

**QUARTERLY MONITORING REPORT
Springfield Street School Complex
Providence, Rhode Island
February 2009 Monitoring Round**

Project No. 081-12152-05

Prepared for
Providence School Department
797 Westminster Street
Providence, RI 02903

Prepared by
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March 18, 2009

081-12152-05

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, 50 Springfield Street,
Providence, RI – February 2009 Monitoring Round

Dear Mr. Crawford:

Quarterly monitoring for soil gas, indoor air and system monitoring was conducted during the week of February 9, and on 26th of February 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 February 26, 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. Some areas with small holes or poor grass cover were observed during the previous inspection, and we observed that these areas have since been repaired. A new hole was observed during the February inspection; the hole was located adjacent to the concrete foundation wall on the southwesterly side of the Middle School. This hole was brought to the attention of the on-site maintenance department and has been repaired. Photographs of the hole before and after repair are provided in Attachment D.

SUB-SLAB VENTILATION SYSTEM

The sub-slab ventilation system was inspected by LFR during the quarterly monitoring on February 12, 2009. The elementary school and rear middle school blowers were operating normally. The front middle school blower was not operating at the time of the inspection. LFR personnel had observed high water levels in the knockout water tank on the morning of February 10th. LFR

technicians drained the tank and returned the system to normal operation. On the morning of February 12th, LFR personnel again observed high water levels in the water tank. The tank was drained and systems returned to normal operation. This front blower was reinspected and found to be running normally on February 26, 2009.

Influent and effluent air from the two blowers at the elementary school and the two blowers at the middle school were monitored on February 1. Samples of influent and effluent gas were collected in Tedlar bags at each location and screened for methane, carbon dioxide, carbon monoxide, and hydrogen sulfide using a Landtec GEM 2000 Plus, and for volatile organic compounds (VOC) using a MiniRae 2000. Results are provided in Table 1.

Carbon monoxide, methane, and hydrogen sulfide concentrations in the subslab ventilation system samples were all measured as zero during this monitoring event. Organic vapor readings at the elementary and middle schools were measured as 0.0 ppm throughout. Carbon dioxide readings at both the elementary school and middle school ranged from 0.1 to 0.3 percent. The only parameter which was detected at a concentration in excess of the RAWP Action Levels was carbon dioxide.

INDOOR AIR MONITORING

Indoor air monitoring was conducted on February 12, 2009 using a Landtec Gem 2000 Plus landfill gas monitor (methane), a QRAE plus multi-gas meter (hydrogen sulfide, oxygen), a Mini Rae photoionization detector (organic vapors), and a Fluke 975 Airmeter (carbon dioxide, carbon monoxide). Both schools were occupied at the time of the monitoring. Results of monitoring are provided in the Table 2. Methane, carbon monoxide, hydrogen sulfide and organic vapors were not detected during the indoor air monitoring.

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.

Carbon dioxide concentrations ranged from 522 to 775 ppm in the elementary school, and from 566 to 820 ppm at the middle school. The maximum concentration detected at the elementary school was measured in the cafeteria, which was fully occupied at the time the measurement was made. The maximum concentration detected in the middle school was in the art room. All concentrations were well below the Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) of 5,000 ppm for carbon dioxide.

Carbon dioxide is a colorless, odorless gas which is a trace constituent of our atmosphere. It is emitted by people and other mammals during respiration, by combustion of fossil fuels, and through many other natural and manmade sources. The US Department of Energy's Carbon Dioxide Information Analysis Center (CDIAC) reports that the average concentration of carbon dioxide in the atmosphere is 377 ppm. The actual concentrations are expected to vary locally based on the proximity of carbon dioxide sources to the measuring site, meteorological conditions, and other factors. An ambient carbon dioxide concentration of 368 ppm was measured in the parking lot of the middle school on February 12, 2009, when the indoor air measurements were made.

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 CO₂ concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air. The average concentrations measured inside the site buildings were below these levels.

Concentrations of methane, carbon monoxide, hydrogen sulfide and organic vapors were measured at zero at all locations in both buildings.

The control panels for the methane monitors at both schools were inspected on February 12, 2009. The methane monitor control panels had stickers that indicated the monitors were last calibrated by Diamond Technical Services personnel on January 6, 2009. Methane was indicated to be present at elevated levels at some locations. These locations were monitored with the handheld instruments and no evidence of methane was detected. The building methane monitors were recalibrated on February 12, 2009 by Diamond Calibration.

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 February 10th, 2009. Two monitoring wells, ATC-2 and ATC-3, were not able to be sampled because they were covered by ice and snow on the day of sampling. 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. Depth to groundwater ranged from 11.72 to 18.07 feet below the ground surface. Groundwater samples were collected in laboratory prepared sample jars and delivered under chain-of-custody protocol to Contest Laboratory in East Longmeadow, Massachusetts for analysis for volatile organic compounds by EPA method 8260. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 3.

No target analytes were detected in the three groundwater samples.

SOIL GAS MONITORING

Soil gas monitoring was conducted at 27 locations on February 10th and 26th, 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 & Extraction Monitor, a QRAE 4-gas meter and a MiniRae Photoionization Detector (PID).

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

Soil Gas Field Monitoring Results

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 4. Carbon monoxide and hydrogen sulfide were not detected in any of the soil gas wells during this round of sampling. Organic vapors were detected at trace levels below the RAWP Action Level.

Carbon dioxide was detected in all 27 locations with detectable concentrations ranging from 0.1% to 3.2%. The carbon dioxide Remedial Action Work Plan Action Level is 0.1% and 20 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 3.2%, compared with a maximum detected concentration of 9.9% in November 2008, and 11.8% in August, 2008. The highest concentration of carbon dioxide was found in well MPL-7, 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.

Methane was not detected in any of the soil gas wells with the exception of MPL-7. Methane was detected at a concentration of 1.4% in well MPL-7 on February 10, 2009. This well was monitored again on February 26, 2009. A concentration of 1.0% was detected with the Landtec Gem 2000 on this date. Both concentrations were above the action level. The concentration of oxygen at MPL-7 was 11.8%, and the concentration of carbon dioxide was 3.2%. The concentration of carbon dioxide is lower than it was in November 2008, when it was 8.8%, but the concentration of oxygen is lower than in November when it was measured at 13.2%. A graph showing the carbon dioxide and oxygen concentration trends for MPL-7 is included in Attachment C. The graph shows that concentrations have followed a seasonal pattern, with carbon dioxide rising with increasing temperatures, and falling with decreasing temperatures.

MPL-7 is located near the corner of Hartford Avenue and Springfield Street, in a landscaped area between the parking lot and sidewalk. Methane was not detected at MPL-6, to the west of MPL-7 along Hartford Avenue, or at MPL-8, in the parking lot between MPL-7 and the school. The source of the methane at MPL-7 has not been determined. The fact that oxygen is present makes it less likely that methane is being generated at this location, since methane is generated under anaerobic conditions. Also, this location is not an area which was historically used for trash disposal. Historic information about the Site showed that a gas station was located on the corner of Hartford Avenue and Springfield Street.

The proximity of MPL-7 to Hartford Avenue and Springfield Avenue raises the possibility that the methane detected at this location resulted from a release from natural gas lines in the street, as has occurred previously.

Soil Gas Laboratory Results

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

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are provided in Table 5 for comparison purposes even though they are not applicable to soil gas, because it does not represent exposure point concentrations. The PELs are the average concentrations that OSHA allows to be present in a workplace without any respiratory protection or exposure controls. The concentrations detected in soil gas were well below the OSHA PELs.

CONCLUSIONS

Carbon monoxide, hydrogen sulfide and organic vapor concentrations did not exceed RAWP action levels in any soil gas samples, indoor air or subslab ventilation system samples. Carbon dioxide concentrations exceeded the action level at some 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.

Methane was detected at a concentration above the RAWP action level of 0.5% of the LEL. The concentration will be monitored again in March and April of 2009 prior to the next scheduled monitoring event in May 2009 to see if it persists.

Inspection of the cap revealed a hole adjacent to the Middle School boiler room; the hole has been repaired as documented in the photographs included in Attachment D of this report.

This report is subject to the limitations contained in Attachment A.

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



Joseph Papandrea
Director of Field Services

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
February 12, 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	0.2	21.0	0	0	0.0
Elementary School inlet 2	0.0	0.1	21.4	0	0	0.0
Elementary School Outlet	0.0	0.2	20.9	0	0	0.0
Middle School front shed inlet	Not running - high water					
Middle School front shed after 2 nd carbon	Draining and restarting					
Middle School back shed inlet	0.0	0.2	20.6	0	0	0.0
Middle School back shed after 2 nd carbon	0.0	0.3	20.8	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm	10 ppm	5 ppm

Measurements made with: Landtec GEM 2000 Plus, MiniRae PID, RAE 4 gas meter, Fluke 975 Airmeter

Sampling Date: February 12, 2009

Measured By: Donna Pallister

Table 2
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
February 12, 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	0.0	625	21.5	0	0	0.0
E.S. Elevator	0.0	630	21.4	0	0	0.0
E.S. Faculty Work Room	0.0	615	21.3	0	0	0.0
E.S Gym	0.0	637	21.4	0	0	0.0
E.S. Hallway Outside Gym	0.0	609	21.3	0	0	0.0
E.S. Library	0.0	704	21.0	0	0	0.0
(GS - 8 Hall)	0.0	642	21.1	0	0	0.0
E.S. Stairway Stair B	0.0	522	21.3	0	0	0.0
E.S. Room 104	0.0	630	21.2	0	0	0.0
E.S. Cafeteria	0.0	775	21.0	0	0	0.0

Table 2 (continued)
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
February 12, 2009

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by Volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Office	0.0	566	20.6	0	0	0.0
M.S. Elevator	0.0	660	20.6	0	0	0.0
M.S. Music Room (now an art room)	0.0	820	20.7	0	0	0.0
M.S. Stairway near Elem. School	0.0	761	20.5	0	0	0.0
M.S. Near sensor #16 in hall outside cafeteria	0.0	798	20.6	0	0	0.0
M.S. GS-03	0.0	672	20.6	0	0	0.0
M.S Hallway Front N and near stairs GS-06	0.0	750	20.6	0	0	0.0
M.S. Hallway Front Near center GS-05	0.0	680	20.6	0	0	0.0

Table 2 (continued)
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
February 12, 2009

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by Volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Faculty Workroom 1 st Floor	0.0	749	20.6	0	0	0.0
M.S. Front Hall near sensor #4	0.0	584	20.6	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0.0	687	20.6	0	0	0.0
M.S. Stairway/Hartford Ave. near sensor #07	0.0	702	20.6	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm	10 ppm	5 ppm

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

Measurements made with: Fluke 975 Airmeter and Q-RAE plus Multi-Gas Monitor

PPM = Parts per million

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

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

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

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
February 10 & 26, 2009

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0.0	0.1	20.5	0	0	0.0
WB-2	0.0	0.1	20.3	0	0	0.0
WB-3	0.0	0.4	20.0	0	0	0.0
WB-4	0.0	0.1	22.3	0	0	0.0
WB-5	N/S	N/S	N/S	N/S	N/S	N/S
WB-6	0.0	0.1	22.3	0	0	0.0
WB-7	N/S	N/S	N/S	N/S	N/S	N/S
WB-8	0.0	0.1	20.9	0	0	0.0
WB-12	0.0	0.4	20.1	0	0	0.0
WB-13	0.0	0.6	20.0	0	0	0.0
WB-14	0.0	0.3	20.3	0	0	0.0
WB-15	0.0	0.1	20.4	0	0	0.0
EPL-1	0.0	0.2	21.5	0	0	0.5
EPL-2	0.0	0.2	21.3	0	0	0.6
EPL-3	0.0	1.6	19.4	0	0	0.5
EPL-4	0.0	1.1	19.3	0	0	0.3
EPL-5	0.0	1.6	18.3	0	0	0.0
ENE-1	0.0	1.0	19.0	0	0	0.0

Table 4
Soil Gas Survey Field Notes
Springfield Street School Complex
Providence, Rhode Island
February 10 & 26, 2009

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	0.1	20.1	0	0	0.0
MG2	0.0	1.8	19.3	0	0	0.0
MG3	0.0	0.1	20.2	0	0	0.0
MG4	0.0	0.4	20.9	0	0	0.8
MG5	0.0	0.8	19.5	0	0	0.0
MPL2	0.0	0.7	19.2	0	0	0.1
MPL3	0.0	2.2	18.0	0	0	0.0
MPL5	0.0	0.1	20.0	0	0	0.0
MPL6 (2/10/09)	0.0	2.2	10.9	0	0	0.4
MPL6 (2/26/09)	0.0	2.0	12.0	0	0	0.0
MPL7 (2/10/09)	1.4	3.1	11.2	0	0	0.0
MPL7 (2/26/09)	1.0	3.2	11.8	0	0	0.0
MPL8	0.0	1.7	19.0	0	0	0.0
Remedial Action Work Plan Action Levels	0.5%	1,000 PPM	NA	9 PPM	10 PPM	5 PPM

Sampled by: Joseph Papandrea

Weather Conditions: 2/10/09-Sunny, Temperature 20-25°F, 2/26/09-Cloudy,
Temperature 30-45°F

Sampling Equipment: Landtec GEM 2000 Plus (with internal H₂S pod), Landtec GEM
2000 (with external H₂S pod), MiniRae 2000 PID, QRae 4 gas meter

N/S = Not sampled. Well WB-7 contained water to top of casing. Well WB-5 was
beneath snow and ice and was not located at time of sampling.

