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ENVIRONMENTAL

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

Subject:
August 2012 Quarterly Monitoring Report for Springfield Street School Complex

Date:
October 19, 2012

Contact:
Donna H. Pallister, PE

Phone:
401.738.3887

Email:
Donna.pallister@arcadis-us.com

Our ref:
WK012152.0007

Dear Mr. Crawford:

ARCADIS US, Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between August 21st and 23rd, 2012. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

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

COVER MONITORING

ARCADIS conducted a visual survey of the site on August 23, 2012 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. No evidence of erosion or significant settling was observed.

SUB-SLAB VENTILATION SYSTEM

Field Monitoring

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on May 29 and 31, 2012. 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. Carbon Monoxide, hydrogen sulfide, and organic vapors were not detected in any of the samples. Methane was detected at a concentration of 0.1% at two locations; all locations were below the RAWP Action Level of 0.5 % by volume. Carbon dioxide was detected at a concentration of 0.1 to 0.2% at each location; all seven of the sample concentrations were greater than the RAWP Action Level of 1000 ppm (0.1%).

Air samples were also collected in Tedlar bags from influent air at each blower. The Tedlar bags were submitted to Con-test Analytical Laboratory for analysis for VOC via EPA method TO-14.

Soil Gas Laboratory Results

Soil gas samples were collected from the influent to each sub-slab ventilation system. The samples were collected in Tedlar bags and submitted to Con-Test Analytical Laboratories for analysis by method TO-14. Results of the analysis are summarized in Table 2, and the laboratory report is provided in Attachment C.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are provided in Table 2 for comparison purposes even though they are not directly 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.

INDOOR AIR MONITORING

Indoor air monitoring was conducted on August 23, 2012 using a Landtec GEM 2000 Plus 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 3. 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 August 23 was 81 ^{o}F. Carbon dioxide was measured outside in the school parking lot at 620 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_2 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 August 23, 2012. The methane monitor control panels had stickers that indicated that the monitors were calibrated by Diamond Technical Services within the month prior to the inspection. Diamond Technical Services calibrates the sensors on a monthly basis.

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

GROUNDWATER MONITORING

The groundwater monitoring wells were sampled by ARCADIS on August 21, 2012. 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 4.

The only target analyte detected in any of the wells was chloroform which was detected in a sample collected from monitoring well MW-6 at a concentration of 2.2 µg/L. There is no GB groundwater standard for this compound. This compound has been detected during a previous sampling event in this well at a similar concentration. No other target analytes were detected in any of the groundwater samples collected on August 21, 2012.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 29 locations on August 23, 2012. 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).

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 5. Methane, carbon monoxide, and hydrogen sulfide were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 12.8% during the May monitoring event. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 26 readings exceeded the action level. The maximum concentration detected during the May round was 9.2%, which was lower than the maximum during the current round. This is consistent with the pattern shown during previous rounds of declining carbon dioxide concentrations in the winter, and

increasing concentrations in the summer and early fall. Graphs presenting carbon dioxide, oxygen, and methane concentrations over time for selected representative wells are presented in Attachment 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-6, 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.

Organic Vapors (VOC'S) were detected in soil gas at concentrations ranging from 0.1 to 3.3 ppm during the August sampling event. The organic vapors RAWP action level is 5 ppm and no readings exceeded the action level.

ANNUAL INSPECTIONS

After the Five Year Review of the Site was completed, RIDEM issued a letter dated August 17, 2012 which requires that annual inspections be conducted for compliance with the Environmental Land Usage Restriction (ELUR), and to monitor the vacuum produced by the subslab ventilation system. Annual ELUR inspections will be conducted in during the November 2012 monitoring round. Annual monitoring of the monitoring of vacuum produced by the subslab ventilation system will also be conducted in November 2012.

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 sub slab system monitoring points. The detection of carbon dioxide in soil gas is typical of what has been detected during previous monitoring events and appears to be a result of naturally occurring bacterial activity in the subsurface.

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

Sincerely,

ARCADIS U.S., Inc.

Donna H. Pallister, PE, LSP
Senior Environmental Engineer

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

ARCADIS

Tables

Table 1
System Monitoring Notes
Springfield Street School Complex
Providence, Rhode Island
August 23, 2012

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
Elementary School inlet 1	0.0	0.6	12.9	0.0	0.0	0.0
Elementary School inlet 2	0.0	0.4	20.8	0.0	0.0	0.0
Elementary School Outlet	0.0	0.1	21.2	0.0	0.0	0.0
Middle School front shed inlet	0.1	0.1	21.1	0.0	0.0	0.0
Middle School front shed after 2nd carbon	0.1	0.1	21.2	0.0	0.0	0.0
Middle School back shed inlet	0.0	0.1	21.0	0.0	0.0	0.0
Middle School back shed after 2nd carbon	0.0	0.1	20.9	0.0	0.0	0.0
Remedial Action Work Plan Action Levels	**10% (5,000 ppm)**	**0.1% (1,000 ppm)**	**NA**	**9 ppm**	**10 ppm**	**5 ppm**

Measurements made with:

Sampling date:

Measured by:

Table 2
Soil Gas Samples Collected from System Influent
Springfield Street School Complex
August 23, 2012

Parameter	Middle School Back (in ppbv)	Middle School Front (in ppbv)	Elementary School #1 (in ppbv)	Elementary School # 2 (in ppbv)	OSHA PEL's (in ppbv)
Benzene	0.27	0.32	0.22	0.22	1,000
Carbon Tetrachloride	ND	ND	0.1	ND	10,000
Chloroform	ND	ND	0.34	0.36	50,000
Chloromethane	ND	0.95	ND	ND	75,000
1,4-Dichlorobenzene	0.31	ND	0.32	ND	1,000,000
Dichlorodifluoromethane (Freon 12)	1.4	0.46	2.3	1.3	1,000,000
trans- 1,3-Dichloropopene	ND	ND	ND	0.13	100,000
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	2.4	0.11	2.8	0.29	100,000
Ethylbenzene	0.11	ND	0.11	ND	100,000
Methylene Chloride	5.5	15	5.2	13	100,000
Styrene	6.3	1.5	6.6	1.6	100,000
Tetrachloroethylene	0.21	ND	4.2	0.53	100,000
Toluene	75	40	79	37	200,000
Trichloroethylene	ND	ND	0.85	0.12	100,000
Trichlorofluoromethane (Freon 11)	1.5	1.4	3	2.5	1,000,000
M/p-Xylene	0.27	0.21	2.6	ND	100,000
o-Xylene	0.10	ND	0.10	ND	100000.00

Notes:
Samples collected in Tedlar bags and analyzed via EPA method TO-14
Only detected compounds are listed, see laboratory certificate for complete
OSHA PEL's = Occupational Safety and Health Administration Permissable Exposure Limits
ppbv = Parts per billion by volume

Table 3
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
August 23, 2012

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Front office	0.0	387	21.0	0	0	0.0
E.S. Elevator	0.0	385	21.1	0	0	0.0
E.S. Faculty Work Room	0.0	375	21.1	0	0	0.0
E.S. Gym	0.0	391	21.1	0	0	0.0
E.S. Stairway B	0.0	388	21.2	0	0	0.0
E.S. Stairway C	0.0	373	21.2	0	0	0.0
E.S. Library	0.0	403	21.1	0	0	0.0
E.S Janitors Closet	0.0	408	21.1	0	0	0.0
E.S. Cafeteria	0.0	368	21.3	0	0	0.0
E.S. Room 107	0.0	370	21.2	0	0	0.0

Table 3
Indoor Air Monitoring Notes
Springfield Street School Complex
August 23, 2012

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Office	0.0	495	21.1	0	0	0.0
M.S. Elevator	0.0	530	21.1	0	0	0.0
M.S. Stairway near E.S. GS-01	0.0	447	21.0	0	0	0.0
M.S. Near sensor #16 in hall outside cafeteria	0.0	390	21.2	0	0	0.0
M.S. Faculty Work Room	0.0	433	21.1	0	0	0.0
M.S. Sensor #15	0.0	412	21.3	0	0	0.0
M.S. GS-03 Across from Boys Bathroom	0.0	429	21.1	0	0	0.0
M.S. Second Floor - Library	0.0	388	21.2	0	0	0.0
M.S. Cafeteria	0.0	387	21.2	0	0	0.0

Table 3
Indoor Air Monitoring Notes
Springfield Street School Complex
August 23, 2012

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Hall near sensor #4	0.0	420	21.0	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0.0	415	21.1	0	0	0.0
M.S. Near sensor GS 06 hallway right end	0.0	421	21.1	0	0	0.0
M.S. stairway near Hartford Ave. sensor GS-7	0.0	443	21.2	0	0	0.0
Remedial Action Work Plan Action Levels	**1% LEL (500 ppm)**	**1,000 ppm (0.1%)**	**NA**	**9 ppm**	**5 ppm**	**5 ppm**

Notes:

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

Measurements made with: MiniRae photoionization detector, Fluke 975 Airmeter

PPM = Parts per million

Outdoor conditions: carbon dioxide = 620 ppm, temperature = 81 ºF.

