1	8270C	12/14/10 19:16	PL	206-44-0	
Fluorene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	86-73-7	
Hexachlorobenzene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	118-74-1	
Hexachlorobutadiene	Not detected	ug/L	10	8270C	12/14/10 19:16	PL	87-68-3	
Hexachlorocyclopentadiene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	77-47-4	
Hexachloroethane	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	8270C	12/14/10 19:16	PL	193-39-5	
Isophorone	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	78-59-1	
2-Methylnaphthalene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	91-57-6	
Naphthalene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	91-20-3	
2-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 19:16	PL	88-74-4	
3-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 19:16	PL	99-09-2	
4-Nitroaniline	Not detected	ug/L	25	8270C	12/14/10 19:16	PL	100-01-6	
Nitrobenzene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	98-95-3	
2-Nitrophenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	88-75-5	
4-Nitrophenol	Not detected	ug/L	25	8270C	12/14/10 19:16	PL	100-02-7	
N-Nitrosodiphenylamine	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	621-64-7	
Pentachlorophenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	87-86-5	
Phenanthrene	Not detected	ug/L	2	8270C	12/14/10 19:16	PL	85-01-8	
Phenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	108-95-2	
Pyrene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	129-00-0	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	120-82-1	
2,4,5-Trichlorophenol	Not detected	ug/L	5	8270C	12/14/10 19:16	PL	95-95-4	
2,4,6-Trichlorophenol	Not detected	ug/L	4	8270C	12/14/10 19:16	PL	88-06-2	
Organics - Volatiles								
Volatile Organics - DEQ List								
Diethyl ether	Not detected	ug/L	10	8260B	12/15/10 20:27	WAT	60-29-7	
Acetone	Not detected	ug/L	50	8260B	12/15/10 20:27	WAT	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	12/15/10 20:27	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	30	8260B	12/15/10 20:27	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	75-09-2	



Analytical Laboratory Report

Lab Sample ID: S46979.02 (continued)

Sample Tag: MW-20 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	12/15/10 20:27	WAT	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	12/15/10 20:27	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	12/15/10 20:27	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	8260B	12/15/10 20:27	WAT		
o-Xylene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	75-25-2	
1,1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:27	WAT	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S46979.02 (continued)

Sample Tag: MW-20 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	12/15/10 20:27	WAT	91-57-6	



Analytical Laboratory Report

Lab Sample ID: S46979.03
Sample Tag: TB-01 (120210)
Collected Date/Time: 12/02/2010 :
Matrix: Groundwater
COC Reference: 59293

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.3	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Organics - Volatiles

Volatile Organics - DEQ List

Diethyl ether	Not detected	ug/L	10	8260B	12/15/10 20:46	WAT	60-29-7	
Acetone	Not detected	ug/L	50	8260B	12/15/10 20:46	WAT	67-64-1	
Methyl iodide	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	74-88-4	
Carbon disulfide	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	75-15-0	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	1634-04-4	
Acrylonitrile	Not detected	ug/L	2	8260B	12/15/10 20:46	WAT	107-13-1	
2-Butanone (MEK)	Not detected	ug/L	30	8260B	12/15/10 20:46	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	75-71-8	
Chloromethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-01-4	
Bromomethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	74-83-9	
Chloroethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	156-59-2	
Tetrahydrofuran	Not detected	ug/L	90	8260B	12/15/10 20:46	WAT	109-99-9	
Chloroform	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	67-66-3	
Bromochloromethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	74-97-5	
1,1,1-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	50	8260B	12/15/10 20:46	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	8260B	12/15/10 20:46	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	56-23-5	
Benzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-27-4	
Dibromomethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	74-95-3	
cis-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	127-18-4	
trans-1,4-Dichloro-2-butene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	110-57-6	
Dibromochloromethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	106-93-4	
Chlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	630-20-6	
Ethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	100-41-4	



Analytical Laboratory Report

Lab Sample ID: S46979.03 (continued)

Sample Tag: TB-01 (120210)

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
Volatile Organics - DEQ List (continued)								
p,m-Xylene	Not detected	ug/L	2	8260B	12/15/10 20:46	WAT		
o-Xylene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	95-47-6	
Styrene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	79-34-5	
1,2,3-Trichloropropane	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	96-18-4	
n-Propylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	103-65-1	
Bromobenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	108-86-1	
1,3,5-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	108-67-8	
tert-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	98-06-6	
1,2,4-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	95-63-6	
sec-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	135-98-8	
p-Isopropyltoluene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	99-87-6	
1,3-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	95-50-1	
1,2,3-Trimethylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	526-73-8	
n-Butylbenzene	Not detected	ug/L	1	8260B	12/15/10 20:46	WAT	104-51-8	
Hexachloroethane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	67-72-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	120-82-1	
1,2,3-Trichlorobenzene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	87-61-6	
Naphthalene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	91-20-3	
2-Methylnaphthalene	Not detected	ug/L	5	8260B	12/15/10 20:46	WAT	91-57-6	



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