Table 5
Results of Laboratory Analysis of Soil Gas
Springfield Street School Complex
Providence, Rhode Island

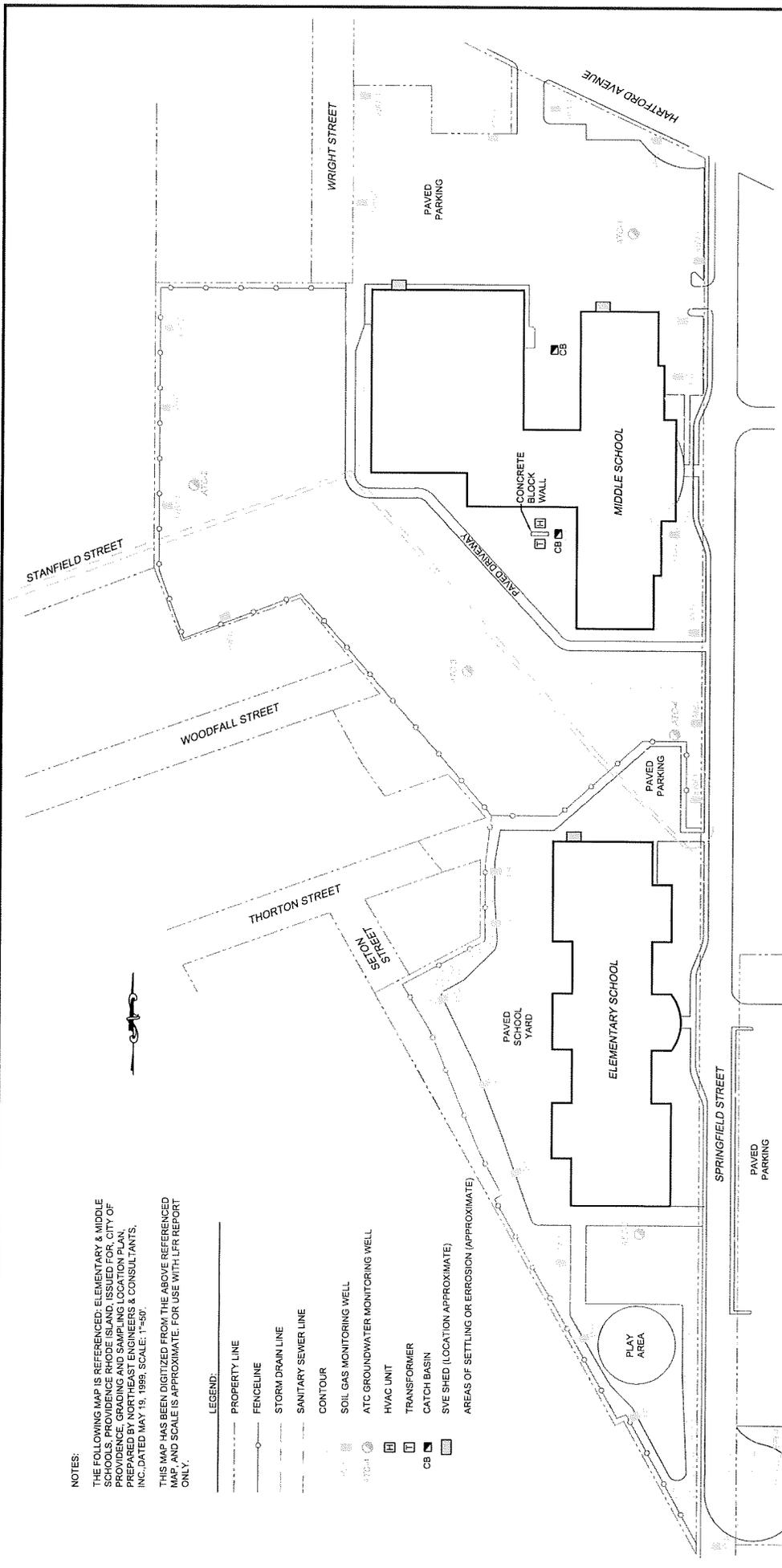
Parameter	OSHA PELs (PPBv)	Results of Analysis in parts per billion by volume (PPBv)																	
		MPL-6									WB-2								
		2/20/2007	5/17/2007	8/22/2007	11/14/2007	2/12/2008	5/21/2008	8/26/2008	11/26/2008	2/10/2009	2/20/2007	5/17/2007	8/22/2007	11/14/2007	2/12/2008	5/21/2008	8/26/2008	11/26/2008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

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

FIGURE

NOTES:
 THE FOLLOWING MAP IS REFERENCED: ELEMENTARY & MIDDLE SCHOOLS, PROVIDENCE RHODE ISLAND, ISSUED FOR CITY OF PROVIDENCE, GRADING AND SAMPLING LOCATION PLAN, PREPARED BY NORTHEAST ENGINEERS & CONSULTANTS, INC., DATED MAY 19, 1989, SCALE: 1"=50'.
 THIS MAP HAS BEEN DIGITIZED FROM THE ABOVE REFERENCED MAP, AND SCALE IS APPROXIMATE, FOR USE WITH LPR REPORT ONLY.

- LEGEND:
- PROPERTY LINE
 - FENCELINE
 - STORM DRAIN LINE
 - SANITARY SEWER LINE
 - CONTOUR
 - SOIL GAS MONITORING WELL
 - ATC GROUNDWATER MONITORING WELL
 - HVAC UNIT
 - TRANSFORMER
 - CATCH BASIN
 - CB
 - SVE SHED (LOCATION APPROXIMATE)
 - AREAS OF SETTLING OR EROSION (APPROXIMATE)



<p>LFR 250 Contoiville Road Building E Suite 12 Warwick, Rhode Island 02886 Phone: (401) 738-3887 Fax: (401) 732-1686</p>	DATE: 4-7-03	4-7-03	PPH	DP
	DRAWN BY: PPH	REVIEWED BY: DP	APPROVED BY: AS NOTED	SCALE: 081-12027-00
TITLE: SITE PLAN		LOCATION: SPRINGFIELD STREET SCHOOL COMPLEX PROVIDENCE, RHODE ISLAND		
FIGURE: 1				



Attachment A

Limitations

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 Report for Soil Gas and Groundwater



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

REPORT DATE 2/18/2009

LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886
ATTN: DONNA PALLISTER

CONTRACT NUMBER:
PURCHASE ORDER NUMBER:

PROJECT NUMBER: 081-12152-05

ANALYTICAL SUMMARY

LIMS BAT #: LIMIT-23232
JOB NUMBER: 081-12152-05

PROJECT LOCATION: SPRINGFIELD STREET

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	Subcontract Lab (if any) Cert. Nos.
MPL-6	09B03984	AIR	Not Specified	to-14 ppbv	
MPL-6	09B03984	AIR	Not Specified	to-14 ug/m3	

Comments :

LIMS BATCH NO. : LIMIT-23232

In method TO- 14 sample was taken in a tedlar bag. Holding times and stability for samples taken in tedlar bags have not been determined.

In method TO-14, any reported result for 1,2-dichloropropane in sample is estimated and likely to be biased on the low side based on continuing calibration bias.

In method TO-14, method blank associated with sample contained methylene chloride at 0.05 ppbv = 0.19 ug/m3.

The results of analyses performed are based on samples as submitted to the laboratory and relate only to the items collected and tested.

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations. AIHA accreditations only apply to NIOSH methods and Environmental Lead Analyses.

AIHA 100033	AIHA ELLAP (LEAD) 100033	NORTH CAROLINA CERT. # 652
MASSACHUSETTS MA0100	NEW HAMPSHIRE NELAP 2516	NEW JERSEY NELAP NJ MA007 (AIR)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036	FLORIDA DOH E871027 (AIR)
NEW YORK ELAP/NELAP 10899	RHODE ISLAND (LIC. No. 112)	

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.

Edward Denson 2/18/09

SIGNATURE

DATE

Tod Kopyscinski
Air Laboratory Manager

Michael Erickson
Assistant Laboratory Director

Edward Denson
Technical Director

Daren Damboragian
Organics Department Supervisor

* See end of data tabulation for notes and comments pertaining to this sample



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

DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

2/18/2009

Page 1 of 5

Project Location: SPRINGFIELD STREET
Date Received: 2/12/2009
Field Sample #: MPL-6

Purchase Order No.:

Project Number: 081-12152-05

LIMS-BAT #: LIMIT-23232

Job Number: 081-12152-05

Sample ID : 09B03984

‡Sampled : 2/10/2009

Not Specified

Sample Matrix: AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Benzene	PPBv	0.31	02/13/09	TPH	0.10			
Bromomethane	PPBv	ND	02/13/09	TPH	0.10			
Carbon Tetrachloride	PPBv	ND	02/13/09	TPH	0.10			
Chlorobenzene	PPBv	ND	02/13/09	TPH	0.10			
Chloroethane	PPBv	ND	02/13/09	TPH	0.10			
Chloroform	PPBv	ND	02/13/09	TPH	0.10			
Chloromethane	PPBv	0.39	02/13/09	TPH	0.10			
1,2-Dibromoethane	PPBv	ND	02/13/09	TPH	0.10			
1,2-Dichlorobenzene	PPBv	ND	02/13/09	TPH	0.10			
1,3-Dichlorobenzene	PPBv	ND	02/13/09	TPH	0.10			
1,4-Dichlorobenzene	PPBv	0.13	02/13/09	TPH	0.10			
Dichlorodifluoromethane	PPBv	0.44	02/13/09	TPH	0.10			
1,1-Dichloroethane	PPBv	ND	02/13/09	TPH	0.10			
1,2-Dichloroethane	PPBv	ND	02/13/09	TPH	0.10			
1,1-Dichloroethylene	PPBv	ND	02/13/09	TPH	0.10			
cis-1,2-Dichloroethylene	PPBv	ND	02/13/09	TPH	0.10			
1,2-Dichloropropane	PPBv	ND	02/13/09	TPH	0.10			
cis-1,3-Dichloropropene	PPBv	ND	02/13/09	TPH	0.10			
trans-1,3-Dichloropropene	PPBv	ND	02/13/09	TPH	0.10			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	02/13/09	TPH	0.10			
Ethylbenzene	PPBv	0.36	02/13/09	TPH	0.10			
Hexachlorobutadiene	PPBv	ND	02/13/09	TPH	0.20			
Methylene Chloride	PPBv	1.7	02/13/09	TPH	0.10			
Styrene	PPBv	0.36	02/13/09	TPH	0.10			
1,1,2,2-Tetrachloroethane	PPBv	ND	02/13/09	TPH	0.10			
Tetrachloroethylene	PPBv	0.33	02/13/09	TPH	0.10			
Toluene	PPBv	4.1	02/13/09	TPH	0.10			
1,2,4-Trichlorobenzene	PPBv	ND	02/13/09	TPH	0.10			
1,1,1-Trichloroethane	PPBv	ND	02/13/09	TPH	0.10			

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

2/18/2009
Page 2 of 5

Project Location: SPRINGFIELD STREET
Date Received: 2/12/2009
Field Sample #: MPL-6

Purchase Order No.:

Project Number: 081-12152-05
LIMS-BAT #: LIMT-23232
Job Number: 081-12152-05

Sample ID : 09B03984

‡Sampled : 2/10/2009

Not Specified

Sample Matrix: AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
1,1,2-Trichloroethane	PPBv	ND	02/13/09	TPH	0.10			
Trichloroethylene	PPBv	ND	02/13/09	TPH	0.10			
Trichlorofluoromethane (Freon 11)	PPBv	0.28	02/13/09	TPH	0.10			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	02/13/09	TPH	0.10			
1,2,4-Trimethylbenzene	PPBv	0.24	02/13/09	TPH	0.10			
1,3,5-Trimethylbenzene	PPBv	ND	02/13/09	TPH	0.10			
Vinyl Chloride	PPBv	ND	02/13/09	TPH	0.10			
m/p-Xylene	PPBv	0.95	02/13/09	TPH	0.20			
o-Xylene	PPBv	0.32	02/13/09	TPH	0.10			

Analytical Method:

EPA TO-14A

SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

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WARWICK, RI 02886

2/18/2009

Page 3 of 5

Project Location: SPRINGFIELD STREET
Date Received: 2/12/2009

Purchase Order No.:

Project Number: 081-12152-05

LIMS-BAT #: LIMIT-23232

Job Number: 081-12152-05

Field Sample #: MPL-6

Sample ID : 09B03984

‡Sampled : 2/10/2009

Not Specified

Sample Matrix: AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Benzene	ug/m3	1.0	02/13/09	TPH	0.32			
Bromomethane	ug/m3	ND	02/13/09	TPH	0.38			
Carbon Tetrachloride	ug/m3	ND	02/13/09	TPH	0.62			
Chlorobenzene	ug/m3	ND	02/13/09	TPH	0.46			
Chloroethane	ug/m3	ND	02/13/09	TPH	0.26			
Chloroform	ug/m3	ND	02/13/09	TPH	0.48			
Chloromethane	ug/m3	0.81	02/13/09	TPH	0.20			
1,2-Dibromoethane	ug/m3	ND	02/13/09	TPH	0.76			
1,2-Dichlorobenzene	ug/m3	ND	02/13/09	TPH	0.60			
1,3-Dichlorobenzene	ug/m3	ND	02/13/09	TPH	0.60			
1,4-Dichlorobenzene	ug/m3	0.79	02/13/09	TPH	0.60			
Dichlorodifluoromethane	ug/m3	2.2	02/13/09	TPH	0.50			
1,1-Dichloroethane	ug/m3	ND	02/13/09	TPH	0.40			
1,2-Dichloroethane	ug/m3	ND	02/13/09	TPH	0.40			
1,1-Dichloroethylene	ug/m3	ND	02/13/09	TPH	0.40			
cis-1,2-Dichloroethylene	ug/m3	ND	02/13/09	TPH	0.40			
1,2-Dichloropropane	ug/m3	ND	02/13/09	TPH	0.46			
cis-1,3-Dichloropropene	ug/m3	ND	02/13/09	TPH	0.44			
trans-1,3-Dichloropropene	ug/m3	ND	02/13/09	TPH	0.44			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	02/13/09	TPH	0.70			
Hexachlorobutadiene	ug/m3	ND	02/13/09	TPH	2.2			
Methylene Chloride	ug/m3	5.9	02/13/09	TPH	0.34			
Styrene	ug/m3	1.5	02/13/09	TPH	0.42			
1,1,2,2-Tetrachloroethane	ug/m3	ND	02/13/09	TPH	0.68			
Tetrachloroethylene	ug/m3	2.2	02/13/09	TPH	0.68			
Toluene	ug/m3	15	02/13/09	TPH	0.38			
1,2,4-Trichlorobenzene	ug/m3	ND	02/13/09	TPH	0.74			
1,1,1-Trichloroethane	ug/m3	ND	02/13/09	TPH	0.54			
1,1,2-Trichloroethane	ug/m3	ND	02/13/09	TPH	0.54			

