ARCADIS Design & Consultancy for natural and built assets

Mr. Jeffrey Crawford
Rhode Island Department of Environmental Management
Office of Waste Management
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Subject:

October 2016 Quarterly Monitoring Report for Springfield Street School Complex

ENVIRONMENTAL

Date:
October 18, 2016

Contact:
Donna H. Pallister, PE

Phone:
401.285.2235

Email:
Donna.pallister@arcadis.com

Our ref:
WK012152.2016

Dear Mr. Crawford:

ARCADIS US, Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between June 2nd and 3rd, 2016. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

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

COVER MONITORING

ARCADIS conducted a visual survey of the site on October 5th, 2016 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.

WELL REPAIRS

Groundwater monitoring well ATC-4 was observed to be open and missing its gripper cap and lid, as the elevation of the well box relative to the PVC casing of the well had sunk. This caused the PVC to push the lid away, leaving the well exposed. On October 6, 2016, the PVC pipe of ATC-4 was cut and a gripper cap

and lid were added. Additionally, the PVC casing of soil gas monitoring well WB-8 was cut so that a gripper cap could be fit under the locking lid of the stickup.

The lid of groundwater monitoring well MW-7 was observed to be vandalized and its lock smashed off. The lid and lock were replaced on October 11, 2016.

SUB-SLAB VENTILATION SYSTEM

Field Monitoring

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on October 5th, 2016. 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.

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 GEM5000 Plus and a MiniRae 3000. Results of screening are provided in Table 1. Methane, carbon monoxide, hydrogen sulfide and organic vapors were not detected in any of the samples. Carbon dioxide was detected at concentrations of 0.5% for the elementary school effluent and at concentrations of 0.7% and 0.5% at the two elementary school influent ports. Carbon dioxide was detected at the middle school front influent and effluent ports at a concentration of 0.2%. All of these concentrations exceed 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 October 7th, 2016 using a Landtec GEM 5000 Plus meter (methane, hydrogen sulfide, oxygen), a Mini Rae 3000 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 October 7th, 2016 was 53.6ºF and ambient carbon dioxide was measured at 513 ppm.

Carbon dioxide did not exceed the RAWP Action Levels at any monitoring point. Methane, carbon monoxide, hydrogen sulfide, and organic vapors were not detected. Carbon dioxide was detected at concentrations between 475 and 896 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 Attachment C of the Standard states: "… maintaining a steady-state CO_2 concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air.

The 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 September 22, 2016. 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 October 5th, 2016. 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. During the sampling period, MW-6, MW-8, and ATC-4 were discovered dry and unable to be sampled. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 4.

No target analytes were detected in either of the two groundwater samples collected on October 5th, 2016.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 29 locations on October 4th, 2016. 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 5000 Plus Landfill Gas Analyzer and a MiniRae 3000 Photoionization Detector (PID).

Soil Gas Field Monitoring Results

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 5. Total VOCs, Methane, Carbon monoxide, and hydrogen sulfide were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 11.4% during the October 2016 monitoring event. The carbon dioxide RAWP action level of 0.1% was exceeded at all monitoring points. The maximum concentration detected during the June 2016 monitoring round was 11.4%, which was higher than the maximum detected during the June 2016 round of 9.3%. 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 biological activity and does not represent a threat to users of the property. The highest concentrations of carbon dioxide were found in wells MPL3 and WB-15, located on the northern end of the property near Hartford Avenue and Milo Street. 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.

VACUUM TESTING

Vacuum testing was conducted on October 14th, 2016 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 in 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 29 soil gas locations and 5 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 biological 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

Enclosures:

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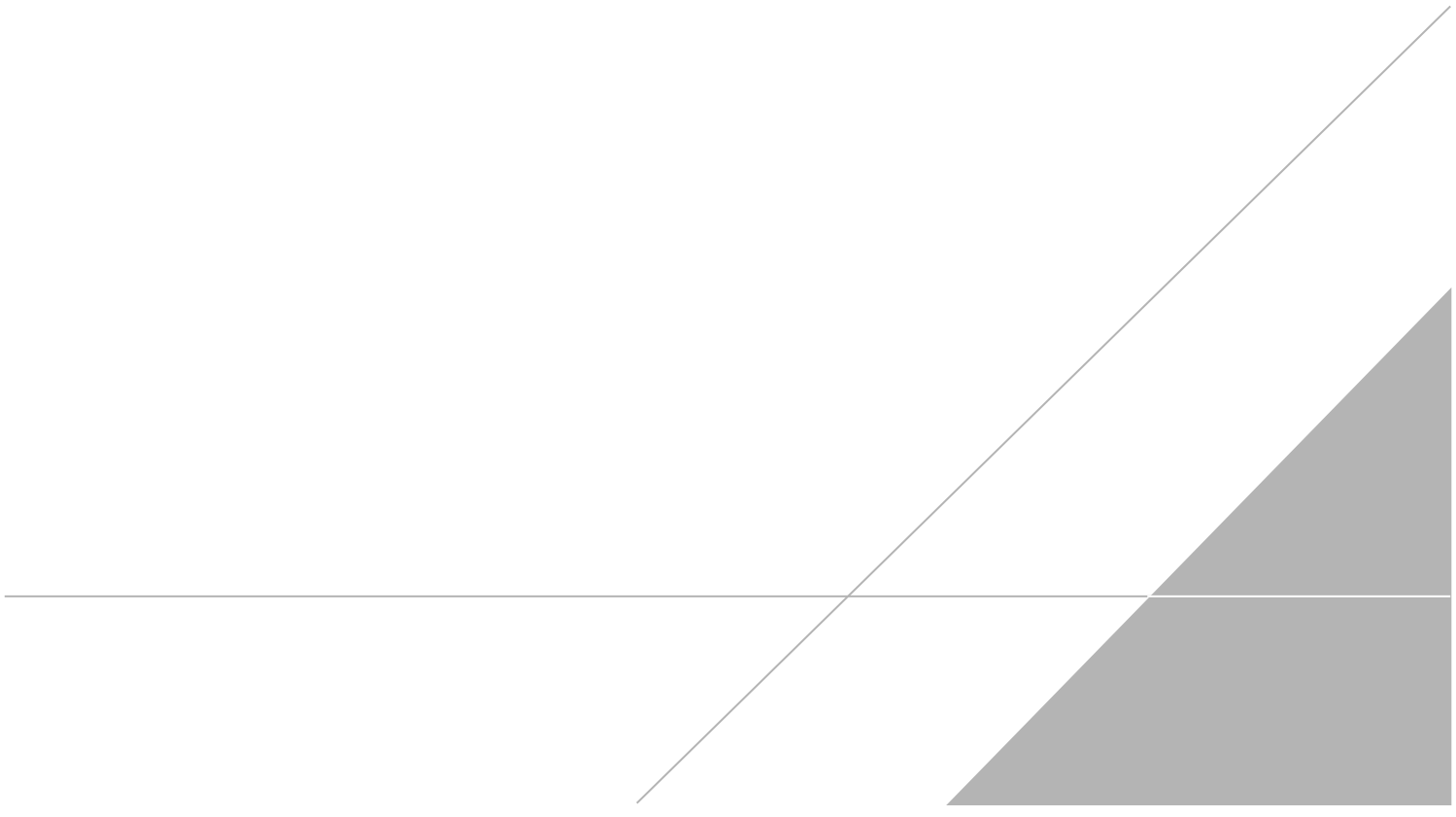


Table 1
System Monitoring Notes
Springfield Street School Complex
Providence, RI
10/5/2016

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	0.7	21	0	0	0
Elementary School inlet 2	0	0.5	21	0	0	0
Elementary School Outlet	0	0.5	20.6	0	0	0
Middle School front shed inlet	0	0.2	21.9	0	0	0
Middle School front shed after 2nd carbon	0	0.2	21.8	0	0	0
Middle School back shed inlet #	NT	NT	NT	NT	NT	NT
Middle School back shed after 2nd 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 GEM5000 Plus, MiniRae 3000
Sampling date: 10/5/2016
Measured by: Jon Lewis
#- Middle school back shed not tested because blower not functioning properly

Table 2
Soil Gas Collected From System Influent
Springfield Street School Complex
Providence, RI

ARCADIS Design & Consultancy for natural and built assets

Parameter	Sample Date	CT DEEP Proposed Residental Volatization Criteria For Soil Vapor (ug/m3)*	OSHA PELs (ug/m3)	Middle School Back (ug/m3)	Middle School Front (ug/m3)	Elementary School #1 (ug/m3)	Elementary School # 2 (ug/m3)
Benzene	6/16/2015	3,247	3,000	NT	ND	ND	ND
	10/27/2015			NT	ND	ND	0.35
	1/6/2016			NT	0.59	1	0.89
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.41	0.32	ND
	10/5/2016			NT	0.58	0.69	0.36
Carbon Tetrachloride	6/16/2015	6,395	62,900	NT	ND	ND	ND
	10/27/2015			NT	ND	ND	ND
	1/6/2016			NT	0.64	0.57	0.6
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.64	ND	ND
	10/5/2016			NT	ND	ND	ND
Chloroform	6/16/2015	22,334	240,000	NT	ND	1.5	1.5
	10/27/2015			NT	ND	1.3	1.6
	1/6/2016			NT	0.25	1.3	1.3
	3/23/2016			NT	ND	1	1.1
	6/3/2016			NT	ND	0.75	0.89
	10/5/2016			NT	ND	1.6	1.4
Chloromethane	6/16/2015	NA	207,000	NT	ND	ND	ND
	10/27/2015			NT	0.51	ND	ND
	1/6/2016			NT	0.35	2.3	2.1
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.71	ND	ND
	10/5/2016			NT	ND	ND	ND
1,4-Dichlorobenzene	6/16/2015	5,805,840	450,000	NT	ND	ND	ND
	10/27/2015			NT	0.71	1	0.89
	1/6/2016			NT	1.1	0.51	0.66
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	ND	ND	ND
	10/5/2016			NT	ND	ND	ND
Dichlorodifluoromethane (Freon 12)	6/16/2015	NA	4,950,000	NT	4.1	6.6	3.6
	10/27/2015			NT	3.7	4.2	7
	1/6/2016			NT	4.1	4.1	4.3
	3/23/2016			NT	2.7	3.1	5.9
	6/3/2016			NT	1.5	1.2	2.5
	10/5/2016			NT	4.3	11	3.1
1,2-Dichloroethane	6/16/2015	4,000	202,372	NT	ND	ND	ND
	10/27/2015			NT	ND	ND	ND
	1/6/2016			NT	ND	ND	ND
	3/23/2016			NT	ND	ND	0.56
	6/3/2016			NT	ND	ND	ND
	10/5/2016			NT	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	6/16/2015	NA	7,000,000	NT	2.5	8.2	1.2
	10/27/2015			NT	3.9	2.5	5.6
	1/6/2016			NT	2.8	1.6	2.6
	3/23/2016			NT	0.98	ND	2.6
	6/3/2016			NT	0.78	ND	1.4
	10/5/2016			NT	5.3	17	2.7
Ethylbenzene	6/16/2015	7,281,812	435,000	NT	0.5	0.53	0.56
	10/27/2015			NT	ND	0.72	0.59
	1/6/2016			NT	0.29	0.33	0.48
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.5	ND	ND
	10/5/2016			NT	0.9	1.4	ND

Table 2
Soil Gas Collected From System Influent
Springfield Street School Complex
Providence, RI

