



Mr. Jeffrey Crawford  
Rhode Island Department of Environmental Management  
Office of Waste Management  
235 Promenade Street  
Providence, RI 02908-5767

ARCADIS U.S., Inc.  
300 Metro Center Boulevard  
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Rhode Island 02886  
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Subject:  
June 2011 Quarterly Monitoring Report for Springfield Street School Complex

SER-1

Dear Mr. Crawford:

Date:  
July 29, 2011

ARCADIS Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between June 13, 2011 and June 17, 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.

Contact:  
Donna H. Pallister, PE

Phone:  
401-738-3887

Email:  
[Donna.pallister@arcadis-us.com](mailto:Donna.pallister@arcadis-us.com)

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

Our ref:  
WK012152.0007

## COVER MONITORING

ARCADIS conducted a visual survey of the site on June 16, 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 holes, apparently due to erosion from stormwater runoff and settling, were observed along the middle school building foundation in the courtyard adjacent to the cafeteria and along the back wall near the electrical transformer. These holes have been repaired by the School Department's contractor.

## **SUB-SLAB VENTILATION SYSTEM**

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on June 16, 2011. The two elementary school blowers and the two middle school blowers were operating normally upon arrival.

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 0.0 to 0.3% at each location; four 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 June 16, 2011 using a QRAE plus multi-gas 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 June 16, 2011 was 86 °F. Carbon dioxide was measured outside in the school parking lot at 585 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 CO<sub>2</sub> 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 June 16, 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.

On June 16, 2011, we observed that four sensors at the elementary school and two at the middle school were not working or the control panel had been removed. Diamond Calibration reported that they were in the process of replacing these units in the control panel, and the units were replaced later in the week.

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**

Three new groundwater monitoring wells, MW-6, MW-7 and MW-8 were installed on April 25, 2011 by ARCADIS and New England GeoTech to replace monitoring wells ATC-2, ATC-3 and ATC-5 which were damaged and no longer usable. The three new wells were installed to a depth of 20 to 22 feet below ground surface. Copies of well logs for the three new wells are provided in Appendix B.

The new and existing groundwater monitoring wells were sampled by ARCADIS on June 16, 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 C. Results of analysis of groundwater samples are summarized in Table 3.

Analysis of groundwater from the monitoring wells did not detect any target analytes in any of the groundwater samples.

## **SOIL GAS MONITORING**

Soil gas monitoring was conducted at 27 locations on June 14, 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, carbon monoxide, hydrogen sulfide and organic vapors were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.0% to 10.5% during the June monitoring event. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 21 readings exceeded the action level. The maximum concentration detected during the February round was 6.5%, and the maximum concentration of carbon dioxide detected during June was 10.5%. This is consistent

with the pattern shown during previous rounds of declining carbon dioxide concentrations in the winter, and increasing concentrations in the summer. Graphs presenting carbon dioxide, oxygen, and methane concentrations over time for selected representative wells are presented in Attachment D.

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 C. 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.

A handwritten signature in black ink, appearing to read "Donna H. Pallister". The signature is fluid and cursive, with the first name "Donna" being the most prominent.

Donna H. Pallister, PE, LSP  
Senior Environmental Engineer

Copies:  
C. Jones, Providence Schools  
A. Sepe, City of Providence  
Providence Public Building Authority

ARCADIS

**Tables**

**Table 1**  
**System Monitoring Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**June 16, 2011**

<b>Monitoring Location</b>	<b>Methane % by volume Landtec</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
Elementary School inlet 1	0.0	0.3	19.5	0	0	0.0
Elementary School inlet 2	0.0	0.2	19.6	0	0	0.0
Elementary School Outlet	0.0	0.3	19.9	0	0	0.0
Middle School front shed inlet	0.0	0.0	20.4	0	0	0.0
Middle School front shed after 2 <sup>nd</sup> carbon	0.0	0.0	20.3	0	0	0.0
Middle School back shed inlet	0.0	0.1	20.2	0	0	0.0
Middle School back shed after 2 <sup>nd</sup> carbon	0.0	0.2	20.2	0	0	0.0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5</b>	<b>1,000 ppm (0.1%)</b>	<b>NA</b>	<b>9 ppm</b>	<b>10 ppm</b>	<b>5 ppm</b>

**Measurements made with:** Land tec GEM2000, MiniRAE 2000, Q-RAE multigas meter

**Sampling date:** June 16, 2011

**Measured by:** D. Pallister



**Table 2**  
**Indoor Air Monitoring Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**June 16, 2011**

<b>Monitoring Location</b>	<b>Methane as % LEL</b>	<b>Carbon Dioxide PPM</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
<b>E.S. Front office</b>	0	484	20.9	0/1	0	0.0
<b>E.S. Elevator</b>	0	444	20.9	0	0	0.0
<b>E.S. Faculty Work Room</b>	0	452	20.9	0	0	0.0
<b>E.S. Gym</b>	0	729	20.9	0	0	0.0
<b>E.S. Stairway B</b>	0	475	20.9	0	0	0.0
<b>E.S. Room 105</b>	0	530	20.9	0	0	0.0
<b>E.S. Library</b>	0	582	20.9	0	0	0.0
<b>E.S. Room 111 Music/Art Room</b>	0	564	20.9	0	0	0.0
<b>E.S. Cafeteria</b>	0	781	20.9	0	0	0.0
<b>E.S. Mechanical Room</b>	0	451	20.9	0	0	0.0
<b>Stairway C</b>	0	581	20.9	0	0	0.0

**Table 2**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**June 16, 2011**

<b>Monitoring Location</b>	<b>Methane as % LEL</b>	<b>Carbon Dioxide PPM</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
<b>M.S.</b> Front Office	0	703	20.9	0	0	0.0
<b>M.S.</b> Gym	0	641	20.9	0	0	0.0
<b>M.S.</b> Stairway near Hartford Ave. GS-07	0	637	20.9	0	0	0.0
<b>M.S.</b> Near sensor #16 in hall outside cafeteria	0	743	20.9	0	0	0.0
<b>M.S.</b> Faculty Work Room	0	649	20.9	0	0	0.0
<b>M.S.</b> Music/Art Room	0	731	20.9	0	0	0.0
<b>M.S.</b> GS-03 Across from Boys Bathroom	0	660	20.9	0	0	0.0
<b>M.S.</b> Second Floor - Library	0	682	20.9	0	0	0.0
<b>M.S.</b> Cafeteria	0	791	20.9	0	0	0.0

**Table 2**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**June 16, 2011**

<b>Monitoring Location</b>	<b>Methane as % LEL</b>	<b>Carbon Dioxide PPM</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
<b>M.S.</b> Front Hall near sensor #4	0	638	20.9	0	0	0.0
<b>M.S.</b> Hallway across from elevator near sensor #9	0	711	20.9	0	0	0.0
<b>M.S.</b> Near sensor GS 06 hallway right end	0	672	20.9	0	0	0.0
<b>M.S.</b> stairway near Elem. sensor GS-1	0	740	20.9	0	0	0.0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5</b>	<b>1,000 ppm (0.1%)</b>	<b>NA</b>	<b>9 ppm</b>	<b>10 ppm</b>	<b>5 ppm</b>

**Notes:**

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

Measurements made with: MiniRAE 2000, Q-RAE Multigas Meter, Fluke 975 Airmeter

PPM = Parts per million

Outdoor conditions: carbon monoxide = 0 ppm, carbon dioxide = 585 ppm, temperature = 86.9 °F.



**Table 4**  
**Soil Gas Survey Field Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**June 14 , 2011**

<b>Monitoring Well</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
WB-1	00.0	2.1	18.0	0	0	0.0
WB-2	00.0	0.3	20.6	0	0	0.0
WB-3	00.0	0.0	20.4	0	0	0.0
WB-4	00.0	0.0	20.9	0	0	0.0
WB-5	DESTROYED					
WB-6	00.0	0.0	20.9	0	0	0.0
WB-7	DESTROYED					
WB-8	00.0	0.0	20.9	0	0	0.0
WB-12	00.0	0.8	20.0	0	0	0.0
WB-13	00.0	0.1	20.5	0	0	0.0
WB-14	00.0	0.0	20.7	0	0	0.0
WB-15	00.0	1.0	19.4	0	0	0.0
EPL-1	00.0	0.5	20.1	0	0	0.0
EPL-2	00.0	0.8	19.4	0	0	0.0
EPL-3	00.0	2.4	17.3	0	0	0.0
EPL-4	00.0	2.3	17.9	0	0	0.0
EPL-5	00.0	0.8	19.6	0	0	0.0
ENE-1	00.0	0.2	20.5	0	0	0.0

**Table 4**  
**Soil Gas Survey Field Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**June 14, 2011**

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	00.0	0.5	19.6	0	0	0.0
MG2	00.0	0.6	19.3	0	0	0.0
MG3	00.0	0.4	20.5	0	0	0.0
MG4	00.0	0.2	20.4	0	0	0.0
MG5	00.0	0.3	20.5	0	0	0.0
MPL2	00.0	2.1	16.8	0	0	0.0
MPL3	00.0	3.6	14.0	0	0	0.0
MPL5	00.0	3.7	14.9	0	0	0.0
MPL6	00.0	4.3	15.8	0	0	0.0
MPL7	00.0	10.5	6.3	0	0	0.0
MPL8	00.0	2.9	16.1	0	0	0.0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5%</b>	<b>1,000 PPM</b>	<b>NA</b>	<b>9 PPM</b>	<b>10 PPM</b>	<b>5 PPM</b>

**Sampled by:**

**Sampling Equipment:** Landtec GEM 2000+ , MiniRae 2000 PID



**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's 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.

ARCADIS

**Appendix B**  
**Well Logs**

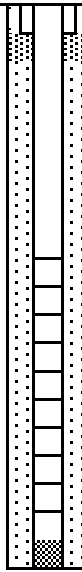
**BORING LOG**

Site: Springfield Street Schools  
Providence, RI

Boring No. MW-6  
Page: 1 of 1  
File No WK012152.0000

300 Metro Center Blvd  
Warwick, RI, 02886  
phone (401) 738-3887 fax (401) 732-1686

Date: 4/25/11 Boring Equipment Description: Truck mounted Geoprobe  
Reported by: Chris Jamison  
Boring Co: NE Geotech Sampler Description: Macrocore  
Foreman: Hayes Field Testing Equipment: None  
Others: \_\_\_\_\_