Table 4
Groundwater Monitoring Results
Springfield Street School
Providence, Rhode Island

Well	Detected Compounds	Sampling Dates and Results in µg/L															
		2/28/2001	7/20/2001	*9- 12/2001	8/1/2002	8/28/2002	12/19/2002	3/18/2003	7/17/2003	11/5/2003	1/22/2004	5/21/2004	8/17/2004	12/2/2004	4/6/2005	7/27/2005	10/27&28/2005
ATC-1																	
	Benzene	6.1	ND	18.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	n-butylbenzene	1.7	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	sec-Butylbenzene	1.1	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Ethylbenzene	4.5	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Isopropylbenzene	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	n-Propylbenzene	ND	ND	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	MTBE	12.4	7.0	28.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND	1.10	ND	ND
	Toluene	2.5	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2,4-Trimethylbenzene	2.2	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,3,5-Trimethylbenzene	3.4	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Xylenes	14.6	ND	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ATC-2																	
	Chloroform	0.9	ND	ND	1.0	ND	ND	ND	ND	ND	NS	1.1	1.0	ND	ND	ND	ND
MW-6																	
	Chloroform																
Installed 4/2011																	
ATC-3																	
	Toluene	ND	ND	ND	ND	NS	ND	ND	ND	ND	3.03	ND	ND	ND	ND	ND	ND
MW-7																	
Installed 4/2011																	
ATC-4																	
	Benzene	ND	ND	2.5	0.6	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND
	Chlorobenzene	2.6	ND	57.3	2.7	5.18	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	ND
	1,4-dichlorobenzene	4.2	ND	9.2	3.4	3.36	ND	ND	ND	ND	ND	0.80	1.6	2.1	ND	ND	ND
	MTBE	ND	ND	ND	ND	ND	ND	ND	1.19	9.55	1.06	2.90	0.6	ND	ND	ND	ND
	1,2,4-Trimethylbenzene	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	tert-Amyl Methyl Ether (TAME)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Trichloroethylene																
ATC-5																	
	MTBE	ND	ND	2.2	NS	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND
	Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	0.6	ND	ND	ND	ND
MW-8																	
Installed 4/2011																	
Sampled By:		ATC	ATC	ATC	ATC	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR

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

Table 4
Groundwater Monitoring Results
Springfield Street School
Providence, Rhode Island

Well	Detected Compounds	Sampling Dates and Results in ug/L																	
		2/2/2006	4/27/2006	8/31/2006	11/15/2006	3/27/2007	5/21/2007	8/20/2007	11/13/2007	2/12/2008	5/21/2008	8/26/2008	11/18/2008	2/17/2009	5/7/2009	8/25/2009	11/18/2009	3/1/2010
ATC-1																		
	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	n-butylbenzene	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	tert-Butylbenzene	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND
	Trichloroethylene	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,1,2-Trichloroethane	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ATC-2																		
	Chloroform	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6																		
	Chloroform																	
Installed 4/2011																		
ATC-3																		
	Toluene	3.0	ND	4.5	13.1	ND	2.3	1.3	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS
MW-7																		
Installed 4/2011																		
ATC-4																		
	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chlorobenzene	ND	ND	ND	ND	ND	ND	1.80	1.90	ND	ND	1.2	ND	ND	ND	1	ND	ND
	1,4-dichlorobenzene	ND	ND	1.2	1.1	ND	1.2	2.1	2.1	ND	ND	2.1	1.4	ND	1.7	1.5	ND	ND
	MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	tert-Amyl Methyl Ether (TAME)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Trichloroethylene													ND	ND	ND	ND	ND
ATC-5																		
	MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-8																		
Installed 4/2011																		
Sampled By:		LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	ARCADIS

*ATC Monitoring Report for Septemb
ND is not detected above method det
NS is not sampled
NA= No applicable standard publishe
MTBE is Methyl tert-Butyl Ether
µg/L = micrograms per liter

Table 4
Groundwater Monitoring Results
Springfield Street School
Providence, Rhode Island

Well	Detected Compounds	Sampling Dates and Results in ug/L										RIDEM GB Groundwater Objective
		5/20/2010	8/25/2010	11/19/2010	2/24/2011	6/16/2011	10/3/2011	12/6/2011	3/15/2012	5/29/2012	8/21/2012	
ATC-1												
	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
	n-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1600
	Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5000
	Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	540
	Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1700
	1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
ATC-2												
	Chloroform	NS	NS	NS	NS	Closed	Closed	Closed	Closed	Closed	Closed	NA
						4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	
MW-6						ND						
	Chloroform					ND	2.0	ND	ND	ND	2.2	NA
Installed 4/2011												
ATC-3												
	Toluene	NS	NS	NS	NS	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	1700
MW-7						ND	ND	ND	ND	ND	ND	NA
Installed 4/2011												
ATC-4												
	Benzene	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	140
	Chlorobenzene	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	70
	1,4-dichlorobenzene	ND	ND	1.5	NS	NS	ND	ND	ND	1.9	ND	NA
	MTBE	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	5000
	1,2,4-Trimethylbenzene	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	NA
	tert-Amyl Methyl Ether (TAME)	ND	0.5	ND	NS	NS	ND	ND	ND	ND	ND	NA
	Trichloroethylene	ND	ND	ND	NS	NS	1.1	1.3	ND	ND	ND	540
ATC-5												
	MTBE	ND	NS	NS	NS	Closed	Closed	Closed	Closed	Closed	Closed	5000
	Chloroform	ND	NS	NS	NS	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	NA
MW-8						ND	ND	ND	ND	ND	ND	NA
Installed 4/2011												
Sampled By:		ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	

*ATC Monitoring Report for Septemb
ND is not detected above method det
NS is not sampled
NA= No applicable standard publishe
MTBE is Methyl tert-Butyl Ether
µg/L = micrograms per liter

Table 5
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
August 23, 2012

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0.0	5.3	12.9	0	0	0.0
WB-2	0.0	1.2	20.2	0	0	0.0
WB-3	0.0	0.2	21.4	0	0	0.0
WB-4	0.0	0.0	21.8	0	0	0.0
WB-5	0.0	0.0	21.6	0	0	0.0
WB-6	0.0	0.1	21.5	0	0	0.0
WB-7 R	0.0	0.3	21.1	0	0	0.0
WB-8	0.0	0.0	21.7	0	0	0.0
WB-12	0.0	2.7	18.1	0	0	0.0
WB-13	0.0	4.4	11.0	0	0	0.0
WB-14	0.0	9.6	5.8	0	0	0.0
WB-15	0.0	11.2	2.8	0	0	0.0
EPL-1	0.0	1.2	19.5	0	0	0.0
EPL-2	0.0	3.1	16.8	0	0	0.0
EPL-3	0.0	5.7	13.3	0	0	0.0
EPL-4	0.0	1.7	18.6	0	0	0.0
EPL-5	0.0	2.2	17.5	0	0	0.0
ENE-1	0.0	1.8	18.1	0	0	0.0

Table 5
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
August 23, 2012

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	5.5	12.6	0	0	0.4
MG2	0.0	2.1	17.5	0	0	0.1
MG3	0.0	6.4	11.3	0	0	0.0
MG4	0.0	3.0	16.2	0	0	0.6
MG5	0.0	1.9	17.3	0	0	0.0
MPL2	0.0	11.0	2.4	0	0	0.0
MPL3	0.0	11.3	3.2	0	0	0.0
MPL5	0.0	12.1	3.6	0	0	2.3
MPL6	0.0	12.8	6.6	0	0	3.3
MPL7	0.0	11.7	6.4	0	0	3.3
MPL8	0.0	11.9	4.7	0	0	1.5
Remedial Action Work Plan Action Levels	**0.5%**	**0.1% (1,000 PPM)**	**NA**	**9 PPM**	**10 PPM**	**5 PPM**

Sampled by: Andrew DaSilva

Weather Conditions: Sunny 85 degrees F

Sampling Equipment: Landtec GEM 2000 Plus, MiniRae 2000 PID

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Appendix A

Limitations & Service Constraints

LIMITATIONS AND SERVICE CONSTRAINTS

GENERAL REPORTS/DOCUMENT

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

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

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

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Appendix B

Laboratory Results

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ANALYTICAL LABORATORY
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September 4, 2012

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

Project Location: Providence, RI
Client Job Number:
Project Number: WK012152.0007
Laboratory Work Order Number: 12H0853

Enclosed are results of analyses for samples received by the laboratory on August 24, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa A. Worthington
Project Manager

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

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

REPORT DATE: 9/4/2012

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0007

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12H0853

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

PROJECT LOCATION: Providence, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Middle School Back	12H0853-01	Sub Slab		EPA TO-14A	
Middle School Front	12H0853-02	Sub Slab		EPA TO-14A	
Elementry School #1	12H0853-03	Sub Slab		EPA TO-14A	
Elementry School #2	12H0853-04	Sub Slab		EPA TO-14A	

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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.

Michael A. Erickson
Laboratory Director

con-test® ANALYTICAL LABORATORY
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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Middle School Back
Sample ID: 12H0853-01
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:15

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.27	0.10		0.87	0.32	2	8/27/12 20:09	TPH
Bromomethane	ND	0.10		ND	0.39	2	8/27/12 20:09	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	8/27/12 20:09	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/12 20:09	TPH
Chloroethane	ND	0.10		ND	0.26	2	8/27/12 20:09	TPH
Chloroform	ND	0.10		ND	0.49	2	8/27/12 20:09	TPH
Chloromethane	ND	0.10		ND	0.21	2	8/27/12 20:09	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/12 20:09	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 20:09	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 20:09	TPH
1,4-Dichlorobenzene	0.31	0.10		1.9	0.60	2	8/27/12 20:09	TPH
Dichlorodifluoromethane (Freon 12)	1.4	0.10		7.0	0.49	2	8/27/12 20:09	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 20:09	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 20:09	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 20:09	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 20:09	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/12 20:09	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 20:09	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 20:09	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	2.4	0.10		17	0.70	2	8/27/12 20:09	TPH
Ethylbenzene	0.11	0.10		0.49	0.43	2	8/27/12 20:09	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/12 20:09	TPH
Methylene Chloride	5.5	1.0		19	3.5	2	8/27/12 20:09	TPH
Styrene	6.3	0.10		27	0.43	2	8/27/12 20:09	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/12 20:09	TPH
Tetrachloroethylene	0.21	0.10		1.4	0.68	2	8/27/12 20:09	TPH
Toluene	75	0.10		280	0.38	2	8/27/12 20:09	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/12 20:09	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 20:09	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 20:09	TPH
Trichloroethylene	ND	0.10		ND	0.54	2	8/27/12 20:09	TPH
Trichlorofluoromethane (Freon 11)	1.5	0.10		8.5	0.56	2	8/27/12 20:09	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/12 20:09	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 20:09	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 20:09	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/12 20:09	TPH
m&p-Xylene	0.27	0.20		1.2	0.87	2	8/27/12 20:09	TPH

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Middle School Back
Sample ID: 12H0853-01
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:15

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	0.10	0.10		0.45	0.43	2	8/27/12 20:09	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	8/27/12 20:09

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Middle School Front
Sample ID: 12H0853-02
Sample Matrix: Sub Slab
Sampled: 8/23/2012 13:10

