

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

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Subject:

June 2015 Quarterly Monitoring Report for Springfield Street School Complex

ENVIRONMENTAL

Dear Mr. Crawford:

Date:
July 16, 2015

ARCADIS US, Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between June 16th, 2015 and June 17th, 2015. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

Contact:
Donna H. Pallister, PE

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

Our ref:
WK012152.0010

COVER MONITORING

ARCADIS conducted a visual survey of the site on June 16th, 2015 for evidence of significant soil cover erosion, or for any areas of settling and depression.

The orange indicator barrier was not observed during the inspection, and there was no evidence of significant settling or cover erosion in need of repair.

SUB-SLAB VENTILATION SYSTEM

Field Monitoring

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on July 16, 2015. The two elementary school blowers and one of the two middle school blowers were operating normally upon arrival. The second middle school blower, middle school back, was not operating normally due to an unknown issue. ARCADIS previously determined that the motor and blower would need repair.

Samples of influent and effluent (before and after the carbon canisters) air were collected at each functioning blower and screened for methane, carbon dioxide, oxygen, carbon monoxide, hydrogen sulfide, and organic vapors using a Landtec GEM2000 Plus and a MiniRae 2000. Results of screening are provided on Table 1. Methane, carbon monoxide, hydrogen sulfide and organic vapors were not detected in any of the samples. Carbon dioxide was detected at concentrations ranging from 0.2% to 0.5%; all the sample concentrations were greater than the RAWP Action Level of 1000 ppm (0.1%).

Soil Gas Laboratory Results

Sub-slab soil gas samples were collected from the influent to each functioning sub-slab ventilation system. The samples were collected in Tedlar bags and submitted to Con-Test Analytical Laboratories for analysis of volatile organic compounds (VOCs) by EPA method TO-14. Results of the analysis are summarized in Table 2, and the laboratory report is provided in Attachment B.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) and CT DEEP Proposed Residential Volatilization Criteria for Soil Vapor are provided in Table 2 for comparison purposes. The OSHA PELs 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 and the CT DEEP Proposed Residential Volatilization Criteria.

INDOOR AIR MONITORING

Indoor air monitoring was conducted on June 17, 2015 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 June 17, 2015 was approximately 72°F and ambient carbon dioxide was measured at 451 ppm.

All readings were below the RAWP Action Levels. Methane, carbon monoxide, and hydrogen sulfide were not detected. Organic vapor was detected at concentrations between 0.2 and 0.4 ppm. These readings fall below RAWP action levels. Carbon

dioxide was detected at concentrations between 494 and 812 ppm. As noted below, these readings are within the expected range for indoor air levels of carbon dioxide in an occupied building.

Concentrations of carbon dioxide inside occupied buildings are expected to be higher than the concentrations in outdoor air because the building occupants expel carbon dioxide. Therefore, in indoor air, the concentration of carbon dioxide is typically used as an indicator of the effectiveness of the heating, ventilating, and air conditioning (HVAC) system in circulating outdoor air into the building. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have prepared ASHRAE Standard 62.1-2007 titled *Ventilation for Acceptable Indoor Air Quality*. The purpose of the Standard is to specify minimum ventilation rates and other measures to provide indoor air quality that is acceptable to human occupants and that minimize adverse health effects. A discussion regarding carbon dioxide concentrations in indoor air contained in Informative Appendix C of the Standard states: "... maintaining a steady-state CO₂ concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air.

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

The control panels for the methane monitors at both schools were inspected on June 15, 2015. 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 June 15, 2015. Prior to sampling, the depth to water was gauged, and a volume of water equivalent to approximately three well volumes was removed from the well. Groundwater

samples were collected in laboratory prepared sample jars and delivered under chain-of-custody protocol to Contest Laboratory in East Longmeadow, Massachusetts for analysis for volatile organic compounds by EPA method 8260. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 4.

The only target analyte detected in any of the wells was chloromethane in monitoring well ATC-1 at a concentration of 4.1µg/L. There is no GB groundwater standard for chloromethane. This compound has not been detected during previous sampling events in this well. No other target analytes were detected in any of the groundwater samples collected on June 15, 2015.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 28 locations on June 16th, 2015. 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. During the screening, well WB-4 was damaged and was not tested. Soil gas survey results are provided in Table 5. Methane, Carbon monoxide, hydrogen sulfide, and total VOCs were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.3% to 11.9% during the June monitoring event. The carbon dioxide RAWP action level of 0.1% was exceeded at every monitoring point. The maximum concentration detected during the June 2015 monitoring round was 11.9%, which was higher than the maximum detected during the April 2015 round of 8.1%. 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 depicting carbon dioxide, oxygen, and methane concentrations over time for selected representative wells are presented in Attachment C.

The presence of carbon dioxide in soil gas is an indicator of subsurface bacterial activity and does not represent a threat to users of the property. The highest concentration of carbon dioxide was found in well MPL-7, located on the northern

end of the property near Hartford Avenue. The monitoring locations on the northern end of the property adjacent to large expanses of paved parking lot, sidewalk, and streets have typically had the highest carbon dioxide concentrations.

ANNUAL ELUR INSPECTIONS

After the Five Year Review of the Site was completed, RIDEM issued a letter dated August 17, 2012 which requires, among other things, that annual inspections be conducted for compliance with the Environmental Land Usage Restriction (ELUR). The Annual ELUR inspections was conducted during the June 2015 monitoring round.

The Site was inspected for compliance with the restrictions contained in Section A of the ELUR. The restrictions specified in the ELUR are listed below along with the current status with respect to the restriction:

- No residential use beyond current RIDEM approved use as a school – compliant, no change in use.
- No groundwater on the property to be used as potable water – compliant, no drinking water wells have been installed.
- No soil shall be disturbed in any manner without written permission of the Office of Waste Management except as permitted in the Long Term Operation and Maintenance Plan (LTOMP) – compliant, no evidence of disturbance of soils not in compliance with the LTOMP.
- Humans engaged in activities at the Property shall not be exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding applicable Department approved Direct Exposure Criteria set forth in the Remediation Regulations – compliant, no evidence of breaches of cap that would allow people at the site to come in contact with underlying impacted soil.
- No subsurface structures shall be constructed on the Property over groundwater containing Hazardous Materials and/or petroleum concentrations exceeding the applicable Department approved GB Objectives – compliant, no Hazardous Materials or petroleum have been detected in groundwater at concentrations exceeding GB Objectives.
- The engineered controls described in the LTOMP must not be disturbed and shall be properly maintained to prevent humans engaged in residential activities from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved residential Direct Exposure Criteria – compliant, engineered controls are in place and properly maintained.

VACUUM TESTING

Vacuum testing was conducted on June 16th, 2015 to confirm negative pressure in the soil gas around the occupied buildings. The measurements are performed to assess whether the sub-slab ventilation system is functioning as designed. The testing confirmed the sub-slab ventilation system is performing as designed. Vacuum testing results may be found on Figure 1.

CONCLUSIONS

Methane, hydrogen sulfide, carbon monoxide and organic vapor concentrations did not exceed RAWP action levels in any soil gas or indoor air samples in this quarterly round of sampling. Carbon dioxide concentrations exceeded the action level at 33 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 401-285-2235.

Sincerely,

ARCADIS U.S., Inc.



Donna H. Pallister, PE, LSP
Senior Environmental Engineer

Copies:

A. Sepe, City of Providence
Providence Public Building Authority

Tables

Table 1
 System Monitoring Notes
 Springfield Street School Complex
 Providence, Rhode Island
 June 16, 2015

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	0.5	19.9	0	0	0.0
Elementary School inlet 2	0.0	0.3	20.2	0	0	0.0
Elementary School Outlet	0.0	0.4	20.0	0	0	0.0
Middle School front shed inlet *	0.0	0.2	19.8	0	0	0.0
Middle School front shed after 2 nd carbon *	0.0	0.2	19.9	0	0	0.0
Middle School back shed inlet #	NT	NT	NT	NT	NT	NT
Middle School back shed after 2 nd carbon #	NT	NT	NT	NT	NT	NT
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm	10 ppm	5 ppm

Measurements made with: Landtec GEM2000 Plus, MiniRae 2000

Sampling date: June 16, 2015

Measured by: Andrew DaSilva

*- Tested on

#- Middle school back shed not tested because blower not functioning properly

Table 2
Soil Gas Samples Collected from System Influent
Springfield Street School Complex

