

Mr. Jeffrey Crawford Rhode Island Department of Environmental Management Office of Waste Management 235 Promenade Street Providence, RI 02908-5767 Suite 250 Warwick Rhode Island 02886 Tel 401.738.3887 Fax 401.732.1686

www.arcadis-us.com

ARCADIS U.S., Inc. 300 Metro Center Boulevard

SER-1

Subject

December 2012 Quarterly Monitoring Report for Springfield Street School Complex

Dear Mr. Crawford:

ARCADIS US, Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between December 2 and 9, 2011. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

This work is subject to the Limitations contained in Attachment A. Results of monitoring are provided in the following sections and in the attachments.

COVER MONITORING

ARCADIS conducted a visual survey of the site on December 2, 2011 for evidence of significant soil cover erosion, or for any areas where the orange snow fencing indicator barrier was visible. ARCADIS did not observe any areas where the orange indicator barrier was visible during this monitoring event. Some minor settling was observed in the area behind the Middle School. This will be repaired by Providence School maintenance personnel, and repairs will be verified.

SUB-SLAB VENTILATION SYSTEM

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on December 2 and 5, 2011. The two elementary school blowers and the two middle school blowers were operating normally upon arrival.

Imagine the result

Date:

January 30, 2012

Contact:

Donna H. Pallister, PE

Phone:

401.738.3887

Email:

donna.pallister@arcadis-us.com

Our ref:

WK012152.0007



Samples of influent and effluent (before and after the carbon canisters) air were collected at each blower and screened for methane, carbon dioxide, oxygen, carbon monoxide, hydrogen sulfide, and organic vapors using a Landtec GEM2000 plus and a MiniRae 2000. Results of screening are provided on Table 1. Methane, carbon monoxide, hydrogen sulfide and organic vapors were not detected in any of the samples. Carbon dioxide was detected at a concentration of 0.2 to 0.4% at each location; all seven of the sample concentrations were greater than the RAWP Action Level of 1000 ppm (0.1%).

INDOOR AIR MONITORING

Indoor air monitoring was conducted on December 5, 2011 using a QRAE plus multigas meter (methane, hydrogen sulfide, oxygen), a Mini Rae photoionization detector (organic vapors), and a Fluke 975 Airmeter (carbon dioxide, carbon monoxide). School was in session during the monitoring event. Results of monitoring are provided in the Table 2. Carbon dioxide measurements were made with a Fluke 975 Airmeter indoor air quality meter. The Fluke 975 has a range of 0 to 5,000 ppm, with a resolution of 1 ppm.

The outside temperature on December 5, 2011 was 61 °F. Carbon dioxide was measured outside in the school parking lot at 472 ppm.

All readings were below the RAWP Action Levels. Methane, carbon monoxide, hydrogen sulfide, and organic vapors were not detected, and carbon dioxide was within the expected range for an occupied building.

Concentrations of carbon dioxide inside occupied buildings are expected to be higher than the concentrations in outdoor air because the building occupants expel carbon dioxide. Therefore, in indoor air, the concentration of carbon dioxide is typically used as an indicator of the effectiveness of the heating, ventilating, and air conditioning (HVAC) system in circulating outdoor air into the building. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have prepared ASHRAE Standard 62.1-2007 titled *Ventilation for Acceptable Indoor Air Quality*. The purpose of the Standard is to specify minimum ventilation rates and other measures to provide indoor air quality that is acceptable to human occupants and that minimize adverse health effects.



A discussion regarding carbon dioxide concentrations in indoor air contained in Informative Appendix C of the Standard states: "... maintaining a steady-state CO₂ concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)."

This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air. The average concentrations measured inside the site buildings were less than 700 ppm above the ambient outdoor concentrations.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for carbon dioxide in the workplace is 5,000 ppm. All readings were below this concentration.

The control panels for the methane monitors at both schools were inspected on December 5, 2011. The methane monitor control panels had stickers that indicated that the monitors were calibrated by Diamond Technical Services within the month prior to the inspection. Diamond Technical Services calibrates the sensors on a monthly basis.

Calibration Certificates from Diamond Calibration indicate that many of the sensors read above 0 when calibrated to the zero gas. This prevents the sensors from giving a fault alarm if the reading drops below zero due to a sudden temperature change, and still provides a conservative measure of protection because the alarm limit does not change.

GROUNDWATER MONITORING

The new and existing groundwater monitoring wells were sampled by ARCADIS on December 6, 2011.

Prior to sampling, the depth to water was gauged, and a volume of water equivalent to approximately three well volumes was removed from the well. Groundwater samples were collected in laboratory prepared sample jars and delivered under chain-of-custody protocol to Contest Laboratory in East Longmeadow, Massachusetts for analysis for volatile organic compounds by EPA method 8260. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 3.



Trichloroethylene was detected in ATC-4 at 1.3 ug/L, significantly below the RIDEM GB Groundwater Objective of 540 ug/L. No other target analytes were detected in any of the groundwater samples.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 29 locations on December 6, 2011. The sampling was conducted by placing an air sampling gripper cap on each well and attaching a piece of tubing. A volume of air equivalent to approximately 3 well volumes was removed from each well using a Sensidyne BDXII air sampling pump. Soil gas was then screened using a Landtec GEM 2000 Plus Landfill Gas Analyzer and a MiniRae Photoionization Detector (PID).

Air samples were also collected in Tedlar bags from wells WB-2 and MPL-6. The Tedlar bags were submitted to Con-test Analytical Laboratory for analysis for VOC via EPA method TO-14.

Soil Gas Field Monitoring Results

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 4. Methane, hydrogen sulfide, carbon monoxide and organic vapors were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 9.9% during the December monitoring event. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 22 readings exceeded the action level. The maximum concentration detected during the October round was 14.3%, which was higher than the maximum during the current round. This is consistent with the pattern shown during previous rounds of declining carbon dioxide concentrations in the winter, and increasing concentrations in the summer and early fall. Graphs presenting carbon dioxide, oxygen, and methane concentrations over time for selected representative wells are presented in Attachment C.



The presence of carbon dioxide in soil gas is an indicator of subsurface bacterial activity and does not represent a threat to users of the property. The highest concentration of carbon dioxide was found in well MPL-7, located on the northern end of the property near Hartford Avenue. The monitoring locations on the northern end of the property adjacent to large expanses of paved parking lot, sidewalk, and streets have typically had the highest carbon dioxide concentrations.

Soil Gas Laboratory Results

Soil gas samples were collected from soil gas wells MPL-6 and WB-2 in Tedlar bags and submitted to Con-Test Analytical Laboratories for analysis by method TO-14. Results of the analysis are summarized in Table 5, and the laboratory report is provided in Attachment B. The results of analysis were generally consistent with the concentrations and compounds which have been detected in previous monitoring events.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are provided in Table 5 for comparison purposes even though they are not applicable to soil gas, because it does not represent exposure point concentrations. The PELs are the average concentrations that OSHA allows to be present in a workplace without any respiratory protection or exposure controls. The concentrations detected in soil gas were well below the OSHA PELs.

CONCLUSIONS

Methane, hydrogen sulfide, carbon monoxide and organic vapor concentrations did not exceed RAWP action levels in any soil gas or indoor air samples. Carbon dioxide concentrations exceeded the action level at soil gas locations and subslab system monitoring points. The detection of carbon dioxide in soil gas is typical of what has been detected during previous monitoring events and appears to be a result of naturally occurring bacterial activity in the subsurface.



If you have any questions or require any additional information, please contact the undersigned at 401-738-3887, extension 25.

Sincerely,

ARCADIS U.S., Inc.

Donna H. Pallister, PE, LSP Senior Environmental Engineer

Copies:

C. Jones, Providence SchoolsA. Sepe, City of ProvidenceProvidence Public Building Authority

Sonna H Pallett



Tables

Table 1
System Monitoring Notes
Springfield Street School Complex
Providence, Rhode Island
December 2nd & 5th, 2011

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
Elementary School inlet 1	0.0	0.3	20.9	0	0	0.0
Elementary School inlet 2	0.0	0.3	20.8	0	0	0.0
Elementary School Outlet	0.0	0.3	20.9	0	0	0.0
Middle School front shed inlet	0.0	0.2	21.4	0	0	0.0
Middle School front shed after 2 nd carbon	0.0	0.2	21.3	0	0	0.0
Middle School back shed inlet	0.0	0.4	20.8	0	0	0.0
Middle School back shed after 2 nd carbon	0.0	0.4	20.7	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ррт	10 ppm	5 ppm

Measurements made with: Land tec GEM2000, Fluke 975 Airmeter, MiniRAE 2000

Sampling date: December 2nd & 5th, 2011

Measured by: D. Pallister, C. Dentch

Table 2 Indoor Air Monitoring Results Springfield Street School Complex Providence, Rhode Island December 5, 2011

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Front office	0.0	595	21.0	0	0	0.0
E.S. Elevator	0.0	647	21.1	0	0	0.0
E.S. Faculty Work Room	0.0	634	21.1	0	0	0.0
E.S. Gym	0.0	652	21.1	0	0	0.0
E.S. Stairway B	0.0	622	21.1	0	0	0.0
E.S. Room 110	0.0	602	21.1	0	0	0.0
E.S. Library	0.0	603	21.0	0	0	0.0
E.S. Room 111 Music/Art Room	0.0	549	21.2	0	0	0.0
E.S. Cafeteria	0.0	888	21.0	0	0	0.0
E.S. GS-8	0.0	595	21.2	0	0	0.0
Stairway C	0.0	576	21.2	0	0	0.0

Table 2 Indoor Air Monitoring Notes Springfield Street School Complex December 5, 2011

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Office	0.0	518	20.7	0	0	0.0
GS-14	0.0	597	20.7	0	0	0.0
M.S. Stairway near Hartford Ave. GS-07	0.0	625	20.7	0	0	0.0
M.S. Near sensor #16 in hall outside cafeteria	0.0	633	20.8	0	0	0.0
M.S. Faculty Work Room	0.0	593	20.8	0	0	0.0
M.S. GS-03 Across from Boys Bathroom	0.0	676	20.8	0	0	0.0
M.S. Second Floor - Library	0.0	724	20.9	0	0	0.0
M.S. Cafeteria	0.0	650	20.8	0	0	0.0
Custodian Closet	0.0	573	20.9	0	0	0.0
Elevator	0.0	623	20.9	0	0	0.0

Table 2 Indoor Air Monitoring Notes Springfield Street School Complex December 5, 2011

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Hall near sensor #4	0.0	609	20.9	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0.0	561	20.9	0	0	0.0
M.S. Near sensor GS 06 hallway right end	0.0	641	20.9	0	0	0.0
M.S. stairway near Elem. sensor GS-1	0.0	602	20.9	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm	5 ppm	5 ppm

Notes:

E.S. indicates Elementary School, M.S. indicates Middle School

Measurements made with: Land tec GEM2000, Fluke 975 Airmeter, MiniRAE 2000

PPM = **Parts** per million

Outdoor conditions: carbon monoxide = $\,0$ ppm, carbon dioxide = $\,472\,$ ppm, temperature = $\,61.7\,$ °F.

Table 3 Summary of Ground Water Sampling Results Springfield Street School Complex Springfield Street Providence, Rhode Island

											Samplin	g Dates and	d Results in	μg/L																											RIDEM GB
Well Compounds	2/28/2001	7/20/2001	*9- 12/2001	8/1/2002	8/28/2002	12/19/2002	3/18/2003	7/17/2003	3 11/5/2003	1/22/2004	5/21/2004	8/17/2004	12/2/2004	4/6/2005	7/27/2005	10/27&2 8/2005	2/2/2006	4/27/2006	8/31/2006	11/15/2006	3/27/2007	5/21/2007	8/20/2007	11/13/2007	2/12/2008	5/21/2008	8/26/2008	3 11/18/2008	2/17/2009	5/7/2009	8/25/2009	11/18/2009	3/1/2010	5/20/2010	8/25/2010	11/19/2010	2/24/2011	6/16/2011	10/3/2011		Groundwater Objective
ATC-1																																									
Benzene	6.1	ND ND	18.9	0.9	ND ND	ND	ND ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND	ND ND	ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	140
n-butylbenzene	1.7		2.8	ND		ND		ND			ND		ND ND	ND			ND		1.4	ND		ND			<u> </u>						ND			ND	ND						NA
sec-Butylbenzene	1.1 ND	ND ND	4.1 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 1.2	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NA NA
tert-Butylbenzene	4.5	ND ND	12.6	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND	1600
Ethylbenzene	ND	ND	1.8	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	NA NA
Isopropylbenzene n-Propylbenzene	ND ND	ND ND	5.0	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND ND	ND	ND	ND	ND ND	ND ND	ND	ND	ND	NA NA
MTBF	12.4	7.0	28.6	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	ND	5000
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND	1.10	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	540
Toluene	2.5	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1700
1.2.4-Trimethylber		ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,3,5-Trimethylber	3.4	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Xylenes	14.6	ND	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,1,2-Trichloroeth	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
ATC-2																																									
Chloroform	0.9	ND	ND	1.0	ND	ND	ND	ND	ND	NS	1.1	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Closed	Closed	Closed	NA
																																						4/2011	4/2011	4/2011	
MW-6																																						ND			
Chloroform																																						ND	2.0	ND	NA
Installed 4/2011																																									
ATC-3																																									
Toluene	ND	ND	ND	ND	NS	ND	ND	ND	ND	3.03	ND	ND	ND	ND	ND	ND	3.0	ND	4.5	13.1	ND	2.3	1.3	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Closed 4/2011	Closed 4/2011	Closed 4/2011	1700
MW-7				+ +																																		4/2011 ND	4/2011 ND	4/2011 ND	NA
Installed 4/2011		+		+			+																			+	-						+	+	+			IND	IND.	IND	NA
ATC-4																																									
Benzene	ND	ND	2.5	0.6	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	140
Chlorobenzene	2.6	ND	57.3	2.7	5.18	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.80	1.90	ND	ND	1.2		ND	ND	1	ND	ND	ND	ND	ND	NS	NS	ND	ND	70
1.4-dichlorobenze		ND	9.2	3.4	3.36	ND	ND	ND	ND	ND	0.80	1.6	2.1	ND	ND	ND	ND	ND	1.2	1.1	ND	1.2	2.1	2.1	ND	ND	2.1	1.4	ND	1.7	1.5	ND	ND	ND	ND	1.5	NS	NS	ND	ND	NA
MTBE	ND	ND	ND	ND	ND	ND	ND	1.19	9.55	1.06	2.90	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	5000
1,2,4-Trimethylber		ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	ND	ND	NA
tert-Amyl Methyl																																									
Ether (TAME)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	NS	NS	ND	ND	NA
Trichloroethylene																													ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	1.1	1.3	540
ATC-5																																									
MTBE	ND	ND	2.2	NS	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	Closed	Closed	Closed	5000
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	4/2011	4/2011	4/2011	NA
																												1													
MW-8		1																										1		ļ			1					ND	ND	ND	NA
Installed 4/2011							L	L		<u> </u>												l			 							<u> </u>									
Sampled By:	ATC	ATC	ATC	ATC	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	
	l	1						1			l	1	1							l	1				1		1		1	1	1	1		1	1	l			1		