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.32	0.10		1.0	0.32	2	8/27/12 21:25	TPH
Bromomethane	ND	0.10		ND	0.39	2	8/27/12 21:25	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	8/27/12 21:25	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/12 21:25	TPH
Chloroethane	ND	0.10		ND	0.26	2	8/27/12 21:25	TPH
Chloroform	ND	0.10		ND	0.49	2	8/27/12 21:25	TPH
Chloromethane	0.95	0.10		2.0	0.21	2	8/27/12 21:25	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/12 21:25	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 21:25	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 21:25	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 21:25	TPH
Dichlorodifluoromethane (Freon 12)	0.46	0.10		2.3	0.49	2	8/27/12 21:25	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 21:25	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 21:25	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 21:25	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 21:25	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/12 21:25	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 21:25	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 21:25	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.11	0.10		0.78	0.70	2	8/27/12 21:25	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	8/27/12 21:25	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/12 21:25	TPH
Methylene Chloride	15	1.0		52	3.5	2	8/27/12 21:25	TPH
Styrene	1.5	0.10		6.6	0.43	2	8/27/12 21:25	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/12 21:25	TPH
Tetrachloroethylene	ND	0.10		ND	0.68	2	8/27/12 21:25	TPH
Toluene	40	0.10		150	0.38	2	8/27/12 21:25	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/12 21:25	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 21:25	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 21:25	TPH
Trichloroethylene	ND	0.10		ND	0.54	2	8/27/12 21:25	TPH
Trichlorofluoromethane (Freon 11)	1.4	0.10		8.0	0.56	2	8/27/12 21:25	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/12 21:25	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 21:25	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 21:25	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/12 21:25	TPH
m&p-Xylene	0.21	0.20		0.90	0.87	2	8/27/12 21:25	TPH

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Middle School Front
Sample ID: 12H0853-02
Sample Matrix: Sub Slab
Sampled: 8/23/2012 13:10

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	ND	0.10		ND	0.43	2	8/27/12 21:25	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	8/27/12 21:25

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Elementry School #1
Sample ID: 12H0853-03
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:41

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.22	0.10		0.70	0.32	2	8/27/12 22:41	TPH
Bromomethane	ND	0.10		ND	0.39	2	8/27/12 22:41	TPH
Carbon Tetrachloride	0.10	0.10		0.65	0.63	2	8/27/12 22:41	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/12 22:41	TPH
Chloroethane	ND	0.10		ND	0.26	2	8/27/12 22:41	TPH
Chloroform	0.34	0.10		1.7	0.49	2	8/27/12 22:41	TPH
Chloromethane	ND	0.10		ND	0.21	2	8/27/12 22:41	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/12 22:41	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 22:41	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 22:41	TPH
1,4-Dichlorobenzene	0.32	0.10		1.9	0.60	2	8/27/12 22:41	TPH
Dichlorodifluoromethane (Freon 12)	2.3	0.10		11	0.49	2	8/27/12 22:41	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 22:41	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 22:41	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 22:41	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 22:41	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/12 22:41	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 22:41	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 22:41	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	2.8	0.10		20	0.70	2	8/27/12 22:41	TPH
Ethylbenzene	0.11	0.10		0.49	0.43	2	8/27/12 22:41	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/12 22:41	TPH
Methylene Chloride	5.2	1.0		18	3.5	2	8/27/12 22:41	TPH
Styrene	6.6	0.10		28	0.43	2	8/27/12 22:41	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/12 22:41	TPH
Tetrachloroethylene	4.2	0.10		29	0.68	2	8/27/12 22:41	TPH
Toluene	79	0.10		300	0.38	2	8/27/12 22:41	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/12 22:41	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 22:41	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 22:41	TPH
Trichloroethylene	0.85	0.10		4.5	0.54	2	8/27/12 22:41	TPH
Trichlorofluoromethane (Freon 11)	3.0	0.10		17	0.56	2	8/27/12 22:41	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/12 22:41	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 22:41	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 22:41	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/12 22:41	TPH
m&p-Xylene	0.26	0.20		1.1	0.87	2	8/27/12 22:41	TPH

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Elementry School #1
Sample ID: 12H0853-03
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:41

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	0.10	0.10		0.45	0.43	2	8/27/12 22:41	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	101	70-130	8/27/12 22:41

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Elementry School #2
Sample ID: 12H0853-04
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:54

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.22	0.10		0.70	0.32	2	8/27/12 23:56	TPH
Bromomethane	ND	0.10		ND	0.39	2	8/27/12 23:56	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	8/27/12 23:56	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/12 23:56	TPH
Chloroethane	ND	0.10		ND	0.26	2	8/27/12 23:56	TPH
Chloroform	0.36	0.10		1.7	0.49	2	8/27/12 23:56	TPH
Chloromethane	ND	0.10		ND	0.21	2	8/27/12 23:56	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/12 23:56	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 23:56	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 23:56	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/12 23:56	TPH
Dichlorodifluoromethane (Freon 12)	1.3	0.10		6.6	0.49	2	8/27/12 23:56	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 23:56	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/12 23:56	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 23:56	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/12 23:56	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/12 23:56	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/12 23:56	TPH
trans-1,3-Dichloropropene	0.13	0.10		0.61	0.45	2	8/27/12 23:56	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.29	0.10		2.0	0.70	2	8/27/12 23:56	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	8/27/12 23:56	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/12 23:56	TPH
Methylene Chloride	13	1.0		46	3.5	2	8/27/12 23:56	TPH
Styrene	1.6	0.10		6.7	0.43	2	8/27/12 23:56	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/12 23:56	TPH
Tetrachloroethylene	0.53	0.10		3.6	0.68	2	8/27/12 23:56	TPH
Toluene	37	0.10		140	0.38	2	8/27/12 23:56	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/12 23:56	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 23:56	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/12 23:56	TPH
Trichloroethylene	0.12	0.10		0.63	0.54	2	8/27/12 23:56	TPH
Trichlorofluoromethane (Freon 11)	2.5	0.10		14	0.56	2	8/27/12 23:56	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/12 23:56	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 23:56	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/12 23:56	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/12 23:56	TPH
m&p-Xylene	ND	0.20		ND	0.87	2	8/27/12 23:56	TPH

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ANALYTICAL RESULTS

Project Location: Providence, RI
Date Received: 8/24/2012
Field Sample #: Elementry School #2
Sample ID: 12H0853-04
Sample Matrix: Sub Slab
Sampled: 8/23/2012 11:54

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

Work Order: 12H0853
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 Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	ND	0.10		ND	0.43	2	8/27/12 23:56	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	8/27/12 23:56

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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
12H0853-01 [Middle School Back]	B058069	1	1	N/A	1000	400	200	08/27/12
12H0853-02 [Middle School Front]	B058069	1	1	N/A	1000	400	200	08/27/12
12H0853-03 [Elementry School #1]	B058069	1	1	N/A	1000	400	200	08/27/12
12H0853-04 [Elementry School #2]	B058069	1	1	N/A	1000	400	200	08/27/12

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B058069 - TO-15 Prep											
Blank (B058069-BLK1)					Prepared & Analyzed: 08/27/12						
Benzene	ND	0.025									
Bromomethane	ND	0.025									
Carbon Tetrachloride	ND	0.025									
Chlorobenzene	ND	0.025									
Chloroethane	ND	0.025									
Chloroform	ND	0.025									
Chloromethane	ND	0.025									
1,2-Dibromoethane (EDB)	ND	0.025									
1,2-Dichlorobenzene	ND	0.025									
1,3-Dichlorobenzene	ND	0.025									
1,4-Dichlorobenzene	ND	0.025									
Dichlorodifluoromethane (Freon 12)	ND	0.025									
1,1-Dichloroethane	ND	0.025									
1,2-Dichloroethane	ND	0.025									
1,1-Dichloroethylene	ND	0.025									
cis-1,2-Dichloroethylene	ND	0.025									
1,2-Dichloropropane	ND	0.025									
cis-1,3-Dichloropropene	ND	0.025									
trans-1,3-Dichloropropene	ND	0.025									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.025									
Ethylbenzene	ND	0.025									
Hexachlorobutadiene	ND	0.025									
Methylene Chloride	ND	0.25									
Styrene	ND	0.025									
1,1,2,2-Tetrachloroethane	ND	0.025									
Tetrachloroethylene	ND	0.025									
Toluene	ND	0.025									
1,2,4-Trichlorobenzene	ND	0.025									
1,1,1-Trichloroethane	ND	0.025									
1,1,2-Trichloroethane	ND	0.025									
Trichloroethylene	ND	0.025									
Trichlorofluoromethane (Freon 11)	ND	0.025									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.025									
1,2,4-Trimethylbenzene	ND	0.025									
1,3,5-Trimethylbenzene	ND	0.025									
Vinyl Chloride	ND	0.025									
m&p-Xylene	ND	0.050									
o-Xylene	ND	0.025									
Surrogate: 4-Bromofluorobenzene (1)	*8.03*				*8.00*		*100*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B058069 - TO-15 Prep											
LCS (B058069-BS1)					Prepared & Analyzed: 08/27/12						
Benzene	4.55				5.00		91.1	70-130			
Bromomethane	4.94				5.00		98.7	70-130			
Carbon Tetrachloride	5.03				5.00		101	70-130			
Chlorobenzene	4.91				5.00		98.2	70-130			
Chloroethane	5.83				5.00		117	70-130			
Chloroform	5.09				5.00		102	70-130			
Chloromethane	4.74				5.00		94.7	70-130			
1,2-Dibromoethane (EDB)	4.75				5.00		94.9	70-130			
1,2-Dichlorobenzene	5.03				5.00		101	70-130			
1,3-Dichlorobenzene	5.10				5.00		102	70-130			
1,4-Dichlorobenzene	4.84				5.00		96.8	70-130			
Dichlorodifluoromethane (Freon 12)	4.96				5.00		99.2	70-130			
1,1-Dichloroethane	5.02				5.00		100	70-130			
1,2-Dichloroethane	5.01				5.00		100	70-130			
1,1-Dichloroethylene	4.79				5.00		95.8	70-130			
cis-1,2-Dichloroethylene	5.10				5.00		102	70-130			
1,2-Dichloropropane	4.85				5.00		97.0	70-130			
cis-1,3-Dichloropropene	5.32				5.00		106	70-130			
trans-1,3-Dichloropropene	4.98				5.00		99.6	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.24				5.00		105	70-130			
Ethylbenzene	4.92				5.00		98.4	70-130			
Hexachlorobutadiene	5.12				5.00		102	70-130			
Methylene Chloride	4.56				5.00		91.2	70-130			
Styrene	5.14				5.00		103	70-130			
1,1,2,2-Tetrachloroethane	5.29				5.00		106	70-130			
Tetrachloroethylene	4.82				5.00		96.5	70-130			
Toluene	4.77				5.00		95.5	70-130			
1,2,4-Trichlorobenzene	4.98				5.00		99.6	70-130			
1,1,1-Trichloroethane	4.85				5.00		97.0	70-130			
1,1,2-Trichloroethane	5.00				5.00		100	70-130			
Trichloroethylene	4.98				5.00		99.5	70-130			
Trichlorofluoromethane (Freon 11)	4.97				5.00		99.4	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.94				5.00		98.9	70-130			
1,2,4-Trimethylbenzene	5.14				5.00		103	70-130			
1,3,5-Trimethylbenzene	5.08				5.00		102	70-130			
Vinyl Chloride	5.25				5.00		105	70-130			
m&p-Xylene	10.1				10.0		101	70-130			
o-Xylene	5.02				5.00		100	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*7.84*				*8.00*		*98.0*	*70-130*			