Parameter	Sample Date	CT DEEP Proposed Residential Volatilization Criteria For Soil Vapor (ug/m3)*	OSHA PEL's (ug/m3)	Middle School Back (ug/m3)	Middle School Front (ug/m3)	Elementary School #1 (ug/m3)	Elementary School # 2 (ug/m3)
Benzene	3/24/2014	3,247	3,000	0.57	0.63	0.72	0.68
	6/10/14 and 7/01/14			0.42	0.52	0.45	ND
	9/19/14 and 9/23/14			NT	0.53	0.7	0.57
	12/19/2014			NT	0.93	0.63	0.67
	5/11/2015			NT	0.43	0.49	0.61
	6/16/2015			NT	ND	ND	ND
Carbon Tetrachloride	3/24/2014	6,395	62,900	ND	ND	ND	ND
	6/10/14 and 7/01/14			0.46	0.68	ND	ND
	9/19/14 and 9/23/14			NT	ND	ND	ND
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	ND	ND	ND
	6/16/2015			NT	ND	ND	ND
Chloroform	3/24/2014	22,334	240,000	ND	ND	0.76	0.75
	6/10/14 and 7/01/14			0.46	ND	1.9	1.9
	9/19/14 and 9/23/14			NT	ND	2.2	2.2
	12/19/2014			NT	ND	1	1.1
	5/11/2015			NT	ND	0.85	1.1
	6/16/2015			NT	ND	1.5	1.5
Chloromethane	3/24/2014	NA	207,000	ND	0.44	ND	ND
	6/10/14 and 7/01/14			1.2	ND	ND	ND
	9/19/14 and 9/23/14			NT	0.89	ND	ND
	12/19/2014			NT	1.20	ND	ND
	5/11/2015			NT	0.57	ND	ND
	6/16/2015			NT	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	3/24/2014	NA	4,950,000	4.4	2.6	3.1	3.1
	6/10/14 and 7/01/14			4.6	6.9	4.1	4.1
	9/19/14 and 9/23/14			NT	38	3.8	3.9
	12/19/2014			NT	3.6	4.9	5
	5/11/2015			NT	3.00	4.10	3.00
	6/16/2015			NT	4.1	6.6	3.6
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3/24/2014	NA	7,000,000	4.2	1.1	0.75	0.75
	6/10/14 and 7/01/14			5.4	6.1	ND	0.91
	9/19/14 and 9/23/14			NT	24	2.0	2
	12/19/2014			NT	ND	1	0.98
	5/11/2015			NT	0.82	2.1	1.1
	6/16/2015			NT	2.5	8.2	1.2
Ethylbenzene	3/24/2014	7,281,812	435,000	0.70	0.70	0.77	0.66
	6/10/14 and 7/01/14			0.29	0.52	ND	ND
	9/19/14 and 9/23/14			NT	ND	ND	ND
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	2.80	2.5	3.9
	6/16/2015			NT	0.50	0.53	0.56
Methylene Chloride	3/24/2014	4,237,289	86,750	6.6	5.5	6.6	6.2
	6/10/14 and 7/01/14			6.2	12	11	11
	9/19/14 and 9/23/14			NT	6.7	23	20
	12/19/2014			NT	3.9	4.4	4.2
	5/11/2015			NT	ND	ND	ND
	6/16/2015			NT	110	78	64
Styrene	3/24/2014	34,633	456,000	0.49	0.49	ND	0.48
	6/10/14 and 7/01/14			56	13	5.3	5
	9/19/14 and 9/23/14			NT	4.7	3.5	2.9
	12/19/2014			NT	5	2.7	2.5
	5/11/2015			NT	30	28	34
	6/16/2015			NT	1.7	1.5	1.7
Tetrachloroethylene	3/24/2014	75,840	678,000	3.6	2.3	3.3	2.9
	6/10/14 and 7/01/14			3.2	5.6	3.3	4.2
	9/19/14 and 9/23/14			NT	3.6	100	13
	12/19/2014			NT	1.8	2.8	3.3
	5/11/2015			NT	15	11	3.7
	6/16/2015			NT	3.9	23	4.8
Toluene	3/24/2014	2,910,779	750,000	4.5	4.7	4.7	5.3
	6/10/14 and 7/01/14			51	33	13	10
	9/19/14 and 9/23/14			NT	8.3	6.6	5.9
	12/19/2014			NT	54	20	22
	5/11/2015			NT	46	41	53
	6/16/2015			NT	5.7	4.7	6.2
1,1,1-Trichloroethane	3/24/2014	NA	1,900,000	ND	ND	ND	ND
	6/10/14 and 7/01/14			ND	ND	ND	ND
	9/19/14 and 9/23/14			NT	ND	0.68	ND
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	ND	ND	ND
	6/16/2015			NT	ND	ND	ND
Trichloroethylene	3/24/2014	38,237	537,000	ND	ND	0.62	0.56
	6/10/14 and 7/01/14			0.35	0.71	0.59	0.54
	9/19/14 and 9/23/14			NT	ND	1.7	0.84
	12/19/2014			NT	0.82	ND	1.2
	5/11/2015			NT	ND	1.5	ND
	6/16/2015			NT	ND	2.1	ND
Trichlorofluoromethane (Freon 11)	3/24/2014	NA	5,600,000	3.2	2.4	2.8	2.8
	6/10/14 and 7/01/14			4	10	15	8.1
	9/19/14 and 9/23/14			NT	7.3	4.3	6.3
	12/19/2014			NT	5.0	3.1	4
	5/11/2015			NT	2.7	2.6	4.5
	6/16/2015			NT	2.3	2.9	2.6
1,1,2-Trichloro-1,2,2-trifluoromethane(Freon 113)	3/24/2014	NA	7,600,000	ND	ND	ND	ND
	6/10/14 and 7/01/14			ND	ND	ND	ND
	9/19/14 and 9/23/14			NT	0.89	ND	ND
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	ND	ND	ND
	6/16/2015			NT	ND	ND	ND
1,2,4-Trimethylbenzene	3/24/2014	NA	125,000	ND	0.11	ND	ND
	6/10/14 and 7/01/14			0.35	ND	ND	ND
	9/19/14 and 9/23/14			NT	ND	ND	ND
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	1.3	1.7	2.3
	6/16/2015			NT	1.6	1.5	1.5
M/p-Xylene	3/24/2014	2,215,755#	435,000	2.9	3.2	3.3	2.9
	6/10/14 and 7/01/14			1.1	2.2	1.6	1.8
	9/19/14 and 9/23/14			NT	1.3	1.2	1.3
	12/19/2014			NT	0.96	0.89	ND
	5/11/2015			NT	18	17	25
	6/16/2015			NT	2.4	2.4	2.6
o-Xylene	3/24/2014	2,215,755#	435,000	1.4	1.4	1.4	1.2
	6/10/14 and 7/01/14			0.66	1.1	0.84	0.83
	9/19/14 and 9/23/14			NT	0.55	0.63	0.74
	12/19/2014			NT	ND	ND	ND
	5/11/2015			NT	3.6	3.5	5.4
	6/16/2015			NT	1.4	1.3	1.3

Notes:
Samples collected in Tedlar bags and analyzed via EPA method TO-14
Only detected compounds are listed, see laboratory certificate for complete list of analyses
OSHA PEL's = Occupational Safety and Health Administration Permissible Exposure Limits
CT DEEP= Connecticut Department of Energy and Environmental Protection
ug/m3 = micrograms per cubic meter
* From Appendix F to Sections 22a-133k-1 through 22a-133k-3 of the Regulations of Connecticut State Agencies
#- Represents Total Xylenes
Samples collected prior to March 2014 are not shown.

Table 3
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
June 17, 2015

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	628	20.7	0	0	0.3
E.S. Elevator	0.0	668	20.6	0	0	0.3
E.S. Faculty Work Room	0.0	709	20.6	0	0	0.3
E.S. Gym	0.0	674	20.6	0	0	0.4
E.S. Stairway B	0.0	771	20.6	0	0	0.4
E.S. Stairway C	0.0	683	20.6	0	0	0.4
E.S. Library	0.0	655	20.6	0	0	0.3
E.S. Front Stairs	0.0	653	20.6	0	0	0.3
E.S. Cafeteria	0.0	828	20.6	0	0	0.4
E.S. Mechanical Room	0.0	694	20.6	0	0	0.3

Table 3
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
June 17, 2015

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	494	20.6	0	0	0.2
M.S. Elevator	0.0	732	20.7	0	0	0.4
M.S. Stairway near Elem. School GS-01	0.0	738	20.7	0	0	0.3
M.S. Near sensor #16 in hall outside cafeteria	0.0	762	20.7	0	0	0.3
M.S. Faculty Work Room	0.0	689	20.7	0	0	0.2
M.S. Sensor #15 Outside Gym	0.0	751	20.7	0	0	0.4
M.S. GS-03 Across from Boys Bathroom	0.0.	724	20.8	0	0	0.4
M.S. Gym	0.0	711	20.8	0	0	0.3
M.S. Outside of Music Room	0.0	726	20.7	0	0	0.4
M.S. Cafeteria	0.0	764	20.7	0	0	0.3

Table 3
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
June 17, 2015

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	572	20.7	0	0	0.3
M.S. Hallway across from elevator near sensor #9	0.0	643	20.7	0	0	0.4
M.S. Near sensor GS 06 hallway right end	0.0	812	20.7	0	0	0.3
M.S. stairway near Hartford Ave. sensor GS-7	0.0	728	20.7	0	0	0.2
Remedial Action Work Plan Action Levels	0.0	1,000 ppm (0.1%)	NA	9 ppm	5 ppm	5 ppm

Notes: The indoor air quality monitoring panels in the M.S. and E.S. were calibrated on 11/24/2014.

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

Measurements made with: MiniRae photoionization detector, Fluke 975 Airmeter, Landtec Gem 2000 Plus

PPM = Parts per million

Outdoor conditions: carbon dioxide = 451 ppm temperature = 72 degrees F

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

Well ID	Detected Compounds							RIDEM GB
		3/24/2014	6/10/2014	9/19/2014	12/18/2014	4/2/2015	6/15/2015	Groundwater Objective
ATC-1	Chloromethane	ND	ND	ND	ND	ND	4.1	NA
ATC-2	Chloroform	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	NA
MW-6	Chloroform Installed 4/2011	ND	2.1	4.1	ND	ND	ND	NA
ATC-3		Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	
MW-7	Installed 4/2011	ND	ND	ND	ND	ND	ND	
ATC-4	1,4-dichlorobenzene	1.6	ND	2.0	1.2	ND	ND	NA
ATC-5		Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	Closed 4/2011	
MW-8	Installed 4/2011	ND	ND	ND	ND	ND	ND	
Sampled By:		ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	

ND = not detected above method detection limit
 NS = not sampled
 NA = No applicable standard published
 Results are in µg/L (micrograms per liter) unless otherwise noted.

Table 5
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
June 16, 2015

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	2.5	17.5	0	0	0.0
WB-2	0.0	1.3	19.4	0	0	0.0
WB-3	0.0	0.4	20.6	0	0	0.0
WB-4	Well Damaged					
WB-5	0.0	0.3	20.7	0	0	0.0
WB-6	0.0	0.4	20.6	0	0	0.0
WB-7 R	0.0	0.8	20.0	0	0	0.0
WB-8	0.0	0.2	20.8	0	0	0.0
WB-12	0.0	1.8	19.2	0	0	0.0
WB-13	0.0	0.3	20.6	0	0	0.0
WB-14	0.0	0.5	20.3	0	0	0.0
WB-15	0.0	0.9	18.0	0	0	0.0
EPL-1	0.0	1.0	19.9	0	0	0.0
EPL-2	0.0	2.2	18.4	0	0	0.0
EPL-3	0.0	4.0	16.3	0	0	0.0
EPL-4	0.0	2.7	17.7	0	0	0.0
EPL-5	0.0	3.2	16.7	0	0	0.0
ENE-1	0.0	1.0	19.0	0	0	0.0

Table 5
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
June 16, 2015

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	2.3	17.2	0	0	0.0
MG2	0.0	3.1	17.2	0	0	0.0
MG3	0.0	2.6	16.9	0	0	0.0
MG4	0.0	0.8	19.4	0	0	0.0
MG5	0.0	0.4	20.4	0	0	0.0
MPL2	0.0	4.3	13.4	0	0	0.0
MPL3	0.0	6.1	11.2	0	0	0.0
MPL5	0.0	6.0	12.0	0	0	0.0
MPL6	0.0	10.7	7.5	0	0	0.0
MPL7	0.0	11.9	6.5	0	0	0.0
MPL8	0.0	4.4	14.3	0	0	0.0
Remedial Action Work Plan Action Levels	0.5%	0.1% (1,000 PPM)	NA	9 PPM	5 PPM	5 PPM

Sampled by: Andrew DaSilva

Weather Conditions:

