

January 8, 2010

081-12152-06

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

Subject: Quarterly Monitoring for Springfield Street School Complex, Springfield Street,  
Providence, RI – November 2009 Monitoring Round

Dear Mr. Crawford:

Quarterly monitoring for soil gas, indoor air and system monitoring was conducted between November 16 and 21, 2009. An additional round of indoor air monitoring conducted on October 22, 2009. 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**

LFR conducted a visual survey of the site on November 17, 2009 for evidence of significant soil cover erosion, or for any areas where the orange snow fencing indicator barrier was visible. LFR did not observe any areas where the orange indicator barrier was visible during this monitoring event. No significant holes or erosion were observed during this inspection.

## **SUB-SLAB VENTILATION SYSTEM**

The sub-slab ventilation system was inspected by LFR during the quarterly monitoring on November 16, 2009. All of the sub-slab ventilation system blowers were operating at the time of the inspection.

Samples of influent and effluent (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, carbon monoxide, and hydrogen sulfide were not

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detected in any of the samples. Carbon dioxide was detected at 0.1% in all samples, which is equal to the RAWP Action Level of 1000 ppm.

## INDOOR AIR MONITORING

Indoor air monitoring was conducted on October 22, 2009 and November 17, 2009 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). The schools were occupied by students during both of these monitoring events. Results of monitoring are provided in the Table 2 and 3. Carbon dioxide measurements were made with a Fluke 975 Airmeter indoor air quality meter. The Fluke 975 has a range of 0 to 5,000 ppm, with a resolution of 1 ppm.

All readings were below the RAWP Action Levels on October 22, 2009 (Table 2). On November 17, all readings were below the RAWP Action Levels except for the carbon dioxide reading in the cafeterias of both schools. Carbon dioxide was measured at 1076 ppm in the Elementary School cafeteria, and 1277 ppm in the middle school cafeteria. Both of these measurements were made when the cafeterias were fully occupied. The outside temperature on November 17 was 49.1°F, so the heating system was operating. Carbon dioxide was measured outside in the middle school parking lot at 433 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 affects. A discussion regarding carbon dioxide concentrations in indoor air contained in Informative Appendix C of the Standard states: "... maintaining a steady-state CO<sub>2</sub> concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air. The average concentrations measured inside the site buildings were less than 700 ppm above the ambient outdoor concentrations.

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

The control panels for the methane monitors at both schools were inspected on October 22, 2009 and November 17, 2009. 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.

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

## GROUNDWATER MONITORING

Three of five groundwater monitoring wells were sampled by LFR on November 18, 2009. Two monitoring wells, ATC-2 and ATC-3, 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 4.

No target analytes were detected in the three groundwater samples.

## SOIL GAS MONITORING

Soil gas monitoring was conducted at 28 locations on November 18, 2009. 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 5. Carbon monoxide was detected at levels ranging from 0 to 8 ppm. All carbon monoxide results were below the RAWP Action Level of 9 ppm. Methane, hydrogen sulfide, and organic vapors were not detected in soil gas.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 12.3%. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 26 readings exceeded the action level. 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. Graphs presenting carbon dioxide, oxygen, and methane concentrations over time for seven representative wells are presented in Attachment C. The maximum concentration of carbon dioxide detected during this round of monitoring was 12.3%, compared with a maximum detected concentration of 13.9% in August 2009. 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. Concentrations detected during this round of monitoring appear to be consistent with the patterns of higher carbon dioxide concentrations in the summer and fall, and lower carbon dioxide concentrations in the winter and spring.

### ***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 6, 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 6 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 most 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 did not reveal any areas warranting repair.

Two blower motors were repaired and the sub-slab ventilation system is operating normally.

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

Sincerely,



Donna Holden Pallister, P.E., L.S.P.  
Senior Engineer

cc: A. Sepe, City of Providence  
S. Tremblay, Providence School Department  
Providence Public Building Authority

## **TABLES**

**Table 1**  
**System Monitoring Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**November 17, 2009**

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
Elementary School inlet 1	0.0	0.1	20.8	0	0	0.0
Elementary School inlet 2	0.0	0.1	20.9	0	0	0.0
Elementary School Outlet	0.0	0.0	20.8	0	0	0.0
Middle School front shed inlet	0.0	0.1	21.2	0	0	0.3
Middle School front shed after 2 <sup>nd</sup> carbon	0.0	0.1	21.0	0	0	0.0
Middle School back shed inlet	0.0	0.1	20.9	0	0	0.0
Middle School back shed after 2 <sup>nd</sup> carbon	0.0	0.1	21.1	0	0	0.0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5</b>	<b>1,000 ppm (0.1%)</b>	<b>NA</b>	<b>9 ppm</b>	<b>10 ppm</b>	<b>5 ppm</b>

**Measurements made with:** Landtec GEM2000 Plus, Mini Rae 2000, Q-Rae Plus multigas meter

**Sampling date:** 11/17/09

**Measured by:** D.H. Pallister

**Table 2**  
**Indoor Air Monitoring Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**October 22, 2009**

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	515	20.9	0	0	0.0
E.S. Elevator	0	627	20.9	1	0	0.0
E.S. Faculty Work Room	0	625	20.9	0	0	0.0
E.S. Gym	0	581	20.9	0	0	0.0
E.S. Stairway B	0	614	20.9	0	0	0.0
E.S. Stairway C	0	635	20.9	1	0	0.0
E.S. Library	0	587	20.9	0	0	0.0
E.S. Room 113 Music Room	0	492	20.9	0	0	0.0
E.S. Cafeteria	0	676	20.9	0	0	0.0
E.S. Mechanical Room	0	603	20.9	0	0	0.0

**Table 2**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**October 22, 2009**

<b>Monitoring Location</b>	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
<b>M.S. Front Office</b>	0	550	20.9	0	0	0.0
<b>M.S. Elevator</b>	0	557	20.9	1	0	0.0
<b>M.S. Stairway near Elem. School GS-01</b>	0	629	20.9	0	0	0.0
<b>M.S. Near sensor #16 in hall outside cafeteria</b>	0	715	20.9	1	0	0.0
<b>M.S. Faculty Work Room</b>	0	630	20.9	0	0	0.0
<b>M.S. Janitor's Office</b>	0	659	20.9	1	0	0.0
<b>M.S. GS-03 Across from Boys Bathroom</b>	0	642	20.9	0	0	0.0

**Table 2**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**October 22, 2009**

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Cafeteria	0	649	20.9	1	0	0.0
M.S. Front Hall near sensor #4	0	591	20.9	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0	575	20.9	1	0	0.0
<b>Remedial Action Work Plan Action Levels</b>	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: Fluke 975 Airmeter, Q-RAE plus multigas meter, Mini RAE 2000

PPM = Parts per million

Outdoor conditions: Middle School Parking Lot

Carbon Dioxide: 655 ppm

Temperature: 67.1 degrees Fahrenheit

**Table 3**  
**Indoor Air Monitoring Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**November 17, 2009**

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	624	20.9	0	0	0.0
E.S. Elevator	0	788	20.9	0	0	0.0
E.S. Faculty Work Room	0	747	20.9	0	0	0.0
E.S. Equip. Rm.	0	672	20.9	0	0	0.0
E.S. Stairway B	0	753	20.9	0	0	0.0
E.S. Stairway C	0	738	20.9	0	0	0.0
E.S. Library	0	741	20.9	0	0	0.0
E.S. Room 106	0	675	20.9	0	0	0.0
E.S. Cafeteria	0	1076	20.9	0	0	0.0
E.S. Mech.Room Elec. Room	0	741	20.9	0	0	0.0

**Table 3**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**November 17, 2009**

<b>Monitoring Location</b>	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
<b>M.S. Front Office</b>	0	735	21.3	0	0	0.0
<b>M.S. Elevator</b>	0	696	20.9	0	0	0.0
<b>M.S. Stairway near Elem. School GS-01</b>	0	691	20.9	0	0	0.0
<b>M.S. Near sensor #16 in hall outside cafeteria</b>	0	651	21.4	0	0	0.0
<b>M.S. Janitor's Office</b>	0	640	20.9	0	0	0.0
<b>M.S. GS-03 Across from Boys Bathroom</b>	0	658	20.9	0	0	0.0
<b>M.S. Across from Library</b>	0	647	20.9	0	0	0.0

**Table 3**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**November 17, 2009**

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Cafeteria	0	1277	21.2	0	0	0.00
M.S. Front Hall near sensor #4	0	638	20.9	0	0	0.00
M.S. Hallway across from elevator near sensor #9	0	686	20.9	0	0	0.00
M.S. GS-05 Outside Comm. Room	0	621	20.9	0	0	0.00
M.S. Stairway D Hartford Ave. Sensor 7	0	655	20.9	0	0	0.00
M.S. Library	0	620	20.9	0	0	0.00
<b>Remedial Action Work Plan Action Levels</b>	0.5	1,000 ppm (0.1%)	NA	9 ppm	10 ppm	5 ppm

**Table 3**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**November 17, 2009**

**Notes:**

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

**M.S.** indicates Middle School

Measurements made with: Fluke 975 Airmeter, Q-RAE plus multigas meter, Mini RAE 2000

PPM = Parts per million

Outdoor conditions: Middle School Parking Lot

Carbon Dioxide: 433 ppm

Temperature: 49.1 degrees Fahrenheit

Table 4  
 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
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	140	
	n-butylbenzene	1.7	ND	2.8	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	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	NA		
	tert-Butylbenzene	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	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	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	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	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	ND	ND	5000		
	Trichloroethylene	ND	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	1.10	ND	ND	1.3	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	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	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	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	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	NA	
ATC-2																																
	Chloroform	0.9	ND	ND	1.0	ND	ND	ND	NS	1.1	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS	NS	NS	NS	NS	NS	NA		
ATC-3																																
	Toluene	ND	ND	ND	ND	NS	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	1700	
ATC-4																																
	Benzene	ND	ND	2.5	0.6	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	140		
	Chlorobenzene	2.6	ND	57.3	2.7	5.18	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	1	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	1.2	1.1	ND	1.2	2.1	ND	ND	2.1	ND	1.4	ND	1.7	1.5	NA
	MTBE	ND	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	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	NA		
ATC-5																																
	MTBE	ND	ND	2.2	NS	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	5000	
	Chloroform	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		
Sampled By:	ATC	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		

\*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 5**  
**Soil Gas Survey Field Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**November 18, 2009**

<b>Monitoring Well</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
WB-1	0.0	3.3	17.3	8	0	0.8
WB-2	0.0	0.9	20.6	0	0	0.7
WB-3	0.0	0.3	21.1	0	0	0.8
WB-4	0.0	0.2	21.0	0	0	0.8
WB-5	0.0	0.2	21.0	0	0	0.7
WB-6	0.0	0.2	21.0	0	0	0.8
WB-7	Inundated with water					
WB-8	0.0	0.2	21.0	0	0	0.8
WB-12	0.0	1.7	20.0	0	0	0.5
WB-13	0.0	2.0	17.7	4	0	0.5
WB-14	0.0	0.1	21.3	0	0	0.3
WB-15	0.0	6.2	14.2	5	0	0.4
EPL-1	0.0	1.0	20.4	0	0	0.7
EPL-2	0.0	1.5	18.6	4	0	0.7
EPL-3	0.0	1.8	19.4	4	0	0.7
EPL-4	0.0	6.1	12.8	5	0	0.9
EPL-5	0.0	6.5	12.6	6	0	0.9
ENE-1	0.0	0.8	19.5	0	0	0.6

**Table 5**  
**Soil Gas Survey Field Notes**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**August 26, 2008**

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	1.8	17.7	3	0	0.6
MG2	0.0	1.6	18.6	3	0	0.6
MG3	0.0	1.1	20.6	0	0	0.5
MG4	0.0	3.0	18.0	3	0	0.6
MG5	0.0	1.3	18.0	3	0	0.6
MPL2	0.0	5.5	14.4	5	0	0.3
MPL3	0.0	10.9	7.7	5	0	0.4
MPL5	0.0	2.9	12.2	0	0	0.4
MPL6	0.0	12.3	5.4	5	0	0.7
MPL7	0.0	10.7	9.9	3	0	1.0
MPL8	0.0	6.9	14.0	3	0	0.8
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5%</b>	<b>1,000 PPM</b>	<b>NA</b>	<b>9 PPM</b>	<b>10 PPM</b>	<b>5 PPM</b>

**Sampled by:** Chris Jamison

**Weather Conditions:** Overcast, Temperature 55-60 F

**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.

**Table 6**  
**Results of Laboratory Analysis of Soil Gas**  
**Springfield Street School Complex**  
**Providence, Rhode Island**

Parameter	OSHA PELs (PPBv)	Results of Analysis in parts per billion by volume (PPBv)																							
		MPL-6										WB-2													
Date Collected:		2/20/2007	5/17/2007	8/22/2007	11/14/2007	2/12/2008	5/21/2008	8/26/2008	11/26/2008	2/10/2009	5/7/2009	8/25/2009	11/19/2009	2/20/2007	5/17/2007	8/22/2007	11/14/2007	2/12/2008	5/21/2008	8/26/2008	11/26/2008	2/26/2009	5/12/2009	8/25/2009	11/18/2009
Benzene	1,000	ND	0.36	0.74	ND	ND	0.51	1.0	0.3	0.31	0.31	2.40	0.29	ND	0.29	ND	ND	ND	0.21	0.46	0.23	0.24	ND	2.1	0.39
Carbon Tetrachloride	10,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.093	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06	ND
Chlorobenzene	75,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.053	ND
Chloroethane	1,000,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	50,000	ND	3.2	0.48	ND	ND	0.25	ND	0.10	ND	ND	0.15	0.12	ND	ND	ND	ND	ND	ND	ND	0.06	ND	ND	0.22	0.38
Chloromethane	100,000	ND	0.24	0.36	ND	ND	0.28	0.88	0.36	0.39	0.16	0.77	0.13	ND	0.11	ND	ND	ND	0.2	0.56	0.23	0.54	ND	0.28	0.2
Dichlorodifluoromethane (Freon 12)	1,000,000	ND	ND	0.28	ND	ND	0.53	0.78	0.31	0.44	0.44	0.43	0.28	ND	0.5	0.57	0.66	0.57	0.49	0.66	0.4	0.51	0.55	0.57	0.44
1,3-Dichlorobenzene	None	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30	1.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	0.74
1,4-Dichlorobenzene	75,000	ND	ND	0.54	ND	ND	0.65	ND	0.13	ND	0.27	0.44	ND	0.16	0.37	ND	ND	ND	ND	ND	ND	0.15	ND	0.3	0.25
1,1-Dichloroethane	100,000	ND	ND	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	None	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethylene	200,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	1,000,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.36	ND
Ethylbenzene	100,000	ND	0.75	0.7	2.3	0.65	1.3	3.9	0.4	0.36	3.8	5.6	1.1	ND	0.55	0.46	3.2	0.78	0.41	1.3	0.33	0.42	2.0	4.6	0.6
Methylene Chloride	100,000	ND	ND	0.84	3.5	2	2.6	3.8	2.9	1.7	2.2	1.9	1.5	ND	0.53	0.5	4.9	2.5	3.4	3.0	2.3	1.1	2.0	1.8	1.8
Styrene	100,000	ND	1.6	1.5	1.4	ND	1.1	3.0	0.3	0.36	2.8	3.2	1.0	ND	1	1	0.69	ND	0.5	1.5	0.1	0.47	1.3	3.1	0.51
Tetrachloroethylene	100,000	ND	0.19	0.27	4.6	1.9	0.99	4.1	0.6	0.33	0.65	4.0	0.76	ND	0.16	0.81	3.2	2.7	0.64	1.6	0.8	0.32	16	3.2	0.43
Toluene	200,000	4.9	17	7.2	15	6.9	7.7	64	4	4.1	30	21	5	4.6	12	5.3	10	9.3	3	30	1.8	2.3	12	21	2.6
1,1,1-Trichloroethane	350,000	ND	0.36	ND	ND	ND	0.27	ND	ND	ND	ND	ND	ND	ND	ND	38	ND	1.3	ND	ND	ND	ND	ND	ND	0.052
Trichloroethylene	100,000	ND	ND	0.25	0.53	1	4.1	3.6	1.7	ND	0.26	0.098	0.91	ND	ND	4.6	ND	ND	3	2.8	0.97	0.32	ND	0.095	0.26
Trichlorofluoromethane (Freon 11)	1,000,000	ND	ND	0.7	0.65	ND	0.27	1.3	0.5	0.28	0.72	0.96	0.60	ND	0.41	0.43	ND	ND	0.26	0.54	0.3	0.41	2.8	2	0.51
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	1,000,000	ND	ND	0.27	ND	ND	ND	ND	0.06	ND	0.06	0.083	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	0.06	0.11	
1,3,5-Trimethylbenzene	None	ND	0.12	ND	ND	ND	0.28	3.7	0.1	ND	8.1	0.5	0.31	ND	ND	ND	0.57	ND	ND	0.67	0.2	0.13	1.4	0.41	0.18
1,2,4-Trimethylbenzene	None	ND	ND	0.44	1.6	1.3	1.3	9.1	0.3	0.24	15	1.6	1.3	ND	1	0.26	1.7	1.1	0.66	1.6	0.66	0.52	3.2	1.2	0.9
Vinyl chloride	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.087	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
M/p-Xylene	100,000	1.4	3.1	2.4	5.3	2.2	3.7	11	1	0.95	11	15	3	1.2	2.5	1.8	10	2.6	1.3	3.7	0.94	1.4	6.1	13	1.5
o-Xylene	100,000	ND	0.61	0.68	1.8	0.69	1.6	5.0	0.4	0.32	8.0	4.3	1.2	ND	0.56	0.48	3.5	0.8	0.64	1.5	0.43	0.45	2.3	3.3	0.6

Notes:  
ND = Not detected  
Only detected compounds are listed, see laboratory report for complete list on analytes.