Depth (ft)	Sample Information					Sample Description	Equipment Installed
	No.	Depth	Pen./ Rec.	Blows/ 6"	Field Test Data		
5'			16/60"			0-8" brown, f to med SAND & Silt 8-16" tan, f to med SAND some Silt (debris)	 Annular Seal Bentonite Seal  Filter Sand  Sediment Trap
			50/60"			0-6" dark brown, f to med SAND & Silt (debris) 6-40" orange/ brown, f to med SAND & Silt 40-50" tan, f to med SAND some Silt	
			50/60"			0-50" tan/ gray, med to coarse SAND some Silt	
10'						water at 13.5'	
15'							
20'						Drive casing to 20'	
25'							
30'							

Well Construction Data:  
 Screen Length: 10'  
 Screen Slot: 0.1  
 Riser Length: 13'  
 Filter Pack Length: 11'  
 Filter Pack Seal material and length: 1' bent s to s  
 Annular seal material and length: s to s  
 Total Depth of Boring: 20'  
 Bottom of well set at: 20'  
 Guard pipe or Roadbox: guard

Notes:  
 Water at 17.5'  
 Well set at 20'  
 Finished with standpipe.  
 Debris material included brick, paper, and plastic

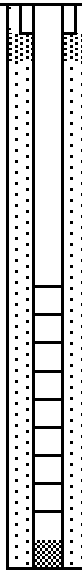
### BORING LOG

Site: Springfield Street Schools  
Providence, RI

Boring No. MW-7  
 Page: 1 of 1  
 File No WK012152.0000

300 Metro Center Blvd  
 Warwick, RI, 02886  
 phone (401) 738-3887 fax (401) 732-1686

Date: 4/25/11 Boring Equipment Description: Truck mounted Geoprobe  
 Reported by: Chris Jamison  
 Boring Co: NE Geotech Sampler Description: Macrocore  
 Foreman: Hayes Field Testing Equipment: None  
 Others: \_\_\_\_\_

Depth (ft)	Sample Information					Sample Description	Equipment Installed
	No.	Depth	Pen./ Rec.	Blows/ 6"	Field Test Data		
5'			48-60"			0-6" tan/ brown, f to med SAND & Silt	 Annular Seal Bentonite Seal Filter Sand Sediment Trap
						6-14" tan f to med SAND & Silt	
						14-20" gray/ tan, f to med SAND some Silt	
						20-24" light brown, f to med SAND & Silt (debris)	
						24-48" dark brown, f to med SAND & Silt (debris)	
10'			24/60"			0-24" brown/ gray, f to med SAND & Silt (debris)	
						Water at 10'	
			30/60"			0-6" brown, f to med SAND & Silt	
						6-30" brown, Silt & vf to f Sand	
15'							
20'						drive casing to 20'	
25'							
30'							

Well Construction Data:  
 Screen Length: 10'  
 Screen Slot: 0.1  
 Riser Length: 13'  
 Filter Pack Length: 11'  
 Filter Pack Seal material and length: 1' bent s to s  
 Annular seal material and length: s to s  
 Total Depth of Boring: 20'  
 Bottom of well set at: 20'  
 Guard pipe or Roadbox: guard

Notes:  
 Water at 10'  
 Well set at 20'  
 Finished with standpipe.  
 Debris material included brick, paper, and plastic



# BORING LOG

Site: Springfield Street Schools  
Providence, RI

Boring No. MW-8  
 Page: 1 of 1  
 File No WK012152.0000

300 Metro Center Blvd  
 Warwick, RI, 02886  
 phone (401) 738-3887 fax (401) 732-1686

Date: 4/25/11 Boring Equipment Description: Truck mounted Geoprobe  
 Reported by: Chris Jamison  
 Boring Co: NE Geotech Sampler Description: Macrocore  
 Foreman: Hayes Field Testing Equipment: None  
 Others: \_\_\_\_\_

Depth (ft)	Sample Information					Sample Description	Equipment Installed
	No.	Depth	Pen./ Rec.	Blows/ 6"	Field Test Data		
5'			48/60"			0-12" brown, f to med Sand & Silt 12-40" tan, f to med SAND some Silt 40-48" brown, f to med SAND & Silt (debris)	Annular Seal Bentonite Seal Filter Sand Sediment Trap
			24/60"			0-16" brown, f to med SAND & Silt (debris) 16-24" tan, f to med SAND some Silt	
			48/60"			0-12" tan, f to med SAND some Silt 12-20" black, f to med SAND & Silt 20-48" tan, f to med SAND some Silt	
10'							
			50/60"			0-10" orange/ tan, f to med SAND some Silt 10-50" gray/ tan, f to med SAND some Silt Water at 17.5'	
15'							
						Drive casing to 22'	
20'							
25'							
30'							

Well Construction Data:  
 Screen Length: 10'  
 Screen Slot: 0.1  
 Riser Length: 15'  
 Filter Pack Length: 12'  
 Filter Pack Seal material and length: 1' bent s to s  
 Annular seal material and length: s to s  
 Total Depth of Boring: 22'  
 Bottom of well set at: 22'  
 Guard pipe or Roadbox: guard

Notes:  
 Water at 17.5'  
 Well set at 22'  
 Finished with standpipe.  
 Debris material included brick, paper, and plastic

**Appendix C**  
**Laboratory Results**

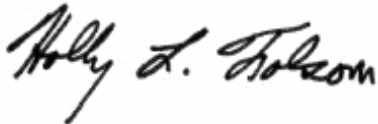
June 22, 2011

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

Project Location: Springfield St. School  
Client Job Number:  
Project Number: WK012152.007.0000  
Laboratory Work Order Number: 11F0565

Enclosed are results of analyses for samples received by the laboratory on June 15, 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  
300 Metro Center Blvd., Suite 250  
Warwick, RI 02886  
ATTN: Donna Pallister

REPORT DATE: 6/22/2011

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.007.0000

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 11F0565

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. School

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB-2	11F0565-01	Air		EPA TO-14A	
MPL-6	11F0565-02	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.

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 individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "M. Erickson", is written on a light gray rectangular background.

Michael A. Erickson  
Laboratory Director

**ANALYTICAL RESULTS**

Project Location: Springfield St. School  
 Date Received: 6/15/2011  
**Field Sample #: WB-2**  
**Sample ID: 11F0565-01**  
 Sample Matrix: Air  
 Sampled: 6/15/2011 17:00

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

**Work Order: 11F0565**  
 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**

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Benzene	0.38	0.10		1.2	0.32	2	6/16/11 12:17	TPH	
Bromomethane	ND	0.10		ND	0.39	2	6/16/11 12:17	TPH	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	6/16/11 12:17	TPH	
Chlorobenzene	ND	0.10		ND	0.46	2	6/16/11 12:17	TPH	
Chloroethane	ND	0.10		ND	0.26	2	6/16/11 12:17	TPH	
Chloroform	ND	0.10		ND	0.49	2	6/16/11 12:17	TPH	
Chloromethane	0.50	0.10		1.0	0.21	2	6/16/11 12:17	TPH	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	6/16/11 12:17	TPH	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:17	TPH	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:17	TPH	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:17	TPH	
Dichlorodifluoromethane (Freon 12)	0.68	0.10		3.3	0.49	2	6/16/11 12:17	TPH	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	6/16/11 12:17	TPH	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	6/16/11 12:17	TPH	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	6/16/11 12:17	TPH	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	6/16/11 12:17	TPH	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	6/16/11 12:17	TPH	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/16/11 12:17	TPH	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/16/11 12:17	TPH	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	6/16/11 12:17	TPH	
Ethylbenzene	3.1	0.10		14	0.43	2	6/16/11 12:17	TPH	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	6/16/11 12:17	TPH	
Methylene Chloride	2.6	0.20		8.9	0.69	2	6/16/11 12:17	TPH	
Styrene	0.76	0.10		3.2	0.43	2	6/16/11 12:17	TPH	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	6/16/11 12:17	TPH	
Tetrachloroethylene	6.0	0.10		41	0.68	2	6/16/11 12:17	TPH	
Toluene	7.3	0.10		28	0.38	2	6/16/11 12:17	TPH	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	6/16/11 12:17	TPH	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	6/16/11 12:17	TPH	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	6/16/11 12:17	TPH	
Trichloroethylene	0.78	0.10		4.2	0.54	2	6/16/11 12:17	TPH	
Trichlorofluoromethane (Freon 11)	0.94	0.10		5.3	0.56	2	6/16/11 12:17	TPH	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	6/16/11 12:17	TPH	
1,2,4-Trimethylbenzene	3.2	0.10		16	0.49	2	6/16/11 12:17	TPH	
1,3,5-Trimethylbenzene	1.4	0.10		6.8	0.49	2	6/16/11 12:17	TPH	
Vinyl Chloride	ND	0.10		ND	0.26	2	6/16/11 12:17	TPH	
m&p-Xylene	8.4	0.20		36	0.87	2	6/16/11 12:17	TPH	
o-Xylene	3.9	0.10		17	0.43	2	6/16/11 12:17	TPH	

**ANALYTICAL RESULTS**

Project Location: Springfield St. School  
 Date Received: 6/15/2011  
**Field Sample #: WB-2**  
**Sample ID: 11F0565-01**  
 Sample Matrix: Air  
 Sampled: 6/15/2011 17:00

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

**Work Order: 11F0565**  
 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**

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)		107			70-130		6/16/11 12:17	

**ANALYTICAL RESULTS**

Project Location: Springfield St. School  
 Date Received: 6/15/2011  
**Field Sample #: MPL-6**  
**Sample ID: 11F0565-02**  
 Sample Matrix: Air  
 Sampled: 6/15/2011 14:30

