# QUARTERLY MONITORING REPORT Springfield Street School Complex Providence, Rhode Island

Project No. 081-12152-01 December 2004 Monitoring Round

## **Prepared for**

Providence School Department 797 Westminster Street Providence, RI 02903

## Prepared by

LFR Levine Fricke 250 Centerville Road Building E., Suite 12 Warwick, RI 02886





December 21, 2004

081-12152-01

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 - December 2004 Monitoring Round

Dear Mr. Crawford:

Quarterly monitoring was conducted between November 30 and December 13, 2004 at the above referenced site. 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.

Results of monitoring are provided in the following sections and in the attachments.

### **SOIL COVER MONITORING**

LFR conducted a visual survey of the site 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 of significant erosion or any areas where the orange indicator barrier was visible during this monitoring event. We observed some areas where standing water was present as a result of rain events during and preceding the monitoring.

#### SUB-SLAB VENTILATION SYSTEM

The sub-slab ventilation system was inspected by LFR during the quarterly monitoring on December 10 and 13, 2004. Influent and effluent air from the two blowers at the elementary school and the two blowers at the middle school were sampled. Samples of influent and effluent gas were collected at each location for screening for methane, carbon dioxide, carbon monoxide, hydrogen sulfide, and volatile organic compounds (VOC). Results are provided in Table 1.

Methane, carbon monoxide, and hydrogen sulfide concentrations below the Action Levels in the sub-slab ventilation system monitoring during this monitoring event. Carbon dioxide concentrations ranged from zero to 0.2%. Elevated VOC concentrations were detected by

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the MiniRae photoionization detector (PID) used to conduct the VOC monitoring. A notification has already been made regarding the detection of concentrations above the Action Limit.

In response to the elevated PID concentrations detected during monitoring, air samples were collected in Tedlar bags on December 13 for laboratory analysis by method TO-14. Samples were collected of the inlet air from the subslab systems at the elementary school and the middle school, and the outlet (after carbon adsorbtion) at the elementary school and one of the middle school systems (6 samples total). Results of the air analysis have not been received at the time of writing of this report.

The sub-slab ventilation system operated without interruptions or problems during the period covered by this monitoring report.

#### **INDOOR AIR MONITORING**

Indoor air monitoring was conducted on December 10 and 13, 2004 using a Landtec GA-90 landfill gas monitor, and a Mini Rae photoionization detector (PID). Results of monitoring are provided in the Table 2. No parameters were detected at concentrations above the action levels specified in the Remedial Action Work Plan during this round of monitoring.

The methane monitors at the elementary school were being calibrated by Diamond Calibration personnel on December 10 when the monitoring was being performed. The methane monitors at the Middle school were marked with stickers indicating that Diamond Calibration last calibrated the methane monitors at the middle school on December 8, 2004. All of the sensors were functioning at the time of our inspection.

## **GROUNDWATER MONITORING**

Five groundwater monitoring wells were sampled by LFR on December 2, 2004. 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. Temperature, specific conductance, dissolved oxygen, and pH were measured in the field prior to sampling. Depth to groundwater ranged between 12.00 and 18.14 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. Groundwater sampling logs are provided as Attachment 1, and the laboratory report is provided as Attachment 2. Results of analysis of groundwater samples are summarized in Table 3.

No target analytes were detected in samples from wells ATC-1, ATC-2, ATC-3 or ATC-5. Chlorobenzene and 1,4-dichlorobenzene were detected in the groundwater sample from

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monitoring well ATC-4. The concentration of chlorobenzene detected,  $0.60~\mu g/L$ , was well below the RIDEM GB objective of  $70~\mu g/L$ . RIDEM has not established a GB groundwater groundwater objective for 1,4-dichlorobenzene. LFR calculated a GB groundwater objective of 3,406  $\mu g/L$  using the procedure specified in Appendix F of the Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases (2/2004). The concentration of 1,4-dichlorobenzene detected in the sample from ATC-4 (2.1  $\mu g/L$ ) was well below the calculated groundwater objective.

## **SOIL GAS MONITORING**

Soil gas monitoring was conducted at 29 locations on November 30, 2004. 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 an SKC Airchek Sampling pump. Soil gas was then screened using a Landtec GA-90 Gas Analyzer, and a MiniRae Photoionization Detector.

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

## Soil Gas Field Monitoring Results

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 4.

Methane was not detected in any of the 29 sample locations on November 30, 2004. All PID readings for total VOCs were zero.

Concentrations of carbon monoxide were detected in 25 of 29 locations monitored on November 30, 2004. None of the detected concentrations exceeded the Remedial Action Work Plan Level of 9 parts per million (ppm). The highest reading was 2 ppm.

Hydrogen sulfide was detected in 12 of 29 locations monitored on November 30, 2004. None of the detected concentrations exceeded the Remedial Action Work Plan Level of 10 ppm. The highest concentration detected was 2 ppm. No odors typically associated with hydrogen sulfide were detected during any of the on-site monitoring activities.

Carbon dioxide was detected at 21 locations with detectable concentrations ranging from 0.1% to 8.2% during the November 30, 2004 monitoring event. The carbon dioxide 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 4.

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As has been encountered during previous monitoring events, the highest concentrations of carbon dioxide were encountered in soil gas collected from soil gas wells in or near the paved parking lots and roads on the northern and southern ends of the property. In the paved areas, soil gas does not exchange as readily with the atmosphere causing carbon dioxide generated by naturally occurring bacteria to accumulate.

### Soil Gas Laboratory Results

In accordance with the O&M Plan, two soil gas samples were collected 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 5. Several compounds were detected at low concentrations. The results were typical of the concentrations and compounds which have been detected in previous monitoring events, as shown on tables 6 and 7 which summarize the results of 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.

### **REPAIRS**

Monitoring wells were found to be intact during this round of monitoring. No repairs were necessary during this monitoring period.

### **CONCLUSIONS**

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

Monitoring at the inlet and outlet of the sub-slab ventilation system detected elevated PID readings which may indicate the presence of volatile organic compounds. No odors or other indicators of the presence of unusual conditions was detected. Elevated PID readings were not detected in the Site buildings or in the soil gas monitoring wells. In response to the elevated PID readings, LFR collected Tedlar bag samples at inlets and outlets of the subslab ventilation system and submitted them to Contest Laboratory for analysis by method TO-14. This analysis will detect common VOCs to try to identify the source of the elevated PID readings.

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The elevated PID readings were detected at both the inlets and outlets of the carbon adsorbtion vessels. Therefore, the Providence School Department is arranging for a contractor to replace the carbon in all six 2,000 pound carbon vessels with new carbon.

We will forward the results of analysis of the system inlet and outlet gases when they are received. If you have any questions or require any additional information, please contact the undersigned at 401-738-3887.

Thomas L. Daley Senior Engineer

Sincerely,

Donna Holden Pallister, P.E.

Senior Engineer

Cc: A. Sepe, City of Providence

R. Troiano, PPBA

J. Boffa, Providence School Department

# **TABLES**

Table 1
System Monitoring Notes
Springfield Street School Complex
Providence, Rhode Island
December 10 & 13, 2004

Monitoring Location	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume §	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
Elementary School inlet 1	0.0	0.2	20.1	3	0	43.4
Elementary School inlet 2	0.0	0.1	20.2	3	0	17.6
Elementary School Outlet	0.0	0.2	20.0	1	1	4475
Middle school front shed inlet	0.0	0.0	20.3	4	1	699
Middle school front shed after 2 <sup>nd</sup> carbon	0.0	0.0	20.5	4	2	1750
Middle school back shed inlet	0.0	0.2	20.0	5	0	1453
Middle school back shed after 2 <sup>nd</sup> carbon	0.0	0.2	20.0	4	1	1342
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1 %)	NA	9 ppm	10 ppm	5 ppm

Measurements made with: Landtec GA90, Mini Rae PID

Sampling date: Elementary School – 12/10/04, Middle School – 12/13/04

Measured by: D. Pallister

Table 2
Indoor Air Monitoring Results
Springfield Street School Complex
Providence, Rhode Island
December 10 & 13, 2004

Monitoring Location	Methane % by volume	Carbon Dioxide % by yolume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Front office	0.0	0.0	20.7	3	0	0
E.S. Elevator Room	0.0	0.0	20.7	3	. 1	0
E.S. Boiler Rm. Electri- cal closet	0.0	0.0	20.7	3	0	0
E.S. Gym storage closet	0.0	0.0	20.5	2	1	0
E.S. Elec. Closet	0.0	0.0	20.6	3	2	0
E.S. Library	0.0	0.0	20.5	2	1	0
E.S. Stairway Stair C	0.0	0.0	20.4	3	0	0
<b>E.S.</b> Room 106	0.0	0.0	20.4	2	0	0
E.S. Second Floor, Electrical Room	0.0	0.0	20.5	2	0	0

# Table 2 Indoor Air Monitoring Notes Springfield Street School Complex December 10 & 13, 2004

Monitoring Location	Methane % by yolume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
E.S. Custodian / Electrical Closet w/Sensor	0.0	0.0	20.3	3	1	0
<b>E.S.</b> Room 216	0.0	0.0	20.5	2	0	0
E.S. Cafeteria	0.0	0.0	20.3	2	0	0
Elevator Shaft	0.0	0.0	20.8	3	0	0
<b>E.S.</b> Room 201	0.0	0.0	20.5	3	1	0
M.S. Cafeteria	0.0	0.0	20.5	4	1	0
M.S. Crack near door to outside near gym	0.0	0.0	20.6	3	1	0
M.S. Former Music Room	0.0	0.0	20.7	3	1	0
M.S. Faculty Work Room Next to Elevator 1st floor	0.0	0.0	20.4	4	0	0
<b>M.S.</b> Room 105	0.0	0.0	20.5	3	0	0

# Table 2 Indoor Air Monitoring Notes Springfield Street School Complex December 10 & 13, 2004

Monitoring Location	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
<b>M.S.</b> Room 108	0.0	0.0	20.5	3	0	0
M.S. Janitor office	0.0	0.0	20.5	3	0	0
M.S. Second Floor, Faculty Work Room	0.0	0.0	20.5	4	1	0
M.S. Front Office	0.0	0.0	20.7	3	0	0
M.S. (Elementary Side) Stairway	0.0	0.0	20.5	3	1	0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm	10 ppm	5 ppm

## **Notes:**

 $\mathbf{E.S.}$  indicates Elementary School - monitoring conducted 12/10/04

M.S. indicates Middle School - monitoring conducted 12/13/04

Measurements made with: Landtec GA90, Mini Rae PID

Measurements By: D. Pallister

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

Monitoring	Compounds		A Commission of the Commission			Š	Sampling Dates and Results in µg/L	s and Res	ults in µg/L	i i					RIDEMGB
Wells		2/28/2001	7/20/2001	2/28/2001 7/20/2001 *9-12/2001 8/1/2002	8/1/2002	8/28/2002	12/19/2002	3/18/2003	3/18/2003 7/17/2003 11/5/2003	11/5/2003	1/22/2004	5/21/2004	1/22/2004   5/21/2004   8/17/2004   12/2/2004	12/2/2004	Groundwater Objective
ATC-1															
	Benzene	6.1	QN	18.9	6.0	QN	QN	QN	QN	Q	Q	ND	QN	9	140
	n-butylbenzene	1.7	QN	2.8	QN	QN	Q	Q	Q	9	Ð	Q	Q	Ð	AN
	sec-Butylbenzene	1.1	QN	4.1	QN	ND	QN.	QN	QN	QN	ND	Q	Q	Q	AN A
	Ethylbenzene	4.5	QN	12.6	QN	QN	DN	QN	QN	QN	ND	QN	QN	QN Q	1600
	Isopropylbenzene	ND	Q	1.8	Q.	QN	QN	QN	QN	Q	QN	QN	QN	QN	NA
	n-Propylbenzene	ND	QN	5.0	QN	QN	QN	QV	QN	Q.	QN	QN	QN	Ð	NA
	MTBE	12.4	7.0	28.6	QN	QN	QN	QN	ND	Q.	Q	QN	QN	Ð	2000
	Trichloroethylene	QN	QN	ND	QN	QN	QN	Q	1.27	Q	2	QN	ΩN	9	540
	Toluene	2.5	QN	8.2	QN	QN	QN	Ð	Q	9	Q	QN	ΩN	9	1700
	1,2,4-Trimethylbenzene	2.2	QN	8.2	DN	QN	QN	Ð	QN	2	Q	QN	ND	₽	ΑΝ
	1,3,5-Trimethylbenzene	3.4	DN	5.2	2	QN	ND	ND	Q	ND	QN	QN	QN	Q	ΝΑ
	Xylenes	14.6	QN	37	Q	QN	QN	QN	QN	Q	Q	ΔN	QN	Q	ΑΝ
ATC-2															
	Chloroform	6.0	QN	QN	1.0	QN	QN	Q	Q	Q	NS		1.0	Q	NA
ATC-3															
	Toluene	Q	Q.	Q	2	SN	2	9	2	2	3.03	2	2	2	1700
ATC-4															
	Benzene	Q	2	2.5	9.0	Q	Q.	Q.	QN	Q	ΩN	ΩN	0.5	Q.	140
	Chlorobenzene	2.6	Q.	57.3	2.7	5.18	2	2	Q	2	QN	Q	D Q	09.0	20
	1,4-dichlorobenzene	4.2	ND	9.2	3.4	3.36	Q	Q	Q	Q	ND	0.80	1.6	2.1	ΝΑ
	MTBE	QN	ND	QN	9	Q	Q	Q	1.19	9.55	1.06	2.90	9.0	Ð	2000
	1,2,4-Trimethylbenzene	DN	QN	1.7	Ð	Q	Q	Q	QN	Q	Q	Q	Q	Q	NA
ATC-5															
	MTBE	QN	QV	2.2	NS	Q	Q	Q	2	SN	QN	Q	2	ND	2000
	Chloroform	Q.	Q	Q	9	Q	Q	9	QV	NS	Q	QN	9.0	Q	NA
Sampled By:	y:	ATC	ATC	ATC	ATC	LFR	E,	LFR	E.	E.	E.	LFR	EF.	LFR	
			-7												