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2/18/2009
 Page 4 of 5

Project Location: SPRINGFIELD STREET
 Date Received: 2/12/2009
 Field Sample #: MPL-6

Purchase Order No.:

Project Number: 081-12152-05
 LIMS-BAT #: LIMT-23232
 Job Number: 081-12152-05

Sample ID : 09B03984

‡Sampled : 2/10/2009
 Not Specified

Sample Matrix: AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Trichloroethylene	ug/m3	ND	02/13/09	TPH	0.54			
Trichlorofluoromethane	ug/m3	1.6	02/13/09	TPH	0.56			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	02/13/09	TPH	0.76			
1,2,4-Trimethylbenzene	ug/m3	1.2	02/13/09	TPH	0.50			
1,3,5-Trimethylbenzene	ug/m3	ND	02/13/09	TPH	0.50			
Vinyl Chloride	ug/m3	ND	02/13/09	TPH	0.26			
m/p-Xylene	ug/m3	4.1	02/13/09	TPH	0.86			
o-Xylene	ug/m3	1.4	02/13/09	TPH	0.44			

Analytical Method:

EPA TO-14A

SAMPLES ARE TAKEN IN SUMMA CANISTERS AND ANALYZED BY GAS CHROMATOGRAPHY WITH MASS SPECTROMETRY DETECTION. (GC/MS)

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

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DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

Project Location: SPRINGFIELD STREET
Date Received: 2/12/2009

Purchase Order No.:

** END OF REPORT **

2/18/2009
Page 5 of 5

Project Number: 081-12152-05
LIMS-BAT #: LIMT-23232
Job Number: 081-12152-05

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

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SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.



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

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/18/2009

Lims Bat # : LIMT-23232

Page 1 of 6

QC Batch Number: BATCH-16027

Sample Id	Analysis	QC Analysis	Values	Units	Limits
09B03984	4-Bromofluorobenzene	Surrogate Recovery	82.75	%	70-130
BLANK-129524	Benzene	Blank	<0.08	ug/m3	
	Carbon Tetrachloride	Blank	<0.16	ug/m3	
	Chloroform	Blank	<0.12	ug/m3	
	1,2-Dichloroethane	Blank	<0.10	ug/m3	
	1,4-Dichlorobenzene	Blank	<0.15	ug/m3	
	Ethylbenzene	Blank	<0.11	ug/m3	
	Styrene	Blank	<0.11	ug/m3	
	Tetrachloroethylene	Blank	<0.17	ug/m3	
	Toluene	Blank	<0.10	ug/m3	
	1,1,1-Trichloroethane	Blank	<0.14	ug/m3	
	Trichloroethylene	Blank	<0.14	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<0.19	ug/m3	
	Trichlorofluoromethane	Blank	<0.14	ug/m3	
	o-Xylene	Blank	<0.11	ug/m3	
	m/p-Xylene	Blank	<0.22	ug/m3	
	1,2-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,3-Dichlorobenzene	Blank	<0.15	ug/m3	
	1,1-Dichloroethane	Blank	<0.10	ug/m3	
	1,1-Dichloroethylene	Blank	<0.10	ug/m3	
	Vinyl Chloride	Blank	<0.07	ug/m3	
	Methylene Chloride	Blank	0.19	ug/m3	
	Chlorobenzene	Blank	<0.12	ug/m3	
	Chloromethane	Blank	<0.05	ug/m3	
	Bromomethane	Blank	<0.10	ug/m3	
	Chloroethane	Blank	<0.07	ug/m3	
	cis-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	trans-1,3-Dichloropropene	Blank	<0.11	ug/m3	
	1,1,2-Trichloroethane	Blank	<0.14	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<0.17	ug/m3	
	Hexachlorobutadiene	Blank	<0.54	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<0.19	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<0.13	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<0.13	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<0.10	ug/m3	
	1,2-Dichloropropane	Blank	<0.12	ug/m3	
	Dichlorodifluoromethane	Blank	<0.13	ug/m3	
	1,2-Dibromoethane	Blank	<0.19	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<0.18	ug/m3	
LFBLANK-91608	Benzene	Lab Fort Blank Amt.	15.95	ug/m3	
		Lab Fort Blk. Found	12.30	ug/m3	



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

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/18/2009

Lims Bat # : LIMIT-23232

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QC Batch Number: BATCH-16027

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91608	Benzene	Lab Fort Blk. % Rec.	77.11	%	70-130
		Lab Fort Blank Amt.	31.45	ug/m3	
	Carbon Tetrachloride	Lab Fort Blk. Found	29.09	ug/m3	
		Lab Fort Blk. % Rec.	92.49	%	70-130
		Lab Fort Blank Amt.	24.33	ug/m3	
	Chloroform	Lab Fort Blk. Found	23.42	ug/m3	
		Lab Fort Blk. % Rec.	96.23	%	70-130
		Lab Fort Blank Amt.	20.24	ug/m3	
	1,2-Dichloroethane	Lab Fort Blk. Found	18.48	ug/m3	
		Lab Fort Blk. % Rec.	91.30	%	70-130
		Lab Fort Blank Amt.	30.06	ug/m3	
	1,4-Dichlorobenzene	Lab Fort Blk. Found	35.28	ug/m3	
		Lab Fort Blk. % Rec.	117.38	%	70-130
		Lab Fort Blank Amt.	21.67	ug/m3	
	Ethylbenzene	Lab Fort Blk. Found	19.00	ug/m3	
		Lab Fort Blk. % Rec.	87.68	%	70-130
		Lab Fort Blank Amt.	21.26	ug/m3	
	Styrene	Lab Fort Blk. Found	20.76	ug/m3	
		Lab Fort Blk. % Rec.	97.61	%	70-130
		Lab Fort Blank Amt.	33.90	ug/m3	
	Tetrachloroethylene	Lab Fort Blk. Found	36.55	ug/m3	
		Lab Fort Blk. % Rec.	107.80	%	70-130
		Lab Fort Blank Amt.	18.81	ug/m3	
	Toluene	Lab Fort Blk. Found	16.14	ug/m3	
		Lab Fort Blk. % Rec.	85.80	%	70-130
		Lab Fort Blank Amt.	27.28	ug/m3	
	1,1,1-Trichloroethane	Lab Fort Blk. Found	22.58	ug/m3	
		Lab Fort Blk. % Rec.	82.80	%	70-130
		Lab Fort Blank Amt.	26.87	ug/m3	
	Trichloroethylene	Lab Fort Blk. Found	22.85	ug/m3	
		Lab Fort Blk. % Rec.	85.05	%	70-130
		Lab Fort Blank Amt.	38.31	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Lab Fort Blk. Found	43.24	ug/m3	
		Lab Fort Blk. % Rec.	112.86	%	70-130
		Lab Fort Blank Amt.	28.09	ug/m3	
	Trichlorofluoromethane	Lab Fort Blk. Found	30.13	ug/m3	
		Lab Fort Blk. % Rec.	107.26	%	70-130
		Lab Fort Blank Amt.	21.71	ug/m3	
	o-Xylene	Lab Fort Blk. Found	19.28	ug/m3	
		Lab Fort Blk. % Rec.	88.78	%	70-130
		Lab Fort Blank Amt.	43.43	ug/m3	
	m/p-Xylene	Lab Fort Blk. Found	38.98	ug/m3	
		Lab Fort Blk. % Rec.	89.76	%	70-130
		Lab Fort Blank Amt.			



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/18/2009

Lims Bat # : LIMT-23232

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QC Batch Number: BATCH-16027

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91608	1,2-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	36.07	ug/m3	
		Lab Fort Blk. % Rec.	120.02	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	30.06	ug/m3	
		Lab Fort Blk. Found	35.49	ug/m3	
		Lab Fort Blk. % Rec.	118.06	%	70-130
	1,1-Dichloroethane	Lab Fort Blank Amt.	20.24	ug/m3	
		Lab Fort Blk. Found	17.49	ug/m3	
		Lab Fort Blk. % Rec.	86.42	%	70-130
	1,1-Dichloroethylene	Lab Fort Blank Amt.	19.83	ug/m3	
		Lab Fort Blk. Found	20.01	ug/m3	
		Lab Fort Blk. % Rec.	100.92	%	70-130
Vinyl Chloride		Lab Fort Blank Amt.	12.78	ug/m3	
		Lab Fort Blk. Found	11.95	ug/m3	
		Lab Fort Blk. % Rec.	93.50	%	70-130
Methylene Chloride		Lab Fort Blank Amt.	17.36	ug/m3	
		Lab Fort Blk. Found	18.67	ug/m3	
		Lab Fort Blk. % Rec.	107.58	%	70-130
Chlorobenzene		Lab Fort Blank Amt.	23.02	ug/m3	
		Lab Fort Blk. Found	22.46	ug/m3	
		Lab Fort Blk. % Rec.	97.53	%	70-130
Chloromethane		Lab Fort Blank Amt.	10.32	ug/m3	
		Lab Fort Blk. Found	9.74	ug/m3	
		Lab Fort Blk. % Rec.	94.36	%	70-130
Bromomethane		Lab Fort Blank Amt.	19.40	ug/m3	
		Lab Fort Blk. Found	21.04	ug/m3	
		Lab Fort Blk. % Rec.	108.42	%	70-130
Chloroethane		Lab Fort Blank Amt.	13.19	ug/m3	
		Lab Fort Blk. Found	13.69	ug/m3	
		Lab Fort Blk. % Rec.	103.80	%	70-130
cis-1,3-Dichloropropene		Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	18.57	ug/m3	
		Lab Fort Blk. % Rec.	81.83	%	70-130
trans-1,3-Dichloropropene		Lab Fort Blank Amt.	22.69	ug/m3	
		Lab Fort Blk. Found	19.38	ug/m3	
		Lab Fort Blk. % Rec.	85.37	%	70-130
1,1,2-Trichloroethane		Lab Fort Blank Amt.	27.28	ug/m3	
		Lab Fort Blk. Found	23.16	ug/m3	
		Lab Fort Blk. % Rec.	84.92	%	70-130
1,1,2,2-Tetrachloroethane		Lab Fort Blank Amt.	34.33	ug/m3	
		Lab Fort Blk. Found	30.55	ug/m3	
		Lab Fort Blk. % Rec.	89.00	%	70-130
Hexachlorobutadiene		Lab Fort Blank Amt.	53.33	ug/m3	



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QC SUMMARY REPORT

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Method Blanks

Report Date: 2/18/2009

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QC Batch Number: BATCH-16027

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91608	Hexachlorobutadiene	Lab Fort Blk. Found	64.73	ug/m3	
		Lab Fort Blk. % Rec.	121.38	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	37.10	ug/m3	
		Lab Fort Blk. Found	51.25	ug/m3	
	1,2,4-Trimethylbenzene	Lab Fort Blk. % Rec.	138.12	%	70-130
		Lab Fort Blank Amt.	24.58	ug/m3	
	1,3,5-Trimethylbenzene	Lab Fort Blk. Found	24.56	ug/m3	
		Lab Fort Blk. % Rec.	99.94	%	70-130
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	24.58	ug/m3	
		Lab Fort Blk. Found	23.93	ug/m3	
	1,2-Dichloropropane	Lab Fort Blk. % Rec.	97.38	%	70-130
		Lab Fort Blank Amt.	19.82	ug/m3	
	Dichlorodifluoromethane	Lab Fort Blk. Found	17.95	ug/m3	
		Lab Fort Blk. % Rec.	90.53	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	23.10	ug/m3	
		Lab Fort Blk. Found	16.42	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Lab Fort Blk. % Rec.	71.09	%	70-130
		Lab Fort Blank Amt.	24.72	ug/m3	
		Lab Fort Blk. Found	23.76	ug/m3	
		Lab Fort Blk. % Rec.	96.11	%	70-130
		Lab Fort Blank Amt.	38.42	ug/m3	
		Lab Fort Blk. Found	35.31	ug/m3	
		Lab Fort Blk. % Rec.	91.90	%	70-130
		Lab Fort Blank Amt.	34.95	ug/m3	
		Lab Fort Blk. Found	35.30	ug/m3	
		Lab Fort Blk. % Rec.	101.00	%	70-130



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/18/2009

Lims Bat # : LIMT-23232

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NOTES:

QC Batch No. : BATCH-16027

Sample ID : LFBLANK-91608

Analysis : 1,2,4-Trichlorobenzene

LABORATORY FORTIFIED BLANK 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.



