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

SER-1

Subject:
August 2010 Quarterly Monitoring Report for Springfield Street School Complex

Date:
September 16, 2010

Contact:
Donna H. Pallister, PE

Phone:
401-738-3887

Email:
Donna.pallister@arcadis-us.com

Our ref:
WK012152.0007

Dear Mr. Crawford:

ARCADIS Inc. (ARCADIS, formerly LFR, Inc.) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between August 23 and 27, 2010. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

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

COVER MONITORING

ARCADIS conducted a visual survey of the site on August 26, 2010 for evidence of significant soil cover erosion, or for any areas where the orange snow fencing indicator barrier was visible. ARCADIS did not observe any areas where the orange indicator barrier was visible during this monitoring event. Some small holes were observed adjacent to the Middle School foundation on the east side of the building near the transformer, on the east side near the door to the gymnasium, and in the courtyard on the north end of the school near the boiler room.

The Providence School Department will repair these areas and documentation of the repairs will be submitted.

SUB-SLAB VENTILATION SYSTEM

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on August 26, 2010. The subslab ventilation system blowers at the elementary school were operating normally upon arrival at the Site. The blower in the front shed at the middle school was off upon arrival; water was drained from the knockout tank, and the blower was restarted on August 26. The blower in the back shed at the middle school was not operating on August 26, 2010 because repairs were in progress.

Carbon dust was observed in the rear blower shed during 2010. Several repairs were made to the PVC piping connecting the blowers and carbon vessels to repair leaks. During the summer of 2010 the janitor at the school reported observing black dust coming out of the stack for the rear blower. In response, the system was shut down, and Service Tech was retained to remove the carbon from the vessels so the interior could be inspected.

Service Tech removed the carbon from the vessels on August 24, 2010. Inspection of the interior of the vessels revealed that the piping inside the carbon vessels was PVC, with holes large enough to allow the passage of carbon pellets. The piping had apparently been wrapped with window screen when it was initially installed, but the window screen had fallen off or deteriorated such that it no longer prevented the carbon pellets from entering the piping. On August 27, the vessels were entered (in accordance with appropriate confined space entry precautions) and the piping was replaced with slotted PVC which will not allow carbon pellets to enter the piping. The shed was also cleaned by power washing to remove carbon dust, and wash water was collected and disposed of properly off-site. The blower was then restarted.

Samples of influent and effluent (before and after the carbon canisters) air were collected at each blower and screened for methane, carbon dioxide, oxygen, carbon monoxide, hydrogen sulfide, and organic vapors using a Landtec GEM2000 Plus, a MiniRae 2000, and a Q-Rae multigas meter. Results of screening are provided on Table 1. Methane, hydrogen sulfide and organic vapors were not detected in any of the samples. Carbon dioxide was detected at concentrations ranging from 0.0% to 0.6%; four of the five sample concentrations were greater than the RAWP Action Level of 1000 ppm. Carbon monoxide was detected at concentrations of 3 to 6 ppm, which is below the RAWP action level of 9 ppm.

INDOOR AIR MONITORING

Indoor air monitoring was conducted on August 26, 2010 using a QRAE plus multi-gas meter (methane, hydrogen sulfide, oxygen), a Mini Rae photoionization detector (organic vapors), and a Fluke 975 Airmeter (carbon dioxide, carbon monoxide). School was not in session during the monitoring event. Results of monitoring are provided in the Table 2. Carbon dioxide measurements were made with a Fluke 975 Airmeter indoor air quality meter. The Fluke 975 has a range of 0 to 5,000 ppm, with a resolution of 1 ppm.

All readings were below the RAWP Action Levels. The outside temperature on August 26th was 73.4 ^{o}F. Carbon dioxide was measured outside in the school parking lot at 380 ppm.

Concentrations of carbon dioxide inside occupied buildings are expected to be higher than the concentrations in outdoor air because the building occupants expel carbon dioxide. Therefore, in indoor air, the concentration of carbon dioxide is typically used as an indicator of the effectiveness of the heating, ventilating, and air conditioning (HVAC) system in circulating outdoor air into the building. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have prepared ASHRAE Standard 62.1-2007 titled *Ventilation for Acceptable Indoor Air Quality*. The purpose of the Standard is to specify minimum ventilation rates and other measures to provide indoor air quality that is acceptable to human occupants and that minimize adverse health effects. A discussion regarding carbon dioxide concentrations in indoor air contained in Informative Appendix C of the Standard states: "… maintaining a steady-state CO_2 concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air. The average concentrations measured inside the site buildings were less than 700 ppm above the ambient outdoor concentrations.

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

The control panels for the methane monitors at both schools were inspected on August 26, 2010. 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

Two of five groundwater monitoring wells were sampled by ARCADIS on May 20, 2010. Three monitoring wells, ATC-2, ATC-3, and ATC-5 were not able to be sampled because they were obstructed. Prior to sampling, the depth to water was gauged, and a volume of water equivalent to approximately three well volumes was removed from each well. Groundwater samples were collected in laboratory prepared sample jars and delivered under chain-of-custody protocol to Contest Laboratory in East Longmeadow, Massachusetts for analysis for volatile organic compounds by EPA method 8260. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 3.

The only compound detected in the samples collected during this round of monitoring was tert-Amyl Methyl Ether (TAME) detected at 0.5 µg/L. TAME is a fuel oxygenate found in gasoline. The concentration detected, 0.5 µg/L was equal to the detection limit of the method used.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 28 locations on August 25, 2010. The sampling was conducted by placing an air sampling gripper cap on each well and attaching a piece of tubing. A volume of air equivalent to approximately 3 well volumes was removed from each well using a Sensidyne BDXII air sampling pump. Soil gas was then screened using a Landtec GEM 2000 Plus Landfill Gas Analyzer, a QRAE 4-gas meter and a MiniRae Photoionization Detector (PID).

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

Soil Gas Field Monitoring Results

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 4. Methane, organic vapors and hydrogen sulfide were not detected in any samples. Carbon monoxide was detected at one location, EPL-2, at a concentration of 4 ppm, which is less than the RAWP action level of 9 ppm. Carbon monoxide was not detected any other soil gas sampling locations.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 9.7%. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 24 readings exceeded the action level. The maximum concentration detected during this round, 9.7%, is higher than the maximum detected during the May 2010 monitoring round when the maximum concentration detected was 7.8%. This is consistent with the pattern shown during previous rounds of declining carbon dioxide concentrations in the winter, and increasing concentrations in the summer. Graphs presenting carbon dioxide, oxygen, and methane concentrations over time for seven representative wells are presented in Attachment C.

The presence of carbon dioxide in soil gas is an indicator of subsurface bacterial activity and does not represent a threat to users of the property. The highest concentration of carbon dioxide was found in well MPL-6, located on the northern end of the property adjacent to the parking lot. The monitoring locations on the northern end of the property adjacent to large expanses of paved parking lot, sidewalk, and streets have typically had the highest carbon dioxide concentrations.

Soil Gas Laboratory Results

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

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are provided in Table 5 for comparison purposes even though they are not applicable to soil gas, because it does not represent exposure point concentrations. The PELs are the average concentrations that OSHA allows to be

present in a workplace without any respiratory protection or exposure controls. The concentrations detected in soil gas were well below the OSHA PELs.

CONCLUSIONS

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

Inspection of the cap detected some small areas requiring repairs. Documentation of the repairs will be submitted separately.

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

Sincerely,

ARCADIS U.S., Inc.

Donna H. Pallister, PE, LSP
Senior Environmental Engineer

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

ARCADIS

Tables

Table 1
System Monitoring Notes
Springfield Street School Complex
Providence, Rhode Island
August 26, 2010

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	0.6	20.6	4	0	0.0
Elementary School inlet 2	0	0.4	20.8	6	0	0.0
Elementary School Outlet	0	0.4	20.7	4	0	0.0
Middle School front shed inlet	0	0.3	20.9	3	0	0.0
Middle School front shed after 2nd carbon	0	0.0	20.9	3	0	0.0
Middle School back shed inlet	Not operating					
Middle School back shed after 2nd carbon	Not Operating					
Remedial Action Work Plan Action Levels	**0.5**	**1,000 ppm (0.1%)**	**NA**	**9 ppm**	**10 ppm**	**5 ppm**

Measurements made with: Landtec GEM2000 Plus, a MiniRae 2000, and a Q-Rae multigas meter

Sampling date: August 26, 2010

Measured by: D.H. Pallister

Table 2
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
August 26, 2010

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Front office	0	411	20.9	0	0	0.0
E.S. Elevator	0	393	20.9	0	0	0.0
E.S. Faculty Work Room	0	379	20.9	0	0	0.0
E.S. Gym	0	369	20.9	0	0	0.0
E.S. Stairway B	0	375	20.9	0	0	0.0
E.S. Stairway C	0	366	20.2	0	0	0.0
E.S. Library Entrance	0	372	20.9	0	0	0.0
E.S. Room 111 Music Room	0	381	20.9	0	0	0.0
E.S. Cafeteria	0	375	20.2	0	0	0.0
E.S. Mechanical Room	0	391	20.9	0	0	0.0

Table 2
Indoor Air Monitoring Notes
Springfield Street School Complex
August 26, 2010, 2010

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Office	0	552	20.9	0	0	0.0
M.S. Elevator	0	433	20.9	1	0	0.0
M.S. Stairway near Elem. School GS-01	0	441	20.9	0	0	0.0
M.S. Near sensor #16 in hall outside cafeteria	0	450	20.9	0	0	0.0
M.S. Faculty Work Room	0	450	20.9	0	0	0.0
M.S. Music/Act Rm	0	442	20.9	0	0	0.0
M.S. GS-03 Across from Boys Bathroom	0	419	20.9	0	0	0.0
M.S. Room 105	0	425	20.9	0	0	0.0
M.S. Second Floor Hall near central stairs	0	423	20.9	0	0	0.0

Table 2
Indoor Air Monitoring Notes
Springfield Street School Complex
August 26, 2010, 2010

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Cafeteria	0	440	20.9	0	0	0.0
M.S. Front Hall near sensor #4	0	422	20.9	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0	417	20.9	0	0	0.0
M.S. Near sensor GS 06 – hallway right end	0	415	20.9	0	0	0.0
Remedial Action Work Plan Action Levels	**0.5**	**1,000 ppm (0.1%)**	**NA**	**9 ppm**	**10 ppm**	**5 ppm**

Notes:

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

Measurements made with: Landtec GEM2000 Plus, a MiniRae 2000, and a Q-Rae multigas meter

PPM = Parts per million

Outdoor conditions: carbon monoxide = 0, carbon dioxide = 380, temperature = 73.4 ºF.