## **ATTACHMENT A**

### **Limitations and Service Constraints**

## **LIMITATIONS AND SERVICE CONSTRAINTS**

### **General Reports/Document**

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR 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 LFR relied upon any information prepared by other parties not under contract to LFR, LFR 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 LFR'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. LFR'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.

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

**ATTACHMENT B**

**Laboratory Reports**

November 30, 2009

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

Project Location: Springfield St  
Client Job Number:  
Project Number: 081-12152-06  
Laboratory Work Order Number: 09K0471

Enclosed are results of analyses for samples received by the laboratory on November 19, 2009. 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

REPORT DATE: 11/30/2009

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

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: 081-12152-06

#### **ANALYTICAL SUMMARY**

WORK ORDER NUMBER: 09K0471

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-5	09K0471-01	Water		SW-846 8260B	
ATC-4	09K0471-02	Water		SW-846 8260B	
ATC-1	09K0471-03	Water		SW-846 8260B	
Trip Blank	09K0471-04	Trip Blank Water		SW-846 8260B	
WB-2	09K0471-05	Air		EPA TO-14A	
MPL-6	09K0471-06	Air		EPA TO-14A	



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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.

EPA TO-14A

**Qualifications:**

Holding times and stability of samples taken in tedlar bags have not been determined

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

09K0471-05[WB-2], 09K0471-06[MPL-6]

Analyte is found in the associated blank as well as in the sample.

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

**Methylene Chloride**

09K0471-05[WB-2], 09K0471-06[MPL-6], B007633-BLK1, B007633-BS1, B007633-DUP1

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

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

**Bromomethane, Chloroethane, Vinyl Chloride**

B007633-BS1

**SW-846 8260B**

**Qualifications:**

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

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

**Carbon Disulfide**

B007543-BS1, B007543-BSD1, B007545-BS1, B007545-BSD1

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

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

**Bromoform, Chlorodibromomethane**

09K0471-02[ATC-4], B007624-BLK1, B007624-BS1, B007624-BSD1

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

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

**1,2,4-Trichlorobenzene, Naphthalene**

09K0471-03[ATC-1], 09K0471-04[Trip Blank], B007545-BLK1, B007545-BS1, B007545-BSD1

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

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

**Naphthalene**

09K0471-01[ATC-5], 09K0471-02[ATC-4], 09K0471-03[ATC-1], 09K0471-04[Trip Blank], B007543-BLK1, B007543-BS1, B007543-BSD1, B007545-BLK1, B007545-BS1, B007545-BSD1, B007624-BLK1, B007624-BS1, B007624-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:**

**2,2-Dichloropropane, Bromoform, Chlorodibromomethane, tert-Butyl Alcohol (TBA), trans-1,3-Dichloropropene**

09K0471-01[ATC-5], B007543-BLK1, B007543-BS1, B007543-BSD1, 09K0471-02[ATC-4], B007624-BLK1, B007624-BS1, B007624-BSD1, 09K0471-03[ATC-1], 09K0471-04[Trip Blank], B007545-BLK1, B007545-BS1, B007545-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:**

**Bromomethane**

B007624-BS1, B007624-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**

09K0471-01[ATC-5], 09K0471-02[ATC-4], 09K0471-03[ATC-1], 09K0471-04[Trip Blank], B007543-BLK1, B007543-BS1, B007543-BSD1, B007545-BLK1, B007545-BS1, B007545-BSD1, B007624-BLK1, B007624-BS1, B007624-BSD1

Reported results are estimated. Results are being reported from a previously analyzed vial.

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

09K0471-04RE1[Trip Blank]

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



Daren J. Damboragian  
Laboratory Manager

**ANALYTICAL RESULTS**

Project Location: Springfield St

Date Received: 11/19/2009

**Field Sample #:** WB-2

**Sample ID:** 09K0471-05

Sample Matrix: Air

Sampled: 11/18/2009 17:10

Sample Description/Location:

Sub Description/Location:

Canister ID:

Canister Size:

Flow Controller ID:

Sample Type:

**Work Order:** 09K0471

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**

Sample Flags: A-09

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag	Results	RL				
Benzene	0.39	0.050		1.2	0.16		1	11/19/09 17:41	TPH
Bromomethane	ND	0.050		ND	0.19		1	11/19/09 17:41	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31		1	11/19/09 17:41	TPH
Chlorobenzene	ND	0.050		ND	0.23		1	11/19/09 17:41	TPH
Chloroethane	ND	0.050		ND	0.13		1	11/19/09 17:41	TPH
Chloroform	0.38	0.050		1.8	0.24		1	11/19/09 17:41	TPH
Chloromethane	0.20	0.050		0.40	0.10		1	11/19/09 17:41	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38		1	11/19/09 17:41	TPH
1,2-Dichlorobenzene	ND	0.050		ND	0.30		1	11/19/09 17:41	TPH
1,3-Dichlorobenzene	0.74	0.050		4.5	0.30		1	11/19/09 17:41	TPH
1,4-Dichlorobenzene	0.25	0.050		1.5	0.30		1	11/19/09 17:41	TPH
Dichlorodifluoromethane (Freon 12)	0.44	0.050		2.2	0.25		1	11/19/09 17:41	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20		1	11/19/09 17:41	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20		1	11/19/09 17:41	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20		1	11/19/09 17:41	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20		1	11/19/09 17:41	TPH
1,2-Dichloropropane	ND	0.050		ND	0.23		1	11/19/09 17:41	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23		1	11/19/09 17:41	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23		1	11/19/09 17:41	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050		ND	0.35		1	11/19/09 17:41	TPH
Ethylbenzene	0.60	0.050		2.6	0.22		1	11/19/09 17:41	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1		1	11/19/09 17:41	TPH
Methylene Chloride	1.8	0.20	B	6.1	0.69		1	11/19/09 17:41	TPH
Styrene	0.51	0.050		2.2	0.21		1	11/19/09 17:41	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34		1	11/19/09 17:41	TPH
Tetrachloroethylene	0.43	0.050		2.9	0.34		1	11/19/09 17:41	TPH
Toluene	2.6	0.050		9.9	0.19		1	11/19/09 17:41	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74		1	11/19/09 17:41	TPH
1,1,1-Trichloroethane	0.052	0.050		0.28	0.27		1	11/19/09 17:41	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27		1	11/19/09 17:41	TPH
Trichloroethylene	0.26	0.050		1.4	0.27		1	11/19/09 17:41	TPH
Trichlorofluoromethane (Freon 11)	0.51	0.050		2.8	0.28		1	11/19/09 17:41	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.11	0.050		0.83	0.38		1	11/19/09 17:41	TPH
1,2,4-Trimethylbenzene	0.90	0.050		4.4	0.25		1	11/19/09 17:41	TPH
1,3,5-Trimethylbenzene	0.18	0.050		0.89	0.25		1	11/19/09 17:41	TPH
Vinyl Chloride	ND	0.050		ND	0.13		1	11/19/09 17:41	TPH
m&p-Xylene	1.5	0.10		6.6	0.43		1	11/19/09 17:41	TPH
o-Xylene	0.60	0.050		2.6	0.22		1	11/19/09 17:41	TPH

**ANALYTICAL RESULTS**

Project Location: Springfield St

Date Received: 11/19/2009

**Field Sample #:** WB-2

**Sample ID:** 09K0471-05

Sample Matrix: Air

Sampled: 11/18/2009 17:10

Sample Description/Location:

Sub Description/Location:

Canister ID:

Canister Size:

Flow Controller ID:

Sample Type:

**Work Order:** 09K0471

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**

Sample Flags: A-09

Analyte	ppbv			ug/m3			Date/Time		
	Results	RL	Flag	Results	RL	Dilution	Analyzed	Analyst	
Surrogates	% Recovery				% REC Limits				
4-Bromofluorobenzene (1)		93.6			70-130				11/19/09 17:41

**ANALYTICAL RESULTS**

Project Location: Springfield St

Date Received: 11/19/2009

**Field Sample #:** MPL-6

**Sample ID:** 09K0471-06

Sample Matrix: Air

Sampled: 11/18/2009 14:30

Sample Description/Location:

Sub Description/Location:

Canister ID:

Canister Size:

Flow Controller ID:

Sample Type:

**Work Order:** 09K0471

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**

Sample Flags: A-09

Analyte	ppbv			ug/m3			Dilution	Date/Time Analyzed	Analyst
	Results	RL	Flag	Results	RL				
Benzene	0.29	0.050		0.92	0.16		1	11/19/09 18:23	TPH
Bromomethane	ND	0.050		ND	0.19		1	11/19/09 18:23	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31		1	11/19/09 18:23	TPH
Chlorobenzene	ND	0.050		ND	0.23		1	11/19/09 18:23	TPH
Chloroethane	ND	0.050		ND	0.13		1	11/19/09 18:23	TPH
Chloroform	0.12	0.050		0.60	0.24		1	11/19/09 18:23	TPH
Chloromethane	0.13	0.050		0.27	0.10		1	11/19/09 18:23	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38		1	11/19/09 18:23	TPH
1,2-Dichlorobenzene	ND	0.050		ND	0.30		1	11/19/09 18:23	TPH
1,3-Dichlorobenzene	1.7	0.050		10	0.30		1	11/19/09 18:23	TPH
1,4-Dichlorobenzene	0.44	0.050		2.6	0.30		1	11/19/09 18:23	TPH
Dichlorodifluoromethane (Freon 12)	0.28	0.050		1.4	0.25		1	11/19/09 18:23	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20		1	11/19/09 18:23	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20		1	11/19/09 18:23	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20		1	11/19/09 18:23	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20		1	11/19/09 18:23	TPH
1,2-Dichloropropane	ND	0.050		ND	0.23		1	11/19/09 18:23	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23		1	11/19/09 18:23	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23		1	11/19/09 18:23	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050		ND	0.35		1	11/19/09 18:23	TPH
Ethylbenzene	1.1	0.050		5.0	0.22		1	11/19/09 18:23	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1		1	11/19/09 18:23	TPH
Methylene Chloride	1.5	0.20	B	5.3	0.69		1	11/19/09 18:23	TPH
Styrene	1.0	0.050		4.3	0.21		1	11/19/09 18:23	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34		1	11/19/09 18:23	TPH
Tetrachloroethylene	0.76	0.050		5.2	0.34		1	11/19/09 18:23	TPH
Toluene	4.9	0.050		19	0.19		1	11/19/09 18:23	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74		1	11/19/09 18:23	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27		1	11/19/09 18:23	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27		1	11/19/09 18:23	TPH
Trichloroethylene	0.91	0.050		4.9	0.27		1	11/19/09 18:23	TPH
Trichlorofluoromethane (Freon 11)	0.60	0.050		3.4	0.28		1	11/19/09 18:23	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.083	0.050		0.64	0.38		1	11/19/09 18:23	TPH
1,2,4-Trimethylbenzene	1.3	0.050		6.4	0.25		1	11/19/09 18:23	TPH
1,3,5-Trimethylbenzene	0.31	0.050		1.5	0.25		1	11/19/09 18:23	TPH
Vinyl Chloride	ND	0.050		ND	0.13		1	11/19/09 18:23	TPH
m&p-Xylene	3.0	0.10		13	0.43		1	11/19/09 18:23	TPH
o-Xylene	1.2	0.050		5.1	0.22		1	11/19/09 18:23	TPH

**ANALYTICAL RESULTS**

Project Location: Springfield St

Date Received: 11/19/2009

**Field Sample #:** MPL-6

**Sample ID:** 09K0471-06

Sample Matrix: Air

Sampled: 11/18/2009 14:30

Sample Description/Location:

Sub Description/Location:

Canister ID:

Canister Size:

Flow Controller ID:

Sample Type:

**Work Order:** 09K0471

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**

Sample Flags: A-09

Analyte	ppbv			ug/m3			Date/Time		
	Results	RL	Flag	Results	RL	Dilution	Analyzed	Analyst	
Surrogates	% Recovery				% REC Limits				
4-Bromofluorobenzene (1)		91.3			70-130				11/19/09 18:23

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

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-5

Sampled: 11/18/2009 18:30

**Sample ID:** 09K0471-01

Sample Matrix: 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	11/20/09	11/23/09 4:31	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Bromoform	ND	1.0	µg/L	1	V-05	SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Bromomethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Carbon Disulfide	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Chlorodibromomethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
2,2-Dichloropropane	ND	5.0	µg/L	1	V-05	SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
cis-1,3-Dichloropropene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
trans-1,3-Dichloropropene	ND	5.0	µg/L	1	V-05	SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-5

Sampled: 11/18/2009 18:30

**Sample ID:** 09K0471-01

Sample Matrix: 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	11/20/09	11/23/09 4:31	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Naphthalene	ND	2.0	µg/L	1	V-04	SW-846 8260B	11/20/09	11/23/09 4:31	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1,1-Trichloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 4:31	LBD

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	104	70-130		11/23/09 4:31
Toluene-d8	97.6	70-130		11/23/09 4:31
4-Bromofluorobenzene	95.5	70-130		11/23/09 4:31

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-4

Sampled: 11/18/2009 18:45

**Sample ID:** 09K0471-02

Sample Matrix: 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	11/24/09	11/24/09 17:12	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromochloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromodichloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromoform	ND	5.0	µg/L	1	L-04, V-05	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Bromomethane	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1	V-05	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Carbon Disulfide	ND	10	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Chlorodibromomethane	ND	5.0	µg/L	1	L-04, V-05	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
2,2-Dichloropropane	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
cis-1,3-Dichloropropene	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
trans-1,3-Dichloropropene	ND	5.0	µg/L	1	V-05	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-4