Sampling Equipment: Landtec GEM 2000 Plus, MiniRae 2000 PID

Figures

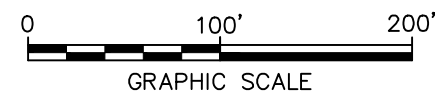
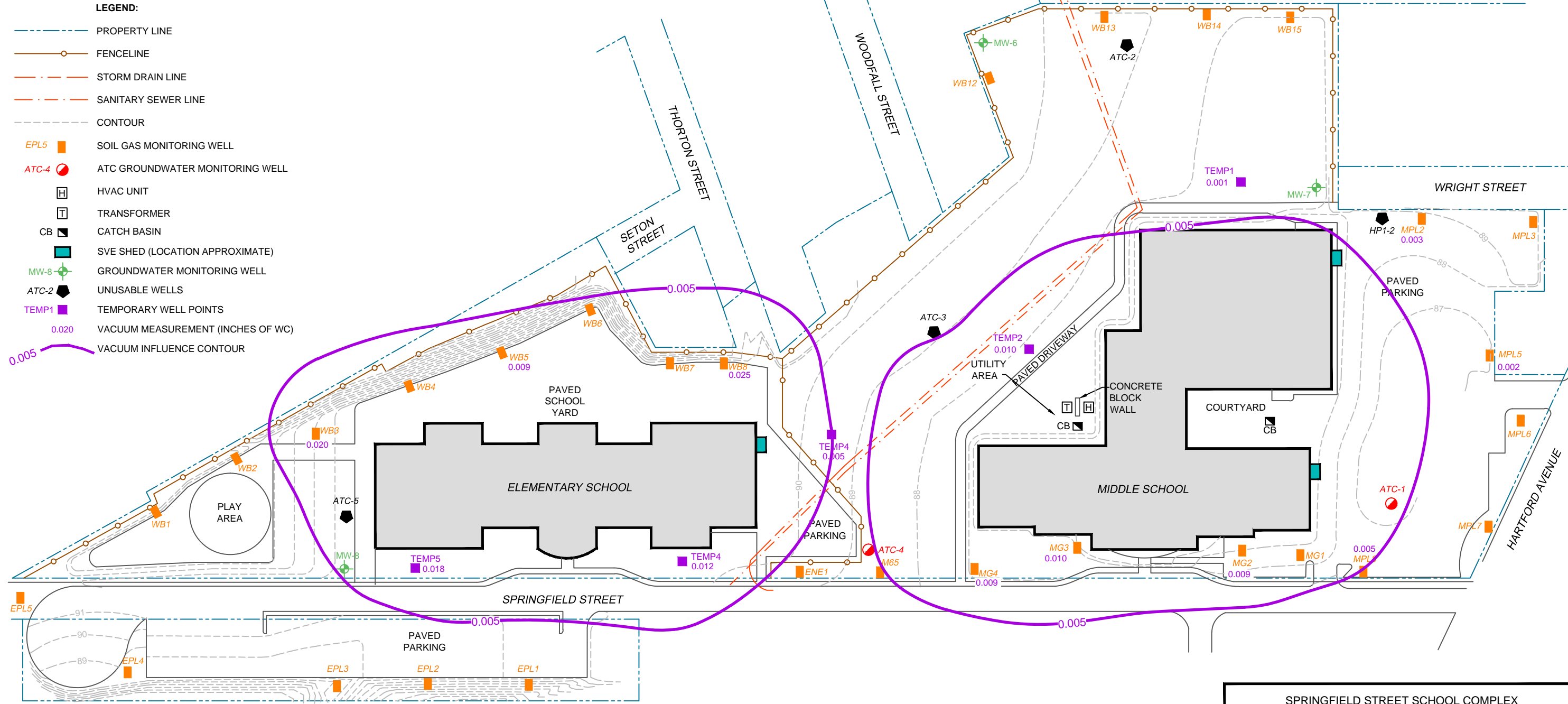
NOTES:

THE FOLLOWING MAP IS REFERENCED: ELEMENTARY & MIDDLE SCHOOLS, PROVIDENCE RHODE ISLAND, ISSUED FOR, CITY OF PROVIDENCE, GRADING AND SAMPLING LOCATION PLAN, PREPARED BY NORTHEAST ENGINEERS & CONSULTANTS, INC., DATED MAY 19, 1999, SCALE: 1"=50'.

THIS MAP HAS BEEN DIGITIZED FROM THE ABOVE REFERENCED MAP, AND SCALE IS APPROXIMATE. FOR USE WITH LFR REPORT ONLY.



- LEGEND:**
- PROPERTY LINE
 - FENCELINE
 - STORM DRAIN LINE
 - SANITARY SEWER LINE
 - CONTOUR
 - EPL5 SOIL GAS MONITORING WELL
 - ATC-4 ATC GROUNDWATER MONITORING WELL
 - HVAC UNIT
 - TRANSFORMER
 - CATCH BASIN
 - SVE SHED (LOCATION APPROXIMATE)
 - MW-8 GROUNDWATER MONITORING WELL
 - ATC-2 UNUSABLE WELLS
 - TEMP1 TEMPORARY WELL POINTS
 - 0.020 VACUUM MEASUREMENT (INCHES OF WC)
 - 0.005 VACUUM INFLUENCE CONTOUR



SPRINGFIELD STREET SCHOOL COMPLEX
SPRINGFIELD STREET
PROVIDENCE, RHODE ISLAND

**AREA OF VACUUM INFLUENCE
JUNE 16, 2015**

FIGURE
1



Attachment A

Limitations and 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.



Attachment B

Laboratory Results

June 24, 2015

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: WK012152.0010
Laboratory Work Order Number: 15F0854

Enclosed are results of analyses for samples received by the laboratory on June 17, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Lisa A. Worthington
Project Manager

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B124712	12
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Certifications	15
Chain of Custody/Sample Receipt	17

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: 6/24/2015

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0010

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15F0854

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
ES#1	15F0854-01	Sub Slab		EPA TO-14A	
ES#2	15F0854-02	Sub Slab		EPA TO-14A	
MS Front	15F0854-03	Sub Slab		EPA TO-14A	

CASE NARRATIVE SUMMARY

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

EPA TO-14A

Qualifications:

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

B124712-BS1

Hexachlorobutadiene

B124712-BS1

V-06

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

Analyte & Samples(s) Qualified:

1,2,4-Trichlorobenzene

B124712-BS1

1,4-Dichlorobenzene

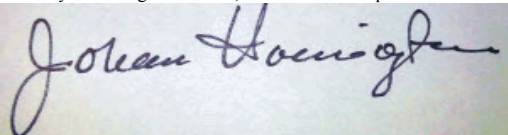
B124712-BS1

Hexachlorobutadiene

B124712-BS1

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.



Johanna K. Harrington

Manager, Laboratory Reporting

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: ES#1
Sample ID: 15F0854-01
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 09:45

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Benzene	ND	0.10		ND	0.32	2	6/19/15 8:08	TPH	
Bromomethane	ND	0.10		ND	0.39	2	6/19/15 8:08	TPH	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	6/19/15 8:08	TPH	
Chlorobenzene	ND	0.10		ND	0.46	2	6/19/15 8:08	TPH	
Chloroethane	ND	0.10		ND	0.26	2	6/19/15 8:08	TPH	
Chloroform	0.30	0.10		1.5	0.49	2	6/19/15 8:08	TPH	
Chloromethane	ND	0.20		ND	0.41	2	6/19/15 8:08	TPH	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	6/19/15 8:08	TPH	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 8:08	TPH	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 8:08	TPH	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 8:08	TPH	
Dichlorodifluoromethane (Freon 12)	1.3	0.10		6.6	0.49	2	6/19/15 8:08	TPH	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15 8:08	TPH	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15 8:08	TPH	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15 8:08	TPH	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15 8:08	TPH	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	6/19/15 8:08	TPH	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15 8:08	TPH	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15 8:08	TPH	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	1.2	0.10		8.2	0.70	2	6/19/15 8:08	TPH	
Ethylbenzene	0.12	0.10		0.53	0.43	2	6/19/15 8:08	TPH	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	6/19/15 8:08	TPH	
Methylene Chloride	22	1.0		78	3.5	2	6/19/15 8:08	TPH	
Styrene	0.35	0.10		1.5	0.43	2	6/19/15 8:08	TPH	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	6/19/15 8:08	TPH	
Tetrachloroethylene	3.3	0.10		23	0.68	2	6/19/15 8:08	TPH	
Toluene	1.3	0.10		4.7	0.38	2	6/19/15 8:08	TPH	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	6/19/15 8:08	TPH	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15 8:08	TPH	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15 8:08	TPH	
Trichloroethylene	0.39	0.10		2.1	0.54	2	6/19/15 8:08	TPH	
Trichlorofluoromethane (Freon 11)	0.52	0.10		2.9	0.56	2	6/19/15 8:08	TPH	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	6/19/15 8:08	TPH	
1,2,4-Trimethylbenzene	0.30	0.10		1.5	0.49	2	6/19/15 8:08	TPH	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	6/19/15 8:08	TPH	
Vinyl Chloride	ND	0.10		ND	0.26	2	6/19/15 8:08	TPH	
m&p-Xylene	0.55	0.20		2.4	0.87	2	6/19/15 8:08	TPH	

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: ES#1
Sample ID: 15F0854-01
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 09:45

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
o-Xylene	0.29	0.10		1.3	0.43	2	6/19/15	8:08	TPH
Surrogates	% Recovery			% REC Limits					
4-Bromofluorobenzene (1)		122			70-130		6/19/15	8:08	

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: ES#2
Sample ID: 15F0854-02
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 09:50

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Benzene	ND	0.10		ND	0.32	2	6/19/15	8:46	TPH
Bromomethane	ND	0.10		ND	0.39	2	6/19/15	8:46	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	6/19/15	8:46	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	6/19/15	8:46	TPH
Chloroethane	ND	0.10		ND	0.26	2	6/19/15	8:46	TPH
Chloroform	0.31	0.10		1.5	0.49	2	6/19/15	8:46	TPH
Chloromethane	ND	0.20		ND	0.41	2	6/19/15	8:46	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	6/19/15	8:46	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15	8:46	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15	8:46	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15	8:46	TPH
Dichlorodifluoromethane (Freon 12)	0.72	0.10		3.6	0.49	2	6/19/15	8:46	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15	8:46	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15	8:46	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15	8:46	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15	8:46	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	6/19/15	8:46	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15	8:46	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15	8:46	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.17	0.10		1.2	0.70	2	6/19/15	8:46	TPH
Ethylbenzene	0.13	0.10		0.56	0.43	2	6/19/15	8:46	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	6/19/15	8:46	TPH
Methylene Chloride	18	1.0		64	3.5	2	6/19/15	8:46	TPH
Styrene	0.41	0.10		1.7	0.43	2	6/19/15	8:46	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	6/19/15	8:46	TPH
Tetrachloroethylene	0.70	0.10		4.8	0.68	2	6/19/15	8:46	TPH
Toluene	1.6	0.10		6.2	0.38	2	6/19/15	8:46	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	6/19/15	8:46	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15	8:46	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15	8:46	TPH
Trichloroethylene	ND	0.10		ND	0.54	2	6/19/15	8:46	TPH
Trichlorofluoromethane (Freon 11)	0.45	0.10		2.6	0.56	2	6/19/15	8:46	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	6/19/15	8:46	TPH
1,2,4-Trimethylbenzene	0.31	0.10		1.5	0.49	2	6/19/15	8:46	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	6/19/15	8:46	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	6/19/15	8:46	TPH
m&p-Xylene	0.61	0.20		2.6	0.87	2	6/19/15	8:46	TPH

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: ES#2
Sample ID: 15F0854-02
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 09:50

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
o-Xylene	0.31	0.10		1.3	0.43	2	6/19/15	8:46	TPH
Surrogates	% Recovery			% REC Limits					
4-Bromofluorobenzene (1)		121			70-130		6/19/15	8:46	

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: MS Front
Sample ID: 15F0854-03
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 10:10