^{*}ATC Monitoring Report for September through December 2001 did not list date samples were collected. ND is not detected above method dete NS is not sampled NA= No applicable standard published MTBE is Methyl tert-Butyl I µg/L = micrograms per liter

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
December 5, 2011

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0.0	0.1	21.4	0	0	0.0
WB-2	0.0	1.1	20.6	0	0	0.0
WB-3	0.0	0.1	21.5	0	0	0.0
WB-4	0.0	0.1	21.5	0	0	0.0
WB-5	0.0	0.2	21.4	0	0	0.0
WB-6	0.0	0.1	21.5	0	0	0.0
WB-7 R	0.0	0.4	21.0	0	0	0.0
WB-8	0.0	0.1	21.5	0	0	0.0
WB-12	0.0	2.3	19.5	0	0	0.0
WB-13	0.0	0.1	21.0	0	0	0.0
WB-14	0.0	0.2	21.0	0	0	0.0
WB-15	0.0	1.6	18.2	0	0	0.0
EPL-1	0.0	0.4	20.8	0	0	0.0
EPL-2	0.0	0.3	20.7	0	0	0.0
EPL-3	0.0	2.3	18.3	0	0	0.0
EPL-4	0.0	3.0	17.2	0	0	0.0
EPL-5	0.0	2.5	18.0	0	0	0.0
ENE-1	0.0	0.3	21.0	0	0	0.0

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
December 5, 2011

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	0.2	20.8	0	0	0.0
MG2	0.0	0.1	21.2	0	0	0.0
MG3	0.0	1.3	19.9	0	0	0.0
MG4	0.0	2.0	19.2	0	0	0.0
MG5	0.0	1.4	19.6	0	0	0.0
MPL2	0.0	0.6	20.6	0	0	0.0
MPL3	0.0	7.2	10.7	0	0	0.0
MPL5	0.0	8.7	10.1	0	0	0.0
MPL6	0.0	9.6	4.8	0	0	0.0
MPL7	0.0	9.9	6.1	0	0	0.0
MPL8	0.0	4.7	16.6	0	0	0.0
Remedial Action Work Plan Action Levels	0.5%	1,000 PPM	NA	9 PPM	10 PPM	5 PPM

Sampled by: Andrew DaSilva

Weather Conditions: Cloudy and light rain , $57\ F$

Sampling Equipment: Landtec GEM 2000 Plus, MiniRae 2000 PID

Table 5
Results of Laboratory Analysis of Soil Gas
Springfield Street School Complex
Providence, Rhode Island

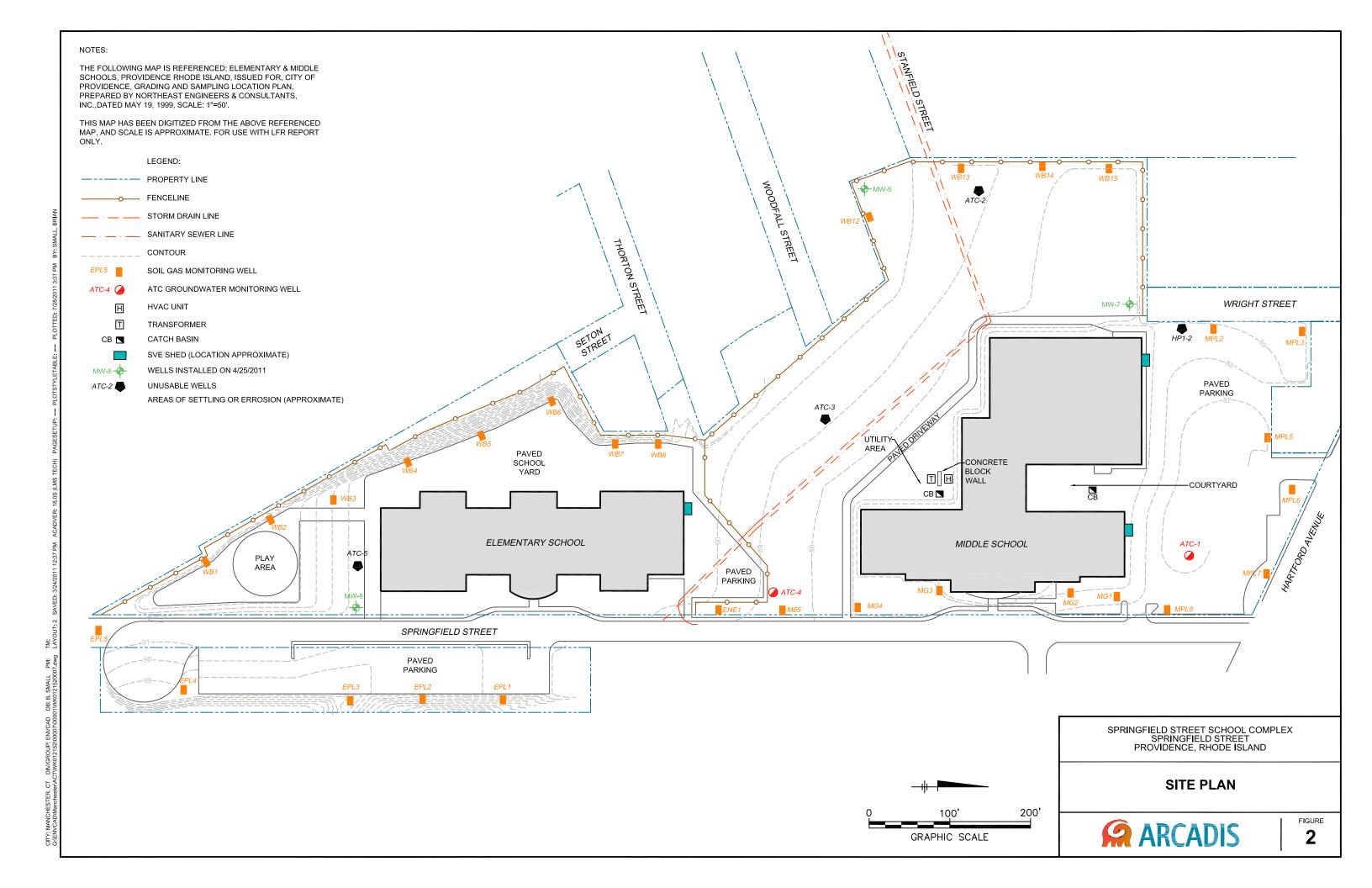
Parameter	OSHA PEL: (PPBv)	:																				Results	s of Analys	is in parts	per billion	by volur	me (PPBv)	1															
	(,												MPL-6																					WB-2	2								
Date Collected:		#####	# ####	# #####	# ###	### ###	#### #	######	######	######	#####	######	######	#####	# #####	# #####	# ####	#####	## ###	### ###	### ###	#### 1	2/6/2011	2/20/2007	5/17/200	07 ####	## #####	# ####	## ####	## #####	# #####	# ######	######	######	11/18/2009	9 3/1/2010	5/21/2010	0 #####	#######	# 2/24/2011	6/14/2011	10/3/2011	12/6/2011
Benzene	1,000	ND	0.36	0.74	NI) N	ND	0.51	1.0	0.3	0.31	0.31	2.40	0.29	0.18	0.52	0.37	0.2	5 N	D 0.	38 0.	.48	16.00	ND	0.29	ND	ND	ND	0.2	1 0.46	0.23	0.24	ND	2.1	0.39	0.16	0.22	0.30	0.18	ND	0.45	0.22	0.43
Carbon Tetrachloride	10,000	ND	ND	ND	NI	0 N	ND	ND	ND	ND	ND	ND	0.093	ND	ND	ND	ND	ND	N	D N	D N	1D	ND	ND	ND	ND	ND	ND	ND	ND.	ND	ND	ND	0.06	ND	0.062	ND	ND	ND	ND	ND	ND	0.055
Chlorobenzene	75,000	ND	ND	ND	NI		ND	ND	ND	ND	ND	ND	ND	ND	0.058		ND	.,,,	,				0.140	ND	ND	ND	.,,	ND		.,,,	ND	ND	ND	0.053	ND	0.073	ND	ND	ND	ND	ND	ND	0.160
Chloroethane	1,000,000	ND	ND	ND	N	O N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	D N	D N	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	50,000	ND	3.2	0.48	NI	0 N	ND	0.25	ND	0.10	ND	ND	0.15	0.12	0.12	0.13	ND	ND	N	D N	D 0.	.13	0.06	ND	ND	ND	ND	ND	ND	ND	0.06	ND	ND	0.22	0.38	0.07	0.12	ND	0.15	ND	ND	0.59	0.24
Chloromethane	100,000	ND	0.24	0.36	N	O N	ND	0.28	0.88	0.36	0.39	0.16	0.77	0.13	0.26	0.22	0.31	0.12	2 N	D 0.	50 0.	.22	0.60	ND	0.11	ND	ND	ND	0.2	0.56	0.23	0.54	ND	0.28	0.2	0.22	0.23	0.35	0.11	ND	0.34	0.25	0.12
Dichlorodifluoromethane	1,000,000	ND	ND	0.28	N	0 C	ND	0.53																ND	0.5	0.57	0.66	0.57	7 0.49	9													
(Freon 12)									0.78	0.31	0.44	0.44	0.43	0.28	0.61	0.48	0.45	0.3	4 0.5	1 B 0.	68 0.	.33	0.46							0.66	0.4	0.51	0.55	0.57	0.44	0.66	0.49	0.60	0.44	0.51 B	0.48	0.63	0.59
1,3-Dichlorobenzene	None	ND	ND	ND	N	N C	ND	ND	ND	ND	ND	ND	0.30	1.70	ND	0.14	ND	ND	N	D N	D N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	0.74	ND	0.20	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	75,000	ND	ND	0.54	N	N C	ND	ND	0.65	ND	0.13	ND	0.27	0.44	0.051	0.27	0.13	ND.	0.2	23 N	D 0.	.94	0.19	ND	0.16	0.37	' ND	ND	ND	ND	ND	0.15	ND	0.3	0.25	0.056	0.12	ND	ND	0.23	ND	0.84	0.25
1,1-Dichloroethane	100,000	ND	ND	0.28	NI	0 N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	D N	D N	۱D	ND	ND	ND	29	ND	ND	ND	ND.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	None	ND	ND	ND	N	O N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	D N	D N	ND	ND	ND	ND	2.5	ND	ND	ND	ND.	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethylene	200,000	ND	ND	ND	N	O N	ND	ND																ND	ND	3.5	ND	ND	ND)													
									ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	D N	D N	ND	ND							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-	1,000,000	ND	ND	ND	N	N C	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	D N	D N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND
tetrafluoroethane (Freon																																											1
114)																																											i .
Ethylbenzene	100,000	ND	0.75	0.7	2.3	3 0.	0.65	1.3	3.9	0.4	0.36	3.8	5.6	1.1	0.14	0.44	0.14	0.2	2 1.8	3.	10 1	.0	1.3	ND	0.55	0.46	3.2	0.78	0.4	1 1.3	0.33	0.42	2.0	4.6	0.6	0.16	0.37	0.10	0.23	1.8	2.5	0.94	1.40
Methylene Chloride	100,000	ND	ND	0.84	3.	5	2	2.6	3.8	2.9	1.7	2.2	1.9	1.5	1.7	3.2	2.7	1.4	1.	.7 2	6 2	2.8	14.0	ND	0.53	0.5	4.9	2.5	3.4	3.0	2.3	1.1	2.0	1.8	1.8	1.9	3.2	5.1	1.5	1.7	2.5	2.7	13.0
Styrene	100,000	ND	1.6	1.5	1.4	4 N	ND	1.1	3.0	0.3	0.36	2.8	3.2	1.0	0.26	10	1.7	0.3	0.5	51 0.	76 2	2.1	1.2	ND	1	1.1	0.69	ND	0.5	1.5	0.1	0.47	1.3	3.1	0.51	0.33	3.6	1.1	0.37	0.51	0.80	1.8	1.2
Tetrachloroethylene	100,000	ND	0.19	0.27	4.0	6 1	1.9	0.99	4.1	0.6	0.33	0.65	4.0	0.76	0.19	0.21	0.47	0.2	5 0.3	34 6.	00 1	.1	0.1	ND	0.16	0.81	3.2	2.7	0.64	1.6	0.8	0.32	16	3.2	0.43	0.13	0.37	0.44	0.18	0.34	4.70	0.60	0.12
Toluene	200,000	4.9	17	7.2	15	5 6	6.9	7.7	64	4	4.1	30	21	5	0.84	32	1.2	0.8	3 2.4	40 7.	30 9	9.1	5.6	4.6	12	5.3	10	9.3	3	30	1.8	2.3	12	21	2.6	1.4	8.8	1.1	0.75	2.4	6.1	7.8	3.9
1,1,1-Trichloroethane	350,000	ND	ND	0.36	N	O N	ND	ND	0.27	ND	ND	ND	ND	ND	ND	0.19	0.24	l ND	N	D N	D N	ND	ND	ND	ND	38	ND	1.3	ND	ND.	ND	ND	ND	ND	0.052	ND	ND	0.14	ND	ND	0.31	ND	ND
Trichloroethylene	100,000	ND	ND	0.25	0.5	53	1	4.1	3.6	1.7	ND	0.26	0.098	0.91	0.067	0.24	3.0	0.6	3 N	D 0.	78 1	.2	0.1	ND	ND	4.6	ND	ND	3	2.8	0.97	0.32	ND	0.095	0.26	ND	0.37	0.70	0.15	ND	0.59	0.18	0.07
Trichlorofluoromethane	1,000,000	ND	ND	0.7	0.6	35 N	ND	0.27																ND	0.41	0.43	ND.	ND	0.26	õ													
(Freon 11)									1.3	0.5	0.28	0.72	0.96	0.60	0.44	6.0	0.82	0.4	4 0.3	31 0.	94 2	2.4	0.7							0.54	0.3	0.41	2.8	2	0.51	0.47	1.2	1.1	0.28	0.31	0.93	2.20	0.50
1,1,2-Trichloro-1,2,2,-	1,000,000	ND	ND	0.27	N	N C	ND	ND	ND	0.06	ND	ND	0.06	0.083	0.069	ND	ND	ND	N	D N	D N	ND	0.077	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	0.06	0.11	0.076	ND	ND	ND	ND	ND	ND	0.089
1,3,5-Trimethylbenzene	None	ND	0.12	ND	NI	<u> </u>	ND	0.28	2.7	0.1	ND	8.1	0.5	0.31	0.057	ND	ND	ND	1	.0 1	4 0	.56	0.33	ND	ND	ND	0.57	ND	ND	0.67	0.2	0.13	1.4	0.41	0.18	0.071	ND	ND	ND	1.0	1.3	0.47	0.39
1,2,4-Trimethylbenzene	None	ND	ND	0.44	1.0		1.3	1.3	9.1	0.1	0.24	15	1.6	1.3	0.037	0.72						2.6	1.0	ND	1	0.26		1.1			0.2	0.13	3.2	1.2	0.16	0.071	0.62	0.10	0.38	3.1	3.3	2.0	1.2
Vinyl chloride	1.000	ND	ND	ND	NI		ND	ND	ND	ND	ND	ND	0.087	ND	ND	ND	ND		_		_	ND	ND	ND	ND	ND		ND		-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M/p-Xylene	100.000	1.4	3.1	2.4	5.3		2.2	3.7	11	1	0.95	11	15	3	0.41	1.2	0.42						3.2	1.2	2.5	1.8		2.6			0.94	1.4	6.1	13	1.5	0.52	0.93	0.32	0.59	5.1	7.0	3.5	3.7
o-Xylene	100,000		_			_).69	1.6	5.0	0.4	0.93		4.3	1.2		0.34					_	.6	1.0	ND	0.56						0.43			3.3	0.6	0.32	0.93	ND	0.39	2.3	3.4	1.4	1.2
0-Aylerie	100,000	טאו	0.01	0.00	1.0	0 0.	7.03	1.0	5.0	0.4	0.32	0.0	4.3	1.2	0.15	0.34	0.12	. 0.2	۰. ک	JU J.	7U I	.0	1.0	ND	0.36	0.40	3.3	0.0	0.0	+ 1.5	0.43	0.45	2.3	ა.ა	0.6	0.10	0.20	טאו	0.24	2.3	5.4	1.4	1.4

Notes: ND = Not detected Only detected compounds are listed, see laboratory report for complete list on analytes.