ARCADIS Design & Consultancy for natural and built assets

Parameter	Sample Date	CT DEEP Proposed Residental Volatization Criteria For Soil Vapor (ug/m3)*	OSHA PELs (ug/m3)	Middle School Back (ug/m3)	Middle School Front (ug/m3)	Elementary School #1 (ug/m3)	Elementary School # 2 (ug/m3)
Methylene Chloride	6/16/2015	4,237,289	86,750	NT	110	78	64
	10/27/2015			NT	21	30	8.4
	1/6/2016			NT	4.1	2.4	2
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	17	15	17
	10/5/2016			NT	4.2	4.2	3.9
Styrene	6/16/2015	34,633	456,000	NT	1.7	1.5	1.7
	10/27/2015			NT	30	46	27
	1/6/2016			NT	34	31	31
	3/23/2016			NT	25	26	25
	6/3/2016			NT	38	36	35
	10/5/2016			NT	1.3	2.3	1.3
Tetrachloroethylene	6/16/2015	75,840	678,000	NT	3.9	23	4.8
	10/27/2015			NT	1.6	2.6	32
	1/6/2016			NT	6	2.8	19
	3/23/2016			NT	1.2	1.6	9.8
	6/3/2016			NT	1	3.1	7.9
	10/5/2016			NT	3.6	51	6.2
Toluene	6/16/2015	2,910,779	750,000	NT	5.7	4.7	6.2
	10/27/2015			NT	27	36	25
	1/6/2016			NT	31	27	28
	3/23/2016			NT	18	18	16
	6/3/2016			NT	21	18	19
	10/5/2016			NT	3.6	9.5	3.7
Trichloroethylene	6/16/2015	38,237	537,000	NT	ND	2.1	ND
	10/27/2015			NT	ND	ND	4.2
	1/6/2016			NT	0.53	0.82	4.1
	3/23/2016			NT	ND	ND	1.1
	6/3/2016			NT	ND	ND	1.1
	10/5/2016			NT	ND	5.6	0.7
Trichlorofluoromethane (Freon 11)	6/16/2015	NA	5,600,000	NT	2.3	2.9	2.6
	10/27/2015			NT	2.7	3.7	3.4
	1/6/2016			NT	2.9	2.8	4
	3/23/2016			NT	3.2	2.8	3
	6/3/2016			NT	3.8	2.9	3.9
	10/5/2016			NT	1.7	3.2	1.8
1,1,2- Trichloro-1,2,2-trifluoroethane(Freon 113)	6/16/2015	NA	7,600,000	NT	ND	ND	ND
	10/27/2015			NT	ND	ND	ND
	1/6/2016			NT	0.64	0.77	0.64
	3/23/2016			NT	ND	0.84	0.8
	6/3/2016			NT	ND	ND	ND
	10/5/2016			NT	ND	ND	ND
1,2,4-Trimethylbenzene	6/16/2015	NA	125,000##	NT	1.6	1.5	1.5
	10/27/2015			NT	1.2	0.76	1.9
	1/6/2016			NT	0.68	0.44	0.54
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.66	ND	0.59
	10/5/2016			NT	2	2	2
1,3,5-Trimethylbenzene	6/16/2015	6,883	125,000##	NT	ND	ND	ND
	10/27/2015			NT	ND	ND	ND
	1/6/2016			NT	ND	ND	ND
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	ND	ND	ND
	10/5/2016			NT	0.7	0.71	0.66
M/p-Xylene	6/16/2015	2,215,755#	435,000	NT	2.4	2.4	2.6
	10/27/2015			NT	1.3	2.7	2.4
	1/6/2016			NT	1.6	1.2	1.7
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	1.7	0.91	1.1
	10/5/2016			NT	2.3	3.3	ND

Table 2
Soil Gas Collected From System Influent
Springfield Street School Complex
Providence, RI

Parameter	Sample Date	CT DEEP Proposed Residental Volatization Criteria For Soil Vapor (ug/m3)*	OSHA PELs (ug/m3)	Middle School Back (ug/m3)	Middle School Front (ug/m3)	Elementary School #1 (ug/m3)	Elementary School # 2 (ug/m3)
o-Xylene	6/16/2015	2,215,755#	435,000	NT	1.4	1.3	1.3
	10/27/2015			NT	0.57	1.1	0.89
	1/6/2016			NT	0.62	0.53	0.64
	3/23/2016			NT	ND	ND	ND
	6/3/2016			NT	0.67	ND	0.48
	10/5/2016			NT	ND	ND	ND

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 PELs = Occupational Safety and Health Administration Permissable Exposure Limits
CT DEEP= Connecticut Dpeartment 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
##- Represents total trimethylbenzene
Results prior to June 2015 are not shown.

Table 3
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, RI
10/7/2016

ARCADIS Design & Consultancy for natural and built assets

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Front office	0	574	21.3	0	0	0
E.S. Elevator	0	475	21.2	0	0	0
E.S. Faculty Work Room	0	610	21.2	0	0	0
E.S. Gym	0	575	21.2	0	0	0
E.S. Stairway B	0	553	21.2	0	0	0
E.S. Stairway C	0	520	21.3	0	0	0
E.S. Library	0	533	21.3	0	0	0
E.S. Front Stairs	0	506	213	0	0	0
E.S. Cafeteria	0	562	21.2	0	0	0
E.S. Mechanical Room	0	632	21.2	0	0	0
M.S. Front Office	0	569	21.5	0	0	0
M.S. Elevator	0	690	21.5	0	0	0
M.S. Stairway near Elem. School GS-01	0	797	21.8	0	0	0
M.S. Near sensor #16 in hall outside cafeteria	0	822	21.8	0	0	0
M.S. Faculty Work Room	0	776	21.5	0	0	0
M.S. Sensor #15 Outside Gym	0	759	21.7	0	0	0
M.S. GS-03 Across from Boys Bathroom	0	896	21.7	0	0	0
M.S. Gym	0	599	21.6	0	0	0
M.S. Outside of Music Room	0	842	21.8	0	0	0
M.S. Cafeteria	0	627	21.6	0	0	0
M.S. Front Hall near sensor #4	0	870	21.7	0	0	0
M.S. Hallway across from elevator near sensor #9	0	880	21.7	0	0	0
M.S. Near sensor GS 06 hallway right end	0	889	21.7	0	0	0
M.S. stairway near Hartford Ave. sensor GS-7	0	681	21.9	0	0	0
Remedial Action Work Plan Action Levels	**0.5**	**1,000 ppm (0.1%)**	**NA**	**9 ppm**	**10 ppm**	**5 ppm**

Notes: The indoor air quality monitoring panels in the M.S. and E.S. were calibrated on 9/22/2016.
E.S. indicates Elementary School, M.S. indicates Middle School
Measurements made with: MiniRae 3000 photoionization detector, Fluke 975 Airmeter, Landtec Gem 5000 Plus
PPM = Parts per million
Outdoor conditions: carbon dioxide = 513 ppm temperature = 53.6 degrees F

Table 4
Groundwater Monitoring Results
Springfield Street School Complex
Providence, RI

Sampling Dates and Results in µg/L		Sampling Dates and Results in µg/L						RIDEM GB Groundwater Objective
Well ID	**Detected Compounds**	**6/15/2015**	**10/29/2015**	**1/6/2016**	**3/23/2016**	**6/3/2016**	**10/5/2016**	
ATC-1								
	Chloromethane	4.1	ND	ND	ND	ND	ND	**NA**
ATC-2		Closed	Closed	Closed	Closed	Closed	Closed	
MW-6		ND	NS	NS	NS	NS	NS	
ATC-3		Closed	Closed	Closed	Closed	Closed	Closed	
MW-7		ND	ND	ND	ND	ND	ND	
ATC-4								
	Chlorobenzene	ND	1.2	ND	ND	ND	NS	**70**
	1,4-dichlorobenzene	ND	1.8	1.4	1	1	NS	**NA**
ATC-5		Closed	Closed	Closed	Closed	Closed	Closed	
MW-8		ND	NS	NS	NS	NS	NS	
Sampled By:		ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	

ND = not detected above method detection limit
NS = not sampled
NA = No applicable standard published
MTBE = Methyl tert-Butyl Ether
µg/L = micrograms per liter
Samples collected prior to 6/15/15 and after 2009 are hidden.

Table 5
Soil Gas Survey
Springfield Street School Complex
Providence, RI
10/4/2016

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0	3.9	18.1	0	0	0
WB-2	0	0.5	21.3	0	0	0
WB-3	0	0.2	22.2	0	0	0
WB-4	0	0.3	21.9	0	0	0
WB-5	0	0.1	22.2	0	0	0
WB-6	0	0.3	22	0	0	0
WB-7	0	0.3	22	0	0	0
WB-8	0	0.1	22.2	0	0	0
WB-12	0	1.2	21.3	0	0	0
WB-13	0	2.7	19.2	0	0	0
WB-14	0	5	15	0	0	0
WB-15	0	11.4	6.4	0	0	0
EPL-1	0	0.4	21.4	0	0	0
EPL-2	0	2	19.6	0	0	0
EPL-3	0	2.4	19	0	0	0
EPL-4	0	3.2	17.6	0	0	0
EPL-5	0	4.2	16	0	0	0
ENE-1	0	0.1	21.5	0	0	0
MG1	0	0.1	21.8	0	0	0
MG2	0	3.9	18.1	0	0	0
MG3	0	0.1	21.9	0	0	0
MG4	0	3.3	17.4	0	0	0
MG5	0	6.7	13.2	0	0	0
MPL2	0	2.9	18.7	0	0	0
MPL3	0	11.4	9.4	0	0	0
MPL5	0	9.6	10.7	0	0	0
MPL6	0	8.7	12.5	0	0	0
MPL7	0	10.5	11	0	0	0
MPL8	0	6.1	14.5	0	0	0
Remedial Action Work Plan Action Levels	**0.5**	**1,000 ppm (0.1%)**	**NA**	**9 ppm**	**10 ppm**	**5 ppm**

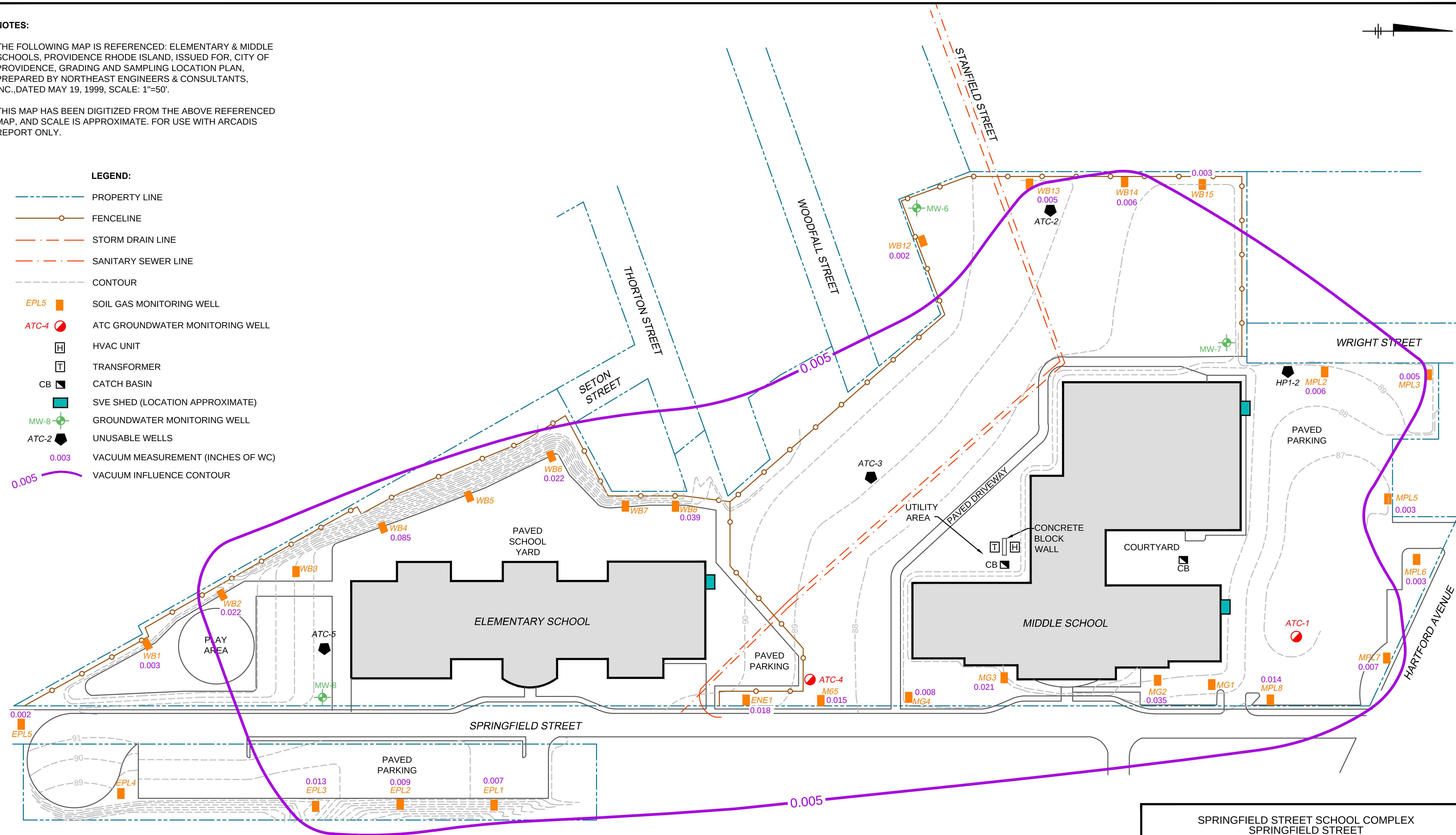
Sampled by: Jon Lewis
Weather Conditions: 10/4/2016 - overcast, 61°F
Sampling Equipment: Landtec GEM 5000 Plus, MiniRae 3000 PID

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 ARCADIS REPORT ONLY.