Sampled: 11/18/2009 18:45

**Sample ID:** 09K0471-02

Sample Matrix: 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	11/24/09	11/24/09 17:12	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Naphthalene	ND	2.0	µg/L	1	V-04	SW-846 8260B	11/24/09	11/24/09 17:12	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1,1-Trichloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/24/09	11/24/09 17:12	LBD

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	104	70-130		11/24/09 17:12
Toluene-d8	99.7	70-130		11/24/09 17:12
4-Bromofluorobenzene	96.2	70-130		11/24/09 17:12

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-1

Sampled: 11/18/2009 19:00

**Sample ID:** 09K0471-03

Sample Matrix: 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	11/20/09	11/23/09 22:39	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Bromochloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Bromodichloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Carbon Disulfide	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Chlorodibromomethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
2,2-Dichloropropane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
cis-1,3-Dichloropropene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
trans-1,3-Dichloropropene	ND	5.0	µg/L	1	V-05	SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** ATC-1

Sampled: 11/18/2009 19:00

**Sample ID:** 09K0471-03

Sample Matrix: 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	11/20/09	11/23/09 22:39	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Naphthalene	ND	2.0	µg/L	1	R-05, V-04	SW-846 8260B	11/20/09	11/23/09 22:39	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Styrene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	R-05	SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1,1-Trichloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 22:39	LBD

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	101	70-130		11/23/09 22:39
Toluene-d8	99.2	70-130		11/23/09 22:39
4-Bromofluorobenzene	95.8	70-130		11/23/09 22:39

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** Trip Blank

Sampled: 11/18/2009 00:00

**Sample ID:** 09K0471-04

Sample Matrix: Trip Blank Water

Sample Flags: Z-01

**Volatile Organic Compounds by GC/MS**

Analyte	Results	RL	Units	Dilution	Flag	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	1000	500	µg/L	10		SW-846 8260B	11/20/09	11/24/09 15:42	LBD
Acrylonitrile	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Benzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Bromoform	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Bromochloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Bromodichloromethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
2-Butanone (MEK)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
tert-Butyl Alcohol (TBA)	ND	20	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Carbon Disulfide	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Carbon Tetrachloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Chlorodibromomethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Chloroethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Chloroform	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Chloromethane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
2,2-Dichloropropane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1-Dichloropropene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
cis-1,3-Dichloropropene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
trans-1,3-Dichloropropene	ND	5.0	µg/L	1	V-05	SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD

Project Location: Springfield St

Sample Description:

Work Order: 09K0471

Date Received: 11/19/2009

**Field Sample #:** Trip Blank

Sampled: 11/18/2009 00:00

**Sample ID:** 09K0471-04

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	11/20/09	11/23/09 15:10	LBD
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Hexachlorobutadiene	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Methylene Chloride	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Naphthalene	ND	2.0	µg/L	1	R-05, V-04	SW-846 8260B	11/20/09	11/23/09 15:10	LBD
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Styrene	1.2	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1,1,2-Tetrachloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Tetrahydrofuran	ND	10	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Toluene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2,3-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2,4-Trichlorobenzene	ND	1.0	µg/L	1	R-05	SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,3,5-Trichlorobenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1,1-Trichloroethane	ND	5.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Trichloroethylene	1.1	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
Vinyl Chloride	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD
o-Xylene	ND	1.0	µg/L	1		SW-846 8260B	11/20/09	11/23/09 15:10	LBD

Surrogates	% Recovery	Recovery Limits	Flag	
1,2-Dichloroethane-d4	105	70-130		11/23/09 15:10
1,2-Dichloroethane-d4	105	70-130		11/24/09 15:42
Toluene-d8	100	70-130		11/24/09 15:42
Toluene-d8	98.7	70-130		11/23/09 15:10
4-Bromofluorobenzene	97.4	70-130		11/23/09 15:10
4-Bromofluorobenzene	94.9	70-130		11/24/09 15:42

**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
09K0471-05 [WB-2]	B007633	1	1	N/A	1000	400	400	11/19/09
09K0471-06 [MPL-6]	B007633	1	1	N/A	1000	400	400	11/19/09

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
09K0471-01 [ATC-5]	B007543	5	5	11/20/09

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
09K0471-03 [ATC-1]	B007545	5	5	11/20/09
09K0471-04 [Trip Blank]	B007545	5	5	11/20/09

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
09K0471-02 [ATC-4]	B007624	5	5	11/24/09
09K0471-04RE1 [Trip Blank]	B007624	0.5	5	11/20/09

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

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Flag
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**Batch B007633 - TO-15 Prep**

<b>Blank (B007633-BLK1)</b>	Prepared & Analyzed: 11/18/09									
Benzene	ND	0.025								
Bromomethane	ND	0.025								
Carbon Tetrachloride	ND	0.025								
Chlorobenzene	ND	0.025								
Chloroethane	ND	0.025								
Chloroform	ND	0.025								
Chloromethane	ND	0.025								
1,2-Dibromoethane (EDB)	ND	0.025								
1,2-Dichlorobenzene	ND	0.025								
1,3-Dichlorobenzene	ND	0.025								
1,4-Dichlorobenzene	ND	0.025								
Dichlorodifluoromethane (Freon 12)	ND	0.025								
1,1-Dichloroethane	ND	0.025								
1,2-Dichloroethane	ND	0.025								
1,1-Dichloroethylene	ND	0.025								
cis-1,2-Dichloroethylene	ND	0.025								
1,2-Dichloropropane	ND	0.025								
cis-1,3-Dichloropropene	ND	0.025								
trans-1,3-Dichloropropene	ND	0.025								
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.025								
Ethylbenzene	ND	0.025								
Hexachlorobutadiene	ND	0.050								
Methylene Chloride	0.28	0.10								
Styrene	ND	0.025								
1,1,2,2-Tetrachloroethane	ND	0.025								
Tetrachloroethylene	ND	0.025								
Toluene	ND	0.025								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.025								
1,1,2-Trichloroethane	ND	0.025								
Trichloroethylene	ND	0.025								
Trichlorofluoromethane (Freon 11)	ND	0.025								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.025								
1,2,4-Trimethylbenzene	ND	0.025								
1,3,5-Trimethylbenzene	ND	0.025								
Vinyl Chloride	ND	0.025								
m&p-Xylene	ND	0.050								
o-Xylene	ND	0.025								
<i>Surrogate: 4-Bromofluorobenzene (I)</i>	7.29		8.00			91.2		70-130		

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

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Flag
<b>Batch B007633 - TO-15 Prep</b>											
<b>LCS (B007633-BS1)</b>											
Prepared & Analyzed: 11/18/09											
Benzene	4.41				5.00		88.3	70-130			
Bromomethane	7.18				5.00		144 *	70-130			L-01
Carbon Tetrachloride	3.65				5.00		73.0	70-130			
Chlorobenzene	4.58				5.00		91.7	70-130			
Chloroethane	7.69				5.00		154 *	70-130			L-01
Chloroform	5.00				5.00		99.9	70-130			
Chloromethane	6.14				5.00		123	70-130			
1,2-Dibromoethane (EDB)	4.47				5.00		89.4	70-130			
1,2-Dichlorobenzene	4.84				5.00		96.9	70-130			
1,3-Dichlorobenzene	4.76				5.00		95.2	70-130			
1,4-Dichlorobenzene	4.74				5.00		94.8	70-130			
Dichlorodifluoromethane (Freon 12)	4.65				5.00		92.9	70-130			
1,1-Dichloroethane	5.09				5.00		102	70-130			
1,2-Dichloroethane	4.43				5.00		88.5	70-130			
1,1-Dichloroethylene	4.76				5.00		95.2	70-130			
cis-1,2-Dichloroethylene	5.12				5.00		102	70-130			
1,2-Dichloropropane	4.38				5.00		87.7	70-130			
cis-1,3-Dichloropropene	4.25				5.00		85.0	70-130			
trans-1,3-Dichloropropene	3.96				5.00		79.1	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	6.13				5.00		123	70-130			
Ethylbenzene	4.27				5.00		85.4	70-130			
Hexachlorobutadiene	4.51				5.00		90.2	70-130			
Methylene Chloride	5.57				5.00		111	70-130			B
Styrene	4.97				5.00		99.4	70-130			
1,1,2,2-Tetrachloroethane	4.87				5.00		97.3	70-130			
Tetrachloroethylene	4.55				5.00		91.1	70-130			
Toluene	4.42				5.00		88.5	70-130			
1,2,4-Trichlorobenzene	5.32				5.00		106	70-130			
1,1,1-Trichloroethane	3.76				5.00		75.2	70-130			
1,1,2-Trichloroethane	4.54				5.00		90.8	70-130			
Trichloroethylene	4.49				5.00		89.8	70-130			
Trichlorofluoromethane (Freon 11)	5.53				5.00		111	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.08				5.00		102	70-130			
1,2,4-Trimethylbenzene	4.80				5.00		96.0	70-130			
1,3,5-Trimethylbenzene	4.50				5.00		90.0	70-130			
Vinyl Chloride	7.13				5.00		143 *	70-130			L-01
m&p-Xylene	8.75				10.0		87.5	70-130			
o-Xylene	4.29				5.00		85.8	70-130			
Surrogate: 4-Bromofluorobenzene (I)	7.20				8.00		90.0	70-130			

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

Analyte	ppbv Results	RL	ug/m3 Results	RL	Spike Level ppbv	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Flag
<b>Batch B007633 - TO-15 Prep</b>											
<b>Duplicate (B007633-DUP1)</b>											
Source: 09K0471-05      Prepared: 11/18/09 Analyzed: 11/19/09											
Benzene	0.36	0.050	1.2	0.16		0.39		7.45		25	
Bromomethane	ND	0.050	ND	0.19		ND				25	
Carbon Tetrachloride	ND	0.050	ND	0.31		ND				25	
Chlorobenzene	ND	0.050	ND	0.23		ND				25	
Chloroethane	ND	0.050	ND	0.13		ND				25	
Chloroform	0.37	0.050	1.8	0.24		0.38		1.88		25	
Chloromethane	0.16	0.050	0.32	0.10		0.20		22.9		25	
1,2-Dibromoethane (EDB)	ND	0.050	ND	0.38		ND				25	
1,2-Dichlorobenzene	ND	0.050	ND	0.30		ND				25	
1,3-Dichlorobenzene	0.72	0.050	4.3	0.30		0.74		2.73		25	
1,4-Dichlorobenzene	0.23	0.050	1.4	0.30		0.25		10.4		25	
Dichlorodifluoromethane (Freon 12)	0.40	0.050	2.0	0.25		0.44		9.19		25	
1,1-Dichloroethane	ND	0.050	ND	0.20		ND				25	
1,2-Dichloroethane	ND	0.050	ND	0.20		ND				25	
1,1-Dichloroethylene	ND	0.050	ND	0.20		ND				25	
cis-1,2-Dichloroethylene	ND	0.050	ND	0.20		ND				25	
1,2-Dichloropropane	ND	0.050	ND	0.23		ND				25	
cis-1,3-Dichloropropene	ND	0.050	ND	0.23		ND				25	
trans-1,3-Dichloropropene	ND	0.050	ND	0.23		ND				25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.050	ND	0.35		ND				25	
Ethylbenzene	0.58	0.050	2.5	0.22		0.60		4.42		25	
Hexachlorobutadiene	ND	0.10	ND	1.1		ND				25	
Methylene Chloride	1.7	0.20	5.8	0.69		1.8		4.59		25	B
Styrene	0.50	0.050	2.1	0.21		0.51		2.57		25	
1,1,2,2-Tetrachloroethane	ND	0.050	ND	0.34		ND				25	
Tetrachloroethylene	0.36	0.050	2.5	0.34		0.43		16.5		25	
Toluene	2.7	0.050	10	0.19		2.6		0.567		25	
1,2,4-Trichlorobenzene	ND	0.10	ND	0.74		ND				25	
1,1,1-Trichloroethane	ND	0.050	ND	0.27		0.052				25	
1,1,2-Trichloroethane	ND	0.050	ND	0.27		ND				25	
Trichloroethylene	0.24	0.050	1.3	0.27		0.26		9.22		25	
Trichlorofluoromethane (Freon 11)	0.48	0.050	2.7	0.28		0.51		4.85		25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.085	0.050	0.65	0.38		0.11		23.8		25	
1,2,4-Trimethylbenzene	0.80	0.050	3.9	0.25		0.90		12.6		25	
1,3,5-Trimethylbenzene	0.15	0.050	0.72	0.25		0.18		21.4		25	
Vinyl Chloride	ND	0.050	ND	0.13		ND				25	
m&p-Xylene	1.4	0.10	6.3	0.43		1.5		5.12		25	
o-Xylene	0.57	0.050	2.5	0.22		0.60		6.16		25	
Surrogate: 4-Bromofluorobenzene (I)	7.26				8.00		90.8	70-130			

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Notes
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**Batch B007543 - SW-846 5030B**

<b>Blank (B007543-BLK1)</b>									Prepared: 11/20/09 Analyzed: 11/23/09
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						
Bromoform	ND	5.0	µg/L						V-05
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	10	µg/L						
Carbon Tetrachloride	ND	5.0	µg/L						
Chlorobenzene	ND	1.0	µg/L						
Chlorodibromomethane	ND	5.0	µg/L						
Chloroethane	ND	2.0	µg/L						
Chloroform	ND	2.0	µg/L						
Chloromethane	ND	2.0	µg/L						
2-Chlorotoluene	ND	1.0	µg/L						
4-Chlorotoluene	ND	1.0	µg/L						
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L						
1,2-Dibromoethane (EDB)	ND	0.50	µg/L						
Dibromomethane	ND	1.0	µg/L						
1,2-Dichlorobenzene	ND	1.0	µg/L						
1,3-Dichlorobenzene	ND	1.0	µg/L						
1,4-Dichlorobenzene	ND	1.0	µg/L						
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L						
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L						
1,1-Dichloroethane	ND	1.0	µg/L						
1,2-Dichloroethane	ND	1.0	µg/L						
1,1-Dichloroethylene	ND	1.0	µg/L						
cis-1,2-Dichloroethylene	ND	1.0	µg/L						
trans-1,2-Dichloroethylene	ND	1.0	µg/L						
1,2-Dichloropropane	ND	1.0	µg/L						
1,3-Dichloropropane	ND	0.50	µg/L						
2,2-Dichloropropane	ND	5.0	µg/L						V-05
1,1-Dichloropropene	ND	2.0	µg/L						
cis-1,3-Dichloropropene	ND	5.0	µg/L						
trans-1,3-Dichloropropene	ND	5.0	µg/L						V-05
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						