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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.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-14A in Air	
Benzene	AIHA,FL,NY
Bromomethane	AIHA,FL,NY
Carbon Tetrachloride	AIHA,FL,NY
Chlorobenzene	AIHA,FL,NY
Chloroethane	AIHA,FL,NY
Chloroform	AIHA,FL,NY
Chloromethane	AIHA,FL,NY
1,2-Dibromoethane (EDB)	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
trans-1,3-Dichloropropene	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
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012

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

AIR SAMPLE CHAIN OF CUSTODY RECORD

39 SPRUCE ST
EAST LONGMEADOW, MA 01028

12H0853

Company Name: ARCADIS
Address: 300 Metro Center Blvd. Warwick RI
Attention: Donna Pallister
Project Location: Providence, RI Springfield St.
Sampled By: A. DaSilva

Telephone: (401) 738-3887
Project # WK012152.0008
Client PO # —

DATA DELIVERY (check one):
☐ FAX ☒ EMAIL ☒ WEBSITE CLIENT
Fax # :
Email: donna.pallister@arcadis-us.com
Format: ☒ EXCEL ☒ PDF ☐ GIS KEY ☐ OTHER

Proposal Provided? (For Billing purposes)
☐ yes _____ proposal date

Field ID	Sample Description	Media	Lab #	Date Sampled Start Date Time	Date Sampled Stop Date Time	ONLY USE WHEN USING PUMPS: Total Minutes Sampled	Flow Rate M^3/Min. or L / Min.	Volume Liters or M^3	Matrix Code*	ANALYSIS REQUESTED: TO-14	" Hg: Initial pressure	" Hg: Final Pressure	" Hg: Lab Receipt Pressure	Summa Canister ID	Flow Controller ID
01	Middle School Back	TB		8/23/12	11:15				SS	X					
02	Middle School Front	TB			13:10				SS	X					
03	Elementary School #1	TB			11:41				SS	X					
04	Elementary School #2	TB			11:54				SS	X					

Please fill out completely, sign, da and retain the yellow copy for your record
Summa canisters a flow controllers mu returned within 14 d of receipt or rental f will apply.
Summa canisters w retained for a minimum of 14 days after sampling date prior to cleaning.

Page 18 of 19 CRWPDF87

Laboratory Comments:

CLIENT COMMENTS:

	Date/Time
Relinquished by: (signature)	8/23/12 17:11
Received by: (signature)	8/24/12 11:52
Relinquished by: (signature)	8/24/12 17:55
Received by: (signature) 3-6	8/24/12 17:55

Turnaround **
☐ 7-Day
☐ 10-Day
☒ Other SIP
RUSH *
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
*Approval Required

Special Requirements
Regulations: Rhode Island
Data Enhancement/RCP? ☐ Y ☐ N
Enhanced Data Package ☐ Y ☐ N
(Surchage Applies)
Required Detection Limits:
Other:

***Matrix Code:**
SG= SOIL GAS
IA= INDOOR AIR
AMB=AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = other

****Media Codes:**
S=summa can
TB=tedlar bag
P=PUF
T=tube
F= filter
C=cassette
O = Other

** TURNAROUNDTIME 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.

AIHA, NELAC & WBE/DBE Certified

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AIR Only Receipt Checklist

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

CLIENT NAME: ARCADIS RECEIVED BY: WF DATE: 8/24/12

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: 14

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

Containers received at Con-Test

	# of Containers	Types (Size, Duration)
Summa Cans		
Tedlar Bags	4	
Tubes		
Regulators		
Restrictors		
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:

con-test® ANALYTICAL LABORATORY
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August 29, 2012

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

Project Location: Springfield St., Providence, RI
Client Job Number:
Project Number: WK012152.0008
Laboratory Work Order Number: 12H0763

Enclosed are results of analyses for samples received by the laboratory on August 22, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lisa A. Worthington
Project Manager

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

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

REPORT DATE: 8/29/2012

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0008

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12H0763

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, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-7	12H0763-01	Ground Water		SW-846 8260C	
MW-6	12H0763-02	Ground Water		SW-846 8260C	
ATC-4	12H0763-03	Ground Water		SW-846 8260C	
MW-8	12H0763-04	Ground Water		SW-846 8260C	
ATC-1	12H0763-05	Ground Water		SW-846 8260C	
Trip Blank	12H0763-06	Trip Blank Water		SW-846 8260C	

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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:

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

2-Hexanone (MBK), Acetone, trans-1,4-Dichloro-2-butene

12H0763-01[MW-7], 12H0763-02[MW-6], 12H0763-03[ATC-4], 12H0763-04[MW-8], 12H0763-05[ATC-1], 12H0763-06[Trip Blank], B057534-BLK1, B057534-BS1, B057534-BSD1

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:

1,2-Dibromo-3-chloropropane (DBCP)

B057534-BS1

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:

1,2-Dibromo-3-chloropropane (DBCP), 2,2-Dichloropropane, tert-Butyl Alcohol (TBA)

12H0763-01[MW-7], 12H0763-02[MW-6], 12H0763-03[ATC-4], 12H0763-04[MW-8], 12H0763-05[ATC-1], 12H0763-06[Trip Blank], B057534-BLK1, B057534-BS1, B057534-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)

12H0763-01[MW-7], 12H0763-02[MW-6], 12H0763-03[ATC-4], 12H0763-04[MW-8], 12H0763-05[ATC-1], 12H0763-06[Trip Blank], B057534-BLK1, B057534-BS1, B057534-BSD1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those 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.

Michael A. Erickson
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-7 | Sampled: 8/21/2012 09:55

Sample ID: 12H0763-01

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	L-04	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-7 | Sampled: 8/21/2012 09:55

Sample ID: 12H0763-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:22	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	107	70-130		8/24/12 3:22
Toluene-d8	101	70-130		8/24/12 3:22
4-Bromofluorobenzene	103	70-130		8/24/12 3:22

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-6 | Sampled: 8/21/2012 10:25

Sample ID: 12H0763-02

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	L-04	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Chloroform	2.2	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-6 | Sampled: 8/21/2012 10:25

Sample ID: 12H0763-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 3:48	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	105	70-130		8/24/12 3:48
Toluene-d8	102	70-130		8/24/12 3:48
4-Bromofluorobenzene	98.5	70-130		8/24/12 3:48

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: ATC-4 | Sampled: 8/21/2012 11:22

Sample ID: 12H0763-03

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	L-04	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: ATC-4 | Sampled: 8/21/2012 11:22

Sample ID: 12H0763-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:14	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	102	70-130		8/24/12 4:14
Toluene-d8	103	70-130		8/24/12 4:14
4-Bromofluorobenzene	99.5	70-130		8/24/12 4:14

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-8 | Sampled: 8/21/2012 12:07

Sample ID: 12H0763-04

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	L-04	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: MW-8 | Sampled: 8/21/2012 12:07

Sample ID: 12H0763-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 4:40	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	107	70-130		8/24/12 4:40
Toluene-d8	100	70-130		8/24/12 4:40
4-Bromofluorobenzene	99.8	70-130		8/24/12 4:40

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: ATC-1 | Sampled: 8/21/2012 13:04

Sample ID: 12H0763-05

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	L-04	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: ATC-1 | Sampled: 8/21/2012 13:04

Sample ID: 12H0763-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 5:06	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	104	70-130		8/24/12 5:06
Toluene-d8	101	70-130		8/24/12 5:06
4-Bromofluorobenzene	100	70-130		8/24/12 5:06

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: Trip Blank | Sampled: 8/21/2012 00:00

Sample ID: 12H0763-06

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	ND	50	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Bromomethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05, V-16	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Chloromethane	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1	V-05	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Springfield St., Providence, RI | Sample Description: | Work Order: 12H0763

Date Received: 8/22/2012

Field Sample #: Trip Blank | Sampled: 8/21/2012 00:00

Sample ID: 12H0763-06

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
2-Hexanone (MBK)	ND	10	µg/L	1	L-04	SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	8/23/12	8/24/12 2:05	EEH

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	105	70-130		8/24/12 2:05
Toluene-d8	100	70-130		8/24/12 2:05
4-Bromofluorobenzene	100	70-130		8/24/12 2:05

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
12H0763-01 [MW-7]	B057534	5	5.00	08/23/12
12H0763-02 [MW-6]	B057534	5	5.00	08/23/12
12H0763-03 [ATC-4]	B057534	5	5.00	08/23/12
12H0763-04 [MW-8]	B057534	5	5.00	08/23/12
12H0763-05 [ATC-1]	B057534	5	5.00	08/23/12
12H0763-06 [Trip Blank]	B057534	5	5.00	08/23/12