SPRINGFIELD STREET SCHOOL COMPLEX
SPRINGFIELD STREET
PROVIDENCE, RHODE ISLAND

AREA OF VACUUM INFLUENCE OCTOBER 14, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: MANCHESTER, CT DIV/GROUP: ENVCAD DB: B.SMALL PM: TM:
LAYOUT: 1 SAVED: 10/18/2016 2:21 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: PDF-LB PLOTSTYLETABLE: ---- PLOTTED: 10/18/2016 2:22 PM BY: HALLIWELL, TRISH
G:\ENVCAD\MANCHESTER\ACT\WK012152\2016\0001\WK012152-OCT 2016.dwg

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
- H — HVAC UNIT
- T — TRANSFORMER
- CB — CATCH BASIN
- SVE SHED (LOCATION APPROXIMATE)
- MW-8 — GROUNDWATER MONITORING WELL
- ATC-2 — UNUSABLE WELLS

STANFIELD STREET
WOODFALL STREET
THORTON STREET
SETON STREET
WRIGHT STREET
SPRINGFIELD STREET
HARTFORD AVENUE
PAVED DRIVEWAY
PAVED SCHOOL YARD
PAVED PARKING
PAVED PARKING
PAVED PARKING
PLAY AREA
ELEMENTARY SCHOOL
MIDDLE SCHOOL
UTILITY AREA
CONCRETE BLOCK WALL
COURTYARD
CB
CB
WB1 WB2 WB3 WB4 WB5 WB6 WB7 WB8 WB12 WB13 WB14 WB15
MW-6 MW-7 MW-8
ATC-1 ATC-2 ATC-3 ATC-4 ATC-5
HP1-2 MPL2 MPL3 MPL5 MPL6 MPL7 MPL8
MG1 MG2 MG3 MG4
ENE1 M65
EPL1 EPL2 EPL3 EPL4 EPL5
87 88 89 90 91

0 100' 200'
GRAPHIC SCALE

SPRINGFIELD STREET SCHOOL COMPLEX
SPRINGFIELD STREET
PROVIDENCE, RHODE ISLAND

SITE PLAN

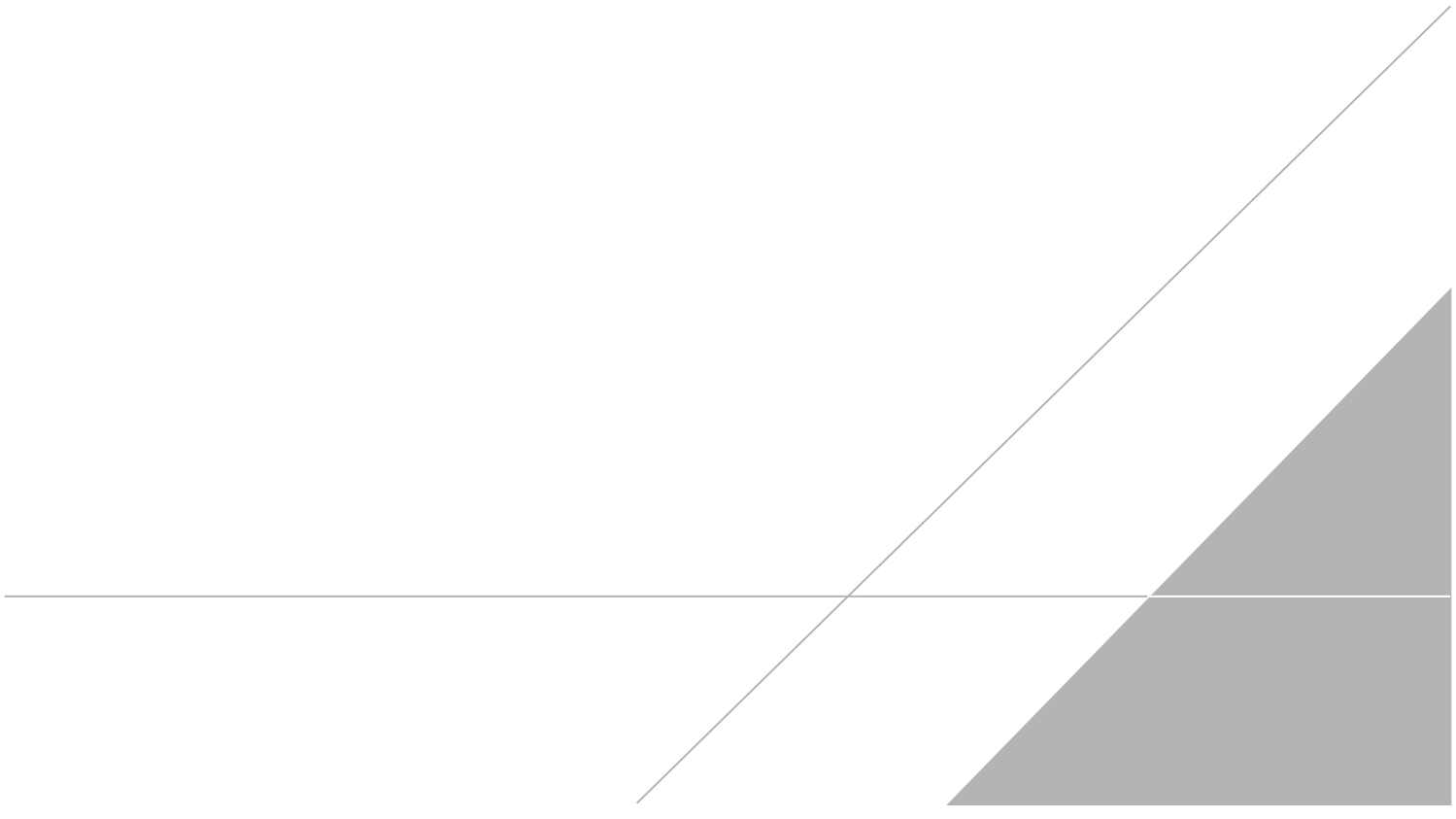
ARCADIS Design & Consultancy for natural and built assets

FIGURE **2**

CITY: MANCHESTER, CT DIV/GROUP: ENVCAD DB: B. SMALL PM: TM:
G:\ENVCAD\MANCHESTER\ACTIVE\TWK\012152\0011\00001\WK012152001 1-B01.dwg LAYOUT: 1 SAVED: 2/17/2016 3:05 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: PDF-LB PLOTSTYLETABLE: ---- PLOTTED: 2/17/2016 3:05 PM BY: HALLWELL, TRISH

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

Complete Lab Results

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

October 12, 2016

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

Project Location: Springfield St. Schools, Providence, RI
Client Job Number:
Project Number: WK012152.2016
Laboratory Work Order Number: 16J0220

Enclosed are results of analyses for samples received by the laboratory on October 6, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

Table of Contents

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: 10/12/2016

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.2016

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16J0220

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. Schools, Providence, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
ATC-1	16J0220-01	Ground Water		SW-846 8260C	
MW-7	16J0220-02	Ground Water		SW-846 8260C	
TB	16J0220-03	Trip Blank Water		SW-846 8260C	

con-test® ANALYTICAL LABORATORY

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

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-02

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

Analyte & Samples(s) Qualified:

Methyl Acetate
B160097-BS1, B160097-BSD1

L-06

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

Analyte & Samples(s) Qualified:

Isopropylbenzene (Cumene)
B160097-BS1, B160097-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:

1,4-Dioxane
16J0220-01[ATC-1], 16J0220-02[MW-7], 16J0220-03[TB], B160097-BLK1, B160097-BS1, B160097-BSD1

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:

Isopropylbenzene (Cumene)
B160097-BS1, B160097-BSD1

V-20

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

Analyte & Samples(s) Qualified:

Chloromethane
B160097-BS1, B160097-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.

Lisa A. Worthington
Project Manager

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: ATC-1 Sampled: 10/5/2016 10:00

Sample ID: 16J0220-01

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	10/7/16	10/7/16 20:02	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: ATC-1 Sampled: 10/5/2016 10:00

Sample ID: 16J0220-01

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	10/7/16	10/7/16 20:02	EEH
1,4-Dioxane	ND	50	µg/L	1	V-05	SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:02	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.2	70-130		10/7/16 20:02
Toluene-d8	99.8	70-130		10/7/16 20:02
4-Bromofluorobenzene	99.6	70-130		10/7/16 20:02

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: MW-7 Sampled: 10/5/2016 10:50

Sample ID: 16J0220-02

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	10/7/16	10/7/16 20:29	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: MW-7 Sampled: 10/5/2016 10:50

Sample ID: 16J0220-02

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	10/7/16	10/7/16 20:29	EEH
1,4-Dioxane	ND	50	µg/L	1	V-05	SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 20:29	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	100	70-130		10/7/16 20:29
Toluene-d8	101	70-130		10/7/16 20:29
4-Bromofluorobenzene	98.7	70-130		10/7/16 20:29

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: TB Sampled: 10/5/2016 00:00

Sample ID: 16J0220-03

Sample Matrix: Trip Blank 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	10/7/16	10/7/16 19:09	EEH
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Bromoform	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Carbon Disulfide	ND	4.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Chlorodibromomethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Chloromethane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH

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

Project Location: Springfield St. Schools, Providenc Sample Description: Work Order: 16J0220

Date Received: 10/6/2016

Field Sample #: TB Sampled: 10/5/2016 00:00

Sample ID: 16J0220-03

Sample Matrix: Trip Blank 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	10/7/16	10/7/16 19:09	EEH
1,4-Dioxane	ND	50	µg/L	1	V-05	SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Hexachlorobutadiene	ND	0.60	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Methyl Acetate	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Methyl Cyclohexane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Naphthalene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	10/7/16	10/7/16 19:09	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	99.8	70-130		10/7/16 19:09
Toluene-d8	99.9	70-130		10/7/16 19:09
4-Bromofluorobenzene	98.2	70-130		10/7/16 19:09