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Notes
<b>Batch B007543 - SW-846 5030B</b>									
<b>Blank (B007543-BLK1)</b>									
Prepared: 11/20/09 Analyzed: 11/23/09									
Methylene Chloride	ND	5.0	µg/L						
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L						
Naphthalene	ND	2.0	µg/L						V-04
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	5.0	µg/L						
1,1,2-Trichloroethane	ND	1.0	µg/L						
Trichloroethylene	ND	1.0	µg/L						
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L						
1,2,3-Trichloropropane	ND	2.0	µg/L						
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L						
1,2,4-Trimethylbenzene	ND	1.0	µg/L						
1,3,5-Trimethylbenzene	ND	1.0	µg/L						
Vinyl Chloride	ND	2.0	µg/L						
m+p Xylene	ND	2.0	µg/L						
o-Xylene	ND	1.0	µg/L						
Surrogate: 1,2-Dichloroethane-d4	25.9		µg/L	25.0		104	70-130		
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.3	70-130		
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		95.8	70-130		
<b>LCS (B007543-BS1)</b>									
Prepared: 11/20/09 Analyzed: 11/22/09									
Acetone	138	50	µg/L	100		138	70-160		†
Acrylonitrile	8.94	5.0	µg/L	10.0		89.4	70-130		
tert-Amyl Methyl Ether (TAME)	9.81	0.50	µg/L	10.0		98.1	70-130		
Benzene	9.01	1.0	µg/L	10.0		90.1	70-130		
Bromobenzene	9.53	1.0	µg/L	10.0		95.3	70-130		
Bromoform	7.62	5.0	µg/L	10.0		76.2	70-130		
Bromoform	7.33	5.0	µg/L	10.0		73.3	70-130		V-05
Bromomethane	8.08	2.0	µg/L	10.0		80.8	40-160		†
2-Butanone (MEK)	103	20	µg/L	100		103	40-160		†
tert-Butyl Alcohol (TBA)	77.2	20	µg/L	100		77.2	40-160		†
n-Butylbenzene	9.92	1.0	µg/L	10.0		99.2	70-130		
sec-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130		
tert-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130		
tert-Butyl Ethyl Ether (TBEE)	9.27	0.50	µg/L	10.0		92.7	70-130		
<b>Carbon Disulfide</b>	13.2	10	µg/L	10.0		132 *	70-130		L-02
Carbon Tetrachloride	8.18	5.0	µg/L	10.0		81.8	70-130		
Chlorobenzene	9.58	1.0	µg/L	10.0		95.8	70-130		
Chlorodibromomethane	7.17	5.0	µg/L	10.0		71.7	70-130		
Chloroethane	9.04	2.0	µg/L	10.0		90.4	70-130		
Chloroform	10.7	2.0	µg/L	10.0		107	70-130		
Chloromethane	8.91	2.0	µg/L	10.0		89.1	40-160		†
2-Chlorotoluene	9.49	1.0	µg/L	10.0		94.9	70-130		

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007543 - SW-846 5030B</b>										
<b>LCS (B007543-BS1)</b>										
Prepared: 11/20/09 Analyzed: 11/22/09										
4-Chlorotoluene	9.73	1.0	µg/L	10.0	97.3	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	8.11	5.0	µg/L	10.0	81.1	70-130				
1,2-Dibromoethane (EDB)	9.50	0.50	µg/L	10.0	95.0	70-130				
Dibromomethane	9.73	1.0	µg/L	10.0	97.3	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	10.3	1.0	µg/L	10.0	103	70-130				
trans-1,4-Dichloro-2-butene	8.17	2.0	µg/L	10.0	81.7	70-130				
Dichlorodifluoromethane (Freon 12)	4.76	2.0	µg/L	10.0	47.6	40-160				†
1,1-Dichloroethane	8.92	1.0	µg/L	10.0	89.2	70-130				
1,2-Dichloroethane	8.73	1.0	µg/L	10.0	87.3	70-130				
1,1-Dichloroethylene	8.82	1.0	µg/L	10.0	88.2	70-130				
cis-1,2-Dichloroethylene	8.26	1.0	µg/L	10.0	82.6	70-130				
trans-1,2-Dichloroethylene	8.28	1.0	µg/L	10.0	82.8	70-130				
1,2-Dichloropropane	8.38	1.0	µg/L	10.0	83.8	70-130				
1,3-Dichloropropane	9.29	0.50	µg/L	10.0	92.9	70-130				
2,2-Dichloropropane	6.95	5.0	µg/L	10.0	69.5	40-130			V-05	†
1,1-Dichloropropene	9.52	2.0	µg/L	10.0	95.2	70-130				
cis-1,3-Dichloropropene	7.98	5.0	µg/L	10.0	79.8	70-130				
trans-1,3-Dichloropropene	7.48	5.0	µg/L	10.0	74.8	70-130			V-05	
Diethyl Ether	10.4	2.0	µg/L	10.0	104	70-130				
Diisopropyl Ether (DIPE)	9.83	0.50	µg/L	10.0	98.3	70-130				
1,4-Dioxane	86.9	50	µg/L	100	86.9	40-130			V-16	†
Ethylbenzene	9.49	1.0	µg/L	10.0	94.9	70-130				
Hexachlorobutadiene	9.11	0.50	µg/L	10.0	91.1	70-130				
2-Hexanone (MBK)	104	10	µg/L	100	104	70-160				†
Isopropylbenzene (Cumene)	11.4	1.0	µg/L	10.0	114	70-130				
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0	101	70-130				
Methyl tert-Butyl Ether (MTBE)	9.96	1.0	µg/L	10.0	99.6	70-130				
Methylene Chloride	8.01	5.0	µg/L	10.0	80.1	70-130				
4-Methyl-2-pentanone (MIBK)	102	10	µg/L	100	102	70-160				†
Naphthalene	8.76	2.0	µg/L	10.0	87.6	40-130			V-04	†
n-Propylbenzene	9.90	1.0	µg/L	10.0	99.0	70-130				
Styrene	9.01	1.0	µg/L	10.0	90.1	70-130				
1,1,1,2-Tetrachloroethane	8.40	1.0	µg/L	10.0	84.0	70-130				
1,1,2,2-Tetrachloroethane	9.16	0.50	µg/L	10.0	91.6	70-130				
Tetrachloroethylene	9.89	1.0	µg/L	10.0	98.9	70-160				†
Tetrahydrofuran	10.2	10	µg/L	10.0	102	70-130				
Toluene	9.30	1.0	µg/L	10.0	93.0	70-130				
1,2,3-Trichlorobenzene	10.0	5.0	µg/L	10.0	100	70-130				
1,2,4-Trichlorobenzene	9.34	1.0	µg/L	10.0	93.4	70-130				
1,3,5-Trichlorobenzene	10.8	1.0	µg/L	10.0	108	70-130				
1,1,1-Trichloroethane	8.37	5.0	µg/L	10.0	83.7	70-130				
1,1,2-Trichloroethane	9.14	1.0	µg/L	10.0	91.4	70-130				
Trichloroethylene	9.53	1.0	µg/L	10.0	95.3	70-130				
Trichlorofluoromethane (Freon 11)	8.72	2.0	µg/L	10.0	87.2	70-130				
1,2,3-Trichloropropane	9.31	2.0	µg/L	10.0	93.1	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.57	1.0	µg/L	10.0	95.7	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	5.46	2.0	µg/L	10.0	54.6	40-160				†

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007543 - SW-846 5030B</b>										
<b>LCS (B007543-BS1)</b>										
Prepared: 11/20/09 Analyzed: 11/22/09										
m+p Xylene	19.6	2.0	µg/L	20.0	98.0	70-130				
o-Xylene	10.2	1.0	µg/L	10.0	102	70-130				
Surrogate: 1,2-Dichloroethane-d4	25.3		µg/L	25.0	101	70-130				
Surrogate: Toluene-d8	24.8		µg/L	25.0	99.2	70-130				
Surrogate: 4-Bromofluorobenzene	24.5		µg/L	25.0	98.1	70-130				
<b>LCS Dup (B007543-BS1D)</b>										
Prepared: 11/20/09 Analyzed: 11/22/09										
Acetone	140	50	µg/L	100	140	70-160	1.10	25		†
Acrylonitrile	9.26	5.0	µg/L	10.0	92.6	70-130	3.52	25		
tert-Amyl Methyl Ether (TAME)	9.81	0.50	µg/L	10.0	98.1	70-130	0.00	25		
Benzene	9.08	1.0	µg/L	10.0	90.8	70-130	0.774	25		
Bromobenzene	9.56	1.0	µg/L	10.0	95.6	70-130	0.314	25		
Bromoform	7.90	5.0	µg/L	10.0	79.0	70-130	3.61	25		
Bromochloromethane	7.20	5.0	µg/L	10.0	72.0	70-130	1.79	25	V-05	
Bromomethane	8.63	2.0	µg/L	10.0	86.3	40-160	6.58	25		†
2-Butanone (MEK)	104	20	µg/L	100	104	40-160	1.17	25		†
tert-Butyl Alcohol (TBA)	79.2	20	µg/L	100	79.2	40-160	2.51	25		†
n-Butylbenzene	9.85	1.0	µg/L	10.0	98.5	70-130	0.708	25		
sec-Butylbenzene	10.4	1.0	µg/L	10.0	104	70-130	1.06	25		
tert-Butylbenzene	10.5	1.0	µg/L	10.0	105	70-130	2.21	25		
tert-Butyl Ethyl Ether (TBEE)	9.41	0.50	µg/L	10.0	94.1	70-130	1.50	25		
<b>Carbon Disulfide</b>	13.2	10	µg/L	10.0	132	*	70-130	0.0758	25	L-02
Carbon Tetrachloride	8.13	5.0	µg/L	10.0	81.3	70-130	0.613	25		
Chlorobenzene	9.45	1.0	µg/L	10.0	94.5	70-130	1.37	25		
Chlorodibromomethane	7.27	5.0	µg/L	10.0	72.7	70-130	1.39	25		
Chloroethane	9.05	2.0	µg/L	10.0	90.5	70-130	0.111	25		
Chloroform	11.0	2.0	µg/L	10.0	110	70-130	3.22	25		
Chloromethane	9.11	2.0	µg/L	10.0	91.1	40-160	2.22	25		†
2-Chlorotoluene	9.68	1.0	µg/L	10.0	96.8	70-130	1.98	25		
4-Chlorotoluene	9.63	1.0	µg/L	10.0	96.3	70-130	1.03	25		
1,2-Dibromo-3-chloropropane (DBCP)	8.18	5.0	µg/L	10.0	81.8	70-130	0.859	25		
1,2-Dibromoethane (EDB)	9.40	0.50	µg/L	10.0	94.0	70-130	1.06	25		
Dibromomethane	9.71	1.0	µg/L	10.0	97.1	70-130	0.206	25		
1,2-Dichlorobenzene	10.6	1.0	µg/L	10.0	106	70-130	0.471	25		
1,3-Dichlorobenzene	10.4	1.0	µg/L	10.0	104	70-130	0.862	25		
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0	104	70-130	0.581	25		
trans-1,4-Dichloro-2-butene	8.20	2.0	µg/L	10.0	82.0	70-130	0.367	25		
Dichlorodifluoromethane (Freon 12)	4.71	2.0	µg/L	10.0	47.1	40-160	1.06	25		†
1,1-Dichloroethane	9.11	1.0	µg/L	10.0	91.1	70-130	2.11	25		
1,2-Dichloroethane	8.82	1.0	µg/L	10.0	88.2	70-130	1.03	25		
1,1-Dichloroethylene	8.86	1.0	µg/L	10.0	88.6	70-130	0.452	25		
cis-1,2-Dichloroethylene	8.37	1.0	µg/L	10.0	83.7	70-130	1.32	25		
trans-1,2-Dichloroethylene	8.30	1.0	µg/L	10.0	83.0	70-130	0.241	25		
1,2-Dichloropropane	8.71	1.0	µg/L	10.0	87.1	70-130	3.86	25		
1,3-Dichloropropane	9.43	0.50	µg/L	10.0	94.3	70-130	1.50	25		
2,2-Dichloropropane	6.95	5.0	µg/L	10.0	69.5	40-130	0.00	25	V-05	†
1,1-Dichloropropene	9.63	2.0	µg/L	10.0	96.3	70-130	1.15	25		
cis-1,3-Dichloropropene	8.12	5.0	µg/L	10.0	81.2	70-130	1.74	25		
trans-1,3-Dichloropropene	7.58	5.0	µg/L	10.0	75.8	70-130	1.33	25	V-05	
Diethyl Ether	10.4	2.0	µg/L	10.0	104	70-130	0.0959	25		
Diisopropyl Ether (DIPE)	9.98	0.50	µg/L	10.0	99.8	70-130	1.51	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
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**Batch B007543 - SW-846 5030B**

LCS Dup (B007543-BSD1)					Prepared: 11/20/09 Analyzed: 11/22/09					
1,4-Dioxane	80.7	50	µg/L	100	80.7	40-130	7.39	50	V-16	† ‡
Ethylbenzene	9.51	1.0	µg/L	10.0	95.1	70-130	0.211	25		
Hexachlorobutadiene	9.29	0.50	µg/L	10.0	92.9	70-130	1.96	25		
2-Hexanone (MBK)	106	10	µg/L	100	106	70-160	1.80	25		†
Isopropylbenzene (Cumene)	11.4	1.0	µg/L	10.0	114	70-130	0.263	25		
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0	102	70-130	0.492	25		
Methyl tert-Butyl Ether (MTBE)	10.1	1.0	µg/L	10.0	101	70-130	0.999	25		
Methylene Chloride	8.11	5.0	µg/L	10.0	81.1	70-130	1.24	25		
4-Methyl-2-pentanone (MIBK)	104	10	µg/L	100	104	70-160	1.23	25		†
Naphthalene	9.05	2.0	µg/L	10.0	90.5	40-130	3.26	25	V-04	†
n-Propylbenzene	9.92	1.0	µg/L	10.0	99.2	70-130	0.202	25		
Styrene	8.90	1.0	µg/L	10.0	89.0	70-130	1.23	25		
1,1,1,2-Tetrachloroethane	8.16	1.0	µg/L	10.0	81.6	70-130	2.90	25		
1,1,2,2-Tetrachloroethane	8.86	0.50	µg/L	10.0	88.6	70-130	3.33	25		
Tetrachloroethylene	10.1	1.0	µg/L	10.0	101	70-160	1.70	25		†
Tetrahydrofuran	9.89	10	µg/L	10.0	98.9	70-130	3.57	25		
Toluene	9.49	1.0	µg/L	10.0	94.9	70-130	2.02	25		
1,2,3-Trichlorobenzene	10.3	5.0	µg/L	10.0	103	70-130	2.46	25		
1,2,4-Trichlorobenzene	9.48	1.0	µg/L	10.0	94.8	70-130	1.49	25		
1,3,5-Trichlorobenzene	10.8	1.0	µg/L	10.0	108	70-130	0.371	25		
1,1,1-Trichloroethane	8.42	5.0	µg/L	10.0	84.2	70-130	0.596	25		
1,1,2-Trichloroethane	9.07	1.0	µg/L	10.0	90.7	70-130	0.769	25		
Trichlorethylene	9.69	1.0	µg/L	10.0	96.9	70-130	1.66	25		
Trichlorofluoromethane (Freon 11)	8.76	2.0	µg/L	10.0	87.6	70-130	0.458	25		
1,2,3-Trichloropropane	9.44	2.0	µg/L	10.0	94.4	70-130	1.39	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.92	1.0	µg/L	10.0	99.2	70-130	3.59	25		
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0	102	70-130	0.886	25		
1,3,5-Trimethylbenzene	10.2	1.0	µg/L	10.0	102	70-130	0.00	25		
Vinyl Chloride	5.43	2.0	µg/L	10.0	54.3	40-160	0.551	25		†
m+p Xylene	19.4	2.0	µg/L	20.0	96.8	70-130	1.18	25		
o-Xylene	10.1	1.0	µg/L	10.0	101	70-130	0.394	25		
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0	103	70-130				
Surrogate: Toluene-d8	25.0		µg/L	25.0	100	70-130				
Surrogate: 4-Bromofluorobenzene	24.4		µg/L	25.0	97.8	70-130				

**Batch B007545 - SW-846 5030B**

Blank (B007545-BLK1)					Prepared: 11/20/09 Analyzed: 11/23/09					
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							

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Notes
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**Batch B007545 - SW-846 5030B**

<b>Blank (B007545-BLK1)</b>									Prepared: 11/20/09 Analyzed: 11/23/09
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L						
Carbon Disulfide	ND	3.0	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						V-05
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						
Methylene Chloride	ND	5.0	µg/L						
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L						
Naphthalene	ND	2.0	µg/L						R-05, V-04
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						R-05
1,3,5-Trichlorobenzene	ND	1.0	µg/L						
1,1,1-Trichloroethane	ND	1.0	µg/L						