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

**Work Order: 11F0565**  
 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**

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Benzene	0.45	0.10		1.4	0.32	2	6/16/11 12:54	TPH	
Bromomethane	ND	0.10		ND	0.39	2	6/16/11 12:54	TPH	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	6/16/11 12:54	TPH	
Chlorobenzene	ND	0.10		ND	0.46	2	6/16/11 12:54	TPH	
Chloroethane	ND	0.10		ND	0.26	2	6/16/11 12:54	TPH	
Chloroform	ND	0.10		ND	0.49	2	6/16/11 12:54	TPH	
Chloromethane	0.34	0.10		0.71	0.21	2	6/16/11 12:54	TPH	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	6/16/11 12:54	TPH	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:54	TPH	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:54	TPH	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	6/16/11 12:54	TPH	
Dichlorodifluoromethane (Freon 12)	0.48	0.10		2.4	0.49	2	6/16/11 12:54	TPH	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	6/16/11 12:54	TPH	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	6/16/11 12:54	TPH	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	6/16/11 12:54	TPH	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	6/16/11 12:54	TPH	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	6/16/11 12:54	TPH	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/16/11 12:54	TPH	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/16/11 12:54	TPH	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	6/16/11 12:54	TPH	
Ethylbenzene	2.5	0.10		11	0.43	2	6/16/11 12:54	TPH	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	6/16/11 12:54	TPH	
Methylene Chloride	2.5	0.20		8.5	0.69	2	6/16/11 12:54	TPH	
Styrene	0.80	0.10		3.4	0.43	2	6/16/11 12:54	TPH	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	6/16/11 12:54	TPH	
Tetrachloroethylene	4.7	0.10		32	0.68	2	6/16/11 12:54	TPH	
Toluene	6.1	0.10		23	0.38	2	6/16/11 12:54	TPH	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	6/16/11 12:54	TPH	
1,1,1-Trichloroethane	0.31	0.10		1.7	0.55	2	6/16/11 12:54	TPH	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	6/16/11 12:54	TPH	
Trichloroethylene	0.59	0.10		3.2	0.54	2	6/16/11 12:54	TPH	
Trichlorofluoromethane (Freon 11)	0.93	0.10		5.2	0.56	2	6/16/11 12:54	TPH	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	6/16/11 12:54	TPH	
1,2,4-Trimethylbenzene	3.3	0.10		16	0.49	2	6/16/11 12:54	TPH	
1,3,5-Trimethylbenzene	1.3	0.10		6.5	0.49	2	6/16/11 12:54	TPH	
Vinyl Chloride	ND	0.10		ND	0.26	2	6/16/11 12:54	TPH	
m&p-Xylene	7.0	0.20		30	0.87	2	6/16/11 12:54	TPH	
o-Xylene	3.4	0.10		15	0.43	2	6/16/11 12:54	TPH	

**ANALYTICAL RESULTS**

Project Location: Springfield St. School  
 Date Received: 6/15/2011  
**Field Sample #: MPL-6**  
**Sample ID: 11F0565-02**  
 Sample Matrix: Air  
 Sampled: 6/15/2011 14:30

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

**Work Order: 11F0565**  
 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**

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)		106			70-130		6/16/11 12:54	

**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
11F0565-01 [WB-2]	B032275	1	1	N/A	1000	400	200	06/15/11
11F0565-02 [MPL-6]	B032275	1	1	N/A	1000	400	200	06/15/11

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD		
<b>Batch B032275 - TO-15 Prep</b>											
<b>Blank (B032275-BLK1)</b>						Prepared & Analyzed: 06/15/11					
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	0.050									
Styrene	ND	0.025									
1,1,1,2-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									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.27				8.00		103	70-130			

**QUALITY CONTROL**

**Air Toxics by EPA Compendium Methods - Quality Control**

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
<b>Batch B032275 - TO-15 Prep</b>											
<b>LCS (B032275-BS1)</b>					Prepared & Analyzed: 06/15/11						
Benzene	4.64				5.00		92.9	70-130			
Bromomethane	5.53				5.00		111	70-130			
Carbon Tetrachloride	5.23				5.00		105	70-130			
Chlorobenzene	5.02				5.00		100	70-130			
Chloroethane	5.21				5.00		104	70-130			
Chloroform	5.53				5.00		111	70-130			
Chloromethane	4.94				5.00		98.8	70-130			
1,2-Dibromoethane (EDB)	5.10				5.00		102	70-130			
1,2-Dichlorobenzene	5.52				5.00		110	70-130			
1,3-Dichlorobenzene	5.52				5.00		110	70-130			
1,4-Dichlorobenzene	5.45				5.00		109	70-130			
Dichlorodifluoromethane (Freon 12)	5.88				5.00		118	70-130			
1,1-Dichloroethane	5.10				5.00		102	70-130			
1,2-Dichloroethane	5.44				5.00		109	70-130			
1,1-Dichloroethylene	5.15				5.00		103	70-130			
cis-1,2-Dichloroethylene	5.17				5.00		103	70-130			
1,2-Dichloropropane	4.65				5.00		93.1	70-130			
cis-1,3-Dichloropropene	5.18				5.00		104	70-130			
trans-1,3-Dichloropropene	4.61				5.00		92.2	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.35				5.00		107	70-130			
Ethylbenzene	4.84				5.00		96.8	70-130			
Hexachlorobutadiene	5.66				5.00		113	70-130			
Methylene Chloride	4.61				5.00		92.2	70-130			
Styrene	4.84				5.00		96.9	70-130			
1,1,1,2-Tetrachloroethane	5.33				5.00		107	70-130			
Tetrachloroethylene	5.03				5.00		101	70-130			
Toluene	4.76				5.00		95.1	70-130			
1,2,4-Trichlorobenzene	6.19				5.00		124	70-130			
1,1,1-Trichloroethane	5.19				5.00		104	70-130			
1,1,2-Trichloroethane	5.05				5.00		101	70-130			
Trichloroethylene	4.99				5.00		99.8	70-130			
Trichlorofluoromethane (Freon 11)	5.66				5.00		113	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.31				5.00		106	70-130			
1,2,4-Trimethylbenzene	5.13				5.00		103	70-130			
1,3,5-Trimethylbenzene	5.05				5.00		101	70-130			
Vinyl Chloride	5.23				5.00		105	70-130			
m&p-Xylene	10.2				10.0		102	70-130			
o-Xylene	5.00				5.00		100	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.51</i>				<i>8.00</i>		<i>106</i>	<i>70-130</i>			



**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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>EPA TO-14A in Air</i>	
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	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
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	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com  
 www.contestlabs.com

**CHAIN OF CUSTODY RECORD**

39 SPRUCE ST, 2ND FLOOR  
 EAST LONGMEADOW, MA 01028

11F0565

Company Name: **ARCADIS**

Address: **300 METRO CENTER BLVD**

**WARWICK RT 02886**

Attention: **DAVINA PALISTER**

Project Location: **SPELWEEFIELD ST SCHOOL**

Sampled By: **CHRIS JAMISON**

Proposal Provided? (For Billing purposes)  yes  no

State Form Required?  yes  no

Telephone: (401) 738-3887

Project # **WLC12152.007.0000**

Client PO #

DATA DELIVERY (check one):  
 FAX  EMAIL  WEBSITE CLIENT

Fax #:

Email:

Format:  EXCEL  PDF  GIS KEY

OTHER

**Date Sampled**

Start Date/Time	Stop Date/Time	Comp-site	Grab	*Matrix Code	Conc. Code
6/15/11 17:06		X		A	L
6/15/11 14:30		X		A	L

Field ID **01** Sample Description **WB-2** Lab #

**02** **MPL-6**

Laboratory Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:

H - High; M - Medium; L - Low; C - Clean; U - Unknown

Cont. Code:	# of containers
A=amber glass	
G=glass	
P=plastic	
ST=sterile	
V=vial	
S=Summa can	
T=ledlar bag	
O=Other	

**ANALYSIS REQUESTED**

Client Comments:

Relinquished by: (signature)

Date/Time: **6/14/11 18:00**

Received by: (signature)

Date/Time: **6.15.11 1605**

Relinquished by: (signature)

Date/Time: **6.15.11 1915**

Received by: (signature)

Date/Time: **6.15.11 1915**

**Turnaround \*\***

7-Day

10-Day

Other **RUSH \***

\*24-Hr  \*48-Hr

\*72-Hr  \*4-Day

\* Require lab approval

**Detection Limit Requirements**

Regulations? **RIE**

Data Enhancement Project/RCP?  Y  N

Special Requirements or DL's:

**\*Matrix Code:**

GW = groundwater

WW = wastewater

DW = drinking water

A = air

S = soil/solid

SL = sludge

O = other

**\*\*Preservation Codes:**

I = iced X = Na hydroxide

H = HCL T = Na thiosulfate

M = Methanol

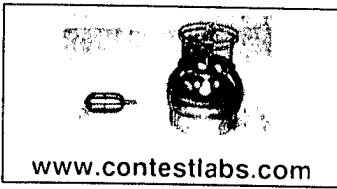
N = Nitric Acid

S = Sulfuric Acid

B = Sodium bisulfate

O = Other

\*\* TURNAROUND TIME 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 BY OUR CLIENT.



39 Spruce St.  
 East Longmeadow, MA.  
 01038  
 P: 413-525-2332  
 F: 413-525-6405

**AIR Only Receipt Checklist**

CLIENT NAME: Arcadis RECEIVED BY: PB DATE: 6.15.11

- 1) Was the chain(s) of custody relinquished and signed?  Yes No
- 2) Does the chain agree with the samples?  Yes No  
 If not, explain:
- 3) Are all the samples in good condition?  Yes No  
 If not, explain:
- 4) Are there any samples "On Hold"? Yes  No Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No  
 Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Location where samples are stored:  Permission to subcontract samples? Yes No  
 (Walk-in clients only) if not already approved  
 Client Signature: \_\_\_\_\_

**Air Media received at Con-Test**

		# of Containers	Types (Size, Duration)
Air Sampling Media	Summa Cans		
	Tedlar Bags	1	
	Tubes		
Flow Controllers	Regulators		
	Restrictors		
Extras	Tubing		
	Other		

Unused Summas:

Unused Regulators:

- 1) Was all media (used & unused checked into the WASP?
- 2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

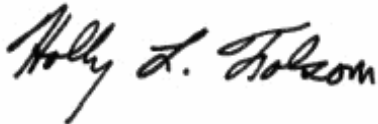
June 24, 2011

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

Project Location: Springfield St. Providance  
Client Job Number:  
Project Number: WK012152.0000  
Laboratory Work Order Number: 11F0638

Enclosed are results of analyses for samples received by the laboratory on June 17, 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  
300 Metro Center Blvd., Suite 250  
Warwick, RI 02886  
ATTN: Donna Pallister

REPORT DATE: 6/24/2011

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0000

**ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 11F0638

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. Providence

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
TB	11F0638-01	Trip Blank Water		SW-846 8260C	
ATC-1	11F0638-02	Ground Water		SW-846 8260C	
MW-7	11F0638-03	Ground Water		SW-846 8260C	
MW-6	11F0638-04	Ground Water		SW-846 8260C	
MW-8	11F0638-05	Ground 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

Qualifications:

---

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:

1,4-Dioxane, Acetone, Carbon Tetrachloride

B032330-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:

Tetrahydrofuran

B032330-BSD1

---

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:

2-Butanone (MEK), Bromomethane, tert-Butyl Alcohol (TBA), Tetrahydrofuran

11F0638-01[TB], 11F0638-02[ATC-1], 11F0638-03[MW-7], 11F0638-04[MW-6], 11F0638-05[MW-8], B032330-BLK1, B032330-BS1, B032330-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, Chloromethane

11F0638-01[TB], 11F0638-02[ATC-1], 11F0638-03[MW-7], 11F0638-04[MW-6], 11F0638-05[MW-8], B032330-BLK1, B032330-BS1, B032330-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:

Acetone

11F0638-01[TB], B032330-BS1, B032330-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)

11F0638-01[TB], 11F0638-02[ATC-1], 11F0638-03[MW-7], 11F0638-04[MW-6], 11F0638-05[MW-8], B032330-BLK1, B032330-BS1, B032330-BSD1

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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 individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

A handwritten signature in black ink, appearing to read "Daren J. Damboragian", is written over a light gray rectangular background.