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

Monitoring Wells	Detected Compounds	Sampling Dates and Results in µg/L																																		RIDEM GB Groundwater Objective
		2/28/2001	7/20/2001	*9- 12/2001	8/1/2002	8/28/2002	12/19/2002	3/18/2003	7/17/2003	11/5/2003	1/22/2004	5/21/2004	8/17/2004	12/2/2004	4/6/2005	7/27/2005	10/27&28/2005	2/2/2006	4/27/2006	8/31/2006	11/15/2006	3/27/2007	5/21/2007	8/20/2007	11/13/2007	2/12/2008	5/21/2008	8/26/2008	11/18/2008	2/17/2009	5/7/2009	8/25/2009	11/18/2009	3/1/2010	5/20/2010	8/25/2010	
ATC-1																																				
	Benzene	6.1	ND	18.9	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
	n-butylbenzene	1.7	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	sec-Butylbenzene	1.1	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Ethylbenzene	4.5	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1600
	Isopropylbenzene	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	n-Propylbenzene	ND	ND	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	MTBE	12.4	7.0	28.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	5000
	Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND	1.10	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	540
	Toluene	2.5	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1700
	1,2,4-Trimethylbenzene	2.2	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,3,5-Trimethylbenzene	3.4	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Xylenes	14.6	ND	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
ATC-2																																				
	Chloroform	0.9	ND	ND	1.0	ND	ND	ND	ND	ND	NS	1.1	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NA
ATC-3																																				
	Toluene	ND	ND	ND	ND	NS	ND	ND	ND	ND	3.03	ND	ND	ND	ND	ND	ND	3.0	ND	4.5	13.1	ND	2.3	1.3	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
ATC-4																																				
	Benzene	ND	ND	2.5	0.6	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
	Chlorobenzene	2.6	ND	57.3	2.7	5.18	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.80	1.90	ND	ND	1.2	ND	ND	ND	1	ND	ND	ND	ND	70
	1,4-dichlorobenzene	4.2	ND	9.2	3.4	3.36	ND	ND	ND	ND	ND	0.80	1.6	2.1	ND	ND	ND	ND	ND	1.2	1.1	ND	1.2	2.1	2.1	ND	ND	2.1	1.4	ND	1.7	1.5	ND	ND	ND	ND	NA
	MTBE	ND	ND	ND	ND	ND	ND	ND	1.19	9.55	1.06	2.90	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5000
	1,2,4-Trimethylbenzene	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	tert-Amyl Methyl Ether (TAME)																																			0.5	NA
ATC-5																																				
	MTBE	ND	ND	2.2	NS	ND	ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	5000
	Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NA
Sampled By:		ATC	ATC	ATC	ATC	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	LFR	ARCADIS	ARCADIS	ARCADIS	

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

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
August 25, 2010

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0.0	0.1	21.2	0	0	0.0
WB-2	0.0	1.3	19.8	0	0	0.0
WB-3	0.0	0.2	21.2	0	0	0.0
WB-4	0.0	0.1	21.2	0	0	0.0
WB-5	0.0	0.1	21.3	0	0	0.0
WB-6	0.0	0.6	20.7	0	0	0.0
WB-7	NM	NM	NM	NM	NM	NM
WB-8	0.0	0.1	21.2	0	0	0.0
WB-12	0.0	1.5	19.9	0	0	0.0
WB-13	0.0	1.0	19.4	0	0	0.0
WB-14	0.0	0.8	19.8	0	0	0.0
WB-15	0.0	5.4	12.3	0	0	0.0
EPL-1	0.0	1.1	20.5	0	0	0.0
EPL-2	0.0	2.5	18.6	4	0	0.0
EPL-3	0.0	3.6	17.8	0	0	0.0
EPL-4	0.0	2.8	17.7	0	0	0.0
EPL-5	0.0	4.6	15.3	0	0	0.0
ENE-1	0.0	0.6	20.4	0	0	0.0

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
August 25, 2010

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	0.5	20.0	0	0	0.0
MG2	0.0	2.6	18.5	0	0	0.0
MG3	0.0	0.5	20.9	0	0	0.0
MG4	0.0	0.8	20.0	0	0	0.0
MG5	0.0	0.2	21.0	0	0	0.0
MPL2	0.0	9.7	6.2	0	0	0.0
MPL3	0.0	7.8	10.8	0	0	0.0
MPL5	0.0	0.7	20.0	0	0	0.0
MPL6	0.0	8.6	12.7	0	0	0.0
MPL7	0.0	8.6	12.5	0	0	0.0
MPL8	0.0	4.6	16.0	0	0	0.0
Remedial Action Work Plan Action Levels	**0.5%**	**1,000 PPM**	**NA**	**9 PPM**	**10 PPM**	**5 PPM**

Sampled by: Chris Jamison

Weather Conditions: Overcast, drizzle, 75-80F

Sampling Equipment: Landtec GEM 2000 Plus, MiniRae 2000 PID, QRae 4 gas meter

NM = Not measured. Well WB-7 contained water to top of casing on day of sampling.

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

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

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Appendix B

Laboratory Results

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

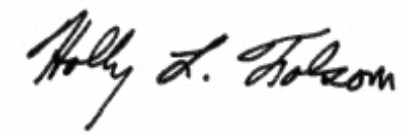
September 2, 2010

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

Project Location: Springfield St.
Client Job Number:
Project Number: WK012152.0000
Laboratory Work Order Number: 10H0790

Enclosed are results of analyses for samples received by the laboratory on August 26, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Holly L. Folsom
Project Manager

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

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

REPORT DATE: 9/2/2010

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0000

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 10H0790

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

PROJECT LOCATION: Springfield St.

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
WB-2	10H0790-04	Air		EPA TO-14A	
MPL-6	10H0790-05	Air		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.

EPA TO-14A

Qualifications:

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

Analyte & Samples(s) Qualified:

Bromomethane

10H0790-04[WB-2], B018460-BLK1, B018460-BS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson
Laboratory Director

con-test® ANALYTICAL LABORATORY

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ANALYTICAL RESULTS

Project Location: Springfield St.
Date Received: 8/26/2010
Field Sample #: WB-2
Sample ID: 10H0790-04
Sample Matrix: Air
Sampled: 8/25/2010 14:30

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

Work Order: 10H0790
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.30	0.10		0.96	0.32	2	8/27/10 16:03	WSD
Bromomethane	ND	0.10	V-05	ND	0.39	2	8/27/10 16:03	WSD
Carbon Tetrachloride	ND	0.10		ND	0.63	2	8/27/10 16:03	WSD
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/10 16:03	WSD
Chloroethane	ND	0.10		ND	0.26	2	8/27/10 16:03	WSD
Chloroform	ND	0.10		ND	0.49	2	8/27/10 16:03	WSD
Chloromethane	0.35	0.10		0.73	0.21	2	8/27/10 16:03	WSD
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/10 16:03	WSD
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/10 16:03	WSD
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/10 16:03	WSD
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/10 16:03	WSD
Dichlorodifluoromethane (Freon 12)	0.60	0.10		3.0	0.49	2	8/27/10 16:03	WSD
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/10 16:03	WSD
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/10 16:03	WSD
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/10 16:03	WSD
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/10 16:03	WSD
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/10 16:03	WSD
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/10 16:03	WSD
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/10 16:03	WSD
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	8/27/10 16:03	WSD
Ethylbenzene	0.10	0.10		0.45	0.43	2	8/27/10 16:03	WSD
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/10 16:03	WSD
Methylene Chloride	5.1	0.20		18	0.69	2	8/27/10 16:03	WSD
Styrene	1.1	0.10		4.6	0.43	2	8/27/10 16:03	WSD
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/10 16:03	WSD
Tetrachloroethylene	0.44	0.10		3.0	0.68	2	8/27/10 16:03	WSD
Toluene	1.1	0.10		4.0	0.38	2	8/27/10 16:03	WSD
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/10 16:03	WSD
1,1,1-Trichloroethane	0.14	0.10		0.74	0.55	2	8/27/10 16:03	WSD
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/10 16:03	WSD
Trichloroethylene	0.70	0.10		3.7	0.54	2	8/27/10 16:03	WSD
Trichlorofluoromethane (Freon 11)	1.1	0.10		6.2	0.56	2	8/27/10 16:03	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/10 16:03	WSD
1,2,4-Trimethylbenzene	0.10	0.10		0.49	0.49	2	8/27/10 16:03	WSD
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/10 16:03	WSD
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/10 16:03	WSD
m&p-Xylene	0.32	0.20		1.4	0.87	2	8/27/10 16:03	WSD
o-Xylene	ND	0.10		ND	0.43	2	8/27/10 16:03	WSD

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ANALYTICAL RESULTS

Project Location: Springfield St.
Date Received: 8/26/2010
Field Sample #: WB-2
Sample ID: 10H0790-04
Sample Matrix: Air
Sampled: 8/25/2010 14:30

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

Work Order: 10H0790
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)	97.4			70-130			8/27/10 16:03	

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ANALYTICAL RESULTS

Project Location: Springfield St.
Date Received: 8/26/2010
Field Sample #: MPL-6
Sample ID: 10H0790-05
Sample Matrix: Air
Sampled: 8/25/2010 16:00

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

Work Order: 10H0790
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Benzene	0.37	0.10		1.2	0.32	2	8/27/10 5:54	WSD
Bromomethane	ND	0.10		ND	0.39	2	8/27/10 5:54	WSD
Carbon Tetrachloride	ND	0.10		ND	0.63	2	8/27/10 5:54	WSD
Chlorobenzene	ND	0.10		ND	0.46	2	8/27/10 5:54	WSD
Chloroethane	ND	0.10		ND	0.26	2	8/27/10 5:54	WSD
Chloroform	ND	0.10		ND	0.49	2	8/27/10 5:54	WSD
Chloromethane	0.31	0.10		0.64	0.21	2	8/27/10 5:54	WSD
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	8/27/10 5:54	WSD
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/10 5:54	WSD
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	8/27/10 5:54	WSD
1,4-Dichlorobenzene	0.13	0.10		0.78	0.60	2	8/27/10 5:54	WSD
Dichlorodifluoromethane (Freon 12)	0.45	0.10		2.2	0.49	2	8/27/10 5:54	WSD
1,1-Dichloroethane	ND	0.10		ND	0.40	2	8/27/10 5:54	WSD
1,2-Dichloroethane	ND	0.10		ND	0.40	2	8/27/10 5:54	WSD
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/10 5:54	WSD
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	8/27/10 5:54	WSD
1,2-Dichloropropane	ND	0.10		ND	0.46	2	8/27/10 5:54	WSD
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/10 5:54	WSD
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	8/27/10 5:54	WSD
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.10		ND	0.70	2	8/27/10 5:54	WSD
Ethylbenzene	0.14	0.10		0.61	0.43	2	8/27/10 5:54	WSD
Hexachlorobutadiene	ND	0.10		ND	1.1	2	8/27/10 5:54	WSD
Methylene Chloride	2.7	0.20		9.2	0.69	2	8/27/10 5:54	WSD
Styrene	1.7	0.10		7.2	0.43	2	8/27/10 5:54	WSD
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	8/27/10 5:54	WSD
Tetrachloroethylene	0.47	0.10		3.2	0.68	2	8/27/10 5:54	WSD
Toluene	1.2	0.10		4.5	0.38	2	8/27/10 5:54	WSD
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	8/27/10 5:54	WSD
1,1,1-Trichloroethane	0.24	0.10		1.3	0.55	2	8/27/10 5:54	WSD
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	8/27/10 5:54	WSD
Trichloroethylene	3.0	0.10		16	0.54	2	8/27/10 5:54	WSD
Trichlorofluoromethane (Freon 11)	0.82	0.10		4.6	0.56	2	8/27/10 5:54	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	8/27/10 5:54	WSD
1,2,4-Trimethylbenzene	0.13	0.10		0.66	0.49	2	8/27/10 5:54	WSD
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	8/27/10 5:54	WSD
Vinyl Chloride	ND	0.10		ND	0.26	2	8/27/10 5:54	WSD
m&p-Xylene	0.42	0.20		1.8	0.87	2	8/27/10 5:54	WSD
o-Xylene	0.12	0.10		0.54	0.43	2	8/27/10 5:54	WSD

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ANALYTICAL RESULTS

Project Location: Springfield St.
Date Received: 8/26/2010
Field Sample #: MPL-6
Sample ID: 10H0790-05
Sample Matrix: Air
Sampled: 8/25/2010 16:00

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

Work Order: 10H0790
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type:
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-14A

Analyte	ppbv Results	ppbv RL	Flag	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Surrogates	% Recovery			% REC Limits				
4-Bromofluorobenzene (1)	102			70-130			8/27/10 5:54	

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Project Location: Sample Description: Work Order:

Date Received:

Field Sample #:

Sample ID: Start Date/Time:

Sample Matrix: Stop Date/Time:

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst

Analyte	Results	Units	Response	RT	DF	CAS #	Method	Date Prepared	Date/Time Analyzed	Analyst

Surrogates	% Recovery	Recovery Limits	Flag

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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
10H0790-05 [MPL-6]	B018456	1	1	N/A	1000	400	200	08/26/10

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
10H0790-04 [WB-2]	B018460	1	1	N/A	1000	400	200	08/27/10