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007545 - SW-846 5030B</b>										
<b>Blank (B007545-BLK1)</b>										
Prepared: 11/20/09 Analyzed: 11/23/09										
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0		102	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	24.0		µg/L	25.0		96.0	70-130			
<b>LCS (B007545-BS1)</b>										
Prepared: 11/20/09 Analyzed: 11/23/09										
Acetone	139	50	µg/L	100		139	70-160			†
Acrylonitrile	8.56	5.0	µg/L	10.0		85.6	70-130			
tert-Amyl Methyl Ether (TAME)	9.71	0.50	µg/L	10.0		97.1	70-130			
Benzene	9.45	1.0	µg/L	10.0		94.5	70-130			
Bromobenzene	9.52	1.0	µg/L	10.0		95.2	70-130			
Bromoform	10.3	1.0	µg/L	10.0		103	70-130			
Bromochloromethane	8.05	0.50	µg/L	10.0		80.5	70-130			
Bromodichloromethane	7.35	1.0	µg/L	10.0		73.5	70-130			
Bromomethane	8.33	2.0	µg/L	10.0		83.3	40-160			†
2-Butanone (MEK)	91.6	20	µg/L	100		91.6	40-160			†
tert-Butyl Alcohol (TBA)	74.1	20	µg/L	100		74.1	40-160			†
n-Butylbenzene	10.0	1.0	µg/L	10.0		100	70-130			
sec-Butylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
tert-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.42	0.50	µg/L	10.0		94.2	70-130			
<b>Carbon Disulfide</b>	13.8	3.0	µg/L	10.0		<b>138</b>	*	70-130		L-02
Carbon Tetrachloride	8.67	1.0	µg/L	10.0		86.7	70-130			
Chlorobenzene	9.52	1.0	µg/L	10.0		95.2	70-130			
Chlorodibromomethane	7.48	0.50	µg/L	10.0		74.8	70-130			
Chloroethane	9.66	2.0	µg/L	10.0		96.6	70-130			
Chloroform	11.0	2.0	µg/L	10.0		110	70-130			
Chloromethane	9.67	2.0	µg/L	10.0		96.7	40-160			†
2-Chlorotoluene	9.66	1.0	µg/L	10.0		96.6	70-130			
4-Chlorotoluene	9.54	1.0	µg/L	10.0		95.4	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	7.44	5.0	µg/L	10.0		74.4	70-130			
1,2-Dibromoethane (EDB)	9.10	0.50	µg/L	10.0		91.0	70-130			
Dibromomethane	9.71	1.0	µg/L	10.0		97.1	70-130			
1,2-Dichlorobenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,3-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			
1,4-Dichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130			
trans-1,4-Dichloro-2-butene	8.44	2.0	µg/L	10.0		84.4	70-130			
Dichlorodifluoromethane (Freon 12)	4.98	2.0	µg/L	10.0		49.8	40-160			†
1,1-Dichloroethane	9.43	1.0	µg/L	10.0		94.3	70-130			
1,2-Dichloroethane	8.75	1.0	µg/L	10.0		87.5	70-130			
1,1-Dichloroethylene	9.49	1.0	µg/L	10.0		94.9	70-130			
cis-1,2-Dichloroethylene	8.61	1.0	µg/L	10.0		86.1	70-130			
trans-1,2-Dichloroethylene	8.57	1.0	µg/L	10.0		85.7	70-130			

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007545 - SW-846 5030B</b>										
<b>LCS (B007545-BS1)</b>										
Prepared: 11/20/09 Analyzed: 11/23/09										
1,2-Dichloropropane	8.62	1.0	µg/L	10.0	86.2	70-130				
1,3-Dichloropropane	9.01	0.50	µg/L	10.0	90.1	70-130				
2,2-Dichloropropane	8.14	1.0	µg/L	10.0	81.4	40-130				†
1,1-Dichloropropene	9.93	2.0	µg/L	10.0	99.3	70-130				
cis-1,3-Dichloropropene	8.39	0.50	µg/L	10.0	83.9	70-130				
trans-1,3-Dichloropropene	7.85	0.50	µg/L	10.0	78.5	70-130				V-05
Diethyl Ether	10.7	2.0	µg/L	10.0	107	70-130				
Diisopropyl Ether (DIPE)	10.5	0.50	µg/L	10.0	105	70-130				
1,4-Dioxane	83.6	50	µg/L	100	83.6	40-130				V-16 †
Ethylbenzene	9.61	1.0	µg/L	10.0	96.1	70-130				
Hexachlorobutadiene	7.96	0.50	µg/L	10.0	79.6	70-130				
2-Hexanone (MBK)	95.1	10	µg/L	100	95.1	70-160				†
Isopropylbenzene (Cumene)	11.4	1.0	µg/L	10.0	114	70-130				
p-Isopropyltoluene (p-Cymene)	10.2	1.0	µg/L	10.0	102	70-130				
Methyl tert-Butyl Ether (MTBE)	9.80	1.0	µg/L	10.0	98.0	70-130				
Methylene Chloride	8.60	5.0	µg/L	10.0	86.0	70-130				
4-Methyl-2-pentanone (MIBK)	93.0	10	µg/L	100	93.0	70-160				†
Naphthalene	7.16	2.0	µg/L	10.0	71.6	40-130				R-05, V-04 †
n-Propylbenzene	9.80	1.0	µg/L	10.0	98.0	70-130				
Styrene	9.12	1.0	µg/L	10.0	91.2	70-130				
1,1,1,2-Tetrachloroethane	8.24	1.0	µg/L	10.0	82.4	70-130				
1,1,2,2-Tetrachloroethane	8.60	0.50	µg/L	10.0	86.0	70-130				
Tetrachloroethylene	9.85	1.0	µg/L	10.0	98.5	70-160				†
Tetrahydrofuran	9.04	10	µg/L	10.0	90.4	70-130				
Toluene	9.48	1.0	µg/L	10.0	94.8	70-130				
1,2,3-Trichlorobenzene	9.02	5.0	µg/L	10.0	90.2	70-130				
1,2,4-Trichlorobenzene	7.66	1.0	µg/L	10.0	76.6	70-130				R-05
1,3,5-Trichlorobenzene	10.7	1.0	µg/L	10.0	107	70-130				
1,1,1-Trichloroethane	8.90	1.0	µg/L	10.0	89.0	70-130				
1,1,2-Trichloroethane	8.67	1.0	µg/L	10.0	86.7	70-130				
Trichloroethylene	9.40	1.0	µg/L	10.0	94.0	70-130				
Trichlorofluoromethane (Freon 11)	9.38	2.0	µg/L	10.0	93.8	70-130				
1,2,3-Trichloropropane	8.14	2.0	µg/L	10.0	81.4	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	10.3	1.0	µg/L	10.0	103	70-130				
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0	101	70-130				
1,3,5-Trimethylbenzene	9.96	1.0	µg/L	10.0	99.6	70-130				
Vinyl Chloride	5.92	2.0	µg/L	10.0	59.2	40-160				†
m+p Xylene	19.6	2.0	µg/L	20.0	97.8	70-130				
o-Xylene	10.1	1.0	µg/L	10.0	101	70-130				
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0	103	70-130				
Surrogate: Toluene-d8	24.8		µg/L	25.0	99.2	70-130				
Surrogate: 4-Bromofluorobenzene	24.5		µg/L	25.0	97.9	70-130				

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007545 - SW-846 5030B</b>										
<b>LCS Dup (B007545-BSD1)</b>										
Prepared: 11/20/09 Analyzed: 11/23/09										
Acetone	140	50	µg/L	100	140	70-160	0.875	25		†
Acrylonitrile	8.98	5.0	µg/L	10.0	89.8	70-130	4.79	25		
tert-Amyl Methyl Ether (TAME)	9.72	0.50	µg/L	10.0	97.2	70-130	0.103	25		
Benzene	9.07	1.0	µg/L	10.0	90.7	70-130	4.10	25		
Bromobenzene	9.43	1.0	µg/L	10.0	94.3	70-130	0.950	25		
Bromo(chloromethane)	9.98	1.0	µg/L	10.0	99.8	70-130	2.96	25		
Bromodichloromethane	7.88	0.50	µg/L	10.0	78.8	70-130	2.13	25		
Bromoform	7.38	1.0	µg/L	10.0	73.8	70-130	0.407	25		
Bromomethane	8.62	2.0	µg/L	10.0	86.2	40-160	3.42	25		†
2-Butanone (MEK)	107	20	µg/L	100	107	40-160	15.2	25		†
tert-Butyl Alcohol (TBA)	76.6	20	µg/L	100	76.6	40-160	3.29	25		†
n-Butylbenzene	9.84	1.0	µg/L	10.0	98.4	70-130	1.91	25		
sec-Butylbenzene	10.3	1.0	µg/L	10.0	103	70-130	4.19	25		
tert-Butylbenzene	10.2	1.0	µg/L	10.0	102	70-130	3.86	25		
tert-Butyl Ethyl Ether (TBEE)	9.31	0.50	µg/L	10.0	93.1	70-130	1.17	25		
<b>Carbon Disulfide</b>	13.4	3.0	µg/L	10.0	134	*	70-130	3.23	25	L-02
Carbon Tetrachloride	8.59	1.0	µg/L	10.0	85.9	70-130	0.927	25		
Chlorobenzene	9.29	1.0	µg/L	10.0	92.9	70-130	2.45	25		
Chlorodibromomethane	7.34	0.50	µg/L	10.0	73.4	70-130	1.89	25		
Chloroethane	9.26	2.0	µg/L	10.0	92.6	70-130	4.23	25		
Chloroform	10.6	2.0	µg/L	10.0	106	70-130	3.70	25		
Chloromethane	9.21	2.0	µg/L	10.0	92.1	40-160	4.87	25		†
2-Chlorotoluene	9.51	1.0	µg/L	10.0	95.1	70-130	1.56	25		
4-Chlorotoluene	9.56	1.0	µg/L	10.0	95.6	70-130	0.209	25		
1,2-Dibromo-3-chloropropane (DBCP)	8.41	5.0	µg/L	10.0	84.1	70-130	12.2	25		
1,2-Dibromoethane (EDB)	9.30	0.50	µg/L	10.0	93.0	70-130	2.17	25		
Dibromomethane	9.67	1.0	µg/L	10.0	96.7	70-130	0.413	25		
1,2-Dichlorobenzene	10.3	1.0	µg/L	10.0	103	70-130	0.679	25		
1,3-Dichlorobenzene	10.1	1.0	µg/L	10.0	101	70-130	2.92	25		
1,4-Dichlorobenzene	9.97	1.0	µg/L	10.0	99.7	70-130	1.30	25		
trans-1,4-Dichloro-2-butene	8.56	2.0	µg/L	10.0	85.6	70-130	1.41	25		
Dichlorodifluoromethane (Freon 12)	4.84	2.0	µg/L	10.0	48.4	40-160	2.85	25		†
1,1-Dichloroethane	9.21	1.0	µg/L	10.0	92.1	70-130	2.36	25		
1,2-Dichloroethane	8.80	1.0	µg/L	10.0	88.0	70-130	0.570	25		
1,1-Dichloroethylene	9.04	1.0	µg/L	10.0	90.4	70-130	4.86	25		
cis-1,2-Dichloroethylene	8.43	1.0	µg/L	10.0	84.3	70-130	2.11	25		
trans-1,2-Dichloroethylene	8.40	1.0	µg/L	10.0	84.0	70-130	2.00	25		
1,2-Dichloropropane	8.86	1.0	µg/L	10.0	88.6	70-130	2.75	25		
1,3-Dichloropropane	9.33	0.50	µg/L	10.0	93.3	70-130	3.49	25		
2,2-Dichloropropane	7.94	1.0	µg/L	10.0	79.4	40-130	2.49	25		†
1,1-Dichloropropene	9.85	2.0	µg/L	10.0	98.5	70-130	0.809	25		
cis-1,3-Dichloropropene	8.33	0.50	µg/L	10.0	83.3	70-130	0.718	25		
trans-1,3-Dichloropropene	7.94	0.50	µg/L	10.0	79.4	70-130	1.14	25		V-05
Diethyl Ether	10.2	2.0	µg/L	10.0	102	70-130	4.79	25		
Diisopropyl Ether (DIPE)	10.1	0.50	µg/L	10.0	101	70-130	3.30	25		
1,4-Dioxane	79.4	50	µg/L	100	79.4	40-130	5.26	50		V-16
Ethylbenzene	9.51	1.0	µg/L	10.0	95.1	70-130	1.05	25		
Hexachlorobutadiene	10.0	0.50	µg/L	10.0	100	70-130	23.0	25		
2-Hexanone (MBK)	103	10	µg/L	100	103	70-160	8.21	25		†
Isopropylbenzene (Cumene)	11.4	1.0	µg/L	10.0	114	70-130	0.176	25		
p-Isopropyltoluene (p-Cymene)	9.96	1.0	µg/L	10.0	99.6	70-130	2.38	25		
Methyl tert-Butyl Ether (MTBE)	9.78	1.0	µg/L	10.0	97.8	70-130	0.204	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
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**Batch B007545 - SW-846 5030B**

<b>LCS Dup (B007545-BSD1)</b>	Prepared: 11/20/09 Analyzed: 11/23/09								
Methylene Chloride	9.81	5.0	µg/L	10.0	98.1	70-130	13.1	25	
4-Methyl-2-pentanone (MIBK)	101	10	µg/L	100	101	70-160	8.23	25	†
Naphthalene	9.36	2.0	µg/L	10.0	93.6	40-130	<b>26.6</b> *	25	R-05, V-04 †
n-Propylbenzene	9.82	1.0	µg/L	10.0	98.2	70-130	0.204	25	
Styrene	9.08	1.0	µg/L	10.0	90.8	70-130	0.440	25	
1,1,1,2-Tetrachloroethane	8.43	1.0	µg/L	10.0	84.3	70-130	2.28	25	
1,1,2,2-Tetrachloroethane	9.25	0.50	µg/L	10.0	92.5	70-130	7.28	25	
Tetrachloroethylene	10.0	1.0	µg/L	10.0	100	70-160	1.61	25	†
Tetrahydrofuran	10.1	10	µg/L	10.0	101	70-130	10.9	25	
Toluene	9.42	1.0	µg/L	10.0	94.2	70-130	0.635	25	
1,2,3-Trichlorobenzene	10.0	5.0	µg/L	10.0	100	70-130	10.8	25	
1,2,4-Trichlorobenzene	10.2	1.0	µg/L	10.0	102	70-130	<b>28.2</b> *	25	R-05
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0	105	70-130	1.79	25	
1,1,1-Trichloroethane	8.75	1.0	µg/L	10.0	87.5	70-130	1.70	25	
1,1,2-Trichloroethane	8.86	1.0	µg/L	10.0	88.6	70-130	2.17	25	
Trichloroethylene	9.41	1.0	µg/L	10.0	94.1	70-130	0.106	25	
Trichlorofluoromethane (Freon 11)	8.99	2.0	µg/L	10.0	89.9	70-130	4.25	25	
1,2,3-Trichloropropane	9.09	2.0	µg/L	10.0	90.9	70-130	11.0	25	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.55	1.0	µg/L	10.0	95.5	70-130	7.17	25	
1,2,4-Trimethylbenzene	9.87	1.0	µg/L	10.0	98.7	70-130	2.11	25	
1,3,5-Trimethylbenzene	9.97	1.0	µg/L	10.0	99.7	70-130	0.100	25	
Vinyl Chloride	5.64	2.0	µg/L	10.0	56.4	40-160	4.84	25	†
m+p Xylene	19.4	2.0	µg/L	20.0	97.1	70-130	0.667	25	
o-Xylene	10.1	1.0	µg/L	10.0	101	70-130	0.693	25	
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0	102	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0	101	70-130			
Surrogate: 4-Bromofluorobenzene	24.8		µg/L	25.0	99.0	70-130			