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Benzene	ND	0.10		ND	0.32	2	6/19/15 9:23	TPH	
Bromomethane	ND	0.10		ND	0.39	2	6/19/15 9:23	TPH	
Carbon Tetrachloride	ND	0.10		ND	0.63	2	6/19/15 9:23	TPH	
Chlorobenzene	ND	0.10		ND	0.46	2	6/19/15 9:23	TPH	
Chloroethane	ND	0.10		ND	0.26	2	6/19/15 9:23	TPH	
Chloroform	ND	0.10		ND	0.49	2	6/19/15 9:23	TPH	
Chloromethane	ND	0.20		ND	0.41	2	6/19/15 9:23	TPH	
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	6/19/15 9:23	TPH	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 9:23	TPH	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 9:23	TPH	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	6/19/15 9:23	TPH	
Dichlorodifluoromethane (Freon 12)	0.82	0.10		4.1	0.49	2	6/19/15 9:23	TPH	
1,1-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15 9:23	TPH	
1,2-Dichloroethane	ND	0.10		ND	0.40	2	6/19/15 9:23	TPH	
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15 9:23	TPH	
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	6/19/15 9:23	TPH	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	6/19/15 9:23	TPH	
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15 9:23	TPH	
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	6/19/15 9:23	TPH	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.35	0.10		2.5	0.70	2	6/19/15 9:23	TPH	
Ethylbenzene	0.12	0.10		0.50	0.43	2	6/19/15 9:23	TPH	
Hexachlorobutadiene	ND	0.10		ND	1.1	2	6/19/15 9:23	TPH	
Methylene Chloride	32	1.0		110	3.5	2	6/19/15 9:23	TPH	
Styrene	0.40	0.10		1.7	0.43	2	6/19/15 9:23	TPH	
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	6/19/15 9:23	TPH	
Tetrachloroethylene	0.57	0.10		3.9	0.68	2	6/19/15 9:23	TPH	
Toluene	1.5	0.10		5.7	0.38	2	6/19/15 9:23	TPH	
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	6/19/15 9:23	TPH	
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15 9:23	TPH	
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	6/19/15 9:23	TPH	
Trichloroethylene	ND	0.10		ND	0.54	2	6/19/15 9:23	TPH	
Trichlorofluoromethane (Freon 11)	0.41	0.10		2.3	0.56	2	6/19/15 9:23	TPH	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	6/19/15 9:23	TPH	
1,2,4-Trimethylbenzene	0.32	0.10		1.6	0.49	2	6/19/15 9:23	TPH	
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	6/19/15 9:23	TPH	
Vinyl Chloride	ND	0.10		ND	0.26	2	6/19/15 9:23	TPH	
m&p-Xylene	0.55	0.20		2.4	0.87	2	6/19/15 9:23	TPH	

ANALYTICAL RESULTS

Project Location: Springfield St., Providence, RI
 Date Received: 6/17/2015
Field Sample #: MS Front
Sample ID: 15F0854-03
 Sample Matrix: Sub Slab
 Sampled: 6/16/2015 10:10

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

Work Order: 15F0854
 Initial Vacuum(in Hg):
 Final Vacuum(in Hg):
 Receipt Vacuum(in Hg):
 Flow Controller Type:
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv		Flag/Qual	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
o-Xylene	0.31	0.10		1.4	0.43	2	6/19/15	9:23	TPH
Surrogates	% Recovery			% REC Limits					
4-Bromofluorobenzene (1)		122		70-130			6/19/15	9:23	

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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
15F0854-01 [ES#1]	B124712	1	1	N/A	1000	400	200	06/18/15
15F0854-02 [ES#2]	B124712	1	1	N/A	1000	400	200	06/18/15
15F0854-03 [MS Front]	B124712	1	1	N/A	1000	400	200	06/18/15

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	
Batch B124712 - TO-15 Prep											
Blank (B124712-BLK1)											
						Prepared & Analyzed: 06/18/15					
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	0.050									
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									
1,1,1,2-Tetrachloroethane	ND	0.025									
Tetrachloroethylene	ND	0.025									
Toluene	ND	0.025									
1,2,4-Trichlorobenzene	ND	0.025									
1,1,1-Trichloroethane	ND	0.025									
1,1,2-Trichloroethane	ND	0.025									
Trichloroethylene	ND	0.025									
Trichlorofluoromethane (Freon 11)	ND	0.025									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.025									
1,2,4-Trimethylbenzene	ND	0.025									
1,3,5-Trimethylbenzene	ND	0.025									
Vinyl Chloride	ND	0.025									
m&p-Xylene	ND	0.050									
o-Xylene	ND	0.025									
Surrogate: 4-Bromofluorobenzene (1)	9.54				8.00		119	70-130			

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag/Qual
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
Batch B124712 - TO-15 Prep											
LCS (B124712-BS1)											
						Prepared & Analyzed: 06/18/15					
Benzene	5.01				5.00		100	70-130			
Bromomethane	5.26				5.00		105	70-130			
Carbon Tetrachloride	5.08				5.00		102	70-130			
Chlorobenzene	5.33				5.00		107	70-130			
Chloroethane	3.76				5.00		75.2	70-130			
Chloroform	5.36				5.00		107	70-130			
Chloromethane	3.96				5.00		79.2	70-130			
1,2-Dibromoethane (EDB)	4.86				5.00		97.3	70-130			
1,2-Dichlorobenzene	5.70				5.00		114	70-130			
1,3-Dichlorobenzene	5.87				5.00		117	70-130			
1,4-Dichlorobenzene	5.89				5.00		118	70-130			V-06
Dichlorodifluoromethane (Freon 12)	6.18				5.00		124	70-130			
1,1-Dichloroethane	4.50				5.00		90.0	70-130			
1,2-Dichloroethane	4.31				5.00		86.1	70-130			
1,1-Dichloroethylene	4.70				5.00		94.0	70-130			
cis-1,2-Dichloroethylene	4.60				5.00		91.9	70-130			
1,2-Dichloropropane	4.20				5.00		84.0	70-130			
cis-1,3-Dichloropropene	4.80				5.00		96.0	70-130			
trans-1,3-Dichloropropene	4.94				5.00		98.9	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.14				5.00		103	70-130			
Ethylbenzene	4.98				5.00		99.7	70-130			
Hexachlorobutadiene	7.02				5.00		140 *	70-130			L-01, V-06
Methylene Chloride	4.46				5.00		89.2	70-130			
Styrene	4.78				5.00		95.6	70-130			
1,1,2,2-Tetrachloroethane	4.62				5.00		92.4	70-130			
Tetrachloroethylene	5.59				5.00		112	70-130			
Toluene	4.80				5.00		96.1	70-130			
1,2,4-Trichlorobenzene	6.92				5.00		138 *	70-130			L-01, V-06
1,1,1-Trichloroethane	4.85				5.00		96.9	70-130			
1,1,2-Trichloroethane	4.61				5.00		92.1	70-130			
Trichloroethylene	5.05				5.00		101	70-130			
Trichlorofluoromethane (Freon 11)	5.05				5.00		101	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.67				5.00		113	70-130			
1,2,4-Trimethylbenzene	4.74				5.00		94.8	70-130			
1,3,5-Trimethylbenzene	4.67				5.00		93.4	70-130			
Vinyl Chloride	4.21				5.00		84.2	70-130			
m&p-Xylene	10.2				10.0		102	70-130			
o-Xylene	4.77				5.00		95.4	70-130			
Surrogate: 4-Bromofluorobenzene (1)	9.66				8.00		121	70-130			

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- L-01 Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
 - V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-14A in Air</i>	
Benzene	AIHA,FL,NY
Bromomethane	AIHA,FL,NY
Carbon Tetrachloride	AIHA,FL,NY
Chlorobenzene	AIHA,FL,NY
Chloroethane	AIHA,FL,NY
Chloroform	AIHA,FL,NY
Chloromethane	AIHA,FL,NY
1,2-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	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015



Phone: 413-525-2332 AIR SAMPLE CHAIN OF CUSTODY 39 SPRUCE ST
 Fax: 413-525-6405 EAST LONGMEADOW, MA 01028
 Email: info@contestlabs.com

Company Name: ARCADIS
 Address: 300 Metro Center Blvd Warrick RI
 Attention: 02886
 Project Location: Donna Pallister Academy
 Sampled By: A. Dasilva

Telephone: 401-738-3887
 Project #: WK02152 0010
 Client PO #: _____

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT
 Fax #: _____
 Email: Donna.Pallister@acadys.us.com
 Format: EXCEL PDF GIS KEY OTHER

Proposal Provided? (For Billing purposes)
 yes no proposal date

Field ID	Sample Description	Media	Lab #	Date/Time	Start Date/Time	Stop Date/Time	Total Minutes Sampled	Flow Rate M ³ /Min. or L/Min.	Volume Liters or M ³	Matrix Code*
	ES#1	T	01	6/16/15	0945					SS
	ES#2	T	02		0950					SS
	MS Front	T	03		1010					SS

Laboratory Comments: _____

Reinquished by (signature) (to ref) Date/Time: 6/16/15 1700
 Received by (signature) 6/17/15 10:45
 Reinquished by (signature) 6/16/15 18:30
 Received by (signature) 6/17/15 12:30

Turnaround **
 7-Day
 10-Day
 Other _____
 RUSH *
 *24-Hr *48-Hr
 *72-Hr *4-Day
 *Approval Required

Regulations: _____
 Data Enhancement/RCP? Y N
 Enhanced Data Package Y N
 (Surcharge Applies)
 Required Detection Limits: _____
 Other: _____

ANALYSIS REQUESTED

1	2	3	4	5	6	7	8	9	10	11	12
I	F	I	N	A	I	P	R	E	S	S	E

Flow Controller ID

Matrix Code

SG = SOIL GAS	IA = INDOOR AIR	AMB = AMBIENT	SS = SUB SLAB	D = DUP	BL = BLANK	O = other
---------------	-----------------	---------------	---------------	---------	------------	-----------

Media Codes

S = summa can	T = tedlar bag	P = PUF	T = tube	F = filter	C = cassette	O = Other
---------------	----------------	---------	----------	------------	--------------	-----------

CLIENT COMMENTS: _____

PLEASE FILL OUT COMPLETELY, SIGN, DATE AND RETAIN THE YELLOW COPY FOR YOUR RECORD. Summa canisters and flow controllers must be returned within 14 days of receipt or rental fees will apply. For summa canister and flow controller information please refer to Con-Test's Air Media Agreement.



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

AIR Only Receipt Checklist

CLIENT NAME: ARCADIS RECEIVED BY: KB DATE: 6/17/15

- 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: 20°
- 3) Are all the samples in good condition? Yes No
 If not, explain: In cooler
- 4) Are there any samples "On Hold"? Yes No No
 Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No No

Who was notified _____ Date _____ Time _____

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

7) Number of cans Individually Certified or Batch Certified? _____

Containers received at Con-Test		
	# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		
Tedlar Bags	3	
TO-17 Tubes		
Regulators		
Restrictors		
Hg/Hopcalite Tube (NIOSH 6009)		
(TO-4A/ TO-10A/TO-13) PUFs		
PCB Florisil Tubes (NIOSH 5503)		
Air cassette		
PM 2.5/PM 10		
TO-11A Cartridges		
Other		

Unused Summas/PUF Media:

Unused Regulators:

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

Laboratory Comments:

Login Sample Receipt Checklist
(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False)	Comment
	T/F/NA	
1) The coolers'/boxes' custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	F	
4) Cooler Temperature is acceptable.	F	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	NA	

Doc #278 Rev. 5 October 2014

Who notified of False statements?