B = compound also detected in blank



Figure





Appendix A

Limitations & Service Constraints

LIMITATIONS AND SERVICE CONSTRAINTS

GENERAL REPORTS/DOCUMENT

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ARCADIS and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that ARCADIS relied upon any information prepared by other parties not under contract to ARCADIS, ARCADIS makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when ARCADIS' investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ARCADIS's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in environmental investigation conclusions cannot reasonably be achieved.

ARCADIS, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.



Appendix B

Laboratory Results



December 14, 2011

Donna Pallister Arcadis US, Inc. - Warwick, RI 300 Metro Center Blvd., Suite 250 Warwick, RI 02886

Project Location: Springfield St.

Client Job Number:

Project Number: WK012152.0000

Laboratory Work Order Number: 11L0242

Holy L. Tolson

Enclosed are results of analyses for samples received by the laboratory on December 7, 2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Holly L. Folsom Project Manager



Arcadis US, Inc. - Warwick, RI REPORT DATE: 12/14/2011

300 Metro Center Blvd., Suite 250 Warwick, RI 02886

ATTN: Donna Pallister

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0000

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 11L0242

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Springfield St.

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MPL-6	11L0242-01	Air		EPA TO-14A	
WB-2	11L0242-02	Air		EPA TO-14A	



CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-14A

_		
()ma	lifica	itions

Holding times and stability of samples taken in tedlar bags have not been determined

Analyte & Samples(s) Qualified:

11L0242-01[MPL-6], 11L0242-02[WB-2]

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson Laboratory Director

Culu



ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/7/2011 Field Sample #: MPL-6 Sample ID: 111 0242 01

Sample ID: 11L0242-01Sample Matrix: Air
Sampled: 12/6/2011 14:00

Sample Description/Location: Sub Description/Location:

Canister ID: Canister Size: Flow Controller ID: Sample Type: Work Order: 11L0242 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type: Flow Controller Calibration RPD Pre and Post-Sampling:

EPA TO-14A

Sample Flags: A-09				,	2		D / //E*	
Analyte	pp Results	DV RL	Flag	ug/1 Results	ms RL	Dilution	Date/Time Analyzed	Analyst
Benzene	16	0.050		52	0.16	1	12/9/11 12:05	WSD
Bromomethane	ND	0.050		ND	0.19	1	12/9/11 12:05	WSD
Carbon Tetrachloride	ND	0.050		ND	0.31	1	12/9/11 12:05	WSD
Chlorobenzene	0.14	0.050		0.67	0.23	1	12/9/11 12:05	WSD
Chloroethane	ND	0.050		ND	0.13	1	12/9/11 12:05	WSD
Chloroform	0.062	0.050		0.30	0.24	1	12/9/11 12:05	WSD
Chloromethane	0.60	0.050		1.2	0.10	1	12/9/11 12:05	WSD
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	1	12/9/11 12:05	WSD
1,2-Dichlorobenzene	ND	0.050		ND	0.30	1	12/9/11 12:05	WSD
1,3-Dichlorobenzene	ND	0.050		ND	0.30	1	12/9/11 12:05	WSD
1,4-Dichlorobenzene	0.19	0.050		1.2	0.30	1	12/9/11 12:05	WSD
Dichlorodifluoromethane (Freon 12)	0.46	0.050		2.3	0.25	1	12/9/11 12:05	WSD
1,1-Dichloroethane	ND	0.050		ND	0.20	1	12/9/11 12:05	WSD
1,2-Dichloroethane	ND	0.050		ND	0.20	1	12/9/11 12:05	WSD
1,1-Dichloroethylene	ND	0.050		ND	0.20	1	12/9/11 12:05	WSD
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	1	12/9/11 12:05	WSD
1,2-Dichloropropane	ND	0.050		ND	0.23	1	12/9/11 12:05	WSD
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	1	12/9/11 12:05	WSD
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	1	12/9/11 12:05	WSD
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050		ND	0.35	1	12/9/11 12:05	WSD
Ethylbenzene	1.3	0.050		5.5	0.22	1	12/9/11 12:05	WSD
Hexachlorobutadiene	ND	0.050		ND	0.53	1	12/9/11 12:05	WSD
Methylene Chloride	14	0.50		48	1.7	1	12/9/11 12:05	WSD
Styrene	1.2	0.050		5.0	0.21	1	12/9/11 12:05	WSD
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	1	12/9/11 12:05	WSD
Tetrachloroethylene	0.079	0.050		0.54	0.34	1	12/9/11 12:05	WSD
Toluene	5.6	0.050		21	0.19	1	12/9/11 12:05	WSD
1,2,4-Trichlorobenzene	ND	0.050		ND	0.37	1	12/9/11 12:05	WSD
1,1,1-Trichloroethane	ND	0.050		ND	0.27	1	12/9/11 12:05	WSD
1,1,2-Trichloroethane	ND	0.050		ND	0.27	1	12/9/11 12:05	WSD
Trichloroethylene	0.072	0.050		0.39	0.27	1	12/9/11 12:05	WSD
Trichlorofluoromethane (Freon 11)	0.68	0.050		3.8	0.28	1	12/9/11 12:05	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.077	0.050		0.59	0.38	1	12/9/11 12:05	WSD
1,2,4-Trimethylbenzene	1.0	0.050		5.0	0.25	1	12/9/11 12:05	WSD
1,3,5-Trimethylbenzene	0.33	0.050		1.6	0.25	1	12/9/11 12:05	WSD
Vinyl Chloride	ND	0.050		ND	0.13	1	12/9/11 12:05	WSD
m&p-Xylene	3.2	0.10		14	0.43	1	12/9/11 12:05	WSD
o-Xylene	1.0	0.050		4.4	0.22	1	12/9/11 12:05	WSD



ANALYTICAL RESULTS

Project Location: Springfield St.
Date Received: 12/7/2011
Field Sample #: MPL-6
Sample ID: 11L0242-01
Sample Matrix: Air

Sampled: 12/6/2011 14:00

Sample Description/Location: Sub Description/Location: Canister ID: Canister Size: Flow Controller ID:

Sample Type:

Work Order: 11L0242 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type: Flow Controller Calibration RPD Pre and Post-Sampling:

	EPA	TO-14A	
Sample Flags: A-09 Analyte	ppbv Results RL	ug/m3 Flag Results RL	Date/Time Dilution Analyzed Analyst
<u> </u>			·
Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	12/9/11 12:05



ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/7/2011 Field Sample #: WB-2 Sample ID: 11L0242-02

Sample ID: 11L0242-02Sample Matrix: Air
Sampled: 12/6/2011 11:50

Sample Description/Location: Sub Description/Location:

Canister ID: Canister Size: Flow Controller ID: Sample Type: Work Order: 11L0242 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type:

Flow Controller Calibration RPD Pre and Post-Sampling:

FP	Δ	-11	().	-1	4	A

Sample Flags: A-09	pp	by		ug/ı	m3	Date/Time							
Analyte	Results	RL	Flag	Results	RL	Dilution	Analyzed	Analyst					
Benzene	0.43	0.050		1.4	0.16	1	12/9/11 11:24	WSD					
Bromomethane	ND	0.050		ND	0.19	1	12/9/11 11:24	WSD					
Carbon Tetrachloride	0.055	0.050		0.35	0.31	1	12/9/11 11:24	WSD					
Chlorobenzene	0.16	0.050		0.71	0.23	1	12/9/11 11:24	WSD					
Chloroethane	ND	0.050		ND	0.13	1	12/9/11 11:24	WSD					
Chloroform	0.24	0.050		1.2	0.24	1	12/9/11 11:24	WSD					
Chloromethane	0.12	0.050		0.24	0.10	1	12/9/11 11:24	WSD					
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	1	12/9/11 11:24	WSD					
1,2-Dichlorobenzene	ND	0.050		ND	0.30	1	12/9/11 11:24	WSD					
1,3-Dichlorobenzene	ND	0.050		ND	0.30	1	12/9/11 11:24	WSD					
1,4-Dichlorobenzene	0.25	0.050		1.5	0.30	1	12/9/11 11:24	WSD					
Dichlorodifluoromethane (Freon 12)	0.59	0.050		2.9	0.25	1	12/9/11 11:24	WSD					
1,1-Dichloroethane	ND	0.050		ND	0.20	1	12/9/11 11:24	WSD					
1,2-Dichloroethane	ND	0.050		ND	0.20	1	12/9/11 11:24	WSD					
1,1-Dichloroethylene	ND	0.050		ND	0.20	1	12/9/11 11:24	WSD					
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	1	12/9/11 11:24	WSD					
1,2-Dichloropropane	ND	0.050		ND	0.23	1	12/9/11 11:24	WSD					
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	1	12/9/11 11:24	WSD					
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	1	12/9/11 11:24	WSD					
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050		ND	0.35	1	12/9/11 11:24	WSD					
Ethylbenzene	1.4	0.050		6.3	0.22	1	12/9/11 11:24	WSD					
Hexachlorobutadiene	ND	0.050		ND	0.53	1	12/9/11 11:24	WSD					
Methylene Chloride	13	0.50		44	1.7	1	12/9/11 11:24	WSD					
Styrene	1.2	0.050		5.1	0.21	1	12/9/11 11:24	WSD					
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	1	12/9/11 11:24	WSD					
Tetrachloroethylene	0.12	0.050		0.82	0.34	1	12/9/11 11:24	WSD					
Toluene	3.9	0.050		15	0.19	1	12/9/11 11:24	WSD					
1,2,4-Trichlorobenzene	ND	0.050		ND	0.37	1	12/9/11 11:24	WSD					
1,1,1-Trichloroethane	ND	0.050		ND	0.27	1	12/9/11 11:24	WSD					
1,1,2-Trichloroethane	ND	0.050		ND	0.27	1	12/9/11 11:24	WSD					
Trichloroethylene	0.066	0.050		0.35	0.27	1	12/9/11 11:24	WSD					
Trichlorofluoromethane (Freon 11)	0.50	0.050		2.8	0.28	1	12/9/11 11:24	WSD					
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.089	0.050		0.68	0.38	1	12/9/11 11:24	WSD					
1,2,4-Trimethylbenzene	1.2	0.050		5.9	0.25	1	12/9/11 11:24	WSD					
1,3,5-Trimethylbenzene	0.39	0.050		1.9	0.25	1	12/9/11 11:24	WSD					
Vinyl Chloride	ND	0.050		ND	0.13	1	12/9/11 11:24	WSD					
m&p-Xylene	3.7	0.10		16	0.43	1	12/9/11 11:24	WSD					
o-Xylene	1.2	0.050		5.4	0.22	1	12/9/11 11:24	WSD					



ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/7/2011 Field Sample #: WB-2 Sample ID: 11L0242-02 Sample Matrix: Air

Sampled: 12/6/2011 11:50

Sample Description/Location: Sub Description/Location: Canister ID: Canister Size: Flow Controller ID:

Sample Type:

Work Order: 11L0242
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

	EPA	TO-14A	
Sample Flags: A-09 Analyte	ppbv Results RL	ug/m3 Flag Results RL	Date/Time Dilution Analyzed Analyst
Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	12/9/11 11:24



Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-14A Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
11L0242-01 [MPL-6]	B042649	1	1	N/A	1000	400	400	12/08/11
11L0242-02 [WB-2]	B042649		1	N/A	1000	400	400	12/08/11



Surrogate: 4-Bromofluorobenzene (1)

7.38

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

	ppb	v	ug/n	13	Spike Level	Source		%REC		RPD	
Analyte	Results			RL	ppbv	Result	%REC	Limits	RPD	Limit	Flag
Batch B042649 - TO-15 Pren											

Batch B042649 - TO-15 Prep			
Blank (B042649-BLK1)			Prepared & Analyzed: 12/08/11
Benzene	ND	0.025	
Bromomethane	ND	0.025	
Carbon Tetrachloride	ND	0.025	
Chlorobenzene	ND	0.025	
Chloroethane	ND	0.025	
Chloroform	ND	0.025	
Chloromethane	ND	0.025	
1,2-Dibromoethane (EDB)	ND	0.025	
1,2-Dichlorobenzene	ND	0.025	
1,3-Dichlorobenzene	ND	0.025	
1,4-Dichlorobenzene	ND	0.025	
Dichlorodifluoromethane (Freon 12)	ND	0.025	
1,1-Dichloroethane	ND	0.025	
1,2-Dichloroethane	ND	0.025	
1,1-Dichloroethylene	ND	0.025	
cis-1,2-Dichloroethylene	ND	0.025	
1,2-Dichloropropane	ND	0.025	
cis-1,3-Dichloropropene	ND	0.025	
trans-1,3-Dichloropropene	ND	0.025	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.025	
Ethylbenzene	ND	0.025	
Hexachlorobutadiene	ND	0.025	
Methylene Chloride	ND	0.25	
Styrene	ND	0.025	
1,1,2,2-Tetrachloroethane	ND	0.025	
Tetrachloroethylene	ND	0.025	
Toluene	ND	0.025	
1,2,4-Trichlorobenzene	ND	0.025	
1,1,1-Trichloroethane	ND	0.025	
1,1,2-Trichloroethane	ND	0.025	
Trichloroethylene	ND	0.025	
Trichlorofluoromethane (Freon 11)	ND	0.025	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.025	
1,2,4-Trimethylbenzene	ND	0.025	
1,3,5-Trimethylbenzene	ND	0.025	
Vinyl Chloride	ND	0.025	
m&p-Xylene	ND	0.050	
o-Xylene	ND	0.025	

8.00

92.3

70-130



QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

	ppbv		ug/m3		Spike Level	Source		%REC		RPD	
Analyte	Results RL		Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	Flag