**Batch B007624 - SW-846 5030B**

<b>Blank (B007624-BLK1)</b>	Prepared & Analyzed: 11/24/09							
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					L-04, V-05
Bromomethane	ND	2.0	µg/L					
2-Butanone (MEK)	ND	20	µg/L					V-05
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	3.0	µg/L					
Carbon Tetrachloride	ND	1.0	µg/L					
Chlorobenzene	ND	1.0	µg/L					
Chlorodibromomethane	ND	0.50	µg/L					L-04, V-05
Chloroethane	ND	2.0	µg/L					
Chloroform	ND	2.0	µg/L					

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
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**Batch B007624 - SW-846 5030B**

<b>Blank (B007624-BLK1)</b>	Prepared & Analyzed: 11/24/09									
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							V-05
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							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							V-04
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							

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	RPD Limit	Notes
<b>Batch B007624 - SW-846 5030B</b>										
<b>Blank (B007624-BLK1)</b>										
Prepared & Analyzed: 11/24/09										
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	26.2		µg/L	25.0		105	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.8	70-130			
Surrogate: 4-Bromofluorobenzene	23.4		µg/L	25.0		93.6	70-130			
<b>LCS (B007624-BS1)</b>										
Prepared & Analyzed: 11/24/09										
Acetone	113	50	µg/L	100		113	70-160			†
Acrylonitrile	9.32	5.0	µg/L	10.0		93.2	70-130			
tert-Amyl Methyl Ether (TAME)	9.38	0.50	µg/L	10.0		93.8	70-130			
Benzene	8.97	1.0	µg/L	10.0		89.7	70-130			
Bromobenzene	9.00	1.0	µg/L	10.0		90.0	70-130			
Bromoform	9.87	1.0	µg/L	10.0		98.7	70-130			
Bromochloromethane	9.87	1.0	µg/L	10.0		73.3	70-130			
Bromodichloromethane	7.33	0.50	µg/L	10.0						
<b>Bromoform</b>	6.91	1.0	µg/L	10.0		<b>69.1</b> *	70-130			L-04, V-05
Bromomethane	6.30	2.0	µg/L	10.0		63.0	40-160			V-06 †
2-Butanone (MEK)	94.3	20	µg/L	100		94.3	40-160			†
tert-Butyl Alcohol (TBA)	78.0	20	µg/L	100		78.0	40-160			V-05 †
n-Butylbenzene	9.86	1.0	µg/L	10.0		98.6	70-130			
sec-Butylbenzene	9.95	1.0	µg/L	10.0		99.5	70-130			
tert-Butylbenzene	9.87	1.0	µg/L	10.0		98.7	70-130			
tert-Butyl Ethyl Ether (TBEE)	9.02	0.50	µg/L	10.0		90.2	70-130			
Carbon Disulfide	12.6	3.0	µg/L	10.0		126	70-130			
Carbon Tetrachloride	7.89	1.0	µg/L	10.0		78.9	70-130			
Chlorobenzene	9.05	1.0	µg/L	10.0		90.5	70-130			
<b>Chlorodibromomethane</b>	6.97	0.50	µg/L	10.0		<b>69.7</b> *	70-130			L-04, V-05
Chloroethane	8.41	2.0	µg/L	10.0		84.1	70-130			
Chloroform	10.2	2.0	µg/L	10.0		102	70-130			
Chloromethane	8.47	2.0	µg/L	10.0		84.7	40-160			†
2-Chlorotoluene	9.09	1.0	µg/L	10.0		90.9	70-130			
4-Chlorotoluene	9.23	1.0	µg/L	10.0		92.3	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	8.14	5.0	µg/L	10.0		81.4	70-130			
1,2-Dibromoethane (EDB)	9.50	0.50	µg/L	10.0		95.0	70-130			
Dibromomethane	9.53	1.0	µg/L	10.0		95.3	70-130			
1,2-Dichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130			
1,3-Dichlorobenzene	10.1	1.0	µg/L	10.0		101	70-130			
1,4-Dichlorobenzene	9.90	1.0	µg/L	10.0		99.0	70-130			
trans-1,4-Dichloro-2-butene	9.16	2.0	µg/L	10.0		91.6	70-130			
Dichlorodifluoromethane (Freon 12)	4.34	2.0	µg/L	10.0		43.4	40-160			†
1,1-Dichloroethane	8.76	1.0	µg/L	10.0		87.6	70-130			
1,2-Dichloroethane	8.55	1.0	µg/L	10.0		85.5	70-130			
1,1-Dichloroethylene	8.31	1.0	µg/L	10.0		83.1	70-130			
cis-1,2-Dichloroethylene	8.22	1.0	µg/L	10.0		82.2	70-130			
trans-1,2-Dichloroethylene	7.94	1.0	µg/L	10.0		79.4	70-130			
1,2-Dichloropropane	8.37	1.0	µg/L	10.0		83.7	70-130			
1,3-Dichloropropane	9.04	0.50	µg/L	10.0		90.4	70-130			
2,2-Dichloropropane	8.26	1.0	µg/L	10.0		82.6	40-130			†
1,1-Dichloropropene	9.21	2.0	µg/L	10.0		92.1	70-130			
cis-1,3-Dichloropropene	8.08	0.50	µg/L	10.0		80.8	70-130			
trans-1,3-Dichloropropene	7.56	0.50	µg/L	10.0		75.6	70-130			V-05

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007624 - SW-846 5030B</b>										
<b>LCS (B007624-BS1)</b>										
Prepared & Analyzed: 11/24/09										
Diethyl Ether	9.76	2.0	µg/L	10.0	97.6	70-130				
Diisopropyl Ether (DIPE)	10.4	0.50	µg/L	10.0	104	70-130				
1,4-Dioxane	93.1	50	µg/L	100	93.1	40-130				V-16 †
Ethylbenzene	9.00	1.0	µg/L	10.0	90.0	70-130				
Hexachlorobutadiene	10.9	0.50	µg/L	10.0	109	70-130				
2-Hexanone (MBK)	106	10	µg/L	100	106	70-160				†
Isopropylbenzene (Cumene)	10.8	1.0	µg/L	10.0	108	70-130				
p-Isopropyltoluene (p-Cymene)	9.85	1.0	µg/L	10.0	98.5	70-130				
Methyl tert-Butyl Ether (MTBE)	9.72	1.0	µg/L	10.0	97.2	70-130				
Methylene Chloride	9.92	5.0	µg/L	10.0	99.2	70-130				
4-Methyl-2-pentanone (MIBK)	107	10	µg/L	100	107	70-160				†
Naphthalene	11.4	2.0	µg/L	10.0	114	40-130				V-04 †
n-Propylbenzene	9.44	1.0	µg/L	10.0	94.4	70-130				
Styrene	8.62	1.0	µg/L	10.0	86.2	70-130				
1,1,1,2-Tetrachloroethane	8.00	1.0	µg/L	10.0	80.0	70-130				
1,1,2,2-Tetrachloroethane	9.48	0.50	µg/L	10.0	94.8	70-130				
Tetrachloroethylene	9.65	1.0	µg/L	10.0	96.5	70-160				†
Tetrahydrofuran	10.6	10	µg/L	10.0	106	70-130				
Toluene	9.03	1.0	µg/L	10.0	90.3	70-130				
1,2,3-Trichlorobenzene	10.7	5.0	µg/L	10.0	107	70-130				
1,2,4-Trichlorobenzene	11.4	1.0	µg/L	10.0	114	70-130				
1,3,5-Trichlorobenzene	10.5	1.0	µg/L	10.0	105	70-130				
1,1,1-Trichloroethane	8.20	1.0	µg/L	10.0	82.0	70-130				
1,1,2-Trichloroethane	8.72	1.0	µg/L	10.0	87.2	70-130				
Trichloroethylene	8.66	1.0	µg/L	10.0	86.6	70-130				
Trichlorofluoromethane (Freon 11)	8.55	2.0	µg/L	10.0	85.5	70-130				
1,2,3-Trichloropropane	9.20	2.0	µg/L	10.0	92.0	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.51	1.0	µg/L	10.0	95.1	70-130				
1,2,4-Trimethylbenzene	9.73	1.0	µg/L	10.0	97.3	70-130				
1,3,5-Trimethylbenzene	9.47	1.0	µg/L	10.0	94.7	70-130				
Vinyl Chloride	5.16	2.0	µg/L	10.0	51.6	40-160				†
m+p Xylene	18.5	2.0	µg/L	20.0	92.6	70-130				
o-Xylene	9.60	1.0	µg/L	10.0	96.0	70-130				
Surrogate: 1,2-Dichloroethane-d4	26.1		µg/L	25.0	104	70-130				
Surrogate: Toluene-d8	25.0		µg/L	25.0	100	70-130				
Surrogate: 4-Bromofluorobenzene	24.2		µg/L	25.0	96.6	70-130				
<b>LCS Dup (B007624-BS1D)</b>										
Prepared & Analyzed: 11/24/09										
Acetone	125	50	µg/L	100	125	70-160	10.1	25		†
Acrylonitrile	8.99	5.0	µg/L	10.0	89.9	70-130	3.60	25		
tert-Amyl Methyl Ether (TAME)	9.40	0.50	µg/L	10.0	94.0	70-130	0.213	25		
Benzene	8.85	1.0	µg/L	10.0	88.5	70-130	1.35	25		
Bromobenzene	9.06	1.0	µg/L	10.0	90.6	70-130	0.664	25		
Bromo-chloromethane	9.53	1.0	µg/L	10.0	95.3	70-130	3.51	25		
Bromo-dichloromethane	7.35	0.50	µg/L	10.0	73.5	70-130	0.272	25		
<b>Bromoform</b>	6.88	1.0	µg/L	10.0	<b>68.8</b> *	70-130	0.435	25		L-04, V-05
Bromo-methane	7.51	2.0	µg/L	10.0	75.1	40-160	17.5	25		V-06 †
2-Butanone (MEK)	93.6	20	µg/L	100	93.6	40-160	0.735	25		†
tert-Butyl Alcohol (TBA)	75.9	20	µg/L	100	75.9	40-160	2.68	25		V-05 †
n-Butylbenzene	9.96	1.0	µg/L	10.0	99.6	70-130	1.01	25		
sec-Butylbenzene	10.2	1.0	µg/L	10.0	102	70-130	2.58	25		
tert-Butylbenzene	10.2	1.0	µg/L	10.0	102	70-130	3.19	25		

**QUALITY CONTROL**
**Volatile Organic Compounds by GC/MS - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B007624 - SW-846 5030B</b>										
<b>LCS Dup (B007624-BS1)</b>										
Prepared & Analyzed: 11/24/09										
tert-Butyl Ethyl Ether (TBEE)	8.98	0.50	µg/L	10.0	89.8	70-130	0.444	25		
Carbon Disulfide	13.0	3.0	µg/L	10.0	130	70-130	2.90	25		
Carbon Tetrachloride	8.03	1.0	µg/L	10.0	80.3	70-130	1.76	25		
Chlorobenzene	9.01	1.0	µg/L	10.0	90.1	70-130	0.443	25		
<b>Chlorodibromomethane</b>	<b>6.99</b>	<b>0.50</b>	<b>µg/L</b>	<b>10.0</b>	<b>69.9</b>	<b>*</b>	<b>70-130</b>	<b>0.287</b>	<b>25</b>	<b>L-04, V-05</b>
Chloroethane	8.88	2.0	µg/L	10.0	88.8	70-130	5.44	25		
Chloroform	10.2	2.0	µg/L	10.0	102	70-130	0.589	25		
Chloromethane	8.39	2.0	µg/L	10.0	83.9	40-160	0.949	25		†
2-Chlorotoluene	9.22	1.0	µg/L	10.0	92.2	70-130	1.42	25		
4-Chlorotoluene	9.24	1.0	µg/L	10.0	92.4	70-130	0.108	25		
1,2-Dibromo-3-chloropropane (DBCP)	8.23	5.0	µg/L	10.0	82.3	70-130	1.10	25		
1,2-Dibromoethane (EDB)	9.17	0.50	µg/L	10.0	91.7	70-130	3.54	25		
Dibromomethane	9.76	1.0	µg/L	10.0	97.6	70-130	2.38	25		
1,2-Dichlorobenzene	10.3	1.0	µg/L	10.0	103	70-130	1.28	25		
1,3-Dichlorobenzene	10.1	1.0	µg/L	10.0	101	70-130	0.0989	25		
1,4-Dichlorobenzene	10.1	1.0	µg/L	10.0	101	70-130	2.30	25		
trans-1,4-Dichloro-2-butene	8.90	2.0	µg/L	10.0	89.0	70-130	2.88	25		
Dichlorodifluoromethane (Freon 12)	4.52	2.0	µg/L	10.0	45.2	40-160	4.06	25		†
1,1-Dichloroethane	8.82	1.0	µg/L	10.0	88.2	70-130	0.683	25		
1,2-Dichloroethane	8.59	1.0	µg/L	10.0	85.9	70-130	0.467	25		
1,1-Dichloroethylene	8.72	1.0	µg/L	10.0	87.2	70-130	4.82	25		
cis-1,2-Dichloroethylene	8.08	1.0	µg/L	10.0	80.8	70-130	1.72	25		
trans-1,2-Dichloroethylene	8.18	1.0	µg/L	10.0	81.8	70-130	2.98	25		
1,2-Dichloropropane	8.37	1.0	µg/L	10.0	83.7	70-130	0.00	25		
1,3-Dichloropropane	8.91	0.50	µg/L	10.0	89.1	70-130	1.45	25		
2,2-Dichloropropane	8.46	1.0	µg/L	10.0	84.6	40-130	2.39	25		†
1,1-Dichloropropene	9.43	2.0	µg/L	10.0	94.3	70-130	2.36	25		
cis-1,3-Dichloropropene	8.02	0.50	µg/L	10.0	80.2	70-130	0.745	25		
trans-1,3-Dichloropropene	7.59	0.50	µg/L	10.0	75.9	70-130	0.396	25		V-05
Diethyl Ether	10.2	2.0	µg/L	10.0	102	70-130	4.21	25		
Diisopropyl Ether (DIPE)	10.2	0.50	µg/L	10.0	102	70-130	1.75	25		
1,4-Dioxane	57.5	50	µg/L	100	57.5	40-130	47.2	50		V-16
Ethylbenzene	9.23	1.0	µg/L	10.0	92.3	70-130	2.52	25		
Hexachlorobutadiene	9.48	0.50	µg/L	10.0	94.8	70-130	13.7	25		
2-Hexanone (MBK)	103	10	µg/L	100	103	70-160	2.78	25		†
Isopropylbenzene (Cumene)	11.0	1.0	µg/L	10.0	110	70-130	1.10	25		
p-Isopropyltoluene (p-Cymene)	9.94	1.0	µg/L	10.0	99.4	70-130	0.910	25		
Methyl tert-Butyl Ether (MTBE)	9.41	1.0	µg/L	10.0	94.1	70-130	3.24	25		
Methylene Chloride	8.19	5.0	µg/L	10.0	81.9	70-130	19.1	25		
4-Methyl-2-pentanone (MIBK)	103	10	µg/L	100	103	70-160	3.85	25		†
Naphthalene	8.92	2.0	µg/L	10.0	89.2	40-130	24.4	25		V-04
n-Propylbenzene	9.64	1.0	µg/L	10.0	96.4	70-130	2.10	25		
Styrene	8.75	1.0	µg/L	10.0	87.5	70-130	1.50	25		
1,1,1,2-Tetrachloroethane	7.77	1.0	µg/L	10.0	77.7	70-130	2.92	25		
1,1,2,2-Tetrachloroethane	9.51	0.50	µg/L	10.0	95.1	70-130	0.316	25		
Tetrachloroethylene	9.74	1.0	µg/L	10.0	97.4	70-160	0.928	25		†
Tetrahydrofuran	9.97	10	µg/L	10.0	99.7	70-130	5.75	25		
Toluene	9.10	1.0	µg/L	10.0	91.0	70-130	0.772	25		
1,2,3-Trichlorobenzene	10.0	5.0	µg/L	10.0	100	70-130	6.18	25		
1,2,4-Trichlorobenzene	9.70	1.0	µg/L	10.0	97.0	70-130	16.5	25		
1,3,5-Trichlorobenzene	10.8	1.0	µg/L	10.0	108	70-130	2.62	25		
1,1,1-Trichloroethane	8.30	1.0	µg/L	10.0	83.0	70-130	1.21	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
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**Batch B007624 - SW-846 5030B**