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 2/18/2009

Lims Bat #: LIMT-23232

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QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.

LIMITS Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.

Sample Amount Amount of analyte found in a sample.

Blank Method Blank that has been taken though all the steps of the analysis.

LFBLANK Laboratory Fortified Blank (a control sample)

STDADD Standard Added (a laboratory control sample)

Matrix Spk Amt Added Amount of analyte spiked into a sample
MS Amt Measured Amount of analyte found including amount that was spiked
Matrix Spike % Rec. % Recovery of spiked amount in sample.

Duplicate Value The result from the Duplicate analysis of the sample.
Duplicate RPD The Relative Percent Difference between two Duplicate Analyses.

Surrogate Recovery The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.

Sur. Recovery (ELCD) Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID) Surrogate Recovery on the Photoionization Detector.

Standard Measured Amount measured for a laboratory control sample
Standard Amt Added Known value for a laboratory control sample
Standard % Recovery % recovered for a laboratory control sample with a known value.

Lab Fort Blank Amt Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).

Lab Fort Bl. Av. Rec. Laboratory Fortified Blank Average Recovery

Duplicate Sample Amt Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured Matrix Spike Duplicate Amount Measured
MSD % Recovery Matrix Spike Duplicate % Recovery
MSD Range Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries



www.contestlabs.com

39 Spruce Street
East Longmeadow, MA
Phone: 1-413-525-2332
Fax: 1-413-525-6405

AIR ONLY RECEIPT CHECKLIST

CLIENT NAME: LFR
RECEIVED BY: Km DATE: 02/12/09

- 1. Was chain of custody relinquished and signed? YES NO
- 2. Does Chain agree with samples? YES NO

If not, explain: _____

- 3. All Samples in good condition? YES NO

If not, explain: _____

- 4. Are there any on hold samples? YES NO STORED WHERE: _____

- 5. ARE THERE ANY RUSH OR SHORT HOLDING TIME SAMPLES? WHO WAS NOTIFIED? TPA DATE 02/12/09 TIME _____

Location where samples are stored: AIR

Permission to sub-contract samples? Yes No (circle)
(Walk in clients only) if not already approved.
Client Signature _____

CONTAINERS SENT TO CON-TEST	# of containers
Summa cans	
Tedlar Bags	1
Regulators	
Restrictors	
Tubes	
Other	

- 1. Was all media (used & unused) checked into the WASP asset management program? Y
- 2. Were all returned summa cans, restrictors, & regulators documented as returned in the AIR Lab Outbound excel sheet? Y
- 3. Were the Lab ID's documented in the Air Lab Outbound excel sheet? Y
- 4. Was the job documented in the Air Lab Log-In Access Database? Y

Laboratory comments: _____



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REPORT DATE 2/17/2009

LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886
ATTN: DONNA PALLISTER

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMIT-23225
JOB NUMBER: 081-12152-05

PROJECT LOCATION: SPRINGFIELD STREET, PROVIDENCE, RI.

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	Subcontract Lab (if any) Cert. Nos.
ATC-1	09B03954	GRND WATER	Not Specified	8260 water	
ATC-4	09B03952	GRND WATER	Not Specified	8260 water	
ATC-5	09B03953	GRND WATER	Not Specified	8260 water	
TRIP BLANK	09B03955	WATER OTHE	Not Specified	8260 water	



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REPORT DATE 2/17/2009

LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886
ATTN: DONNA PALLISTER

CONTRACT NUMBER:
PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #: LIMIT-23225
JOB NUMBER: 081-12152-05

Comments :

LIMS BATCH NO. : LIMIT-23225

In method 8260, the initial and/or continuing calibration did not meet method specifications. For all samples, 1,4-Dioxane was calibrated with a relative response factor <0.05.

In method 8260, the initial calibration did not meet method specifications. For all samples, Bromomethane was calibrated by linear regression with a correlation coefficient <0.99. Reduced accuracy and precision are anticipated for any reported result for this compound.

In method 8260, any reported result for tert-Butyl Alcohol, Acrylonitrile, 2-Hexanone, Naphthalene, trans-1,4-Dichloro-2-butene, 1,2,4-Trichlorobenzene, Hexachlorobutadiene, and 1,2,3-Trichlorobenzene in all samples is estimated and likely to be biased on the low side based on continuing calibration bias.

In method 8260 for Bromomethane in all samples, data is not affected by continuing calibration non-conformance since bias is on the high side and all results are "not detected".

In method 8260, any reported result for Methyl Isobutyl Ketone, 1,2,3-Trichlorobenzene, 2-Hexanone, and trans-1,4-Dichloro-2-butene in all samples is likely to be biased on the low side based on laboratory fortified blank (laboratory control sample) recovery bias.

In method 8260, data is not affected by laboratory fortified blank (laboratory control sample) recovery outlier(s) for Methylene Chloride since all results are "not detected" and recovery bias is on the high side.

The results of analyses performed are based on samples as submitted to the laboratory and relate only to the items collected and tested.

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations. AIHA accreditations only apply to NIOSH methods and Environmental Lead Analyses.

AIHA 100033	AIHA ELLAP (LEAD) 100033	NORTH CAROLINA CERT. #652
MASSACHUSETTS MA0100	NEW HAMPSHIRE NELAP 2516	NEW JERSEY NELAP NJ MA007 (AIR)
CONNECTICUT PH-0567	VERMONT DOH (LEAD) No. LL015036	FLORIDA DOH E871027 (AIR)
NEW YORK ELAP/NELAP 10899	RHODE ISLAND (LIC. No. 112)	

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.

Edward Denson 2/18/09
SIGNATURE DATE

Tod Kopyscinski
Air Laboratory Manager

Michael Erickson
Assistant Laboratory Director

Edward Denson
Technical Director

Daren Damboragian
Organics Department Supervisor

* See end of data tabulation for notes and comments pertaining to this sample



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DONNA PALLISTER
 LFR, INC. - RI
 300 METRO CENTER BLVD., SUITE 250
 WARWICK, RI 02886

Purchase Order No.: 5131

2/17/2009
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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
 Date Received: 2/12/2009

LIMS-BAT #: LIMT-23225
 Job Number: 081-12152-05

Field Sample #: ATC-1

Sample ID: 09B03954 ‡Sampled: 2/10/2009
 Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	50.0		02/14/09	MFF
Acrylonitrile	ug/l	ND	5.0		02/14/09	MFF
tert-Amylmethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Benzene	ug/l	ND	1.0		02/14/09	MFF
Bromobenzene	ug/l	ND	1.0		02/14/09	MFF
Bromochloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromodichloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromoform	ug/l	ND	5.0		02/14/09	MFF
Bromomethane	ug/l	ND	2.0		02/14/09	MFF
2-Butanone (MEK)	ug/l	ND	20.0		02/14/09	MFF
tert-Butyl Alcohol	ug/l	ND	20.0		02/14/09	MFF
n-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
sec-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Carbon Disulfide	ug/l	ND	5.0		02/14/09	MFF
Carbon Tetrachloride	ug/l	ND	1.0		02/14/09	MFF
Chlorobenzene	ug/l	ND	1.0		02/14/09	MFF
Chlorodibromomethane	ug/l	ND	5.0		02/14/09	MFF
Chloroethane	ug/l	ND	2.0		02/14/09	MFF
Chloroform	ug/l	ND	2.0		02/14/09	MFF
Chloromethane	ug/l	ND	2.0		02/14/09	MFF
2-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
4-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dibromo-3-Chloropropane	ug/l	ND	5.0		02/14/09	MFF
1,2-Dibromoethane	ug/l	ND	0.50		02/14/09	MFF
Dibromomethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,4-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
trans-1,4-Dichloro-2-Butene	ug/l	ND	5.0		02/14/09	MFF
Dichlorodifluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,1-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF

RL = Reporting Limit

ND = Not Detected at or above the Reporting Limit

NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled



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DONNA PALLISTER

LFR, INC. - RI

300 METRO CENTER BLVD., SUITE 250

WARWICK, RI 02886

Purchase Order No.: 5131

2/17/2009

Page 2 of 13

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.

LIMS-BAT #: LIMIT-23225

Date Received: 2/12/2009

Job Number: 081-12152-05

Field Sample #: ATC-1

Sample ID: 09B03954

‡Sampled: 2/10/2009

Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
cis-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
trans-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichloropropane	ug/l	ND	0.5		02/14/09	MFF
2,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloropropene	ug/l	ND	2.0		02/14/09	MFF
cis-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
trans-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
Diethyl Ether	ug/l	ND	2.0		02/14/09	MFF
Diisopropyl Ether	ug/l	ND	0.5		02/14/09	MFF
1,4-Dioxane	ug/l	ND	50.0		02/14/09	MFF
Ethyl Benzene	ug/l	ND	1.0		02/14/09	MFF
Hexachlorobutadiene	ug/l	ND	1.0		02/14/09	MFF
2-Hexanone	ug/l	ND	10.0		02/14/09	MFF
Isopropylbenzene	ug/l	ND	1.0		02/14/09	MFF
p-Isopropyltoluene	ug/l	ND	1.0		02/14/09	MFF
MTBE	ug/l	ND	1.0		02/14/09	MFF
Methylene Chloride	ug/l	ND	5.0		02/14/09	MFF
MIBK	ug/l	ND	10.0		02/14/09	MFF
Naphthalene	ug/l	ND	5.0		02/14/09	MFF
n-Propylbenzene	ug/l	ND	1.0		02/14/09	MFF
Styrene	ug/l	ND	1.0		02/14/09	MFF
1,1,1,2-Tetrachloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		02/14/09	MFF
Tetrachloroethylene	ug/l	ND	1.0		02/14/09	MFF
Tetrahydrofuran	ug/l	ND	10.0		02/14/09	MFF
Toluene	ug/l	ND	1.0		02/14/09	MFF
1,2,3-Trichlorobenzene	ug/l	ND	5.0		02/14/09	MFF
1,2,4-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,1,1-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
Trichloroethylene	ug/l	ND	1.0		02/14/09	MFF
Trichlorofluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,2,3-Trichloropropane	ug/l	ND	2.0		02/14/09	MFF

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NM = Not Measured

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‡ = See attached chain-of-custody record for time sampled



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

DONNA PALLISTER

LFR, INC. - RI

300 METRO CENTER BLVD., SUITE 250

WARWICK, RI 02886

Purchase Order No.: 5131

2/17/2009

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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.

LIMS-BAT #: LIMIT-23225

Date Received: 2/12/2009

Job Number: 081-12152-05

Field Sample #: ATC-1

Sample ID: 09B03954

‡Sampled: 2/10/2009

Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	ND	1.0		02/14/09	MFF
1,2,4-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
Vinyl Chloride	ug/l	ND	2.0		02/14/09	MFF
m + p Xylene	ug/l	ND	2.0		02/14/09	MFF
o-Xylene	ug/l	ND	1.0		02/14/09	MFF

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Purchase Order No.: 5131

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
 Date Received: 2/12/2009

LIMS-BAT #: LIMIT-23225
 Job Number: 081-12152-05

Field Sample #: ATC-4

Sample ID: 09B03952 ‡Sampled: 2/10/2009
 Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	50.0		02/14/09	MFF
Acrylonitrile	ug/l	ND	5.0		02/14/09	MFF
tert-Amylmethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Benzene	ug/l	ND	1.0		02/14/09	MFF
Bromobenzene	ug/l	ND	1.0		02/14/09	MFF
Bromochloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromodichloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromoform	ug/l	ND	5.0		02/14/09	MFF
Bromomethane	ug/l	ND	2.0		02/14/09	MFF
2-Butanone (MEK)	ug/l	ND	20.0		02/14/09	MFF
tert-Butyl Alcohol	ug/l	ND	20.0		02/14/09	MFF
n-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
sec-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Carbon Disulfide	ug/l	ND	5.0		02/14/09	MFF
Carbon Tetrachloride	ug/l	ND	1.0		02/14/09	MFF
Chlorobenzene	ug/l	ND	1.0		02/14/09	MFF
Chlorodibromomethane	ug/l	ND	5.0		02/14/09	MFF
Chloroethane	ug/l	ND	2.0		02/14/09	MFF
Chloroform	ug/l	ND	2.0		02/14/09	MFF
Chloromethane	ug/l	ND	2.0		02/14/09	MFF
2-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
4-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dibromo-3-Chloropropane	ug/l	ND	5.0		02/14/09	MFF
1,2-Dibromoethane	ug/l	ND	0.50		02/14/09	MFF
Dibromomethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,4-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
trans-1,4-Dichloro-2-Butene	ug/l	ND	5.0		02/14/09	MFF
Dichlorodifluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,1-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF

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WARWICK, RI 02886

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Purchase Order No.: 5131

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMIT-23225
Job Number: 081-12152-05