Daren J. Damboragian  
Laboratory Manager

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: TB

Sampled: 6/16/2011 00:00

Sample ID: 11F0638-01

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	150	50	µg/L	1	V-06	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Bromoform	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Bromomethane	ND	2.0	µg/L	1	R-05, V-05	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-16	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
n-Butylbenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: TB

Sampled: 6/16/2011 00:00

Sample ID: 11F0638-01

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Hexachlorobutadiene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Tetrahydrofuran	ND	10	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,3,5-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:25	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	116	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	110	70-130	

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: ATC-1

Sampled: 6/16/2011 07:30

Sample ID: 11F0638-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Bromoform	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Bromomethane	ND	2.0	µg/L	1	R-05, V-05	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-16	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
n-Butylbenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: ATC-1

Sampled: 6/16/2011 07:30

Sample ID: 11F0638-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Hexachlorobutadiene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Tetrahydrofuran	ND	10	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,3,5-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 0:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	108	70-130	6/21/11 0:55
Toluene-d8	107	70-130	6/21/11 0:55
4-Bromofluorobenzene	106	70-130	6/21/11 0:55

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-7

Sampled: 6/16/2011 08:15

Sample ID: 11F0638-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Bromoform	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Bromomethane	ND	2.0	µg/L	1	R-05, V-05	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-16	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
n-Butylbenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-7

Sampled: 6/16/2011 08:15

Sample ID: 11F0638-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Hexachlorobutadiene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Tetrahydrofuran	ND	10	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,3,5-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:25	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	124	70-130	
Toluene-d8	104	70-130	
4-Bromofluorobenzene	105	70-130	

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-6

Sampled: 6/16/2011 09:15

Sample ID: 11F0638-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Bromoform	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Bromomethane	ND	2.0	µg/L	1	R-05, V-05	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-16	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
n-Butylbenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF



Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-6

Sampled: 6/16/2011 09:15

Sample ID: 11F0638-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Hexachlorobutadiene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Tetrahydrofuran	ND	10	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,3,5-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 1:56	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	112	70-130	
Toluene-d8	107	70-130	
4-Bromofluorobenzene	106	70-130	

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-8

Sampled: 6/16/2011 10:15

Sample ID: 11F0638-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Bromoform	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Bromomethane	ND	2.0	µg/L	1	R-05, V-05	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-16	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
n-Butylbenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Chloromethane	ND	2.0	µg/L	1	V-05	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF

Project Location: Springfield St. Providence

Sample Description:

Work Order: 11F0638

Date Received: 6/17/2011

Field Sample #: MW-8

Sampled: 6/16/2011 10:15

Sample ID: 11F0638-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Hexachlorobutadiene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Tetrahydrofuran	ND	10	µg/L	1	R-05	SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,3,5-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/20/11	6/21/11 2:26	MFF

Surrogates	% Recovery	Recovery Limits	Flag
1,2-Dichloroethane-d4	118	70-130	6/21/11 2:26
Toluene-d8	108	70-130	6/21/11 2:26
4-Bromofluorobenzene	104	70-130	6/21/11 2:26

**Sample Extraction Data**

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
11F0638-01 [TB]	B032330	5	5.00	06/20/11
11F0638-02 [ATC-1]	B032330	5	5.00	06/20/11
11F0638-03 [MW-7]	B032330	5	5.00	06/20/11
11F0638-04 [MW-6]	B032330	5	5.00	06/20/11
11F0638-05 [MW-8]	B032330	5	5.00	06/20/11

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
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Batch B032330 - SW-846 5030B

Blank (B032330-BLK1)

Prepared & Analyzed: 06/20/11

Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	5.0	µg/L							
Bromomethane	ND	2.0	µg/L							R-05, V-05
2-Butanone (MEK)	ND	20	µg/L							R-05
tert-Butyl Alcohol (TBA)	ND	20	µg/L							R-05, V-16
n-Butylbenzene	ND	2.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	2.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							V-05
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-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							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-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							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	5.0	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							

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
<b>Batch B032330 - SW-846 5030B</b>										
<b>Blank (B032330-BLK1)</b>										
Prepared & Analyzed: 06/20/11										
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	10	µg/L							R-05
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	2.0	µg/L							
1,3,5-Trichlorobenzene	ND	5.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	27.4		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	26.3		µg/L	25.0		105	70-130			
Surrogate: 4-Bromofluorobenzene	24.9		µg/L	25.0		99.5	70-130			
<b>LCS (B032330-BS1)</b>										
Prepared & Analyzed: 06/20/11										
Acetone	143	50	µg/L	100		143	70-160			V-06 †
Acrylonitrile	10.1	5.0	µg/L	10.0		101	70-130			
tert-Amyl Methyl Ether (TAME)	9.80	0.50	µg/L	10.0		98.0	70-130			
Benzene	9.99	1.0	µg/L	10.0		99.9	70-130			
Bromobenzene	8.28	1.0	µg/L	10.0		82.8	70-130			
Bromochloromethane	9.88	1.0	µg/L	10.0		98.8	70-130			
Bromodichloromethane	10.3	0.50	µg/L	10.0		103	70-130			
Bromoform	8.45	5.0	µg/L	10.0		84.5	70-130			
Bromomethane	4.65	2.0	µg/L	10.0		46.5	40-160			R-05, V-05 †
2-Butanone (MEK)	111	20	µg/L	100		111	40-160			R-05 †
tert-Butyl Alcohol (TBA)	115	20	µg/L	100		115	40-160			R-05, V-16 †
n-Butylbenzene	7.70	2.0	µg/L	10.0		77.0	70-130			
sec-Butylbenzene	7.92	1.0	µg/L	10.0		79.2	70-130			
tert-Butylbenzene	7.95	1.0	µg/L	10.0		79.5	70-130			
tert-Butyl Ethyl Ether (TBEE)	8.39	0.50	µg/L	10.0		83.9	70-130			
Carbon Disulfide	11.4	2.0	µg/L	10.0		114	70-130			
Carbon Tetrachloride	11.8	5.0	µg/L	10.0		118	70-130			
Chlorobenzene	8.48	1.0	µg/L	10.0		84.8	70-130			
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109	70-130			
Chloroethane	8.59	2.0	µg/L	10.0		85.9	70-130			
Chloroform	9.88	2.0	µg/L	10.0		98.8	70-130			
Chloromethane	6.10	2.0	µg/L	10.0		61.0	40-160			V-05 †
2-Chlorotoluene	8.50	1.0	µg/L	10.0		85.0	70-130			

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
<b>Batch B032330 - SW-846 5030B</b>										
<b>LCS (B032330-BS1)</b>										
Prepared & Analyzed: 06/20/11										
4-Chlorotoluene	8.64	1.0	µg/L	10.0		86.4	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.70	5.0	µg/L	10.0		87.0	70-130			
1,2-Dibromoethane (EDB)	12.0	0.50	µg/L	10.0		120	70-130			
Dibromomethane	11.1	1.0	µg/L	10.0		111	70-130			
1,2-Dichlorobenzene	7.74	1.0	µg/L	10.0		77.4	70-130			
1,3-Dichlorobenzene	7.82	1.0	µg/L	10.0		78.2	70-130			
1,4-Dichlorobenzene	7.70	1.0	µg/L	10.0		77.0	70-130			
trans-1,4-Dichloro-2-butene	8.21	2.0	µg/L	10.0		82.1	70-130			
Dichlorodifluoromethane (Freon 12)	9.28	2.0	µg/L	10.0		92.8	40-160			†
1,1-Dichloroethane	9.80	1.0	µg/L	10.0		98.0	70-130			
1,2-Dichloroethane	11.2	1.0	µg/L	10.0		112	70-130			
1,1-Dichloroethylene	10.2	1.0	µg/L	10.0		102	70-130			
cis-1,2-Dichloroethylene	10.2	1.0	µg/L	10.0		102	70-130			
trans-1,2-Dichloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
1,2-Dichloropropane	9.30	1.0	µg/L	10.0		93.0	70-130			
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130			
2,2-Dichloropropane	9.45	1.0	µg/L	10.0		94.5	40-130			†
1,1-Dichloropropene	10.1	2.0	µg/L	10.0		101	70-130			
cis-1,3-Dichloropropene	9.30	0.50	µg/L	10.0		93.0	70-130			
trans-1,3-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130			
Diethyl Ether	10.5	2.0	µg/L	10.0		105	70-130			
Diisopropyl Ether (DIPE)	8.65	0.50	µg/L	10.0		86.5	70-130			
1,4-Dioxane	110	50	µg/L	100		110	40-130			V-16 †
Ethylbenzene	8.25	1.0	µg/L	10.0		82.5	70-130			
Hexachlorobutadiene	7.83	5.0	µg/L	10.0		78.3	70-130			
2-Hexanone (MBK)	122	10	µg/L	100		122	70-160			†
Isopropylbenzene (Cumene)	10.2	1.0	µg/L	10.0		102	70-130			
p-Isopropyltoluene (p-Cymene)	8.14	1.0	µg/L	10.0		81.4	70-130			
Methyl tert-Butyl Ether (MTBE)	10.1	1.0	µg/L	10.0		101	70-130			
Methylene Chloride	9.32	5.0	µg/L	10.0		93.2	70-130			
4-Methyl-2-pentanone (MIBK)	110	10	µg/L	100		110	70-160			†
Naphthalene	8.82	2.0	µg/L	10.0		88.2	40-130			†
n-Propylbenzene	8.39	1.0	µg/L	10.0		83.9	70-130			
Styrene	8.02	1.0	µg/L	10.0		80.2	70-130			
1,1,1,2-Tetrachloroethane	8.52	1.0	µg/L	10.0		85.2	70-130			
1,1,2,2-Tetrachloroethane	8.82	0.50	µg/L	10.0		88.2	70-130			
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130			
Tetrahydrofuran	9.94	10	µg/L	10.0		99.4	70-130			R-05
Toluene	9.90	1.0	µg/L	10.0		99.0	70-130			
1,2,3-Trichlorobenzene	8.80	5.0	µg/L	10.0		88.0	70-130			
1,2,4-Trichlorobenzene	9.28	2.0	µg/L	10.0		92.8	70-130			
1,3,5-Trichlorobenzene	7.04	5.0	µg/L	10.0		70.4	70-130			
1,1,1-Trichloroethane	10.9	1.0	µg/L	10.0		109	70-130			
1,1,2-Trichloroethane	10.2	1.0	µg/L	10.0		102	70-130			
Trichloroethylene	10.5	1.0	µg/L	10.0		105	70-130			
Trichlorofluoromethane (Freon 11)	10.3	2.0	µg/L	10.0		103	70-130			
1,2,3-Trichloropropane	7.97	2.0	µg/L	10.0		79.7	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.0	1.0	µg/L	10.0		100	70-130			
1,2,4-Trimethylbenzene	7.75	1.0	µg/L	10.0		77.5	70-130			
1,3,5-Trimethylbenzene	8.38	1.0	µg/L	10.0		83.8	70-130			
Vinyl Chloride	8.63	2.0	µg/L	10.0		86.3	40-160			†