Batch B042649 - TO-15 Prep				
LCS (B042649-BS1)		Prepared & Analyz	ed: 12/08/11	
Benzene	4.00	5.00	80.0	70-130
Bromomethane	5.37	5.00	107	70-130
Carbon Tetrachloride	5.20	5.00	104	70-130
Chlorobenzene	4.44	5.00	88.8	70-130
Chloroethane	5.58	5.00	112	70-130
Chloroform	4.73	5.00	94.7	70-130
Chloromethane	5.80	5.00	116	70-130
1,2-Dibromoethane (EDB)	4.42	5.00	88.4	70-130
1,2-Dichlorobenzene	4.62	5.00	92.4	70-130
,3-Dichlorobenzene	4.83	5.00	96.6	70-130
1,4-Dichlorobenzene	4.65	5.00	93.0	70-130
Dichlorodifluoromethane (Freon 12)	5.65	5.00	113	70-130
,1-Dichloroethane	4.55	5.00	91.0	70-130
,2-Dichloroethane	4.44	5.00	88.8	70-130
,1-Dichloroethylene	4.50	5.00	90.1	70-130
cis-1,2-Dichloroethylene	4.39	5.00	87.7	70-130
,2-Dichloropropane	4.20	5.00	83.9	70-130
is-1,3-Dichloropropene	4.50	5.00	90.0	70-130
rans-1,3-Dichloropropene	4.03	5.00	80.5	70-130
,2-Dichloro-1,1,2,2-tetrafluoroethane Freon 114)	6.12	5.00	122	70-130
Ethylbenzene	4.54	5.00	90.9	70-130
Iexachlorobutadiene	4.37	5.00	87.5	70-130
Methylene Chloride	4.80	5.00	96.0	70-130
Styrene	4.53	5.00	90.5	70-130
,1,2,2-Tetrachloroethane	4.60	5.00	92.0	70-130
Tetrachloroethylene	4.23	5.00	84.7	70-130
Γoluene	4.55	5.00	91.0	70-130
1,2,4-Trichlorobenzene	4.72	5.00	94.4	70-130
,1,1-Trichloroethane	4.38	5.00	87.7	70-130
,1,2-Trichloroethane	4.54	5.00	90.8	70-130
Trichloroethylene	4.28	5.00	85.5	70-130
Frichlorofluoromethane (Freon 11)	5.49	5.00	110	70-130
,1,2-Trichloro-1,2,2-trifluoroethane (Freon 13)	5.12	5.00	102	70-130
,2,4-Trimethylbenzene	4.56	5.00	91.3	70-130
,3,5-Trimethylbenzene	4.64	5.00	92.9	70-130
Vinyl Chloride	5.62	5.00	112	70-130
m&p-Xylene	9.61	10.0	96.1	70-130
o-Xylene	4.68	5.00	93.6	70-130
Surrogate: 4-Bromofluorobenzene (1)	7.60	8.00	95.0	70-130



FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.

‡ Wide RPD limits established for difficult compound.

Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the

calculation which have not been rounded.

A-09 Holding times and stability of samples taken in tedlar bags have not been determined



CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-14A in Air	
Benzene	AIHA,FL,NY
Bromomethane	AIHA,FL,NY
Carbon Tetrachloride	AIHA,FL,NY
Chlorobenzene	AIHA,FL,NY
Chloroethane	AIHA,FL,NY
Chloroform	AIHA,FL,NY
Chloromethane	AIHA,FL,NY
1,2-Dichlorobenzene	AIHA,FL,NY
1,3-Dichlorobenzene	AIHA,FL,NY
1,4-Dichlorobenzene	AIHA,FL,NY
Dichlorodifluoromethane (Freon 12)	AIHA,FL,NY
1,1-Dichloroethane	AIHA,FL,NY
1,2-Dichloroethane	AIHA,FL,NY
1,1-Dichloroethylene	AIHA,FL,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
1,2-Dichloropropane	AIHA,FL,NY
cis-1,3-Dichloropropene	AIHA,FL,NY
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,FL,NY
Ethylbenzene	AIHA,FL,NY
Hexachlorobutadiene	AIHA,FL,NY
Methylene Chloride	AIHA,FL,NY
Styrene	AIHA,FL,NY
1,1,2,2-Tetrachloroethane	AIHA,FL,NY
Tetrachloroethylene	AIHA,FL,NY
Toluene	AIHA,FL,NY
1,2,4-Trichlorobenzene	AIHA,FL,NY
1,1,1-Trichloroethane	AIHA,FL,NY
1,1,2-Trichloroethane	AIHA,FL,NY
Trichloroethylene	AIHA,FL,NY
Trichlorofluoromethane (Freon 11)	AIHA,FL,NY
1,2,4-Trimethylbenzene	AIHA,FL,NY
1,3,5-Trimethylbenzene	AIHA,FL,NY
Vinyl Chloride	AIHA,FL,NY
m&p-Xylene	AIHA,FL,NY
o-Xylene	AIHA,FL,NY



The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2012
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2012
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2012
RI	Rhode Island Department of Health	LAO00112	12/30/2011
NC	North Carolina Div. of Water Quality	652	12/31/2011
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2012
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013

E (business days) STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTION NCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.	e: 1540 0 172-Hr 0 14-Day Other Chode Island Single Island	Date Time: Connecticut: Connecticut: Connecticut: Connecticut:	graphre) < Date/Time: 18:55 \ Other STP	(10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Date/Time: 16:40 Turnaround tt	H - High; M - Medium; L - Low; C - Clean; U - Unknown	Please use the following codes to let Con- i est know it a specific sample may be high in concentration in Matrix/Conc. Code Box:		1	MW-8 12/2/11/15:20 X 6W X	+	12/2/11 16:00 x 6W	12/5/11 11/5/21 X	4TC-1 12/2/11 17:10 X 6W X	2	12/6/11	Con-Test Lab ID Client Sample ID / Description Beginning Ending Composite Grab Client Sample ID / Description Date/Time Composite Grab Client Sample ID / Description Date/Time Composite Grab Client Sample ID / Description Date/Time Date/Time Composite Grab Client Sample ID / Description Date/Time Da	Collection O "Enhanced Data	Project Proposal Provided? (for billing purposes) Format: OPDF OEXCEL OGIS O OTHER	Sampled By: Andrew Dusilve Email: Conna pallister is com	ocation: Springfield St. Fax#		(January (check all that apply)	CC Metro Center Bird. Project # WKC12152 CCC7	Telephone: (401)-738-3887	RM www.contestlabs.com		Phone: 413-525-2332 CHAIN OF CUSTODY RECORD 39 Spruce Street East longmeadow, MA 01028
IS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT	WBE/DBE Certified	Soldie DA Louis Sedanos	RCP Analysis Certification Form Required	MCP Analytical Certification Form Required		C - Clean; U - Unknown SL = sludge O = other		 GW= groundwater		O = Other	X = Na hydroxide	S = Sulfuric Acid R = Sodium hisulfate	N = Nitric Acid	H=HCL	**Preservation		T=tediar bag O=Other	S=summa can	ST=sterile V= vial	G=glass P=plastic	A=amber glass	****	O Lab to Filter	O Field Filtered	*			v, MA 01028 Pageof





AIR Only Receipt Checklist

39 Spruce St. East Longmeadow, MA. 01028

P: 413-525-2332 F: 413-525-6405

CLIE	ENT NAME:	Hrcadis		F	RECEIV	ED BY:	PIS		DATE: 1271
		of custody relinquist gree with the sample explain:	1	gned	?	4	Tes Tes	No No	()
3) Are all the samples in good condition? If not, explain:							Yes	No	
4) Are there any samples "On Hold"?							Yes	(40)	Stored where:
5) Are there any RUSH or SHORT HOLDING TIME					es?		Yes	(M)	
Who was notified Date						Time			
6) Location where samples are stored:			(Qic	Permission to subcontract samples? Yes No (Walk-in clients only) if not already approved Client Signature:					
		Air Med	dia re	cei	ved	at Co	n-T	est	
						# of Co	ntainers	5	Types (Size, Duration)
Air Sampling Media		Summa Cans							
		Tedlar Bags					7		
		Tubes							
Flow Controllers		Regulators							
		Restrictors							
Extras		Tubing							
		Other							
Unused Summas:				Unused Regulators:					
2) We	re all returne	used & unused cho	estrictors				ument	ed as	returned in the Air Lab
Inbou	ınd/Outboun	d Excel Spreadshe	et?						
Laboratory Comments:									



December 16, 2011

Donna Pallister Arcadis US, Inc. - Warwick, RI 300 Metro Center Blvd., Suite 250 Warwick, RI 02886

Project Location: Springfield St.

Client Job Number:

Project Number: WK012152.0007

Laboratory Work Order Number: 11L0213

Holy L. Tolson

Enclosed are results of analyses for samples received by the laboratory on December 7, 2011. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Holly L. Folsom Project Manager



Arcadis US, Inc. - Warwick, RI REPORT DATE: 12/16/2011

300 Metro Center Blvd., Suite 250 Warwick, RI 02886

ATTN: Donna Pallister

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0007

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 11L0213

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Springfield St.

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
ATC-1	11L0213-01	Ground Water		SW-846 8260C	
MW-7	11L0213-02	Ground Water		SW-846 8260C	
MW-6	11L0213-03	Ground Water		SW-846 8260C	
ATC-4	11L0213-04	Ground Water		SW-846 8260C	
MW-8	11L0213-05	Ground Water		SW-846 8260C	
Trip Blank	11L0213-06	Trip Blank Water		SW-846 8260C	



CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.



SW-846 8260C

Oualifications:

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Isopropylbenzene (Cumene), trans-1,4-Dichloro-2-butene

B042845-BS1, B042845-BSD1

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Carbon Disulfide

B042845-BS1

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:

Bromomethane, Carbon Disulfide, Chloromethane, Dichlorodifluoromethane (Freon 12), Vinyl Chloride

 $11L0213-01[ATC-1], 11L0213-02[MW-7], 11L0213-03[MW-6], 11L0213-04[ATC-4], 11L0213-05[MW-8], 11L0213-06[Trip\ Blank], B042845-BLK1, B042845-BS1, B042845-BSD1$

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Bromomethane, Dichlorodifluoromethane (Freon 12)

 $11L0213-01[ATC-1], 11L0213-02[MW-7], 11L0213-03[MW-6], 11L0213-04[ATC-4], 11L0213-05[MW-8], 11L0213-06[Trip\ Blank], B042845-BLK1, B042845-BS1, B042845-BSD1$

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Isopropylbenzene (Cumene)

B042845-BS1, B042845-BSD1

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

Analyte & Samples(s) Qualified:

1,4-Dioxane, tert-Butyl Alcohol (TBA)

 $11L0213-01[ATC-1], 11L0213-02[MW-7], 11L0213-03[MW-6], 11L0213-04[ATC-4], 11L0213-05[MW-8], 11L0213-06[Trip\ Blank], B042845-BLK1, B042845-BS1, B042845-BSD1$

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Acetone, Carbon Disulfide

B042845-BS1, B042845-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson Laboratory Director

Culu



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011
Field Sample #: ATC-1

Sampled: 12/2/2011 17:10

Sample ID: 11L0213-01
Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Acrylonitrile	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Benzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Bromobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Bromochloromethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Bromodichloromethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Bromoform	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Bromomethane	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
tert-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1-Dichloropropene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
cis-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
trans-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: ATC-1

Sampled: 12/2/2011 17:10

Sample ID: 11L0213-01 Sample Matrix: Ground Water

		VO	iathe Organic Com	pounds by GC	JIVIS				
							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Diethyl Ether	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Diisopropyl Ether (DIPE)	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,4-Dioxane	ND	50	$\mu g/L$	1	V-16	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Ethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Hexachlorobutadiene	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
2-Hexanone (MBK)	ND	10	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Methylene Chloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
n-Propylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Styrene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Tetrachloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Tetrahydrofuran	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Toluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2,3-Trichlorobenzene	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,3,5-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1,1-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1,2-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Trichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2,3-Trichloropropane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Vinyl Chloride	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 20:46	LBD
m+p Xylene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
o-Xylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 20:46	LBD
Surrogates		% Recovery	Recovery Limits	6	Flag				
1,2-Dichloroethane-d4		102	70-130					12/15/11 20:46	
Toluene-d8		101	70-130					12/15/11 20:46	
A Bromofluorobenzene		04.2	70.130					12/15/11 20:46	



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011
Field Sample #: MW-7

Sampled: 12/2/2011 11:57

Sample ID: 11L0213-02
Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Acrylonitrile	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Benzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Bromobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Bromochloromethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Bromodichloromethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Bromoform	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Bromomethane	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
tert-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1-Dichloroethane	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2-Dichloroethane	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1-Dichloroethylene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1-Dichloropropene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
cis-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
trans-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: MW-7

Sampled: 12/2/2011 11:57

Sample ID: 11L0213-02 Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	μg/L	1	Flag	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Diisopropyl Ether (DIPE)	ND	0.50	μg/L μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,4-Dioxane	ND	50	μg/L μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Ethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Hexachlorobutadiene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
2-Hexanone (MBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Methylene Chloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
n-Propylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Styrene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Tetrachloroethylene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Tetrahydrofuran	ND	10	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Toluene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2,3-Trichlorobenzene	ND	5.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2,4-Trichlorobenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,3,5-Trichlorobenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1,1-Trichloroethane	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1,2-Trichloroethane	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Trichloroethylene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2,3-Trichloropropane	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,2,4-Trimethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
1,3,5-Trimethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Vinyl Chloride	ND	2.0	$\mu g/L$	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:16	LBD
m+p Xylene	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
o-Xylene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 21:16	LBD
Surrogates		% Recovery	Recovery Limits		Flag	-			
1,2-Dichloroethane-d4		110	70-130					12/15/11 21:16	
Toluene-d8		94.1	70-130					12/15/11 21:16	



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011
Field Sample #: MW-6

Sampled: 12/2/2011 16:00

Sample ID: 11L0213-03
Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Acrylonitrile	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Benzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Bromobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Bromochloromethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Bromodichloromethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Bromoform	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Bromomethane	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
tert-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	$\mu g/L$	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1-Dichloropropene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
cis-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
trans-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: MW-6

Sampled: 12/2/2011 16:00

Sample ID: 11L0213-03 Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	μg/L	1	9	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Diisopropyl Ether (DIPE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,4-Dioxane	ND	50	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Ethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Hexachlorobutadiene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
2-Hexanone (MBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Methylene Chloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
n-Propylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Styrene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Tetrachloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Tetrahydrofuran	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Toluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2,3-Trichlorobenzene	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,3,5-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1,1-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1,2-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Trichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2,3-Trichloropropane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Vinyl Chloride	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 21:47	LBD
m+p Xylene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
o-Xylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 21:47	LBD
Surrogates		% Recovery	Recovery Limits	s	Flag				
1,2-Dichloroethane-d4		105	70-130		-			12/15/11 21:47	
Toluene-d8		99.2	70-130					12/15/11 21:47	
4.70. 07. 1		104	50 120					10/15/11 01 45	