Field Sample #: ATC-4

Sample ID: 09B03952 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
cis-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
trans-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichloropropane	ug/l	ND	0.5		02/14/09	MFF
2,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloropropene	ug/l	ND	2.0		02/14/09	MFF
cis-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
trans-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
Diethyl Ether	ug/l	ND	2.0		02/14/09	MFF
Diisopropyl Ether	ug/l	ND	0.5		02/14/09	MFF
1,4-Dioxane	ug/l	ND	50.0		02/14/09	MFF
Ethyl Benzene	ug/l	ND	1.0		02/14/09	MFF
Hexachlorobutadiene	ug/l	ND	1.0		02/14/09	MFF
2-Hexanone	ug/l	ND	10.0		02/14/09	MFF
Isopropylbenzene	ug/l	ND	1.0		02/14/09	MFF
p-Isopropyltoluene	ug/l	ND	1.0		02/14/09	MFF
MTBE	ug/l	ND	1.0		02/14/09	MFF
Methylene Chloride	ug/l	ND	5.0		02/14/09	MFF
MIBK	ug/l	ND	10.0		02/14/09	MFF
Naphthalene	ug/l	ND	5.0		02/14/09	MFF
n-Propylbenzene	ug/l	ND	1.0		02/14/09	MFF
Styrene	ug/l	ND	1.0		02/14/09	MFF
1,1,1,2-Tetrachloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		02/14/09	MFF
Tetrachloroethylene	ug/l	ND	1.0		02/14/09	MFF
Tetrahydrofuran	ug/l	ND	10.0		02/14/09	MFF
Toluene	ug/l	ND	1.0		02/14/09	MFF
1,2,3-Trichlorobenzene	ug/l	ND	5.0		02/14/09	MFF
1,2,4-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,1,1-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
Trichloroethylene	ug/l	ND	1.0		02/14/09	MFF
Trichlorofluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,2,3-Trichloropropane	ug/l	ND	2.0		02/14/09	MFF

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DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

Purchase Order No.: 5131

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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMT-23225
Job Number: 081-12152-05

Field Sample #: ATC-4

Sample ID: 09B03952 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	ND	1.0		02/14/09	MFF
1,2,4-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
Vinyl Chloride	ug/l	ND	2.0		02/14/09	MFF
m + p Xylene	ug/l	ND	2.0		02/14/09	MFF
o-Xylene	ug/l	ND	1.0		02/14/09	MFF

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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
 Date Received: 2/12/2009

LIMS-BAT #: LIMT-23225
 Job Number: 081-12152-05

Field Sample #: ATC-5

Sample ID: 09B03953 ‡Sampled: 2/10/2009
 Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	50.0		02/14/09	MFF
Acrylonitrile	ug/l	ND	5.0		02/14/09	MFF
tert-Amylmethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Benzene	ug/l	ND	1.0		02/14/09	MFF
Bromobenzene	ug/l	ND	1.0		02/14/09	MFF
Bromochloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromodichloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromoform	ug/l	ND	5.0		02/14/09	MFF
Bromomethane	ug/l	ND	2.0		02/14/09	MFF
2-Butanone (MEK)	ug/l	ND	20.0		02/14/09	MFF
tert-Butyl Alcohol	ug/l	ND	20.0		02/14/09	MFF
n-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
sec-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Carbon Disulfide	ug/l	ND	5.0		02/14/09	MFF
Carbon Tetrachloride	ug/l	ND	1.0		02/14/09	MFF
Chlorobenzene	ug/l	ND	1.0		02/14/09	MFF
Chlorodibromomethane	ug/l	ND	5.0		02/14/09	MFF
Chloroethane	ug/l	ND	2.0		02/14/09	MFF
Chloroform	ug/l	ND	2.0		02/14/09	MFF
Chloromethane	ug/l	ND	2.0		02/14/09	MFF
2-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
4-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dibromo-3-Chloropropane	ug/l	ND	5.0		02/14/09	MFF
1,2-Dibromoethane	ug/l	ND	0.50		02/14/09	MFF
Dibromomethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,4-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
trans-1,4-Dichloro-2-Butene	ug/l	ND	5.0		02/14/09	MFF
Dichlorodifluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,1-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF

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WARWICK, RI 02886

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Purchase Order No.: 5131

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMT-23225
Job Number: 081-12152-05

Field Sample #: ATC-5

Sample ID: 09B03953 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
cis-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
trans-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichloropropane	ug/l	ND	0.5		02/14/09	MFF
2,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloropropane	ug/l	ND	2.0		02/14/09	MFF
cis-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
trans-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
Diethyl Ether	ug/l	ND	2.0		02/14/09	MFF
Diisopropyl Ether	ug/l	ND	0.5		02/14/09	MFF
1,4-Dioxane	ug/l	ND	50.0		02/14/09	MFF
Ethyl Benzene	ug/l	ND	1.0		02/14/09	MFF
Hexachlorobutadiene	ug/l	ND	1.0		02/14/09	MFF
2-Hexanone	ug/l	ND	10.0		02/14/09	MFF
Isopropylbenzene	ug/l	ND	1.0		02/14/09	MFF
p-Isopropyltoluene	ug/l	ND	1.0		02/14/09	MFF
MTBE	ug/l	ND	1.0		02/14/09	MFF
Methylene Chloride	ug/l	ND	5.0		02/14/09	MFF
MIBK	ug/l	ND	10.0		02/14/09	MFF
Naphthalene	ug/l	ND	5.0		02/14/09	MFF
n-Propylbenzene	ug/l	ND	1.0		02/14/09	MFF
Styrene	ug/l	ND	1.0		02/14/09	MFF
1,1,1,2-Tetrachloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		02/14/09	MFF
Tetrachloroethylene	ug/l	ND	1.0		02/14/09	MFF
Tetrahydrofuran	ug/l	ND	10.0		02/14/09	MFF
Toluene	ug/l	ND	1.0		02/14/09	MFF
1,2,3-Trichlorobenzene	ug/l	ND	5.0		02/14/09	MFF
1,2,4-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,1,1-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
Trichloroethylene	ug/l	ND	1.0		02/14/09	MFF
Trichlorofluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,2,3-Trichloropropane	ug/l	ND	2.0		02/14/09	MFF

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Purchase Order No.: 5131

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMIT-23225
Job Number: 081-12152-05

Field Sample #: ATC-5

Sample ID: 09B03953 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	ND	1.0		02/14/09	MFF
1,2,4-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
Vinyl Chloride	ug/l	ND	2.0		02/14/09	MFF
m + p Xylene	ug/l	ND	2.0		02/14/09	MFF
o-Xylene	ug/l	ND	1.0		02/14/09	MFF

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300 METRO CENTER BLVD., SUITE 250

WARWICK, RI 02886

Purchase Order No.: 5131

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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.

LIMS-BAT #: LIMIT-23225

Date Received: 2/12/2009

Job Number: 081-12152-05

Field Sample #: TRIP BLANK

Sample ID: 09B03955

‡Sampled: 2/10/2009

Not Specified

Sample Matrix: WATER OTHER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	50.0		02/14/09	MFF
Acrylonitrile	ug/l	ND	5.0		02/14/09	MFF
tert-Amylmethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Benzene	ug/l	ND	1.0		02/14/09	MFF
Bromobenzene	ug/l	ND	1.0		02/14/09	MFF
Bromochloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromodichloromethane	ug/l	ND	1.0		02/14/09	MFF
Bromoform	ug/l	ND	5.0		02/14/09	MFF
Bromomethane	ug/l	ND	2.0		02/14/09	MFF
2-Butanone (MEK)	ug/l	ND	20.0		02/14/09	MFF
tert-Butyl Alcohol	ug/l	ND	20.0		02/14/09	MFF
n-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
sec-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylbenzene	ug/l	ND	1.0		02/14/09	MFF
tert-Butylethyl Ether	ug/l	ND	0.5		02/14/09	MFF
Carbon Disulfide	ug/l	ND	5.0		02/14/09	MFF
Carbon Tetrachloride	ug/l	ND	1.0		02/14/09	MFF
Chlorobenzene	ug/l	ND	1.0		02/14/09	MFF
Chlorodibromomethane	ug/l	ND	5.0		02/14/09	MFF
Chloroethane	ug/l	ND	2.0		02/14/09	MFF
Chloroform	ug/l	ND	2.0		02/14/09	MFF
Chloromethane	ug/l	ND	2.0		02/14/09	MFF
2-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
4-Chlorotoluene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dibromo-3-Chloropropane	ug/l	ND	5.0		02/14/09	MFF
1,2-Dibromoethane	ug/l	ND	0.50		02/14/09	MFF
Dibromomethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,4-Dichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
trans-1,4-Dichloro-2-Butene	ug/l	ND	5.0		02/14/09	MFF
Dichlorodifluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,1-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF

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NM = Not Measured

* = See end of report for comments and notes applying to this sample

‡ = See attached chain-of-custody record for time sampled



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

DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

2/17/2009
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Purchase Order No.: 5131

Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMT-23225
Job Number: 081-12152-05

Field Sample #: TRIP BLANK

Sample ID: 09B03955 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: WATER OTHER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
cis-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
trans-1,2-Dichloroethylene	ug/l	ND	1.0		02/14/09	MFF
1,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,3-Dichloropropane	ug/l	ND	0.5		02/14/09	MFF
2,2-Dichloropropane	ug/l	ND	1.0		02/14/09	MFF
1,1-Dichloropropene	ug/l	ND	2.0		02/14/09	MFF
cis-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
trans-1,3-Dichloropropene	ug/l	ND	0.5		02/14/09	MFF
Diethyl Ether	ug/l	ND	2.0		02/14/09	MFF
Diisopropyl Ether	ug/l	ND	0.5		02/14/09	MFF
1,4-Dioxane	ug/l	ND	50.0		02/14/09	MFF
Ethyl Benzene	ug/l	ND	1.0		02/14/09	MFF
Hexachlorobutadiene	ug/l	ND	1.0		02/14/09	MFF
2-Hexanone	ug/l	ND	10.0		02/14/09	MFF
Isopropylbenzene	ug/l	ND	1.0		02/14/09	MFF
p-Isopropyltoluene	ug/l	ND	1.0		02/14/09	MFF
MTBE	ug/l	ND	1.0		02/14/09	MFF
Methylene Chloride	ug/l	ND	5.0		02/14/09	MFF
MIBK	ug/l	ND	10.0		02/14/09	MFF
Naphthalene	ug/l	ND	5.0		02/14/09	MFF
n-Propylbenzene	ug/l	ND	1.0		02/14/09	MFF
Styrene	ug/l	ND	1.0		02/14/09	MFF
1,1,1,2-Tetrachloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		02/14/09	MFF
Tetrachloroethylene	ug/l	ND	1.0		02/14/09	MFF
Tetrahydrofuran	ug/l	ND	10.0		02/14/09	MFF
Toluene	ug/l	ND	1.0		02/14/09	MFF
1,2,3-Trichlorobenzene	ug/l	ND	5.0		02/14/09	MFF
1,2,4-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trichlorobenzene	ug/l	ND	1.0		02/14/09	MFF
1,1,1-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
1,1,2-Trichloroethane	ug/l	ND	1.0		02/14/09	MFF
Trichloroethylene	ug/l	ND	1.0		02/14/09	MFF
Trichlorofluoromethane	ug/l	ND	2.0		02/14/09	MFF
1,2,3-Trichloropropane	ug/l	ND	2.0		02/14/09	MFF

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DONNA PALLISTER
LFR, INC. - RI
300 METRO CENTER BLVD., SUITE 250
WARWICK, RI 02886

Purchase Order No.: 5131

2/17/2009
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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.
Date Received: 2/12/2009

LIMS-BAT #: LIMIT-23225
Job Number: 081-12152-05

Field Sample #: TRIP BLANK

Sample ID: 09B03955 ‡Sampled: 2/10/2009
Not Specified

Sample Matrix: WATER OTHER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/l	ND	1.0		02/14/09	MFF
1,2,4-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
1,3,5-Trimethylbenzene	ug/l	ND	1.0		02/14/09	MFF
Vinyl Chloride	ug/l	ND	2.0		02/14/09	MFF
m + p Xylene	ug/l	ND	2.0		02/14/09	MFF
o-Xylene	ug/l	ND	1.0		02/14/09	MFF

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DONNA PALLISTER

LFR, INC. - RI

300 METRO CENTER BLVD., SUITE 250

WARWICK, RI 02886

Purchase Order No.: 5131

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Project Location: SPRINGFIELD STREET, PROVIDENCE, RI.