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
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Batch B032330 - SW-846 5030B

LCS (B032330-BS1)

Prepared & Analyzed: 06/20/11

m+p Xylene	17.0	2.0	µg/L	20.0		84.8	70-130			
o-Xylene	8.27	1.0	µg/L	10.0		82.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	26.0		µg/L	25.0		104	70-130			
Surrogate: Toluene-d8	27.1		µg/L	25.0		109	70-130			
Surrogate: 4-Bromofluorobenzene	26.7		µg/L	25.0		107	70-130			

LCS Dup (B032330-BSD1)

Prepared & Analyzed: 06/20/11

Acetone	174	50	µg/L	100		174 *	70-160	19.6	25	L-07, V-06 †
Acrylonitrile	11.9	5.0	µg/L	10.0		119	70-130	15.9	25	
tert-Amyl Methyl Ether (TAME)	11.6	0.50	µg/L	10.0		116	70-130	17.1	25	
Benzene	10.8	1.0	µg/L	10.0		108	70-130	8.07	25	
Bromobenzene	8.81	1.0	µg/L	10.0		88.1	70-130	6.20	25	
Bromochloromethane	11.8	1.0	µg/L	10.0		118	70-130	17.4	25	
Bromodichloromethane	10.1	0.50	µg/L	10.0		101	70-130	1.47	25	
Bromoform	9.50	5.0	µg/L	10.0		95.0	70-130	11.7	25	
Bromomethane	6.08	2.0	µg/L	10.0		60.8	40-160	26.7 *	25	R-05, V-05 †
2-Butanone (MEK)	144	20	µg/L	100		144	40-160	25.8 *	25	R-05 †
tert-Butyl Alcohol (TBA)	157	20	µg/L	100		157	40-160	30.6 *	25	R-05, V-16 †
n-Butylbenzene	7.67	2.0	µg/L	10.0		76.7	70-130	0.390	25	
sec-Butylbenzene	7.83	1.0	µg/L	10.0		78.3	70-130	1.14	25	
tert-Butylbenzene	8.09	1.0	µg/L	10.0		80.9	70-130	1.75	25	
tert-Butyl Ethyl Ether (TBEE)	10.0	0.50	µg/L	10.0		100	70-130	17.5	25	
Carbon Disulfide	12.0	2.0	µg/L	10.0		120	70-130	4.62	25	
Carbon Tetrachloride	13.2	5.0	µg/L	10.0		132 *	70-130	11.3	25	L-07
Chlorobenzene	8.87	1.0	µg/L	10.0		88.7	70-130	4.50	25	
Chlorodibromomethane	11.1	0.50	µg/L	10.0		111	70-130	2.00	25	
Chloroethane	9.23	2.0	µg/L	10.0		92.3	70-130	7.18	25	
Chloroform	11.6	2.0	µg/L	10.0		116	70-130	16.4	25	
Chloromethane	6.92	2.0	µg/L	10.0		69.2	40-160	12.6	25	V-05 †
2-Chlorotoluene	9.11	1.0	µg/L	10.0		91.1	70-130	6.93	25	
4-Chlorotoluene	9.17	1.0	µg/L	10.0		91.7	70-130	5.95	25	
1,2-Dibromo-3-chloropropane (DBCP)	10.0	5.0	µg/L	10.0		100	70-130	14.4	25	
1,2-Dibromoethane (EDB)	12.7	0.50	µg/L	10.0		127	70-130	5.18	25	
Dibromomethane	11.2	1.0	µg/L	10.0		112	70-130	1.26	25	
1,2-Dichlorobenzene	8.21	1.0	µg/L	10.0		82.1	70-130	5.89	25	
1,3-Dichlorobenzene	8.10	1.0	µg/L	10.0		81.0	70-130	3.52	25	
1,4-Dichlorobenzene	8.20	1.0	µg/L	10.0		82.0	70-130	6.29	25	
trans-1,4-Dichloro-2-butene	9.57	2.0	µg/L	10.0		95.7	70-130	15.3	25	
Dichlorodifluoromethane (Freon 12)	9.68	2.0	µg/L	10.0		96.8	40-160	4.22	25	†
1,1-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130	7.56	25	
1,2-Dichloroethane	12.6	1.0	µg/L	10.0		126	70-130	11.5	25	
1,1-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130	7.78	25	
cis-1,2-Dichloroethylene	10.7	1.0	µg/L	10.0		107	70-130	4.90	25	
trans-1,2-Dichloroethylene	11.7	1.0	µg/L	10.0		117	70-130	10.0	25	
1,2-Dichloropropane	9.30	1.0	µg/L	10.0		93.0	70-130	0.00	25	
1,3-Dichloropropane	11.2	0.50	µg/L	10.0		112	70-130	7.30	25	
2,2-Dichloropropane	9.99	1.0	µg/L	10.0		99.9	40-130	5.56	25	†
1,1-Dichloropropene	11.9	2.0	µg/L	10.0		119	70-130	16.6	25	
cis-1,3-Dichloropropene	10.2	0.50	µg/L	10.0		102	70-130	9.13	25	
trans-1,3-Dichloropropene	11.0	0.50	µg/L	10.0		110	70-130	9.04	25	
Diethyl Ether	11.9	2.0	µg/L	10.0		119	70-130	12.1	25	
Diisopropyl Ether (DIPE)	10.1	0.50	µg/L	10.0		101	70-130	15.2	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
<b>Batch B032330 - SW-846 5030B</b>										
<b>LCS Dup (B032330-BSD1)</b>										
Prepared & Analyzed: 06/20/11										
1,4-Dioxane	147	50	µg/L	100		147 *	40-130	29.1	50	L-07, V-16 † ‡
Ethylbenzene	8.45	1.0	µg/L	10.0		84.5	70-130	2.40	25	
Hexachlorobutadiene	8.41	5.0	µg/L	10.0		84.1	70-130	7.14	25	
2-Hexanone (MBK)	144	10	µg/L	100		144	70-160	16.6	25	†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130	3.66	25	
p-Isopropyltoluene (p-Cymene)	7.76	1.0	µg/L	10.0		77.6	70-130	4.78	25	
Methyl tert-Butyl Ether (MTBE)	12.3	1.0	µg/L	10.0		123	70-130	19.7	25	
Methylene Chloride	10.6	5.0	µg/L	10.0		106	70-130	12.8	25	
4-Methyl-2-pentanone (MIBK)	127	10	µg/L	100		127	70-160	14.6	25	†
Naphthalene	10.2	2.0	µg/L	10.0		102	40-130	14.5	25	†
n-Propylbenzene	8.91	1.0	µg/L	10.0		89.1	70-130	6.01	25	
Styrene	8.64	1.0	µg/L	10.0		86.4	70-130	7.44	25	
1,1,1,2-Tetrachloroethane	9.05	1.0	µg/L	10.0		90.5	70-130	6.03	25	
1,1,2,2-Tetrachloroethane	10.1	0.50	µg/L	10.0		101	70-130	13.4	25	
Tetrachloroethylene	10.7	1.0	µg/L	10.0		107	70-130	0.374	25	
<b>Tetrahydrofuran</b>	6.98	10	µg/L	10.0		69.8 *	70-130	35.0 *	25	L-07A, R-05
Toluene	10.2	1.0	µg/L	10.0		102	70-130	3.47	25	
1,2,3-Trichlorobenzene	10.1	5.0	µg/L	10.0		101	70-130	13.4	25	
1,2,4-Trichlorobenzene	9.58	2.0	µg/L	10.0		95.8	70-130	3.18	25	
1,3,5-Trichlorobenzene	7.43	5.0	µg/L	10.0		74.3	70-130	5.39	25	
1,1,1-Trichloroethane	12.8	1.0	µg/L	10.0		128	70-130	15.9	25	
1,1,2-Trichloroethane	11.2	1.0	µg/L	10.0		112	70-130	9.79	25	
Trichloroethylene	10.6	1.0	µg/L	10.0		106	70-130	0.851	25	
Trichlorofluoromethane (Freon 11)	11.4	2.0	µg/L	10.0		114	70-130	10.2	25	
1,2,3-Trichloropropane	9.17	2.0	µg/L	10.0		91.7	70-130	14.0	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.3	1.0	µg/L	10.0		113	70-130	11.4	25	
1,2,4-Trimethylbenzene	7.85	1.0	µg/L	10.0		78.5	70-130	1.28	25	
1,3,5-Trimethylbenzene	9.17	1.0	µg/L	10.0		91.7	70-130	9.00	25	
Vinyl Chloride	9.18	2.0	µg/L	10.0		91.8	40-160	6.18	25	†
m+p Xylene	17.9	2.0	µg/L	20.0		89.4	70-130	5.22	25	
o-Xylene	8.76	1.0	µg/L	10.0		87.6	70-130	5.75	25	
Surrogate: 1,2-Dichloroethane-d4	28.9		µg/L	25.0		115	70-130			
Surrogate: Toluene-d8	25.6		µg/L	25.0		103	70-130			
Surrogate: 4-Bromofluorobenzene	26.8		µg/L	25.0		107	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.
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.