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B018456 - TO-15 Prep											
Blank (B018456-BLK1)					Prepared & Analyzed: 08/26/10						
Benzene	ND	0.050									
Bromomethane	ND	0.050									
Carbon Tetrachloride	ND	0.050									
Chlorobenzene	ND	0.050									
Chloroethane	ND	0.050									
Chloroform	ND	0.050									
Chloromethane	ND	0.050									
1,2-Dibromoethane (EDB)	ND	0.050									
1,2-Dichlorobenzene	ND	0.050									
1,3-Dichlorobenzene	ND	0.050									
1,4-Dichlorobenzene	ND	0.050									
Dichlorodifluoromethane (Freon 12)	ND	0.050									
1,1-Dichloroethane	ND	0.050									
1,2-Dichloroethane	ND	0.050									
1,1-Dichloroethylene	ND	0.050									
cis-1,2-Dichloroethylene	ND	0.050									
1,2-Dichloropropane	ND	0.050									
cis-1,3-Dichloropropene	ND	0.050									
trans-1,3-Dichloropropene	ND	0.050									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050									
Ethylbenzene	ND	0.050									
Hexachlorobutadiene	ND	0.050									
Methylene Chloride	ND	0.10									
Styrene	ND	0.050									
1,1,2,2-Tetrachloroethane	ND	0.050									
Tetrachloroethylene	ND	0.050									
Toluene	ND	0.050									
1,2,4-Trichlorobenzene	ND	0.050									
1,1,1-Trichloroethane	ND	0.050									
1,1,2-Trichloroethane	ND	0.050									
Trichloroethylene	ND	0.050									
Trichlorofluoromethane (Freon 11)	ND	0.050									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.050									
1,2,4-Trimethylbenzene	ND	0.050									
1,3,5-Trimethylbenzene	ND	0.050									
Vinyl Chloride	ND	0.050									
m&p-Xylene	ND	0.10									
o-Xylene	ND	0.050									
Surrogate: 4-Bromofluorobenzene (1)	*7.87*				*8.00*		*98.4*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B018456 - TO-15 Prep											
LCS (B018456-BS1)					Prepared & Analyzed: 08/26/10						
Benzene	4.60				5.00		92.0	70-130			
Bromomethane	4.54				5.00		90.8	70-130			
Carbon Tetrachloride	5.34				5.00		107	70-130			
Chlorobenzene	4.92				5.00		98.4	70-130			
Chloroethane	4.42				5.00		88.4	70-130			
Chloroform	4.74				5.00		94.8	70-130			
Chloromethane	4.60				5.00		92.0	70-130			
1,2-Dibromoethane (EDB)	4.93				5.00		98.6	70-130			
1,2-Dichlorobenzene	5.00				5.00		100	70-130			
1,3-Dichlorobenzene	5.15				5.00		103	70-130			
1,4-Dichlorobenzene	5.09				5.00		102	70-130			
Dichlorodifluoromethane (Freon 12)	4.72				5.00		94.3	70-130			
1,1-Dichloroethane	4.64				5.00		92.9	70-130			
1,2-Dichloroethane	4.78				5.00		95.6	70-130			
1,1-Dichloroethylene	4.89				5.00		97.7	70-130			
cis-1,2-Dichloroethylene	4.73				5.00		94.6	70-130			
1,2-Dichloropropane	4.69				5.00		93.9	70-130			
cis-1,3-Dichloropropene	5.12				5.00		102	70-130			
trans-1,3-Dichloropropene	4.47				5.00		89.3	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	4.17				5.00		83.4	70-130			
Ethylbenzene	4.75				5.00		95.0	70-130			
Hexachlorobutadiene	5.30				5.00		106	70-130			
Methylene Chloride	4.68				5.00		93.6	70-130			
Styrene	4.74				5.00		94.9	70-130			
1,1,2,2-Tetrachloroethane	4.88				5.00		97.7	70-130			
Tetrachloroethylene	5.12				5.00		102	70-130			
Toluene	4.68				5.00		93.7	70-130			
1,2,4-Trichlorobenzene	5.24				5.00		105	70-130			
1,1,1-Trichloroethane	5.03				5.00		101	70-130			
1,1,2-Trichloroethane	4.89				5.00		97.7	70-130			
Trichloroethylene	4.87				5.00		97.4	70-130			
Trichlorofluoromethane (Freon 11)	4.79				5.00		95.7	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	4.96				5.00		99.2	70-130			
1,2,4-Trimethylbenzene	4.72				5.00		94.3	70-130			
1,3,5-Trimethylbenzene	4.74				5.00		94.8	70-130			
Vinyl Chloride	4.52				5.00		90.3	70-130			
m&p-Xylene	9.66				10.0		96.6	70-130			
o-Xylene	4.76				5.00		95.3	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.58*				*8.00*		*107*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B018460 - TO-15 Prep											
Blank (B018460-BLK1)					Prepared & Analyzed: 08/27/10						
Benzene	ND	0.050									
Bromomethane	ND	0.050									V-05
Carbon Tetrachloride	ND	0.050									
Chlorobenzene	ND	0.050									
Chloroethane	ND	0.050									
Chloroform	ND	0.050									
Chloromethane	ND	0.050									
1,2-Dibromoethane (EDB)	ND	0.050									
1,2-Dichlorobenzene	ND	0.050									
1,3-Dichlorobenzene	ND	0.050									
1,4-Dichlorobenzene	ND	0.050									
Dichlorodifluoromethane (Freon 12)	ND	0.050									
1,1-Dichloroethane	ND	0.050									
1,2-Dichloroethane	ND	0.050									
1,1-Dichloroethylene	ND	0.050									
cis-1,2-Dichloroethylene	ND	0.050									
1,2-Dichloropropane	ND	0.050									
cis-1,3-Dichloropropene	ND	0.050									
trans-1,3-Dichloropropene	ND	0.050									
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050									
Ethylbenzene	ND	0.050									
Hexachlorobutadiene	ND	0.050									
Methylene Chloride	ND	0.10									
Styrene	ND	0.050									
1,1,2,2-Tetrachloroethane	ND	0.050									
Tetrachloroethylene	ND	0.050									
Toluene	ND	0.050									
1,2,4-Trichlorobenzene	ND	0.050									
1,1,1-Trichloroethane	ND	0.050									
1,1,2-Trichloroethane	ND	0.050									
Trichloroethylene	ND	0.050									
Trichlorofluoromethane (Freon 11)	ND	0.050									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.050									
1,2,4-Trimethylbenzene	ND	0.050									
1,3,5-Trimethylbenzene	ND	0.050									
Vinyl Chloride	ND	0.050									
m&p-Xylene	ND	0.10									
o-Xylene	ND	0.050									
Surrogate: 4-Bromofluorobenzene (1)	*7.83*				*8.00*		*97.8*	*70-130*			

con-test® ANALYTICAL LABORATORY

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

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag
Batch B018460 - TO-15 Prep											
LCS (B018460-BS1)					Prepared & Analyzed: 08/27/10						
Benzene	4.39				5.00		87.9	70-130			
Bromomethane	3.58				5.00		71.6	70-130			V-05
Carbon Tetrachloride	5.88				5.00		118	70-130			
Chlorobenzene	4.66				5.00		93.1	70-130			
Chloroethane	3.76				5.00		75.1	70-130			
Chloroform	4.01				5.00		80.1	70-130			
Chloromethane	4.21				5.00		84.2	70-130			
1,2-Dibromoethane (EDB)	4.80				5.00		96.1	70-130			
1,2-Dichlorobenzene	4.85				5.00		97.0	70-130			
1,3-Dichlorobenzene	5.00				5.00		100	70-130			
1,4-Dichlorobenzene	4.95				5.00		99.1	70-130			
Dichlorodifluoromethane (Freon 12)	4.36				5.00		87.2	70-130			
1,1-Dichloroethane	3.95				5.00		79.0	70-130			
1,2-Dichloroethane	4.64				5.00		92.8	70-130			
1,1-Dichloroethylene	4.40				5.00		87.9	70-130			
cis-1,2-Dichloroethylene	4.04				5.00		80.8	70-130			
1,2-Dichloropropane	4.91				5.00		98.3	70-130			
cis-1,3-Dichloropropene	5.22				5.00		104	70-130			
trans-1,3-Dichloropropene	4.80				5.00		96.0	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	3.61				5.00		72.2	70-130			
Ethylbenzene	4.73				5.00		94.6	70-130			
Hexachlorobutadiene	5.16				5.00		103	70-130			
Methylene Chloride	4.42				5.00		88.4	70-130			
Styrene	4.60				5.00		92.1	70-130			
1,1,2,2-Tetrachloroethane	5.21				5.00		104	70-130			
Tetrachloroethylene	4.38				5.00		87.6	70-130			
Toluene	4.52				5.00		90.3	70-130			
1,2,4-Trichlorobenzene	4.90				5.00		97.9	70-130			
1,1,1-Trichloroethane	5.48				5.00		110	70-130			
1,1,2-Trichloroethane	4.70				5.00		94.0	70-130			
Trichloroethylene	4.83				5.00		96.6	70-130			
Trichlorofluoromethane (Freon 11)	4.26				5.00		85.3	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	3.96				5.00		79.2	70-130			
1,2,4-Trimethylbenzene	4.89				5.00		97.8	70-130			
1,3,5-Trimethylbenzene	4.92				5.00		98.5	70-130			
Vinyl Chloride	3.98				5.00		79.7	70-130			
m&p-Xylene	9.54				10.0		95.4	70-130			
o-Xylene	5.09				5.00		102	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*8.46*				*8.00*		*106*	*70-130*			

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QUALITY CONTROL

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits estabished for difficult compound.
‡	Wide RPD limits estabished for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Significant uncertainty is associated with the reported value which is likely to be biased on the low side.

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

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2011

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

CHAIN OF CUSTODY RECORD

10H0790

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

Page 1 of 1

Company Name: ARCADIS
Address: 300 METRO CENTER BLVD
WARWICK RI 02886
Attention: DONNA PALLISTER
Project Location: SPRINGFIELD ST
Sampled By: CHRIS JANIGIAN

Telephone: (401) 732-3600
Project #
Client PO #

DATA DELIVERY (check one):
☐FAX ☐EMAIL ☐WEBSITE CLIENT
Fax # :
Email:
Format: ☐ EXCEL ☐ PDF ☐ GIS KEY
☐ OTHER

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

State Form Required?
☐ yes ☐ no

Field ID	Sample Description	Lab #	Date Sampled Start Date/Time	Stop Date/Time	Composite	Grab	*Matrix Code	Conc. Code	7	14	V	T	# of containe
	ATC-1	-01	8/25/10	11:20		X	GW		X				
	ATC-4	-02	8/25/10	11:40		X	GW		X				
	TRIP BLANK	-03	8/25/10	—		X			X				
	WB-2	-04	8/25/10	14:30		X	A			X			
	MPL-6	-05	8/25/10	16:00		X	A			X			

VOC 8260
TO-14

ANALYSIS REQUESTED

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

Client Comments:

Laboratory Comments: #1 VOC Samples on work order 10I0051

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: 8/26/10 17:00	
Received by: (signature)	Date/Time: 8/26/10 1045	
Relinquished by: (signature)	Date/Time: 8/26/10 1630	
Received by: (signature) 3.0	Date/Time: 8-26-10 1630	

Turnaround **
☐ 7-Day
☐ 10-Day
☒ Other (1)
RUSH *
☐ *24-Hr ☐ *48-Hr
☐ *72-Hr ☐ *4-Day
* Require lab approval

Detection Limit Requirements
Regulations? RI GB
Data Enhancement Project/RCP? ☐ Y ☒ N
Special Requirements or DL's:

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

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

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

AIHA, NELAC & WBE/DBE Certified

www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

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

CLIENT NAME: Arcadis RECEIVED BY: RB DATE: 8-26

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) 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 3.0

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

Who was notified _____ Date _____ Time _____

6) Are there any samples "On Hold"? Yes (No) Stored where: _____

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

Who was notified _____ Date _____ Time _____

8) Location where samples are stored: 19

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

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below	7	SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	2
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments:

40 mL vials: # HCl 7 # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

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

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

June 2010

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

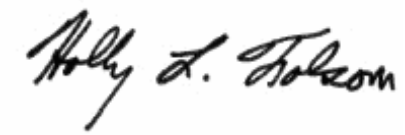
September 2, 2010

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

Project Location: Springfield St.
Client Job Number:
Project Number: WK012152.0000
Laboratory Work Order Number: 10I0051

Enclosed are results of analyses for samples received by the laboratory on August 26, 2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Holly L. Folsom
Project Manager

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

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

REPORT DATE: 9/2/2010

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0000

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 10I0051

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

PROJECT LOCATION: Springfield St.