Log-In Technician Initials: KB

Date/Time: 6/17/15
Date/Time: 12:30

June 25, 2015

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: WK012152.0010
Laboratory Work Order Number: 15F0851

Enclosed are results of analyses for samples received by the laboratory on June 17, 2015. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Lisa A. Worthington
Project Manager

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

REPORT DATE: 6/25/2015

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0010

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 15F0851

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-8	15F0851-01	Ground Water		SW-846 8260C	
ATC-4	15F0851-02	Ground Water		SW-846 8260C	
MW-6	15F0851-03	Ground Water		SW-846 8260C	
MW-7	15F0851-04	Ground Water		SW-846 8260C	
ATC-1	15F0851-05	Ground Water		SW-846 8260C	

CASE NARRATIVE SUMMARY

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

SW-846 8260C

Qualifications:**L-07A**

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

Analyte & Samples(s) Qualified:**Bromomethane**

B124760-BS1

R-05

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

Analyte & Samples(s) Qualified:**Bromomethane**

15F0851-01[MW-8], 15F0851-02[ATC-4], 15F0851-03[MW-6], 15F0851-04[MW-7], 15F0851-05[ATC-1], B124760-BLK1, B124760-BSD1

V-05

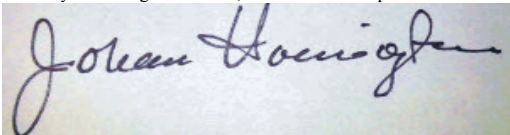
Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**Methylene Chloride**

15F0851-01[MW-8], 15F0851-02[ATC-4], 15F0851-03[MW-6], 15F0851-04[MW-7], 15F0851-05[ATC-1], B124760-BLK1, B124760-BS1, B124760-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.



Johanna K. Harrington

Manager, Laboratory Reporting

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-8

Sampled: 6/15/2015 13:28

Sample ID: 15F0851-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	6/24/15	6/24/15 15:21	CMR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-8

Sampled: 6/15/2015 13:28

Sample ID: 15F0851-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Methylene Chloride	ND	5.0	µg/L	1	V-05	SW-846 8260C	6/24/15	6/24/15 15:21	CMR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:21	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	99.7	70-130	6/24/15 15:21
Toluene-d8	97.2	70-130	6/24/15 15:21
4-Bromofluorobenzene	91.0	70-130	6/24/15 15:21

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: 15F0851

Date Received: 6/17/2015

Field Sample #: ATC-4

Sampled: 6/15/2015 14:00

Sample ID: 15F0851-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	6/24/15	6/24/15 15:49	CMR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR

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: 15F0851

Date Received: 6/17/2015

Field Sample #: ATC-4

Sampled: 6/15/2015 14:00

Sample ID: 15F0851-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Methylene Chloride	ND	5.0	µg/L	1	V-05	SW-846 8260C	6/24/15	6/24/15 15:49	CMR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 15:49	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	6/24/15 15:49
Toluene-d8	100	70-130	6/24/15 15:49
4-Bromofluorobenzene	90.9	70-130	6/24/15 15:49

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-6

Sampled: 6/15/2015 14:50

Sample ID: 15F0851-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	6/24/15	6/24/15 16:17	CMR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-6

Sampled: 6/15/2015 14:50

Sample ID: 15F0851-03

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Methylene Chloride	ND	5.0	µg/L	1	V-05	SW-846 8260C	6/24/15	6/24/15 16:17	CMR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:17	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	6/24/15 16:17
Toluene-d8	98.6	70-130	6/24/15 16:17
4-Bromofluorobenzene	91.7	70-130	6/24/15 16:17

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-7

Sampled: 6/15/2015 15:35

Sample ID: 15F0851-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	6/24/15	6/24/15 16:46	CMR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR

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: 15F0851

Date Received: 6/17/2015

Field Sample #: MW-7

Sampled: 6/15/2015 15:35

Sample ID: 15F0851-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Methylene Chloride	ND	5.0	µg/L	1	V-05	SW-846 8260C	6/24/15	6/24/15 16:46	CMR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 16:46	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	103	70-130	6/24/15 16:46
Toluene-d8	99.4	70-130	6/24/15 16:46
4-Bromofluorobenzene	91.6	70-130	6/24/15 16:46

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: 15F0851

Date Received: 6/17/2015

Field Sample #: ATC-1

Sampled: 6/15/2015 16:15

Sample ID: 15F0851-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Benzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Bromomethane	ND	2.0	µg/L	1	R-05	SW-846 8260C	6/24/15	6/24/15 17:15	CMR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Chloromethane	4.1	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR

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: 15F0851

Date Received: 6/17/2015

Field Sample #: ATC-1

Sampled: 6/15/2015 16:15

Sample ID: 15F0851-05

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,4-Dioxane	ND	50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Methylene Chloride	ND	5.0	µg/L	1	V-05	SW-846 8260C	6/24/15	6/24/15 17:15	CMR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Styrene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Toluene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	6/24/15	6/24/15 17:15	CMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	101	70-130	6/24/15 17:15
Toluene-d8	98.4	70-130	6/24/15 17:15
4-Bromofluorobenzene	91.5	70-130	6/24/15 17:15

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

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
15F0851-01 [MW-8]	B124760	5	5.00	06/24/15
15F0851-02 [ATC-4]	B124760	5	5.00	06/24/15
15F0851-03 [MW-6]	B124760	5	5.00	06/24/15
15F0851-04 [MW-7]	B124760	5	5.00	06/24/15
15F0851-05 [ATC-1]	B124760	5	5.00	06/24/15

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B124760 - SW-846 5030B

Blank (B124760-BLK1)

Prepared & Analyzed: 06/24/15

Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							R-05
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
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	4.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B124760 - SW-846 5030B

Blank (B124760-BLK1)

Prepared & Analyzed: 06/24/15

Methylene Chloride	ND	5.0	µg/L							V-05
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	25.2		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	22.9		µg/L	25.0		91.8	70-130			

LCS (B124760-BS1)

Prepared & Analyzed: 06/24/15

Acetone	138	50	µg/L	100		138	70-160			†
Acrylonitrile	9.47	5.0	µg/L	10.0		94.7	70-130			
tert-Amyl Methyl Ether (TAME)	9.11	0.50	µg/L	10.0		91.1	70-130			
Benzene	9.75	1.0	µg/L	10.0		97.5	70-130			
Bromobenzene	10.2	1.0	µg/L	10.0		102	70-130			
Bromochloromethane	10.2	1.0	µg/L	10.0		102	70-130			
Bromodichloromethane	9.41	0.50	µg/L	10.0		94.1	70-130			
Bromoform	10.3	1.0	µg/L	10.0		103	70-130			
Bromomethane	2.80	2.0	µg/L	10.0		28.0 *	40-160			L-07A †
2-Butanone (MEK)	107	20	µg/L	100		107	40-160			†
tert-Butyl Alcohol (TBA)	93.5	20	µg/L	100		93.5	40-160			†
n-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
sec-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.49	0.50	µg/L	10.0		94.9	70-130			
Carbon Disulfide	10.5	4.0	µg/L	10.0		105	70-130			
Carbon Tetrachloride	9.53	5.0	µg/L	10.0		95.3	70-130			
Chlorobenzene	10.5	1.0	µg/L	10.0		105	70-130			
Chlorodibromomethane	8.96	0.50	µg/L	10.0		89.6	70-130			
Chloroethane	12.8	2.0	µg/L	10.0		128	70-130			
Chloroform	9.12	2.0	µg/L	10.0		91.2	70-130			
Chloromethane	7.90	2.0	µg/L	10.0		79.0	40-160			†
2-Chlorotoluene	10.4	1.0	µg/L	10.0		104	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 B124760 - SW-846 5030B										
LCS (B124760-BS1)										
Prepared & Analyzed: 06/24/15										
4-Chlorotoluene	9.58	1.0	µg/L	10.0		95.8	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	10.4	5.0	µg/L	10.0		104	70-130			
1,2-Dibromoethane (EDB)	10.2	0.50	µg/L	10.0		102	70-130			
Dibromomethane	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130			
1,3-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130			
1,4-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130			
trans-1,4-Dichloro-2-butene	9.84	2.0	µg/L	10.0		98.4	70-130			
Dichlorodifluoromethane (Freon 12)	6.28	2.0	µg/L	10.0		62.8	40-160			†
1,1-Dichloroethane	9.74	1.0	µg/L	10.0		97.4	70-130			
1,2-Dichloroethane	9.88	1.0	µg/L	10.0		98.8	70-130			
1,1-Dichloroethylene	9.14	1.0	µg/L	10.0		91.4	70-130			
cis-1,2-Dichloroethylene	9.47	1.0	µg/L	10.0		94.7	70-130			
trans-1,2-Dichloroethylene	9.35	1.0	µg/L	10.0		93.5	70-130			
1,2-Dichloropropane	10.6	1.0	µg/L	10.0		106	70-130			
1,3-Dichloropropane	10.0	0.50	µg/L	10.0		100	70-130			
2,2-Dichloropropane	9.88	1.0	µg/L	10.0		98.8	40-130			†
1,1-Dichloropropene	10.6	2.0	µg/L	10.0		106	70-130			
cis-1,3-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130			
trans-1,3-Dichloropropene	10.9	0.50	µg/L	10.0		109	70-130			
Diethyl Ether	10.2	2.0	µg/L	10.0		102	70-130			
Diisopropyl Ether (DIPE)	8.83	0.50	µg/L	10.0		88.3	70-130			
1,4-Dioxane	98.7	50	µg/L	100		98.7	40-130			†
Ethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
Hexachlorobutadiene	10.8	0.50	µg/L	10.0		108	70-130			
2-Hexanone (MBK)	98.0	10	µg/L	100		98.0	70-160			†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130			
p-Isopropyltoluene (p-Cymene)	10.8	1.0	µg/L	10.0		108	70-130			
Methyl tert-Butyl Ether (MTBE)	9.34	1.0	µg/L	10.0		93.4	70-130			
Methylene Chloride	7.09	5.0	µg/L	10.0		70.9	70-130			V-05
4-Methyl-2-pentanone (MIBK)	91.7	10	µg/L	100		91.7	70-160			†
Naphthalene	11.4	2.0	µg/L	10.0		114	40-130			†
n-Propylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Styrene	10.0	1.0	µg/L	10.0		100	70-130			
1,1,1,2-Tetrachloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,1,2,2-Tetrachloroethane	10.2	0.50	µg/L	10.0		102	70-130			
Tetrachloroethylene	10.5	1.0	µg/L	10.0		105	70-130			
Tetrahydrofuran	10.0	10	µg/L	10.0		100	70-130			
Toluene	10.0	1.0	µg/L	10.0		100	70-130			
1,2,3-Trichlorobenzene	11.2	5.0	µg/L	10.0		112	70-130			
1,2,4-Trichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130			
1,3,5-Trichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130			
1,1,1-Trichloroethane	9.38	1.0	µg/L	10.0		93.8	70-130			
1,1,2-Trichloroethane	10.1	1.0	µg/L	10.0		101	70-130			
Trichloroethylene	9.94	1.0	µg/L	10.0		99.4	70-130			
Trichlorofluoromethane (Freon 11)	10.6	2.0	µg/L	10.0		106	70-130			
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.0	1.0	µg/L	10.0		100	70-130			
1,2,4-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
1,3,5-Trimethylbenzene	9.40	1.0	µg/L	10.0		94.0	70-130			
Vinyl Chloride	10.4	2.0	µg/L	10.0		104	40-160			†