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
16J0220-01 [ATC-1]	B160097	5	5.00	10/07/16
16J0220-02 [MW-7]	B160097	5	5.00	10/07/16
16J0220-03 [TB]	B160097	5	5.00	10/07/16

con-test® ANALYTICAL LABORATORY
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 B160097 - SW-846 5030B										
Blank (B160097-BLK1)				Prepared & Analyzed: 10/07/16						
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							
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	2.0	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							V-05
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	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 Acetate	ND	1.0	µg/L							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B160097 - SW-846 5030B										
Blank (B160097-BLK1)				Prepared & Analyzed: 10/07/16						
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methyl Cyclohexane	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	10	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,3,5-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*24.9*		µg/L	25.0		99.6	70-130			
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*25.1*		µg/L	25.0		101	70-130			
LCS (B160097-BS1)				Prepared & Analyzed: 10/07/16						
Acetone	82.9	50	µg/L	100		82.9	70-160			†
Acrylonitrile	8.96	5.0	µg/L	10.0		89.6	70-130			
tert-Amyl Methyl Ether (TAME)	9.14	0.50	µg/L	10.0		91.4	70-130			
Benzene	10.9	1.0	µg/L	10.0		109	70-130			
Bromobenzene	10.9	1.0	µg/L	10.0		109	70-130			
Bromochloromethane	12.1	1.0	µg/L	10.0		121	70-130			
Bromodichloromethane	10.8	0.50	µg/L	10.0		108	70-130			
Bromoform	9.56	1.0	µg/L	10.0		95.6	70-130			
Bromomethane	7.06	2.0	µg/L	10.0		70.6	40-160			†
2-Butanone (MEK)	101	20	µg/L	100		101	40-160			†
tert-Butyl Alcohol (TBA)	83.9	20	µg/L	100		83.9	40-160			†
n-Butylbenzene	11.7	1.0	µg/L	10.0		117	70-130			
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130			
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.94	0.50	µg/L	10.0		99.4	70-130			
Carbon Disulfide	8.35	4.0	µg/L	10.0		83.5	70-130			
Carbon Tetrachloride	10.7	5.0	µg/L	10.0		107	70-130			
Chlorobenzene	11.0	1.0	µg/L	10.0		110	70-130			
Chlorodibromomethane	9.56	2.0	µg/L	10.0		95.6	70-130			
Chloroethane	8.96	2.0	µg/L	10.0		89.6	70-130			
Chloroform	10.8	2.0	µg/L	10.0		108	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 B160097 - SW-846 5030B												
LCS (B160097-BS1)				Prepared & Analyzed: 10/07/16								
Chloromethane	6.88	2.0	µg/L	10.0		68.8		40-160			V-20	†
2-Chlorotoluene	10.9	1.0	µg/L	10.0		109		70-130				
4-Chlorotoluene	11.3	1.0	µg/L	10.0		113		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.4	5.0	µg/L	10.0		104		70-130				
1,2-Dibromoethane (EDB)	11.1	0.50	µg/L	10.0		111		70-130				
Dibromomethane	10.8	1.0	µg/L	10.0		108		70-130				
1,2-Dichlorobenzene	10.6	1.0	µg/L	10.0		106		70-130				
1,3-Dichlorobenzene	10.9	1.0	µg/L	10.0		109		70-130				
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130				
trans-1,4-Dichloro-2-butene	8.95	2.0	µg/L	10.0		89.5		70-130				
Dichlorodifluoromethane (Freon 12)	7.34	2.0	µg/L	10.0		73.4		40-160				†
1,1-Dichloroethane	11.5	1.0	µg/L	10.0		115		70-130				
1,2-Dichloroethane	10.6	1.0	µg/L	10.0		106		70-130				
1,1-Dichloroethylene	10.3	1.0	µg/L	10.0		103		70-130				
cis-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109		70-130				
trans-1,2-Dichloroethylene	10.8	1.0	µg/L	10.0		108		70-130				
1,2-Dichloropropane	10.4	1.0	µg/L	10.0		104		70-130				
1,3-Dichloropropane	10.7	0.50	µg/L	10.0		107		70-130				
2,2-Dichloropropane	10.2	1.0	µg/L	10.0		102		40-130				†
1,1-Dichloropropene	11.2	2.0	µg/L	10.0		112		70-130				
cis-1,3-Dichloropropene	9.13	0.50	µg/L	10.0		91.3		70-130				
trans-1,3-Dichloropropene	10.6	0.50	µg/L	10.0		106		70-130				
Diethyl Ether	9.38	2.0	µg/L	10.0		93.8		70-130				
Diisopropyl Ether (DIPE)	9.99	0.50	µg/L	10.0		99.9		70-130				
1,4-Dioxane	66.7	50	µg/L	100		66.7		40-130			V-05	†
Ethylbenzene	11.0	1.0	µg/L	10.0		110		70-130				
Hexachlorobutadiene	11.7	0.60	µg/L	10.0		117		70-130				
2-Hexanone (MBK)	96.4	10	µg/L	100		96.4		70-160				†
Isopropylbenzene (Cumene)	13.3	1.0	µg/L	10.0		**133**	*	70-130			L-06, V-06	
p-Isopropyltoluene (p-Cymene)	10.9	1.0	µg/L	10.0		109		70-130				
Methyl Acetate	16.5	1.0	µg/L	10.0		**165**	*	70-130			L-02	
Methyl tert-Butyl Ether (MTBE)	9.26	1.0	µg/L	10.0		92.6		70-130				
Methyl Cyclohexane	10.8	1.0	µg/L	10.0		108		70-130				
Methylene Chloride	10.7	5.0	µg/L	10.0		107		70-130				
4-Methyl-2-pentanone (MIBK)	101	10	µg/L	100		101		70-160				†
Naphthalene	11.1	2.0	µg/L	10.0		111		40-130				†
n-Propylbenzene	11.3	1.0	µg/L	10.0		113		70-130				
Styrene	10.9	1.0	µg/L	10.0		109		70-130				
1,1,1,2-Tetrachloroethane	10.3	1.0	µg/L	10.0		103		70-130				
1,1,2,2-Tetrachloroethane	11.2	0.50	µg/L	10.0		112		70-130				
Tetrachloroethylene	11.2	1.0	µg/L	10.0		112		70-130				
Tetrahydrofuran	12.8	10	µg/L	10.0		128		70-130				
Toluene	11.0	1.0	µg/L	10.0		110		70-130				
1,2,3-Trichlorobenzene	10.7	5.0	µg/L	10.0		107		70-130				
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106		70-130				
1,3,5-Trichlorobenzene	10.1	1.0	µg/L	10.0		101		70-130				
1,1,1-Trichloroethane	10.7	1.0	µg/L	10.0		107		70-130				
1,1,2-Trichloroethane	11.3	1.0	µg/L	10.0		113		70-130				
Trichloroethylene	11.4	1.0	µg/L	10.0		114		70-130				
Trichlorofluoromethane (Freon 11)	10.8	2.0	µg/L	10.0		108		70-130				
1,2,3-Trichloropropane	10.6	2.0	µg/L	10.0		106		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 B160097 - SW-846 5030B											
LCS (B160097-BS1)				Prepared & Analyzed: 10/07/16							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.1	1.0	µg/L	10.0		101	70-130				
1,2,4-Trimethylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
1,3,5-Trimethylbenzene	11.2	1.0	µg/L	10.0		112	70-130				
Vinyl Chloride	9.12	2.0	µg/L	10.0		91.2	40-160				†
m+p Xylene	21.9	2.0	µg/L	20.0		109	70-130				
o-Xylene	10.9	1.0	µg/L	10.0		109	70-130				
Surrogate: 1,2-Dichloroethane-d4	*25.1*		µg/L	25.0		101	70-130				
Surrogate: Toluene-d8	*25.3*		µg/L	25.0		101	70-130				
Surrogate: 4-Bromofluorobenzene	*25.1*		µg/L	25.0		100	70-130				
LCS Dup (B160097-BSD1)				Prepared & Analyzed: 10/07/16							
Acetone	88.4	50	µg/L	100		88.4	70-160	6.50	25		†
Acrylonitrile	9.61	5.0	µg/L	10.0		96.1	70-130	7.00	25		
tert-Amyl Methyl Ether (TAME)	9.40	0.50	µg/L	10.0		94.0	70-130	2.80	25		
Benzene	10.9	1.0	µg/L	10.0		109	70-130	0.367	25		
Bromobenzene	11.1	1.0	µg/L	10.0		111	70-130	1.73	25		
Bromochloromethane	12.3	1.0	µg/L	10.0		123	70-130	1.72	25		
Bromodichloromethane	10.8	0.50	µg/L	10.0		108	70-130	0.0928	25		
Bromoform	9.75	1.0	µg/L	10.0		97.5	70-130	1.97	25		
Bromomethane	7.41	2.0	µg/L	10.0		74.1	40-160	4.84	25		†
2-Butanone (MEK)	111	20	µg/L	100		111	40-160	8.74	25		†
tert-Butyl Alcohol (TBA)	97.0	20	µg/L	100		97.0	40-160	14.5	25		†
n-Butylbenzene	11.7	1.0	µg/L	10.0		117	70-130	0.599	25		
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130	1.95	25		
tert-Butylbenzene	11.0	1.0	µg/L	10.0		110	70-130	0.455	25		
tert-Butyl Ethyl Ether (TBEE)	10.1	0.50	µg/L	10.0		101	70-130	1.70	25		
Carbon Disulfide	8.27	4.0	µg/L	10.0		82.7	70-130	0.963	25		
Carbon Tetrachloride	10.6	5.0	µg/L	10.0		106	70-130	1.22	25		
Chlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	0.455	25		
Chlorodibromomethane	9.93	2.0	µg/L	10.0		99.3	70-130	3.80	25		
Chloroethane	9.48	2.0	µg/L	10.0		94.8	70-130	5.64	25		
Chloroform	10.9	2.0	µg/L	10.0		109	70-130	1.11	25		
Chloromethane	6.73	2.0	µg/L	10.0		67.3	40-160	2.20	25	V-20	†
2-Chlorotoluene	11.0	1.0	µg/L	10.0		110	70-130	1.46	25		
4-Chlorotoluene	11.3	1.0	µg/L	10.0		113	70-130	0.0888	25		
1,2-Dibromo-3-chloropropane (DBCP)	10.5	5.0	µg/L	10.0		105	70-130	0.864	25		
1,2-Dibromoethane (EDB)	11.4	0.50	µg/L	10.0		114	70-130	3.11	25		
Dibromomethane	11.1	1.0	µg/L	10.0		111	70-130	2.19	25		
1,2-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130	3.60	25		
1,3-Dichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130	2.19	25		
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	0.384	25		
trans-1,4-Dichloro-2-butene	9.04	2.0	µg/L	10.0		90.4	70-130	1.00	25		
Dichlorodifluoromethane (Freon 12)	7.16	2.0	µg/L	10.0		71.6	40-160	2.48	25		†
1,1-Dichloroethane	11.2	1.0	µg/L	10.0		112	70-130	2.55	25		
1,2-Dichloroethane	10.8	1.0	µg/L	10.0		108	70-130	2.24	25		
1,1-Dichloroethylene	10.3	1.0	µg/L	10.0		103	70-130	0.00	25		
cis-1,2-Dichloroethylene	11.2	1.0	µg/L	10.0		112	70-130	2.35	25		
trans-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130	0.0921	25		
1,2-Dichloropropane	10.7	1.0	µg/L	10.0		107	70-130	2.94	25		
1,3-Dichloropropane	10.8	0.50	µg/L	10.0		108	70-130	1.30	25		
2,2-Dichloropropane	10.1	1.0	µg/L	10.0		101	40-130	0.891	25		†
1,1-Dichloropropene	11.2	2.0	µg/L	10.0		112	70-130	0.269	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B160097 - SW-846 5030B												
LCS Dup (B160097-BSD1)				Prepared & Analyzed: 10/07/16								
cis-1,3-Dichloropropene	9.43	0.50	µg/L	10.0		94.3		70-130	3.23	25		
trans-1,3-Dichloropropene	11.0	0.50	µg/L	10.0		110		70-130	3.23	25		
Diethyl Ether	9.37	2.0	µg/L	10.0		93.7		70-130	0.107	25		
Diisopropyl Ether (DIPE)	9.90	0.50	µg/L	10.0		99.0		70-130	0.905	25		
1,4-Dioxane	71.5	50	µg/L	100		71.5		40-130	6.94	50	V-05	† ‡
Ethylbenzene	10.9	1.0	µg/L	10.0		109		70-130	0.912	25		
Hexachlorobutadiene	11.8	0.60	µg/L	10.0		118		70-130	1.11	25		
2-Hexanone (MBK)	105	10	µg/L	100		105		70-160	9.02	25		†
Isopropylbenzene (Cumene)	13.3	1.0	µg/L	10.0		**133**	*	70-130	0.00	25	L-06, V-06	
p-Isopropyltoluene (p-Cymene)	11.0	1.0	µg/L	10.0		110		70-130	1.01	25		
Methyl Acetate	17.3	1.0	µg/L	10.0		**173**	*	70-130	4.50	25	L-02	
Methyl tert-Butyl Ether (MTBE)	9.67	1.0	µg/L	10.0		96.7		70-130	4.33	25		
Methyl Cyclohexane	10.7	1.0	µg/L	10.0		107		70-130	0.840	25		
Methylene Chloride	10.1	5.0	µg/L	10.0		101		70-130	5.38	25		
4-Methyl-2-pentanone (MIBK)	109	10	µg/L	100		109		70-160	7.77	25		†
Naphthalene	12.4	2.0	µg/L	10.0		124		40-130	11.0	25		†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112		70-130	0.798	25		
Styrene	10.9	1.0	µg/L	10.0		109		70-130	0.276	25		
1,1,1,2-Tetrachloroethane	10.2	1.0	µg/L	10.0		102		70-130	0.878	25		
1,1,2,2-Tetrachloroethane	11.8	0.50	µg/L	10.0		118		70-130	5.03	25		
Tetrachloroethylene	11.4	1.0	µg/L	10.0		114		70-130	1.51	25		
Tetrahydrofuran	13.0	10	µg/L	10.0		130		70-130	0.930	25		
Toluene	10.9	1.0	µg/L	10.0		109		70-130	0.820	25		
1,2,3-Trichlorobenzene	11.9	5.0	µg/L	10.0		119		70-130	10.2	25		
1,2,4-Trichlorobenzene	11.6	1.0	µg/L	10.0		116		70-130	8.65	25		
1,3,5-Trichlorobenzene	10.4	1.0	µg/L	10.0		104		70-130	3.22	25		
1,1,1-Trichloroethane	10.8	1.0	µg/L	10.0		108		70-130	0.834	25		
1,1,2-Trichloroethane	11.5	1.0	µg/L	10.0		115		70-130	2.11	25		
Trichloroethylene	11.2	1.0	µg/L	10.0		112		70-130	1.41	25		
Trichlorofluoromethane (Freon 11)	10.6	2.0	µg/L	10.0		106		70-130	1.31	25		
1,2,3-Trichloropropane	11.1	2.0	µg/L	10.0		111		70-130	4.62	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.73	1.0	µg/L	10.0		97.3		70-130	3.53	25		
1,2,4-Trimethylbenzene	10.9	1.0	µg/L	10.0		109		70-130	2.51	25		
1,3,5-Trimethylbenzene	11.4	1.0	µg/L	10.0		114		70-130	2.13	25		
Vinyl Chloride	8.67	2.0	µg/L	10.0		86.7		40-160	5.06	25		†
m+p Xylene	21.6	2.0	µg/L	20.0		108		70-130	1.06	25		
o-Xylene	10.9	1.0	µg/L	10.0		109		70-130	0.0918	25		
Surrogate: 1,2-Dichloroethane-d4	*25.3*		µg/L	25.0		101		70-130				
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		101		70-130				
Surrogate: 4-Bromofluorobenzene	*25.3*		µg/L	25.0		101		70-130				