\*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 exists MTBE is Methyl tert-Butyl Ether µg/L = micrograms per liter

Table 4
Soil Gas Survey Results
Springfield Street School Complex
Providence, Rhode Island
November 30, 2004

Monitoring Well	Methane % by volume	Carbon Dioxide % by	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
		volume				
WB-1	0.0	2.3	17.8	1	0	0
WB-2	0.0	0.2	20.9	1	0	0
WB-3	0.0	0.0	21.0	1	2	0
WB-4	0.0	0.0	21.2	0	0	0
WB-5	0.0	0.0	22.0	1	0	0
WB-6	0.0	0.0	21.2	0	1	0
WB-7	0.0	0.0	21.3	1	1	0
WB-8	0.0	0.0	21.3	1	0	0
WB-12	0.0	0.8	20.8	1	0	0
WB-13	0.0	0.0	21.4	1	0	0
WB-14	0.0	0.3	21.0	1	1	0
WB-15	0.0	1.0	20.3	1	0	0
EPL-1	0.0	0.4	21.0	1	1	0
EPL-2	0.0	3.4	17.9	2	0	0
EPL-3	0.0	2.1	18.3	0	2	0
EPL-4	0.0	5.1	13.6	0	1	0
EPL-5	0.0	5.0	14.9	1	1	0
ENE-1	0.0	0.2	21.1	2	0	0
MG1	0.0	0.5	20.2	1	0	0
MG2	0.0	2.2	19.7	1	1	0
MG3	0.0	0.1	21.3	2	0	0
MG4	0.0	1.5	19.8	1	1	0
MG5	0.0	0.5	20.3	2	0	0
MPL2	0.0	0.0	21.3	1	0	0
MPL3	0.0	8.2	12.4	1	0	0

Monitoring Well	Methane % by volume.	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MPL5	0.0	7.3	12.9	1	0	0
MPL6	0.0	5.3	11.3	1	1	0
MPL7	0.0	6.3	14.4	1	0	0
MPL8	0.0	3.9	17.1	1	1	0
Remedial Action Work Plan Action Levels	0.5%	1,000 PPM (0.1%)	NA	9 PPM	10 PPM	5 PPM

# Notes:

Sampled by: A. Cote

Weather Conditions: partly cloudy / 45-50° F

Sampling Equipment: LandTec GA90, and MiniRae PID Meter

PPM = parts per million

Table 5
Soil Gas Laboratory Analysis Results
Springfield Street School Complex
November 30, 2004

Parameter	Results of Ana per billion by v	llysis in parts olume (PPBy)	OSHA Permissable Exposure Limits (PEL) TWA (ppb)
	MPL-6	WB-2	
Trichlorofluoromethane (Freon 11)	ND	0.6	1,000,000
1,2,4-Trimethylbenzene	3.4	5.0	25,000
1,3,5-Trimethylbenzene	1.4	ND	25,000
Methylene Chloride	ND	0.6	25,000
Toluene	ND	3.4	200,000
Trichloroethylene	ND	15.7	100,000
O -Xylene	2.9	4.8	100,000
M/p-Xylene	3.9	5.9	100,000

Table lists only detected compounds. See laboratory report for full list of analytes.

Summary of Soil Gas Laboratory Results for WB-3/WB-2 Springfield Street School Complex Providence, Rhode Island Table 6

				Results of An	Results of Analysis in PPBv by Sample Date	y Sample Da	et e		
Compounds Detected	9/25/2002	1/2/2003	3/19/2003	7/15/2003	11/11/2003	1/22/2004	5/4/2004	8/18/2004	11/30/2004
1,2,4-Trimethylbenzene	1.8	ND	ND	QN	ND	QN	1.4	ND	5
1,3,5-Trimethylbenzene	ND	QN	ND	QN	QN	QN	2.2	ND	ND
1,3-dichlorobenzene	1.2	QN	ND	QN	QN	QN	ND	ND	ND
Benzene	ND	QN	ND	QN	6.0	QN	QN	QN	ND
Dichlorofluoromethane	ND	0.7	ND	QN	6.0	QN	QN	QN	ND
Ethyl benzene	ND	QN	ND	0.5	1.6	QN	8.0	QN	ND
Methylene Chloride	ND	2.7	QN	2.0	4.0	1.2	8.0	QΝ	9.0
M/p-Xylene	9.0	ND	9.0	1.1	1.7	QN	2.5	QN	5.9
O -Xylene	ND	ND	QN	QN	9.0	QN	QN	QN	4.8
Tetrachloroethylene	9.0	ND	1.7	QN	1.0	QN	1.5	QN	ND
Toluene	3.0	5.9	2.0	3.4	3.3	1.2	2.4	6.5	3.4
Trichloroethylene	ND	ND	QN	ND	6.0	QN	ND	QN	15.7
Trichlorofluoromethane (Freon 11)	1.0	ND	ND	2.1	ND	ND	ND	QN	9.0
Total VOCs Detected	8.2	9.3	4.3	9.1	14.6	2.4	11.6	5.9	36.0

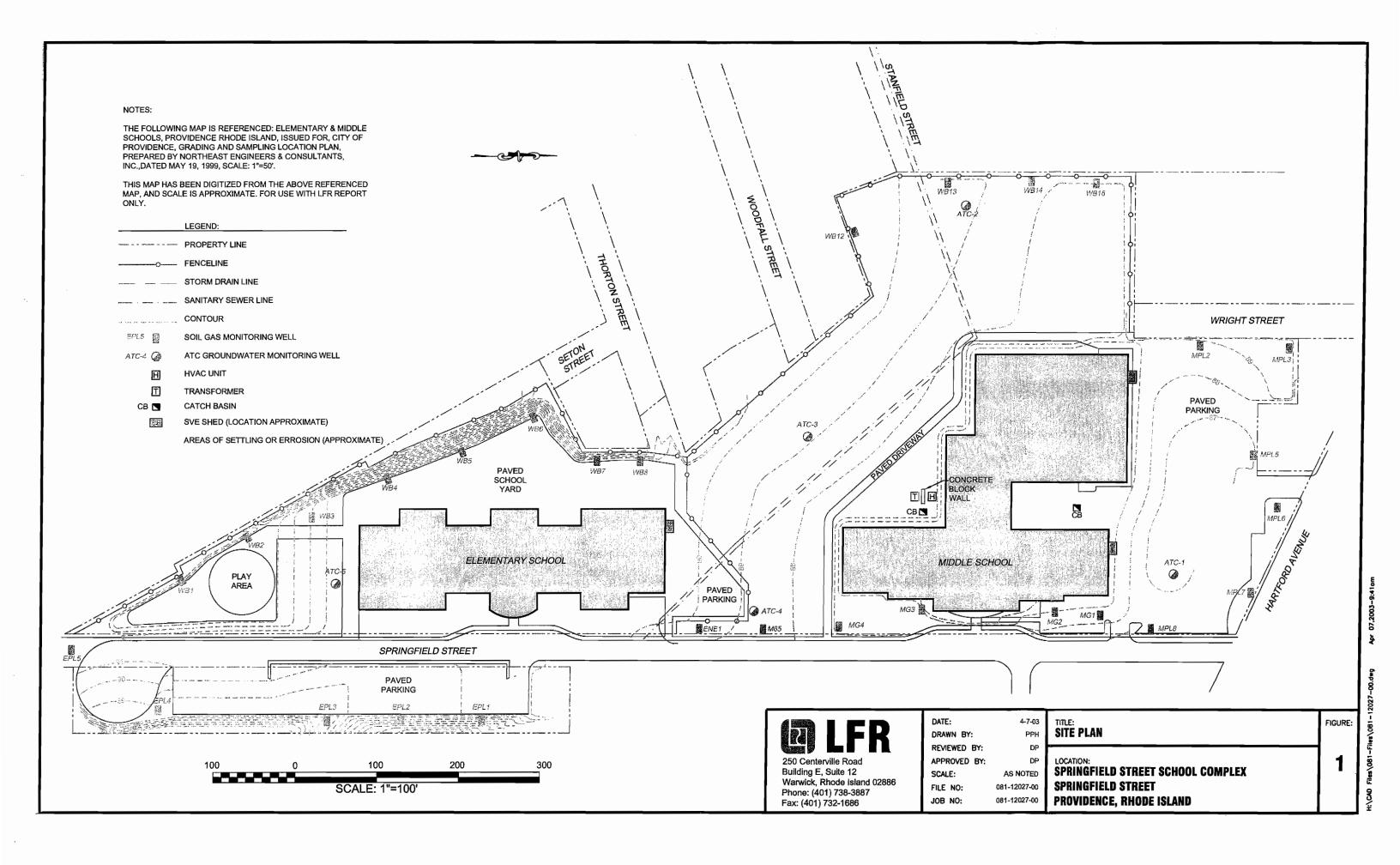
5/4/2004, 8/18/2004 & 11/30/2004 - sampled WB-2, previous results are for samples from WB-2 ND - Not Detected Samples were collected in Tedlar bags and analyzed by method TO-14

Table 7
Summary of Soil Gas Laboratory Results for MPL-6
Springfield Street School Complex
Providence, Rhode Island

			Results of Analysis in PPBv by	vsis in PPBv by	Sample Date		
Compounds Detected	3/19/2003	7/15/2003	11/11/2003	1/22/2004	5/4/2004	8/18/2004	11/30/2004
1,2,4-Trimethylbenzene	<u>QN</u>	ND	2.2	ND	ND	ND	3.4
1,3,5-Trimethylbenzene	ND	ND	1.3	ND	ND	ND	1.4
Ethylbenzene	QN	ND	1.6	ND	ND	ND	ND
M/p-Xylene	0.7	ND	15.8	ND	ND	ND	3.9
O -Xylene	QN	ND	3.3	ND	ND	ND	2.9
Tetrachloroethylene	2.7	ND	ND	ND	ND	ND	ND
Toluene	2.8	ND	ND	1.2	QN	QN	ND
Trichloroethylene	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane (Freon 11)	ND	ND	ND	ND	ND	ND	ND
Total VOCs Detected	6.2	0	24.2	1.2	0	0	11.6

ND - Not Detected Samples were collected in Tedlar bags and analyzed by method TO-14

# FIGURE



# Attachment 1

**Groundwater Monitoring Logs** 



Well Number: ATC-1

Site Name: Springfield Street School

Project Number: 081-12152-01

Site Address: Springfield Street

Providence, RI

		<u>,                                      </u>	
Sampled By: A. Cote		Date: 12/2/04	
Weather: partly cloudy ~ 45°F		Purging Equipment: dedicated polyethylene	bailer
Sampling Equipment: dedicated polyethylene baile	r	Decontamination method:	
Measuring Point (top of PVC/ top of casing): PVC		Depth to water: 13.58	(feet)
Casing diameter: 2 inch	(inches)	Flush mount or riser:	
Depth to Product: NA	(feet)	Product thickness: NA	(feet)
Depth to bottom: 20.78	(feet)	Length of Water Column (depth to bottom to water): 7.2	- depth (feet)
Well measuring point elevation:	(feet)	Water table elevation:	(feet)
Well volume: 4.4	(liters)	Three well volumes: (1.85 x length of water for 2 inch well): 13.3	column
		AUL M MACUA TICANY. 10.0	(liters)

## FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
9	16.0	352.7	1.54	7.1
11	16.6	333.3	0.71	6.9
13	15.9	6.9	0.94	6.7

<b>Total volume Removed</b> : 14	

# **OBSERVATIONS:**

Color of groundwater: Brown Odors: Yes Did well go dry: No



Well Number: ATC-2

Site Name: Springfield Street School

**Project Number: 081-12152-01** 

Site Address: Springfield Street

Providence, RI

Sampled By: A. Cote		Date: 12/2/04	
Weather: partly cloudy ~ 45°F		Purging Equipment: dedicated polyethylene bailer	
Sampling Equipment: dedicated polyethylene bailed	er	Decontamination method:	
Measuring Point (top of PVC/ top of casing): PVC	C	Depth to water: 13.64	(feet)
Casing diameter: 2 inch	(inches)	Flush mount or riser: flush	
Depth to Product: NA	(feet)	Product thickness: NA	(feet)
Depth to bottom: 18.62	(feet)	Length of Water Column (depth to bottom to water): 4.98	- depth (feet)
Well measuring point elevation:	(feet)	Water table elevation:	(feet)
Well volume: 3.1	(liters)	Three well volumes: (1.85 x length of water for 2 inch well): 9.21	column

## FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
6	13.3	408.7	3.76	8.7
7	14.0	440.8	3.63	8.0
8	14.3	416.1	3.55	7.6
9	14.1	394.0	3.38	7.4