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011
Field Sample #: ATC-4

Sampled: 12/2/2011 13:10

Sample ID: 11L0213-04
Sample Matrix: Ground Water

							Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analyst
Acetone	ND	50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Acrylonitrile	ND	5.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Benzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Bromobenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Bromochloromethane	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Bromodichloromethane	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Bromoform	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Bromomethane	ND	2.0	$\mu g/L$	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
tert-Butylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1-Dichloroethane	ND	1.0	μg/L	1	•	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1-Dichloropropene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
cis-1,3-Dichloropropene	ND	0.50	μg/L μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
,	IND	0.50	μ <u>5</u> / L	1		511 510 62000	1 1 / 1 / 1 / 1 / 1	. 4 1 1 1 1 4 4 . 1 1	LDD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: ATC-4

Sampled: 12/2/2011 13:10

Sample ID: 11L0213-04 Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Diisopropyl Ether (DIPE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,4-Dioxane	ND	50	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Ethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Hexachlorobutadiene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
2-Hexanone (MBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Methylene Chloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
n-Propylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Styrene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Tetrachloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Tetrahydrofuran	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Toluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2,3-Trichlorobenzene	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,3,5-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1,1-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1,2-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Trichloroethylene	1.3	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2,3-Trichloropropane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
1,3,5-Trimethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Vinyl Chloride	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:17	LBD
m+p Xylene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
o-Xylene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:17	LBD
Surrogates		% Recovery	Recovery Limits		Flag		_		
1,2-Dichloroethane-d4		111	70-130					12/15/11 22:17	
Toluene-d8		112	70-130					12/15/11 22:17	



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011
Field Sample #: MW-8

Sampled: 12/2/2011 15:20

Sample ID: 11L0213-05
Sample Matrix: Ground Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Acrylonitrile	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Benzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Bromobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Bromochloromethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Bromodichloromethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Bromoform	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Bromomethane	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
tert-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1-Dichloropropene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
cis-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
trans-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: MW-8

Sampled: 12/2/2011 15:20

Sample ID: 11L0213-05 Sample Matrix: Ground Water

	ъ и	DI	¥7. **	D'L C	TOI.	Mr. d. a.	Date	Date/Time	
Analyte	Results	RL	Units	Dilution	Flag	Method	Prepared	Analyzed	Analys
Diethyl Ether	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Diisopropyl Ether (DIPE) 1.4-Dioxane	ND	0.50	μg/L	1	77.16	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
	ND	50	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Ethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Hexachlorobutadiene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
2-Hexanone (MBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Methylene Chloride	ND	5.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
n-Propylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Styrene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Tetrachloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Tetrahydrofuran	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Toluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2,3-Trichlorobenzene	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,3,5-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1,1-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1,2-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Trichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2,3-Trichloropropane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Vinyl Chloride	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 22:48	LBD
m+p Xylene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
o-Xylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 22:48	LBD
Surrogates		% Recovery	Recovery Limits	3	Flag				
1,2-Dichloroethane-d4		105	70-130					12/15/11 22:48	
Toluene-d8		103	70-130					12/15/11 22:48	
4 D (1)		02.6	70.120					10/15/11 00 10	



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011

Field Sample #: Trip Blank

Sampled: 12/2/2011 00:00

Sample ID: 11L0213-06
Sample Matrix: Trip Blank Water

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Acrylonitrile	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Benzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Bromobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Bromochloromethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Bromodichloromethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Bromoform	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Bromomethane	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
2-Butanone (MEK)	ND	20	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
tert-Butyl Alcohol (TBA)	ND	20	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
n-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
sec-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
tert-Butylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Carbon Disulfide	ND	10	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Carbon Tetrachloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Chlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Chlorodibromomethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Chloroethane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Chloroform	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Chloromethane	ND	2.0	μg/L	1	R-05	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
2-Chlorotoluene	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
4-Chlorotoluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2-Dibromoethane (EDB)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Dibromomethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,3-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,4-Dichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	μg/L	1	R-05, V-05	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2-Dichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
cis-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
trans-1,2-Dichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,3-Dichloropropane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
2,2-Dichloropropane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1-Dichloropropene	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
cis-1,3-Dichloropropene	ND	0.50	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
trans-1,3-Dichloropropene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD



Project Location: Springfield St. Sample Description: Work Order: 11L0213

Date Received: 12/7/2011 Field Sample #: Trip Blank

Sampled: 12/2/2011 00:00

Sample ID: 11L0213-06 Sample Matrix: Trip Blank Water

		V O	iatile Organic Comp	ounds by GC	C/NIS				
Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Diisopropyl Ether (DIPE)	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,4-Dioxane	ND	50	μg/L	1	V-16	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Ethylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Hexachlorobutadiene	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
2-Hexanone (MBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Isopropylbenzene (Cumene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Methylene Chloride	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Naphthalene	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
n-Propylbenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Styrene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Tetrachloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Tetrahydrofuran	ND	10	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Toluene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2,3-Trichlorobenzene	ND	5.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,3,5-Trichlorobenzene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1,1-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1,2-Trichloroethane	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Trichloroethylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2,3-Trichloropropane	ND	2.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,2,4-Trimethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
1,3,5-Trimethylbenzene	ND	1.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Vinyl Chloride	ND	2.0	$\mu g/L$	1	R-05	SW-846 8260C	12/15/11	12/15/11 19:46	LBD
m+p Xylene	ND	2.0	$\mu g/L$	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
o-Xylene	ND	1.0	μg/L	1		SW-846 8260C	12/15/11	12/15/11 19:46	LBD
Surrogates		% Recovery	Recovery Limits		Flag		_		
1,2-Dichloroethane-d4		106	70-130					12/15/11 19:46	
Toluene-d8		94.6	70-130					12/15/11 19:46	



Sample Extraction Data

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date	
11L0213-01 [ATC-1]	B042845	5	5.00	12/15/11	
11L0213-02 [MW-7]	B042845	5	5.00	12/15/11	
11L0213-03 [MW-6]	B042845	5	5.00	12/15/11	
11L0213-04 [ATC-4]	B042845	5	5.00	12/15/11	
11L0213-05 [MW-8]	B042845	5	5.00	12/15/11	
11L0213-06 [Trip Blank]	B042845	5	5.00	12/15/11	



QUALITY CONTROL

Spike

Source

Volatile Organic Compounds by GC/MS - Quality Control

Reporting

Prepared & Analyzed: 12/15/11	Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Nacional National Programme (PRI)	Batch B042845 - SW-846 5030B										
Accordination No	Blank (B042845-BLK1)				Prepared &	Analyzed: 12	/15/11				
sericemen	Acetone	ND									
sericemen	Acrylonitrile	ND	5.0								
Tomosechienemene ND 10 μgL	tert-Amyl Methyl Ether (TAME)	ND	0.50	$\mu g/L$							
formachicomethane ND 1.0 pg I. internation ND 0.50 pg I. formachicomethane ND 2.0 pg I. R-05, V-15 formachicomethane ND 2.0 pg I. V-16 shaftanoe (MEK) ND 2.0 pg I. V-16 shaftanoe (MEK) ND 1.0 pg I. V-16 statomatore ND 1.0 pg I. R-16 school formatore ND 1.0 pg I. R-25 School formatore ND 1.0 pg I. R-25 School formatore ND 2.0 pg I. R-25 S	Benzene	ND	1.0	$\mu g/L$							
Stronderhere ND	Bromobenzene	ND	1.0								
Noncomembane ND 1.0	Bromochloromethane	ND	1.0	$\mu g/L$							
Nonconclaine	Bromodichloromethane	ND	0.50								
Abstrace (AEE)	Bromoform	ND	1.0	$\mu \text{g/L}$							
ne-Buryl Alcohor (TBA)	Bromomethane	ND									R-05, V-05
Subylemene ND	2-Butanone (MEK)	ND	20								
see-ButyNetneene ND 1 0 μg/L ert-Butyl Ethyl Ether (TBEE) ND 0.5 μg/L Carbon Distifide ND 0.5 μg/L Carbon Tetrachioride ND 0.5 μg/L Chlorobenzene ND 0.0 μg/L Chlorodhromorethane ND 0.2 μg/L Chlorodhromorethane ND 2.0 μg/L Chlorodhromorethane ND 2.0 μg/L Chlorodhromorethane ND 2.0 μg/L Chlorodhromorethane ND 1.0 μg/L Chlorodhromorethane ND 1.0 μg/L Chlorodhromorethane ND 1.0 μg/L Chlorodhromorethane ND 1.0 μg/L Chlorodhromorethane (EDB) ND 1.0 μg/L 1,2-Dikmono-Scholoropopane (DBCP) ND 1.0 μg/L 1,2-Dichlorodhromorethane (EDB) ND 1.0 μg/L 1,2-Dichlorodhromorethane (EDB) ND 1.0 <t< td=""><td>tert-Butyl Alcohol (TBA)</td><td>ND</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>V-16</td></t<>	tert-Butyl Alcohol (TBA)	ND									V-16
rer-Butyl Eldyl Elder (TBEE) ND 0.50	n-Butylbenzene	ND	1.0								
ert-Bury Ethyl Ethyl Ether (TBEE) ND 0.50 µg/L R-05 Carbon Distlidie ND 1.0 µg/L R-05 Carbon Distlidie ND 1.0 µg/L R-05 Chlorocharene ND 1.0 µg/L R-05 Chlorochane ND 2.0 µg/L R-05 Chlorochane ND 2.0 µg/L R-05 Chlorochane ND 1.0 µg/L R-05 L, Dichlorochane ND 2.0 µg/L R-05 L, Dichlorochane ND 1.0 µg/L R-05	sec-Butylbenzene	ND									
Carbon Datalishe ND 10 µg/L Carbon Tetrachloride ND 5.0 µg/L Carbon Tetrachloride ND 6.0 µg/L Carbor Charbonementhane ND 0.50 µg/L Carborochane ND 2.0 µg/L Carborochane ND 2.0 µg/L Collorochune ND 1.0 µg/L Collorochune ND 1.0 µg/L Collorochune ND 1.0 µg/L 2.Dibromochane (EDBY) ND 5.0 µg/L 2.Dibromochane (EDBY) ND 5.0 µg/L 2.Dibromochane (EDBY) ND 1.0 µg/L 2.Dibromochane (tert-Butylbenzene	ND									
Carbon Tetrachloride ND 5.0 µg/L Chlorobezaree ND 1.0 µg/L Chlorocethane ND 0.50 µg/L Chlorocethane ND 0.50 µg/L Chlorocethane ND 2.0 µg/L Chlorocethane ND 2.0 µg/L Chlorocethane ND 2.0 µg/L Chlorocethane ND 1.0 µg/L Chlorocethane (EDB) ND 5.0 µg/L Chlorocethane (EDB) ND 0.50 µg/L Chlorocethane ND 1.0 µg/L Carbon ND 1.0 µg/L Chloricethylene ND 0.50 µg/L Chlorocethylene ND 0.50 µg/L Chloricethylene ND 0.50 µg/L Chlorocethylene ND 0.50 µg/L Chloricethylene ND 0.50	tert-Butyl Ethyl Ether (TBEE)	ND									
Chlorodbenzene ND 1.0 µg/L Chlorodbenzene ND 0.50 µg/L Chlorodbenzene ND 0.20 µg/L Chlorodbenzene ND 2.0 µg/L Chlorodbenzene ND 0.20 µg/L Chlorodbenzene ND 0.50 µg/L C-Dibrome-S-chloropropane (DBCP) ND 5.0 µg/L C-Dibrome-S-chloropropane ND 1.0 µg/L C-Dibrome-S-chloropropane ND 1.0 µg/L C-Dibrome-S-chloropropane ND 1.0 µg/L C-Dibrome-S-chloropropane ND 1.0 µg/L C-Dibrome-S-chloropropane ND 5.0 µg/L C-Dibrome-S-chlor	Carbon Disulfide	ND									R-05
Chlorothane	Carbon Tetrachloride	ND									
Enloroethane ND 2.0 µg/L Chloroforom ND 2.0 µg/L Chloroforom ND 2.0 µg/L Chloroforom ND 2.0 µg/L Chlorofoluene ND 10 µg/L Chlorotoluene ND 10 µg/L CLObromo-schloropropane (DBCP) ND 5.0 µg/L CLObromo-schloropropane ND 5.0 µg/L	Chlorobenzene	ND									
Chloromethane	Chlorodibromomethane	ND									
Chloromethane ND 2.0 μg/L R-05 Chlorofolucne ND 10 μg/L Chloromethane (EDB) ND 5.0 μg/L Chloromethane (EDB) ND 0.50 μg/L Chloromethane (EDB) ND 1.0 μg/L Chloromethane (Fron 12) ND 2.0 μg/L Chloromethane (Fron 12) ND 2.0 μg/L Chloromethane (Fron 12) ND 2.0 μg/L Chloromethane (Fron 12) ND 1.0 μg/L Chloromethane ND 1.0 μg/L Chloromethan	Chloroethane	ND									
C-Chorotoluene	Chloroform										
A-Chlorotoluene	Chloromethane	ND									R-05
2Dibromo-3-chloropropane (DBCP)	2-Chlorotoluene										
1,2-Dibromoethane (EDB) ND 0.50 µg/L	4-Chlorotoluene										
Dibromomethane ND 1.0 µg/L µg/L											
2.2-Dichlorobenzene ND 1.0 µg/L 3.3-Dichlorobenzene ND 1.0 µg/L 4.4-Dichloroc-2-butene ND 1.0 µg/L 5.6-Dichloroc-2-butene ND 1.0 µg/L 5.6-Dichloroc-2-butene ND 2.0 µg/L 5.6-Dichloroc-2-butene ND 2.0 µg/L 5.6-Dichloroc-2-butene ND 1.0 µg/L 5.6-Dichlorocthane ND 1.0 µg/L 5.6-Dichlorocthane ND 1.0 µg/L 5.6-Dichlorocthylene ND 1.0 µg/L 5.6-Dichlorocthylene ND 1.0 µg/L 5.6-Dichloropropane ND 1.0 µg/L 5.6-Dichloropropane ND 1.0 µg/L 5.7-Dichloropropane ND 1.0 µg/L 5.7-Dichloropropane ND 1.0 µg/L 5.8-Dichloropropane ND 0.50 µg/L 5.8-Dichloropropane ND 0.50 µg/L 5.8-J.3-Dichloropropene ND 0.50 µg/L											
1,4-Dichlorobenzene ND 1,0 µg/L 4,4-Dichloroc-buttene ND 1,0 µg/L 5,4-Dichloroc-buttene ND 1,0 µg/L 5,4-Dichloroc-buttene ND 2,0 µg/L 5,4-Dichlorocthane ND 1,0 µg/L 5,4-Dichlorocthane ND 1,0 µg/L 5,4-Dichlorocthylene ND 1,0 µg/L 5,4-Dichlorocthylene ND 1,0 µg/L 5,4-Dichlorocthylene ND 1,0 µg/L 5,4-Dichlorocthylene ND 1,0 µg/L 5,4-Dichloropropane ND 0,50 µg/L 5,4-Dichloropropane ND 0,5											
A-Dichlorobenzene											
rans-1,4-Dichloro-2-butene ND 2.0 µg/L Dichlorodifluoromethane (Freon 12) ND 2.0 µg/L 1,1-Dichloroethane ND 1.0 µg/L 1,2-Dichloroethane ND 1.0 µg/L 1,1-Dichloroethylene ND 1.0 µg/L 1,1-Dichloroethylene ND 1.0 µg/L rans-1,2-Dichloroethylene ND 1.0 µg/L 1,2-Dichloropropane ND 1.0 µg/L 1,2-Dichloropropane ND 0.50 µg/L 2,2-Dichloropropane ND 1.0 µg/L 1,1-Dichloropropene ND 0.50 µg/L 1,1-Dichloropropene ND 0.50 µg/L 1,1-Dichloropropene ND 0.50 µg/L 2,2-Dichloropropene ND 0.50 µg/L 2,1-Sichloropropene ND 0.50 µg/L 2,1-Sichloropropene ND 0.50 µg/L Dichyloropropene ND 0.50 µg/L <td></td>											
Dichlorodifluoromethane (Freon 12)											
											** 0 *
	· · ·										V-05, R-05
1,1-Dichloroethylene											
ND 1.0 µg/L											
rans-1,2-Dichloroethylene ND 1.0 μg/L 1,2-Dichloropropane ND 1.0 μg/L 1,3-Dichloropropane ND 0.50 μg/L 2,2-Dichloropropane ND 1.0 μg/L 1,1-Dichloropropene ND 2.0 μg/L cis-1,3-Dichloropropene ND 0.50 μg/L crans-1,3-Dichloropropene ND 0.50 μg/L Dicthyl Ether ND 2.0 μg/L Disopropyl Ether (DIPE) ND 0.50 μg/L 1,4-Dioxane ND 50 μg/L Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 1.0 μg/L sopropylbenzene (Cumene) ND 1.0 μg/L o-Isopropyltoluene (p-Cymene) ND 1.0 μg/L	,										
1,2-Dichloropropane ND 1.0 µg/L 1,3-Dichloropropane ND 0.50 µg/L 2,2-Dichloropropane ND 1.0 µg/L 1,1-Dichloropropene ND 2.0 µg/L cis-1,3-Dichloropropene ND 0.50 µg/L crans-1,3-Dichloropropene ND 0.50 µg/L Dicthyl Ether ND 0.50 µg/L Disopropyl Ether (DIPE) ND 0.50 µg/L 1,4-Dioxane ND 50 µg/L Ethylbenzene ND 1.0 µg/L Hexachlorobutadiene ND 0.50 µg/L 2-Hexanone (MBK) ND 10 µg/L sopropylbenzene (Cumene) ND 1.0 µg/L b-Isopropyltoluene (p-Cymene) ND 1.0 µg/L											
1,3-Dichloropropane ND 0.50 μg/L 2,2-Dichloropropane ND 1.0 μg/L 1,1-Dichloropropene ND 2.0 μg/L 2,5-I3-Dichloropropene ND 0.50 μg/L 2,5-I3-Dichloropropene ND 0.50 μg/L 2,1-Dichloropropene ND 0.50 μg/L 3,1-Dichloropropene ND 0.50 μg/L 4,1-Dichloropropene ND 0.50 μg/L 5,1-Dichloropropene ND 0.50 μg/L 5,1-Dichloropropene ND 0.50 μg/L 6,1-Dichloropropene ND 1.0 μg/L 7,1-Dichloropropene ND 1.0 μg/L 8,1-Dichloropropene ND 1.0 μg/L 9,1-Dichloropropene ND 1.0 μg/L 9,1-Dichlorop	· · · · · · · · · · · · · · · · · · ·										
ND 1.0											
1,1-Dichloropropene ND 2.0 μg/L 1,2-Dichloropropene ND 0.50 μg/L 1,3-Dichloropropene ND 0.50 μg/L 1,3-Dichloropropene ND 0.50 μg/L 1,4-Dichloropropene ND 0.50 μg/L 1,4-Dichloropropene ND 0.50 μg/L 1,4-Dichloropropene ND 1.0 μg/L 1,4-Dichloropropene											
ND 0.50 μg/L											
rans-1,3-Dichloropropene ND 0.50 μg/L Dictityl Ether ND 2.0 μg/L Dissopropyl Ether (DIPE) ND 0.50 μg/L 1,4-Dioxane ND 50 μg/L Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 1.0 μg/L sopropylbenzene (Cumene) ND 1.0 μg/L p-Isopropyltoluene (p-Cymene) ND 1.0 μg/L											
Diethyl Ether ND 2.0 μg/L Dispropyl Ether (DIPE) ND 0.50 μg/L 1,4-Dioxane ND 50 μg/L Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 1.0 μg/L sopropylbenzene (Cumene) ND 1.0 μg/L σ-Isopropyltoluene (p-Cymene) ND 1.0 μg/L											
Dissopropyl Ether (DIPE) ND 0.50 μg/L 1,4-Dioxane ND 50 μg/L Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 10 μg/L sopropylbenzene (Cumene) ND 1.0 μg/L σ-Isopropyltoluene (p-Cymene) ND 1.0 μg/L											
1,4-Dioxane ND 50 μg/L Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 1.0 μg/L (sopropylbenzene (Cumene) ND 1.0 μg/L 1-Isopropyltoluene (p-Cymene) ND 1.0 μg/L	-										
Ethylbenzene ND 1.0 μg/L Hexachlorobutadiene ND 0.50 μg/L 2-Hexanone (MBK) ND 10 μg/L sopropylbenzene (Cumene) ND 1.0 μg/L ν-Isopropyltoluene (p-Cymene) ND 1.0 μg/L											V 16
Hexachlorobutadiene ND 0.50 μg/L											V-16
2-Hexanone (MBK) ND 10 μg/L (sopropylbenzene (Cumene) ND 1.0 μg/L (b-Isopropyltoluene (p-Cymene) ND 1.0 μg/L	·										
sopropylbenzene (Cumene) ND $1.0 \mu g/L$ ρ -Isopropyltoluene (p-Cymene) ND $1.0 \mu g/L$											
p-Isopropyltoluene (p-Cymene) ND $1.0 \mu g/L$											
weingt ieit-dutyl duiei (M1βE) ND 1.0 μg/L											
	Metnyi tert-Butyi Etner (MTBE)	ND	1.0	μg/L							