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant 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-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-06	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the high side.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Methylene Chloride	CT,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	CT,NY,ME,NH,VA
Naphthalene	NY,ME,NH,VA
n-Propylbenzene	CT,NY,ME,NH,VA
Styrene	CT,NY,ME,NH,VA
1,1,1,2-Tetrachloroethane	CT,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	CT,NY,ME,NH,VA
Tetrachloroethylene	CT,NY,ME,NH,VA
Toluene	CT,NY,ME,NH,VA
1,2,3-Trichlorobenzene	NY,ME,NH,VA
1,2,4-Trichlorobenzene	CT,NY,ME,NH,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NY,ME,NH,VA
1,1,2-Trichloroethane	CT,NY,ME,NH,VA
Trichloroethylene	CT,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	CT,NY,ME,NH,VA
1,2,3-Trichloropropane	NY,ME,NH,VA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY,VA
1,2,4-Trimethylbenzene	NY,ME,VA
1,3,5-Trimethylbenzene	NY,ME,VA
Vinyl Chloride	CT,NY,ME,NH,VA
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 - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

CHAIN OF CUSTODY RECORD

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

16J0220

Rev 04.05.12

Company Name: Arcadis
Address: 300 Metro Center Blvd. Ste. 250 Warwick, RI
Attention: Donna Pallister
Project Location: Springfield St. Schools, Prov. RI
Sampled By: JAL

Telephone: 401-285-2235
Project #: WK012152.2016
Client PO#:

DATA DELIVERY (check all that apply)
○ FAX ● EMAIL ○ WEBSITE
Fax #:
Email: DONNA.PALLISTER@ARCADIS.COM
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code
01	ATC-1	10/5	1000		X	GW		3		
02	MW-7	10/5	1050		X	GW		3		
03	TB	—	—	~					Z	

ANALYSIS REQUESTED: 8260 VOC; 8260 VOC

Dissolved Metals
○ Field Filtered
○ Lab to Filter

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

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

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

Comments:

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

Relinquished by: (signature)	Date/Time:
	1700
Received by: (signature)	Date/Time:
	10-6-16 1113
Relinquished by: (signature)	Date/Time:
	10/6/16 2330
Received by: (signature)	Date/Time:
	10/6/16 1430

Turnaround ††
☐ 7-Day
☐ 10-Day
☑ Other STD
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certifie

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

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: Arcadis **RECEIVED BY:** JM **DATE:** 10/6/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** ✓ **No** ____ **No COC Incl.**

2) **Does the chain agree with the samples?** **Yes** ✓ **No** ____
If not, explain:

3) **Are all the samples in good condition?** **Yes** ✓ **No** ____
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓

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

Temperature °C by Temp blank ____ Temperature °C by Temp gun 3.2

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:** Login

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 sample:** **Yes** ____ **N/A** ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below	8	Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl 8 # Methanol ____ **Time and Date Frozen:**
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

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) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	N/A	
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.	N/A	
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 requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	T	
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	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** JM **Date/Time:** 10/6/16 1430

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

October 18, 2016

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

Project Location: Springfield St. Schools - Providence, RI
Client Job Number:
Project Number: WK012152.2016
Laboratory Work Order Number: 16J0255

Enclosed are results of analyses for samples received by the laboratory on October 6, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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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: 10/18/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: WK012152.2016

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16J0255

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. Schools - Providence, RI

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
ES#1	16J0255-01	Sub Slab		EPA TO-14A	
ES#2	16J0255-02	Sub Slab		EPA TO-14A	
MS Front	16J0255-03	Sub Slab		EPA TO-14A	

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CASE NARRATIVE SUMMARY

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

REVISED REPORT 10/18/2016: Report revised to change TO-15 compond list to TO-14 compound list as requested by the client.

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.

Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: ES#1
Sample ID: 16J0255-01
Sample Matrix: Sub Slab
Sampled: 10/5/2016 12:45

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.22	0.10		0.69	0.32	2	10/9/16 2:00	CMR
Bromomethane	ND	0.10		ND	0.39	2	10/9/16 2:00	CMR
Carbon Tetrachloride	ND	0.10		ND	0.63	2	10/9/16 2:00	CMR
Chlorobenzene	ND	0.10		ND	0.46	2	10/9/16 2:00	CMR
Chloroethane	ND	0.10		ND	0.26	2	10/9/16 2:00	CMR
Chloroform	0.32	0.10		1.6	0.49	2	10/9/16 2:00	CMR
Chloromethane	ND	0.20		ND	0.41	2	10/9/16 2:00	CMR
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	10/9/16 2:00	CMR
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:00	CMR
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:00	CMR
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:00	CMR
Dichlorodifluoromethane (Freon 12)	2.2	0.10		11	0.49	2	10/9/16 2:00	CMR
1,1-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 2:00	CMR
1,2-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 2:00	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 2:00	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 2:00	CMR
1,2-Dichloropropane	ND	0.10		ND	0.46	2	10/9/16 2:00	CMR
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 2:00	CMR
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 2:00	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	2.4	0.10		17	0.70	2	10/9/16 2:00	CMR
Ethylbenzene	0.33	0.10		1.4	0.43	2	10/9/16 2:00	CMR
Hexachlorobutadiene	ND	0.10		ND	1.1	2	10/9/16 2:00	CMR
Methylene Chloride	1.2	1.0		4.2	3.5	2	10/9/16 2:00	CMR
Styrene	0.54	0.10		2.3	0.43	2	10/9/16 2:00	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	10/9/16 2:00	CMR
Tetrachloroethylene	7.5	0.10		51	0.68	2	10/9/16 2:00	CMR
Toluene	2.5	0.10		9.5	0.38	2	10/9/16 2:00	CMR
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	10/9/16 2:00	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 2:00	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 2:00	CMR
Trichloroethylene	1.0	0.10		5.6	0.54	2	10/9/16 2:00	CMR
Trichlorofluoromethane (Freon 11)	0.57	0.10		3.2	0.56	2	10/9/16 2:00	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	10/9/16 2:00	CMR
1,2,4-Trimethylbenzene	0.42	0.10		2.0	0.49	2	10/9/16 2:00	CMR
1,3,5-Trimethylbenzene	0.14	0.10		0.71	0.49	2	10/9/16 2:00	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	10/9/16 2:00	CMR
m&p-Xylene	0.76	0.20		3.3	0.87	2	10/9/16 2:00	CMR

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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: ES#1
Sample ID: 16J0255-01
Sample Matrix: Sub Slab
Sampled: 10/5/2016 12:45

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	ND	0.10		ND	0.43	2	10/9/16 2:00	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	113	70-130	10/9/16 2:00

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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: ES#2
Sample ID: 16J0255-02
Sample Matrix: Sub Slab
Sampled: 10/5/2016 12:50

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.11	0.10		0.36	0.32	2	10/9/16 2:41	CMR
Bromomethane	ND	0.10		ND	0.39	2	10/9/16 2:41	CMR
Carbon Tetrachloride	ND	0.10		ND	0.63	2	10/9/16 2:41	CMR
Chlorobenzene	ND	0.10		ND	0.46	2	10/9/16 2:41	CMR
Chloroethane	ND	0.10		ND	0.26	2	10/9/16 2:41	CMR
Chloroform	0.28	0.10		1.4	0.49	2	10/9/16 2:41	CMR
Chloromethane	ND	0.20		ND	0.41	2	10/9/16 2:41	CMR
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	10/9/16 2:41	CMR
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:41	CMR
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:41	CMR
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 2:41	CMR
Dichlorodifluoromethane (Freon 12)	0.62	0.10		3.1	0.49	2	10/9/16 2:41	CMR
1,1-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 2:41	CMR
1,2-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 2:41	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 2:41	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 2:41	CMR
1,2-Dichloropropane	ND	0.10		ND	0.46	2	10/9/16 2:41	CMR
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 2:41	CMR
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 2:41	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.39	0.10		2.7	0.70	2	10/9/16 2:41	CMR
Ethylbenzene	ND	0.10		ND	0.43	2	10/9/16 2:41	CMR
Hexachlorobutadiene	ND	0.10		ND	1.1	2	10/9/16 2:41	CMR
Methylene Chloride	1.1	1.0		3.9	3.5	2	10/9/16 2:41	CMR
Styrene	0.31	0.10		1.3	0.43	2	10/9/16 2:41	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	10/9/16 2:41	CMR
Tetrachloroethylene	0.92	0.10		6.2	0.68	2	10/9/16 2:41	CMR
Toluene	0.99	0.10		3.7	0.38	2	10/9/16 2:41	CMR
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	10/9/16 2:41	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 2:41	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 2:41	CMR
Trichloroethylene	0.13	0.10		0.70	0.54	2	10/9/16 2:41	CMR
Trichlorofluoromethane (Freon 11)	0.32	0.10		1.8	0.56	2	10/9/16 2:41	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	10/9/16 2:41	CMR
1,2,4-Trimethylbenzene	0.40	0.10		2.0	0.49	2	10/9/16 2:41	CMR
1,3,5-Trimethylbenzene	0.13	0.10		0.66	0.49	2	10/9/16 2:41	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	10/9/16 2:41	CMR
m&p-Xylene	ND	0.20		ND	0.87	2	10/9/16 2:41	CMR

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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: ES#2
Sample ID: 16J0255-02
Sample Matrix: Sub Slab
Sampled: 10/5/2016 12:50

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	ND	0.10		ND	0.43	2	10/9/16 2:41	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	107	70-130	10/9/16 2:41

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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: MS Front
Sample ID: 16J0255-03
Sample Matrix: Sub Slab
Sampled: 10/5/2016 13:35