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,NC
Acrylonitrile	CT,NY,NC,RI
tert-Amyl Methyl Ether (TAME)	NH,NY,NC
Benzene	CT,NH,NY,NC,RI
Bromobenzene	NC
Bromochloromethane	NH,NY,NC
Bromodichloromethane	CT,NH,NY,NC,RI
Bromoform	CT,NH,NY,NC,RI
Bromomethane	CT,NH,NY,NC,RI
2-Butanone (MEK)	CT,NH,NY,NC
tert-Butyl Alcohol (TBA)	NH,NY,NC
n-Butylbenzene	NY,NC
sec-Butylbenzene	NY,NC
tert-Butylbenzene	NY,NC
tert-Butyl Ethyl Ether (TBEE)	NH,NY,NC
Carbon Disulfide	CT,NH,NY,NC
Carbon Tetrachloride	CT,NH,NY,NC,RI
Chlorobenzene	CT,NH,NY,NC,RI
Chlorodibromomethane	CT,NH,NY,NC,RI
Chloroethane	CT,NH,NY,NC,RI
Chloroform	CT,NH,NY,NC,RI
Chloromethane	CT,NH,NY,NC,RI
2-Chlorotoluene	NY,NC
4-Chlorotoluene	NY,NC
1,2-Dibromo-3-chloropropane (DBCP)	NC
1,2-Dibromoethane (EDB)	NC
Dibromomethane	NH,NY,NC
1,2-Dichlorobenzene	CT,NY,NC,RI
1,3-Dichlorobenzene	CT,NH,NY,NC,RI
1,4-Dichlorobenzene	CT,NH,NY,NC,RI
trans-1,4-Dichloro-2-butene	NH,NY,NC
Dichlorodifluoromethane (Freon 12)	NH,NY,NC,RI
1,1-Dichloroethane	CT,NH,NY,NC,RI
1,2-Dichloroethane	CT,NH,NY,NC,RI
1,1-Dichloroethylene	CT,NH,NY,NC,RI
cis-1,2-Dichloroethylene	NC
trans-1,2-Dichloroethylene	CT,NH,NY,NC,RI
1,2-Dichloropropane	CT,NH,NY,NC,RI
1,3-Dichloropropane	NY,NC
2,2-Dichloropropane	NH,NY,NC
1,1-Dichloropropene	NH,NY,NC
cis-1,3-Dichloropropene	CT,NH,NY,NC,RI
trans-1,3-Dichloropropene	CT,NH,NY,NC,RI
Diethyl Ether	NC
Diisopropyl Ether (DIPE)	NH,NY,NC
1,4-Dioxane	NC
Ethylbenzene	CT,NH,NY,NC,RI

**CERTIFICATIONS**

**Certified Analyses included in this Report**

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
Hexachlorobutadiene	CT,NH,NY,NC
2-Hexanone (MBK)	CT,NH,NY,NC
Isopropylbenzene (Cumene)	NY,NC
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,NC
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,NC
Methylene Chloride	CT,NH,NY,NC,RI
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,NC
Naphthalene	NH,NY,NC
n-Propylbenzene	CT,NH,NY,NC
Styrene	CT,NH,NY,NC
1,1,1,2-Tetrachloroethane	CT,NH,NY,NC
1,1,2,2-Tetrachloroethane	CT,NH,NY,NC,RI
Tetrachloroethylene	CT,NH,NY,NC,RI
Tetrahydrofuran	NC
Toluene	CT,NH,NY,NC,RI
1,2,3-Trichlorobenzene	NH,NY,NC
1,2,4-Trichlorobenzene	CT,NH,NY,NC
1,3,5-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,NH,NY,NC,RI
1,1,2-Trichloroethane	CT,NH,NY,NC,RI
Trichloroethylene	CT,NH,NY,NC,RI
Trichlorofluoromethane (Freon 11)	CT,NH,NY,NC,RI
1,2,3-Trichloropropane	NH,NY,NC
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NC
1,2,4-Trimethylbenzene	NY,NC
1,3,5-Trimethylbenzene	NY,NC
Vinyl Chloride	CT,NH,NY,NC,RI
m+p Xylene	CT,NH,NY,NC,RI
o-Xylene	CT,NH,NY,NC,RI

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

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
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	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2012
ME	State of Maine	2011028	06/9/2013



Phone: 413-525-2332  
 Fax: 413-525-6405  
 Email: info@contestlabs.com  
 www.contestlabs.com

**CHAIN OF CUSTODY RECORD**

39 Spruce Street  
 East Longmeadow, MA 01028

Company Name: ARCADIS  
 Address: 300 Metric Center Blvd  
Warwick, RI

Telephone: 401-738-3887  
 Project # WKO12152

Attention: Donna Pallister  
 Project Location: Springfield St Providence

Client PO#  
 DATA DELIVERY (check all that apply)  
 FAX  EMAIL  WEBSITE

Sampled By: Miguel Cardozo

Email: Donna.Pallister@arcadis-us.com  
 Format:  PDF  EXCEL  OGIS

Project Proposal Provided? (for billing purposes)  
 Yes  No

Collection  
 "Enhanced Data Package"

Con-Test Lab ID <small>(laboratory use only)</small>	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	*Matrix Code	Conc. Code
-1	ATC-1		6-16-11		X	GW	L
-2	WB-4				Y	GW	L
-3	WB-6				Y	GW	L
-4	WB-8				Y	GW	L
-5							

Turnaround	Detection Limit Requirements	Is your project MCP or RCP?
<input type="checkbox"/> 7-Day <input type="checkbox"/> 10-Day <input checked="" type="checkbox"/> Other <u>5</u> RUSH †	Massachusetts: Connecticut: Other: <u>RI</u> <u>GS</u>	<input type="checkbox"/> MCP Analytical Certification Form Required <input type="checkbox"/> RCP Analysis Certification Form Required <input type="checkbox"/> MA State DW Form Required PWSID # _____

Comments: Samples were collected on 6-16-11. Samples were incorrectly labeled with 6-15-11. Relg. T. Steh. Malglo 6-17-11 1845

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:  
 H - High; M - Medium; L - Low; C - Clean; U - Unknown

\*Matrix Code:  
 GW= groundwater  
 WW= wastewater  
 DW= drinking water  
 A = air  
 S = soil/solid  
 SL = sludge  
 O = other

\*\*Preservation  
 I = Iced  
 H = HCL  
 M = Methanol  
 N = Nitric Acid  
 S = Sulfuric Acid  
 B = Sodium bisulfate  
 X = Na hydroxide  
 T = Na thiosulfate  
 O = Other

\*\*\*Cont. Code:  
 A=amber glass  
 G=glass  
 P=plastic  
 ST=sterile  
 V= vial  
 S=summary can  
 T=tedlar bag  
 O=Other

\*\*\*Container Code  
 Dissolved Metals  
 Field Filtered  
 Lab to Filter

# of Containers  
 \*\* Preservation  
 \*\*\* Container Code

ANALYSIS REQUESTED

RELAC & AIHA Certified  
 WB/DBE Certified

39 Spruce St.  
 East Longmeadow, MA. 01028  
 P: 413-525-2332  
 F: 413-525-6405  
 www.contestlabs.com



### Sample Receipt Checklist

CLIENT NAME: Accadis RECEIVED BY: AM DATE: 6/19/11

- 1) Was the chain(s) of custody relinquished and signed?  Yes No No CoC Included
- 2) Does the chain agree with the samples?  Yes No  
If not, explain:
- 3) Are all the samples in good condition?  Yes No  
If not, explain:

4) How were the samples received:

On Ice  Direct from Sampling  Ambient  In Cooler(s)

Were the samples received in Temperature Compliance of (2-6°C)?  Yes No N/A

Temperature °C by Temp blank \_\_\_\_\_ Temperature °C by Temp gun 5.4°

5) Are there Dissolved samples for the lab to filter? Yes  No

Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

6) Are there any RUSH or SHORT HOLDING TIME samples? Yes  No

Who was notified \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

7) Location where samples are stored:

19

Permission to subcontract samples? Yes No  
 (Walk-in clients only) if not already approved  
 Client Signature: \_\_\_\_\_

### Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		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	13	PM 2.5 / PM 10	
Colisure / bacteria bottle		PUF Cartridge	
Dissolved Oxygen bottle		SOC Kit	
Encore		TO-17 Tubes	
Flashpoint bottle		Non-ConTest Container	
Perchlorate Kit		Other glass jar	
Other		Other	

Laboratory Comments:

40 mL vials: # HCl 13 # Methanol \_\_\_\_\_  
 # Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_  
 # Thiosulfate \_\_\_\_\_ Unpreserved \_\_\_\_\_

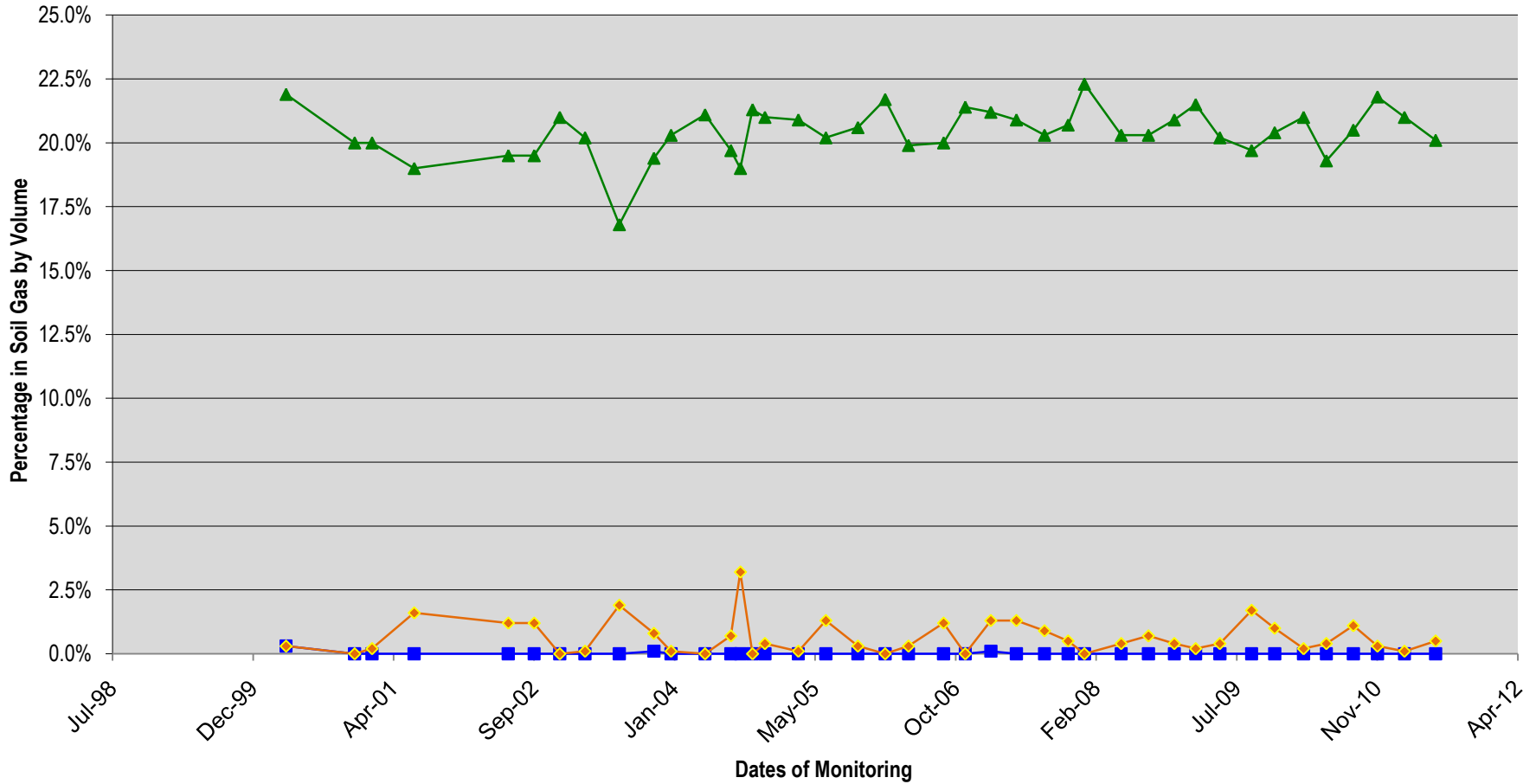
Time and Date Frozen:

Do all samples have the proper Acid pH: Yes No  N/A  
 Do all samples have the proper Base pH: Yes No  N/A

Doc# 277

**Appendix D**  
**Soil Gas Parameter Graphs**

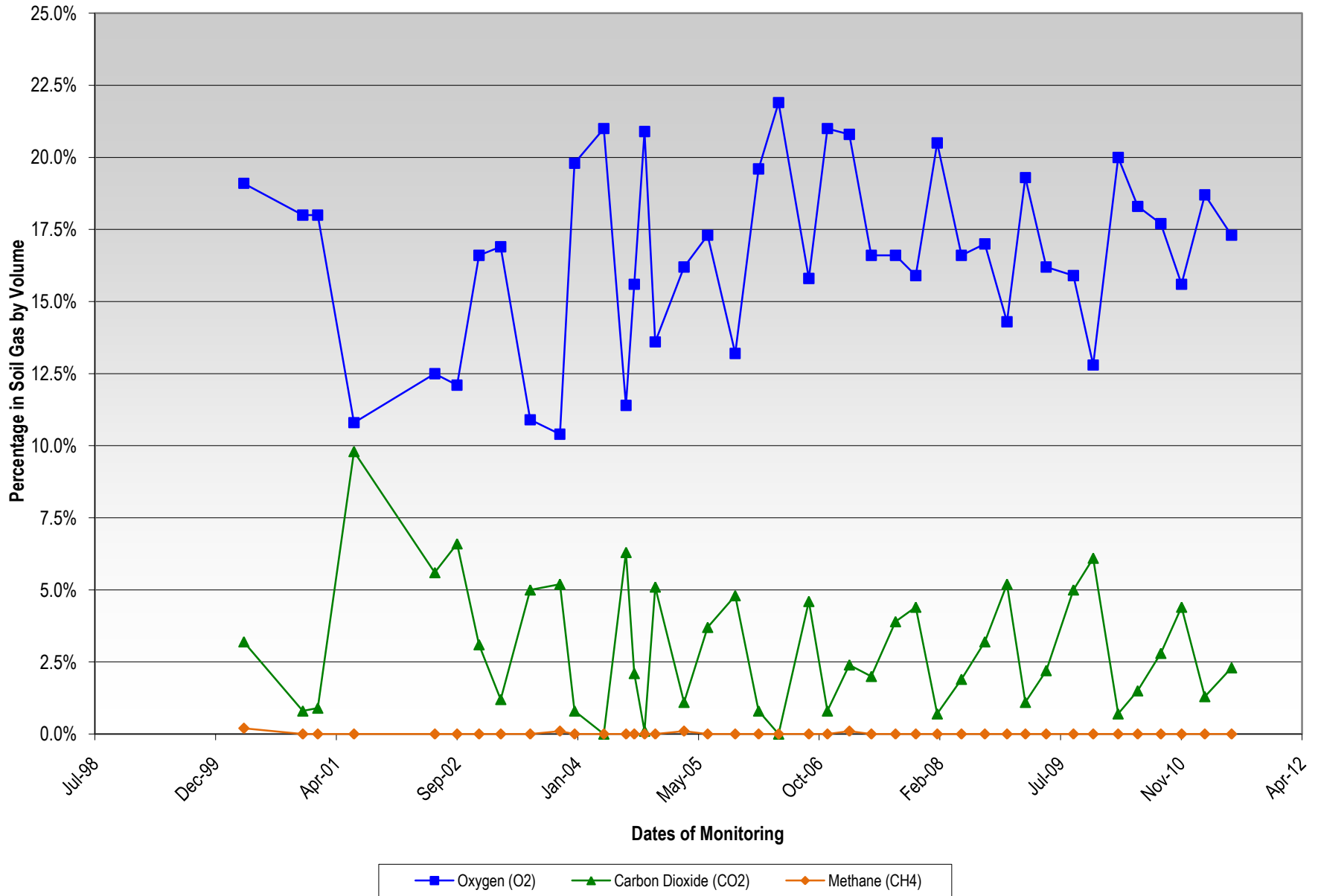
**Soil Gas Well EPL1**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



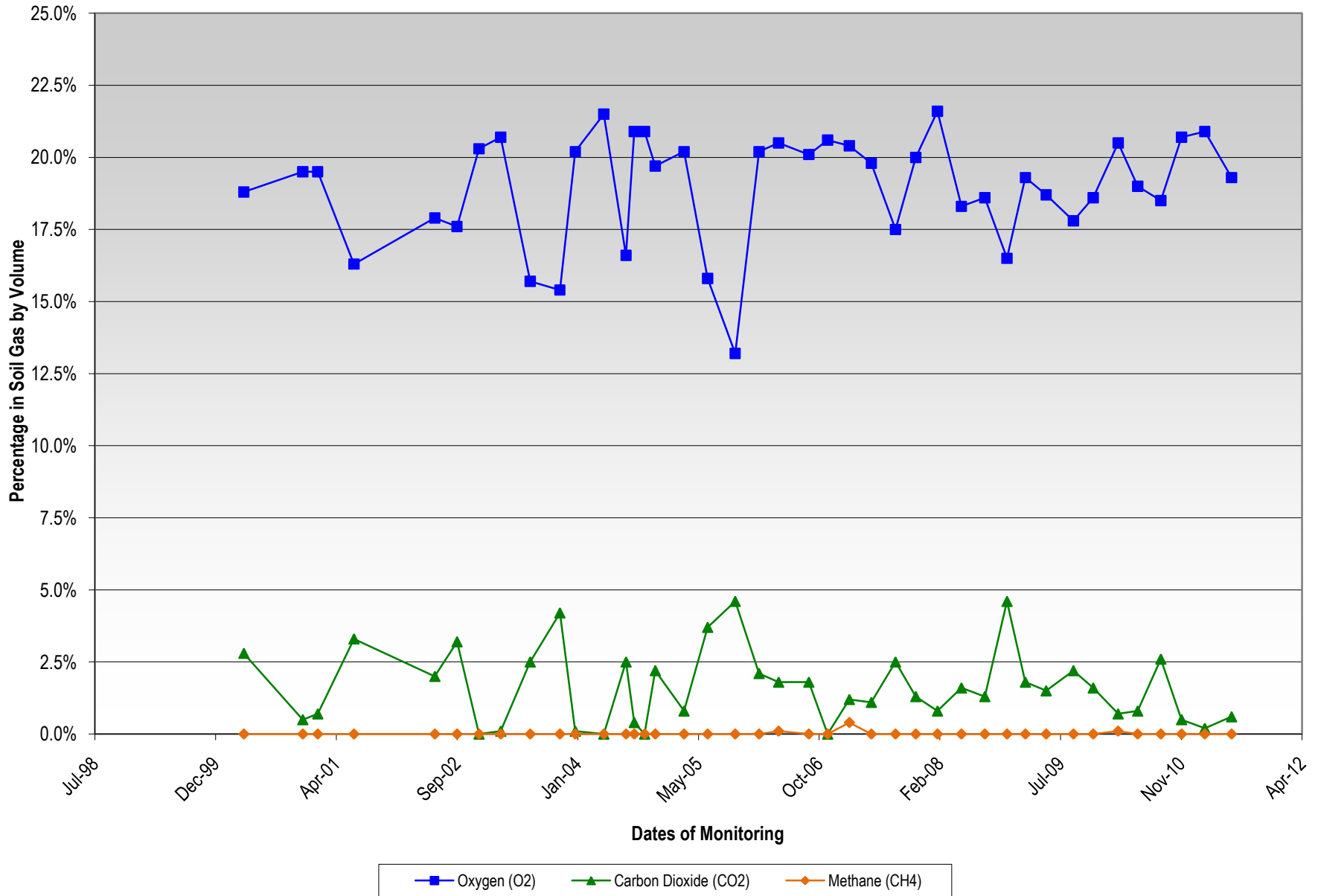
■ Methane    ▲ Oxygen    ◆ Carbon Dioxide