LIMS-BAT #: LIMIT-23225

Date Received: 2/12/2009

Job Number: 081-12152-05

** END OF REPORT **

RL = Reporting Limit

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

QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat #: LIMIT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
09B03952	1,2-Dichloroethane-d4	Surrogate Recovery	93.6	%	70-130
	Toluene-d8	Surrogate Recovery	98.3	%	70-130
	Bromofluorobenzene	Surrogate Recovery	98.4	%	70-130
09B03953	1,2-Dichloroethane-d4	Surrogate Recovery	95.8	%	70-130
	Toluene-d8	Surrogate Recovery	100.0	%	70-130
	Bromofluorobenzene	Surrogate Recovery	96.8	%	70-130
09B03954	1,2-Dichloroethane-d4	Surrogate Recovery	94.0	%	70-130
	Toluene-d8	Surrogate Recovery	99.4	%	70-130
	Bromofluorobenzene	Surrogate Recovery	98.9	%	70-130
09B03955	1,2-Dichloroethane-d4	Surrogate Recovery	94.1	%	70-130
	Toluene-d8	Surrogate Recovery	98.0	%	70-130
	Bromofluorobenzene	Surrogate Recovery	97.1	%	70-130
BLANK-129591	Acetone	Blank	<50.0	ug/l	
	Benzene	Blank	<1.0	ug/l	
	Carbon Tetrachloride	Blank	<1.0	ug/l	
	Chloroform	Blank	<2.0	ug/l	
	1,2-Dichloroethane	Blank	<1.0	ug/l	
	1,4-Dichlorobenzene	Blank	<1.0	ug/l	
	Ethyl Benzene	Blank	<1.0	ug/l	
	2-Butanone (MEK)	Blank	<20.0	ug/l	
	MIBK	Blank	<10.0	ug/l	
	Naphthalene	Blank	<5.0	ug/l	
	Styrene	Blank	<1.0	ug/l	
	Tetrachloroethylene	Blank	<1.0	ug/l	
	Toluene	Blank	<1.0	ug/l	
	1,1,1-Trichloroethane	Blank	<1.0	ug/l	
	Trichloroethylene	Blank	<1.0	ug/l	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<1.0	ug/l	
	Trichlorofluoromethane	Blank	<2.0	ug/l	
	o-Xylene	Blank	<1.0	ug/l	
	m + p Xylene	Blank	<2.0	ug/l	
	1,2-Dichlorobenzene	Blank	<1.0	ug/l	
	1,3-Dichlorobenzene	Blank	<1.0	ug/l	
	1,1-Dichloroethane	Blank	<1.0	ug/l	
	1,1-Dichloroethylene	Blank	<1.0	ug/l	
1,4-Dioxane	Blank	<50.0	ug/l		
MTBE	Blank	<1.0	ug/l		
trans-1,2-Dichloroethylene	Blank	<1.0	ug/l		
Vinyl Chloride	Blank	<2.0	ug/l		



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates
Standard Reference Materials and Duplicates
Method Blanks

Report Date: 2/17/2009

Lims Bat #: LIMIT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-129591	Methylene Chloride	Blank	<5.0	ug/l	
	Chlorobenzene	Blank	<1.0	ug/l	
	Chloromethane	Blank	<2.0	ug/l	
	Bromomethane	Blank	<2.0	ug/l	
	Chloroethane	Blank	<2.0	ug/l	
	cis-1,3-Dichloropropene	Blank	<0.5	ug/l	
	trans-1,3-Dichloropropene	Blank	<0.5	ug/l	
	Chlorodibromomethane	Blank	<5.0	ug/l	
	1,1,2-Trichloroethane	Blank	<1.0	ug/l	
	Bromoform	Blank	<5.0	ug/l	
	1,1,2,2-Tetrachloroethane	Blank	<0.5	ug/l	
	2-Chlorotoluene	Blank	<1.0	ug/l	
	Hexachlorobutadiene	Blank	<1.0	ug/l	
	Isopropylbenzene	Blank	<1.0	ug/l	
	p-Isopropyltoluene	Blank	<1.0	ug/l	
	n-Propylbenzene	Blank	<1.0	ug/l	
	sec-Butylbenzene	Blank	<1.0	ug/l	
	tert-Butylbenzene	Blank	<1.0	ug/l	
	1,2,3-Trichlorobenzene	Blank	<5.0	ug/l	
	1,2,4-Trichlorobenzene	Blank	<1.0	ug/l	
	1,2,4-Trimethylbenzene	Blank	<1.0	ug/l	
	1,3,5-Trimethylbenzene	Blank	<1.0	ug/l	
	Dibromomethane	Blank	<1.0	ug/l	
	cis-1,2-Dichloroethylene	Blank	<1.0	ug/l	
	4-Chlorotoluene	Blank	<1.0	ug/l	
	1,1-Dichloropropene	Blank	<2.0	ug/l	
	1,2-Dichloropropane	Blank	<1.0	ug/l	
	1,3-Dichloropropane	Blank	<0.5	ug/l	
	2,2-Dichloropropane	Blank	<1.0	ug/l	
	1,1,1,2-Tetrachloroethane	Blank	<1.0	ug/l	
	1,2,3-Trichloropropane	Blank	<2.0	ug/l	
	n-Butylbenzene	Blank	<1.0	ug/l	
	Dichlorodifluoromethane	Blank	<2.0	ug/l	
	Bromochloromethane	Blank	<1.0	ug/l	
	Bromobenzene	Blank	<1.0	ug/l	
	Acrylonitrile	Blank	<5.0	ug/l	
	Carbon Disulfide	Blank	<5.0	ug/l	
	2-Hexanone	Blank	<10.0	ug/l	
	trans-1,4-Dichloro-2-Butene	Blank	<5.0	ug/l	
	Diethyl Ether	Blank	<2.0	ug/l	
	Bromodichloromethane	Blank	<1.0	ug/l	
	1,2-Dibromo-3-Chloropropane	Blank	<5.0	ug/l	
	1,2-Dibromoethane	Blank	<0.50	ug/l	



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat #: LIMIT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-129591	Tetrahydrofuran	Blank	<10.0	ug/l	
	tert-Butyl Alcohol	Blank	<20.0	ug/l	
	Diisopropyl Ether	Blank	<0.5	ug/l	
	tert-Butylethyl Ether	Blank	<0.5	ug/l	
	tert-Amylmethyl Ether	Blank	<0.5	ug/l	
	1,3,5-Trichlorobenzene	Blank	<1.0	ug/l	
LFBLANK-91677	Acetone	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	74.5	ug/l	
		Lab Fort Blk. % Rec.	74.5	%	70-160
	Benzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.8	ug/l	
		Lab Fort Blk. % Rec.	108.0	%	70-130
	Carbon Tetrachloride	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.1	ug/l	
		Lab Fort Blk. % Rec.	101.2	%	70-130
	Chloroform	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.8	ug/l	
		Lab Fort Blk. % Rec.	108.0	%	70-130
	1,2-Dichloroethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.8	ug/l	
		Lab Fort Blk. % Rec.	108.5	%	70-130
	1,4-Dichlorobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.5	ug/l	
		Lab Fort Blk. % Rec.	105.0	%	70-130
	Ethyl Benzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.0	ug/l	
		Lab Fort Blk. % Rec.	110.3	%	70-130
	2-Butanone (MEK)	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	70.7	ug/l	
		Lab Fort Blk. % Rec.	70.7	%	40-160
	MIBK	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	67.0	ug/l	
		Lab Fort Blk. % Rec.	67.0	%	70-160
	Naphthalene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	5.2	ug/l	
		Lab Fort Blk. % Rec.	52.2	%	40-130
	Styrene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.6	ug/l	
		Lab Fort Blk. % Rec.	106.0	%	70-130
	Tetrachloroethylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.9	ug/l	
		Lab Fort Blk. % Rec.	109.5	%	70-160



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

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Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat # : LIMT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91677					
	Toluene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.7	ug/l	
		Lab Fort Blk. % Rec.	107.6	%	70-130
	1,1,1-Trichloroethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.2	ug/l	
		Lab Fort Blk. % Rec.	102.6	%	70-130
	Trichloroethylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.6	ug/l	
		Lab Fort Blk. % Rec.	106.5	%	70-130
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	12.1	ug/l	
		Lab Fort Blk. % Rec.	121.3	%	70-130
	Trichlorofluoromethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.4	ug/l	
		Lab Fort Blk. % Rec.	104.4	%	70-130
	o-Xylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.5	ug/l	
		Lab Fort Blk. % Rec.	105.5	%	70-130
	m + p Xylene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	22.0	ug/l	
		Lab Fort Blk. % Rec.	110.0	%	70-130
	1,2-Dichlorobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.0	ug/l	
		Lab Fort Blk. % Rec.	110.0	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.7	ug/l	
		Lab Fort Blk. % Rec.	107.8	%	70-130
	1,1-Dichloroethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.8	ug/l	
		Lab Fort Blk. % Rec.	108.5	%	70-130
	1,1-Dichloroethylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.3	ug/l	
		Lab Fort Blk. % Rec.	103.6	%	70-130
	1,4-Dioxane	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	74.0	ug/l	
		Lab Fort Blk. % Rec.	74.0	%	40-130
	MTBE	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.3	ug/l	
		Lab Fort Blk. % Rec.	103.5	%	70-130
	trans-1,2-Dichloroethylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.6	ug/l	
		Lab Fort Blk. % Rec.	106.0	%	70-130
	Vinyl Chloride	Lab Fort Blank Amt.	10.0	ug/l	



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

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Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat # : LIMIT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91677	Vinyl Chloride	Lab Fort Blk. Found	9.8	ug/l	
		Lab Fort Blk. % Rec.	98.9	%	40-160
	Methylene Chloride	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	13.5	ug/l	
	Chlorobenzene	Lab Fort Blk. % Rec.	135.4	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	Chloromethane	Lab Fort Blk. Found	10.7	ug/l	
		Lab Fort Blk. % Rec.	107.7	%	70-130
	Bromomethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	8.8	ug/l	
	Chloroethane	Lab Fort Blk. % Rec.	88.8	%	40-160
		Lab Fort Blank Amt.	10.0	ug/l	
	cis-1,3-Dichloropropene	Lab Fort Blk. Found	9.6	ug/l	
		Lab Fort Blk. % Rec.	96.5	%	40-160
	trans-1,3-Dichloropropene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.6	ug/l	
	Chlorodibromomethane	Lab Fort Blk. % Rec.	96.6	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	1,1,2-Trichloroethane	Lab Fort Blk. Found	9.2	ug/l	
		Lab Fort Blk. % Rec.	92.0	%	70-130
	Bromoform	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.8	ug/l	
	1,1,2,2-Tetrachloroethane	Lab Fort Blk. % Rec.	98.1	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	2-Chlorotoluene	Lab Fort Blk. Found	9.1	ug/l	
		Lab Fort Blk. % Rec.	91.3	%	70-130
	Hexachlorobutadiene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.1	ug/l	
	Isopropylbenzene	Lab Fort Blk. % Rec.	101.7	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	8.6	ug/l	
		Lab Fort Blk. % Rec.	86.1	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.2	ug/l	
		Lab Fort Blk. % Rec.	92.7	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.8	ug/l	
		Lab Fort Blk. % Rec.	108.8	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.0	ug/l	
		Lab Fort Blk. % Rec.	100.6	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	12.0	ug/l	



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

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Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat # : LIMT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91677	Isopropylbenzene	Lab Fort Blk. % Rec.	120.7	%	70-130
	p-Isopropyltoluene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.2	ug/l	
		Lab Fort Blk. % Rec.	112.6	%	70-130
	n-Propylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.4	ug/l	
		Lab Fort Blk. % Rec.	104.3	%	70-130
	sec-Butylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.0	ug/l	
		Lab Fort Blk. % Rec.	110.5	%	70-130
	tert-Butylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.1	ug/l	
		Lab Fort Blk. % Rec.	111.8	%	70-130
	1,2,3-Trichlorobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	6.9	ug/l	
		Lab Fort Blk. % Rec.	69.6	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	8.9	ug/l	
		Lab Fort Blk. % Rec.	89.7	%	70-130
	1,2,4-Trimethylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.1	ug/l	
		Lab Fort Blk. % Rec.	111.1	%	70-130
	1,3,5-Trimethylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.1	ug/l	
		Lab Fort Blk. % Rec.	111.1	%	70-130
	Dibromomethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.0	ug/l	
		Lab Fort Blk. % Rec.	100.3	%	70-130
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.6	ug/l	
		Lab Fort Blk. % Rec.	106.6	%	70-130
	4-Chlorotoluene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.9	ug/l	
		Lab Fort Blk. % Rec.	109.0	%	70-130
	1,1-Dichloropropene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.9	ug/l	
		Lab Fort Blk. % Rec.	109.5	%	70-130
	1,2-Dichloropropane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.7	ug/l	
		Lab Fort Blk. % Rec.	107.0	%	70-130
	1,3-Dichloropropane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.5	ug/l	
		Lab Fort Blk. % Rec.	105.4	%	70-130



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 2/17/2009

Lims Bat # : LIMIT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91677	2,2-Dichloropropane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.8	ug/l	
		Lab Fort Blk. % Rec.	98.4	%	40-130
	1,1,1,2-Tetrachloroethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.0	ug/l	
		Lab Fort Blk. % Rec.	100.6	%	70-130
	1,2,3-Trichloropropane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	7.9	ug/l	
		Lab Fort Blk. % Rec.	79.9	%	70-130
	n-Butylbenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.6	ug/l	
		Lab Fort Blk. % Rec.	116.5	%	70-130
	Dichlorodifluoromethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	7.2	ug/l	
		Lab Fort Blk. % Rec.	72.6	%	40-160
	Bromochloromethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.9	ug/l	
		Lab Fort Blk. % Rec.	109.1	%	70-130
	Bromobenzene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	11.1	ug/l	
		Lab Fort Blk. % Rec.	111.1	%	70-130
	Acrylonitrile	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	8.4	ug/l	
		Lab Fort Blk. % Rec.	84.1	%	70-130
	Carbon Disulfide	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.1	ug/l	
		Lab Fort Blk. % Rec.	91.4	%	70-130
	2-Hexanone	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	50.2	ug/l	
		Lab Fort Blk. % Rec.	50.2	%	70-160
	trans-1,4-Dichloro-2-Butene	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	6.1	ug/l	
		Lab Fort Blk. % Rec.	61.9	%	70-130
	Diethyl Ether	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	10.7	ug/l	
		Lab Fort Blk. % Rec.	107.7	%	70-130
	Bromodichloromethane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	9.4	ug/l	
		Lab Fort Blk. % Rec.	94.5	%	70-130
	1,2-Dibromo-3-Chloropropane	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	7.6	ug/l	
		Lab Fort Blk. % Rec.	76.0	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	10.00	ug/l	



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QC SUMMARY REPORT

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Report Date: 2/17/2009

Lims Bat #: LIMT-23225

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QC Batch Number: GCMS/VOL-21510