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.18	0.10		0.58	0.32	2	10/9/16 3:21	CMR
Bromomethane	ND	0.10		ND	0.39	2	10/9/16 3:21	CMR
Carbon Tetrachloride	ND	0.10		ND	0.63	2	10/9/16 3:21	CMR
Chlorobenzene	ND	0.10		ND	0.46	2	10/9/16 3:21	CMR
Chloroethane	ND	0.10		ND	0.26	2	10/9/16 3:21	CMR
Chloroform	ND	0.10		ND	0.49	2	10/9/16 3:21	CMR
Chloromethane	ND	0.20		ND	0.41	2	10/9/16 3:21	CMR
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	10/9/16 3:21	CMR
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 3:21	CMR
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 3:21	CMR
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	10/9/16 3:21	CMR
Dichlorodifluoromethane (Freon 12)	0.87	0.10		4.3	0.49	2	10/9/16 3:21	CMR
1,1-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 3:21	CMR
1,2-Dichloroethane	ND	0.10		ND	0.40	2	10/9/16 3:21	CMR
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 3:21	CMR
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	10/9/16 3:21	CMR
1,2-Dichloropropane	ND	0.10		ND	0.46	2	10/9/16 3:21	CMR
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 3:21	CMR
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	10/9/16 3:21	CMR
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.76	0.10		5.3	0.70	2	10/9/16 3:21	CMR
Ethylbenzene	0.21	0.10		0.90	0.43	2	10/9/16 3:21	CMR
Hexachlorobutadiene	ND	0.10		ND	1.1	2	10/9/16 3:21	CMR
Methylene Chloride	1.2	1.0		4.2	3.5	2	10/9/16 3:21	CMR
Styrene	0.31	0.10		1.3	0.43	2	10/9/16 3:21	CMR
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	10/9/16 3:21	CMR
Tetrachloroethylene	0.52	0.10		3.6	0.68	2	10/9/16 3:21	CMR
Toluene	0.96	0.10		3.6	0.38	2	10/9/16 3:21	CMR
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	10/9/16 3:21	CMR
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 3:21	CMR
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	10/9/16 3:21	CMR
Trichloroethylene	ND	0.10		ND	0.54	2	10/9/16 3:21	CMR
Trichlorofluoromethane (Freon 11)	0.31	0.10		1.7	0.56	2	10/9/16 3:21	CMR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	10/9/16 3:21	CMR
1,2,4-Trimethylbenzene	0.41	0.10		2.0	0.49	2	10/9/16 3:21	CMR
1,3,5-Trimethylbenzene	0.14	0.10		0.70	0.49	2	10/9/16 3:21	CMR
Vinyl Chloride	ND	0.10		ND	0.26	2	10/9/16 3:21	CMR
m&p-Xylene	0.52	0.20		2.3	0.87	2	10/9/16 3:21	CMR

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ANALYTICAL RESULTS

Project Location: Springfield St. Schools - Providen
Date Received: 10/6/2016
Field Sample #: MS Front
Sample ID: 16J0255-03
Sample Matrix: Sub Slab
Sampled: 10/5/2016 13:35

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

Work Order: 16J0255
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
o-Xylene	ND	0.10		ND	0.43	2	10/9/16 3:21	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	116	70-130	10/9/16 3:21

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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
16J0255-01 [ES#1]	B160480	1	1	N/A	1000	400	200	10/08/15
16J0255-02 [ES#2]	B160480	1	1	N/A	1000	400	200	10/08/15
16J0255-03 [MS Front]	B160480	1	1	N/A	1000	400	200	10/08/15

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B160480 - TO-15 Prep											
Blank (B160480-BLK1)					Prepared & Analyzed: 10/08/16						
Benzene	ND	0.034									
Bromomethane	ND	0.034									
Carbon Tetrachloride	ND	0.034									
Chlorobenzene	ND	0.034									
Chloroethane	ND	0.034									
Chloroform	ND	0.034									
Chloromethane	ND	0.068									
1,2-Dibromoethane (EDB)	ND	0.034									
1,2-Dichlorobenzene	ND	0.034									
1,3-Dichlorobenzene	ND	0.034									
1,4-Dichlorobenzene	ND	0.034									
Dichlorodifluoromethane (Freon 12)	ND	0.034									
1,1-Dichloroethane	ND	0.034									
1,2-Dichloroethane	ND	0.034									
1,1-Dichloroethylene	ND	0.034									
cis-1,2-Dichloroethylene	ND	0.034									
1,2-Dichloropropane	ND	0.034									
cis-1,3-Dichloropropene	ND	0.034									
trans-1,3-Dichloropropene	ND	0.034									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.034									
Ethylbenzene	ND	0.034									
Hexachlorobutadiene	ND	0.034									
Methylene Chloride	ND	0.34									
Styrene	ND	0.034									
1,1,2,2-Tetrachloroethane	ND	0.034									
Tetrachloroethylene	ND	0.034									
Toluene	ND	0.034									
1,2,4-Trichlorobenzene	ND	0.034									
1,1,1-Trichloroethane	ND	0.034									
1,1,2-Trichloroethane	ND	0.034									
Trichloroethylene	ND	0.034									
Trichlorofluoromethane (Freon 11)	ND	0.034									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.034									
1,2,4-Trimethylbenzene	ND	0.034									
1,3,5-Trimethylbenzene	ND	0.034									
Vinyl Chloride	ND	0.034									
m&p-Xylene	ND	0.068									
o-Xylene	ND	0.034									
Surrogate: 4-Bromofluorobenzene (1)	*8.73*				*8.00*		*109*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B160480 - TO-15 Prep											
LCS (B160480-BS1)					Prepared & Analyzed: 10/08/16						
Benzene	4.81				5.00		96.1	55.6-131			
Bromomethane	3.83				5.00		76.6	29.2-163			
Carbon Tetrachloride	3.68				5.00		73.5	70.9-128			
Chlorobenzene	4.01				5.00		80.3	67.8-126			
Chloroethane	3.82				5.00		76.4	49.5-146			
Chloroform	3.55				5.00		71.0	65-133			
Chloromethane	3.58				5.00		71.5	55.1-139			
1,2-Dibromoethane (EDB)	3.92				5.00		78.4	76.8-121			
1,2-Dichlorobenzene	4.56				5.00		91.3	79.6-141			
1,3-Dichlorobenzene	4.80				5.00		95.9	76.2-147			
1,4-Dichlorobenzene	4.57				5.00		91.4	73.6-147			
Dichlorodifluoromethane (Freon 12)	3.88				5.00		77.7	40.6-164			
1,1-Dichloroethane	3.70				5.00		74.0	67.7-119			
1,2-Dichloroethane	3.73				5.00		74.6	69.8-121			
1,1-Dichloroethylene	3.76				5.00		75.3	72.9-121			
cis-1,2-Dichloroethylene	3.78				5.00		75.7	66.2-119			
1,2-Dichloropropane	3.77				5.00		75.4	49.8-131			
cis-1,3-Dichloropropene	4.09				5.00		81.8	59.9-138			
trans-1,3-Dichloropropene	4.37				5.00		87.4	60.6-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.24				5.00		64.7	36.3-154			
Ethylbenzene	5.02				5.00		100	73.3-137			
Hexachlorobutadiene	5.44				5.00		109	68.1-180			
Methylene Chloride	3.88				5.00		77.7	73.7-115			
Styrene	4.10				5.00		82.0	58.2-141			
1,1,2,2-Tetrachloroethane	3.77				5.00		75.4	70.2-141			
Tetrachloroethylene	4.62				5.00		92.5	62.6-135			
Toluene	5.30				5.00		106	74.9-124			
1,2,4-Trichlorobenzene	6.17				5.00		123	62.9-176			
1,1,1-Trichloroethane	3.63				5.00		72.6	62-128			
1,1,2-Trichloroethane	4.29				5.00		85.7	76.3-120			
Trichloroethylene	3.89				5.00		77.9	68.4-122			
Trichlorofluoromethane (Freon 11)	3.94				5.00		78.8	56.8-154			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	3.79				5.00		75.8	62.7-147			
1,2,4-Trimethylbenzene	4.11				5.00		82.2	75.7-137			
1,3,5-Trimethylbenzene	4.57				5.00		91.3	74-134			
Vinyl Chloride	3.52				5.00		70.3	53.7-137			
m&p-Xylene	10.8				10.0		108	78.8-139			
o-Xylene	5.45				5.00		109	70.4-140			
Surrogate: 4-Bromofluorobenzene (1)	*8.70*				*8.00*		*109*	*70-130*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant 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.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-14A in Air	
Benzene	AIHA,FL,NY
Bromomethane	AIHA,FL,NY
Carbon Tetrachloride	AIHA,FL,NY
Chlorobenzene	AIHA,FL,NY
Chloroethane	AIHA,FL,NY
Chloroform	AIHA,FL,NY
Chloromethane	AIHA,FL,NY
1,2-Dibromoethane (EDB)	NY
1,2-Dichlorobenzene	AIHA,FL,NY
1,3-Dichlorobenzene	AIHA,FL,NY
1,4-Dichlorobenzene	AIHA,FL,NY
Dichlorodifluoromethane (Freon 12)	AIHA,FL,NY
1,1-Dichloroethane	AIHA,FL,NY
1,2-Dichloroethane	AIHA,FL,NY
1,1-Dichloroethylene	AIHA,FL,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
1,2-Dichloropropane	AIHA,FL,NY
cis-1,3-Dichloropropene	AIHA,FL,NY
trans-1,3-Dichloropropene	NY
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,FL,NY
Ethylbenzene	AIHA,FL,NY
Hexachlorobutadiene	AIHA,FL,NY
Methylene Chloride	AIHA,FL,NY
Styrene	AIHA,FL,NY
1,1,2,2-Tetrachloroethane	AIHA,FL,NY
Tetrachloroethylene	AIHA,FL,NY
Toluene	AIHA,FL,NY
1,2,4-Trichlorobenzene	AIHA,FL,NY
1,1,1-Trichloroethane	AIHA,FL,NY
1,1,2-Trichloroethane	AIHA,FL,NY
Trichloroethylene	AIHA,FL,NY
Trichlorofluoromethane (Freon 11)	AIHA,FL,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	AIHA,FL,NY
1,3,5-Trimethylbenzene	AIHA,FL,NY
Vinyl Chloride	AIHA,FL,NY
m&p-Xylene	AIHA,FL,NY
o-Xylene	AIHA,FL,NY
EPA TO-15 in Air	
Benzene	AIHA,FL,NJ,NY,VA,ME
Bromomethane	AIHA,FL,NJ,NY,ME
Carbon Tetrachloride	AIHA,FL,NJ,NY,VA,ME
Chlorobenzene	AIHA,FL,NJ,NY,VA,ME
Chloroethane	AIHA,FL,NJ,NY,VA,ME
Chloroform	AIHA,FL,NJ,NY,VA,ME
Chloromethane	AIHA,FL,NJ,NY,VA,ME

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
1,2-Dibromoethane (EDB)	AIHA,NJ,NY,ME
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
1,3-Dichlorobenzene	AIHA,NJ,NY,ME
1,4-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
Dichlorodifluoromethane (Freon 12)	AIHA,NY,ME
1,1-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1-Dichloroethylene	AIHA,FL,NJ,NY,VA,ME
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA,ME
1,2-Dichloropropane	AIHA,FL,NJ,NY,VA,ME
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY,VA,ME
trans-1,3-Dichloropropene	AIHA,NY,ME
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,NJ,NY,VA,ME
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
Hexachlorobutadiene	AIHA,NJ,NY,VA,ME
Methylene Chloride	AIHA,FL,NJ,NY,VA,ME
Styrene	AIHA,FL,NJ,NY,VA,ME
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY,VA,ME
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Toluene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trichlorobenzene	AIHA,NJ,NY,VA,ME
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1,2-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
Trichloroethylene	AIHA,FL,NJ,NY,VA,ME
Trichlorofluoromethane (Freon 11)	AIHA,NY,ME
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	AIHA,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
Vinyl Chloride	AIHA,FL,NJ,NY,VA,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

16J0255

http://www.contestlabs.com Doc #378 Rev 0 5/8/15

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

Ste 250 Warwick RI

Company Name:	Arcadis
Address:	300 Metro Center Blvd.
Phone:	401-285-7235
Project Name:	Springfield St. Schools
Project Location:	Providence, RI
Project Number:	WKOM157-2016
Project Manager:	DONNA PALLISTER
Con-Test Bid:	
Invoice Recipient:	
Sampled By:	JAL

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other: STD

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
Enhanced Data Package Required: ☐
Email To: DONNA.PALLISTER@ARCADIS.COM
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	51-07 4hr				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	
Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total* Minutes Sampled	☐ m³/min ☐ L/min	Code	☐ Liters ☐ m³					Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply	For summa canister and flow controller information please refer to Con-Test's Air Media Agreement
															Summa Can ID	Flow Controller ID
01	ES#1	10/5	1245			SS		1								
02	ES#2	10/5	1250			SS		1								
03	MS Front	10/5	1335			SS		1								