Total volume Removed:	10

# **OBSERVATIONS:**

Color of groundwater: Yellow Odors: No Did well go dry: No



Well Number: ATC-3

Site Name: Springfield Street School

Project Number: 081-12152-01

Site Address: Springfield Street

Providence, RI

		,	
Sampled By: A. Cote	_	Date: 12/2/04	
Weather: partly cloudy ~ 45°F		Purging Equipment: dedicated polyethylene bailer	
Sampling Equipment: dedicated polyethylene baile	er	Decontamination method:	
Measuring Point (top of PVC/ top of casing): PVC	C	Depth to water: 12.00	(feet)
Casing diameter: 2 inch	(inches)	Flush mount or riser: flush	
Depth to Product: NA	(feet)	Product thickness: NA	(feet)
Depth to bottom: 15.98	(feet)	Length of Water Column (depth to bottom to water): 3.98	<ul><li>depth</li><li>(feet)</li></ul>
Well measuring point elevation:	(feet)	Water table elevation:	(feet)
Well volume: 2.5	(liters)	Three well volumes: (1.85 x length of water for 2 inch well): 7.4	r column (liters)

## FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
5	6.9	32.1	7.21	9.1
6	6.8	29.9	8.32	8.5
7	6.9	30.1	7.98	8.2

Total volume Removed	l: 8
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# **OBSERVATIONS:**

Color of groundwater: Yellow Odors: No Did well go dry: No



Well Number: ATC-4

Site Name: Springfield Street School

Project Number: 081-12152-01

Site Address: Springfield Street

Providence, RI

Sampled By: A. Cote		Date: 12/2/04	
Weather: partly cloudy ~ 45°F		Purging Equipment: dedicated polyethylene bailer	
Sampling Equipment: dedicated polyethylene baile	r	Decontamination method:	
Measuring Point (top of PVC/ top of casing): PVC		Depth to water: 14.52	(feet)
Casing diameter: 2 inch	(inches)	Flush mount or riser: flush	
Depth to Product: NA	(feet)	Product thickness: NA	(feet)
Depth to bottom: 23.74	(feet)	Length of Water Column (depth to bottom to water): 9.22	- depth (feet)
Well measuring point elevation:	(feet)	Water table elevation:	(feet)
Well volume: 5.7	(liters)	Three well volumes: (1.85 x length of water for 2 inch well): 17.1	column (liters)

# FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
12	12.2	282.4	0.80	5.2
15	14.2	336.6	0.74	5.8
18	15.2	300.0	0.47	5.9

Total volume Removed:	19	

# **OBSERVATIONS:**

Color of groundwater: \_\_\_\_\_cloudy \_\_\_\_Odors: \_\_\_No \_\_\_Did well go dry: No



Well Number: ATC-5

Site Name: Springfield Street School

Project Number: 081-12152-01

Site Address: Springfield Street

Providence, RI

	·	
	Date: 12/2/04	
Weather: partly cloudy ~ 45°F		bailer
ler	Decontamination method:	
C'C	Depth to water: 18.14	(feet)
(inches)	Flush mount or riser: flush	
(feet)	Product thickness: NA	(feet)
(feet)	Length of Water Column (depth to bottom to water): 2.40	- depth (feet)
(feet)	Water table elevation:	(feet)
(liters)	Three well volumes: (1.85 x length of water for 2 inch well): 4.4	r column (liters)
	(inches) (feet) (feet)	Purging Equipment: dedicated polyethylene  Decontamination method:  Depth to water: 18.14  (inches)  Flush mount or riser: flush  (feet)  Product thickness: NA  (feet)  Length of Water Column (depth to bottom to water): 2.40  Water table elevation:  Three well volumes: (1.85 x length of water)

# FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
2		Well going dry	y - collected sample	

otal volume Removed: 2				
BSERVATIONS:				
Color of groundwater:	Yello	Odors:	No	Did well go dry: Yes

# Attachment 2

**Laboratory Report for Groundwater** 



REPORT DATE 12/13/2004

LEVINE FRICKE 250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886 ATTN: DONNA PALLISTER CONTRACT NUMBER:

PURCHASE ORDER NUMBER:

PROJECT NUMBER:

#### ANALYTICAL SUMMARY

LIMS BAT #:

LIMS-84416

JOB NUMBER: 081-12152-01

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

PROJECT LOCATION: SPRINGFIELD ST SCHOOL, PROV

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	
ATC-1	04842008	GRND WATER	NOT SPECIFIED	8260 water	
ATC-2	04B42009	GRND WATER	NOT SPECIFIED	8260 water	
ATC-3	04B42010	GRND WATER	NOT SPECIFIED	8260 water	
ATC-4	04B42011	GRND WATER	NOT SPECIFIED	8260 water	
ATC-5	04B42012	GRND WATER	NOT SPECIFIED	8260 water	
TRIP BLANK	04B42013	WATER OTHE	NOT SPECIFIED	8260 water	

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

AIHA 100033

AIHA ELLAP (LEAD) 100033

MASSACHUSETTS MA0100

**NEW HAMPSHIRE NELAP 2516** 

NEW JERSEY NELAP NJ MA007 (AIR)

CONNECTICUT PH-0567

VERMONT DOH (LEAD) No. LL015036

ARIZONA AZ0648

NEW YORK ELAP/NELAP 10899

RHODE ISLAND (LIC, No. 112)

ARIZONA AZ0654 (AIR)

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 12/13/04

Tod Kopyscinski **Director of Operations**  Sondra S. Kocot

Quality Control Coordinator

SIGNATURE

DATE

**Edward Denson Technical Director** 



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT#: LIMS-84416

081-12152-01

Date Received:

12/3/2004

Job Number:

Field Sample #: ATC-1 Sample ID:

04B42008

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC Limit		P/F
			Analyzed			Lo	Hi	
Acetone	ug/l	ND	12/09/04	LBD	10.0			
Acrolein	ug/I	ND	12/09/04	LBD	20.0			
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5			
tert-Amylmethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Benzene	ug/l	ND	12/09/04	LBD	0.6			
Bromobenzene	ug/l	ND	12/09/04	LBD	0.5			
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7			
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4			
Bromoform	ug/l	ND	12/09/04	LBD	1.2			
Bromomethane	ug/l	ND	12/09/04	LBD	1.2			
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0			
ert-Butyl Alcohol	ug/I	ND	12/09/04	LBD	20.0			
n-Butylbenzene	ug/i	ND	12/09/04	LBD	0.7			
sec-Butylbenzene	ug/l	ND.	12/09/04	LBD	0.6			
ert-Butylbenzene	ug/l	ND	12/09/04	LBD	0.8			
ert-Butylethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Carbon Disulfide	ug/l	ND	12/09/04	LBD	3.0			
Carbon Tetrachloride	ug/l	ND	12/09/04	LBD	0.5			
Chlorobenzene	ug/l	ND	12/09/04	LBD	0.6			
Chlorodibromomethane	ug/l	ND	12/09/04	LBD	0.5			
Chloroethane	ug/l	ND	12/09/04	LBD	0.8			
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6			
Chloroform	ug/l	ND	12/09/04	LBD	0.8			
Chloromethane	ug/l	ND	12/09/04	LBD	1.2			
2-Chlorotoluene	ug/l	, ND	12/09/04	LBD	0.6			
-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
,2-Dibromo-3-Chloropropane	ug/l	ND	12/09/04	LBD	1.6			
,2-Dibromoethane	ug/l	ND	12/09/04	LBD	0.70			
Dibromomethane	ug/l	ND	12/09/04	LBD	1.1			
,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.8			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: ATC-1

Sampled: 12/2/2004

Sample ID:

04B42008

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC Limit Lo Hi	P/F
4.0 Diablambamana	//	ND	Analyzed 12/09/04	LBD	0.6		
1,3-Dichlorobenzene	ug/l	ND			0.8		
1,4-Dichlorobenzene	ug/l	ND	12/09/04	LBD			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1		
Dichlorodifluoromethane	ug/l	ND	12/09/04	LBD	1.0		
1,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7		
1,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0		
1,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.6		
1,3-Dichloropropane	ug/l	ND	12/09/04	LBD	0.5		
2,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
cis-1,3-Dichloropropene	ug/i	ND	12/09/04	LBD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4		
Diethyl Ether	ug/l	ND	12/09/04	LBD	2.0		
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5		
1,4-Dioxane	ug/l	ND	12/09/04	LBD	50.0		
Ethyl Benzene	ug/l	ND	12/09/04	LBD	0.6		
Ethyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0		
Hexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3		
2-Hexanone	ug/l	ND	12/09/04	LBD	9.7		
Iodomethane	ug/l	ND	12/09/04	LBD	8.0		
Isopropylbenzene	ug/l	ND	12/09/04	LBD	0.4		
p-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7		
MTBE	ug/l	ND	12/09/04	LBD	8.0		
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0		
MIBK	ug/l	ND	12/09/04	LBD	8.8		
Naphthalene	ug/l	ND	12/09/04	LBD	1.0		

RL = Reporting Limit

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

Purchase Order No.:

WARWICK, RI 02886

LIMS-BAT #: LIMS-84416

Date Received:

Project Location: SPRINGFIELD ST SCHOOL, PROV 12/3/2004

Job Number: 081-12152-01

Field Sample #: ATC-1

Sample ID:

04B42008

Sampled: 12/2/2004

**NOT SPECIFIED** 

Sample Matrix:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo	Hi	
n-Propylbenzene	ug/l	ND	12/09/04	LBD	8.0			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	LBD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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WARWICK, RI 02886

250 CENTERVILLE RD., BLDG. E, SUITE 12

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

12/3/2004

LIMS-BAT #: LIMS-84416

Date Received:

Job Number: 081-12152-01

Field Sample #: ATC-2

Sampled: 12/2/2004

Sample ID:

04B42009

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Acetone	ug/l	ND	12/09/04	LBD	10.0			
Acrolein	ug/l	ND	12/09/04	LBD	20.0			
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5			
tert-Amylmethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Benzene	ug/l	ND	12/09/04	LBD	0.6			
Bromobenzene	ug/l	ND	12/09/04	LBD	0.5			
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7			
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4			
Bromoform	ug/l	ND	12/09/04	LBD	1.2			
Bromomethane	ug/l	ND	12/09/04	LBD	1.2			
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0			
tert-Butyl Alcohol	ug/l	ND	12/09/04	LBD	20.0			
n-Butylbenzene	ug/l	ND	12/09/04	LBD	0.7			
sec-Butylbenzene	ug/l	ND	12/09/04	LBD	0.6			
tert-Butylbenzene	ug/l	ND	12/09/04	LBD	8.0			
tert-Butylethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Carbon Disulfide	ug/l	ND	12/09/04	LBD	3.0			
Carbon Tetrachloride	ug/l	ND	12/09/04	LBD	0.5			
Chlorobenzene	ug/l	ND	12/09/04	LBD	0.6			
Chlorodibromomethane	ug/l	ND	12/09/04	LBD	0.5			
Chloroethane	ug/l	ND	12/09/04	LBD	8.0			
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6			
Chloroform	ug/l	ND	12/09/04	LBD	8.0			
Chloromethane	ug/l	ND	12/09/04	LBD	1.2			
2-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
4-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/09/04	LBD	1.6			
1,2-Dibromoethane	ug/l	ND	12/09/04	LBD	0.70			
Dibromomethane	ug/l	ND	12/09/04	LBD	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.8			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

12/3/2004

04B42009

LIMS-BAT #: LIMS-84416

Date Received:

Job Number: 081-12152-01

Sample ID:

Field Sample #: ATC-2

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC Limit	P/F
			Analyzed			Lo Hi	
1,3-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.6		
1,4-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0		
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1		
Dichlorodifluoromethane	ug/l	ND	12/09/04	LBD	1.0		
1,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7		
1,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0		
1,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.6		
1,3-Dichloropropane	ug/l	ND	12/09/04	LBD	0.5		
2,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
cis-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4		
Diethyl Ether	ug/l	ND	12/09/04	LBD	2.0		
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5		
1,4-Dioxane	ug/l	ND	12/09/04	LBD	50.0		
Ethyl Benzene	ug/l	ND	12/09/04	LBD	0.6		
Ethyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0		
Hexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3		
2-Hexanone	ug/l	ND	12/09/04	LBD	9.7		
lodomethane	ug/l	ND	12/09/04	LBD	8.0		
Isopropylbenzene	ug/l	ND	12/09/04	LBD	0.4		
p-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7		
MTBE	ug/l	ND	12/09/04	LBD	8.0		
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0		
MIBK	ug/l	ND	12/09/04	LBD	8.8		
Naphthalene	ug/l	ND	12/09/04	LBD	1.0		

RL = Reporting Limit

ND = Not Detected

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

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.:

LIMS-BAT #: LIMS-84416

Project Location: SPRINGFIELD ST SCHOOL, PROV

Job Number: 081-12152-01

Date Received:

12/3/2004

Field Sample #: ATC-2

Sample ID:

04B42009

Sampled: 12/2/2004 NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
n-Propylbenzene	ug/l	ND	12/09/04	LBD	0.8			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	l.BD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

Purchase Order No.:

WARWICK, RI 02886

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT#: LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: ATC-3

Sampled: 12/2/2004

Sample ID:

04B42010

NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Acetone		ND	12/09/04	LBD	10.0		111	
Acrolein	ug/l	ND	12/09/04	LBD	20.0			
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5			
tert-Amylmethyl Ether	ug/i	ND	12/09/04	LBD	0.5			
Benzene	ug/i	ND	12/09/04	LBD	0.6			
Bromobenzene	ug/l	ND	12/09/04	LBD	0.5			
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7			
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4			
Bromoform	ug/l	ND	12/09/04	LBD	1.2			
Bromomethane	ug/l	ND	12/09/04	LBD	1.2			
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0			
tert-Butyl Alcohol	ug/l	ND	12/09/04	LBD	20.0			
n-Butylbenzene	ug/l	ND	12/09/04	LBD	0.7			
sec-Butylbenzene	ug/l	ND	12/09/04	LBD	0.6			
tert-Butylbenzene	ug/l	ND	12/09/04	LBD	0.8			
tert-Butylethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Carbon Disulfide	-	ND	12/09/04	LBD	3.0			
	ug/l	ND	12/09/04	LBD	0.5			
Carbon Tetrachloride	ug/l		12/09/04	LBD	0.6			
Chlorodihamanathama	ug/l	ND						
Chlorodibromomethane	ug/l	ND	12/09/04	LBD	0.5			
Chloroethane	ug/l	ND	12/09/04	LBD	8.0			
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6			
Chloroform	ug/l	ND	12/09/04	LBD	0.8			
Chloromethane	ug/l	ND	12/09/04	LBD	1.2			
2-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
4-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/09/04	LBD	1.6			
1,2-Dibromoethane	ug/l	ND	12/09/04	LBD	0.70			
Dibromomethane	ug/l	ND	12/09/04	LBD	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416 Job Number: 081-12152-01

Date Received:

12/3/2004

Field Sample #: ATC-3

04B42010

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

Sample ID:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo	Hi	
1,3-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.6			
1,4-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4			
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1			
Dichlorodifluoromethane	ug/i	ND	12/09/04	LBD	1.0			
1,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7			
1,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6			
cis-1,2-Dichloroethylene	ug/i	ND	12/09/04	LBD	0.5			
trans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0			
1,2-Dichloropropane	ug/I	ND	12/09/04	LBD	0.6			
1,3-Dichloropropane	ug/l	ND	12/09/04	LBD	0.5			
2,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.9			
1,1-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5			
cis-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5			
trans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4			
Diethyl Ether	ug/l	ND	12/09/04	LBD	2.0			
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5			
1,4-Dioxane	ug/l	ND	12/09/04	LBD	50.0			
Ethyl Benzene	ug/l	ND	12/09/04	LBD	0.6			
Ethyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0			
Hexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3			
2-Hexanone	ug/l	ND	12/09/04	LBD	9.7			
Iodomethane	ug/l	ND	12/09/04	LBD	8.0			
Isopropylbenzene	ug/l	ND	12/09/04	LBD	0.4			
p-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7			
MTBE	ug/l	ND	12/09/04	LBD	8.0			
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0			
MIBK	ug/l	ND	12/09/04	LBD	8.8			
Naphthalene	ug/I	ND	12/09/04	LBD	1.0			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



**DONNA PALLISTER** 

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.:

LIMS-BAT #: LIMS-84416

Project Location: SPRINGFIELD ST SCHOOL, PROV

Job Number: 081-12152-01

Date Received:

12/3/2004

Field Sample #: ATC-3

Sample ID:

04B42010

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo	Hi	
n-Propylbenzene	ug/l	ND	12/09/04	LBD	8.0			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/i	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/i	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	LBD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

12/3/2004

LIMS-BAT #: LIMS-84416

Job Number: 081-12152-01

Date Received: Field Sample #: ATC-4 Sample ID:

04B42011

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date Analyzed	Analyst	RL	SPEC I Lo	Limit Hi	P/ F
Acetone	ug/l	ND	12/09/04	LBD	10.0			
Acrolein	ug/l	ND	12/09/04	LBD	20.0			
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5			
tert-Amylmethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Benzene	ug/l	ND	12/09/04	LBD	0.6			
Bromobenzene	ug/l	ND	12/09/04	LBD	0.5			
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7			
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4			
Bromoform	ug/l	ND	12/09/04	LBD	1.2			
Bromomethane	ug/l	ND	12/09/04	LBD	1.2			
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0			
tert-Butyl Alcohol	ug/l	ND	12/09/04	LBD	20.0			
n-Butylbenzene	ug/l	ND	12/09/04	LBD	0.7			
sec-Butylbenzene	ug/l	ND	12/09/04	LBD	0.6			
tert-Butylbenzene	ug/l	ND	12/09/04	LBD	0.8			
tert-Butylethyl Ether	ug/i	ND	12/09/04	LBD	0.5			
Carbon Disulfide	ug/l	ND	12/09/04	LBD	3.0			
Carbon Tetrachloride	ug/l	ND	12/09/04	LBD	0.5			
Chlorobenzene	ug/l	0.6	12/09/04	LBD	0.6			
Chlorodibromomethane	ug/I	ND	12/09/04	LBD	0.5			
Chloroethane	ug/l	ND	12/09/04	LBD	8.0			
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6			
Chloroform	ug/l	ND	12/09/04	LBD	8.0			
Chloromethane	ug/i	ND	12/09/04	LBD	1.2			
2-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
4-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/09/04	LBD	1.6			
1,2-Dibromoethane	ug/l	ND	12/09/04	LBD	0.70			
Dibromomethane	ug/l	ND	12/09/04	LBD	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.8			

RL = Reporting Limit

ND = Not Detected

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

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.:

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Project Location: SPRINGFIELD ST SCHOOL, PROV

Job Number: 081-12152-01

04B42011

Field Sample #: ATC-4 Sample ID:

Sampled: 12/2/2004 NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

Campio Matrix.							
	Units	Results	Date	Analyst	RL	SPEC Limit Lo Hi	P/ <b>F</b>
4.2 Diablerahanzena	ug/l	ND ND	Analyzed 12/09/04	LBD	0.6		
1,3-Dichlorobenzene	_			LBD	0.8		
1,4-Dichlorobenzene	ug/l	2.1	12/09/04				
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4		
rans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1		
Dichlorodifluoromethane	ug/l	ND	12/09/04	LBD	1.0		
,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7		
,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9		
,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6		
is-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.5		
rans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0		
,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.6		
,3-Dichloropropane	ug/l	ND	12/09/04	LBD	0.5		
,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.9		
,1-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
is-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
ans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4		
Diethyl Ether	ug/l	ND	12/09/0 <b>4</b>	LBD	2.0		
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5		
,4-Dioxane	ug/l	ND	12/09/04	LBD	50.0		
Ethyl Benzene	ug/i	ND	12/09/04	LBD	0.6		
thyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0		
lexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3		
-Hexanone	ug/l	ND	12/09/04	LBD	9.7		
odomethane	ug/l	ND	12/09/0 <b>4</b>	LBD	8.0		
sopropylbenzene	ug/l	ND	12/09/04	LBD	0.4		
-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7		
1TBE	ug/l	ND	12/09/04	LBD	0.8		
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0		
IIBK	ug/l	ND	12/09/04	LBD	8.8		
laphthalene	ug/l	ND	12/09/04	LBD	1.0		

RL = Reporting Limit

ND = Not Detected NM = Not Measured SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Job Number:

081-12152-01

Field Sample #: ATC-4

Sampled: 12/2/2004

Sample ID:

04B42011

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo	Hí	
n-Propylbenzene	ug/l	ND	12/09/04	LBD	0.8			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/i	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	LBD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

250 CENTERVILLE RD., BLDG. E, SUITE 12

Job Number: 081-12152-01

Field Sample #: ATC-5 Sample ID:

04B42012

Sampled: 12/2/2004 NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC Limit P/ F
			Analyzed			Lo Hi
Acetone	ug/l	ND	12/09/04	LBD	10.0	_
Acrolein	ug/l	ND	12/09/04	LBD	20.0	
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5	
tert-Amylmethyl Ether	ug/l	ND	12/09/04	LBD	0.5	
Benzene	ug/l	ND	12/09/04	LBD	0.6	
Bromobenzene	ug/I	ND	12/09/04	LBD	0.5	
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7	
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4	
Bromoform	ug/l	ND	12/09/04	LBD	1.2	
Bromomethane	ug/l	ND	12/09/04	LBD	1.2	
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0	
tert-Butyl Alcohol	ug/l	ND	12/09/04	LBD	20.0	
n-Butylbenzene	ug/l	ND	12/09/04	LBD	0.7	
sec-Butylbenzene	ug/l	ND	12/09/04	LBD	0.6	
tert-Butylbenzene	ug/l	ND	12/09/04	LBD	0.8	
tert-Butylethyl Ether	ug/l	ND	12/09/04	LBD	0.5	
Carbon Disulfide	ug/l	ND	12/09/04	LBD	3.0	
Carbon Tetrachloride	ug/l	ND	12/09/04	LBD	0.5	
Chlorobenzene	ug/l	ND	12/09/04	LBD	0.6	
Chlorodibromomethane	ug/l	ND	12/09/04	LBD	0.5	
Chloroethane	ug/l	ND	12/09/04	LBD	0.8	
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6	
Chloroform	ug/l	ND	12/09/04	LBD	0.8	
Chloromethane	ug/l	ND	12/09/04	LBD	1.2	
2-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6	
4-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6	
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/09/04	LBD	1.6	
1,2-Dibromoethane	ug/l	ND	12/09/04	LBD	0.70	
Dibromomethane	ug/i	ND	12/09/04	LBD	1.1	
1,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0	

RL = Reporting Limit

ND = Not Detected

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

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



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12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: ATC-5

04B42012

Sample ID:

Sampled: 12/2/2004

**NOT SPECIFIED** 

Sample Matrix:

**GRND WATER** 

	Units	Results	Date	Analyst	RL	SPEC Limit	P/ F
			Analyzed			Lo Hi	
1,3-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.6		
1,4-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0		
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1		
Dichlorodifluoromethane	ug/l	ND	12/09/04	LBD	1.0		
1,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7		
1,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0		
1,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.6		
1,3-Dichloropropane	ug/l	ND	12/09/04	LBD	0.5		
2,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
cis-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4		
Diethyl Ether	ug/l	ND	12/09/04	LBD	2.0		
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5		
1,4-Dioxane	ug/l	ND	12/09/04	LBD	50.0		
Ethyl Benzene	ug/l	ND	12/09/04	LBD	0.6		
Ethyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0		
Hexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3		
2-Hexanone	ug/l	ND	12/09/04	LBD	9.7		
Iodomethane	ug/l	ND	12/09/04	LBD	8.0		
Isopropylbenzene	ug/l	ND	12/09/04	LBD	0.4		
p-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7		
MTBE	ug/l	ND	12/09/04	LBD	8.0		
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0		
MIBK	ug/l	ND	12/09/04	LBD	8.8		
Naphthalene	ug/l	ND	12/09/04	LBD	1.0		

RL = Reporting Limit

ND = Not Detected NM = Not Measured SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: ATC-5 Sample ID:

04B42012

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

**GRND WATER** 

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/ F
n-Propylbenzene	ug/l	ND	12/09/04	LBD	0.8			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	LBD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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WARWICK, RI 02886

250 CENTERVILLE RD., BLDG. E, SUITE 12

Project Location: SPRINGFIELD ST SCHOOL, PROV

Purchase Order No.:

LIMS-BAT #: LIMS-84416

Job Number: 081-12152-01

Date Received:

12/3/2004

Sample ID:

Field Sample #: TRIP BLANK

04B42013

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

WATER OTHER

•	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo _	Hi	
Acetone	ug/l	ND	12/09/04	LBD	10.0			
Acrolein	ug/l	ND	12/09/04	LBD	20.0			
Acrylonitrile	ug/l	ND	12/09/04	LBD	0.5			
tert-Amylmethyl Ether	ug/l	ND	12/09/04	LBD	0.5			
Benzene	ug/l	ND	12/09/04	LBD	0.6			
Bromobenzene	ug/l	ND	12/09/04	LBD	0.5			
Bromochloromethane	ug/l	ND	12/09/04	LBD	0.7			
Bromodichloromethane	ug/l	ND	12/09/04	LBD	0.4			
Bromoform	ug/l	ND	12/09/04	LBD	1.2			
Bromomethane	ug/l	ND	12/09/04	LBD	1.2			
2-Butanone (MEK)	ug/l	ND	12/09/04	LBD	10.0			
tert-Butyl Alcohol	ug/l	ND	12/09/04	LBD	20.0			
n-Butylbenzene	ug/l	ND	12/09/04	LBD	0.7			
sec-Butylbenzene	ug/l	ND	12/09/04	LBD	0.6			
tert-Butylbenzene	ug/I	ND	12/09/04	LBD	8.0			
tert-Butylethyl Ether	ug/I	ND	12/09/04	LBD	0.5			
Carbon Disulfide	ug/l	ND	12/09/04	LBD	3.0			
Carbon Tetrachloride	ug/l	ND	12/09/04	LBD	0.5			
Chlorobenzene	ug/l	ND	12/09/04	LBD	0.6			
Chlorodibromomethane	ug/l	ND	12/09/04	LBD	0.5			
Chloroethane	ug/l	ND	12/09/04	LBD	8.0			
2-Chloroethylvinylether	ug/l	ND	12/09/04	LBD	9.6			
Chloroform	ug/l	ND	12/09/04	LBD	0.8			
Chloromethane	ug/l	ND	12/09/04	LBD	1.2			
2-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
4-Chlorotoluene	ug/l	ND	12/09/04	LBD	0.6			
1,2-Dibromo-3-Chloropropane	ug/i	ND	12/09/04	LBD	1.6			
1,2-Dibromoethane	ug/i	ND	12/09/04	LBD <sub>.</sub>	0.70			
Dibromomethane	ug/l	ND	12/09/04	LBD	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.8			

RL = Reporting Limit

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NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12

Purchase Order No.:

WARWICK, RI 02886

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #:

LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: TRIP BLANK Sample ID:

Sampled: 12/2/2004

04B42013

**NOT SPECIFIED** 

Sample Matrix:

WATER OTHER

	Units	Results	Date	Analyst	RL	SPEC Limit	P/F
			Analyzed			Lo Hi	
1,3-Dichlorobenzene	ug/l	ND	12/09/04	LBD	0.6		
1,4-Dichlorobenzene	ug/l	ND	12/09/04	LBD	8.0		
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.4		
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/09/04	LBD	2.1		
Dichlorodifluoromethane	ug/l	ND	12/09/04	LBD	1.0		
1,1-Dichloroethane	ug/l	ND	12/09/04	LBD	0.7		
1,2-Dichloroethane	ug/l	ND	12/09/04	LBD	0.9		
1,1-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	12/09/04	LBD	8.0		
1,2-Dichloropropane	ug/l	ND	12/09/04	LBD	0.6		
1,3-Dichloropropane	ug/I	ND	12/09/04	LBD	0.5		
2,2-Dichloropropane	ug/I	ND	12/09/04	LBD	0.9		
1,1-Dichloropropene	ug/I	ND	12/09/04	LBD	0.5		
cis-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.5		
trans-1,3-Dichloropropene	ug/l	ND	12/09/04	LBD	0.4		
Diethyl Ether	ug/l	ND	12/09/04	LBD	2.0		
Diisopropyl Ether	ug/l	ND	12/09/04	LBD	0.5		
1,4-Dioxane	ug/I	ND	12/09/04	LBD	50.0		
Ethyl Benzene	ug/l	ND	12/09/04	LBD	0.6		
Ethyl Methacrylate	ug/l	ND	12/09/04	LBD	8.0		
Hexachlorobutadiene	ug/l	ND	12/09/04	LBD	1.3		
2-Hexanone	ug/l	ND	12/09/04	LBD	9.7		
lodomethane	ug/l	ND	12/09/04	LBD	8.0		
Isopropylbenzene	ug/l	ND	12/09/04	LBD	0.4		
p-Isopropyltoluene	ug/l	ND	12/09/04	LBD	0.7		
MTBE	ug/l	ND	12/09/04	LBD	8.0		
Methylene Chloride	ug/l	ND	12/09/04	LBD	3.0		
MIBK	ug/l	ND	12/09/04	LBD	8.8		
Naphthalene	ug/l	ND	12/09/04	LBD	1.0		

RL = Reporting Limit

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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.

NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE 250 CENTERVILLE RD., BLDG. E, SUITE 12 12/13/2004

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WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84416

Date Received:

12/3/2004

Job Number: 081-12152-01

Field Sample #: TRIP BLANK Sample ID:

04B42013

Sampled: 12/2/2004

NOT SPECIFIED

Sample Matrix:

WATER OTHER

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/ F
			Analyzed			Lo	Hi	
n-Propylbenzene	ug/i	ND	12/09/04	LBD	8.0			
Styrene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/09/04	LBD	0.5			
Tetrachloroethylene	ug/l	ND	12/09/04	LBD	0.4			
Tetrahydrofuran	ug/l	ND	12/09/04	LBD	5.0			
Toluene	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichlorobenzene	ug/I	ND	12/09/04	LBD	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/09/04	LBD	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/09/04	LBD	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/09/04	LBD	0.7			
Trichloroethylene	ug/l	ND	12/09/04	LBD	1.0			
Trichlorofluoromethane	ug/l	ND	12/09/04	LBD	0.7			
1,2,3-Trichloropropane	ug/i	ND	12/09/04	LBD	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/09/04	LBD	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/09/04	LBD	1.0			
Vinyl Acetate	ug/l	ND	12/09/04	LBD	16.4			
Vinyl Chloride	ug/l	ND	12/09/04	LBD	0.3			
m + p Xylene	ug/l	ND	12/09/04	LBD	1.3			
o-Xylene	ug/l	ND	12/09/04	LBD	0.5			

Analytical Method:

SW846 8260

SAMPLES ARE CONCENTRATED BY PURGE & TRAP, FOLLOWED BY GC/MS TARGET COMPOUND ANALYSIS.

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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.

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/13/2004

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250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL, PROV

Date Received:

12/3/2004

LIMS-BAT #: LIMS-84416

Job Number: 081-12152-01

\*\* END OF REPORT \*\*

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

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



# 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:	12/13/2004	Lims Bat #: LIMS-84416		Page 1 of 4				
QC Batch Number	r: GCMS/VOL-11070							
Sample Id	Analysis	QC Analysis	Values	Units	Limits			
4B42008	_							
	1,2-Dichloroethane-d4	Surrogate Recovery	109.6	%	70-130			
	Toluene-d8	Surrogate Recovery	100.1	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	95.6	%	70-130			
04B42009								
	1,2-Dichloroethane-d4	Surrogate Recovery	110.2	%	70-130			
	Toluene-d8	Surrogate Recovery	98.3	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	93.5	%	70-130			
04B42010								
	1,2-Dichloroethane-d4	Surrogate Recovery	111.3	%	70-130			
	Toluene-d8	Surrogate Recovery	98.0	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	94.8	%	70-130			
04B42011								
	1,2-Dichloroethane-d4	Surrogate Recovery	111.1	%	70-130			
	Toluene-d8	Surrogate Recovery	96.9	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	93.6	%	70-130			
04B42012								
	1,2-Dichloroethane-d4	Surrogate Recovery	112.8	%	70-130			
	Toluene-d8	Surrogate Recovery	98.1	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	93.8	%	70-130			
04B <b>42</b> 013								
	1,2-Dichloroethane-d4	Surrogate Recovery	109.2	%	70-130			
	Toluene-d8	Surrogate Recovery	97.3	%	70-130			
	Bromofluorobenzene	Surrogate Recovery	93.8	%	70-130			
BLANK-67702								
	Acetone	Blank	<10.0	ug/l				
	Benzene	Blank	<0.6	ug/l				
	Carbon Tetrachloride	Blank	<0.5	ug/l				
	Chloroform	Blank	<0.8	ug/l				
	1,2-Dichloroethane	Blank	<0.9	ug/l				
	1,4-Dichlorobenzene	Blank	<0.8	ug/l				
	Ethyl Benzene	Blank	<0.6	ug/l				
	2-Butanone (MEK)	Blank	<10.0	ug/l				
	MIBK	Blank	<8.8	ug/l				
	Naphthalene	Blank	<1.0	ug/l				
	Styrene	Blank	<0.7	ug/l				
	Tetrachloroethylene	Blank	<0.4	ug/l				
	Toluene	Blank	<0.7	ug/l				
	1,1,1-Trichloroethane	Blank	<0.9	ug/l				
	Trichloroethylene	Blank	<1.0	ug/l				
	Trichlorofluoromethane	Blank	<0.7	ug/l				
	o-Xylene	Blank	<0.5	ug/l				
	m + p Xylene	Blank	<1.3	ug/l				
	1,2-Dichlorobenzene	Blank	<0.8	ug/l				



# QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

Bromochloromethane

Bromobenzene

Sample Matrix Spikes and Matrix Spike Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Standard Reference Materials and Duplicates

Method Blanks

		Method Blanks							
Report Date:	12/13/2004	Lims Bat #: LIMS-84416		Page	2 of 4				
QC Batch Number:	GCMS/VOL-11070								
Sample Id	Analysis	QC Analysis	Values	Units	Limits				
BLANK-67702									
	1,3-Dichlorobenzene	Blank	<0.6	ug/l					
	1,1-Dichloroethane	Blank	<0.7	ug/l					
	1,1-Dichloroethylene	Blank	<0.6	ug/l					
	1,4-Dioxane	Blank	<50.0	ug/l					
	MTBE	Blank	<0.8	ug/l					
	trans-1,2-Dichloroethylene	Blank	<0.8	ug/l					
	Vinyl Chloride	Blank	<0.3	ug/l					
	Methylene Chloride	Blank	<3.0	ug/l					
	Chlorobenzene	Blank	<0.6	ug/l					
	Chloromethane	Blank	<1.2	ug/l					
	Bromomethane	Blank	<1.2	ug/l					
	Chloroethane	Blank	<0.8	ug/l					
	cis-1,3-Dichloropropene	Blank	<0.5	ug/l					
	trans-1,3-Dichloropropene	Blank	<0.4	ug/l					
	Chlorodibromomethane	Blank	<0.5	ug/l					
	1,1,2-Trichloroethane	Blank	<0.7	ug/l					
	2-Chloroethylvinylether	Blank	<9.6	ug/l					
	Bromoform	Blank	<1.2	ug/l					
	1,1,2,2-Tetrachloroethane	Blank	<0.5	ug/l					
	2-Chlorotoluene	Blank	<0.6	ug/l					
	Hexachlorobutadiene	Blank	<1.3	ug/l					
	Isopropylbenzene	Blank	<0.4	ug/l					
	p-isopropyltoluene	Blank	<0.7	ug/l					
	n-Propylbenzene	Blank	<0.8	ug/l					
	sec-Butylbenzene	Blank	<0.6	ug/l					
	tert-Butylbenzene	Blank	<0.8	ug/l					
	1,2,3-Trichlorobenzene	Blank	<0.7	ug/l					
	1,2,4-Trichlorobenzene	Blank	<0.7	ug/l					
	1,2,4-Trimethylbenzene	Blank	<0.7	ug/i					
	1,3,5-Trimethylbenzene	Blank	<1.0	ug/l					
	Dibromomethane	Blank	<1.1	ug/l					
	cis-1,2-Dichloroethylene	Blank	<0.5	ug/l					
	4-Chlorotoluene	Blank	<0.6	ug/l					
	1,1-Dichloropropene	Blank	<0.5	ug/l					
	1,2-Dichloropropane	Blank	<0.6	ug/l					
	1,3-Dichloropropane	Blank	<0.5	ug/l					
	2,2-Dichloropropane	Blank	<0.9	ug/l					
	1,1,1,2-Tetrachloroethane	Blank	<0.5	ug/l					
	1,2,3-Trichloropropane	Blank	<1.3	ug/l					
	n-Butylbenzene	Blank	<0.7	ug/l					
	Dichlorodifluoromethane	Blank	<1.0	ug/l					

Blank

Blank

<0.7

<0.5

ug/l

ug/l



39 Spruce Street  $^\circ$  2nd Floor  $^\circ$  East Longmeadow, MA 01028  $^\circ$  FAX 413/525-6405  $^\circ$  TEL. 413/525-2332

# 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:	12/13/2004	Lims Bat #: LIMS-84416		Page 3 of	4
QC Batch Numbe	r: GCMS/VOL-11070				
Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-67702					
	Iodomethane	Blank	<0.8	ug/l	
	Acrolein	Blank	<20.0	ug/l	
	Acrylonitrile	Blank	<0.5	ug/l	
	Carbon Disulfide	Blank	<3.0	ug/l	
	Vinyl Acetate	Blank	<16.4	ug/l	
	2-Hexanone	Blank	<9.7	ug/l	
	trans-1,4-Dichloro-2-Butene	Blank	<2.1	ug/l	
	Ethyl Methacrylate	Blank	<0.8	ug/l	
	cis-1,4-Dichloro-2-Butene	Blank	<2.4	ug/l	
	Diethyl Ether	Blank	<2.0	ug/l	
	Bromodichloromethane	Blank	<0.4	ug/l	
	1,2-Dibromo-3-Chloropropane	Blank	<1.6	ug/l	
	1,2-Dibromoethane	Blank	<0.70	ug/l	
	Tetrahydrofuran	Blank	<5.0	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-Amvimethyl Ether	Blank	<0.5	ug/i	



### **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:

12/13/2004

Lims Bat #: LIMS-84416

Page 4 of 4

## QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

OC 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 MS Amt Measured Matrix Spike % Rec.

Amount of analyte spiked into a sample

Amount of analyte found including amount that was spiked

% Recovery of spiked amount in sample.

Duplicate Value Duplicate RPD

The result from the Duplicate analysis of the sample.

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) Sur. Recovery (PID)

Surrogate Recovery on the Electrolytic Conductivity Detector. Surrogate Recovery on the Photoionization Detector.

Standard Measured Standard Amt Added Standard % Recovery Amount measured for a laboratory control sample Known value for a laboratory control sample

% recovered for a laboratory control sample with a known value.