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B124760 - SW-846 5030B										
LCS (B124760-BS1)										
Prepared & Analyzed: 06/24/15										
m+p Xylene	20.0	2.0	µg/L	20.0		100	70-130			
o-Xylene	10.1	1.0	µg/L	10.0		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.6		µg/L	25.0		98.4	70-130			
Surrogate: Toluene-d8	24.8		µg/L	25.0		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	23.5		µg/L	25.0		93.9	70-130			
LCS Dup (B124760-BSD1)										
Prepared & Analyzed: 06/24/15										
Acetone	150	50	µg/L	100		150	70-160	8.08	25	†
Acrylonitrile	9.83	5.0	µg/L	10.0		98.3	70-130	3.73	25	
tert-Amyl Methyl Ether (TAME)	9.51	0.50	µg/L	10.0		95.1	70-130	4.30	25	
Benzene	10.0	1.0	µg/L	10.0		100	70-130	2.83	25	
Bromobenzene	10.0	1.0	µg/L	10.0		100	70-130	1.58	25	
Bromochloromethane	10.2	1.0	µg/L	10.0		102	70-130	0.980	25	
Bromodichloromethane	9.47	0.50	µg/L	10.0		94.7	70-130	0.636	25	
Bromoform	10.9	1.0	µg/L	10.0		109	70-130	5.00	25	
Bromomethane	5.12	2.0	µg/L	10.0		51.2	40-160	58.6 *	25	R-05 †
2-Butanone (MEK)	116	20	µg/L	100		116	40-160	8.00	25	†
tert-Butyl Alcohol (TBA)	98.3	20	µg/L	100		98.3	40-160	4.99	25	†
n-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130	0.00	25	
sec-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130	0.00	25	
tert-Butylbenzene	11.1	1.0	µg/L	10.0		111	70-130	0.903	25	
tert-Butyl Ethyl Ether (TBEE)	9.91	0.50	µg/L	10.0		99.1	70-130	4.33	25	
Carbon Disulfide	10.2	4.0	µg/L	10.0		102	70-130	2.99	25	
Carbon Tetrachloride	9.89	5.0	µg/L	10.0		98.9	70-130	3.71	25	
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	1.04	25	
Chlorodibromomethane	9.35	0.50	µg/L	10.0		93.5	70-130	4.26	25	
Chloroethane	13.0	2.0	µg/L	10.0		130	70-130	1.71	25	
Chloroform	9.38	2.0	µg/L	10.0		93.8	70-130	2.81	25	
Chloromethane	8.55	2.0	µg/L	10.0		85.5	40-160	7.90	25	†
2-Chlorotoluene	10.1	1.0	µg/L	10.0		101	70-130	2.74	25	
4-Chlorotoluene	9.64	1.0	µg/L	10.0		96.4	70-130	0.624	25	
1,2-Dibromo-3-chloropropane (DBCP)	10.8	5.0	µg/L	10.0		108	70-130	4.16	25	
1,2-Dibromoethane (EDB)	10.8	0.50	µg/L	10.0		108	70-130	5.80	25	
Dibromomethane	10.7	1.0	µg/L	10.0		107	70-130	3.24	25	
1,2-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	0.184	25	
1,3-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	0.459	25	
1,4-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130	0.552	25	
trans-1,4-Dichloro-2-butene	10.5	2.0	µg/L	10.0		105	70-130	6.20	25	
Dichlorodifluoromethane (Freon 12)	6.56	2.0	µg/L	10.0		65.6	40-160	4.36	25	†
1,1-Dichloroethane	9.72	1.0	µg/L	10.0		97.2	70-130	0.206	25	
1,2-Dichloroethane	9.91	1.0	µg/L	10.0		99.1	70-130	0.303	25	
1,1-Dichloroethylene	9.13	1.0	µg/L	10.0		91.3	70-130	0.109	25	
cis-1,2-Dichloroethylene	9.89	1.0	µg/L	10.0		98.9	70-130	4.34	25	
trans-1,2-Dichloroethylene	9.39	1.0	µg/L	10.0		93.9	70-130	0.427	25	
1,2-Dichloropropane	10.1	1.0	µg/L	10.0		101	70-130	4.06	25	
1,3-Dichloropropane	10.0	0.50	µg/L	10.0		100	70-130	0.200	25	
2,2-Dichloropropane	9.88	1.0	µg/L	10.0		98.8	40-130	0.00	25	†
1,1-Dichloropropene	10.9	2.0	µg/L	10.0		109	70-130	2.70	25	
cis-1,3-Dichloropropene	10.2	0.50	µg/L	10.0		102	70-130	1.59	25	
trans-1,3-Dichloropropene	11.2	0.50	µg/L	10.0		112	70-130	2.27	25	
Diethyl Ether	11.0	2.0	µg/L	10.0		110	70-130	7.24	25	
Diisopropyl Ether (DIPE)	9.19	0.50	µg/L	10.0		91.9	70-130	4.00	25	

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

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 B124760 - SW-846 5030B										
LCS Dup (B124760-BSD1)										
Prepared & Analyzed: 06/24/15										
1,4-Dioxane	111	50	µg/L	100		111	40-130	12.0	50	† ‡
Ethylbenzene	10.3	1.0	µg/L	10.0		103	70-130	0.388	25	
Hexachlorobutadiene	10.9	0.50	µg/L	10.0		109	70-130	0.369	25	
2-Hexanone (MBK)	102	10	µg/L	100		102	70-160	4.21	25	†
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	2.49	25	
p-Isopropyltoluene (p-Cymene)	11.0	1.0	µg/L	10.0		110	70-130	1.93	25	
Methyl tert-Butyl Ether (MTBE)	9.65	1.0	µg/L	10.0		96.5	70-130	3.26	25	
Methylene Chloride	7.73	5.0	µg/L	10.0		77.3	70-130	8.64	25	V-05
4-Methyl-2-pentanone (MIBK)	95.4	10	µg/L	100		95.4	70-160	3.99	25	†
Naphthalene	11.8	2.0	µg/L	10.0		118	40-130	3.89	25	†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105	70-130	1.79	25	
Styrene	10.1	1.0	µg/L	10.0		101	70-130	0.696	25	
1,1,1,2-Tetrachloroethane	10.4	1.0	µg/L	10.0		104	70-130	2.09	25	
1,1,2,2-Tetrachloroethane	10.3	0.50	µg/L	10.0		103	70-130	1.47	25	
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130	1.14	25	
Tetrahydrofuran	10.8	10	µg/L	10.0		108	70-130	7.41	25	
Toluene	9.96	1.0	µg/L	10.0		99.6	70-130	0.401	25	
1,2,3-Trichlorobenzene	11.3	5.0	µg/L	10.0		113	70-130	0.713	25	
1,2,4-Trichlorobenzene	11.5	1.0	µg/L	10.0		115	70-130	2.92	25	
1,3,5-Trichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130	1.39	25	
1,1,1-Trichloroethane	9.81	1.0	µg/L	10.0		98.1	70-130	4.48	25	
1,1,2-Trichloroethane	10.3	1.0	µg/L	10.0		103	70-130	1.86	25	
Trichloroethylene	9.91	1.0	µg/L	10.0		99.1	70-130	0.302	25	
Trichlorofluoromethane (Freon 11)	11.0	2.0	µg/L	10.0		110	70-130	3.32	25	
1,2,3-Trichloropropane	10.9	2.0	µg/L	10.0		109	70-130	2.89	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.3	1.0	µg/L	10.0		103	70-130	2.95	25	
1,2,4-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.562	25	
1,3,5-Trimethylbenzene	9.36	1.0	µg/L	10.0		93.6	70-130	0.426	25	
Vinyl Chloride	9.34	2.0	µg/L	10.0		93.4	40-160	10.6	25	†
m+p Xylene	20.3	2.0	µg/L	20.0		101	70-130	1.29	25	
o-Xylene	10.2	1.0	µg/L	10.0		102	70-130	1.08	25	
Surrogate: 1,2-Dichloroethane-d4	25.4		µg/L	25.0		101	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		µg/L	25.0		93.6	70-130			

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
No results have been blank subtracted unless specified in the case narrative section.
- L-07A Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
 - R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
 - V-05 Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

CERTIFICATIONS

Certified Analyses included in this Report

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

CERTIFICATIONS

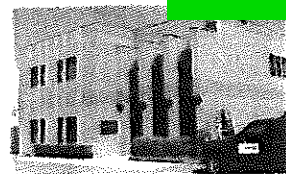
Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2016
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Public Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2016
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2016
RI	Rhode Island Department of Health	LAO00112	12/30/2015
NC	North Carolina Div. of Water Quality	652	12/31/2015
NJ	New Jersey DEP	MA007 NELAP	06/30/2015
FL	Florida Department of Health	E871027 NELAP	06/30/2015
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2015
WA	State of Washington Department of Ecology	C2065	02/23/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2015
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2015

39 Spruce St.
 East Longmeadow, MA. 01028
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Sample Receipt Checklist

CLIENT NAME: Arcadis RECEIVED BY: JDL DATE: 6/17/15

- 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 4.6

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			Plastic Bag / Ziploc	
500 mL Plastic			SOC Kit	
250 mL plastic			Non-ConTest Container	
40 mL Vial - type listed below	15		Perchlorate Kit	
Colisure / bacteria bottle			Flashpoint bottle	
Dissolved Oxygen bottle			Other glass jar	
Encore			Other	

Laboratory Comments:

40 mL vials: # HCl 15 # Methanol _____
 # Bisulfate _____ # DI Water _____
 # Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False)		Comment
	T	F/NA	
1) The cooler's custody seal, if present, is intact.		NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T		
3) Samples were received on ice.	T		
4) Cooler Temperature is acceptable.	T		
5) Cooler Temperature is recorded.	T		
6) COC is filled out in ink and legible.	T		
7) COC is filled out with all pertinent information.	T		
8) Field Sampler's name present on COC.	T		
9) There are no discrepancies between the sample IDs on the container and the COC.	T		
10) Samples are received within Holding Time.	T		
11) Sample containers have legible labels.	T		
12) Containers are not broken or leaking.	T		
13) Air Cassettes are not broken/open.		NA	
14) Sample collection date/times are provided.	T		
15) Appropriate sample containers are used.	T		
16) Proper collection media used.	T		
17) No headspace sample bottles are completely filled.	T		
18) There is sufficient volume for all requested analyses, including any requested MS/MSDs.	T		
19) Trip blanks provided if applicable.		NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	T		
21) Samples do not require splitting or compositing.	T		