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time: 10/5/16 1600
Received by: (signature) Paul Chase	Date/Time: 10-6-16 11:13
Relinquished by: (signature)	Date/Time: 10/6/16 2:30
Received by: (signature) 2.9	Date/Time: 10/6/16 1430
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements
MA
CT
Other

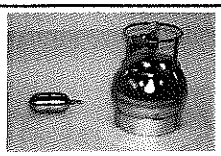
Special Requirements
☐ MA MCP Required
☐ CT RCP Required
☐ Enhanced Data Package Required

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents



www.contestlabs.com

con-test® ANALYTICAL LABORATORY

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

AIR Only Receipt Checklist

CLIENT NAME Arcadis RECEIVED BY: JM DATE: 10/6/16

1) Was the chain(s) of custody relinquished and signed? Yes ✓ No ____

2) Does the chain agree with the samples? Yes ✓ No ____
If not, explain:

3) Are all the samples in good condition? Yes ✓ No ____
If not, explain:

4) Are there any samples "On Hold"? Yes ____ No ✓ Stored where: ____

5) Are there any RUSH or SHORT HOLDING TIME samples? Yes ____ No ✓
Who was notified ____ Date ____ Time ____

6) Location where samples are stored: Air Lab

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? N/A

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? N/A

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet? N/A

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) T/F/NA	Comment
1) The coolers'/boxes' custody seal, if present, is intact.	N/A	
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) 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 requsted analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	N/A	

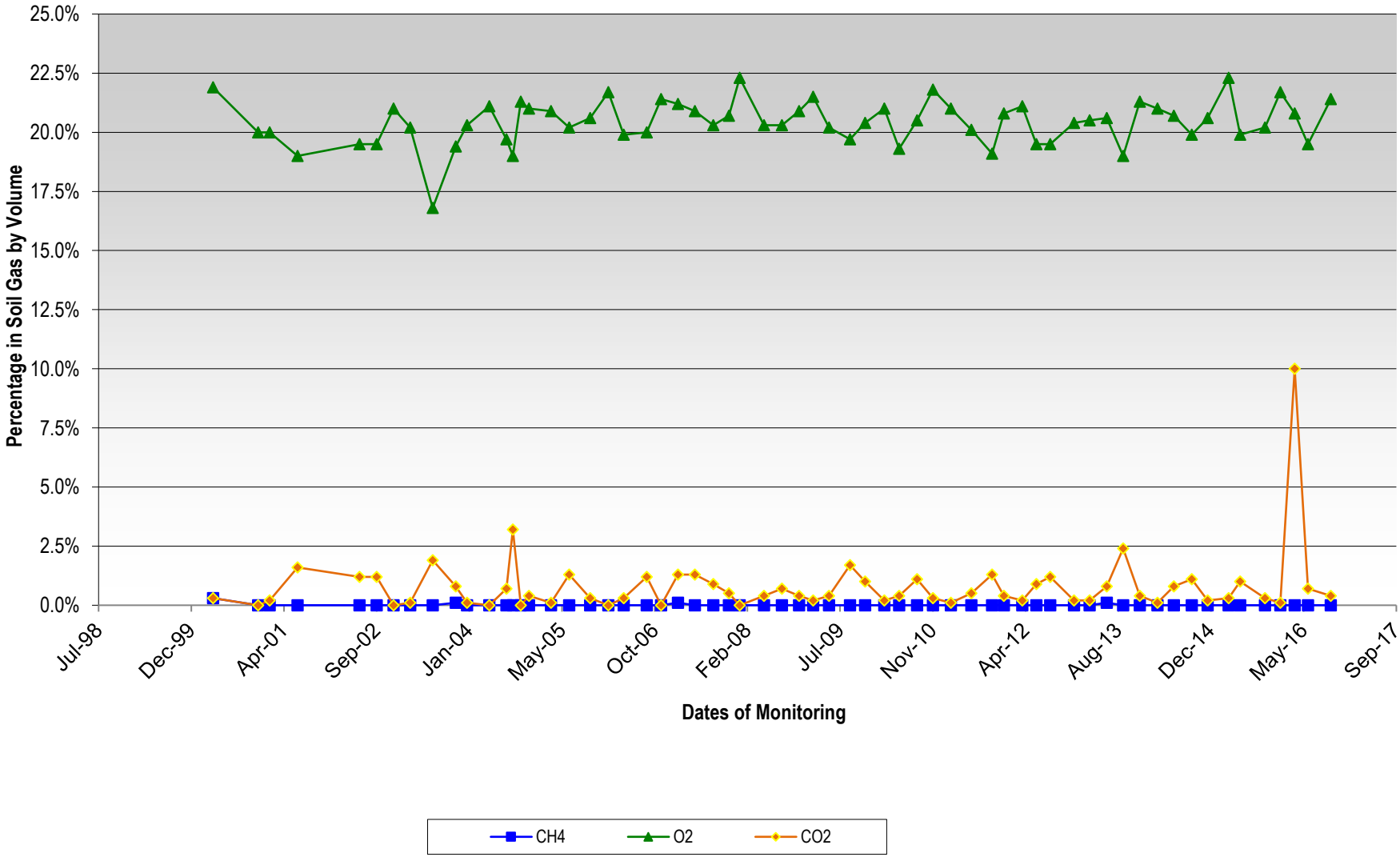
Who notified of False statements? **Date/Time:**

Doc #278 Rev. 5 October 2014 **Log-In Technician Initials:** JM **Date/Time:** 10/6/16 1430

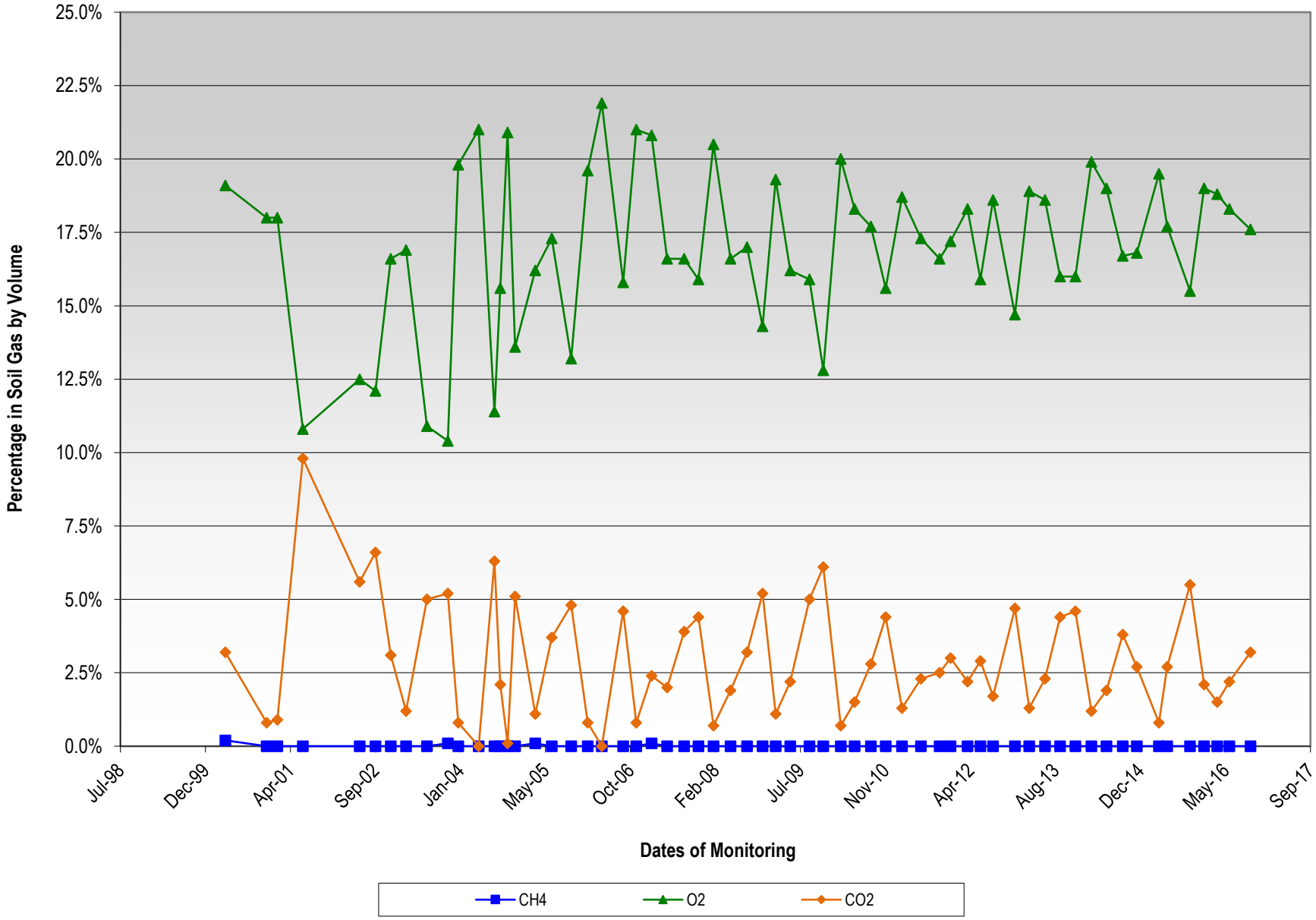
ATTACHMENT C

Soil Gas Trends

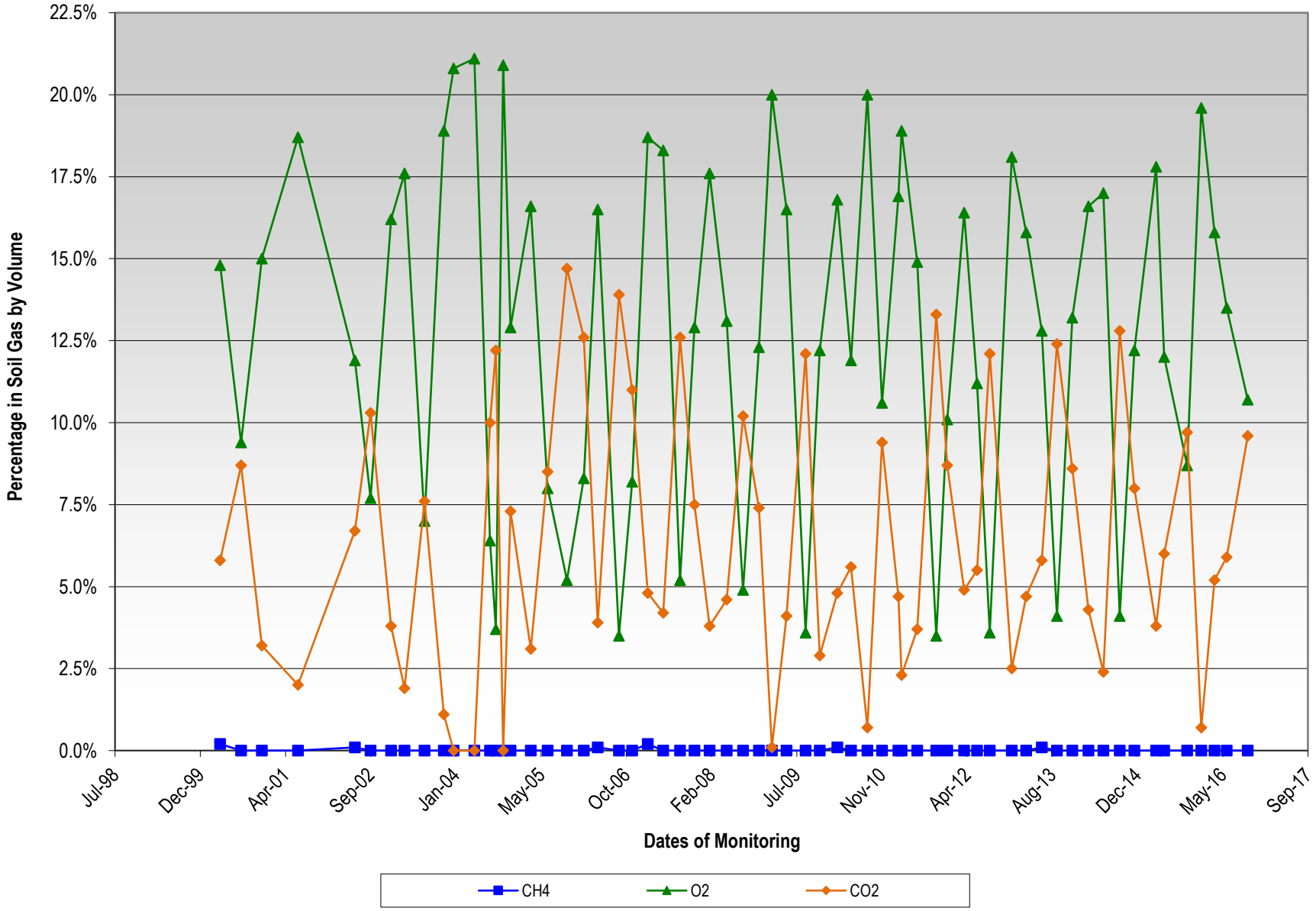
Soil Gas Well EPL1
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