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
ATC-1	10I0051-01	Ground Water		SW-846 8260B	
ATC-4	10I0051-02	Ground Water		SW-846 8260B	
Trip Blank	10I0051-03	Trip Blank Water		SW-846 8260B	

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 8260B

Qualifications:

pH of sample (pH 5) is outside of method specified preservation criteria.

Analyte & Samples(s) Qualified:

10I0051-01[ATC-1]

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

Analyte & Samples(s) Qualified:

2-Butanone (MEK), 2-Hexanone (MBK), Acetone, tert-Butyl Alcohol (TBA)

10I0051-01[ATC-1], 10I0051-02[ATC-4], B018379-BLK1, B018379-BS1, B018379-BSD1

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

Analyte & Samples(s) Qualified:

tert-Butyl Alcohol (TBA)

10I0051-01[ATC-1], 10I0051-02[ATC-4], B018379-BLK1, B018379-BS1, B018379-BSD1

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

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 12)

B018364-BS1, B018364-BSD1, B018379-BS1, B018379-BSD1

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

Analyte & Samples(s) Qualified:

1,4-Dioxane

10I0051-01[ATC-1], 10I0051-02[ATC-4], 10I0051-03[Trip Blank], B018364-BLK1, B018364-BS1, B018364-BSD1, B018379-BLK1, B018379-BS1, B018379-BSD1

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

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Michael A. Erickson
Laboratory Director

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

Project Location: Springfield St. | Sample Description: | Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: ATC-1 | Sampled: 8/25/2010 11:20

Sample ID: 10I0051-01

Sample Matrix: Ground Water

Sample Flags: PR-08

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Benzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Bromomethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:17	TJR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-05	SW-846 8260B	8/27/10	8/28/10 3:17	TJR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR

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

Project Location: Springfield St. | Sample Description: | Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: ATC-1 | Sampled: 8/25/2010 11:20

Sample ID: 10I0051-01

Sample Matrix: Ground Water

Sample Flags: PR-08

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Styrene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Toluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:17	TJR

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	96.2	70-130		8/28/10 3:17
Toluene-d8	99.9	70-130		8/28/10 3:17
4-Bromofluorobenzene	96.2	70-130		8/28/10 3:17

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

Project Location: Springfield St. Sample Description: Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: ATC-4 Sampled: 8/25/2010 11:40

Sample ID: 10I0051-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
tert-Amyl Methyl Ether (TAME)	0.50	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Benzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Bromomethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
2-Butanone (MEK)	ND	20	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:43	TJR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	R-05, V-05	SW-846 8260B	8/27/10	8/28/10 3:43	TJR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR

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

Project Location: Springfield St. | Sample Description: | Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: ATC-4 | Sampled: 8/25/2010 11:40

Sample ID: 10I0051-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
2-Hexanone (MBK)	ND	10	µg/L	1	R-05	SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Styrene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Toluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/28/10 3:43	TJR

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	97.3	70-130		8/28/10 3:43
Toluene-d8	100	70-130		8/28/10 3:43
4-Bromofluorobenzene	97.8	70-130		8/28/10 3:43

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

Project Location: Springfield St. | Sample Description: | Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: Trip Blank | Sampled: 8/25/2010 00:00

Sample ID: 10I0051-03

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Benzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Bromodichloromethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Bromomethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Carbon Disulfide	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
cis-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
trans-1,3-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR

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

Project Location: Springfield St. | Sample Description: | Work Order: 10I0051

Date Received: 8/26/2010

Field Sample #: Trip Blank | Sampled: 8/25/2010 00:00

Sample ID: 10I0051-03

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Naphthalene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Styrene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Toluene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	8/27/10	8/27/10 13:24	TJR

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	98.2	70-130		8/27/10 13:24
Toluene-d8	99.2	70-130		8/27/10 13:24
4-Bromofluorobenzene	96.5	70-130		8/27/10 13:24

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Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10I0051-03 [Trip Blank]	B018364	5	5.00	08/27/10

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
10I0051-01 [ATC-1]	B018379	5	5.00	08/27/10
10I0051-02 [ATC-4]	B018379	5	5.00	08/27/10

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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 B018364 - SW-846 5030B										
Blank (B018364-BLK1)				Prepared & Analyzed: 08/27/10						
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	2.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							

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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 B018364 - SW-846 5030B										
Blank (B018364-BLK1)				Prepared & Analyzed: 08/27/10						
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	*24.3*		µg/L	25.0		97.0	70-130			
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*24.5*		µg/L	25.0		97.9	70-130			
LCS (B018364-BS1)				Prepared & Analyzed: 08/27/10						
Acetone	130	50	µg/L	100		130	70-160			†
Acrylonitrile	11.7	5.0	µg/L	10.0		117	70-130			
tert-Amyl Methyl Ether (TAME)	10.3	0.50	µg/L	10.0		103	70-130			
Benzene	9.64	1.0	µg/L	10.0		96.4	70-130			
Bromobenzene	10.3	1.0	µg/L	10.0		103	70-130			
Bromochloromethane	9.63	1.0	µg/L	10.0		96.3	70-130			
Bromodichloromethane	9.80	0.50	µg/L	10.0		98.0	70-130			
Bromoform	10.4	1.0	µg/L	10.0		104	70-130			
Bromomethane	6.88	2.0	µg/L	10.0		68.8	40-160			†
2-Butanone (MEK)	116	20	µg/L	100		116	40-160			†
tert-Butyl Alcohol (TBA)	112	20	µg/L	100		112	40-160			†
n-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
sec-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
tert-Butylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.4	0.50	µg/L	10.0		104	70-130			
Carbon Disulfide	10.5	2.0	µg/L	10.0		105	70-130			
Carbon Tetrachloride	9.80	1.0	µg/L	10.0		98.0	70-130			
Chlorobenzene	10.1	1.0	µg/L	10.0		101	70-130			
Chlorodibromomethane	10.2	0.50	µg/L	10.0		102	70-130			
Chloroethane	10.3	2.0	µg/L	10.0		103	70-130			
Chloroform	9.53	2.0	µg/L	10.0		95.3	70-130			
Chloromethane	8.98	2.0	µg/L	10.0		89.8	40-160			†
2-Chlorotoluene	10.1	1.0	µg/L	10.0		101	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 B018364 - SW-846 5030B											
LCS (B018364-BS1)				Prepared & Analyzed: 08/27/10							
4-Chlorotoluene	10.4	1.0	µg/L	10.0		104	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.7	5.0	µg/L	10.0		107	70-130				
1,2-Dibromoethane (EDB)	10.7	0.50	µg/L	10.0		107	70-130				
Dibromomethane	10.5	1.0	µg/L	10.0		105	70-130				
1,2-Dichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130				
1,3-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130				
1,4-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130				
trans-1,4-Dichloro-2-butene	10.7	2.0	µg/L	10.0		107	70-130				
Dichlorodifluoromethane (Freon 12)	7.72	2.0	µg/L	10.0		77.2	40-160			V-06	†
1,1-Dichloroethane	9.62	1.0	µg/L	10.0		96.2	70-130				
1,2-Dichloroethane	9.58	1.0	µg/L	10.0		95.8	70-130				
1,1-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130				
cis-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130				
trans-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130				
1,2-Dichloropropane	9.77	1.0	µg/L	10.0		97.7	70-130				
1,3-Dichloropropane	10.0	0.50	µg/L	10.0		100	70-130				
2,2-Dichloropropane	10.2	1.0	µg/L	10.0		102	40-130				†
1,1-Dichloropropene	9.80	2.0	µg/L	10.0		98.0	70-130				
cis-1,3-Dichloropropene	9.93	0.50	µg/L	10.0		99.3	70-130				
trans-1,3-Dichloropropene	10.9	0.50	µg/L	10.0		109	70-130				
Diethyl Ether	11.9	2.0	µg/L	10.0		119	70-130				
Diisopropyl Ether (DIPE)	10.3	0.50	µg/L	10.0		103	70-130				
1,4-Dioxane	107	50	µg/L	100		107	40-130			V-16	†
Ethylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
Hexachlorobutadiene	11.1	0.50	µg/L	10.0		111	70-130				
2-Hexanone (MBK)	110	10	µg/L	100		110	70-160				†
Isopropylbenzene (Cumene)	11.6	1.0	µg/L	10.0		116	70-130				
p-Isopropyltoluene (p-Cymene)	10.5	1.0	µg/L	10.0		105	70-130				
Methyl tert-Butyl Ether (MTBE)	11.0	1.0	µg/L	10.0		110	70-130				
Methylene Chloride	9.92	5.0	µg/L	10.0		99.2	70-130				
4-Methyl-2-pentanone (MIBK)	103	10	µg/L	100		103	70-160				†
Naphthalene	10.7	2.0	µg/L	10.0		107	40-130				†
n-Propylbenzene	10.5	1.0	µg/L	10.0		105	70-130				
Styrene	10.1	1.0	µg/L	10.0		101	70-130				
1,1,1,2-Tetrachloroethane	10.2	1.0	µg/L	10.0		102	70-130				
1,1,2,2-Tetrachloroethane	10.8	0.50	µg/L	10.0		108	70-130				
Tetrachloroethylene	9.93	1.0	µg/L	10.0		99.3	70-130				
Tetrahydrofuran	10.8	10	µg/L	10.0		108	70-130				
Toluene	9.87	1.0	µg/L	10.0		98.7	70-130				
1,2,3-Trichlorobenzene	10.6	5.0	µg/L	10.0		106	70-130				
1,2,4-Trichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130				
1,3,5-Trichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130				
1,1,1-Trichloroethane	9.74	1.0	µg/L	10.0		97.4	70-130				
1,1,2-Trichloroethane	10.2	1.0	µg/L	10.0		102	70-130				
Trichloroethylene	10.0	1.0	µg/L	10.0		100	70-130				
Trichlorofluoromethane (Freon 11)	10.1	2.0	µg/L	10.0		101	70-130				
1,2,3-Trichloropropane	10.1	2.0	µg/L	10.0		101	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.2	1.0	µg/L	10.0		112	70-130				
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130				
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130				
Vinyl Chloride	9.67	2.0	µg/L	10.0		96.7	40-160				†