Doc #277 Rev. 4 August 2013

Who notified of False statements?
Log-In Technician Initials: JDL

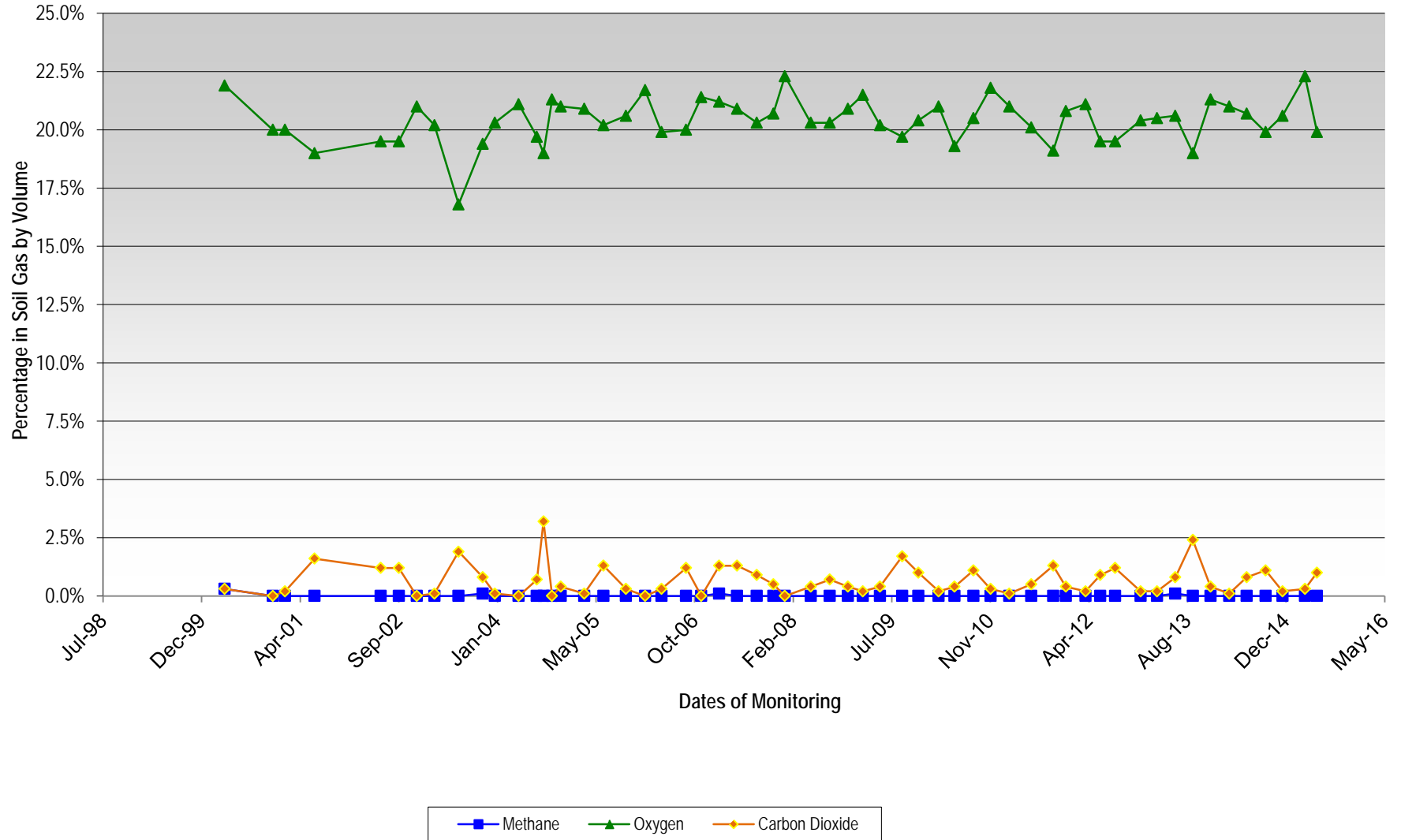
Date/Time: 6/17/15 1230



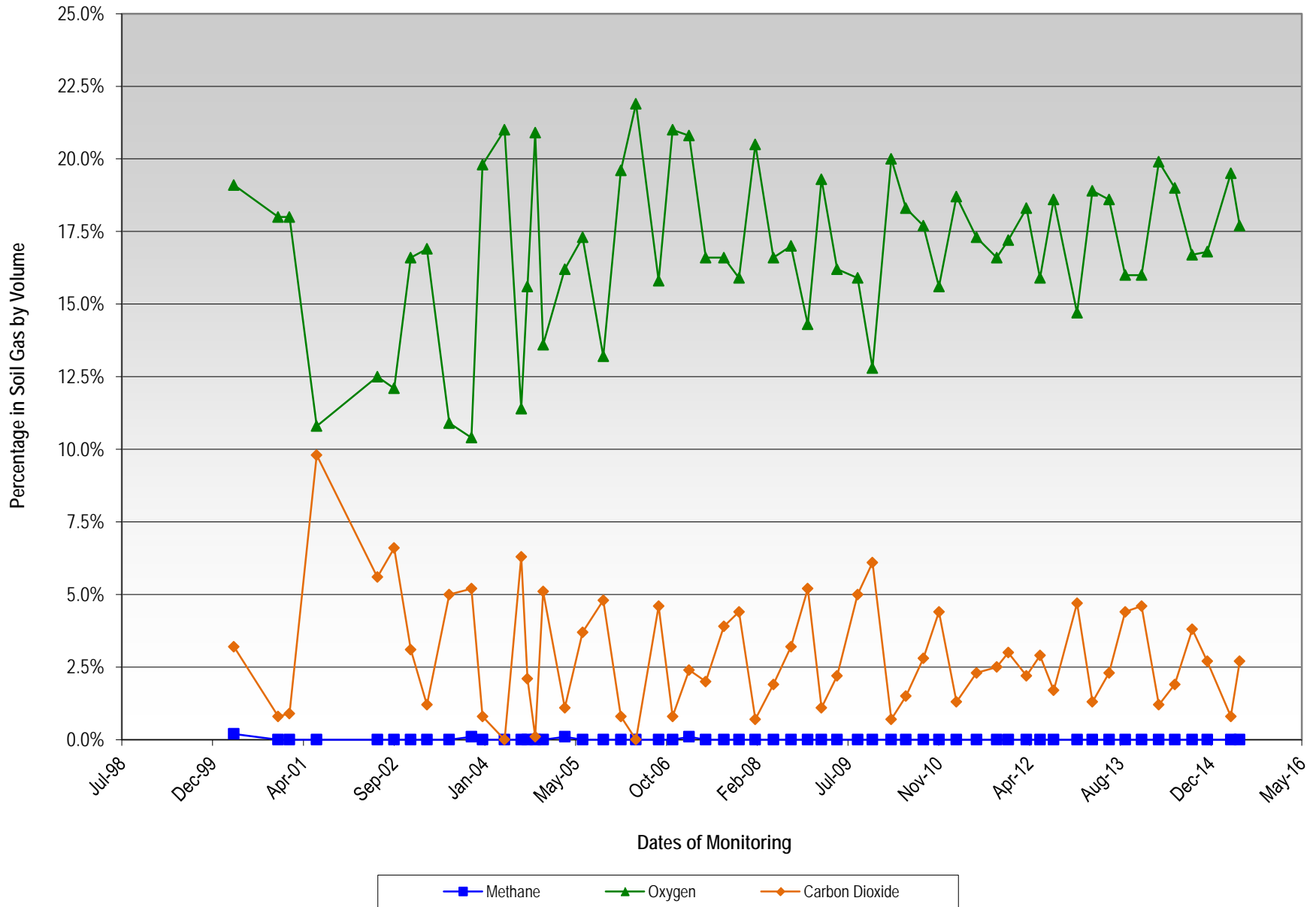
Attachment C

Soil Gas Parameter
Graphs

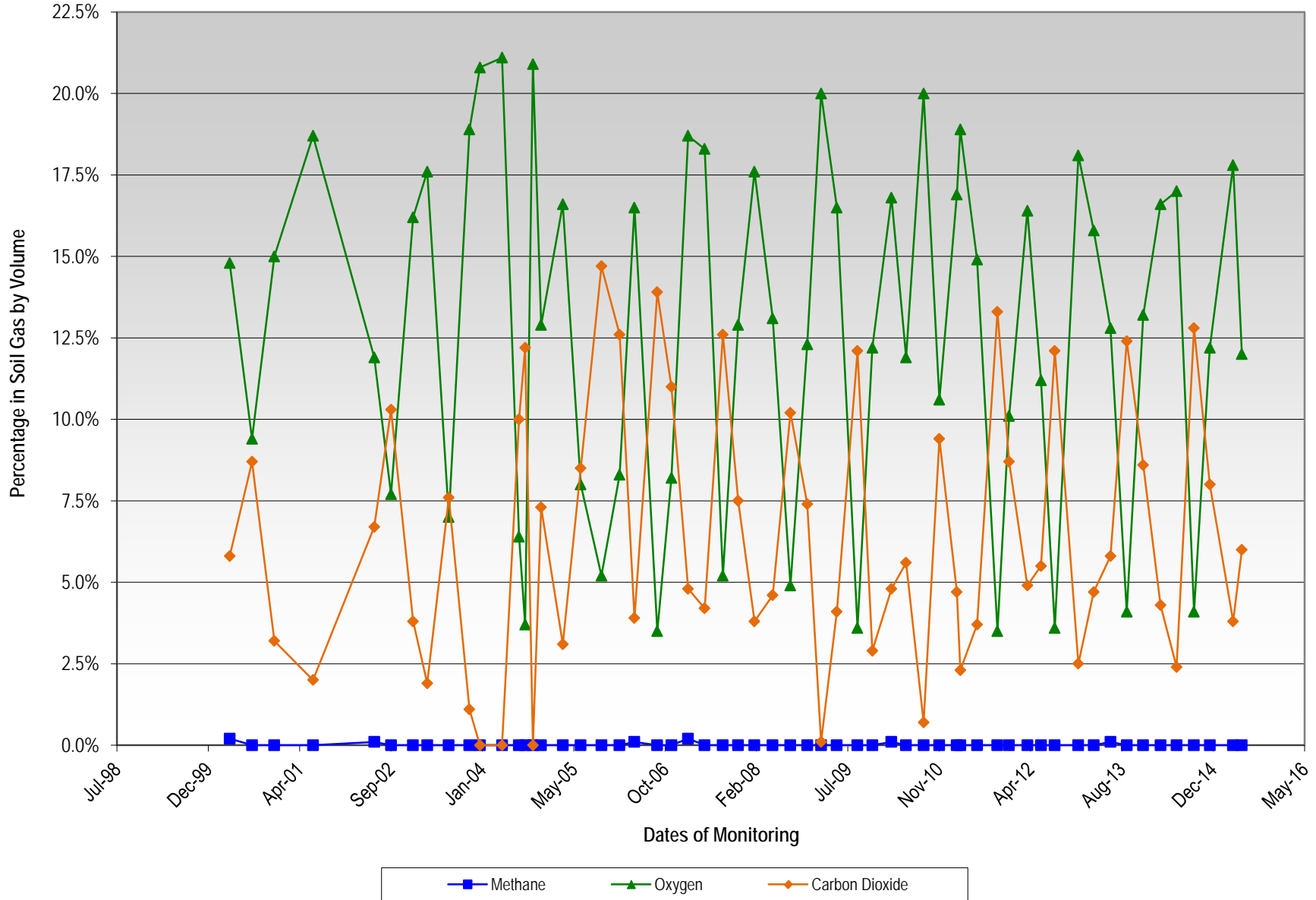
Soil Gas Well EPL1
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