LCS Dup (B007624-BSD1)										
Prepared & Analyzed: 11/24/09										
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	8.75	1.0	µg/L	10.0	87.5	70-130	0.343	25		
Trichloroethylene	8.62	1.0	µg/L	10.0	86.2	70-130	0.463	25		
Trichlorofluoromethane (Freon 11)	8.98	2.0	µg/L	10.0	89.8	70-130	4.91	25		
1,2,3-Trichloropropane	8.93	2.0	µg/L	10.0	89.3	70-130	2.98	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.92	1.0	µg/L	10.0	99.2	70-130	4.22	25		
1,2,4-Trimethylbenzene	9.90	1.0	µg/L	10.0	99.0	70-130	1.73	25		
1,3,5-Trimethylbenzene	9.72	1.0	µg/L	10.0	97.2	70-130	2.61	25		
Vinyl Chloride	5.35	2.0	µg/L	10.0	53.5	40-160	3.62	25		†
m+p Xylene	18.8	2.0	µg/L	20.0	94.2	70-130	1.71	25		
o-Xylene	9.75	1.0	µg/L	10.0	97.5	70-130	1.55	25		
Surrogate: 1,2-Dichloroethane-d4	25.6		µg/L	25.0	103	70-130				
Surrogate: Toluene-d8	24.8		µg/L	25.0	99.0	70-130				
Surrogate: 4-Bromofluorobenzene	24.4		µg/L	25.0	97.6	70-130				

**FLAG/QUALIFIER SUMMARY**

- \* QC result is outside of established limits.
- † Wide recovery limits established for difficult compound.
- ‡ Wide RPD limits established for difficult compound.
- # Data exceeded client recommended or regulatory level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

- A-09 Holding times and stability of samples taken in teflon bags have not been determined
- B Analyte is found in the associated blank as well as in the sample.
- L-01 Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
- L-02 Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
- L-04 Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
- R-05 Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
- V-04 Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
- 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.
- Z-01 Reported results are estimated. Results are being reported from a previously analyzed vial.

**CERTIFICATIONS**
**Certified Analyses included in this Report**

Analyte	Certifications
<b>EPA TO-14A in Air</b>	
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
<b>SW-846 8260B in Water</b>	
Acetone	CT,NH,NY
Acrylonitrile	CT,NY,RI
tert-Amyl Methyl Ether (TAME)	NH,NY
Benzene	CT,NH,NY,RI
Bromochloromethane	NH,NY
Bromodichloromethane	CT,NH,NY,RI
Bromoform	CT,NH,NY,RI
Bromomethane	CT,NH,NY,RI
2-Butanone (MEK)	CT,NH,NY
tert-Butyl Alcohol (TBA)	NH,NY

## CERTIFICATIONS

## Certified Analyses included in this Report

Analyte	Certifications
<b>SW-846 8260B in Water</b>	
n-Butylbenzene	NY
sec-Butylbenzene	NY
tert-Butylbenzene	NY
tert-Butyl Ethyl Ether (TBEE)	NH,NY
Carbon Disulfide	CT,NH,NY
Carbon Tetrachloride	CT,NH,NY,RI
Chlorobenzene	CT,NH,NY,RI
Chlorodibromomethane	CT,NH,NY,RI
Chloroethane	CT,NH,NY,RI
Chloroform	CT,NH,NY,RI
Chloromethane	CT,NH,NY,RI
Dibromomethane	NH,NY
1,2-Dichlorobenzene	CT,NY,RI
1,3-Dichlorobenzene	CT,NH,NY,RI
1,4-Dichlorobenzene	CT,NH,NY,RI
trans-1,4-Dichloro-2-butene	NH,NY
Dichlorodifluoromethane (Freon 12)	NH,NY,RI
1,1-Dichloroethane	CT,NH,NY,RI
1,2-Dichloroethane	CT,NH,NY,RI
1,1-Dichloroethylene	CT,NH,NY,RI
trans-1,2-Dichloroethylene	CT,NH,NY,RI
1,2-Dichloropropane	CT,NH,NY,RI
2,2-Dichloropropane	NH,NY
1,1-Dichloropropene	NH,NY
cis-1,3-Dichloropropene	CT,NH,NY,RI
trans-1,3-Dichloropropene	CT,NH,NY,RI
Diisopropyl Ether (DIPE)	NH,NY
Ethylbenzene	CT,NH,NY,RI
Hexachlorobutadiene	CT,NH,NY
2-Hexanone (MBK)	CT,NH,NY
Isopropylbenzene (Cumene)	NY
p-Isopropyltoluene (p-Cymene)	CT,NH,NY
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY
Methylene Chloride	CT,NH,NY,RI
4-Methyl-2-pentanone (MIBK)	CT,NH,NY
Naphthalene	NH,NY
n-Propylbenzene	CT,NH,NY
Styrene	CT,NH,NY
1,1,1,2-Tetrachloroethane	CT,NH,NY
1,1,2,2-Tetrachloroethane	CT,NH,NY,RI
Tetrachloroethylene	CT,NH,NY,RI
Toluene	CT,NH,NY,RI
1,2,3-Trichlorobenzene	NH,NY
1,2,4-Trichlorobenzene	CT,NH,NY
1,1,1-Trichloroethane	CT,NH,NY,RI
1,1,2-Trichloroethane	CT,NH,NY,RI
Trichloroethylene	CT,NH,NY,RI

#### CERTIFICATIONS

##### Certified Analyses included in this Report

Analyte	Certifications
<b><i>SW-846 8260B in Water</i></b>	
Trichlorofluoromethane (Freon 11)	CT,NH,NY,RI
1,2,3-Trichloropropane	NH,NY
1,2,4-Trimethylbenzene	NY
1,3,5-Trimethylbenzene	NY
Vinyl Chloride	CT,NH,NY,RI
m+p Xylene	CT,NH,NY,RI
o-Xylene	CT,NH,NY,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	06/30/2010
CT	Connecticut Department of Public Health	PH-0567	09/30/2011
NY	New York State Department of Health	10899 NELAP	04/1/2010
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2010
RI	Rhode Island Department of Health	LAO00112	12/30/2009
NC	North Carolina Div. of Water Quality	652	12/31/2009
NJ	New Jersey DEP	MA007 NELAP	06/30/2010
FL	Florida Department of Health	E871027 NELAP	06/30/2010
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2010
WA	State of Washington Department of Ecology	C2065	03/23/2010



### Sample Receipt Checklist

CLIENT NAME: LFR

RECEIVED BY: CEC

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

DATE: 11/19/09

1) Was the chain(s) of custody relinquished and signed?

Yes  No   
Yes  No

2) Does the chain agree with the samples?

If not, explain:

Yes  No

3) Are all the samples in good condition?

If not, explain:

Yes  No

4) How were the samples received:

On Ice  Direct from Sampling  Ambient  In Cooler(s)

Yes  No

Were the samples received in Temperature Compliance of (2-6°C)?

Temperature °C by Temp gun 5.8

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

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:

(y)

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

Client Signature: \_\_\_\_\_

### Containers sent in to Con-Test

	# of containers		# of containers
1 Liter Amber		8 oz clear jar	
500 mL Amber		4 oz clear jar	
250 mL Amber (8oz amber)		2 oz 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	10	Brass Sleeves	
Colisure / bacteria bottle		Tubes	
Dissolved Oxygen bottle		Summa Cans	
Flashpoint bottle		Regulators	
Encore		Other <i>Tedlar Bag</i>	2

Laboratory Comments:

40 mL vials: # HCl 0 # Methanol \_\_\_\_\_

Time and Date Frozen: \_\_\_\_\_

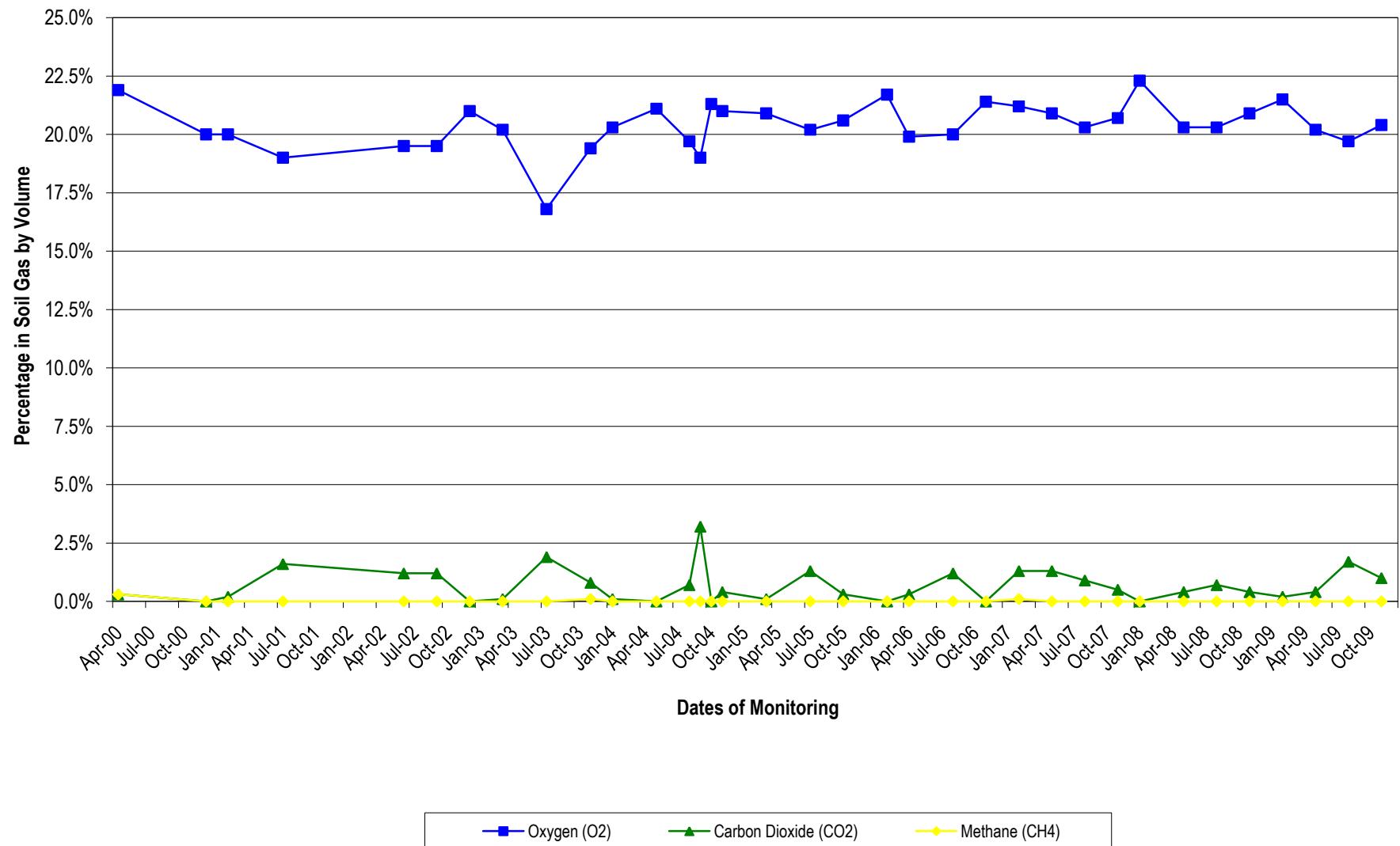
# Bisulfate \_\_\_\_\_ # DI Water \_\_\_\_\_

# Thiosulfate \_\_\_\_\_ Unpreserved \_\_\_\_\_

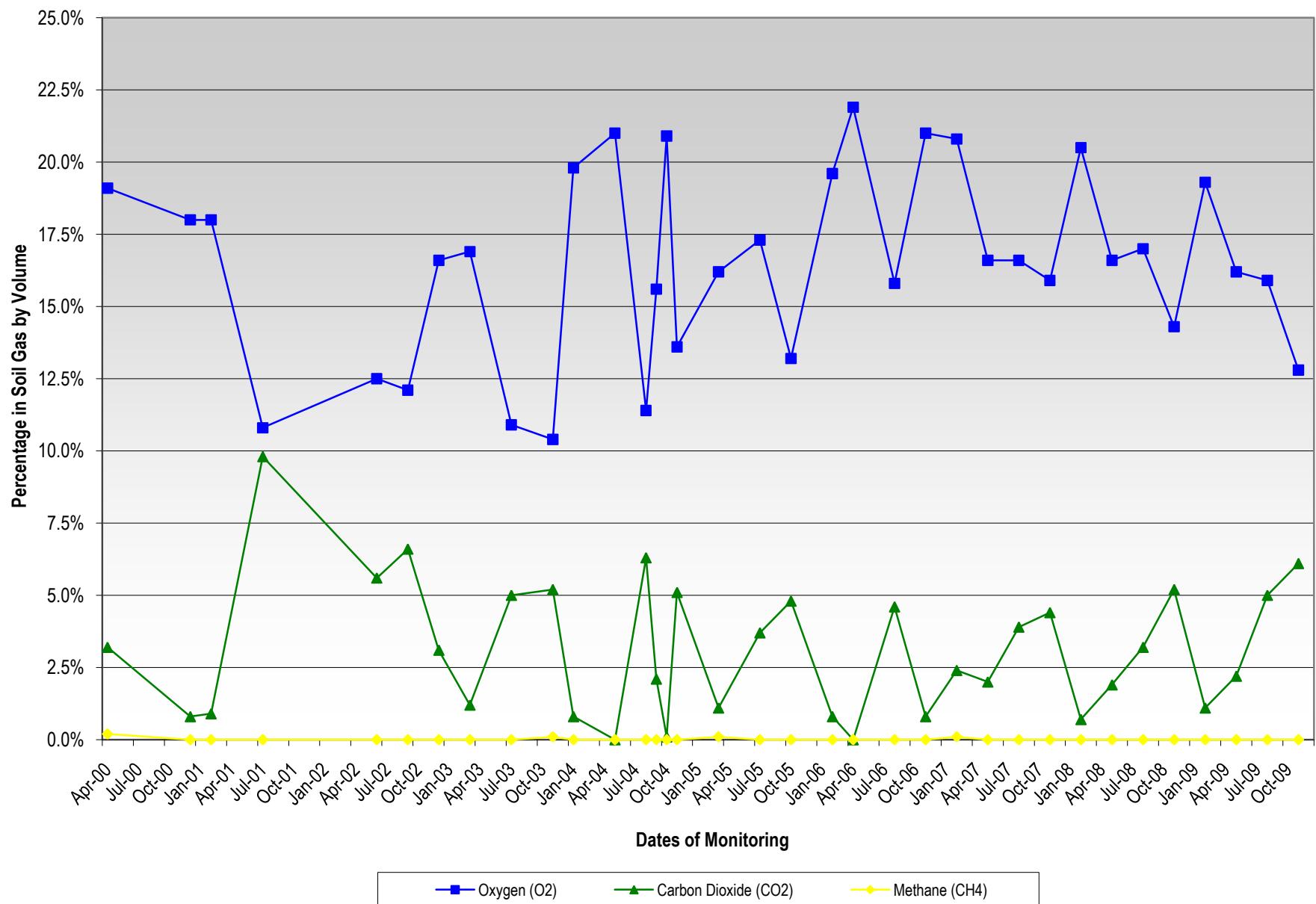
Do all samples have the proper pH: Yes  No  N/A