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B018364 - SW-846 5030B											
LCS (B018364-BS1)				Prepared & Analyzed: 08/27/10							
m+p Xylene	20.2	2.0	µg/L	20.0		101	70-130				
o-Xylene	10.2	1.0	µg/L	10.0		102	70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.8*		µg/L	25.0		99.0	70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		98.6	70-130				
Surrogate: 4-Bromofluorobenzene	*24.5*		µg/L	25.0		98.0	70-130				
LCS Dup (B018364-BSD1)				Prepared & Analyzed: 08/27/10							
Acetone	121	50	µg/L	100		121	70-160	7.35	25		†
Acrylonitrile	10.8	5.0	µg/L	10.0		108	70-130	8.01	25		
tert-Amyl Methyl Ether (TAME)	10.0	0.50	µg/L	10.0		100	70-130	2.96	25		
Benzene	8.87	1.0	µg/L	10.0		88.7	70-130	8.32	25		
Bromobenzene	9.50	1.0	µg/L	10.0		95.0	70-130	7.89	25		
Bromochloromethane	9.57	1.0	µg/L	10.0		95.7	70-130	0.625	25		
Bromodichloromethane	9.23	0.50	µg/L	10.0		92.3	70-130	5.99	25		
Bromoform	9.82	1.0	µg/L	10.0		98.2	70-130	6.02	25		
Bromomethane	6.28	2.0	µg/L	10.0		62.8	40-160	9.12	25		†
2-Butanone (MEK)	108	20	µg/L	100		108	40-160	6.88	25		†
tert-Butyl Alcohol (TBA)	107	20	µg/L	100		107	40-160	5.06	25		†
n-Butylbenzene	9.72	1.0	µg/L	10.0		97.2	70-130	5.31	25		
sec-Butylbenzene	9.69	1.0	µg/L	10.0		96.9	70-130	6.78	25		
tert-Butylbenzene	9.73	1.0	µg/L	10.0		97.3	70-130	6.85	25		
tert-Butyl Ethyl Ether (TBEE)	9.94	0.50	µg/L	10.0		99.4	70-130	4.43	25		
Carbon Disulfide	9.93	2.0	µg/L	10.0		99.3	70-130	5.39	25		
Carbon Tetrachloride	9.06	1.0	µg/L	10.0		90.6	70-130	7.85	25		
Chlorobenzene	9.38	1.0	µg/L	10.0		93.8	70-130	7.69	25		
Chlorodibromomethane	10.0	0.50	µg/L	10.0		100	70-130	1.97	25		
Chloroethane	9.17	2.0	µg/L	10.0		91.7	70-130	11.4	25		
Chloroform	8.95	2.0	µg/L	10.0		89.5	70-130	6.28	25		
Chloromethane	7.97	2.0	µg/L	10.0		79.7	40-160	11.9	25		†
2-Chlorotoluene	9.47	1.0	µg/L	10.0		94.7	70-130	6.44	25		
4-Chlorotoluene	9.55	1.0	µg/L	10.0		95.5	70-130	8.81	25		
1,2-Dibromo-3-chloropropane (DBCP)	9.96	5.0	µg/L	10.0		99.6	70-130	7.44	25		
1,2-Dibromoethane (EDB)	10.1	0.50	µg/L	10.0		101	70-130	5.78	25		
Dibromomethane	9.74	1.0	µg/L	10.0		97.4	70-130	7.22	25		
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130	4.94	25		
1,3-Dichlorobenzene	9.97	1.0	µg/L	10.0		99.7	70-130	4.89	25		
1,4-Dichlorobenzene	9.89	1.0	µg/L	10.0		98.9	70-130	2.69	25		
trans-1,4-Dichloro-2-butene	10.4	2.0	µg/L	10.0		104	70-130	3.03	25		
Dichlorodifluoromethane (Freon 12)	6.72	2.0	µg/L	10.0		67.2	40-160	13.9	25	V-06	†
1,1-Dichloroethane	9.11	1.0	µg/L	10.0		91.1	70-130	5.45	25		
1,2-Dichloroethane	9.34	1.0	µg/L	10.0		93.4	70-130	2.54	25		
1,1-Dichloroethylene	9.55	1.0	µg/L	10.0		95.5	70-130	5.80	25		
cis-1,2-Dichloroethylene	9.40	1.0	µg/L	10.0		94.0	70-130	7.48	25		
trans-1,2-Dichloroethylene	9.51	1.0	µg/L	10.0		95.1	70-130	5.82	25		
1,2-Dichloropropane	9.13	1.0	µg/L	10.0		91.3	70-130	6.77	25		
1,3-Dichloropropane	9.67	0.50	µg/L	10.0		96.7	70-130	3.65	25		
2,2-Dichloropropane	9.14	1.0	µg/L	10.0		91.4	40-130	11.0	25		†
1,1-Dichloropropene	9.11	2.0	µg/L	10.0		91.1	70-130	7.30	25		
cis-1,3-Dichloropropene	9.38	0.50	µg/L	10.0		93.8	70-130	5.70	25		
trans-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105	70-130	3.17	25		
Diethyl Ether	10.6	2.0	µg/L	10.0		106	70-130	11.9	25		
Diisopropyl Ether (DIPE)	9.69	0.50	µg/L	10.0		96.9	70-130	6.49	25		

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B018364 - SW-846 5030B											
LCS Dup (B018364-BSD1)				Prepared & Analyzed: 08/27/10							
1,4-Dioxane	74.3	50	µg/L	100		74.3	40-130	36.0	50	V-16	† ‡
Ethylbenzene	9.28	1.0	µg/L	10.0		92.8	70-130	8.96	25		
Hexachlorobutadiene	9.92	0.50	µg/L	10.0		99.2	70-130	11.4	25		
2-Hexanone (MBK)	103	10	µg/L	100		103	70-160	7.08	25		†
Isopropylbenzene (Cumene)	10.6	1.0	µg/L	10.0		106	70-130	9.20	25		
p-Isopropyltoluene (p-Cymene)	9.89	1.0	µg/L	10.0		98.9	70-130	6.08	25		
Methyl tert-Butyl Ether (MTBE)	10.5	1.0	µg/L	10.0		105	70-130	4.55	25		
Methylene Chloride	9.65	5.0	µg/L	10.0		96.5	70-130	2.76	25		
4-Methyl-2-pentanone (MIBK)	98.8	10	µg/L	100		98.8	70-160	4.55	25		†
Naphthalene	10.5	2.0	µg/L	10.0		105	40-130	2.07	25		†
n-Propylbenzene	9.40	1.0	µg/L	10.0		94.0	70-130	10.8	25		
Styrene	9.46	1.0	µg/L	10.0		94.6	70-130	6.74	25		
1,1,1,2-Tetrachloroethane	9.54	1.0	µg/L	10.0		95.4	70-130	6.98	25		
1,1,2,2-Tetrachloroethane	10.3	0.50	µg/L	10.0		103	70-130	4.73	25		
Tetrachloroethylene	9.30	1.0	µg/L	10.0		93.0	70-130	6.55	25		
Tetrahydrofuran	10.5	10	µg/L	10.0		105	70-130	3.00	25		
Toluene	9.21	1.0	µg/L	10.0		92.1	70-130	6.92	25		
1,2,3-Trichlorobenzene	9.95	5.0	µg/L	10.0		99.5	70-130	6.23	25		
1,2,4-Trichlorobenzene	10.0	1.0	µg/L	10.0		100	70-130	8.70	25		
1,3,5-Trichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130	6.83	25		
1,1,1-Trichloroethane	8.91	1.0	µg/L	10.0		89.1	70-130	8.90	25		
1,1,2-Trichloroethane	9.86	1.0	µg/L	10.0		98.6	70-130	3.49	25		
Trichloroethylene	9.19	1.0	µg/L	10.0		91.9	70-130	8.44	25		
Trichlorofluoromethane (Freon 11)	9.39	2.0	µg/L	10.0		93.9	70-130	7.58	25		
1,2,3-Trichloropropane	9.54	2.0	µg/L	10.0		95.4	70-130	5.70	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.3	1.0	µg/L	10.0		103	70-130	8.82	25		
1,2,4-Trimethylbenzene	9.56	1.0	µg/L	10.0		95.6	70-130	5.89	25		
1,3,5-Trimethylbenzene	9.48	1.0	µg/L	10.0		94.8	70-130	7.51	25		
Vinyl Chloride	8.89	2.0	µg/L	10.0		88.9	40-160	8.41	25		†
m+p Xylene	18.6	2.0	µg/L	20.0		93.0	70-130	8.50	25		
o-Xylene	9.44	1.0	µg/L	10.0		94.4	70-130	7.64	25		
Surrogate: 1,2-Dichloroethane-d4	*24.7*		µg/L	25.0		98.6	70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		99.8	70-130				
Surrogate: 4-Bromofluorobenzene	*24.5*		µg/L	25.0		98.1	70-130				
Batch B018379 - SW-846 5030B											
Blank (B018379-BLK1)				Prepared: 08/27/10 Analyzed: 08/28/10							
Acetone	ND	50	µg/L							R-05	
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							R-05	
tert-Butyl Alcohol (TBA)	ND	20	µg/L							R-05, V-05	
n-Butylbenzene	ND	1.0	µg/L								
sec-Butylbenzene	ND	1.0	µg/L								
tert-Butylbenzene	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 B018379 - SW-846 5030B										
Blank (B018379-BLK1)				Prepared: 08/27/10 Analyzed: 08/28/10						
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	2.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							R-05
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
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							