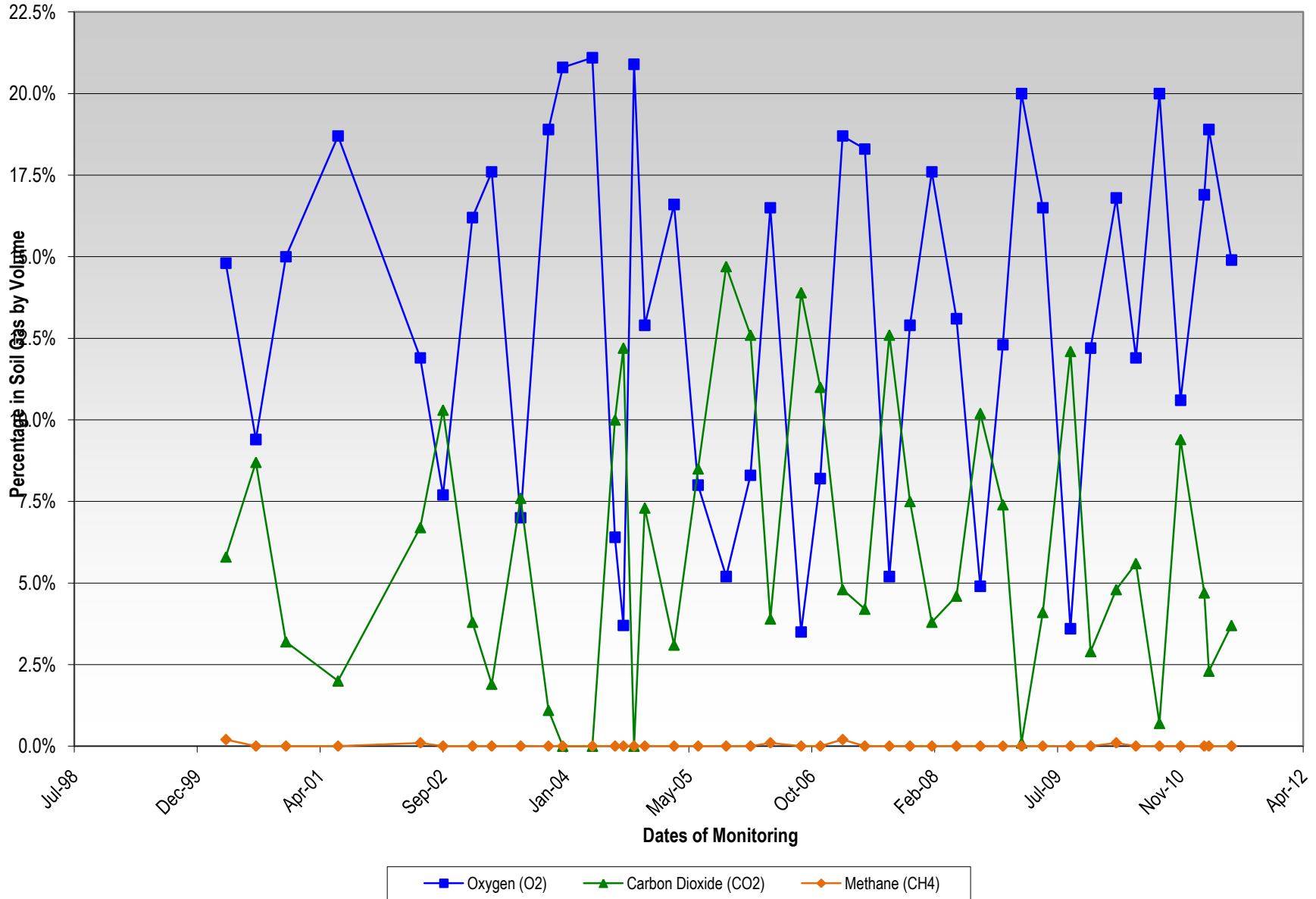
**Soil Gas Well EPL4**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



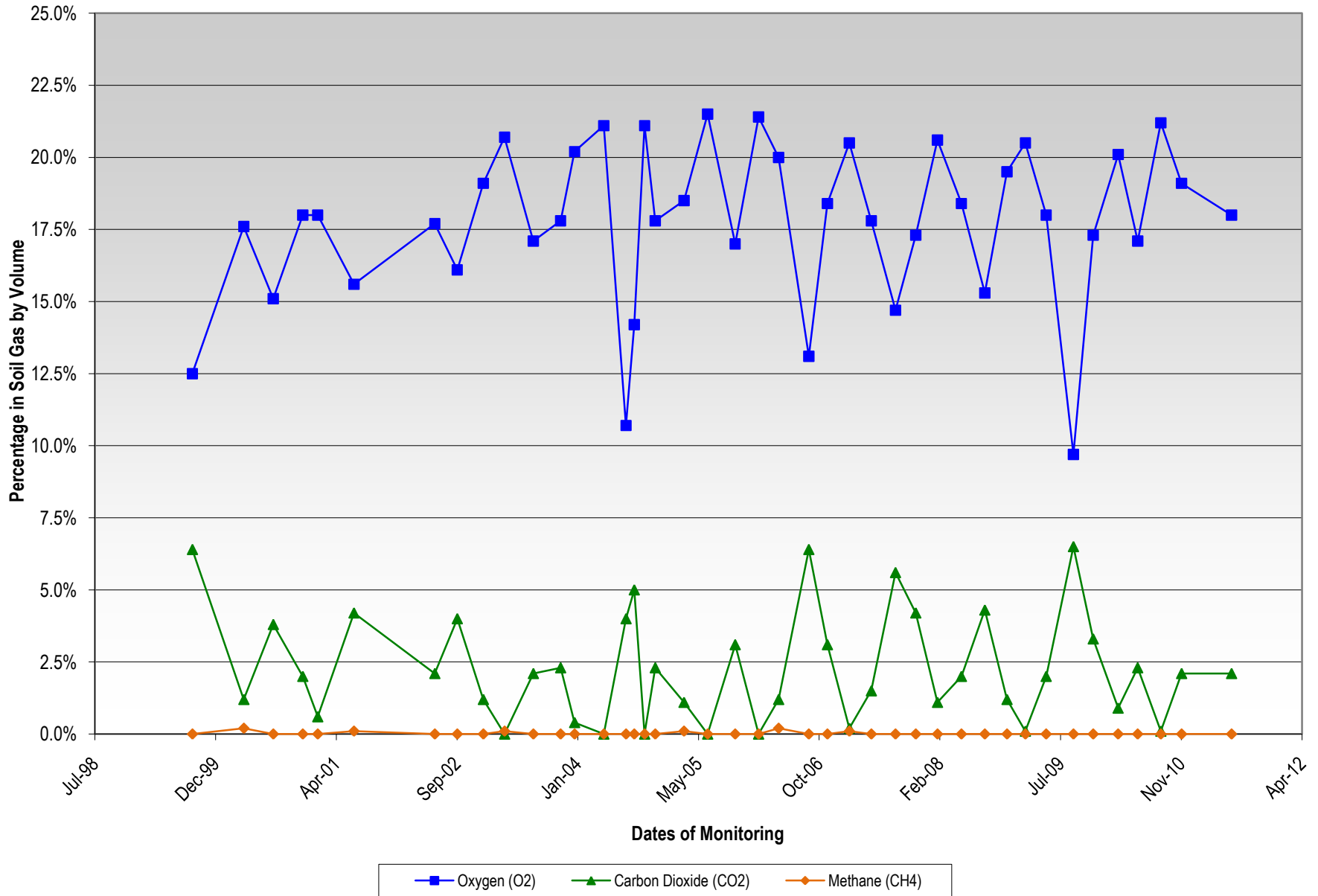
**Soil Gas Well MG2**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



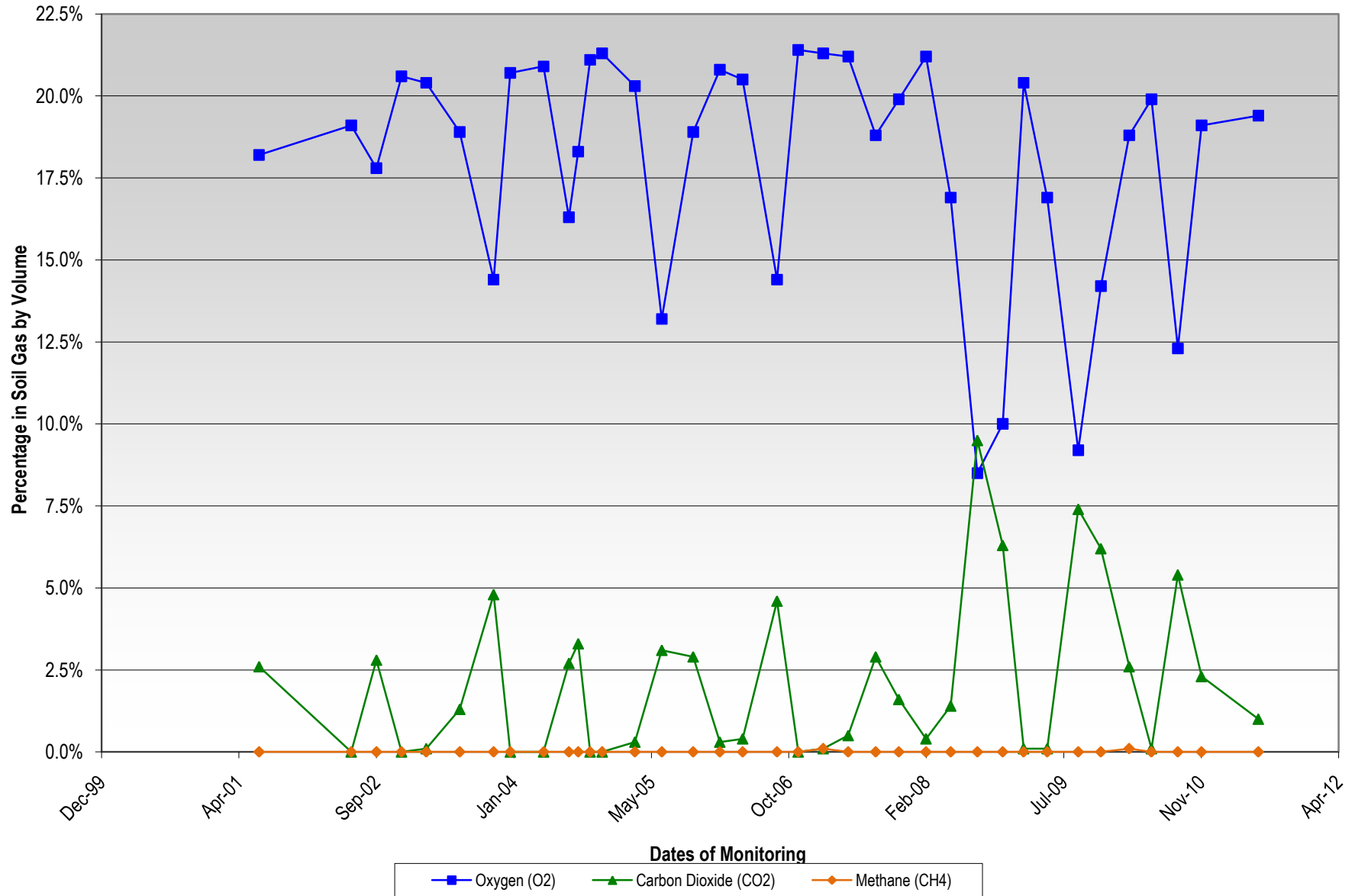
**Soil Gas Well MPL5**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



**Soil Gas Well 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