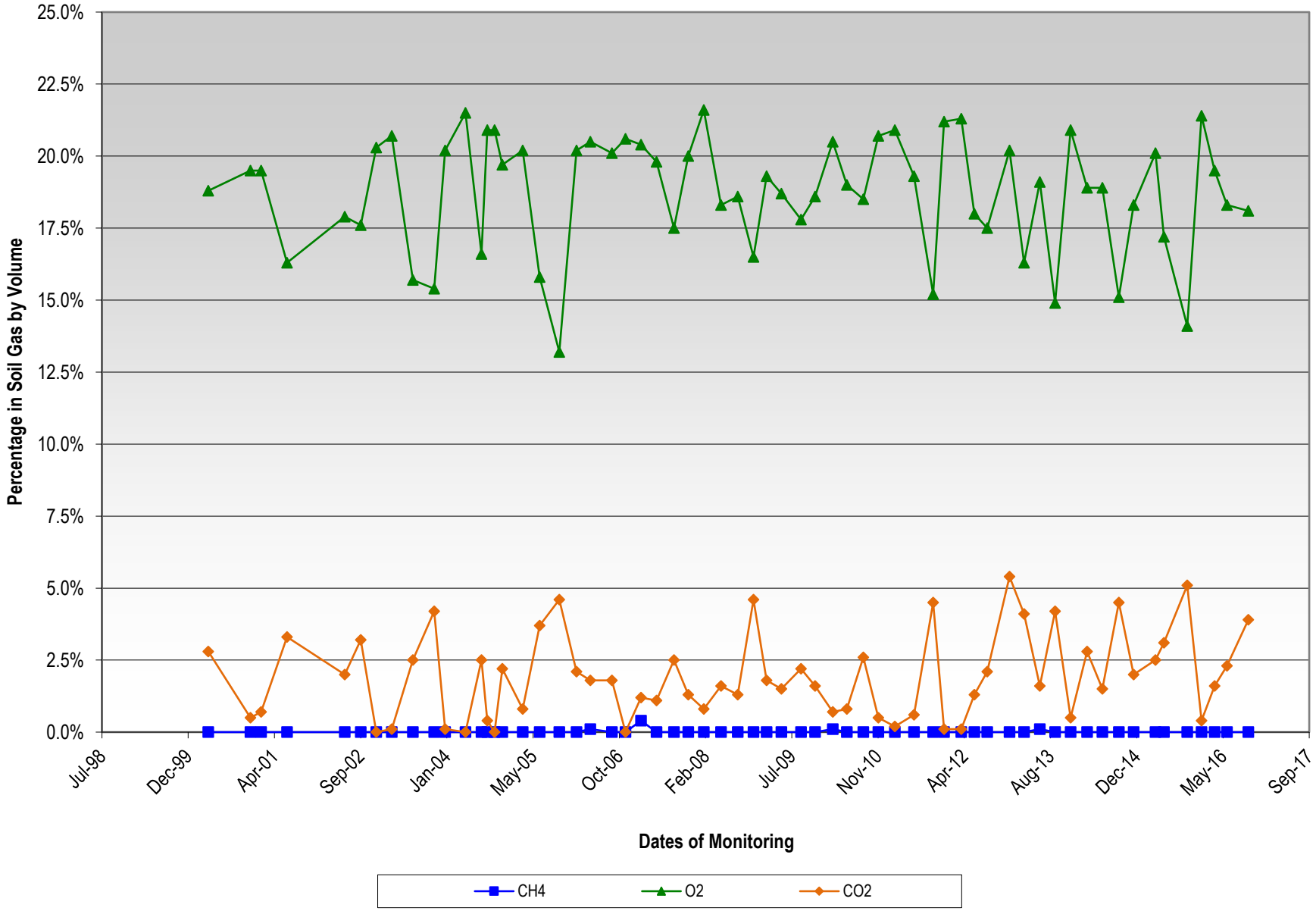
Soil Gas Well EPL4
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



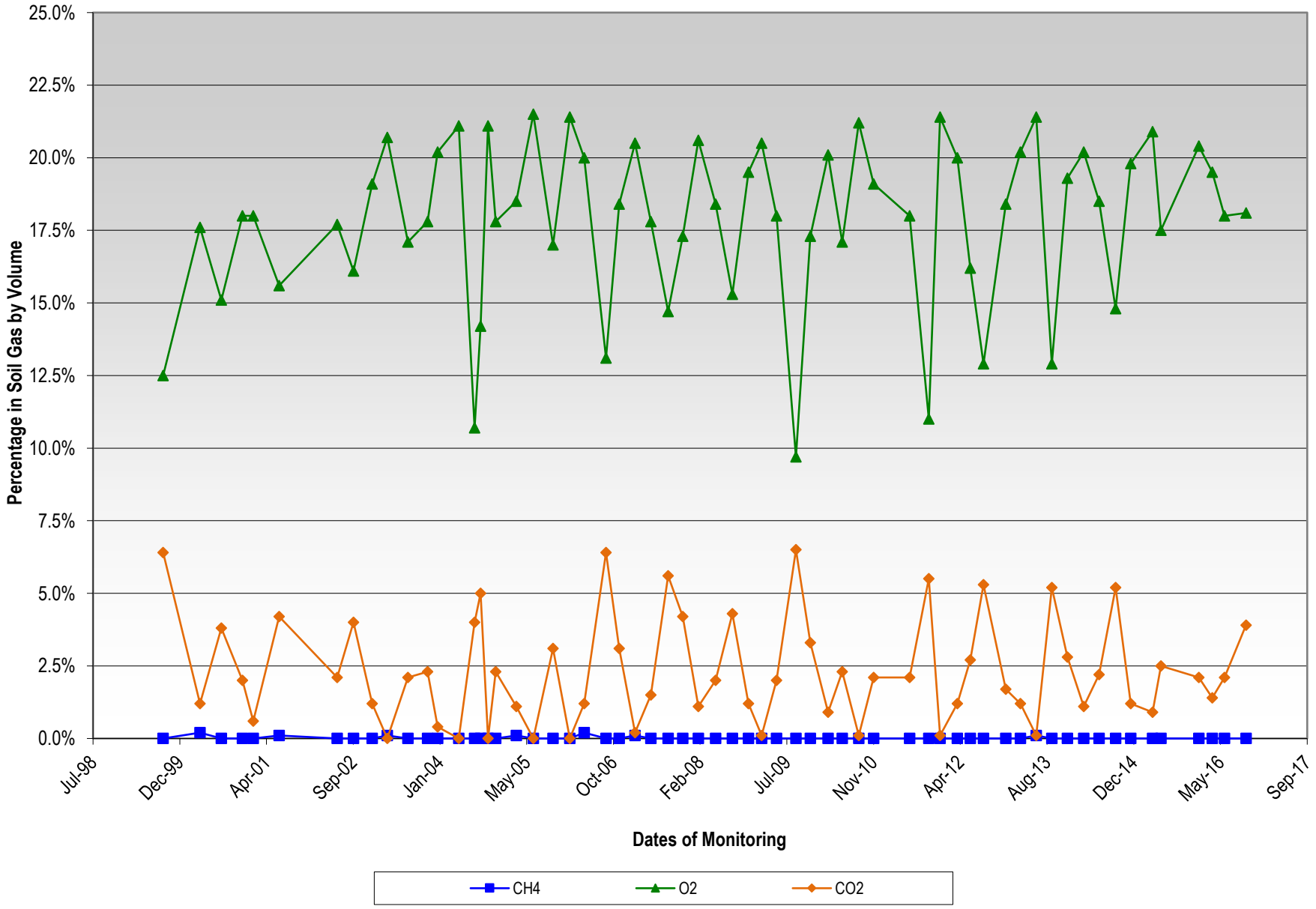
Soil Gas Well MPL5
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



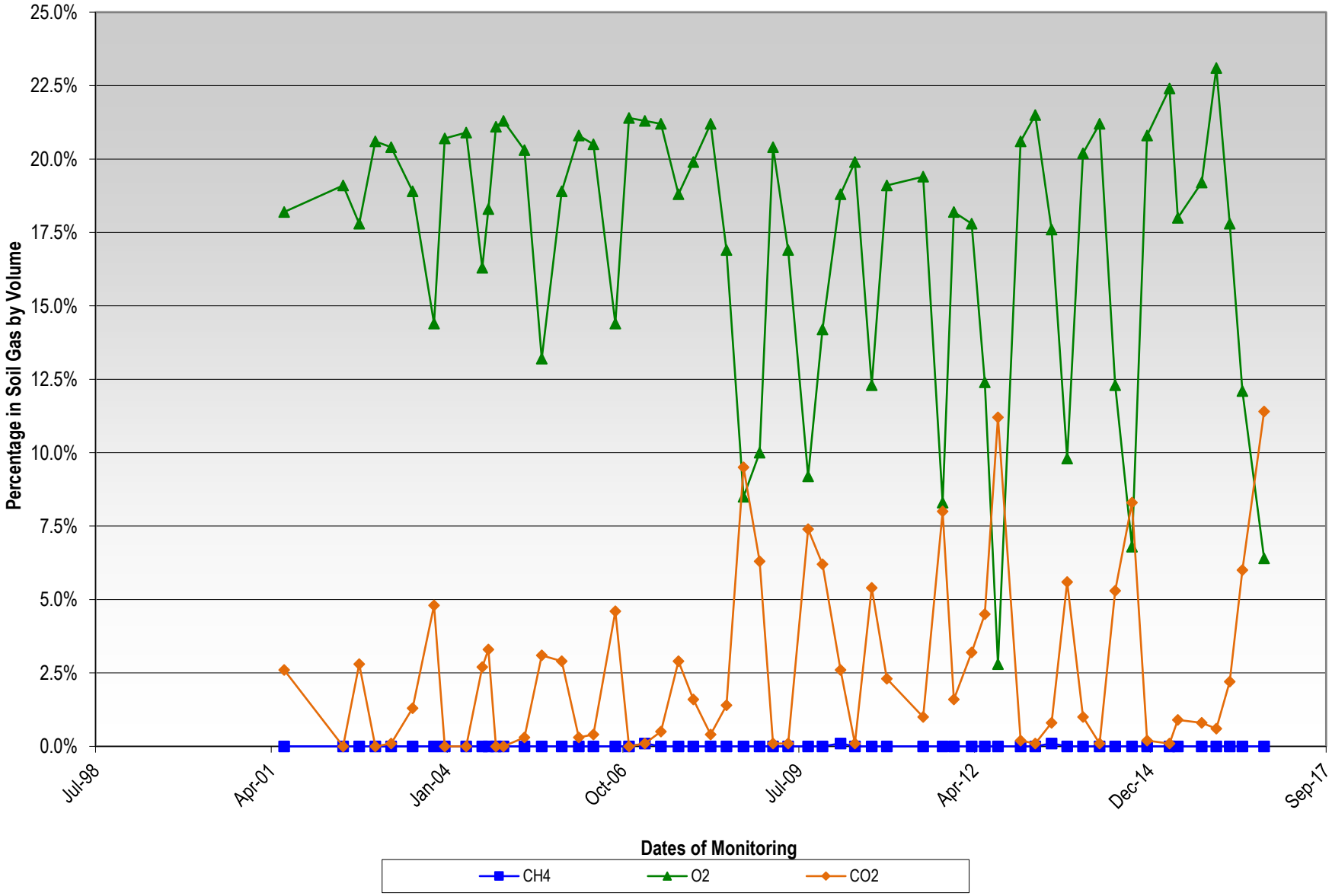
Soil Gas Well MG2
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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