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B057534 - SW-846 5030B										
Blank (B057534-BLK1)				Prepared: 08/23/12 Analyzed: 08/24/12						
Acetone	ND	50	µg/L							L-04
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	1.0	µg/L							
Bromomethane	ND	5.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							V-05, V-16
n-Butylbenzene	ND	1.0	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	5.0	µg/L							
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							V-05
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							L-04
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							V-05
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	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							L-04
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							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result		%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B057534 - SW-846 5030B												
Blank (B057534-BLK1)				Prepared: 08/23/12 Analyzed: 08/24/12								
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									
Toluene	ND	1.0	µg/L									
1,2,3-Trichlorobenzene	ND	5.0	µg/L									
1,2,4-Trichlorobenzene	ND	1.0	µg/L									
1,3,5-Trichlorobenzene	ND	1.0	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	*25.8*		µg/L	25.0			103	70-130				
Surrogate: Toluene-d8	*25.4*		µg/L	25.0			102	70-130				
Surrogate: 4-Bromofluorobenzene	*25.0*		µg/L	25.0			99.8	70-130				
LCS (B057534-BS1)				Prepared & Analyzed: 08/23/12								
Acetone	61.6	50	µg/L	100			**61.6**	* 70-160			L-04	†
Acrylonitrile	7.04	5.0	µg/L	10.0			70.4	70-130				
tert-Amyl Methyl Ether (TAME)	8.08	0.50	µg/L	10.0			80.8	70-130				
Benzene	9.16	1.0	µg/L	10.0			91.6	70-130				
Bromobenzene	8.97	1.0	µg/L	10.0			89.7	70-130				
Bromochloromethane	9.41	1.0	µg/L	10.0			94.1	70-130				
Bromodichloromethane	9.09	0.50	µg/L	10.0			90.9	70-130				
Bromoform	7.94	1.0	µg/L	10.0			79.4	70-130				
Bromomethane	4.26	5.0	µg/L	10.0			42.6	40-160				†
2-Butanone (MEK)	66.1	20	µg/L	100			66.1	40-160				†
tert-Butyl Alcohol (TBA)	49.2	20	µg/L	100			49.2	40-160			V-05, V-16	†
n-Butylbenzene	8.65	1.0	µg/L	10.0			86.5	70-130				
sec-Butylbenzene	8.70	1.0	µg/L	10.0			87.0	70-130				
tert-Butylbenzene	9.04	1.0	µg/L	10.0			90.4	70-130				
tert-Butyl Ethyl Ether (TBEE)	8.85	0.50	µg/L	10.0			88.5	70-130				
Carbon Disulfide	10.2	2.0	µg/L	10.0			102	70-130				
Carbon Tetrachloride	9.42	5.0	µg/L	10.0			94.2	70-130				
Chlorobenzene	8.81	1.0	µg/L	10.0			88.1	70-130				
Chlorodibromomethane	8.64	0.50	µg/L	10.0			86.4	70-130				
Chloroethane	8.98	2.0	µg/L	10.0			89.8	70-130				
Chloroform	9.41	2.0	µg/L	10.0			94.1	70-130				
Chloromethane	5.57	5.0	µg/L	10.0			55.7	40-160				†
2-Chlorotoluene	9.43	1.0	µg/L	10.0			94.3	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B057534 - SW-846 5030B												
LCS (B057534-BS1)				Prepared & Analyzed: 08/23/12								
4-Chlorotoluene	8.92	1.0	µg/L	10.0		89.2		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	6.77	5.0	µg/L	10.0		**67.7**	*	70-130			L-07, V-05	
1,2-Dibromoethane (EDB)	8.79	0.50	µg/L	10.0		87.9		70-130				
Dibromomethane	8.58	1.0	µg/L	10.0		85.8		70-130				
1,2-Dichlorobenzene	9.01	1.0	µg/L	10.0		90.1		70-130				
1,3-Dichlorobenzene	8.84	1.0	µg/L	10.0		88.4		70-130				
1,4-Dichlorobenzene	9.35	1.0	µg/L	10.0		93.5		70-130				
trans-1,4-Dichloro-2-butene	5.63	2.0	µg/L	10.0		**56.3**	*	70-130			L-04	
Dichlorodifluoromethane (Freon 12)	4.18	2.0	µg/L	10.0		41.8		40-160				†
1,1-Dichloroethane	9.67	1.0	µg/L	10.0		96.7		70-130				
1,2-Dichloroethane	9.04	1.0	µg/L	10.0		90.4		70-130				
1,1-Dichloroethylene	8.99	1.0	µg/L	10.0		89.9		70-130				
cis-1,2-Dichloroethylene	9.19	1.0	µg/L	10.0		91.9		70-130				
trans-1,2-Dichloroethylene	8.87	1.0	µg/L	10.0		88.7		70-130				
1,2-Dichloropropane	8.76	1.0	µg/L	10.0		87.6		70-130				
1,3-Dichloropropane	8.62	0.50	µg/L	10.0		86.2		70-130				
2,2-Dichloropropane	7.48	1.0	µg/L	10.0		74.8		40-130			V-05	†
1,1-Dichloropropene	9.09	2.0	µg/L	10.0		90.9		70-130				
cis-1,3-Dichloropropene	8.59	0.50	µg/L	10.0		85.9		70-130				
trans-1,3-Dichloropropene	8.70	0.50	µg/L	10.0		87.0		70-130				
Diethyl Ether	7.37	2.0	µg/L	10.0		73.7		70-130				
Diisopropyl Ether (DIPE)	9.24	0.50	µg/L	10.0		92.4		70-130				
1,4-Dioxane	53.8	50	µg/L	100		53.8		40-130			V-16	†
Ethylbenzene	9.15	1.0	µg/L	10.0		91.5		70-130				
Hexachlorobutadiene	8.52	0.50	µg/L	10.0		85.2		70-130				
2-Hexanone (MBK)	69.7	10	µg/L	100		**69.7**	*	70-160			L-04	†
Isopropylbenzene (Cumene)	8.97	1.0	µg/L	10.0		89.7		70-130				
p-Isopropyltoluene (p-Cymene)	9.31	1.0	µg/L	10.0		93.1		70-130				
Methyl tert-Butyl Ether (MTBE)	9.31	1.0	µg/L	10.0		93.1		70-130				
Methylene Chloride	7.67	5.0	µg/L	10.0		76.7		70-130				
4-Methyl-2-pentanone (MIBK)	71.9	10	µg/L	100		71.9		70-160				†
Naphthalene	7.64	2.0	µg/L	10.0		76.4		40-130				†
n-Propylbenzene	8.47	1.0	µg/L	10.0		84.7		70-130				
Styrene	8.89	1.0	µg/L	10.0		88.9		70-130				
1,1,1,2-Tetrachloroethane	9.02	1.0	µg/L	10.0		90.2		70-130				
1,1,2,2-Tetrachloroethane	7.98	0.50	µg/L	10.0		79.8		70-130				
Tetrachloroethylene	9.34	1.0	µg/L	10.0		93.4		70-130				
Tetrahydrofuran	7.55	10	µg/L	10.0		75.5		70-130				
Toluene	9.43	1.0	µg/L	10.0		94.3		70-130				
1,2,3-Trichlorobenzene	8.10	5.0	µg/L	10.0		81.0		70-130				
1,2,4-Trichlorobenzene	8.65	1.0	µg/L	10.0		86.5		70-130				
1,3,5-Trichlorobenzene	8.01	1.0	µg/L	10.0		80.1		70-130				
1,1,1-Trichloroethane	9.61	1.0	µg/L	10.0		96.1		70-130				
1,1,2-Trichloroethane	8.76	1.0	µg/L	10.0		87.6		70-130				
Trichloroethylene	9.14	1.0	µg/L	10.0		91.4		70-130				
Trichlorofluoromethane (Freon 11)	8.18	2.0	µg/L	10.0		81.8		70-130				
1,2,3-Trichloropropane	7.79	2.0	µg/L	10.0		77.9		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.15	1.0	µg/L	10.0		81.5		70-130				
1,2,4-Trimethylbenzene	8.81	1.0	µg/L	10.0		88.1		70-130				
1,3,5-Trimethylbenzene	8.52	1.0	µg/L	10.0		85.2		70-130				
Vinyl Chloride	7.03	2.0	µg/L	10.0		70.3		40-160				†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B057534 - SW-846 5030B												
LCS (B057534-BS1)				Prepared & Analyzed: 08/23/12								
m+p Xylene	17.8	2.0	µg/L	20.0		89.0		70-130				
o-Xylene	8.94	1.0	µg/L	10.0		89.4		70-130				
Surrogate: 1,2-Dichloroethane-d4	*26.3*		µg/L	25.0		105		70-130				
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101		70-130				
Surrogate: 4-Bromofluorobenzene	*24.7*		µg/L	25.0		98.8		70-130				
LCS Dup (B057534-BSD1)				Prepared: 08/23/12 Analyzed: 08/24/12								
Acetone	58.5	50	µg/L	100		**58.5**	*	70-160	5.15	25	L-04	†
Acrylonitrile	7.20	5.0	µg/L	10.0		72.0		70-130	2.25	25		
tert-Amyl Methyl Ether (TAME)	8.34	0.50	µg/L	10.0		83.4		70-130	3.17	25		
Benzene	9.12	1.0	µg/L	10.0		91.2		70-130	0.438	25		
Bromobenzene	8.97	1.0	µg/L	10.0		89.7		70-130	0.00	25		
Bromochloromethane	9.32	1.0	µg/L	10.0		93.2		70-130	0.961	25		
Bromodichloromethane	8.73	0.50	µg/L	10.0		87.3		70-130	4.04	25		
Bromoform	8.09	1.0	µg/L	10.0		80.9		70-130	1.87	25		
Bromomethane	4.42	5.0	µg/L	10.0		44.2		40-160	3.69	25		†
2-Butanone (MEK)	62.4	20	µg/L	100		62.4		40-160	5.74	25		†
tert-Butyl Alcohol (TBA)	48.0	20	µg/L	100		48.0		40-160	2.43	25	V-05, V-16	†
n-Butylbenzene	8.90	1.0	µg/L	10.0		89.0		70-130	2.85	25		
sec-Butylbenzene	8.75	1.0	µg/L	10.0		87.5		70-130	0.573	25		
tert-Butylbenzene	8.88	1.0	µg/L	10.0		88.8		70-130	1.79	25		
tert-Butyl Ethyl Ether (TBEE)	8.71	0.50	µg/L	10.0		87.1		70-130	1.59	25		
Carbon Disulfide	9.86	2.0	µg/L	10.0		98.6		70-130	3.88	25		
Carbon Tetrachloride	9.32	5.0	µg/L	10.0		93.2		70-130	1.07	25		
Chlorobenzene	8.93	1.0	µg/L	10.0		89.3		70-130	1.35	25		
Chlorodibromomethane	8.78	0.50	µg/L	10.0		87.8		70-130	1.61	25		
Chloroethane	8.77	2.0	µg/L	10.0		87.7		70-130	2.37	25		
Chloroform	9.74	2.0	µg/L	10.0		97.4		70-130	3.45	25		
Chloromethane	5.90	5.0	µg/L	10.0		59.0		40-160	5.75	25		†
2-Chlorotoluene	9.06	1.0	µg/L	10.0		90.6		70-130	4.00	25		
4-Chlorotoluene	8.93	1.0	µg/L	10.0		89.3		70-130	0.112	25		
1,2-Dibromo-3-chloropropane (DBCP)	7.03	5.0	µg/L	10.0		70.3		70-130	3.77	25	V-05	
1,2-Dibromoethane (EDB)	8.83	0.50	µg/L	10.0		88.3		70-130	0.454	25		
Dibromomethane	8.76	1.0	µg/L	10.0		87.6		70-130	2.08	25		
1,2-Dichlorobenzene	8.84	1.0	µg/L	10.0		88.4		70-130	1.90	25		
1,3-Dichlorobenzene	8.88	1.0	µg/L	10.0		88.8		70-130	0.451	25		
1,4-Dichlorobenzene	9.20	1.0	µg/L	10.0		92.0		70-130	1.62	25		
trans-1,4-Dichloro-2-butene	5.54	2.0	µg/L	10.0		**55.4**	*	70-130	1.61	25	L-04	
Dichlorodifluoromethane (Freon 12)	4.37	2.0	µg/L	10.0		43.7		40-160	4.44	25		†
1,1-Dichloroethane	9.55	1.0	µg/L	10.0		95.5		70-130	1.25	25		
1,2-Dichloroethane	9.35	1.0	µg/L	10.0		93.5		70-130	3.37	25		
1,1-Dichloroethylene	9.17	1.0	µg/L	10.0		91.7		70-130	1.98	25		
cis-1,2-Dichloroethylene	9.65	1.0	µg/L	10.0		96.5		70-130	4.88	25		
trans-1,2-Dichloroethylene	8.91	1.0	µg/L	10.0		89.1		70-130	0.450	25		
1,2-Dichloropropane	8.89	1.0	µg/L	10.0		88.9		70-130	1.47	25		
1,3-Dichloropropane	8.77	0.50	µg/L	10.0		87.7		70-130	1.73	25		
2,2-Dichloropropane	7.17	1.0	µg/L	10.0		71.7		40-130	4.23	25	V-05	†
1,1-Dichloropropene	9.31	2.0	µg/L	10.0		93.1		70-130	2.39	25		
cis-1,3-Dichloropropene	8.65	0.50	µg/L	10.0		86.5		70-130	0.696	25		
trans-1,3-Dichloropropene	8.82	0.50	µg/L	10.0		88.2		70-130	1.37	25		
Diethyl Ether	7.45	2.0	µg/L	10.0		74.5		70-130	1.08	25		
Diisopropyl Ether (DIPE)	9.50	0.50	µg/L	10.0		95.0		70-130	2.77	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B057534 - SW-846 5030B												
LCS Dup (B057534-BSD1)				Prepared: 08/23/12 Analyzed: 08/24/12								
1,4-Dioxane	53.4	50	µg/L	100		53.4		40-130	0.709	50	V-16	† ‡
Ethylbenzene	9.02	1.0	µg/L	10.0		90.2		70-130	1.43	25		
Hexachlorobutadiene	8.70	0.50	µg/L	10.0		87.0		70-130	2.09	25		
2-Hexanone (MBK)	65.7	10	µg/L	100		**65.7**	*	70-160	5.85	25	L-04	†
Isopropylbenzene (Cumene)	8.99	1.0	µg/L	10.0		89.9		70-130	0.223	25		
p-Isopropyltoluene (p-Cymene)	9.26	1.0	µg/L	10.0		92.6		70-130	0.539	25		
Methyl tert-Butyl Ether (MTBE)	9.19	1.0	µg/L	10.0		91.9		70-130	1.30	25		
Methylene Chloride	8.29	5.0	µg/L	10.0		82.9		70-130	7.77	25		
4-Methyl-2-pentanone (MIBK)	71.8	10	µg/L	100		71.8		70-160	0.223	25		†
Naphthalene	7.61	2.0	µg/L	10.0		76.1		40-130	0.393	25		†
n-Propylbenzene	8.50	1.0	µg/L	10.0		85.0		70-130	0.354	25		
Styrene	9.14	1.0	µg/L	10.0		91.4		70-130	2.77	25		
1,1,1,2-Tetrachloroethane	9.45	1.0	µg/L	10.0		94.5		70-130	4.66	25		
1,1,2,2-Tetrachloroethane	7.86	0.50	µg/L	10.0		78.6		70-130	1.52	25		
Tetrachloroethylene	9.07	1.0	µg/L	10.0		90.7		70-130	2.93	25		
Tetrahydrofuran	8.61	10	µg/L	10.0		86.1		70-130	13.1	25		
Toluene	9.42	1.0	µg/L	10.0		94.2		70-130	0.106	25		
1,2,3-Trichlorobenzene	8.33	5.0	µg/L	10.0		83.3		70-130	2.80	25		
1,2,4-Trichlorobenzene	8.90	1.0	µg/L	10.0		89.0		70-130	2.85	25		
1,3,5-Trichlorobenzene	8.25	1.0	µg/L	10.0		82.5		70-130	2.95	25		
1,1,1-Trichloroethane	9.62	1.0	µg/L	10.0		96.2		70-130	0.104	25		
1,1,2-Trichloroethane	8.96	1.0	µg/L	10.0		89.6		70-130	2.26	25		
Trichloroethylene	9.11	1.0	µg/L	10.0		91.1		70-130	0.329	25		
Trichlorofluoromethane (Freon 11)	8.39	2.0	µg/L	10.0		83.9		70-130	2.53	25		
1,2,3-Trichloropropane	7.83	2.0	µg/L	10.0		78.3		70-130	0.512	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.38	1.0	µg/L	10.0		83.8		70-130	2.78	25		
1,2,4-Trimethylbenzene	8.91	1.0	µg/L	10.0		89.1		70-130	1.13	25		
1,3,5-Trimethylbenzene	8.68	1.0	µg/L	10.0		86.8		70-130	1.86	25		
Vinyl Chloride	6.85	2.0	µg/L	10.0		68.5		40-160	2.59	25		†
m+p Xylene	17.9	2.0	µg/L	20.0		89.6		70-130	0.784	25		
o-Xylene	8.97	1.0	µg/L	10.0		89.7		70-130	0.335	25		
Surrogate: 1,2-Dichloroethane-d4	*26.2*		µg/L	25.0		105		70-130				
Surrogate: Toluene-d8	*25.2*		µg/L	25.0		101		70-130				
Surrogate: 4-Bromofluorobenzene	*25.4*		µg/L	25.0		102		70-130				