RPD

%REC



QUALITY CONTROL

Spike

Source

%REC

RPD

Volatile Organic Compounds by GC/MS - Quality Control

Reporting

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B042845 - SW-846 5030B										
lank (B042845-BLK1)				Prepared & A	Analyzed: 12	/15/11				
Methylene Chloride	ND	5.0	μg/L							
-Methyl-2-pentanone (MIBK)	ND	10	$\mu g \! / \! L$							
aphthalene	ND	2.0	$\mu g\!/\!L$							
Propylbenzene	ND	1.0	$\mu g/L$							
tyrene	ND	1.0	$\mu \text{g/L}$							
1,1,2-Tetrachloroethane	ND	1.0	μg/L							
1,2,2-Tetrachloroethane	ND	0.50	μg/L							
etrachloroethylene	ND	1.0	μg/L							
etrahydrofuran	ND	10	μg/L							
bluene	ND	1.0	μg/L							
2,3-Trichlorobenzene	ND	5.0	μg/L							
2,4-Trichlorobenzene	ND	1.0	μg/L							
3,5-Trichlorobenzene		1.0	μg/L μg/L							
1,1-Trichloroethane	ND ND	1.0	μg/L μg/L							
	ND									
1,2-Trichloroethane	ND	1.0	μg/L							
richloroethylene	ND	1.0	μg/L							
ichlorofluoromethane (Freon 11)	ND	2.0	μg/L							
2,3-Trichloropropane	ND	2.0	μg/L							
1,2-Trichloro-1,2,2-trifluoroethane (Freon	ND	1.0	μg/L							
2,4-Trimethylbenzene	ND	1.0	μg/L							
3,5-Trimethylbenzene	ND	1.0	μg/L							
inyl Chloride	ND	2.0	μg/L							R-05
+p Xylene	ND	2.0	μg/L							
Xylene	ND	1.0	μg/L							
urrogate: 1,2-Dichloroethane-d4	26.8		μg/L	25.0		107	70-130			
nrrogate: Toluene-d8	25.3		μg/L	25.0		101	70-130			
urrogate: 4-Bromofluorobenzene	22.8		μg/L	25.0		91.2	70-130			
CS (B042845-BS1)				Prepared & A	Analyzed: 12	/15/11				
cetone	129	50	μg/L	100		129	70-160			V-20
crylonitrile	9.61	5.0	μg/L	10.0		96.1	70-130			
rt-Amyl Methyl Ether (TAME)	9.32	0.50	μg/L	10.0		93.2	70-130			
enzene	10.3	1.0	μg/L	10.0		103	70-130			
romobenzene	10.6	1.0	μg/L	10.0		106	70-130			
romochloromethane	11.6	1.0	μg/L	10.0		116	70-130			
romodichloromethane	8.87	0.50	μg/L	10.0		88.7	70-130			
romoform	10.4	1.0	μg/L μg/L	10.0		104	70-130			
romomethane	5.52	2.0	μg/L μg/L	10.0		55.2	40-160			R-05, V-05
Butanone (MEK)		20	μg/L μg/L	10.0		121	40-160			N-05, ¥-05
rt-Butyl Alcohol (TBA)	121	20	μg/L μg/L	100		94.5	40-160			V/ 14
Butylbenzene	94.5									V-16
•	9.81	1.0	μg/L	10.0		98.1	70-130			
c-Butylbenzene	11.0	1.0	μg/L	10.0		110	70-130			
rt-Butylbenzene	11.0	1.0	μg/L	10.0		110	70-130			
rt-Butyl Ethyl Ether (TBEE)	10.9	0.50	μg/L	10.0		109	70-130			
arbon Disulfide	13.1	10	μg/L	10.0		131 *	70-130		I	L-07A, R-05, V-
arbon Tetrachloride	10.4	5.0	μg/L	10.0		104	70-130			
nlorobenzene	10.3	1.0	μg/L	10.0		103	70-130			
nlorodibromomethane	11.5	0.50	$\mu \text{g/L}$	10.0		115	70-130			
		2.0	μg/L	10.0		91.3	70-130			
nloroethane	9.13	2.0	PB 2							
hloroethane hloroform	9.13 11.1	2.0	μg/L	10.0		111	70-130			
						111 78.5	70-130 40-160			R-05



QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
			Prepared &	Analyzed: 12	/15/11					
11.3	1.0	μg/L	10.0		113	70-130				_
7.67	5.0	$\mu g/L$	10.0		76.7	70-130				
10.9	0.50	μg/L	10.0		109	70-130				
10.9	1.0	$\mu g/L$	10.0		109	70-130				
11.5	1.0	$\mu g/L$	10.0		115	70-130				
11.0	1.0	$\mu g/L$	10.0		110	70-130				
9.95	1.0	μg/L	10.0		99.5	70-130				
10.7	2.0	μg/L	10.0		107	70-130				
6.35	2.0	μg/L	10.0		63.5	40-160			V-05, R-05	†
11.5		μg/L	10.0		115	70-130				
10.6					106					
8.97										
11.8										
11.0					110					
										†
									V 16	†
									V-10	1
										†
									L-07 V-06	'
									L-07, V-00	
	5.0									
	10									†
	2.0									†
	1.0	μg/L	10.0		114	70-130				·
	1.0		10.0		114	70-130				
	1.0		10.0		104	70-130				
10.6	0.50	μg/L	10.0		106	70-130				
10.7	1.0	$\mu g/L$	10.0		107	70-130				
10.2	10	$\mu g/L$	10.0		102	70-130				
10.6	1.0	$\mu g/L$	10.0		106	70-130				
9.12	5.0	$\mu g/L$	10.0		91.2	70-130				
8.66	1.0	$\mu \text{g/L}$	10.0		86.6	70-130				
8.71	1.0	$\mu g/L$	10.0		87.1	70-130				
11.0	1.0	$\mu g/L$	10.0		110	70-130				
9.81	1.0	$\mu g/L$	10.0		98.1	70-130				
10.6	1.0	$\mu g/L$	10.0		106	70-130				
10.9	2.0	μg/L	10.0		109	70-130				
10.9	2.0	μg/L	10.0		109	70-130				
9.10	1.0	μg/L	10.0		91.0	70-130				
11.0	1.0	μg/L	10.0		110	/0-130				
	7.67 10.9 10.9 10.9 11.5 11.0 9.95 10.7 6.35 11.5 10.6 8.97 11.8 11.0 10.6 10.8 10.5 10.7 10.3 11.3 10.4 11.8 92.3 11.0 10.6 105 13.2 10.5 9.92 9.53 102 9.34 11.4 11.4 10.4 10.6 10.7 10.2 10.6 9.12 8.66 8.71 11.0 9.81 10.6 10.9 10.9 9.10	7.67	7.67	11.3 1.0 μg/L 10.0 10.9 10.9 1.0 μg/L 10.0 11.5 1.0 μg/L 10.0 11.15 1.0 μg/L 10.0 11.0 11.0 11.0 11.0 11.0 11.0 11.	11.3 1.0	7.67 S.0 µg/L 10.0 76.7 10.9 0.50 µg/L 10.0 109 10.9 1.0 µg/L 10.0 109 11.5 1.0 µg/L 10.0 115 11.0 1.0 µg/L 10.0 116 11.1 11.0 1.0 µg/L 10.0 117 11.0 1.0 µg/L 10.0 107 6.35 2.0 µg/L 10.0 105 11.5 1.0 µg/L 10.0 106 8.97 1.0 µg/L 10.0 116 8.97 1.0 µg/L 10.0 116 8.97 1.0 µg/L 10.0 116 11.0 1.0 µg/L 10.0 116 11.0 1.0 µg/L 10.0 110 11.1 11.0 1.0 µg/L 10.0 106 11.1 11.0 1.0 µg/L 10.0 108 11.1 1.0 1.0 µg/L 10.0 105 11.1 1.0 10.0 µg/L 10.0 105 11.1 10.1 10.1 10.1 10.1 10.1 10.1 10.1	11.3 1.0 μg/L 10.0 113 70-130 7.67 5.0 μg/L 10.0 76.7 70-130 10.9 0.50 μg/L 10.0 109 70-130 11.9 1.0 μg/L 10.0 109 70-130 11.5 1.0 μg/L 10.0 115 70-130 11.5 1.0 μg/L 10.0 116 70-130 11.7 2.0 μg/L 10.0 117 70-130 10.7 2.0 μg/L 10.0 107 70-130 10.7 2.0 μg/L 10.0 107 70-130 11.5 1.0 μg/L 10.0 107 70-130 11.5 1.0 μg/L 10.0 107 70-130 10.7 2.0 μg/L 10.0 115 70-130 10.7 2.0 μg/L 10.0 115 70-130 11.5 1.0 μg/L 10.0 116 70-130 11.5 1.0 μg/L 10.0 116 70-130 11.5 1.0 μg/L 10.0 116 70-130 11.6 1.0 μg/L 10.0 106 70-130 11.8 1.0 μg/L 10.0 118 70-130 11.8 1.0 μg/L 10.0 110 70-130 11.0 1.0 μg/L 10.0 110 70-130 11.0 10.6 1.0 μg/L 10.0 110 70-130 10.8 0.50 μg/L 10.0 106 70-130 10.8 0.50 μg/L 10.0 105 40-130 10.3 0.50 μg/L 10.0 105 40-130 10.3 0.50 μg/L 10.0 107 70-130 11.3 0.50 μg/L 10.0 107 70-130 11.8 0.50 μg/L 10.0 103 70-130 11.8 0.50 μg/L 10.0 104 70-130 11.1 1.0 μg/L 10.0 106 70-130 11.1 1.0 μg/L 10.0 118 70-130 11.1 1.0 μg/L 10.0 110 70-130 11.1 1.0 μg/L 10.0 105 70-130 11.1 1.0 μg/L 10.0 106 70-130 11.1 1.0 μg/L 10.0 109 70-130	11.3	11.3	11.3



QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result %REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B042845 - SW-846 5030B										
LCS (B042845-BS1)				Prepared &	Analyzed: 12/15/11					_
m+p Xylene	22.1	2.0	μg/L	20.0	111	70-130				_
o-Xylene	11.8	1.0	$\mu g/L$	10.0	118	70-130				
Surrogate: 1,2-Dichloroethane-d4	24.7		μg/L	25.0	98.8	70-130				_
Surrogate: Toluene-d8	25.1		μg/L μg/L	25.0	100	70-130				
Surrogate: 4-Bromofluorobenzene	26.6		μg/L	25.0	107	70-130				
LCS Dup (B042845-BSD1)				Prepared: 12	2/15/11 Analyzed: 12/16/	11				
Acetone	108	50	μg/L	100	108	70-160	17.3	25	V-20	 †
Acrylonitrile	10.5	5.0	μg/L	10.0	105	70-130	8.57	25	* 20	,
tert-Amyl Methyl Ether (TAME)	9.36	0.50	μg/L	10.0	93.6	70-130	0.428	25		
Benzene	10.9	1.0	μg/L	10.0	109	70-130	5.38	25		
Bromobenzene	11.0	1.0	μg/L	10.0	110	70-130	3.15	25		
Bromochloromethane	12.1	1.0	μg/L	10.0	121	70-130	4.13	25		
Bromodichloromethane	10.0	0.50	μg/L	10.0	100	70-130	12.4	25		
Bromoform	11.4	1.0	μg/L	10.0	114	70-130	9.92	25		
Bromomethane	11.4	2.0	μg/L	10.0	110	40-160		* 25	R-05, V-05	†
2-Butanone (MEK)	118	20	μg/L	100	118	40-160	2.75	25	1005, 1 05	†
tert-Butyl Alcohol (TBA)	99.8	20	μg/L	100	99.8	40-160	5.52	25	V-16	†
n-Butylbenzene	10.6	1.0	μg/L	10.0	106	70-130	8.12	25	, 10	
sec-Butylbenzene	10.6	1.0	μg/L	10.0	106	70-130	3.62	25		
tert-Butylbenzene	10.9	1.0	μg/L	10.0	109	70-130	1.10	25		
tert-Butyl Ethyl Ether (TBEE)	11.3	0.50	μg/L	10.0	113	70-130	3.70	25		
Carbon Disulfide	9.62	10	μg/L μg/L	10.0	96.2	70-130		* 25	R-05, V-20	
Carbon Tetrachloride	10.9	5.0	μg/L μg/L	10.0	109	70-130	4.32	25	K-03, V-20	
Chlorobenzene	10.5	1.0	μg/L μg/L	10.0	105	70-130	1.63	25		
Chlorodibromomethane	12.4	0.50	μg/L μg/L	10.0	124	70-130	7.78	25		
Chloroethane	10.6	2.0	μg/L μg/L	10.0	106	70-130	14.8	25		
Chloroform		2.0	μg/L μg/L	10.0	118	70-130	5.95	25		
Chloromethane	11.8 10.2	2.0	μg/L μg/L	10.0	102	40-160	25.9		R-05	†
2-Chlorotoluene		10	μg/L μg/L	10.0	118	70-130	2.14	25	K-03	1
4-Chlorotoluene	11.8	1.0	μg/L μg/L	10.0	111	70-130	1.60	25		
1,2-Dibromo-3-chloropropane (DBCP)	11.1	5.0	μg/L μg/L	10.0	81.0	70-130	5.45	25		
1,2-Dibromoethane (EDB)	8.10	0.50	μg/L μg/L	10.0	112	70-130	1.99	25		
Dibromomethane	11.2	1.0	μg/L μg/L	10.0	114	70-130	4.48	25		
1,2-Dichlorobenzene	11.4	1.0	μg/L μg/L	10.0	108	70-130	6.35	25		
1,3-Dichlorobenzene	10.8	1.0	μg/L μg/L	10.0	103	70-130	6.00	25		
1,4-Dichlorobenzene	10.3	1.0	μg/L μg/L	10.0	103	70-130	4.81	25		
trans-1,4-Dichloro-2-butene	10.4	2.0	μg/L μg/L	10.0	134 *		22.4	25	L-07	
Dichlorodifluoromethane (Freon 12)	13.4	2.0	μg/L μg/L	10.0	107	40-160	50.9		R-05, V-05	†
1,1-Dichloroethane	10.7	1.0	μg/L μg/L	10.0	114	70-130			K-03, V-03	1
1,2-Dichloroethane	11.4	1.0	μg/L μg/L	10.0	114	70-130	0.784 8.11	25 25		
1,1-Dichloroethylene	11.6	1.0	μg/L μg/L	10.0		70-130		25		
cis-1,2-Dichloroethylene	9.78	1.0	μg/L μg/L	10.0	97.8	70-130	8.64 3.18	25		
trans-1,2-Dichloroethylene	12.1	1.0	μg/L μg/L		121	70-130				
1,2-Dichloropropane	11.5	1.0		10.0	115		4.27	25		
1,3-Dichloropropane	10.4	0.50	μg/L μg/L	10.0 10.0	104	70-130 70-130	1.05	25 25		
2,2-Dichloropropane	11.2	1.0			112		3.45			4
	11.0		μg/L μα/Ι	10.0	110	40-130	4.82	25 25		†
1,1-Dichloropropene cis-1,3-Dichloropropene	11.5	2.0 0.50	μg/L μα/Ι	10.0	115	70-130	7.93	25		
	10.7		μg/L μα/Ι	10.0	107	70-130	4.09	25		
trans-1,3-Dichloropropene	10.5	0.50	μg/L μα/Ι	10.0	105	70-130	7.90	25		
Diethyl Ether	10.8	2.0	μg/L μg/I	10.0	108	70-130	4.26	25		
Diisopropyl Ether (DIPE)	11.9	0.50	μg/L	10.0	119	70-130	0.590	25		



QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B042845 - SW-846 5030B											
LCS Dup (B042845-BSD1)				Prepared: 12	2/15/11 Analy	yzed: 12/16/	11				
1,4-Dioxane	117	50	μg/L	100		117	40-130	23.4	50	V-16	†‡
Ethylbenzene	10.8	1.0	$\mu g \! / \! L$	10.0		108	70-130	1.19	25		
Hexachlorobutadiene	10.6	0.50	μg/L	10.0		106	70-130	0.659	25		
2-Hexanone (MBK)	119	10	μg/L	100		119	70-160	12.4	25		†
Isopropylbenzene (Cumene)	10.9	1.0	μg/L	10.0		109	70-130	18.7	25	V-06	
p-Isopropyltoluene (p-Cymene)	10.9	1.0	μg/L	10.0		109	70-130	3.65	25		
Methyl tert-Butyl Ether (MTBE)	10.7	1.0	μg/L	10.0		107	70-130	7.47	25		
Methylene Chloride	9.76	5.0	μg/L	10.0		97.6	70-130	2.38	25		
4-Methyl-2-pentanone (MIBK)	121	10	μg/L	100		121	70-160	17.3	25		†
Naphthalene	9.23	2.0	μg/L	10.0		92.3	40-130	1.18	25		†
n-Propylbenzene	11.8	1.0	μg/L	10.0		118	70-130	3.79	25		
Styrene	11.4	1.0	μg/L	10.0		114	70-130	0.0874	25		
1,1,1,2-Tetrachloroethane	10.0	1.0	μg/L	10.0		100	70-130	3.53	25		
1,1,2,2-Tetrachloroethane	10.6	0.50	μg/L	10.0		106	70-130	0.188	25		
Tetrachloroethylene	11.0	1.0	μg/L	10.0		110	70-130	2.87	25		
Tetrahydrofuran	11.1	10	μg/L	10.0		111	70-130	8.47	25		
Toluene	11.9	1.0	μg/L	10.0		119	70-130	11.9	25		
1,2,3-Trichlorobenzene	9.45	5.0	μg/L	10.0		94.5	70-130	3.55	25		
1,2,4-Trichlorobenzene	9.02	1.0	μg/L	10.0		90.2	70-130	4.07	25		
1,3,5-Trichlorobenzene	9.79	1.0	μg/L	10.0		97.9	70-130	11.7	25		
1,1,1-Trichloroethane	11.3	1.0	μg/L	10.0		113	70-130	2.15	25		
1,1,2-Trichloroethane	10.4	1.0	μg/L	10.0		104	70-130	6.03	25		
Trichloroethylene	11.8	1.0	μg/L	10.0		118	70-130	10.1	25		
Trichlorofluoromethane (Freon 11)	12.5	2.0	μg/L	10.0		125	70-130	14.1	25		
1,2,3-Trichloropropane	11.0	2.0	μg/L	10.0		110	70-130	0.456	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.2	1.0	μg/L	10.0		102	70-130	10.9	25		
1,2,4-Trimethylbenzene	11.1	1.0	μg/L	10.0		111	70-130	1.18	25		
1,3,5-Trimethylbenzene	11.5	1.0	$\mu g\!/\!L$	10.0		115	70-130	4.00	25		
Vinyl Chloride	11.0	2.0	$\mu g\!/\!L$	10.0		110	40-160	30.0	* 25	R-05	†
m+p Xylene	23.6	2.0	$\mu g \! / \! L$	20.0		118	70-130	6.26	25		
o-Xylene	11.6	1.0	μg/L	10.0		116	70-130	1.96	25		
Surrogate: 1,2-Dichloroethane-d4	26.4		μg/L	25.0		106	70-130				
Surrogate: Toluene-d8	27.8		$\mu g/L$	25.0		111	70-130				
Surrogate: 4-Bromofluorobenzene	26.8		$\mu g/L$	25.0		107	70-130				



FLAG/QUALIFIER SUMMARY

*	QC result is outside of established filmits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.



CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Acetone	CT,NH,NY,ME
Acrylonitrile	CT,NY,ME,RI
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME,RI
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME,RI
Bromoform	CT,NH,NY,ME,RI
Bromomethane	CT,NH,NY,ME,RI
2-Butanone (MEK)	CT,NH,NY,ME
tert-Butyl Alcohol (TBA)	NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME,RI
Chlorobenzene	CT,NH,NY,ME,RI
Chlorodibromomethane	CT,NH,NY,ME,RI
Chloroethane	CT,NH,NY,ME,RI
Chloroform	CT,NH,NY,ME,RI
Chloromethane	CT,NH,NY,ME,RI
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME,RI
1,3-Dichlorobenzene	CT,NH,NY,ME,RI
1,4-Dichlorobenzene	CT,NH,NY,ME,RI
trans-1,4-Dichloro-2-butene	NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,RI
1,1-Dichloroethane	CT,NH,NY,ME,RI
1,2-Dichloroethane	CT,NH,NY,ME,RI
1,1-Dichloroethylene	CT,NH,NY,ME,RI
cis-1,2-Dichloroethylene	ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME,RI
1,2-Dichloropropane	CT,NH,NY,ME,RI
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME,RI
trans-1,3-Dichloropropene	CT,NH,NY,ME,RI
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME,RI
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME



CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Methylene Chloride	CT,NH,NY,ME,RI
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,RI
Tetrachloroethylene	CT,NH,NY,ME,RI
Toluene	CT,NH,NY,ME,RI
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,RI
1,1,2-Trichloroethane	CT,NH,NY,ME,RI
Trichloroethylene	CT,NH,NY,ME,RI
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,RI
1,2,3-Trichloropropane	NH,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME,RI
m+p Xylene	CT,NH,NY,ME,RI
o-Xylene	CT,NH,NY,ME,RI
The CON-TEST Environmental Laboratory operates un	nder the following certifications and accreditations:

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2012
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2012
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2012
RI	Rhode Island Department of Health	LAO00112	12/30/2011
NC	North Carolina Div. of Water Quality	652	12/31/2011
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2012
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013

	netes	Phone: 413-525 *** Fax: 413-525-6			in of			DY	RE	CO	RD		pruce S : longme		ИА 01028	Р	Page of 1
HHT-H ANALYTI	CAL LABORATOR	3V		om //	L02	13			2	6		<u> </u>				<u></u>	of Containers
Company Name:	ARCADIS	44 45 44 10 011100110	bs.com		P .			7 A. Ca		14						 	Preservation
		^ ^ '	ì	Telephone:	. ,	_			-1	\leq	A KI	NI VEIE	DECH	JESTED		 	*Container Code
Address: 300	. 4	toter Blv		Project#	<u>wkol</u>	1215	2.C	2007			AINA I	4E1313	i newe	l I			Dissolved Metals
***	arwick, Doma 1	Ri CZE allister	38 <u>G</u>	Client PO# DATA DELIVE O FAX © E			oly)	SANSSO/IFESSANS		0.	TANK WAY KAMININ KANING KA	T COMMON TO THE PROPERTY OF TH	**************************************				O Field Filtered O Lab to Filter
Project Location:	Sorinofix	okl St.		Fax#	,				-	97		794				**	**Cont. Code:
Sampled By:	1 Andres	J Dasilu	Com	Email:	donna	oalli	sterp	arcadis -US co	m	OC.		Manage Control of the				1 1	=amber glass =glass
Project Proposal Provi	ded? (for billing purp			Format:	OPDF C	EXCEL	OGIS			0						P=	=plastic T =sterile
	P		 	lection	O "Enhan	iced Dat		ge"	-	· ·							= vial =summa can
Con-Test Lab ID	Client Sample	ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code						THE PERSON NAMED IN COLUMN NAM	200	T=	tedlar bag=
-01	MPL-6	·	12/6/11	14:00		X	A		X.		İ					0	=Other
02	WB-	2	12/6/11	11:50		X	A		Х							**	*Preservation
-0/ 03	ATC-		12/2/11	17:10		X	6W			X						1=	= Iced = HCL
-02 AH	MW-7	-	12/5/11	11:57		X	60			X						1 1	= nct I = Methanol
-03 -05	MW-6		12/2/11	16:00		>	GW			Х						1 1	= Nitric Acid = Sulfuric Acid
-01 186	ATC-4		12/2/11	13:10		×	6W			X						1 1	= Sodium bisulfate = Na hydroxide
-55- 07	Mw-8		12211	15:20		X	GW			¥						* * * *	= Na thiosulfate
-06 98	Trip Bi	ank	or market and the same of the	***************************************						X							= Other
																	Matrix Code:
	74400000000	**************************************														l w	W = groundwater /W = wastewater
Comments:	**************************************					······································	Plea							ow if a spond. Code	pecific sam e Box:	A	W = drinking water = air = soil/solid
	· · · · · · · · · · · · · · · · · · ·		**************************************		4						lium; L - I	Low; C	- Clear	ı; U - Unl	known		L = sludge
Relinguished by (signatur	e) (to Ref) Da	te/Time: 12/6/11	Turna O	round ^{††} 7-Day	Detection Massachus	·····	nit Re	quiren	nents	<u> </u>	is you	ır pro	oject	MCP	or RCP		= other
Received by (signature)	Da	ite/Time: 2/2/11 /0/63		10-Day Other STP			***************************************	CONTRACTOR IN THE CANADA							cation Forn		
Réfinquished by (signatur	77.2	te/Timá	N RI	USH [†]	Connecticu	rt:									ation Form equired P		
I and Kach	Wet 18	17/11 19:40	□ †24-Hr □		*ILLEGATION OF THE STATE OF THE	THE PLANTAGE OF THE PARTY OF TH						N AGCOR		Service Control	1		
Received by: (signature)	285 Da	te/Time: 1540	ງ⊡ [†] 72-Hr ເ [†] Require la		Other:	ant	de.	Islar	VOL.	**************************************	3 /1	el i		E AIHA &	£		HA Certified Certified