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-91677	1,2-Dibromoethane	Lab Fort Blk. Found	10.18	ug/l	
		Lab Fort Blk. % Rec.	101.80	%	70-130
	Tetrahydrofuran	Lab Fort Blank Amt.	10.0	ug/l	
		Lab Fort Blk. Found	7.5	ug/l	
		Lab Fort Blk. % Rec.	75.8	%	70-130
		Lab Fort Blank Amt.	100.0	ug/l	
	tert-Butyl Alcohol	Lab Fort Blk. Found	60.9	ug/l	
		Lab Fort Blk. % Rec.	60.9	%	40-160
		Lab Fort Blank Amt.	10.0	ug/l	
	Diisopropyl Ether	Lab Fort Blk. Found	11.0	ug/l	
		Lab Fort Blk. % Rec.	110.7	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	tert-Butylethyl Ether	Lab Fort Blk. Found	11.6	ug/l	
		Lab Fort Blk. % Rec.	116.5	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	tert-Amylmethyl Ether	Lab Fort Blk. Found	11.4	ug/l	
		Lab Fort Blk. % Rec.	114.1	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	
	1,3,5-Trichlorobenzene	Lab Fort Blk. Found	11.1	ug/l	
		Lab Fort Blk. % Rec.	111.5	%	70-130
		Lab Fort Blank Amt.	10.0	ug/l	



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QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates BATCH QC: Lab fortified Blanks and Duplicates
Sample Matrix Spikes and Matrix Spike Duplicates Standard Reference Materials and Duplicates
Method Blanks

Report Date: 2/17/2009 Lims Bat #: LIMIT-23225 Page 9 of 9

QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

QC BATCH NUMBER This is the number assigned to all samples analyzed together that would be subject to comparison with a particular set of Quality Control Data.
LIMITS Upper and Lower Control Limits for the QC ANALYSIS Reported. All values normally would fall within these statistically determined limits, unless there is an unusual circumstance that would be documented in a NOTE appearing on the last page of the QC SUMMARY REPORT. Not all QC results will have Limits defined.
Sample Amount Amount of analyte found in a sample.
Blank Method Blank that has been taken though all the steps of the analysis.
LFBLANK Laboratory Fortified Blank (a control sample)
STDADD Standard Added (a laboratory control sample)
Matrix Spk Amt Added Amount of analyte spiked into a sample
MS Amt Measured Amount of analyte found including amount that was spiked
Matrix Spike % Rec. % Recovery of spiked amount in sample.
Duplicate Value The result from the Duplicate analysis of the sample.
Duplicate RPD The Relative Percent Difference between two Duplicate Analyses.
Surrogate Recovery The % Recovery for non-environmental compounds (surrogates) spiked into samples to determine the performance of the analytical methods.
Sur. Recovery (ELCD) Surrogate Recovery on the Electrolytic Conductivity Detector.
Sur. Recovery (PID) Surrogate Recovery on the Photoionization Detector.
Standard Measured Amount measured for a laboratory control sample
Standard Amt Added Known value for a laboratory control sample
Standard % Recovery % recovered for a laboratory control sample with a known value.
Lab Fort Blank Amt Laboratory Fortified Blank Amount Added
Lab Fort Blk. Found Laboratory Fortified Blank Amount Found
Lab Fort Blk % Rec Laboratory Fortified Blank % Recovered
Dup Lab Fort Bl Amt Duplicate Laboratory Fortified Blank Amount Added
Dup Lab Fort Bl Fnd Duplicate Laboratory Fortified Blank Amount Found
Dup Lab Fort Bl % Rec Duplicate Laboratory Fortified Blank % Recovery
Lab Fort Blank Range Laboratory Fortified Blank Range (Absolute value of difference between recoveries for Lab Fortified Blank and Lab Fortified Blank Duplicate).
Lab Fort Bl. Av. Rec. Laboratory Fortified Blank Average Recovery
Duplicate Sample Amt Sample Value for Duplicate used with Matrix Spike Duplicate
MSD Amount Added Matrix Spike Duplicate Amount Added (Spiked)
MSD Amt Measured Matrix Spike Duplicate Amount Measured
MSD % Recovery Matrix Spike Duplicate % Recovery
MSD Range Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries



Sample Receipt Checklist

CLIENT NAME: LFR RECEIVED BY: OFC DATE: 2/12/09

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

Were the samples received in Temperature Compliance of (2-6°C)? Yes No

Temperature °C by Temp blank 3.0 Temperature °C by Temp gun _____

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:

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	

Laboratory Comments: _____

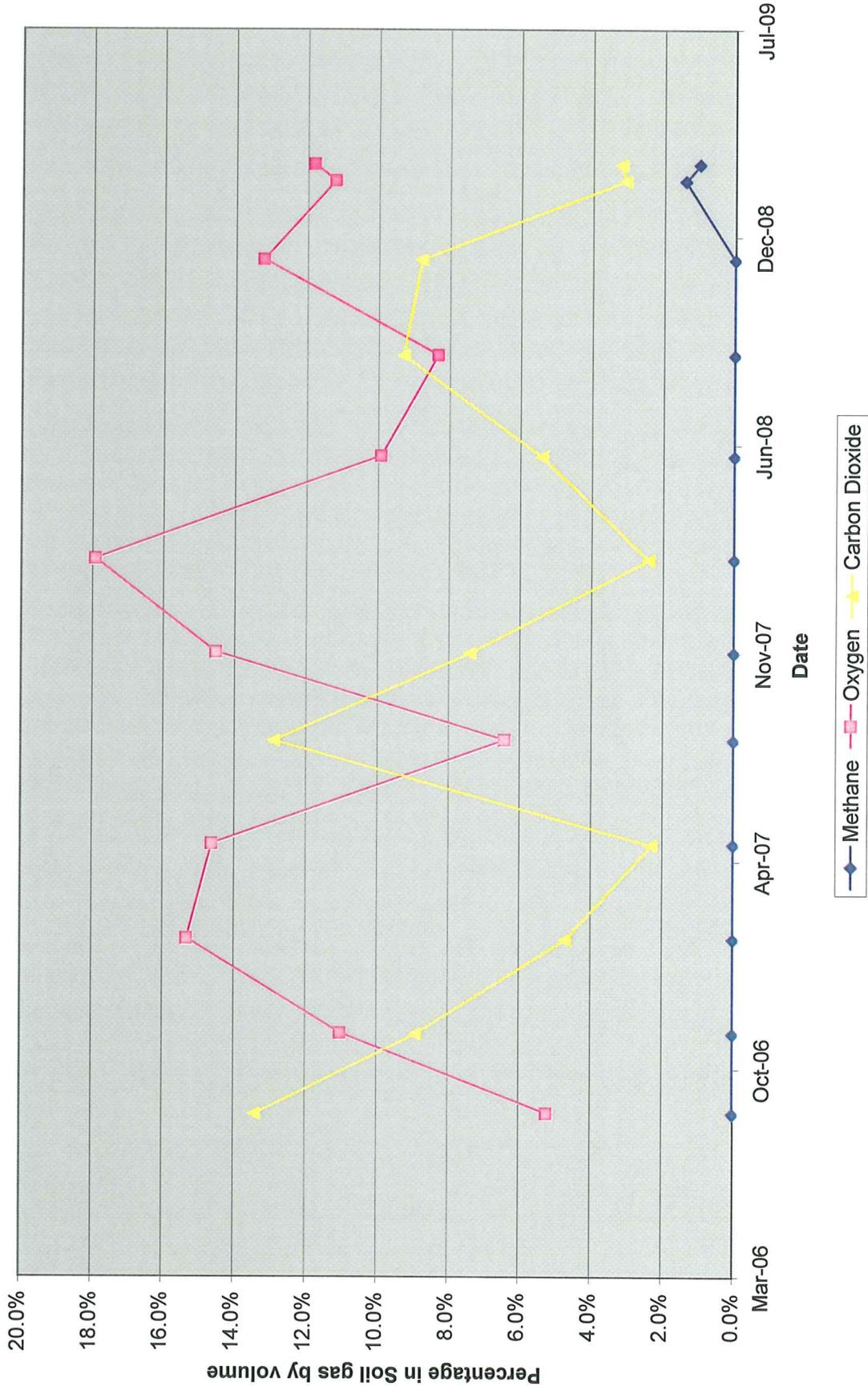
40 mL vials: # HCl 10 # Methanol _____
Bisulfate _____ # DI Water _____
Thiosulfate _____ Unpreserved _____

Time and Date Frozen: _____

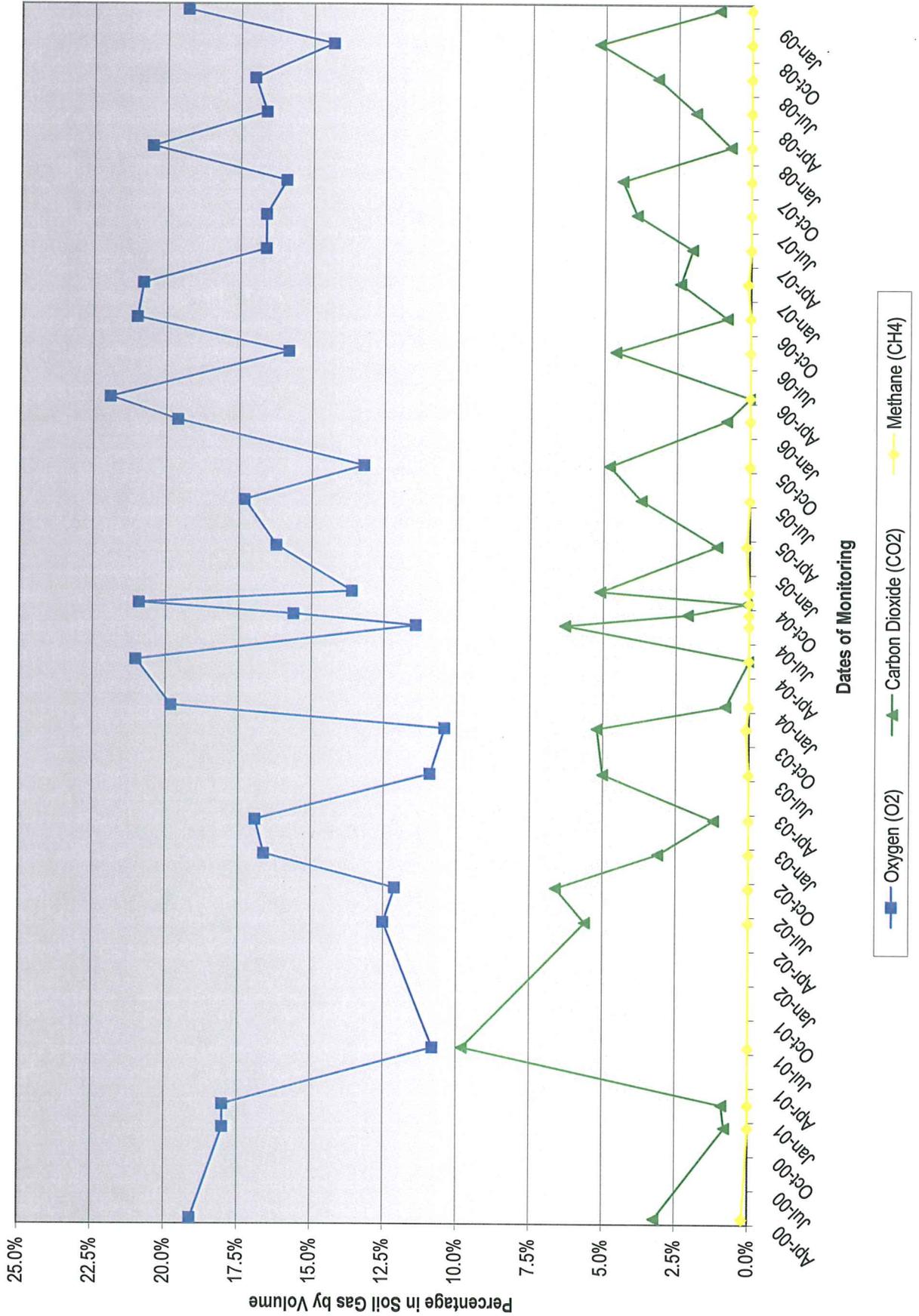
Do all samples have the proper pH: Yes No N/A