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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 B018379 - SW-846 5030B											
Blank (B018379-BLK1)				Prepared: 08/27/10 Analyzed: 08/28/10							
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	*24.0*		µg/L	25.0		95.9	70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		99.9	70-130				
Surrogate: 4-Bromofluorobenzene	*24.4*		µg/L	25.0		97.5	70-130				
LCS (B018379-BS1)				Prepared & Analyzed: 08/27/10							
Acetone	133	50	µg/L	100		133	70-160			R-05	†
Acrylonitrile	11.5	5.0	µg/L	10.0		115	70-130				
tert-Amyl Methyl Ether (TAME)	10.3	0.50	µg/L	10.0		103	70-130				
Benzene	9.85	1.0	µg/L	10.0		98.5	70-130				
Bromobenzene	10.4	1.0	µg/L	10.0		104	70-130				
Bromochloromethane	9.97	1.0	µg/L	10.0		99.7	70-130				
Bromodichloromethane	10.2	0.50	µg/L	10.0		102	70-130				
Bromoform	9.96	1.0	µg/L	10.0		99.6	70-130				
Bromomethane	7.13	2.0	µg/L	10.0		71.3	40-160				†
2-Butanone (MEK)	115	20	µg/L	100		115	40-160			R-05	†
tert-Butyl Alcohol (TBA)	112	20	µg/L	100		112	40-160			R-05, V-05	†
n-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
sec-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
tert-Butyl Ethyl Ether (TBEE)	10.7	0.50	µg/L	10.0		107	70-130				
Carbon Disulfide	11.3	2.0	µg/L	10.0		113	70-130				
Carbon Tetrachloride	9.84	1.0	µg/L	10.0		98.4	70-130				
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130				
Chlorodibromomethane	10.3	0.50	µg/L	10.0		103	70-130				
Chloroethane	10.4	2.0	µg/L	10.0		104	70-130				
Chloroform	9.90	2.0	µg/L	10.0		99.0	70-130				
Chloromethane	9.88	2.0	µg/L	10.0		98.8	40-160				†
2-Chlorotoluene	10.3	1.0	µg/L	10.0		103	70-130				
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	11.0	5.0	µg/L	10.0		110	70-130				
1,2-Dibromoethane (EDB)	11.0	0.50	µg/L	10.0		110	70-130				
Dibromomethane	10.6	1.0	µg/L	10.0		106	70-130				
1,2-Dichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130				
1,3-Dichlorobenzene	11.0	1.0	µg/L	10.0		110	70-130				
1,4-Dichlorobenzene	10.7	1.0	µg/L	10.0		107	70-130				
trans-1,4-Dichloro-2-butene	9.73	2.0	µg/L	10.0		97.3	70-130				
Dichlorodifluoromethane (Freon 12)	7.66	2.0	µg/L	10.0		76.6	40-160			V-06	†
1,1-Dichloroethane	9.84	1.0	µg/L	10.0		98.4	70-130				
1,2-Dichloroethane	9.90	1.0	µg/L	10.0		99.0	70-130				
1,1-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130				
cis-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130				
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B018379 - SW-846 5030B											
LCS (B018379-BS1)				Prepared & Analyzed: 08/27/10							
1,2-Dichloropropane	10.1	1.0	µg/L	10.0		101	70-130				
1,3-Dichloropropane	10.5	0.50	µg/L	10.0		105	70-130				
2,2-Dichloropropane	8.44	1.0	µg/L	10.0		84.4	40-130				†
1,1-Dichloropropene	10.2	2.0	µg/L	10.0		102	70-130				
cis-1,3-Dichloropropene	9.94	0.50	µg/L	10.0		99.4	70-130				
trans-1,3-Dichloropropene	10.9	0.50	µg/L	10.0		109	70-130				
Diethyl Ether	11.1	2.0	µg/L	10.0		111	70-130				
Diisopropyl Ether (DIPE)	10.6	0.50	µg/L	10.0		106	70-130				
1,4-Dioxane	96.7	50	µg/L	100		96.7	40-130			V-16	†
Ethylbenzene	10.5	1.0	µg/L	10.0		105	70-130				
Hexachlorobutadiene	11.3	0.50	µg/L	10.0		113	70-130				
2-Hexanone (MBK)	112	10	µg/L	100		112	70-160			R-05	†
Isopropylbenzene (Cumene)	11.9	1.0	µg/L	10.0		119	70-130				
p-Isopropyltoluene (p-Cymene)	11.1	1.0	µg/L	10.0		111	70-130				
Methyl tert-Butyl Ether (MTBE)	11.1	1.0	µg/L	10.0		111	70-130				
Methylene Chloride	10.3	5.0	µg/L	10.0		103	70-130				
4-Methyl-2-pentanone (MIBK)	106	10	µg/L	100		106	70-160				†
Naphthalene	11.7	2.0	µg/L	10.0		117	40-130				†
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
Styrene	10.5	1.0	µg/L	10.0		105	70-130				
1,1,1,2-Tetrachloroethane	10.1	1.0	µg/L	10.0		101	70-130				
1,1,2,2-Tetrachloroethane	10.5	0.50	µg/L	10.0		105	70-130				
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104	70-130				
Tetrahydrofuran	10.2	10	µg/L	10.0		102	70-130				
Toluene	10.3	1.0	µg/L	10.0		103	70-130				
1,2,3-Trichlorobenzene	11.2	5.0	µg/L	10.0		112	70-130				
1,2,4-Trichlorobenzene	11.8	1.0	µg/L	10.0		118	70-130				
1,3,5-Trichlorobenzene	11.3	1.0	µg/L	10.0		113	70-130				
1,1,1-Trichloroethane	9.79	1.0	µg/L	10.0		97.9	70-130				
1,1,2-Trichloroethane	10.7	1.0	µg/L	10.0		107	70-130				
Trichloroethylene	10.9	1.0	µg/L	10.0		109	70-130				
Trichlorofluoromethane (Freon 11)	10.7	2.0	µg/L	10.0		107	70-130				
1,2,3-Trichloropropane	10.4	2.0	µg/L	10.0		104	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	11.3	1.0	µg/L	10.0		113	70-130				
1,2,4-Trimethylbenzene	11.0	1.0	µg/L	10.0		110	70-130				
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104	70-130				
Vinyl Chloride	10.1	2.0	µg/L	10.0		101	40-160				†
m+p Xylene	21.0	2.0	µg/L	20.0		105	70-130				
o-Xylene	10.5	1.0	µg/L	10.0		105	70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.5*		µg/L	25.0		98.0	70-130				
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.1	70-130				
Surrogate: 4-Bromofluorobenzene	*24.6*		µg/L	25.0		98.2	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 B018379 - SW-846 5030B												
LCS Dup (B018379-BSD1)				Prepared: 08/27/10 Analyzed: 08/28/10								
Acetone	99.6	50	µg/L	100		99.6	70-160	**28.4**	*	25	R-05	†
Acrylonitrile	9.31	5.0	µg/L	10.0		93.1	70-130	20.7		25		
tert-Amyl Methyl Ether (TAME)	9.62	0.50	µg/L	10.0		96.2	70-130	7.21		25		
Benzene	9.24	1.0	µg/L	10.0		92.4	70-130	6.39		25		
Bromobenzene	9.70	1.0	µg/L	10.0		97.0	70-130	7.44		25		
Bromochloromethane	9.64	1.0	µg/L	10.0		96.4	70-130	3.37		25		
Bromodichloromethane	9.71	0.50	µg/L	10.0		97.1	70-130	4.92		25		
Bromoform	8.71	1.0	µg/L	10.0		87.1	70-130	13.4		25		
Bromomethane	7.39	2.0	µg/L	10.0		73.9	40-160	3.58		25		†
2-Butanone (MEK)	85.6	20	µg/L	100		85.6	40-160	**29.6**	*	25	R-05	†
tert-Butyl Alcohol (TBA)	77.0	20	µg/L	100		77.0	40-160	**37.2**	*	25	R-05, V-05	†
n-Butylbenzene	9.89	1.0	µg/L	10.0		98.9	70-130	8.98		25		
sec-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	6.52		25		
tert-Butylbenzene	10.1	1.0	µg/L	10.0		101	70-130	7.16		25		
tert-Butyl Ethyl Ether (TBEE)	9.82	0.50	µg/L	10.0		98.2	70-130	8.67		25		
Carbon Disulfide	10.4	2.0	µg/L	10.0		104	70-130	8.08		25		
Carbon Tetrachloride	9.31	1.0	µg/L	10.0		93.1	70-130	5.54		25		
Chlorobenzene	9.91	1.0	µg/L	10.0		99.1	70-130	7.01		25		
Chlorodibromomethane	9.41	0.50	µg/L	10.0		94.1	70-130	8.93		25		
Chloroethane	9.55	2.0	µg/L	10.0		95.5	70-130	8.04		25		
Chloroform	9.43	2.0	µg/L	10.0		94.3	70-130	4.86		25		
Chloromethane	8.83	2.0	µg/L	10.0		88.3	40-160	11.2		25		†
2-Chlorotoluene	9.59	1.0	µg/L	10.0		95.9	70-130	7.43		25		
4-Chlorotoluene	10.0	1.0	µg/L	10.0		100	70-130	7.22		25		
1,2-Dibromo-3-chloropropane (DBCP)	8.53	5.0	µg/L	10.0		85.3	70-130	24.8		25		
1,2-Dibromoethane (EDB)	9.83	0.50	µg/L	10.0		98.3	70-130	11.7		25		
Dibromomethane	9.65	1.0	µg/L	10.0		96.5	70-130	9.76		25		
1,2-Dichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	6.50		25		
1,3-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	6.00		25		
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	3.33		25		
trans-1,4-Dichloro-2-butene	7.89	2.0	µg/L	10.0		78.9	70-130	20.9		25		
Dichlorodifluoromethane (Freon 12)	7.19	2.0	µg/L	10.0		71.9	40-160	6.33		25	V-06	†
1,1-Dichloroethane	9.31	1.0	µg/L	10.0		93.1	70-130	5.54		25		
1,2-Dichloroethane	9.28	1.0	µg/L	10.0		92.8	70-130	6.47		25		
1,1-Dichloroethylene	9.92	1.0	µg/L	10.0		99.2	70-130	4.82		25		
cis-1,2-Dichloroethylene	9.71	1.0	µg/L	10.0		97.1	70-130	6.67		25		
trans-1,2-Dichloroethylene	9.87	1.0	µg/L	10.0		98.7	70-130	4.94		25		
1,2-Dichloropropane	9.53	1.0	µg/L	10.0		95.3	70-130	6.01		25		
1,3-Dichloropropane	9.40	0.50	µg/L	10.0		94.0	70-130	11.3		25		
2,2-Dichloropropane	7.85	1.0	µg/L	10.0		78.5	40-130	7.24		25		†
1,1-Dichloropropene	9.34	2.0	µg/L	10.0		93.4	70-130	8.31		25		
cis-1,3-Dichloropropene	9.32	0.50	µg/L	10.0		93.2	70-130	6.44		25		
trans-1,3-Dichloropropene	10.1	0.50	µg/L	10.0		101	70-130	7.81		25		
Diethyl Ether	10.1	2.0	µg/L	10.0		101	70-130	9.34		25		
Diisopropyl Ether (DIPE)	9.93	0.50	µg/L	10.0		99.3	70-130	6.72		25		
1,4-Dioxane	82.6	50	µg/L	100		82.6	40-130	15.7		50	V-16	† ‡
Ethylbenzene	9.71	1.0	µg/L	10.0		97.1	70-130	8.01		25		
Hexachlorobutadiene	10.5	0.50	µg/L	10.0		105	70-130	7.17		25		
2-Hexanone (MBK)	84.9	10	µg/L	100		84.9	70-160	**27.3**	*	25	R-05	†
Isopropylbenzene (Cumene)	10.9	1.0	µg/L	10.0		109	70-130	8.51		25		
p-Isopropyltoluene (p-Cymene)	10.3	1.0	µg/L	10.0		103	70-130	7.95		25		
Methyl tert-Butyl Ether (MTBE)	9.99	1.0	µg/L	10.0		99.9	70-130	10.8		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 B018379 - SW-846 5030B										
LCS Dup (B018379-BSD1)				Prepared: 08/27/10 Analyzed: 08/28/10						
Methylene Chloride	9.70	5.0	µg/L	10.0		97.0	70-130	6.10	25	
4-Methyl-2-pentanone (MIBK)	84.0	10	µg/L	100		84.0	70-160	23.2	25	†
Naphthalene	9.50	2.0	µg/L	10.0		95.0	40-130	20.8	25	†
n-Propylbenzene	9.69	1.0	µg/L	10.0		96.9	70-130	9.16	25	
Styrene	9.84	1.0	µg/L	10.0		98.4	70-130	6.77	25	
1,1,1,2-Tetrachloroethane	9.62	1.0	µg/L	10.0		96.2	70-130	5.16	25	
1,1,2,2-Tetrachloroethane	9.14	0.50	µg/L	10.0		91.4	70-130	14.2	25	
Tetrachloroethylene	9.49	1.0	µg/L	10.0		94.9	70-130	9.63	25	
Tetrahydrofuran	7.96	10	µg/L	10.0		79.6	70-130	24.7	25	
Toluene	9.59	1.0	µg/L	10.0		95.9	70-130	6.75	25	
1,2,3-Trichlorobenzene	9.98	5.0	µg/L	10.0		99.8	70-130	12.0	25	
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	10.6	25	
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	6.97	25	
1,1,1-Trichloroethane	9.16	1.0	µg/L	10.0		91.6	70-130	6.65	25	
1,1,2-Trichloroethane	9.83	1.0	µg/L	10.0		98.3	70-130	8.20	25	
Trichloroethylene	9.96	1.0	µg/L	10.0		99.6	70-130	9.10	25	
Trichlorofluoromethane (Freon 11)	9.87	2.0	µg/L	10.0		98.7	70-130	7.70	25	
1,2,3-Trichloropropane	8.45	2.0	µg/L	10.0		84.5	70-130	20.3	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.8	1.0	µg/L	10.0		108	70-130	4.45	25	
1,2,4-Trimethylbenzene	10.0	1.0	µg/L	10.0		100	70-130	8.75	25	
1,3,5-Trimethylbenzene	9.76	1.0	µg/L	10.0		97.6	70-130	6.54	25	
Vinyl Chloride	9.16	2.0	µg/L	10.0		91.6	40-160	9.46	25	†
m+p Xylene	19.2	2.0	µg/L	20.0		95.8	70-130	9.07	25	
o-Xylene	9.83	1.0	µg/L	10.0		98.3	70-130	6.69	25	
Surrogate: 1,2-Dichloroethane-d4	*24.1*		µg/L	25.0		96.5	70-130			
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	*24.1*		µg/L	25.0		96.4	70-130			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits estabished for difficult compound.
‡	Wide RPD limits estabished for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
PR-08	pH of sample (pH 5) is outside of method specified preservation criteria.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Significant 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. Significant uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy are associated with reported result.

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CERTIFICATIONS

Certified Analyses included in this Report

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

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

CERTIFICATIONS

Certified Analyses included in this Report

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

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

Code	Description	Number	Expires
AIHA	American Industrial Hygiene Association	100033	01/1/2012
MA	Massachusetts DEP	M-MA100	06/30/2011
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2011
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2011
RI	Rhode Island Department of Health	LAO00112	12/30/2010
NC	North Carolina Div. of Water Quality	652	12/31/2010
NJ	New Jersey DEP	MA007 NELAP	06/30/2011
FL	Florida Department of Health	E871027 NELAP	06/30/2011
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2011
WA	State of Washington Department of Ecology	C2065	02/23/2011

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 SPRUCE ST, 2ND FLOOR
EAST LONGMEADOW, MA 01028

CHAIN OF CUSTODY RECORD

~~1041079~~ 101005 1

Page 1 of 1

Company Name: ARCADIS
Address: 300 METRO CENTER BLVD
WARWICK RI 02886
Attention: DONNA PALLISTER
Project Location: SPRINGFIELD MA
Sampled By: CHRIS HANSON

Telephone: (401) 736-3887
Project #
Client PO #

DATA DELIVERY (check one):
☐ FAX ☐ EMAIL ☑ WEBSITE CLIENT
Fax #:
Email:
Format: ☐ EXCEL ☐ PDF ☐ GIS KEY
☐ OTHER

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

State Form Required?
☐ yes ☐ no

Field ID	Sample Description	Lab #	Date Sampled Start Date/Time	Stop Date/Time	Comp-osite	Grab	*Matrix Code	Conc. Code	7	2	# of containers	**Preservation	~Cont.Code
	ATC-1	-01	8/25/10	11:20		X	GW		X				
	ATC-4	-02	8/25/10	11:40		X	GW		X				
	TRIP BLANK	-03	8/25/10	—		1			X				
	WB-2	-04	8/25/10	14:30		X	A			X			
	MPL-6	-05	8/25/10	16:00		X	A			X			

ANALYSIS REQUESTED

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

Client Comments:

Laboratory Comments:

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

Relinquished by: (signature)	Date/Time: 8/26/10 1700	
Received by: (signature)	Date/Time: 8/26/10 1045	
Relinquished by: (signature)	Date/Time: 8/26/10 1630	
Received by: (signature)	Date/Time: 8/26 1630	