**ATTACHMENT C**  
**Soil – Gas Graphs**

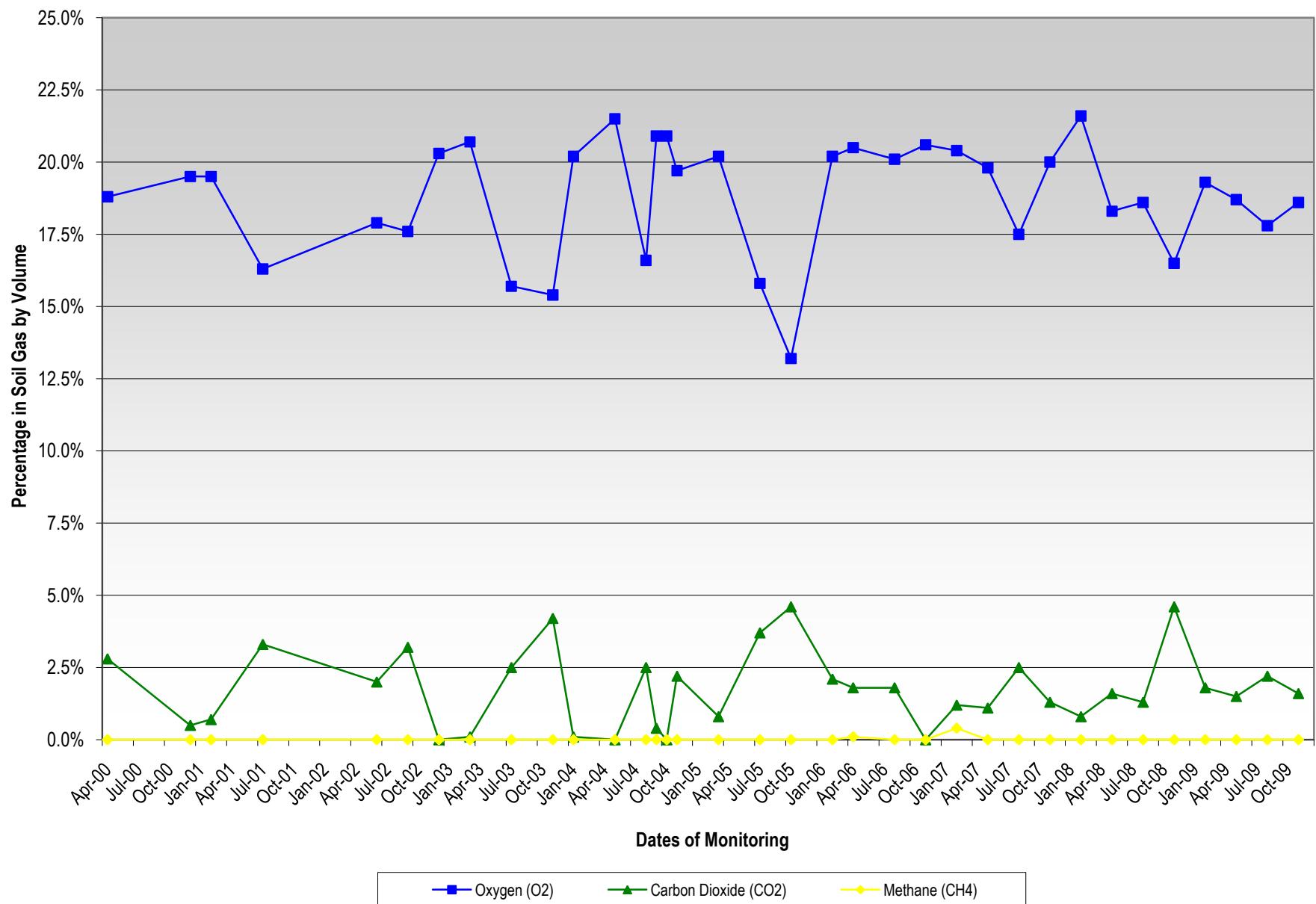
**Soil Gas Well EPL1**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



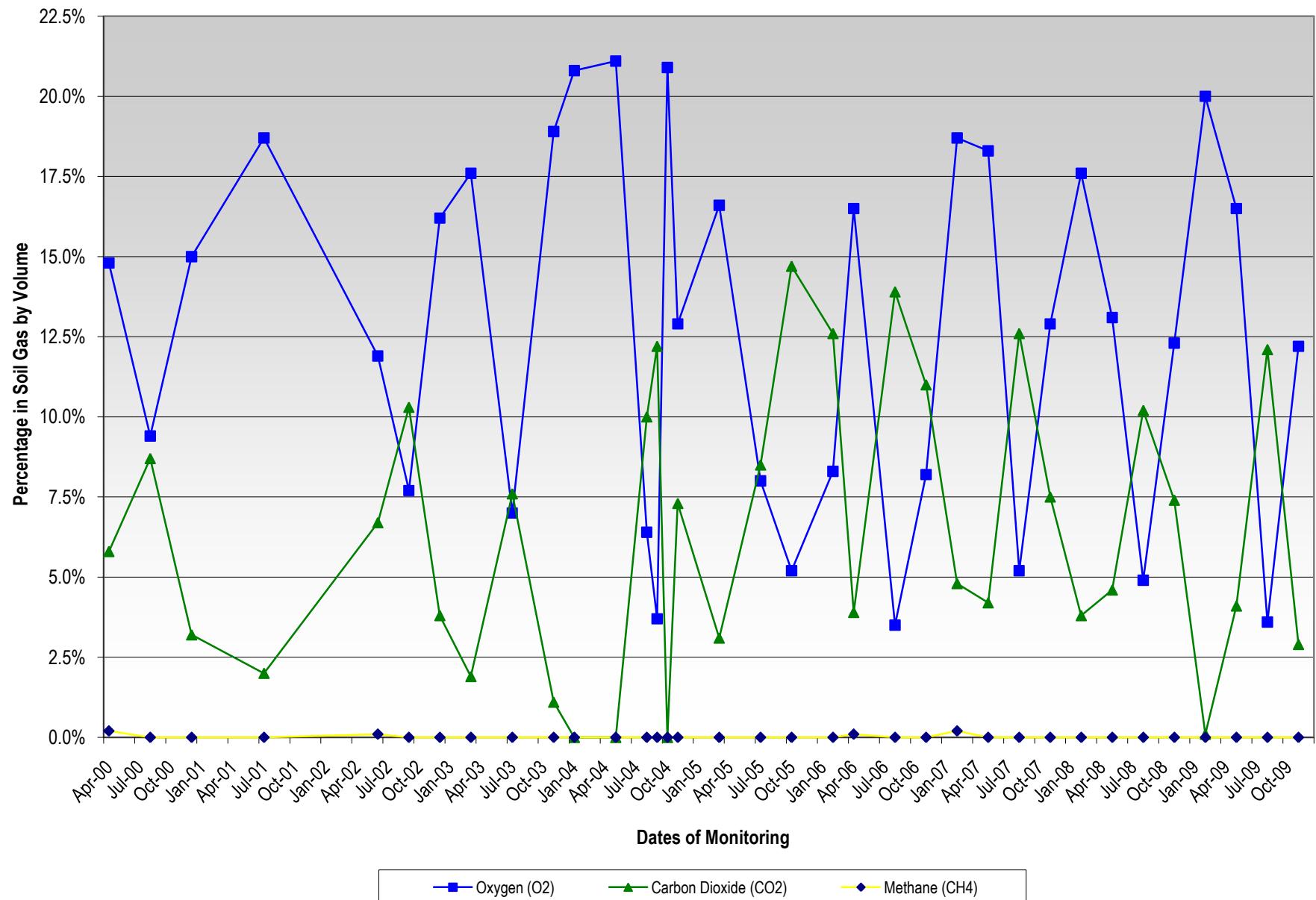
**Soil Gas Well EPL4**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



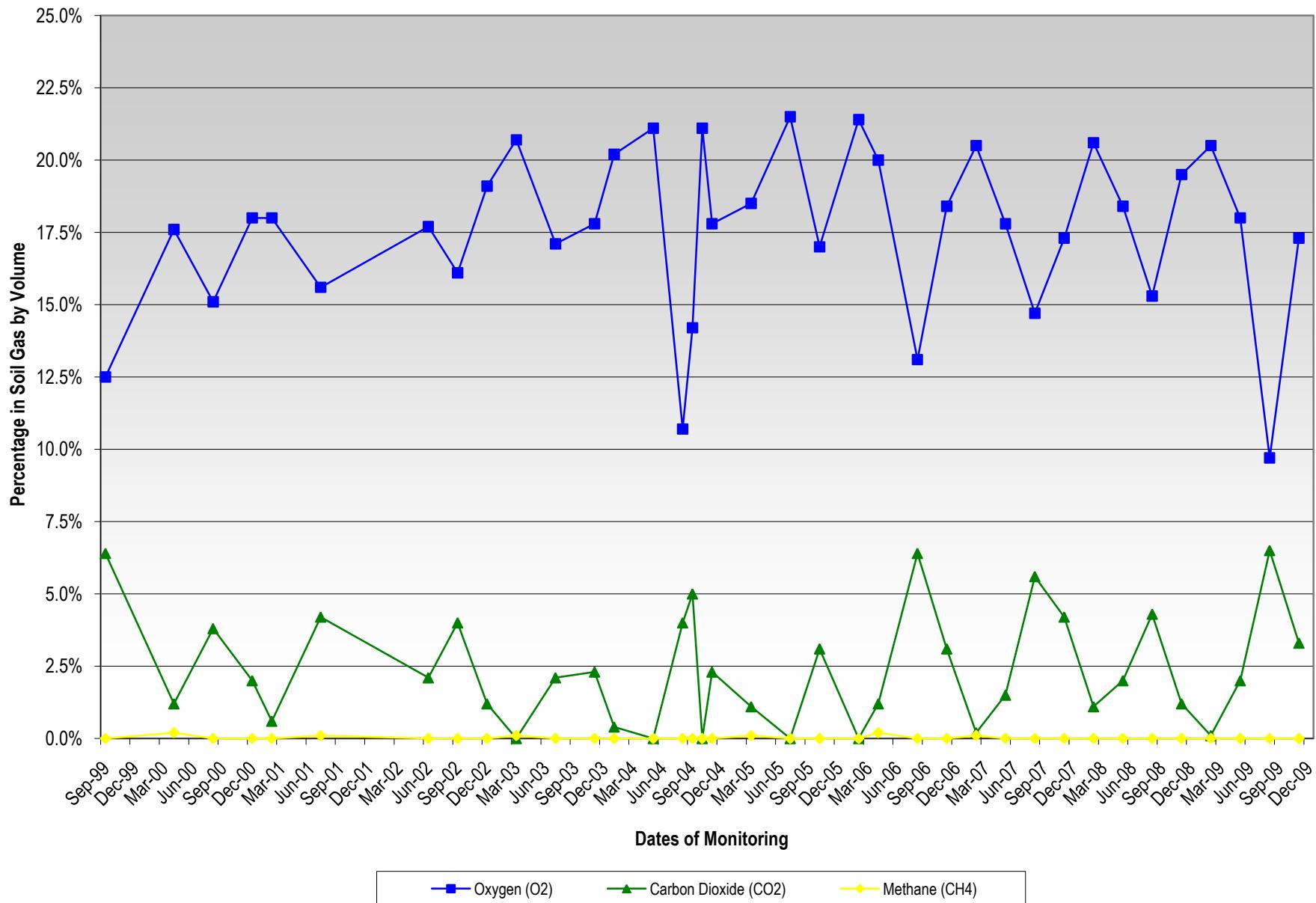
**Soil Gas Well MG2**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



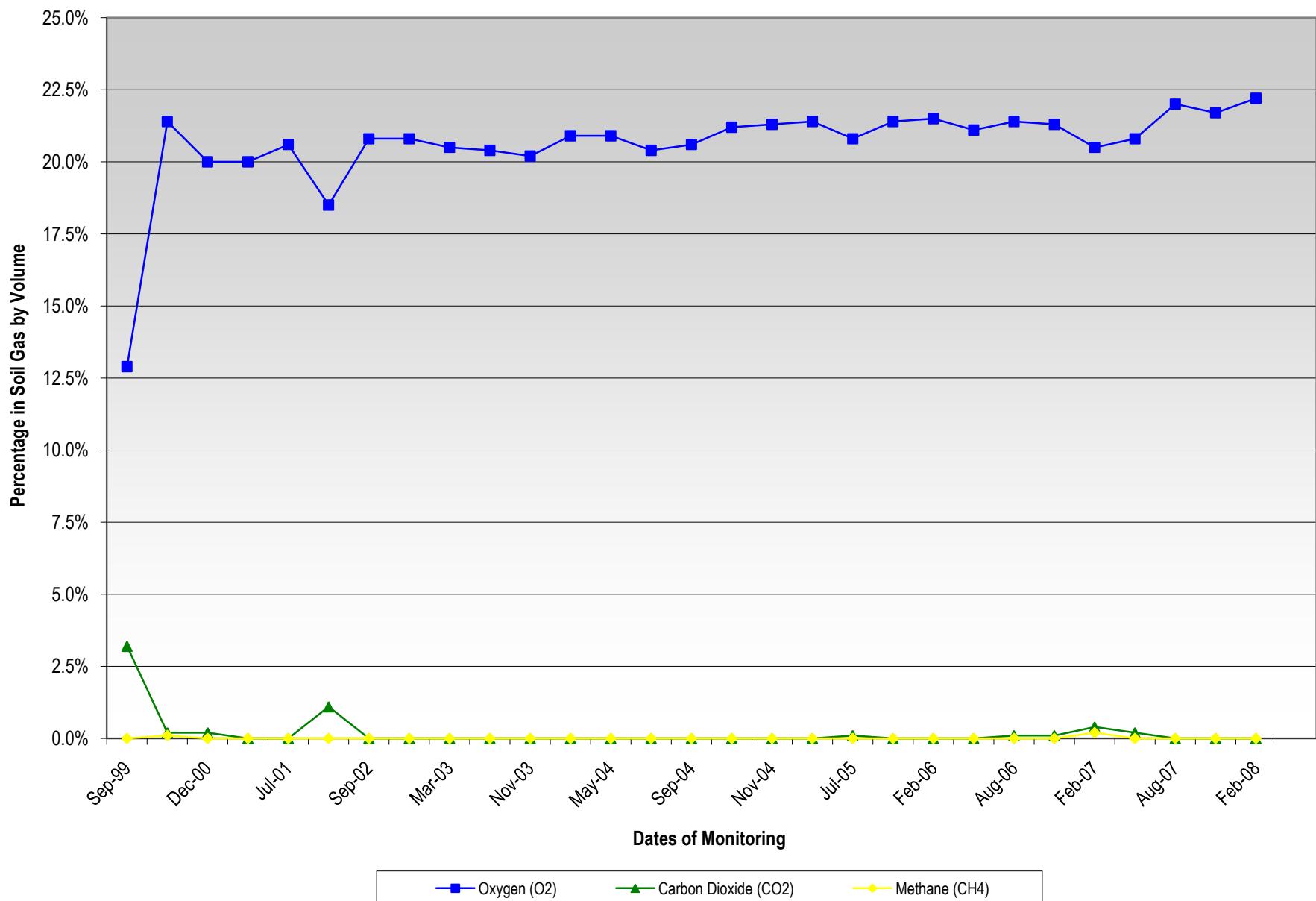
**Soil Gas Well MPL5**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



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



**Soil Gas Well WB7**  
**Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time**  
**Springfield Street School Complex**  
**Providence, Rhode Island**



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