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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-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
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.
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-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

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CERTIFICATIONS

Certified Analyses included in this Report

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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Methylene Chloride	CT,NH,NY,ME,RI
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,RI
Tetrachloroethylene	CT,NH,NY,ME,RI
Toluene	CT,NH,NY,ME,RI
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,RI
1,1,2-Trichloroethane	CT,NH,NY,ME,RI
Trichloroethylene	CT,NH,NY,ME,RI
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,RI
1,2,3-Trichloropropane	NH,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME,RI
m+p Xylene	CT,NH,NY,ME,RI
o-Xylene	CT,NH,NY,ME,RI

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2013
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012

12H0763

CHAIN OF CUSTODY RECORD

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EAST LONGMEADOW, MA 01028

Company Name: ARCADIS
Address: 300 Metro Center Blvd.
Warwick, RI
Attention: Donna Pallister
Project Location: Springfield St School, Providence
Sampled By: A. DaSilva

Telephone: (401) 738-3887
Project # WK012152.0008
Client PO # —

DATA DELIVERY (check one):
☐ FAX ☒ EMAIL ☒ WEBSITE CLIENT
Fax # :
Email: donna.pallister@arcadis-us.com
Format: ☐ EXCEL ☐ PDF ☐ GIS KEY
☐ OTHER

Proposal Provided? (For Billing purposes)
☐ yes _____ proposal date

State Form Required?
☐ yes ☐ no

Field ID	Sample Description	Lab #	Date Sampled Start Date/Time	Date Sampled Stop Date/Time	Composite	Grab	*Matrix Code	Conc. Code	VOC 8260	# of containers	**Preservative	~Cont.Code
	MW-7	-01	8/21/12	9:55		X	GW		X	18		
	MW-6	-02		10:25		X	GW		X			
	ATC-4	-03		11:22		X	GW		X			
	MW-8	-04		12:07		X	GW		X			
	ATC-1	-05		13:04		X	GW		X			
	Trip Blank	-06	—	—					X			

ANALYSIS REQUESTED

~Cont. Co
A=amber g
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

Client Comments:

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

Relinquished by: (signature) (to ref)	Date/Time: 8/21/12	13:50
Received by: (signature)	Date/Time: 8/22/12	10
Relinquished by: (signature)	Date/Time: 8/22/12	425
Received by: (signature) 35C	Date/Time: 8-22-12	16:25

Turnaround **
☐ 7-Day
☐ 10-Day
☒ Other 5P
RUSH *
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
* Require lab approval

Detection Limit Requirements
Regulations? _____
Data Enhancement Project/RCP? ☐ Y ☐ N
Special Requirements or DL's: Rhode Island

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

****Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
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.

AIHA, NELAC & WBE/DBE Certified

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East Longmeadow, MA. 01028
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Sample Receipt Checklist

CLIENT NAME: Arcadis RECEIVED BY: KKH DATE: 8-22-12

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 3.5C

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: _____

8) **Do all samples have the proper Acid pH:** Yes No (N/A) _____

9) **Do all samples have the proper Base pH:** Yes No (N/A) _____

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes No (N/A)

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	18	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 18 # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

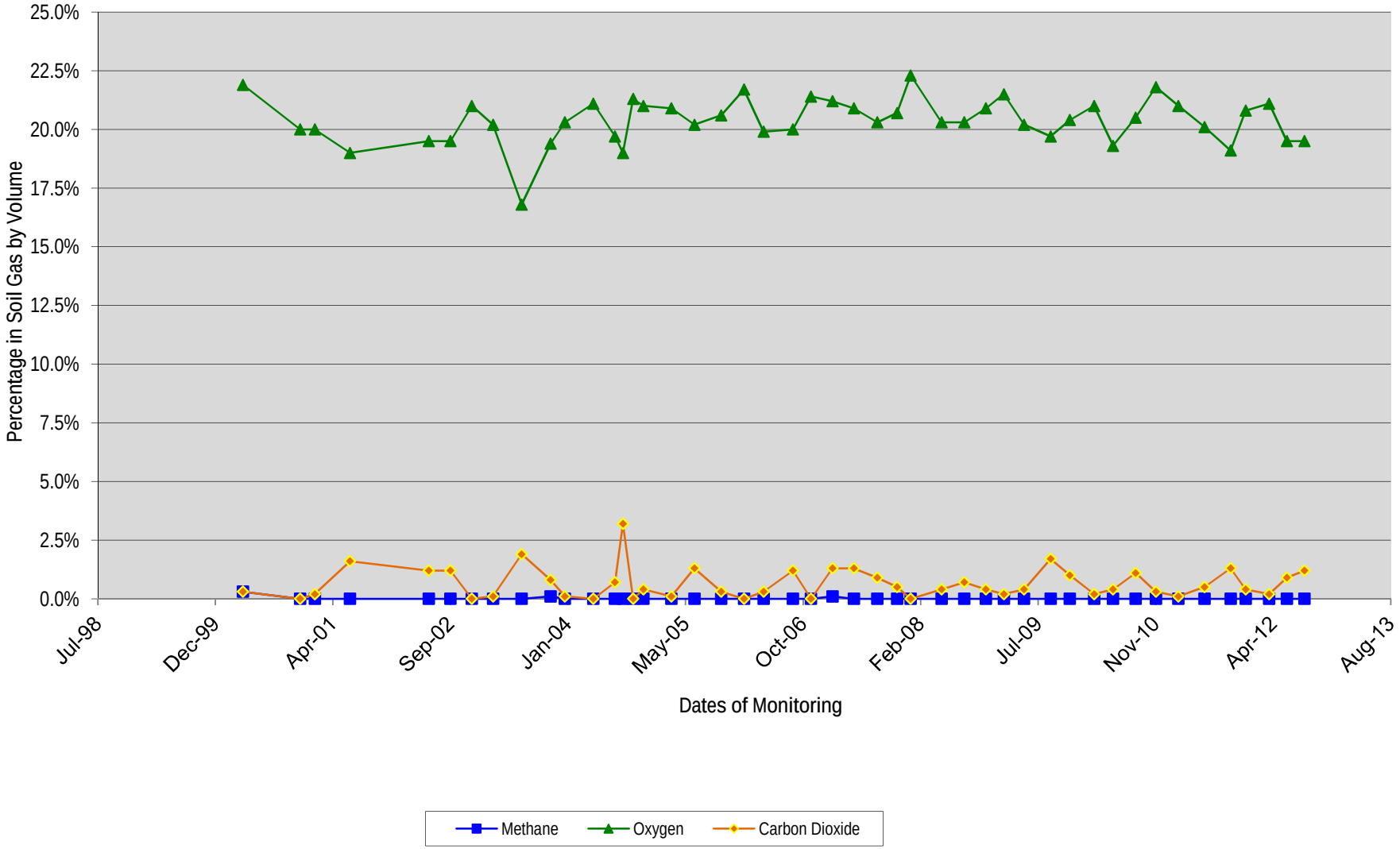
Time and Date Frozen:

ARCADIS

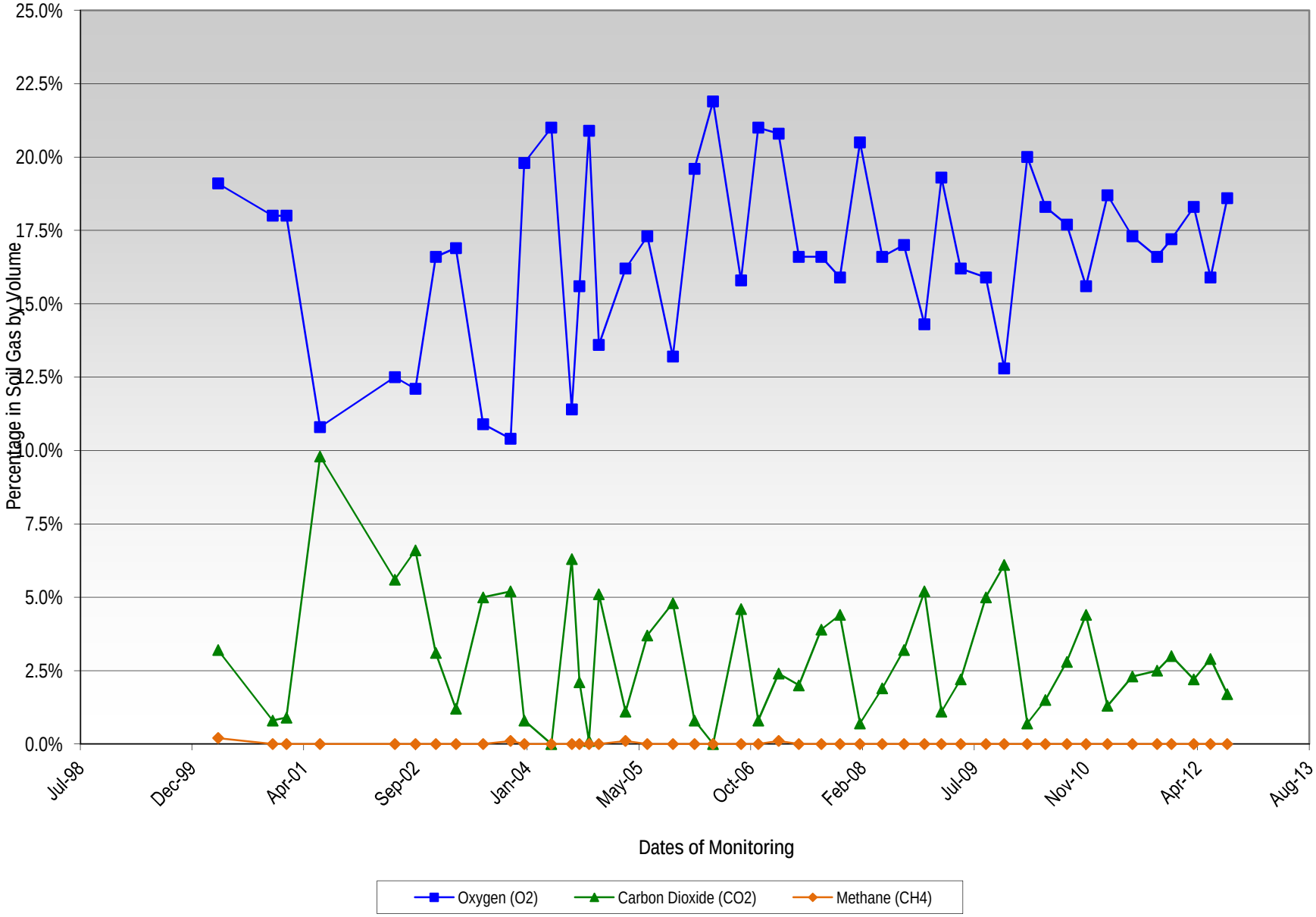
Appendix C

Soil Gas Parameter Graphs

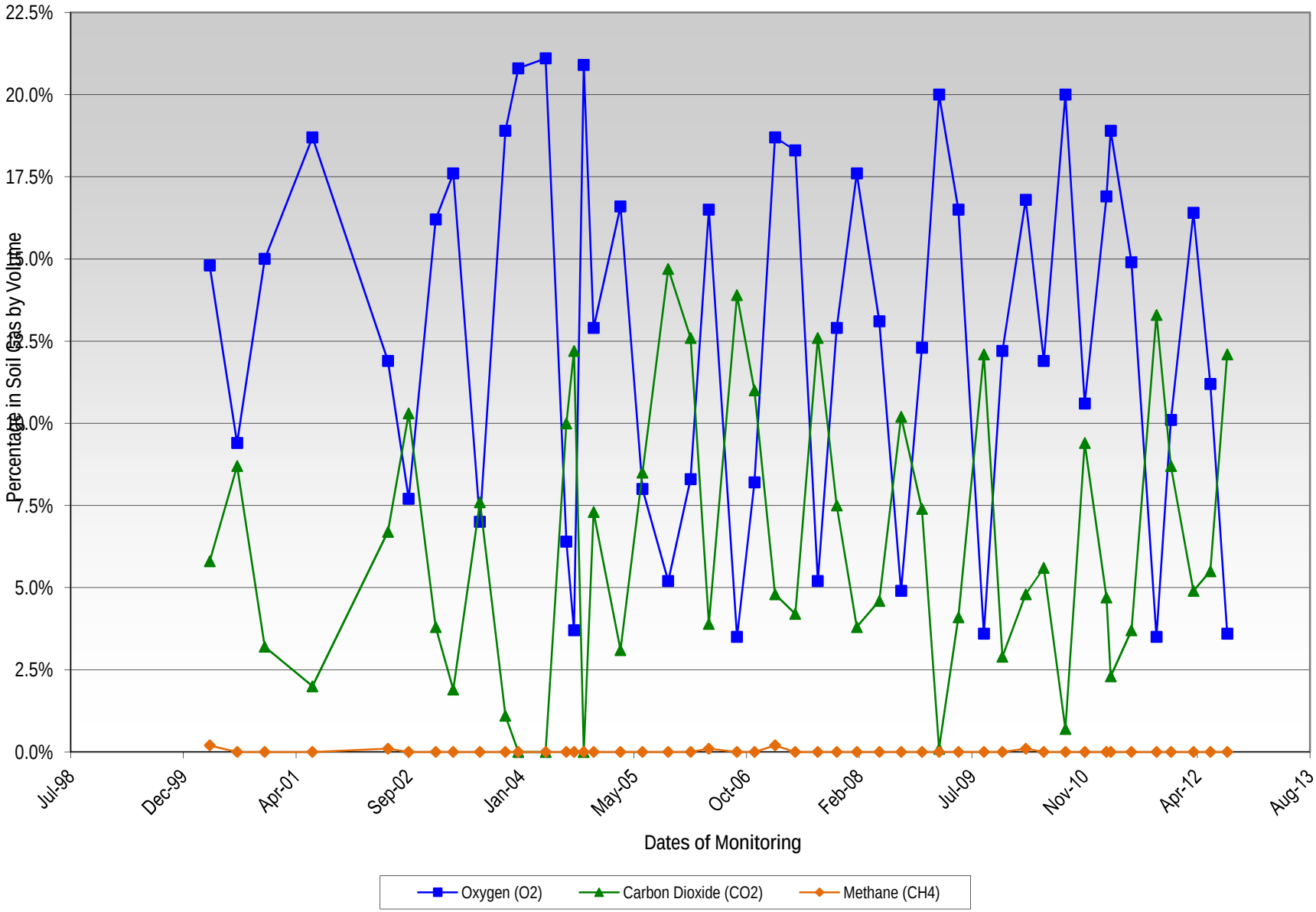
Soil Gas Well EPL1
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