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

Detection Limit Requirements
Regulations? RI GB
Data Enhancement Project/RCP? ☐ Y ☑ N
Special Requirements or DL's:

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

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

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

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Sample Receipt Checklist

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

CLIENT NAME: Arcadis RECEIVED BY: RB DATE: 8-26

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) How were the samples received:

On Ice [X] Direct from Sampling [ ] Ambient [ ] In Cooler(s) [X]

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 3.0

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

Who was notified _____ Date _____ Time _____

6) Are there any samples "On Hold"? Yes (No) Stored where: _____

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

Who was notified _____ Date _____ Time _____

8) Location where samples are stored: 19

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

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz amber/clear jar	
500 mL Amber		4 oz amber/clear jar	
250 mL Amber (8oz amber)		2 oz amber/clear jar	
1 Liter Plastic		Other glass jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		Air Cassette	
40 mL Vial - type listed below	7	SOC Kit	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Non-ConTest Container	
Flashpoint bottle		Other	2
Encore		PM 2.5 / PM 10	
Perchlorate Kit		PUF Cartridge	

Laboratory Comments:

mL vials: # HCl 7 # Methanol _____

Bisulfate _____ # DI Water _____

Thiosulfate _____ Unpreserved _____

Time and Date Frozen:

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

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

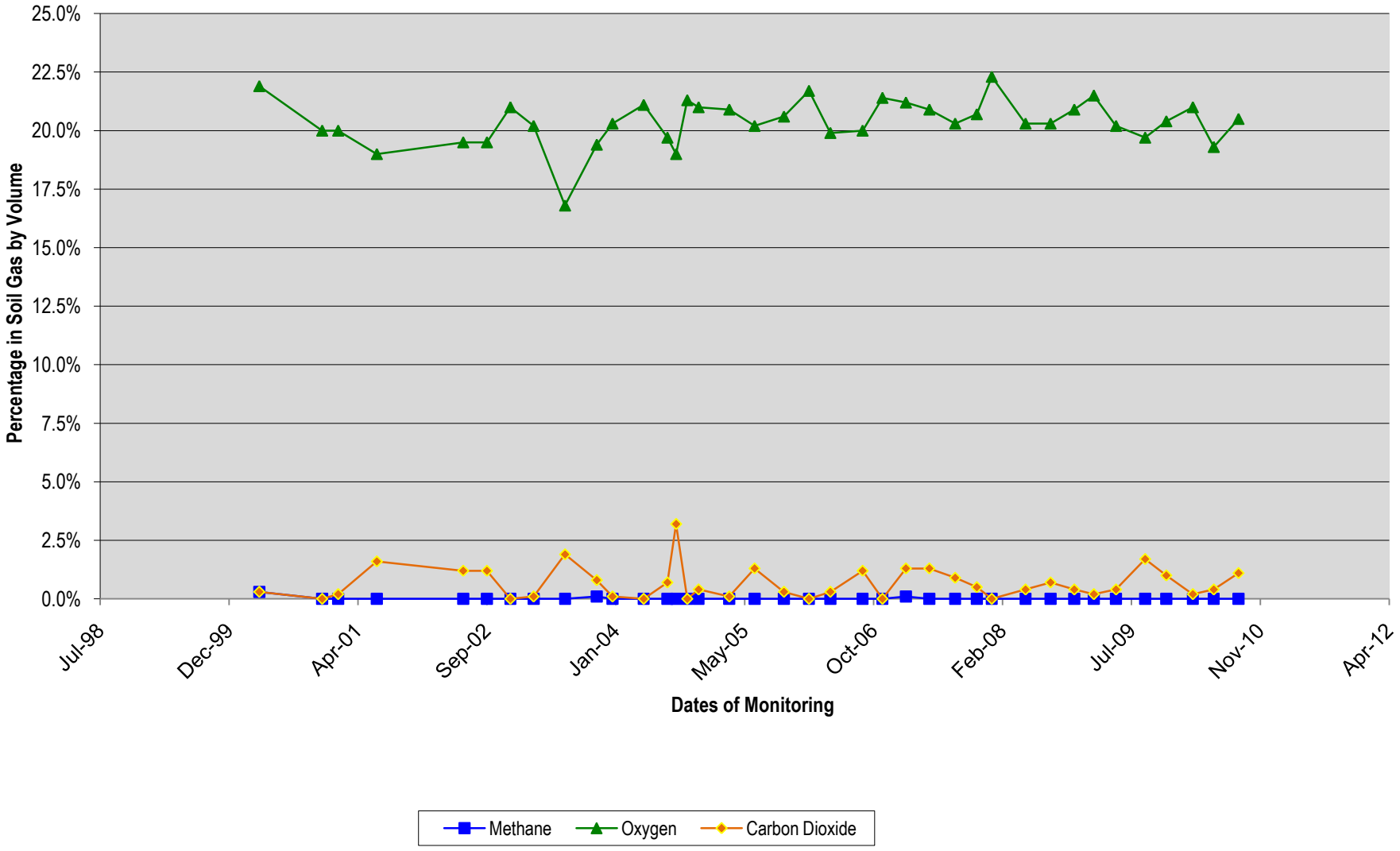
June 2010

ARCADIS

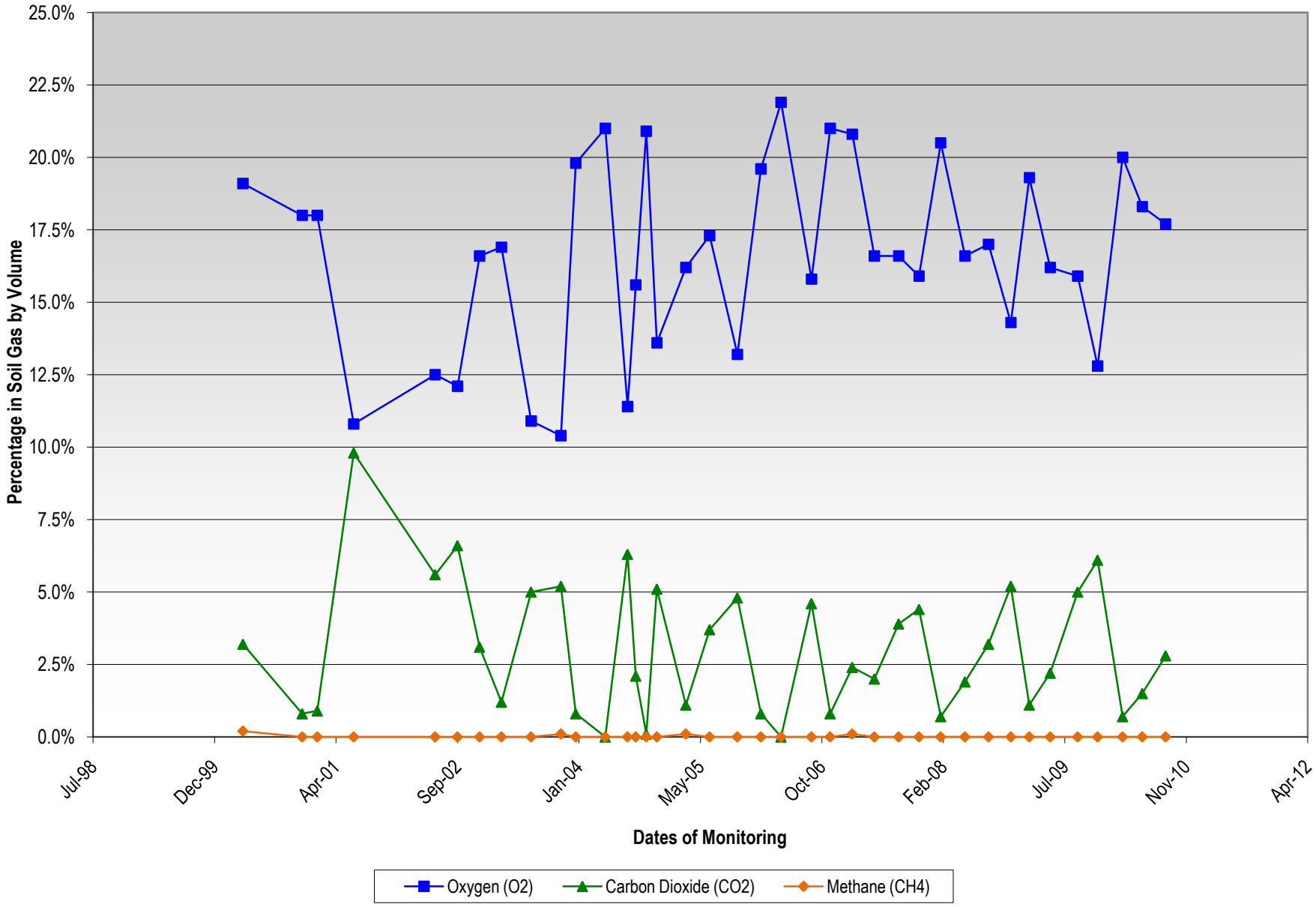
Appendix C

Soil Gas Parameter Graphs

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



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



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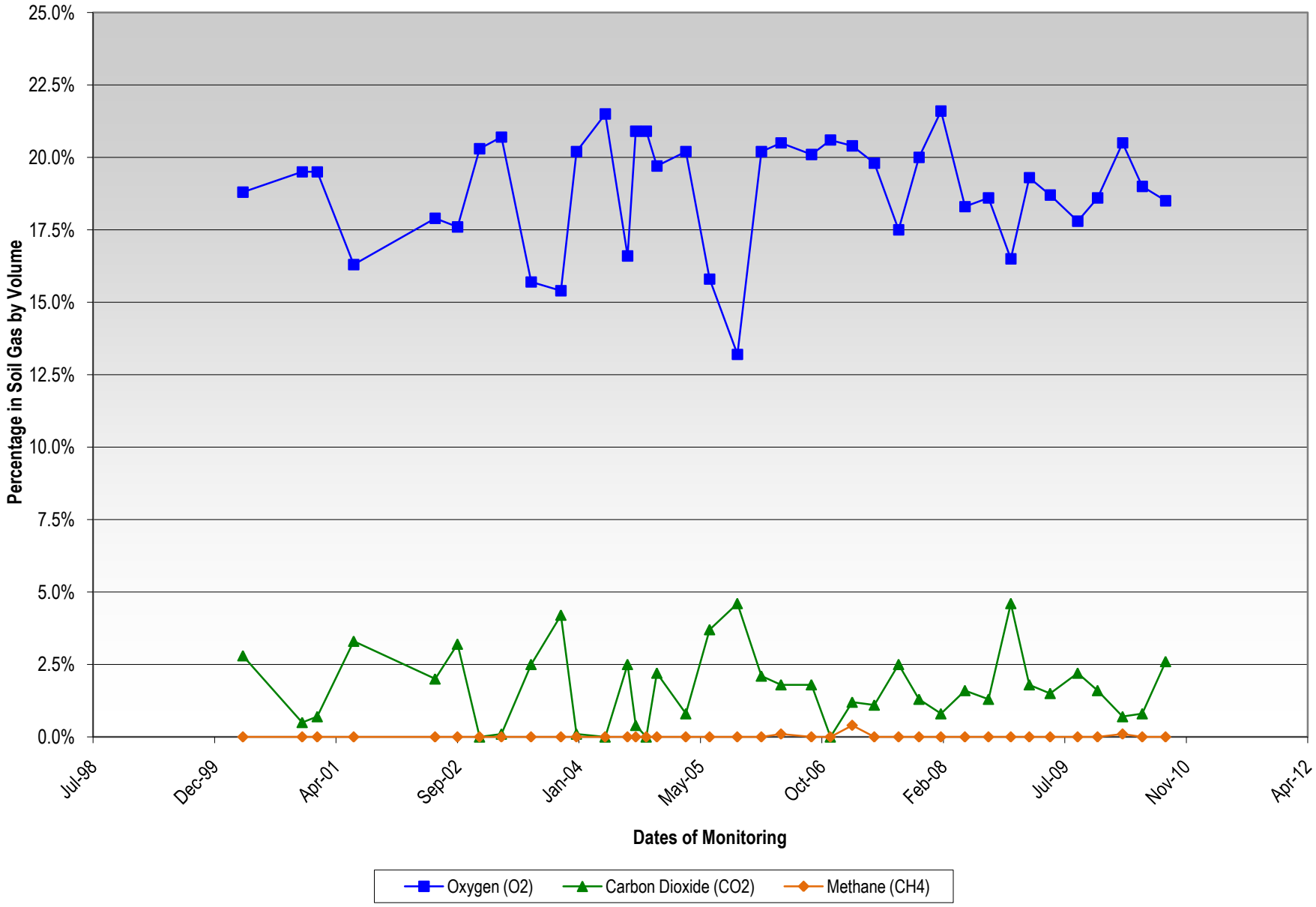
Soil Gas Well MG2
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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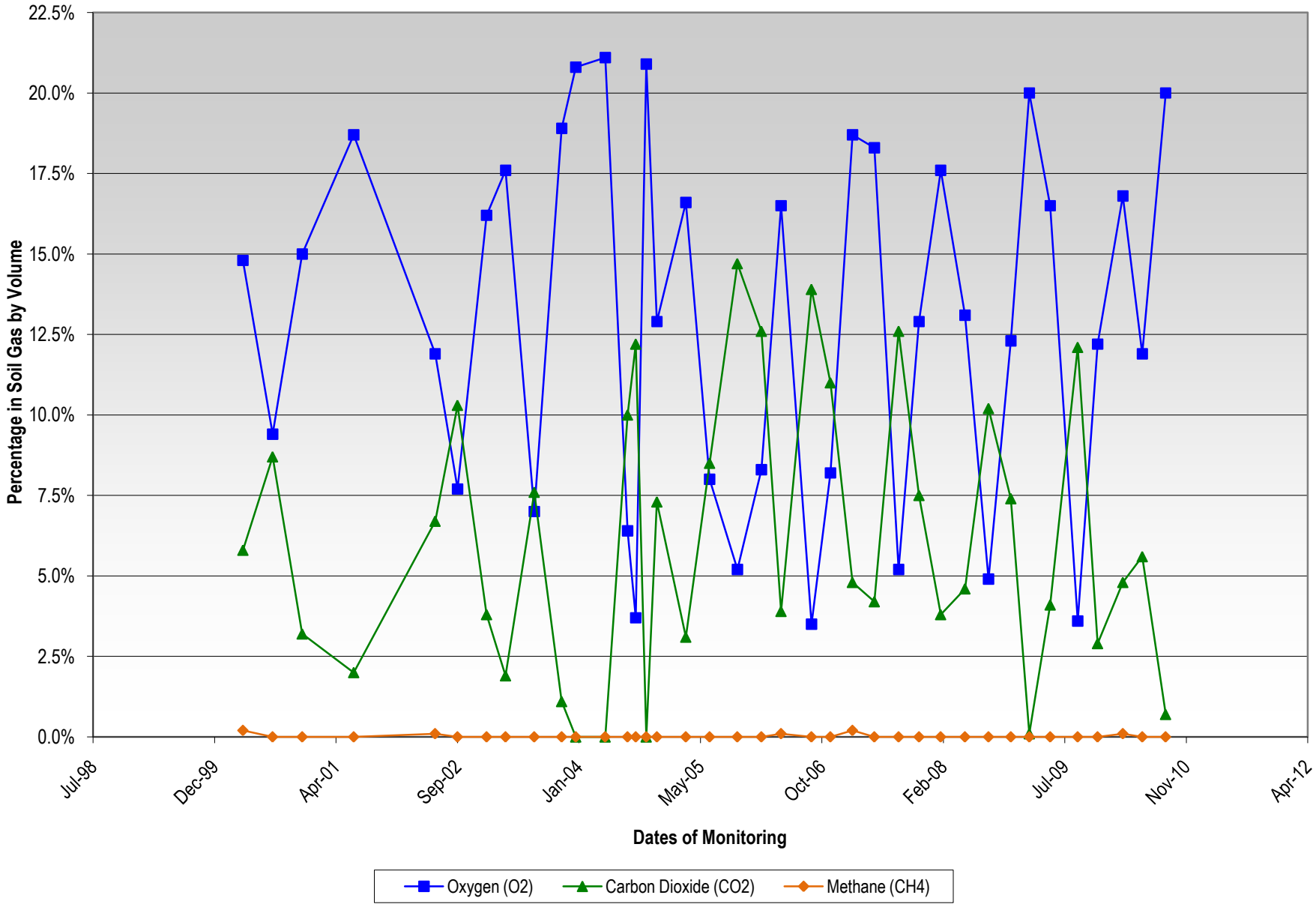
Soil Gas Well MPL5
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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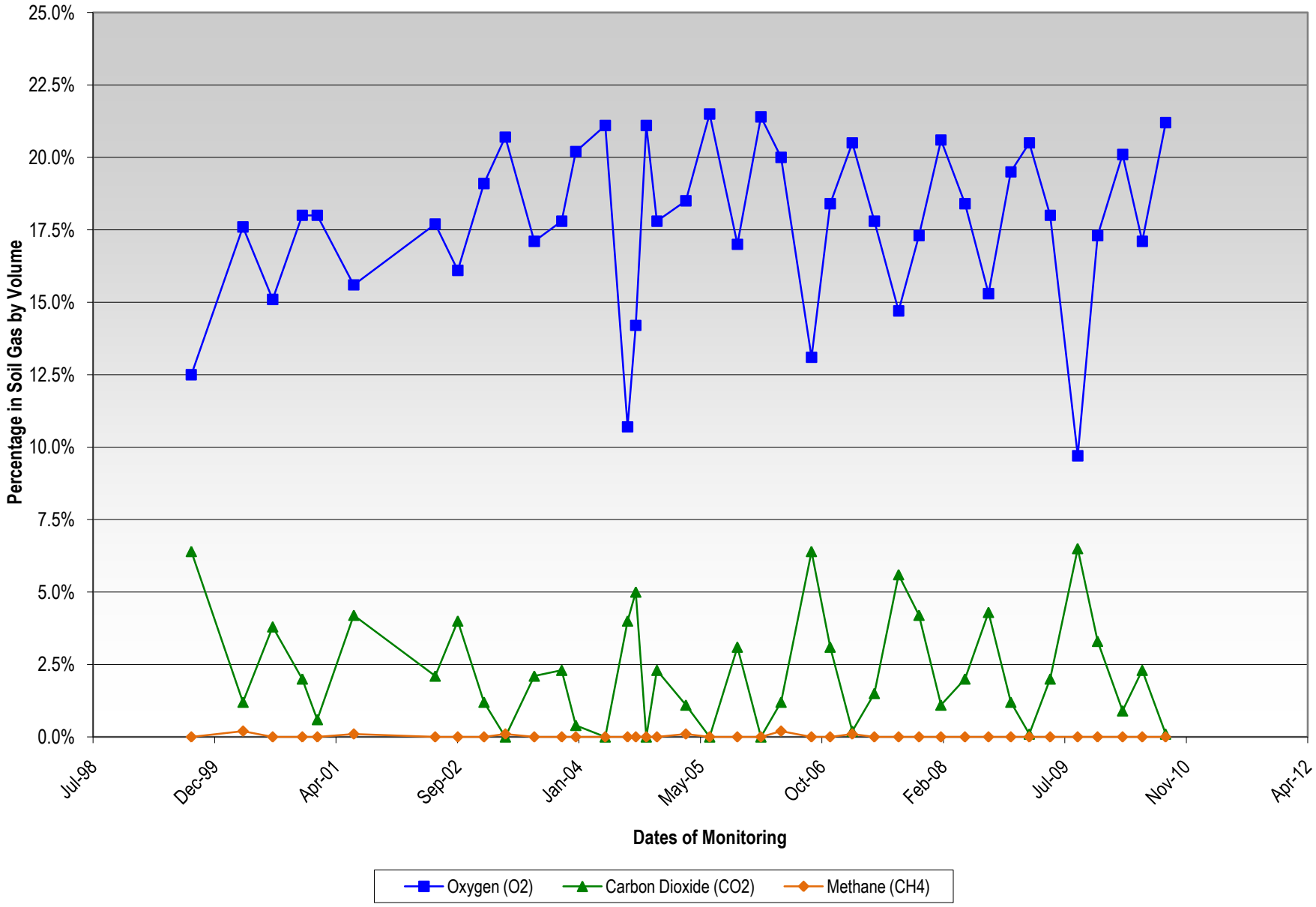
Soil Gas Well WB1
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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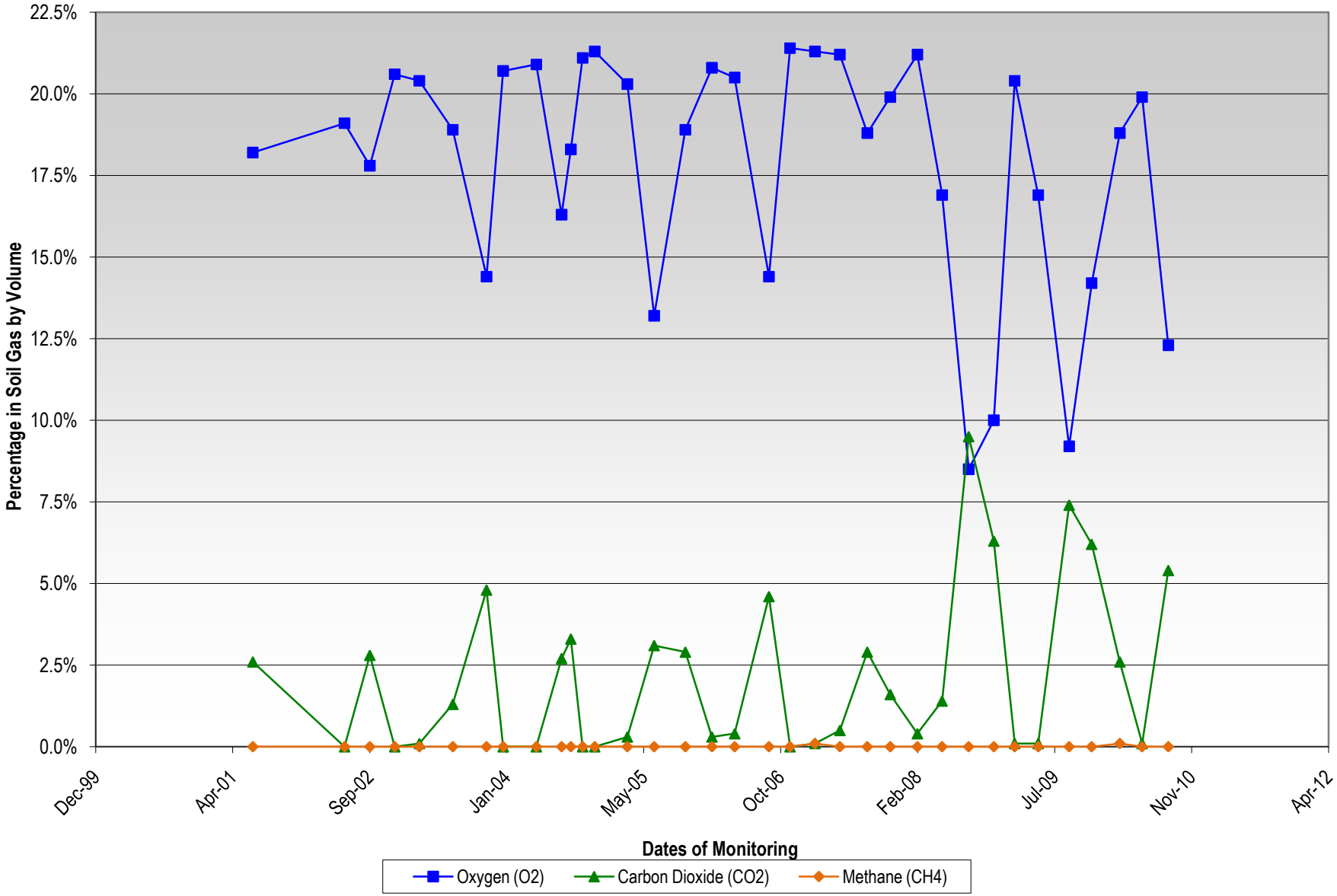
Soil Gas Well WB15
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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