Lab Fort Blank Amt Lab Fort Blk. Found Lab Fort Blk % Rec Dup Lab Fort Bl Amt Dup Lab Fort Bl Fnd Dup Lab Fort Bl % Rec Lab Fort Blank Range

Laboratory Fortified Blank Amount Added Laboratory Fortified Blank Amount Found Laboratory Fortified Blank % Recovered

Duplicate Laboratory Fortified Blank Amount Added Duplicate Laboratory Fortified Blank Amount Found Duplicate Laboratory Fortified Blank % Recovery

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 MSD Amount Added MSD Amt Measured MSD % Recovery MSD Range

Sample Value for Duplicate used with Matrix Spike Duplicate

Matrix Spike Duplicate Amount Added (Spiked) Matrix Spike Duplicate Amount Measured

Matrix Spike Duplicate % Recovery

Absolute difference between Matrix Spike and Matrix Spike Duplicate Recoveries



Email: info@contestlabs.com Fax: 413-525-6405 Phone: 413-525-2332

CHAIN OF CUSTODY RECORD

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

2:00 p.m.) nd WBE/DBE Certified!	t (unless received before IELAC Certifications a	ample receipt AIHA and N	the day after so	ins at 9:00 a.m.	*Turnaround time beg	VLY independent laborato	**Turnaround time begins at 9:00 a.m. the day after sample receipt (unless received before 2:00 p.m.)  **Con-Test Laboratory is the ONLY independent laboratory in all of New England with both prestigious AIHA and NELAC Certifications and WBE/DBE Certified!	
O = Other	O = other				* Require lab approval	. 00/3 [/00 ·	mission disc	
B = Sodium bisulfate	SL = sludge				*72-Hr *4-Day	)	y: (signature)	Rec
S = Sulfuric Acid	S = soil/solid		ments or DL's:	Special Requirements or DL's:	<b>Ճ *</b> 24-Hr □ *48-Hr	W136 KM	you wheel where	2
N = Nitric Acid				(MA MCP sites only)	BUSH *	3	Rejinquished by: (signature)	Re l
nanol	<b>DW</b> ≃ drinking water	X X X	ent Project?	Data Enhancement Project?	がに ロ 10-Day	172/04 1720	yed by: (sig	
H = HCl T = Na thiosulfate		25	KNOW I NOW	Hegulations? _	Luque 5-Day	0	CMINE COTO	
1 varion		HIGHES	illit nequirelle	Defection Filling	2		Helinquisned by: (signature)	100
**Drocomustion Codes:		monte	mit Domin	Dotootion !	T	7		2
		×				42013	Trip Blank	
			× ×	×	17/2/04-1900	1000	ATC-5	
			W X	×	12/2/04 1115		ATC-4	
		<u> </u>	GW X	×	12/2/04 1525		ATC-3	
		×	SN X	×	142/04 1315	12:09	ATC-2	
Comments:			GW ×	×	12/2/04 1200	42 508	ATC-1	
			*Matrix Code	Comp- osite Grab *N	Stop Date/Time	Lab# 045 pa	Field ID Sample Description	Field
<b>D</b> Cher		100	101		ate Sampled	☐ yes 🕅 no	yes proposal date	
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<b>S</b> T-stenie							Project Location: Spingfiell St. School, Payidente, KI	Proje
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A=amberglas					אדא ספו איפטע (אר	1		<b>‡</b>
	ANALYSIS REQUESTED				Client PO#		Warwick RI 02886	
~Cont.Code				181-12152-01	Project #08 \		Address: 250 Centerville Rd Bd E Switc 17	Addr
**Preservation				1885 - 38	Telephone:(401) <u>738 - 3887</u>		Company Name: LFR	Com
# of containers			12			www.contestlabs.com	<u>.</u>	ź

# Attachment 3 GB Groundwater Objective Calculation

# GB Groundwater Objectives Algorithm

	ర్ధ	F	MS	VP	MW	Cw (mg/L)	Cw (ug/L)
VOCs (ug/L)							
1,4-dichlorobenzene	0.451	293	79	1.3	147.0	3.41	3405.7

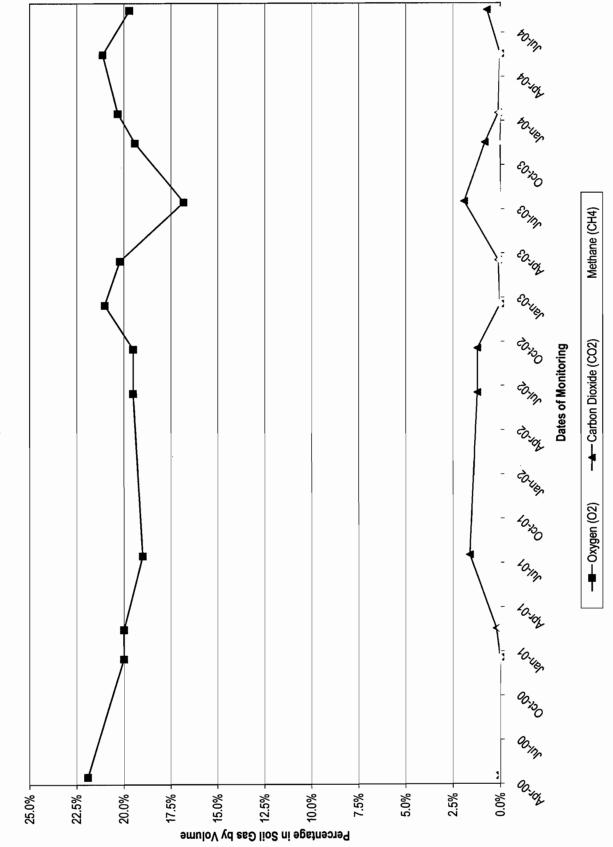
Ca = Air Concentration (mg/L) - OSHA PEL

T = Temperature of groundwater (degrees K)
WS = Solubility (mg/L-water) from MADEP
VP = Vapor Pressure (mm Hg) from NIOSH Pocket Guide to Chemical Hazards
MW = Molecular Weight (g/mole) from NIOSH Pocket Guide to Chemical Hazards
Cw = Water Concentration (mg/L) - calculated

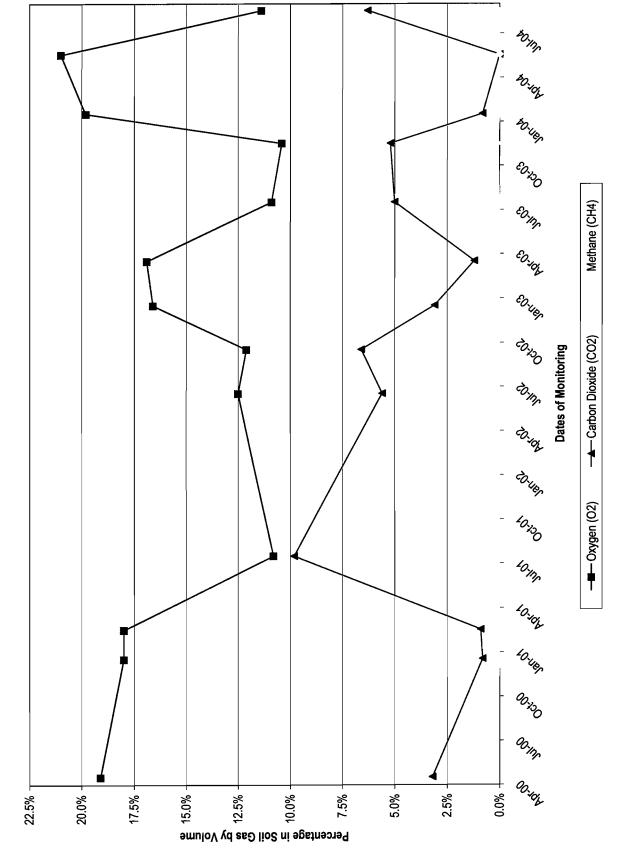
 $C_W = (C_a * T*WS)/(VP*MW*16.04)$ 

# Attachment 4 Soil Gas Graphs

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

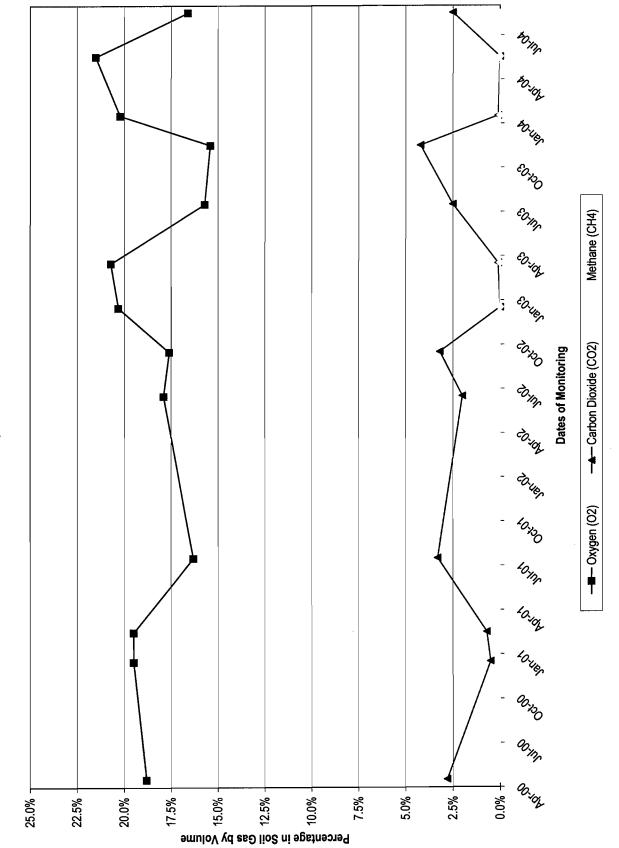


Soil Gas Well EPL4
Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time
Springfield Street School Complex
Providence, Rhode Island



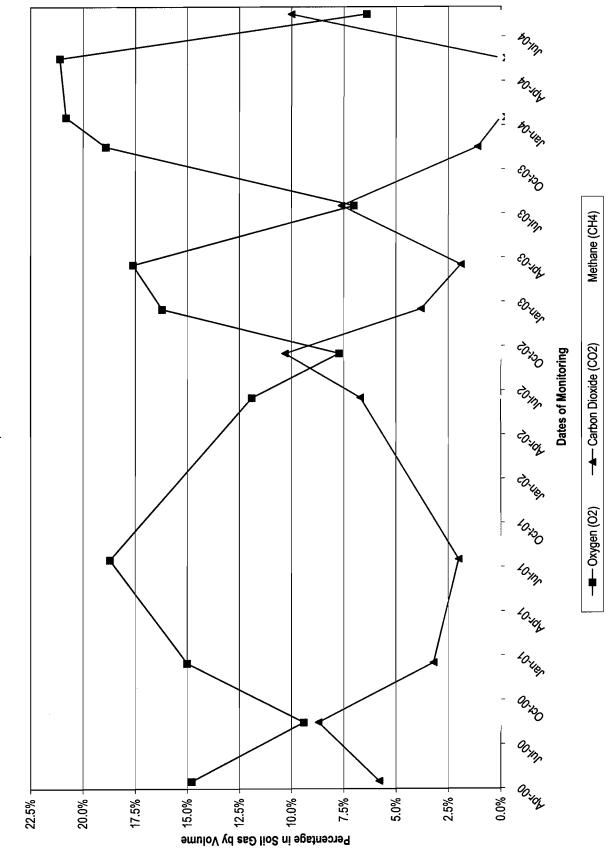
H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\EPL4

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



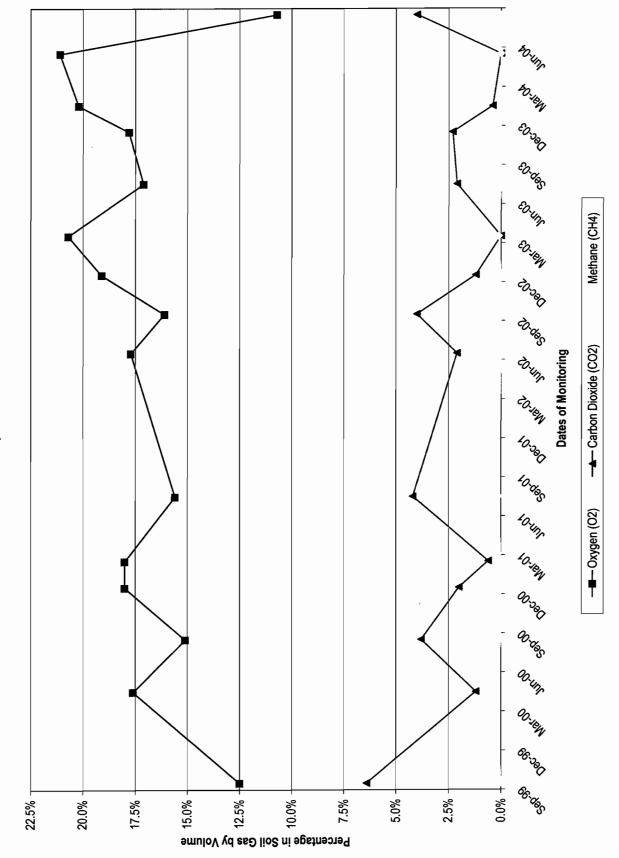
H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\MG2

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



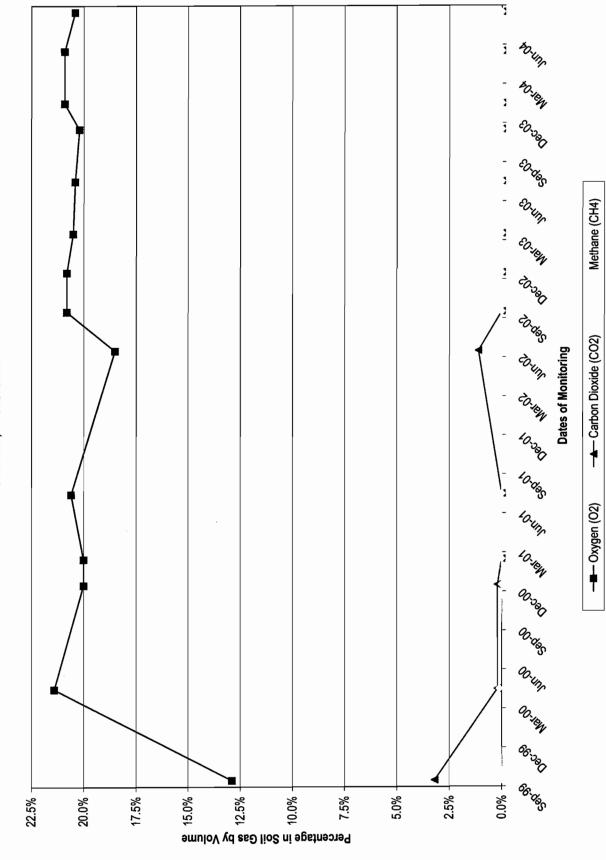
H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\MPL5