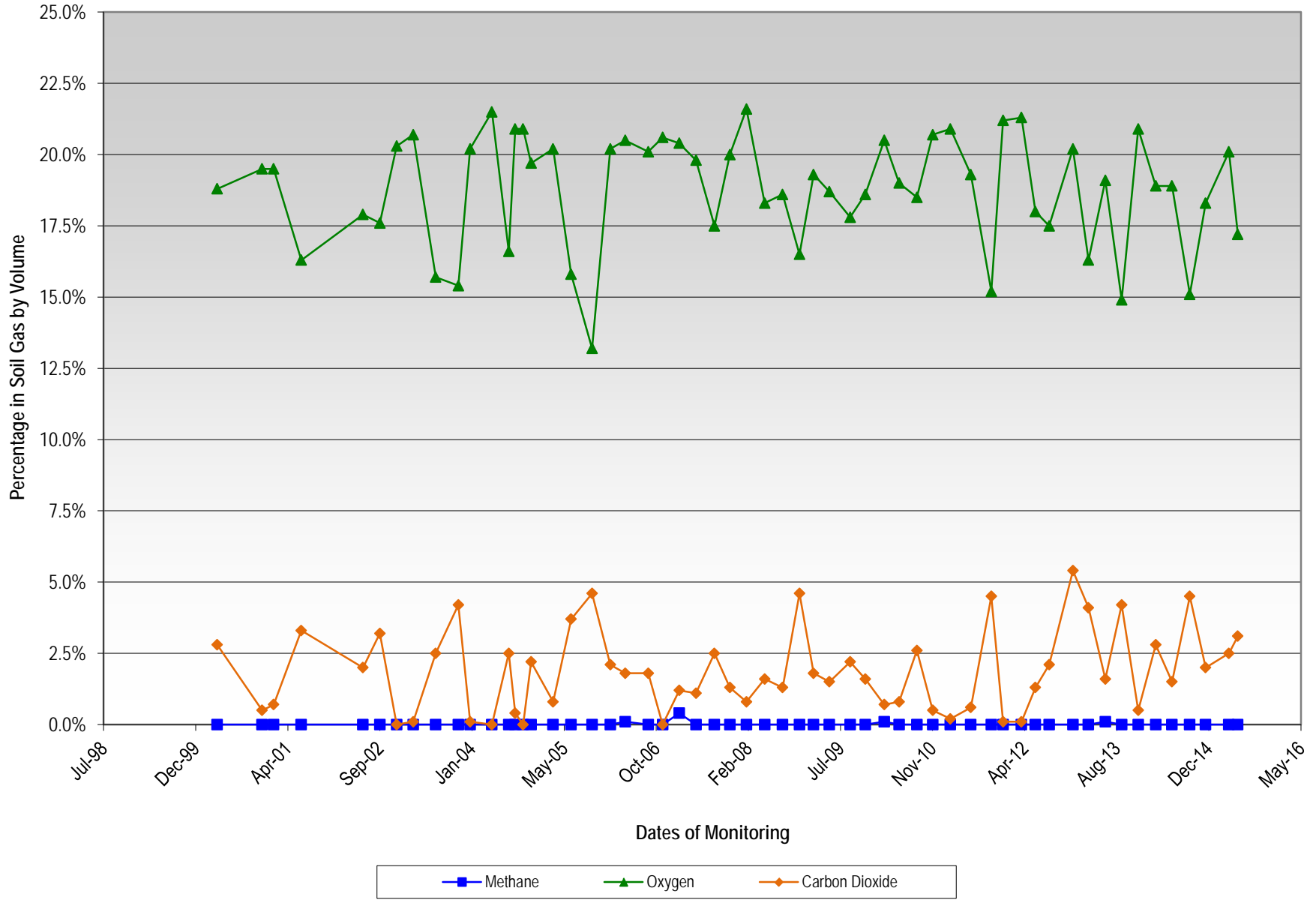
Soil Gas Well EPL4
 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
 Springfield Street School Complex
 Providence, Rhode Island



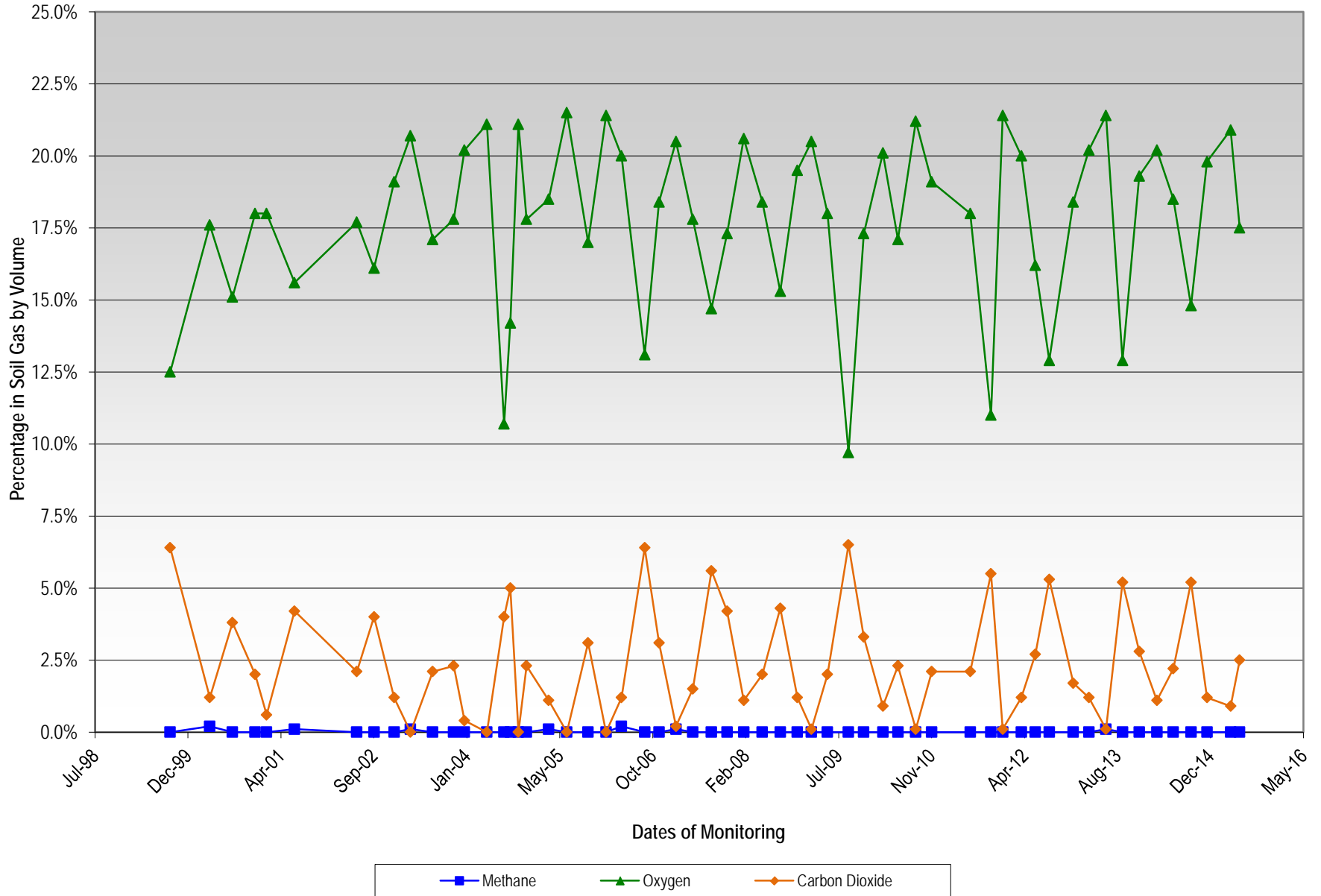
Soil Gas Well MPL5
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



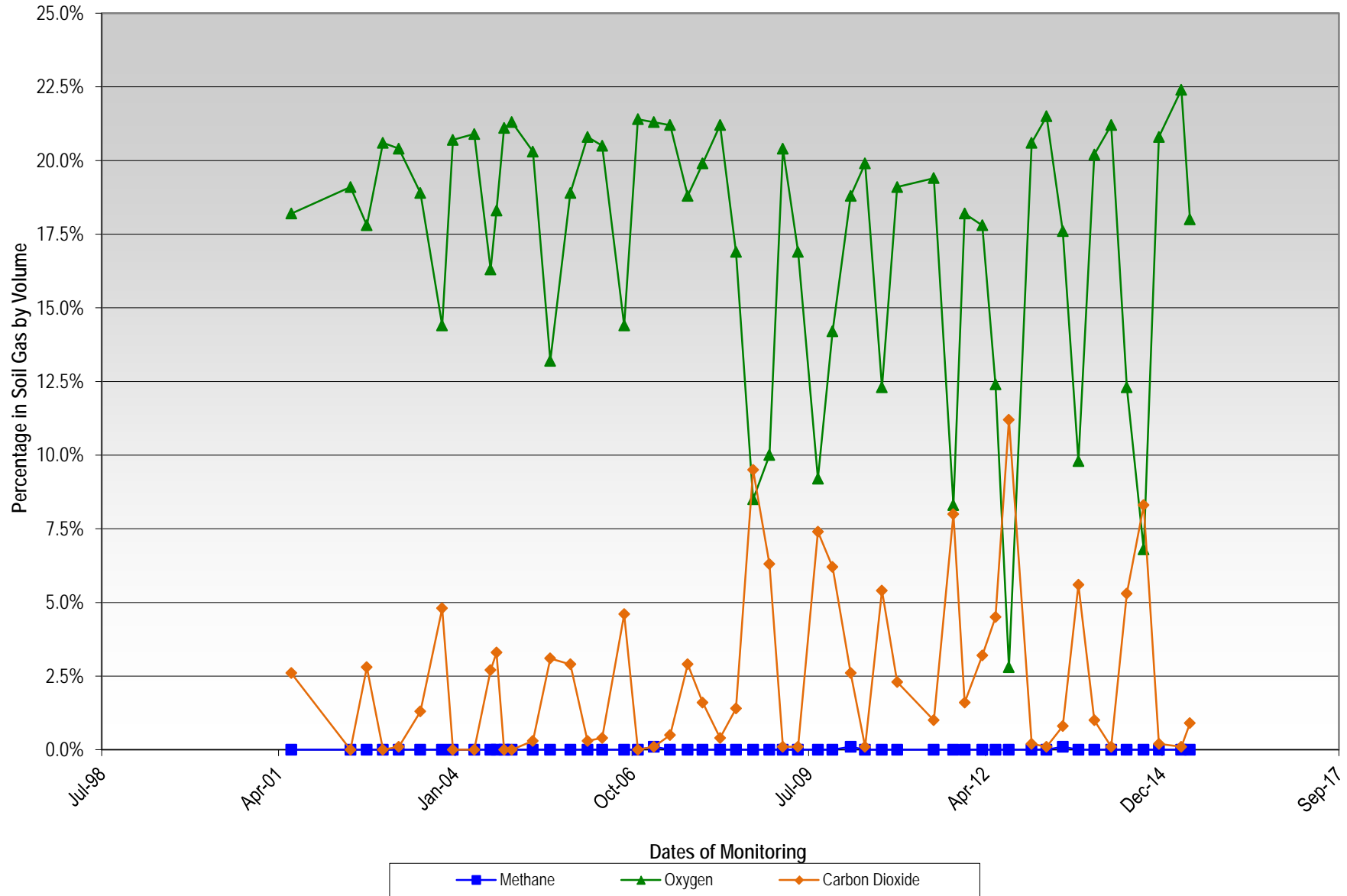
Soil Gas Well MG2
 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
 Springfield Street School Complex
 Providence, Rhode Island



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



Soil Gas MPL 7
 Fluctuation in Methane, Oxygen, Carbon Dioxide Percentages over Time
 Springfield Street School Complex
 Providence, Rhode Island