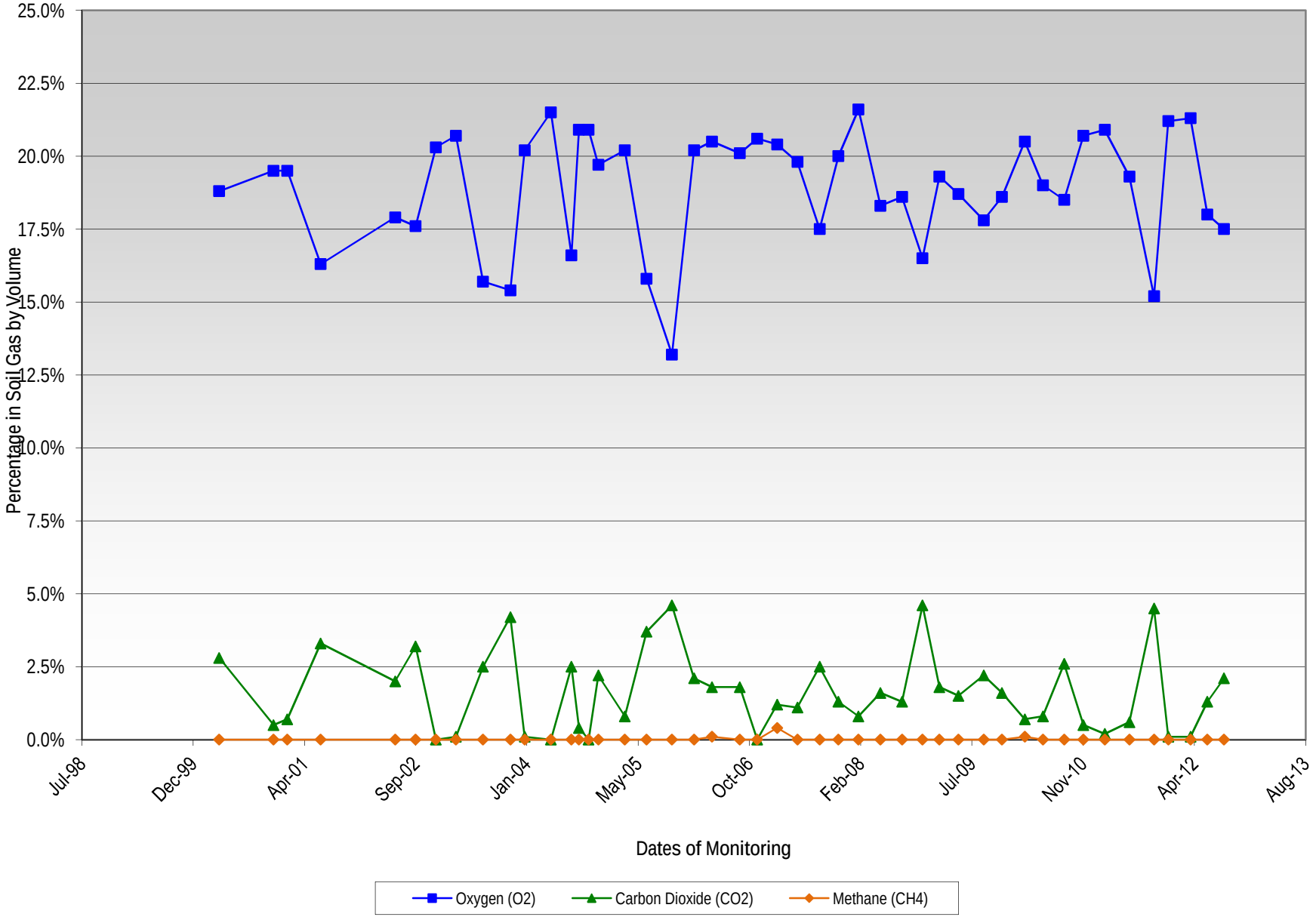
Soil Gas Well EPL4
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



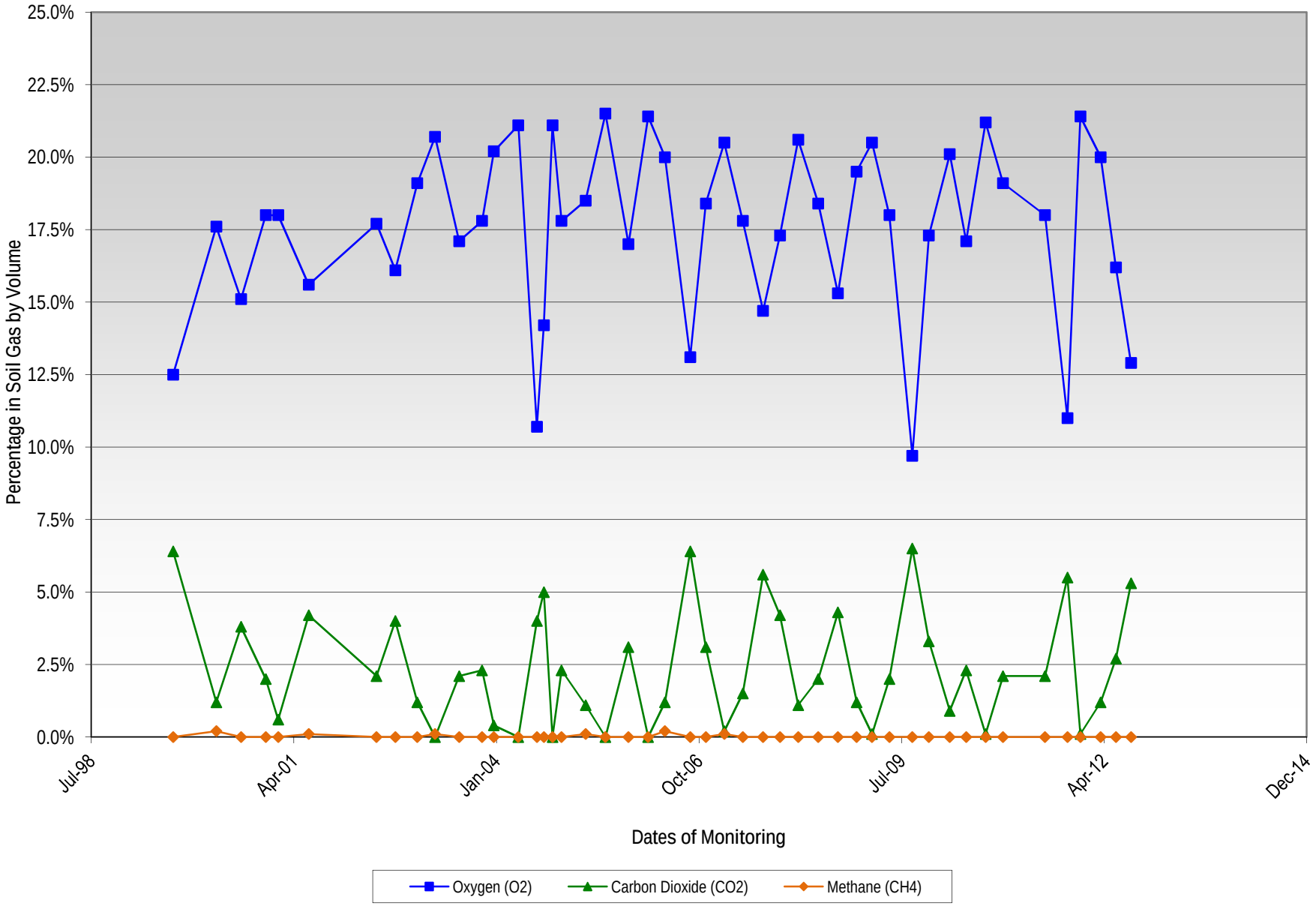
Soil Gas Well MPL5
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



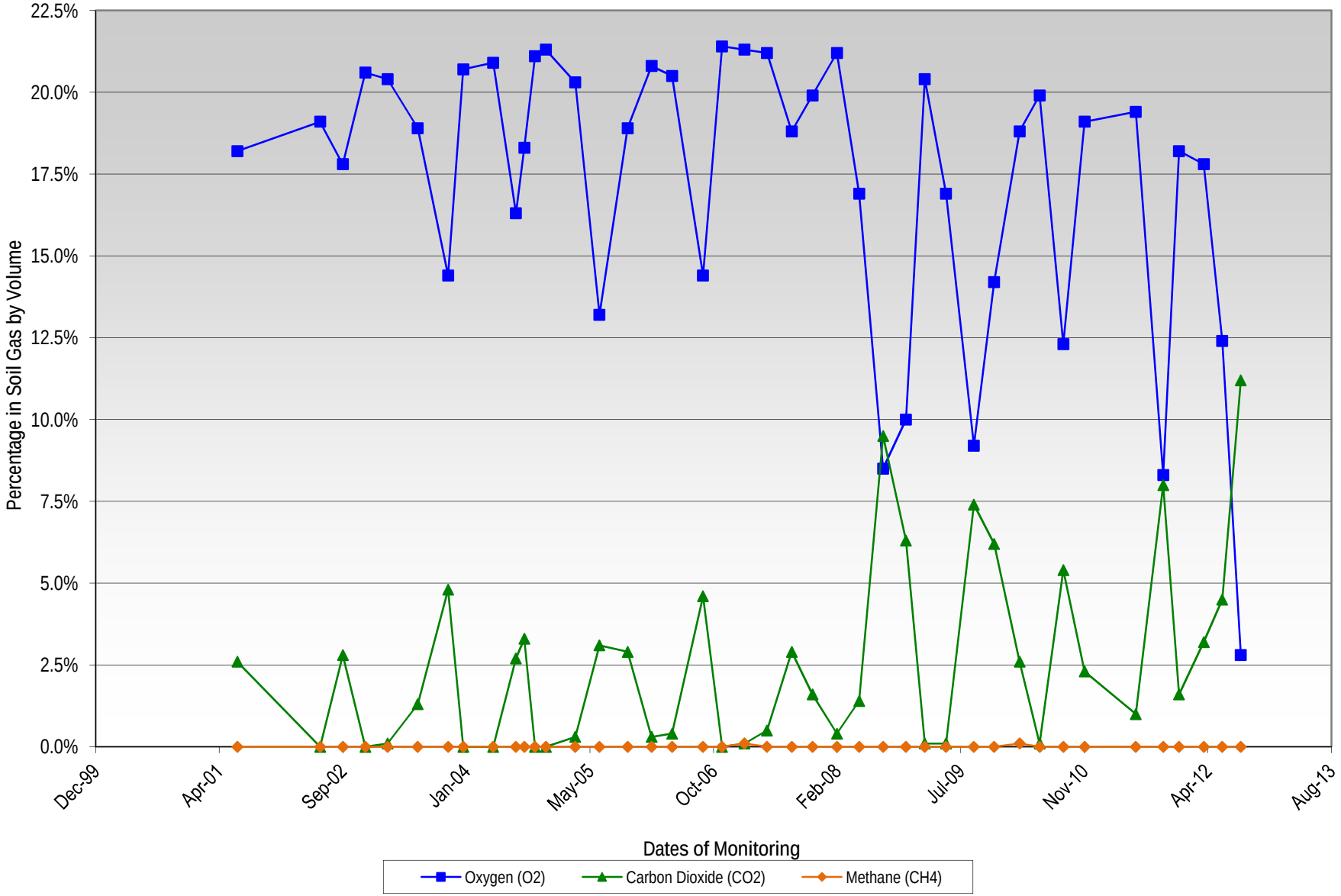
Soil Gas Well MG2
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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



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



H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends-8-2012.xlsm\WB15

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