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



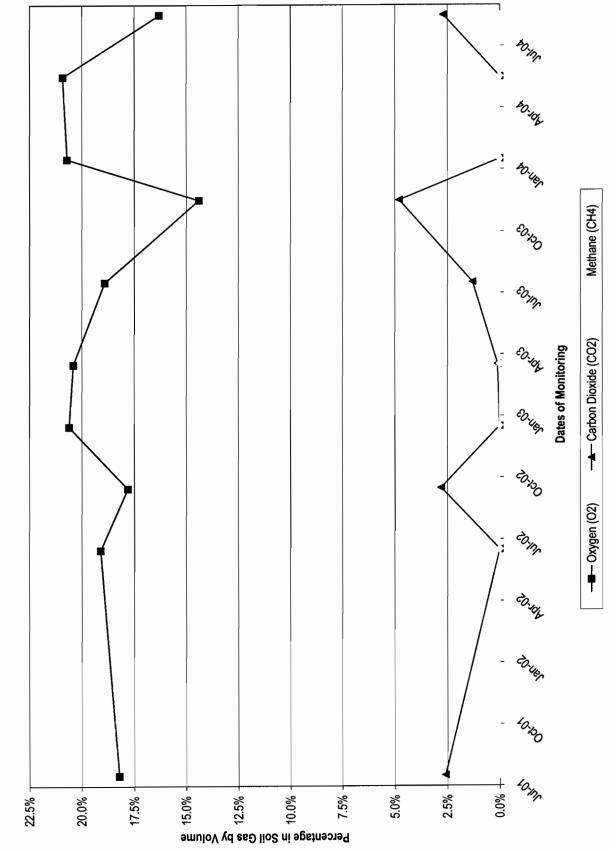
H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\WB1

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



H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\WB7

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



H:\Active Jobs\081-12152\Monitoring Trends\Soil Gas Trends\WB15

# Attachment 5 Laboratory Report for Soil Gas



REPORT DATE 12/8/2004

LEVINE FRICKE 250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

ATTN: DONNA PALLISTER

CONTRACT NUMBER:

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER:

## **ANALYTICAL SUMMARY**

LIMS BAT #:

LIMS-84354

JOB NUMBER: 081-12152-01

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

PROJECT LOCATION: SPRINGFIELD ST SCHOOL, PROV

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	
MPL-6	04B41499	AIR	NOT SPECIFIED	to-14 ppbv	
MPL-6	04B41499	AIR	NOT SPECIFIED	to-14 ug/m3	
WB-2	04B41498	AIR	NOT SPECIFIED	to-14 ppbv	
WB-2	04B41498	AIR	NOT SPECIFIED	to-14 ug/m3	

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

AIHA 100033

AIHA ELLAP (LEAD) 100033

MASSACHUSETTS MA0100

**NEW HAMPSHIRE NELAP 2516** 

NEW JERSEY NELAP NJ MA007 (AIR)

CONNECTICUT PH-0567

VERMONT DOH (LEAD) No. LL015036

ARIZONA AZ0648

NEW YORK ELAP/NELAP 10899

RHODE ISLAND (LIC. No. 112)

ARIZONA AZ0654 (AIR)

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 12/8/04

Tod Kopyscinski

Sondra S. Kocot

**Director of Operations** 

Quality Control Coordinator

SIGNATURE

Edward Denson **Technical Director** 



DONNA PALLISTER

LEVINE FRICKE

250 CENTERVILLE RD., BLDG. E, SUITE 12

12/8/2004

WARWICK, RI 02886

Page 1 of 9

Purchase Order No.: 5131

LIMS-BAT #:

LIMS-84354

Project Location: SPRINGFIELD ST SCHOOL, PROV Date Received:

12/1/2004

Job Number: 081-12152-01

Field Sample #: MPL-6

Sample ID:

04B41499

Sampled: 11/30/2004

NOT SPECIFIED

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date	Analyst	RL	SPEC		P/F
			Analyzed			Lo	Hi	
Benzene	PPBv	ND	12/02/04	WSD	0.5			
Bromomethane	PPBv	ND	12/02/04	WSD	0.5			
Carbon Tetrachloride	PPBv	ND	12/02/04	WSD	0.5			
Chlorobenzene	PPBv	ND	12/02/04	WSD	0.5			
Chloroethane	PPBv	ND	12/02/04	WSD	0.5			
Chloroform	PPBv	ND	12/02/04	WSD	0.5			
Chloromethane	PPBv	ND	12/02/04	WSD	0.5			
1,2-Dibromoethane	PPBv	ND	12/02/04	WSD	0.5			
1,2-Dichlorobenzene	PPBv	ND	12/02/04	WSD	0.5			
1,3-Dichlorobenzene	PPBv	ND	12/02/04	WSD	0.5			
1,4-Dichlorobenzene	PPBv	ND	12/02/04	WSD	0.5			
Dichlorodifluoromethane	PPBv	ND	12/02/04	WSD	0.5			
1,1-Dichloroethane	PPBv	ND	12/02/04	WSD	0.5			
1,2-Dichloroethane	PPBv	ND	12/02/04	WSD	0.5			
1,1-Dichloroethylene	PPBv	ND	12/02/04	WSD	0.5			
cis-1,2-Dichloroethylene	PPBv	ND	12/02/04	WSD	0.5			
1,2-Dichloropropane	PPBv	ND	12/02/04	WSD	0.5			
cis-1,3-Dichloropropene	PPBv	ND	12/02/04	WSD	0.5			
trans-1,3-Dichloropropene	PPBv	ND	12/02/04	WSD	0.5			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/02/04	WSD	0.5			
Ethylbenzene	PPBv	ND	12/02/04	WSD	0.5			
Hexachlorobutadiene	PPBv	ND	12/02/04	WSD	0.5			
Methylene Chloride	PPBv	ND	12/02/04	WSD	0.5			
Styrene	PPBv	ND	12/02/04	WSD	0.5			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/02/04	WSD	0.5			
Tetrachloroethylene	PPBv	ND	12/02/04	WSD	0.5			
Toluene	PPBv	ND	12/02/04	WSD	0.5			
1,2,4-Trichlorobenzene	PPBv	ND	12/02/04	WSD	0.5			
1,1,1-Trichloroethane	PPBv	ND	12/02/04	WSD	0.5			
1,1,2-Trichloroethane	PPBv	ND	12/02/04	WSD	0.5			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

Page 2 of 9

WARWICK, RI 02886

Purchase Order No.: 5131

LIMS-BAT #: LIMS-84354

Project Location: SPRINGFIELD ST SCHOOL, PROV

Job Number:

081-12152-01

Date Received:

12/1/2004

250 CENTERVILLE RD., BLDG. E, SUITE 12

Sampled: 11/30/2004

Sample ID:

Field Sample #: MPL-6

04B41499

**NOT SPECIFIED** 

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Trichloroethylene	PPBv	ND	12/02/04	WSD	0.5			
Trichlorofluoromethane (Freon 11)	PPBv	ND	12/02/04	WSD	0.5			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/02/04	WSD	0.5			
1,2,4-Trimethylbenzene	PPBv	3.4	12/02/04	WSD	0.5			
1,3,5-Trimethylbenzene	PPBv	1.4	12/02/04	WSD	0.5			
Vinyl Chloride	PPBv	ND	12/02/04	WSD	0.5			
m/p-Xylene	PPBv	3.9	12/02/04	WSD	0.5			
o-Xylene	PPBv	2.9	12/02/04	WSD	0.5			

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

NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

Page 3 of 9

250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.: 5131

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84354

Date Received:

12/1/2004

Job Number: 081-12152-01

Field Sample #: WB-2

Sample ID:

04B41498

Sampled: 11/30/2004

NOT SPECIFIED

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date	Analyst	RL	SPEC		P/ <b>F</b>
			Analyzed			Lo	Hi	
Benzene	PPBv	ND	12/01/04	WSD	0.5			
Bromomethane	PPBv	ND	12/01/04	WSD	0.5			
Carbon Tetrachloride	PPBv	ND	12/01/04	WSD	0.5			
Chlorobenzene	PPBv	ND	12/01/04	WSD	0.5			
Chloroethane	PPBv	ND	12/01/04	WSD	0.5			
Chloroform	PPBv	ND	12/01/04	WSD	0.5			
Chloromethane	PPBv	ND	12/01/04	WSD	0.5			
1,2-Dibromoethane	PPBv	ND	12/01/04	WSD	0.5			
1,2-Dichlorobenzene	PPBv	ND	12/01/04	WSD	0.5			
1,3-Dichlorobenzene	PPBv	ND	12/01/04	WSD	0.5			
1,4-Dichlorobenzene	PPBv	ND	12/01/04	WSD	0.5			
Dichlorodifluoromethane	PPBv	ND	12/01/04	WSD	0.5			
1,1-Dichloroethane	PPBv	ND	12/01/04	WSD	0.5			
1,2-Dichloroethane	PPBv	ND	12/01/04	WSD	0.5			
1,1-Dichloroethylene	PPBv	ND	12/01/04	WSD	0.5			
cis-1,2-Dichloroethylene	PPBv	ND	12/01/04	WSD	0.5			
1,2-Dichloropropane	PPBv	ND	12/01/04	WSD	0.5			
cis-1,3-Dichloropropene	PPBv	ND	12/01/04	WSD	0.5			
trans-1,3-Dichloropropene	PPBv	ND	12/01/04	WSD	0.5			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	12/01/04	WSD	0.5			
Ethylbenzene	PPBv	ND	12/01/04	WSD	0.5			
Hexachlorobutadiene	PPBv	ND	12/01/04	WSD	0.5			
Methylene Chloride	PPBv	0.6	12/01/04	WSD	0.5			
Styrene	PPBv	ND	12/01/04	WSD	0.5			
1,1,2,2-Tetrachloroethane	PPBv	ND	12/01/04	WSD	0.5			
Tetrachloroethylene	PPBv	ND	12/01/04	WSD	0.5			
Toluene	PPBv	3.4	12/01/04	WSD	0.5			
1,2,4-Trichlorobenzene	PPBv	ND	12/01/04	WSD	0.5			
1,1,1-Trichloroethane	PPBv	ND	12/01/04	WSD	0.5			
1,1,2-Trichloroethane	PPBv	ND	12/01/04	WSD	0.5			

RL = Reporting Limit

SPEC LIMIT = a client specified recommended or

ND = Not Detected NM = Not Measured regulatory level for comparison with data to determine PASS (P) or FAIL (F) condition of results.

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

Page 4 of 9

250 CENTERVILLE RD., BLDG. E, SUITE 12 WARWICK, RI 02886

Purchase Order No.: 5131

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84354

Date Received:

Job Number:

081-12152-01

Field Sample #: WB-2

12/1/2004

Sampled: 11/30/2004

Sample ID:

04B41498

NOT SPECIFIED

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/ F
Trichloroethylene	PPBv	15.7	12/01/04	WSD	0.5			
Trichlorofluoromethane (Freon 11)	PPBv	0.6	12/01/04	WSD	0.5			
1,1,2-Trichloro-1,2,2-Trifluoroethane	PPBv	ND	12/01/04	WSD	0.5			
1,2,4-Trimethylbenzene	PPBv	5.0	12/01/04	WSD	0.5			
1,3,5-Trimethylbenzene	PPBv	ND	12/01/04	WSD	0.5			
Vinyl Chloride	PPBv	ND	12/01/04	WSD	0.5			
m/p-Xylene	PPBv	5.9	12/01/04	WSD	0.5			
o-Xylene	PPBv	<b>4</b> .8	12/01/04	WSD	0.5			

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

NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



Purchase Order No.: 5131

**DONNA PALLISTER** 

LEVINE FRICKE

12/8/2004 Page 5 of 9

250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84354

Job Number: 081-12152-01

Date Received: 12/1/2004

Sample ID:

Field Sample #: MPL-6 04B41499

Sampled : 11/30/2004

**NOT SPECIFIED** 

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Benzene	ug/m3	ND	12/02/04	WSD	1.6			
Bromomethane	ug/m3	ND	12/02/04	WSD	1.9			
Carbon Tetrachloride	ug/m3	ND	12/02/04	WSD	3.1			
Chlorobenzene	ug/m3	ND	12/02/04	WSD	2.3			
Chloroethane	ug/m3	ND	12/02/04	WSD	1.3			
Chloroform	ug/m3	ND	12/02/04	WSD	2.4			
Chloromethane	ug/m3	ND	12/02/04	WSD	1.0			
1,2-Dibromoethane	ug/m3	ND	12/02/04	WSD	3.8			
1,2-Dichlorobenzene	ug/m3	ND	12/02/04	WSD	3.0			
1,3-Dichlorobenzene	ug/m3	ND	12/02/04	WSD	3.0			
1,4-Dichlorobenzene	ug/m3	ND	12/02/04	WSD	3.0			
Dichlorodifluoromethane	ug/m3	ND	12/02/04	WSD	2.5			
1,1-Dichloroethane	ug/m3	ND	12/02/04	WSD	2.0			
1,2-Dichloroethane	ug/m3	ND	12/02/04	WSD	2.0			
1,1-Dichloroethylene	ug/m3	ND	12/02/04	WSD	2.0			
cis-1,2-Dichloroethylene	ug/m3	ND	12/02/04	WSD	2.0			
1,2-Dichloropropane	ug/m3	ND	12/02/04	WSD	2.3			
cis-1,3-Dichloropropene	ug/m3	ND	12/02/04	WSD	2.3			
trans-1,3-Dichloropropene	ug/m3	ND	12/02/04	WSD	2.3			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/02/04	WSD	3.5			
Ethylbenzene	ug/m3	ND	12/02/04	WSD	2.2			
Hexachlorobutadiene	ug/m3	ND	12/02/04	WSD	5.3			
Methylene Chloride	ug/m3	ND	12/02/04	WSD	1.7			
Styrene	ug/m3	ND	12/02/04	WSD	2.1			
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/02/04	WSD	3.4			
Tetrachloroethylene	ug/m3	ND	12/02/04	WSD	3.4			
Toluene	ug/m3	ND	12/02/04	WSD	1.9			
1,2,4-Trichlorobenzene	ug/m3	ND	12/02/04	WSD	3.7			
1,1,1-Trichloroethane	ug/m3	ND	12/02/04	WSD	2.7			
1,1,2-Trichloroethane	ug/m3	ND	12/02/04	WSD	2.7			

RL = Reporting Limit

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

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

Page 6 of 9

WARWICK, RI 02886

Purchase Order No.: 5131

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #: LIMS-84354

Date Received:

12/1/2004

250 CENTERVILLE RD., BLDG. E, SUITE 12

Job Number: 081-12152-01

Field Sample #: MPL-6 Sample ID:

04B41499

Sampled: 11/30/2004

**NOT SPECIFIED** 

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Trichloroethylene	ug/m3	ND	12/02/04	WSD	2.7			
Trichlorofluoromethane	ug/m3	ND	12/02/04	WSD	2.8			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/02/04	WSD	3.8			
1,2,4-Trimethylbenzene	ug/m3	17.0	12/02/04	WSD	2.5			
1,3,5-Trimethylbenzene	ug/m3	6.6	12/02/04	WSD	2.5			
Vinyl Chloride	ug/m3	ND	12/02/04	WSD	1.3			
m/p-Xylene	ug/m3	17.0	12/02/04	WSD	2.2			
o-Xylene	ug/m3	12.7	12/02/04	WSD	2.2			

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

NM = Not Measured

SPEC LIMIT = a client specified recommended or regulatory level for comparison with data to

determine PASS (P) or FAIL (F) condition of results.

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.: 5131

Page 7 of 9

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT#: LIMS-84354

Date Received:

12/1/2004

Job Number: 081-12152-01

Field Sample #: WB-2

Sample ID:

04B41498

Sampled: 11/30/2004

NOT SPECIFIED

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
Benzene	ug/m3	ND	12/01/04	WSD	1.6	_	
Bromomethane	ug/m3	ND	12/01/04	WSD	1.9		
Carbon Tetrachloride	ug/m3	ND	12/01/04	WSD	3.1		
Chlorobenzene	ug/m3	ND	12/01/04	WSD	2.3		
Chloroethane	ug/m3	ND	12/01/04	WSD	1.3		
Chloroform	ug/m3	ND	12/01/0 <b>4</b>	WSD	2.4		
Chloromethane	ug/m3	ND	12/01/04	WSD	1.0		
1,2-Dibromoethane	ug/m3	ND	12/01/04	WSD	3.8		
1,2-Dichlorobenzene	ug/m3	ND	12/01/04	WSD	3.0		
1,3-Dichlorobenzene	ug/m3	ND	12/01/04	WSD	3.0		
1,4-Dichlorobenzene	ug/m3	ND	12/01/04	WSD	3.0		
Dichlorodifluoromethane	ug/m3	ND	12/01/04	WSD	2.5		
1,1-Dichloroethane	ug/m3	ND	12/01/04	WSD	2.0		
1,2-Dichloroethane	ug/m3	ND	12/01/04	WSD	2.0		
1,1-Dichloroethylene	ug/m3	ND	12/01/04	WSD	2.0		
cis-1,2-Dichloroethylene	ug/m3	ND	12/01/04	WSD	2.0		
1,2-Dichloropropane	ug/m3	ND	12/01/04	WSD	2.3		
cis-1,3-Dichloropropene	ug/m3	ND	12/01/04	WSD	2.3		
trans-1,3-Dichloropropene	ug/m3	ND	12/01/04	WSD	2.3		
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	12/01/04	WSD	3.5		
Ethylbenzene	ug/m3	ND	12/01/04	WSD	2.2		
Hexachlorobutadiene	ug/m3	ND	12/01/04	WSD	5.3		
Methylene Chloride	ug/m3	2.2	12/01/04	WSD	1.7		
Styrene	ug/m3	ND	12/01/04	WSD	2.1		
1,1,2,2-Tetrachloroethane	ug/m3	ND	12/01/04	WSD	3.4		
Tetrachloroethylene	ug/m3	ND	12/01/04	WSD	3.4		
Toluene	ug/m3	12.8	12/01/04	WSD	1.9		
1,2,4-Trichlorobenzene	ug/m3	ND	12/01/04	WSD	3.7		
1,1,1-Trichloroethane	ug/m3	ND	12/01/04	WSD	2.7		
1,1,2-Trichloroethane	ug/m3	ND	12/01/04	WSD	2.7		

RL = Reporting Limit

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

ND = Not Detected NM = Not Measured

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE

12/8/2004

250 CENTERVILLE RD., BLDG. E, SUITE 12

WARWICK, RI 02886

Purchase Order No.: 5131

Page 8 of 9

Project Location: SPRINGFIELD ST SCHOOL, PROV

LIMS-BAT #:

LIMS-84354

Date Received:

12/1/2004

Job Number: 081-12152-01

Field Sample #: WB-2

Sampled: 11/30/2004

Sample ID:

04B41498

NOT SPECIFIED

Sample Matrix:

AIR

Sample Medium : TEDLAR BAG

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Trichloroethylene	ug/m3	84.6	12/01/04	WSD	2.7			
Trichlorofluoromethane	ug/m3	3.4	12/01/04	WSD	2.8			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	12/01/04	WSD	3.8			
1,2,4-Trimethylbenzene	ug/m3	24.3	12/01/04	WSD	2.5			
1,3,5-Trimethylbenzene	ug/m3	ND	12/01/04	WSD	2.5			
Vinyl Chloride	ug/m3	ND	12/01/04	WSD	1.3			
m/p-Xylene	ug/m3	25.7	12/01/04	WSD	2.2			
o-Xylene	ug/m3	20.9	12/01/04	WSD	2.2			

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

NM = Not Measured

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

<sup>\* =</sup> See end of report for comments and notes applying to this sample



DONNA PALLISTER

LEVINE FRICKE 250 CENTERVILLE RD., BLDG. E, SUITE 12 12/8/2004

Page 9 of 9

WARWICK, RI 02886

Purchase Order No.: 5131

Project Location: SPRINGFIELD ST SCHOOL, PROV

Date Received: 12/1/2004

LIMS-BAT#: LIMS-84354

Job Number: 081-12152-01

\*\* END OF REPORT \*\*

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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

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



39 Spruce Street  $^\circ$  2nd Floor  $^\circ$  East Longmeadow, MA  $\,$  01028  $^\circ$  FAX 413/525-6405  $^\circ$  TEL. 413/525-2332

# 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:	12/8/2004 Lim	s Bat #: LIMS-84354		Page '	1 of 2
QC Batch Number	er: BATCH-7691				
Sample Id	Analysis	QC Analysis	Values	Units	Limits
04B41498					
	4-Bromofluorobenzene	Surrogate Recovery	86.0	%	70-130
04B41499					
	4-Bromofluorobenzene	Surrogate Recovery	70.0	%	70-130
BLANK-67480					
	Benzene	Blank	<1.6	ug/m3	
	Carbon Tetrachloride	Blank	<3.1	ug/m3	
	Chloroform	Blank	<2.4	ug/m3	
	1,2-Dichloroethane	Blank	<2.0	ug/m3	
	1,4-Dichlorobenzene	Blank	<3.0	ug/m3	
	Ethylbenzene	Blank	<2.2	ug/m3	
	Styrene	Blank	<2.1	ug/m3	
	Tetrachloroethylene	Blank	<3.4	ug/m3	
	Toluene	Blank	<1.9	ug/m3	
	1,1,1-Trichloroethane	Blank	<2.7	ug/m3	
	Trichloroethylene	Blank	<2.7	ug/m3	
	1,1,2-Trichloro-1,2,2-Trifluoroethane	Blank	<3.8	ug/m3	
	Trichlorofluoromethane	Blank	<2.8	ug/m3	
	o-Xylene	Blank	<2.2	ug/m3	
	m/p-Xylene	Blank	<2.2	ug/m3	
	1,2-Dichlorobenzene	Blank	<3.0	ug/m3	
	1,3-Dichlorobenzene	Blank	<3.0	ug/m3	
	1,1-Dichloroethane	Blank	<2.0	ug/m3	
	1,1-Dichloroethylene	Blank	<2.0	ug/m3	
	Vinyl Chloride	Blank	<1.3	ug/m3	
	Methylene Chloride	Blank	<1.7	ug/m3	
	Chlorobenzene	Blank	<2.3	ug/m3	
	Chloromethane	Blank	<1.0	ug/m3	
	Bromomethane	Blank	<1.9	ug/m3	
	Chloroethane	Blank	<1.3	ug/m3	
	cis-1,3-Dichloropropene	Blank	<2.3	ug/m3	
	trans-1,3-Dichloropropene	Blank	<2.3	ug/m3	
	1,1,2-Trichloroethane	Blank	<2.7	ug/m3	
	1,1,2,2-Tetrachloroethane	Blank	<3.4	ug/m3	
	Hexachlorobutadiene	Blank	<5.3	ug/m3	
	1,2,4-Trichlorobenzene	Blank	<3.7	ug/m3	
	1,2,4-Trimethylbenzene	Blank	<2.5	ug/m3	
	1,3,5-Trimethylbenzene	Blank	<2.5	ug/m3	
	cis-1,2-Dichloroethylene	Blank	<2.0	ug/m3	
	1,2-Dichloropropane	Blank	<2.3	ug/m3	
	Dichlorodifluoromethane	Blank	<2.5	ug/m3	
	1,2-Dibromoethane	Blank	<3.8	ug/m3	
	1,2-Dichlorotetrafluoroethane (114)	Blank	<3.5	ug/m3	



### OC 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:

12/8/2004

Lims Bat #: LIMS-84354

Page 2 of 2

# QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

OC 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 MS Amt Measured Matrix Spike % Rec.

Amount of analyte spiked into a sample Amount of analyte found including amount that was spiked

% Recovery of spiked amount in sample.

Duplicate Value Duplicate RPD

The result from the Duplicate analysis of the sample.

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) Sur. Recovery (PID)

Surrogate Recovery on the Electrolytic Conductivity Detector. Surrogate Recovery on the Photoionization Detector.

Standard Measured Standard Amt Added Standard % Recovery

Lab Fort Blank Amt

Amount measured for a laboratory control sample

Known value for a laboratory control sample % recovered for a laboratory control sample with a known value.

Lab Fort Blk. Found Lab Fort Blk % Rec Dup Lab Fort Bl Amt Dup Lab Fort Bl Fnd Dup Lab Fort Bl % Rec

Lab Fort Blank Range

Laboratory Fortified Blank Amount Added Laboratory Fortified Blank Amount Found Laboratory Fortified Blank % Recovered

Duplicate Laboratory Fortified Blank Amount Added Duplicate Laboratory Fortified Blank Amount Found Duplicate Laboratory Fortified Blank % Recovery

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 MSD Amount Added MSD Amt Measured MSD % Recovery MSD Range

Sample Value for Duplicate used with Matrix Spike Duplicate

Matrix Spike Duplicate Amount Added (Spiked)

Matrix Spike Duplicate Amount Measured Matrix Spike Duplicate % Recovery

Absolute difference between Matrix Spike and Matrix Spike

Duplicate Recoveries



Phone: 413-525-2332

Fax: 413-525-6405 Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD

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

Page \_\_\_\_ of \_\_\_\_

O = Other NUML	<b>0</b> = Ot		her	O = other_					Ė	*Require lab approval.	*Require I	12/1/4	My Jellow	7
B = Sodium bisulfate	B = So		sludge	SL = sludge					<u>:</u> 	_ Date needed**		Date/Time:	Received by: (signature)	Rec
= Sulfuric Acid	S = Su		S = soil/solid	<b>S</b> = so			ements or DL's:	Special Requirements	Spec	Other**		12-1-04 153	Mury or	
N = Nitric Acid	N = Nit		7	A = air		•	only)	(MA MCP sites only)	(MA	Std.	K	Date/Time:	Relinquished by (signature)	Reli
M = Methanol	M = Me	water	<b>DW</b> = drinking water	DW= c		×	Data Enhancement Project? DY N	Enhancer	Data	72 Hour*	<u> </u>	13/04 10/5	All Kallbrug Son 1	žų.
CL T = Na thiosulfate	H = HCL	ater	WW= wastewater	WW=						48 Hour*		Date/Time:	Received by: (signature)	Rec
d X = Na hydroxide	I = Iced	rater	GW= groundwater	GW= (		5-	Rhodeisiand	Regulations?	Regu	24 Hour*		11/30/04/1700	Impa (Blo	
**Preservation Codes:	**Prese		*Matrix Code:	*Matri	(C)	ments	Limit Requirements	Detection Limit	Det	Turnaround	Turn	Date/Time:	Relinquished by: (signature)	Reli
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~Cont.Code						7		2-0	121	061-12152-01	Project #		address: 250 Centerville Rd. Bld E. Suite 12	ddr
**Preservation							0	288	8	Telephone:(401) 7 % - 588 1	Telephone		Company Name: LFR	om
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