TURNAROUND TIME (business days) STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332

F: 413-525-6405 www.contestlabs.com





Sample Receipt Checklist

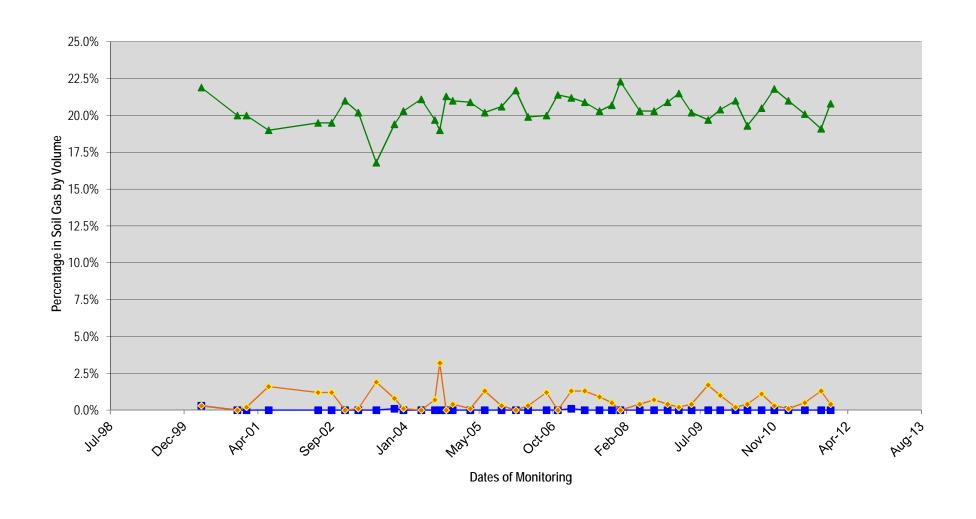
CLIENT NAME: Arcadis		RECEIV	ED BY: MCK DA	re: <u>12/7</u>
) Was the chain(s) of custody reli 2) Does the chain agree with the s If not, explain:	•	ed?	(es) No No	CoC Included
) Are all the samples in good con If not, explain:	dition?		Yes No	
) How were the samples received	!:			
On Ice 💢 Direct from Sar	mpling	Ambient	: ☐ In Cooler(s) 🇷	
Vere the samples received in Tem	perature Complian	ice of (2-	6°C)? Yes No N	Ά
emperature °C by Temp blank			ature °C by Temp gun	200-
i) Are there Dissolved samples fo	r the lab to filter?		Yes No	
Who was notified	Date	Tin	ne	
6) Are there any RUSH or SHORT	HOLDING TIME sar	nples?	Yes (No)	
Who was notified	Date	Tin	ne	
') Location where samples are stored	i: \\89-	10	Permission to subcontraction (Walk-in clients only) if number Client Signature:	·
Co	ntainers rec	eive	d at Con-Test	
	# of containers			# of containers
1 Liter Amber	77 OT OGITAGITOTO	1 /	8 oz amber/clear jar	
500 mL Amber			4 oz amber/clear jar	
.250 mL Amber (8oz amber)			2 oz amber/clear jar	
1 Liter Plastic			Air Cassette	
500 mL Plastic			Hg/Hopcalite Tube	
250 mL plastic			Plastic Bag / Ziploc	
40 mL Vial - type listed below	18	18 L	PM 2.5 / PM 10	
Colisure / bacteria bottle		1	PUF Cartridge	
Dissolved Oxygen bottle		 	SOC Kit	
Encore '			TO-17 Tubes	
Flashpoint bottle			Non-ConTest Container	
Perchlorate Kit		1	Other glass jar Other	
Other		Tourse of T	Ottel	<u> </u>
Laboratory Comments:				
40 mL vials: # HCI	# Methanol		Tir	ne and Date Frozen:
# Bisulfate	# DI Water			
# Thiosulfate	Unpreserved			
Do all samples have the proper A	cid pH: Yes No	(TA)		Doc# 277
Do all samples have the proper B	lase pH: Yes No	(N/A)		Rev. 1 May Page



Appendix C

Soil Gas Trend Graphs

Soil Gas Well EPL1 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island

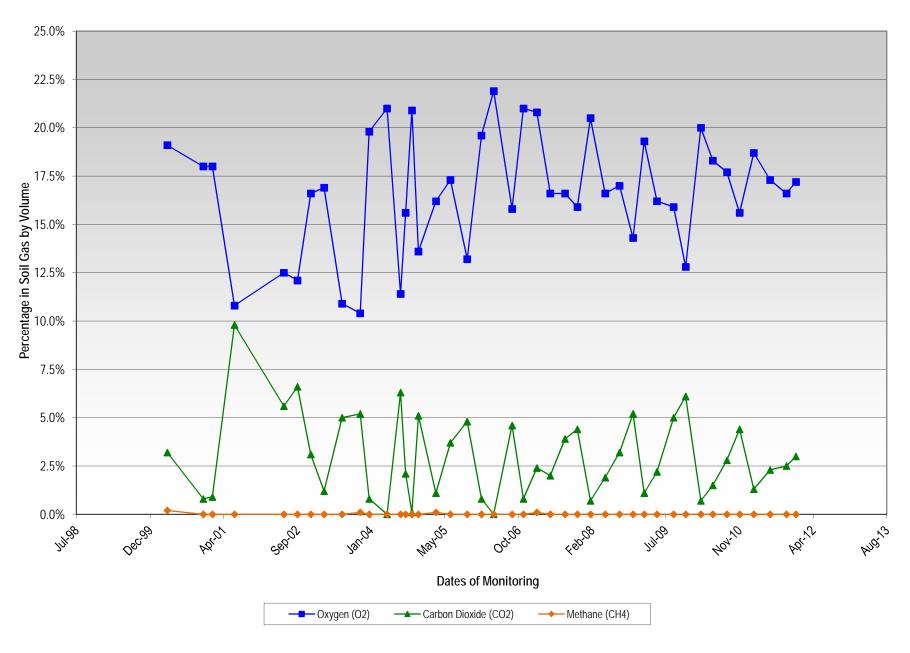


— Oxygen

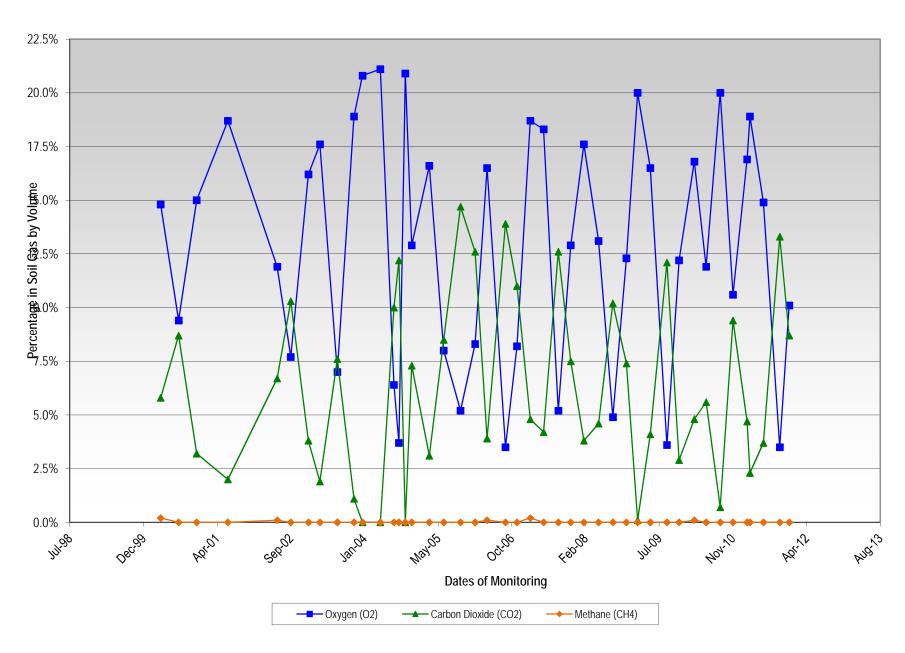
--- Methane

Carbon Dioxide

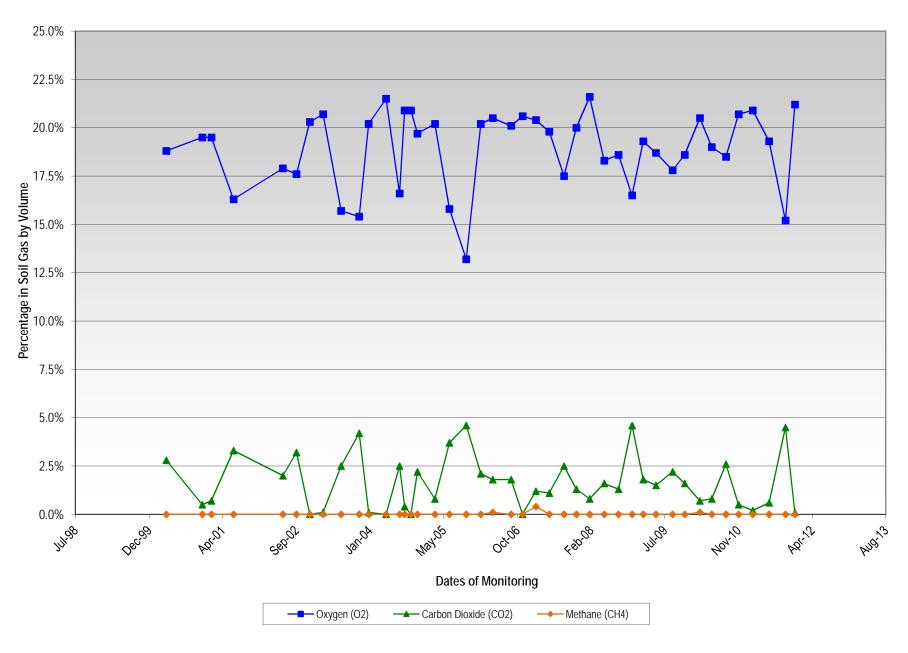
Soil Gas Well EPL4
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



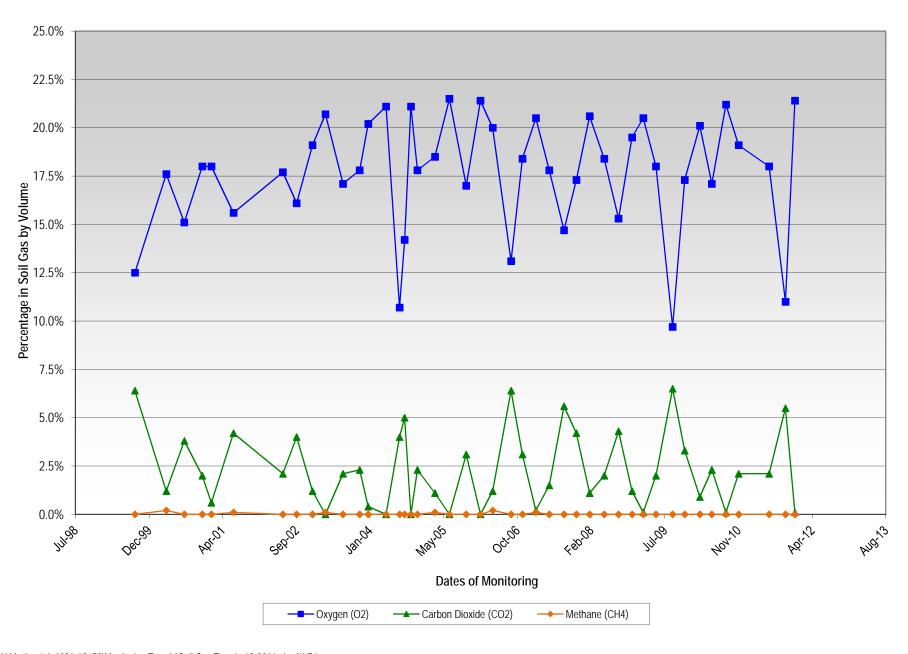
Soil Gas Well MPL5 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



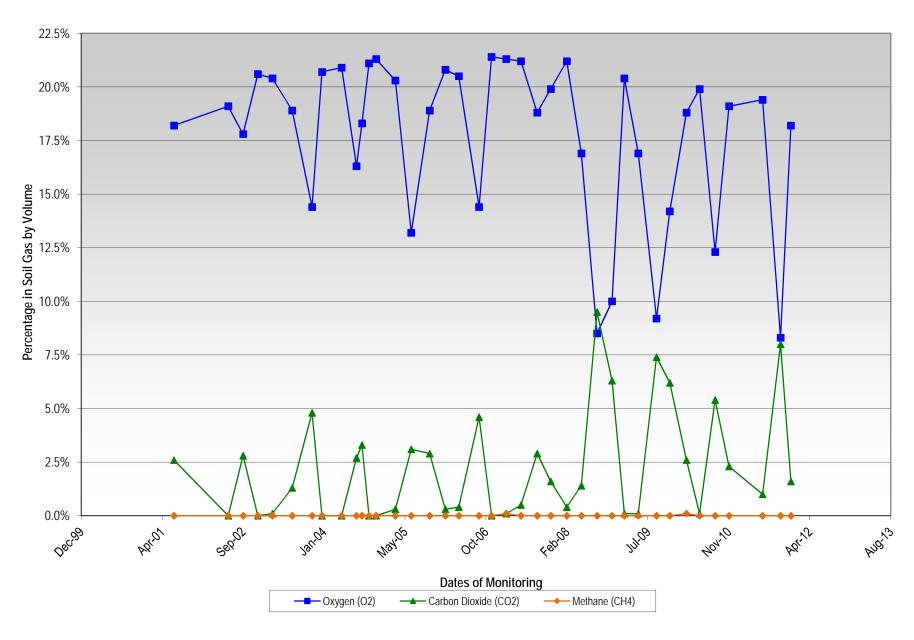
Soil Gas Well MG2 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



Soil Gas Well WB1
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



Soil Gas Well WB15 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



Soil Gas Well MPL-7 Fluctuations in Methane, Oxygen and Carbon Dioxide