Attachment C
Soil Gas Graphs

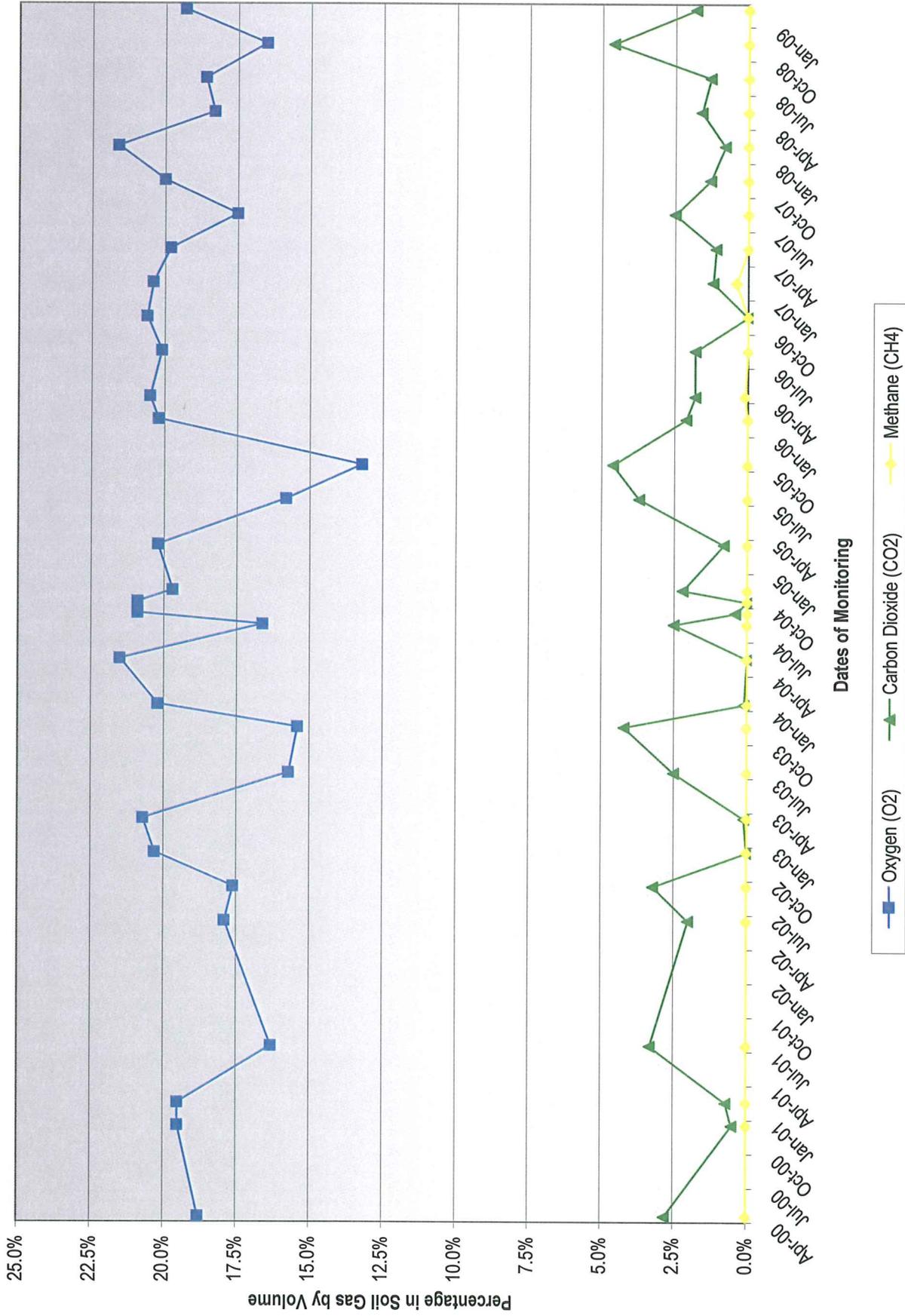
Soil Gas Well MPL-7 Fluctuations in Methane, Oxygen and Carbon Dioxide



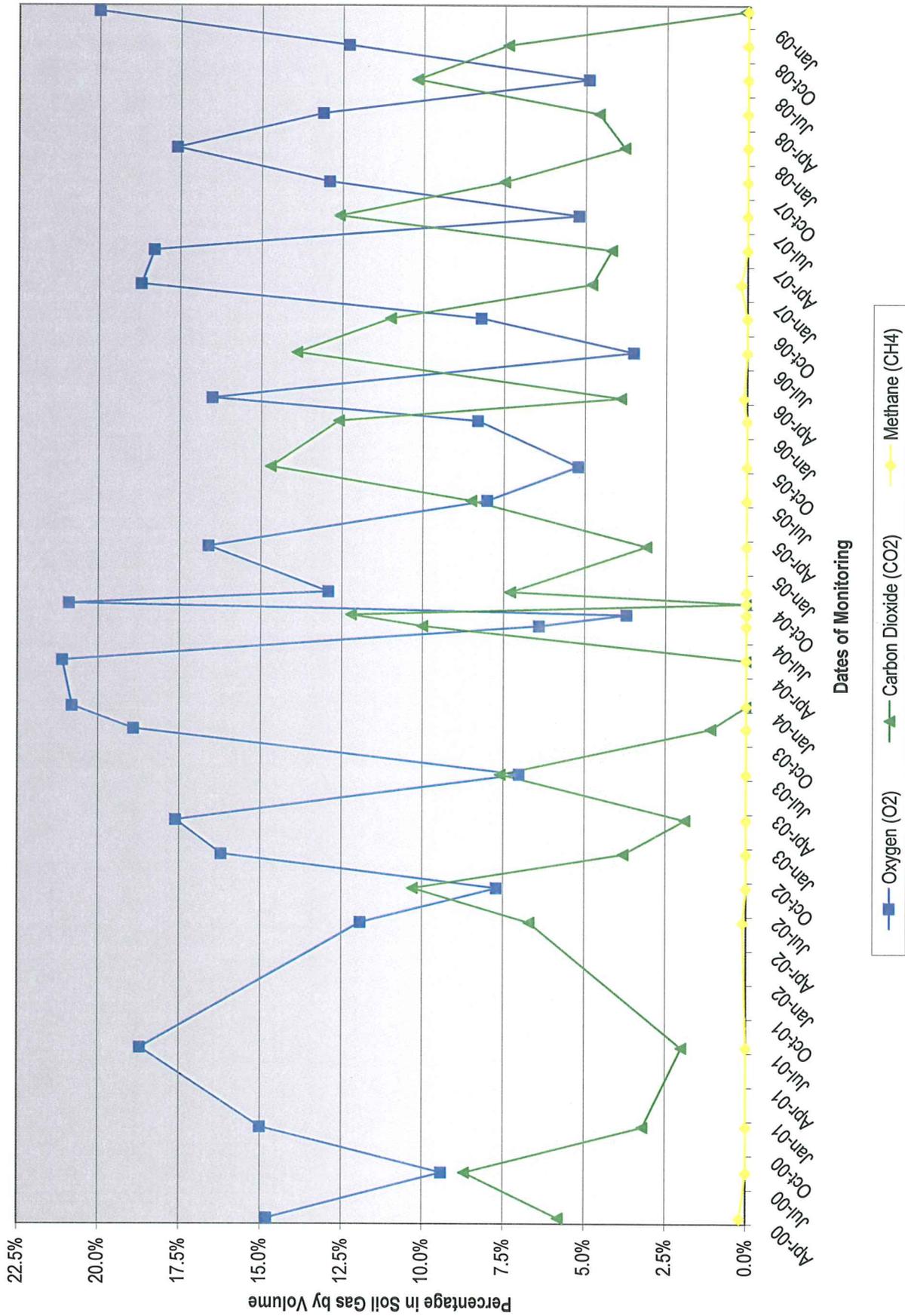
Soil Gas Well EPL4
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



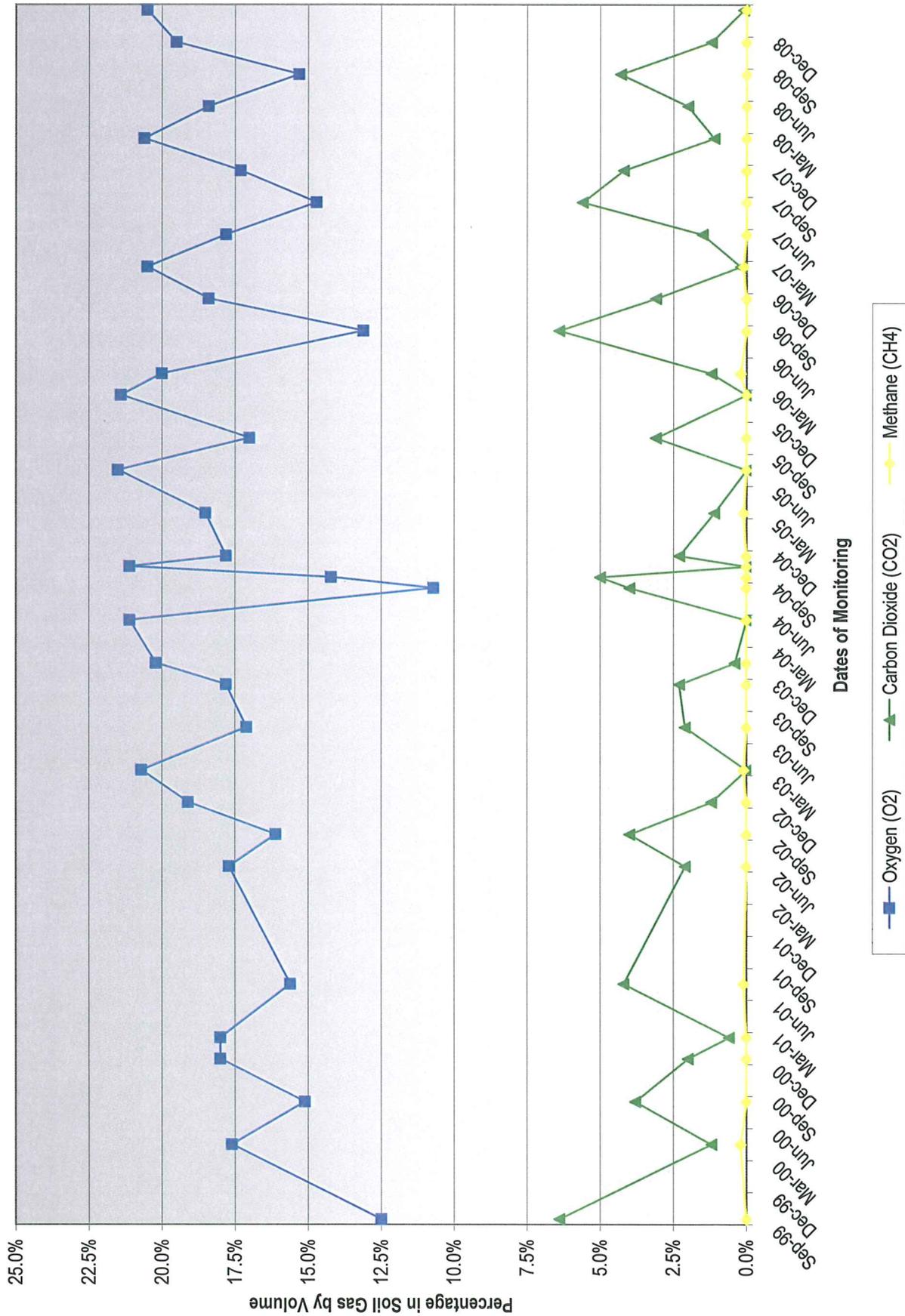
Soil Gas Well MG2
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



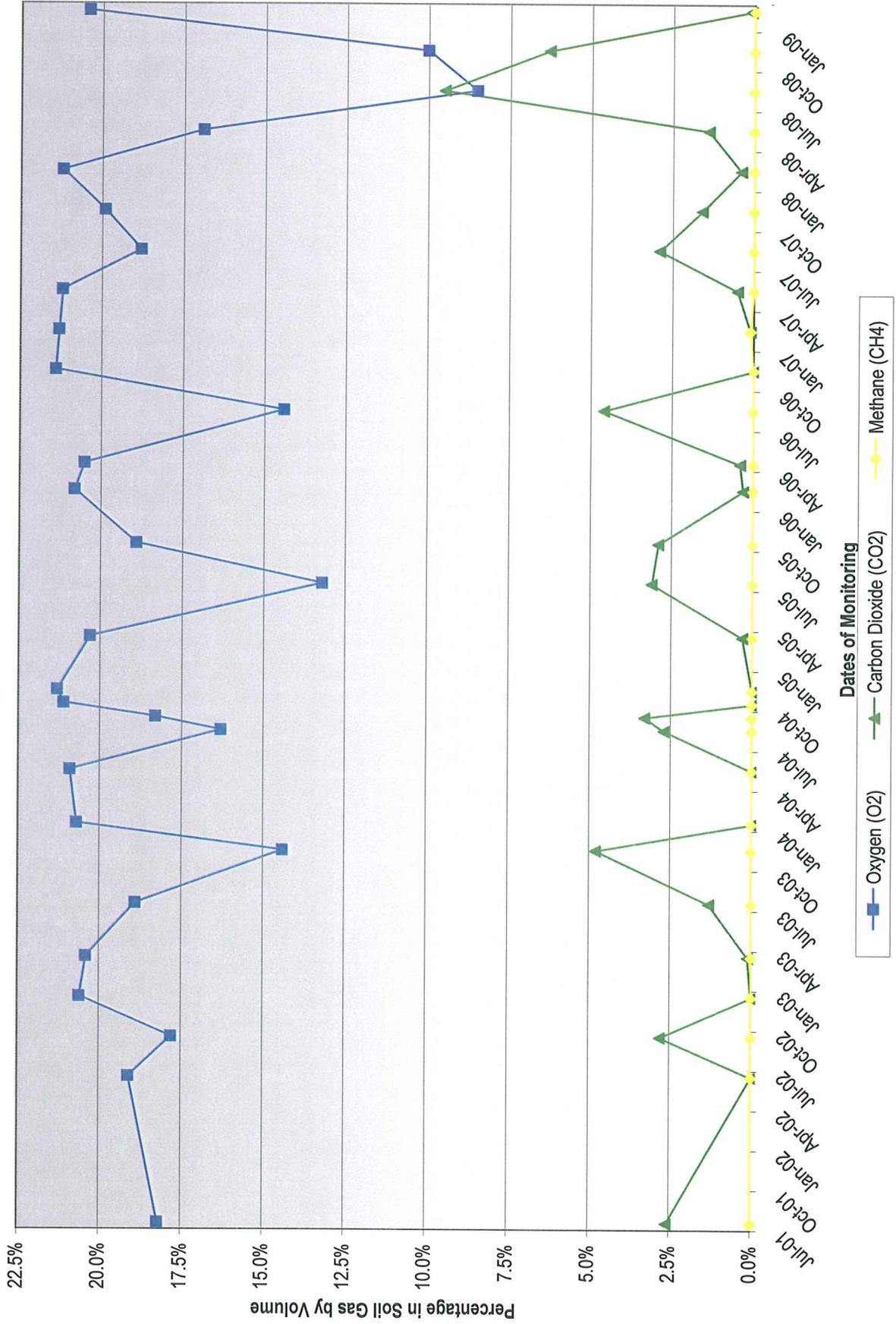
Soil Gas Well MPL5
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



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



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



**Attachment D
Photographs**

Hole Behind Middle School

Before Repair:



After Repair:

