

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

**Project No. 081-12152**  
**May 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

June 4, 2004

081-12152-00

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 – May 2004 Monitoring Round

Dear Mr. Crawford:

Quarterly monitoring was conducted between May 4 and May 21, 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. We did not observe any areas where the orange indicator barrier was visible during the May monitoring.

As described in a previous submittal to the DEM, on May 13, 2004 areas of erosion and settling reported in the last quarterly report were repaired. No additional areas of settling or erosion were observed during an inspection conducted after the repairs were made.

We observed three raised beds which had been created in the area between the middle school and the elementary school. These beds were created by installing wooden sides above the existing grade, then filling with loam from off-site to a depth of approximately 1 foot. Because the plantings are above the cover in a raised bed, they are not considered to have potential to disturb the cap.

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## **SUB-SLAB VENTILATION SYSTEM**

The sub-slab ventilation system was inspected by LFR during the quarterly monitoring on May 6, 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). The particulate filters for each of the four blowers were replaced on May 3, 2004.

Results are provided in Table 1. Methane, carbon dioxide and organic vapors were not detected in any of the system samples collected. Carbon monoxide was detected in one sample, at the elementary school outlet, at 1 ppm. Hydrogen sulfide was detected in both the inlet and the outlet samples at the elementary school, with a maximum concentration of 3 ppm. There were no exceedances of the Action Levels during this monitoring event.

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 May 6, 2004 using a Landtec GA-90 landfill gas monitor, an Industrial Scientific TMX412, and an hNu P-101 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.

On the day of the inspection, the methane monitors were marked with stickers indicating that Diamond Calibration last calibrated the methane monitors at both schools on April 15, 2004. All of the sensors were functioning at the time of the inspection. However, as reported in a separate letters to the DEM, a sensor in the music room was found to be defective on May 24, and was repaired on May 28, 2004.

## **GROUNDWATER MONITORING**

Five groundwater monitoring wells were sampled by LFR on May 21, 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 11.99 to 16.71 feet below the ground surface. 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.

Three compounds were detected at low concentrations during this monitoring event. Chloroform was detected at 1.1  $\mu\text{g}/\text{L}$  in the sample collected from ATC-2. There is no RI DEM GB groundwater standard for chloroform. Chloroform is typically present in tap water as a byproduct of disinfection. The EPA Maximum Contaminant Level for drinking water for total trihalomethanes (which includes chloroform), is 80  $\mu\text{g}/\text{L}$ . Therefore the concentration detected in the sample from ATC-2 is well below the drinking water standard for this compound.

The other two compounds detected during this monitoring event were 1,4-dichlorobenzene and methyl tertiary-butyl ether (MTBE), which were detected in the sample collected from ATC-4. MTBE is a gasoline additive that is highly soluble and mobile in the environment. MTBE was detected at 2.90  $\mu\text{g}/\text{L}$  compared to a GB groundwater objective of 5,000  $\mu\text{g}/\text{L}$ .

1,4-dichlorobenzene is a chemical used to control moths, mold and mildew, and to deodorize restrooms and waste containers. This compound was detected at 0.80  $\mu\text{g}/\text{L}$ . There is no published GB groundwater objective for this compound. A GB groundwater objective of 3,405  $\mu\text{g}/\text{L}$  was derived for this compound using the algorithm from Appendix F of the *Rules and Regulations for the Investigation and Remediation of Hazardous Materials Releases* (see attachment C). The concentration detected was well below the derived GB groundwater objective.

## **SOIL GAS MONITORING**

Soil gas monitoring was conducted at 28 locations on May 3 and 4, 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, an Industrial Scientific TMX412, and a hNu P101 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. In previous sampling rounds, air samples

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were collected from WB-3 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 28 sample locations.

Carbon dioxide was detected at two location, at concentrations of 0.1% and 0.5% during this monitoring event, which is lower than the concentrations detected during previous monitoring rounds. The 0.5% reading in WB-14 is an exceedance of the carbon dioxide action level. Carbon dioxide is an indicator of subsurface bacterial activity. The presence of carbon dioxide in soil gas does not represent a threat to users of the property.

Concentrations of carbon monoxide were detected in each of the 8 locations sampled and none of these samples exceeded the Remedial Action Work Plan Level of 9 parts per million (ppm). The highest reading was 3 ppm.

Hydrogen sulfide was detected in 14 of the 29 sampling locations during this round of monitoring; none of the samples exceeded the Remedial Action Work Plan Level of 10 PPM. The highest concentration detected was 4 ppm. No odors typically associated with hydrogen sulfide were detected during any of the on-site monitoring activities.

***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 4. Constituents detected during this round of analysis were ethyl benzene, methylene chloride, tetrachloroethylene, toluene, 1,2,4-trimethylbenzene, 1,3,5 - trimethylbenzene, m/p-xylene, and o-xylene.

All of the compounds were detected at very low concentrations. 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. The PELs are the average concentrations that OSHA allows to be present in a workplace without any respiratory protection or exposure controls.

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## **REPAIRS**

During monitoring, several monitoring points were identified as being in need of repair due to affects of weather, vandalism, or accidental damage. A list of the repairs made is provided as Attachment 5.

## **CONCLUSIONS**

Methane was not detected in any of the soil gas, subslab ventilation, or indoor air samples collected. 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 were lower than the previous rounds of monitoring.

The only exceedance detected during this round of monitoring was one exceedance of the Remedial Action Work Plan Action Level for carbon dioxide at WB-14. The concentration detected was 0.5%, and the Action Level is 1,000 ppm (0.1%). Carbon dioxide is produced by naturally occurring bacteria in soil. The presence of carbon dioxide in soil gas does not represent a threat to users of the property.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Donna Holden Pallister', written in a cursive style.

Donna Holden Pallister, P.E.  
Senior Engineer

Thomas L. Daley  
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**  
**May 6, 2004**

<b>Monitoring Location</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
Elementary School inlet 1	0.0	0.0	21.0	0	2	0
Elementary School inlet 2	0.0	0.0	21.0	0	3	0
Elementary School Outlet	0.0	0.0	21.0	1	3	0
Middle school front shed inlet	0.0	0.0	21.0	0	0	0
Middle school front shed after 2 <sup>nd</sup> carbon	0.0	0.0	21.0	0	0	0
Middle school back shed inlet	0.0	0.0	21.0	0	0	0
Middle school back shed after 2 <sup>nd</sup> carbon	0.0	0.0	21.0	0	0	0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5</b>	<b>1,000 ppm (0.1 %)</b>	<b>NA</b>	<b>9 ppm</b>	<b>10 ppm</b>	<b>5 ppm</b>

Measurements made with: Landtec GA-90, Industrial Scientific TMX412, and hNu P101

Sampling date: 5/6/2004

Measured by: Donna Pallister



**Table 2**  
**Indoor Air Monitoring Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**May 6, 2004**

<b>Monitoring Location</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
E.S. Front office	0.0	0.0	21.1	0	0	0
E.S. Elevator Room	0.0	0.0	21.1	0	0	0
E.S. Elevator Shaft	0.0	0.0	21.1	0	0	0
E.S. Electrical closet	0.0	0.0	21.1	0	0	0
E.S. Gym storage closet	0.0	0.0	21.1	0	0	0
E.S. Boiler Rm. Elec. Closet	0.0	0.0	21.1	0	0	0
E.S. Library	0.0	0.0	21.1	0	0	0
E.S. Second Floor, West closet	0.0	0.0	21.1	0	0	0
E.S. Stairway Stair C	0.0	0.0	21.1	0	0	0

**Table 2 (page 2 of 4)**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**May 6, 2004**

<b>Monitoring Location</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
E.S. Room 110	0.0	0.0	21.1	0	0	5
E.S. Room 205	0.0	0.0	21.1	0	0	0
E.S. Room 215	0.0	0.0	21.1	0	0	0
E.S. Room 214	0.0	0.0	21.0	0	0	0
E.S. Electrical Room	0.0	0.0	21.0	0	0	0
E.S. Room 218	0.0	0.0	21.0	0	0	0
E.S. Room 201	0.0	0.0	21.0	0	0	0
E.S. Cafeteria	0.0	0.0	21.0	0	0	0
M.S. Front office	0.0	0.0	21.0	3	0	0
M.S. Elev. Closet	0.0	0.0	21.0	0	0	0
M.S. Elev. Shaft	0.0	0.0	21.0	0	0	0
M.S. Crack near door to outside near gym	0.0	0.0	21.0	3	0	0

**Table 2 (page 3 of 4)**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**May 6, 2004**

<b>Monitoring Location</b>	<b>Methane % by volume</b>	<b>Carbon Dioxide % by volume</b>	<b>Oxygen % by volume</b>	<b>Carbon Monoxide PPM</b>	<b>Hydrogen Sulfide PPM</b>	<b>Organic Vapors PPM</b>
<b>M.S.</b> Former Music Room	0.0	0.0	21.0	3	0	0
<b>M.S.</b> Closet 1 <sup>st</sup> Floor	0.0	0.0	21.0	0	0	0
<b>M.S. Room</b> 104	0.0	0.0	21.0	0	0	0
<b>M.S. Room</b> 205	0.0	0.0	21.0	0	0	0
<b>M.S.</b> Library	0.0	0.0	21.0	0	2	0
<b>M.S.</b> Janitor office	0.0	0.0	21.0	0	0	0
<b>M.S.</b> Stairwell north end front Near Room 7	0.0	0.0	21.0	0	0	0
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5</b>	<b>1,000 ppm (0.1%)</b>	<b>NA</b>	<b>9 ppm</b>	<b>10 ppm</b>	<b>5 ppm</b>

**Notes:**

E.S. indicates Elementary School

**Table 2 (page 4 of 4)**  
**Indoor Air Monitoring Notes**  
**Springfield Street School Complex**  
**May 6, 2004**

**M.S.** indicates Middle School

Measurements made with: Landtec GA90, Industrial Scientific TMX412, hNu P101  
Photoionization Detector

Measurements By: Donna Pallister

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

Monitoring Wells	Component(s) (ug/l)	2/28/2001	7/50/2001	9/12/2001	3/1/2002	4/28/2002	10/19/2002	1/18/2003	7/17/2003	11/5/2003	1/22/2004	5/21/2004	RDDWV GPR Groundwater Objective	
ATC-1	Benzene	6.1	ND	18.9	0.9	ND	ND	ND	ND	ND	ND	ND	140	
	n-butylbenzene	1.7	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	sec-Butylbenzene	1.1	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	Ethylbenzene	4.5	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	1600	
	Isopropylbenzene	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	n-Propylbenzene	ND	ND	5.0	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	MTBE	12.4	7.0	28.6	ND	ND	ND	ND	ND	ND	ND	ND	5000	
	Trichloroethylene	ND	ND	ND	ND	ND	ND	1.27	ND	ND	ND	ND	ND	540
	Toluene	2.5	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	1700	
	1,2,4-Trimethylbenzene	2.2	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	1,3,5-Trimethylbenzene	3.4	ND	5.2	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	Xylenes	14.6	ND	37	ND	ND	ND	ND	ND	ND	ND	ND	NA	
	ATC-2	Chloroform	0.9	ND	ND	1.0	ND	ND	ND	ND	ND	NS	1.1	NA
Toluene		ND	ND	ND	ND	NS	ND	ND	ND	ND	3.03	ND	1700	
ATC-4	Benzene	ND	ND	2.5	0.6	ND	ND	ND	ND	ND	ND	ND	140	
	Chlorobenzene	2.6	ND	57.3	2.7	5.18	ND	ND	ND	ND	ND	ND	70	
	1,4-dichlorobenzene	4.2	ND	9.2	3.4	3.36	ND	ND	ND	ND	ND	0.80	NA	
	MTBE	ND	ND	ND	ND	ND	ND	1.19	9.55	1.06	2.90	ND	5000	
	1,2,4-Trimethylbenzene	ND	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	NA	
ATC-5	MTBE	ND	ND	2.2	NS	ND	ND	ND	ND	NS	ND	ND	5000	
	Sampled By:	ATC	ATC	ATC	ATC	LFR	LFR	LFR	LFR	LFR	LFR	LFR		

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

**Table 4**  
**Soil Gas Survey Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**May 3 & 4, 2004**

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
WB-1	0	0	21.1	0	0	0
WB-2	0	0	21.1	0	0	0
WB-3	0	0	21.1	0	0	0
WB-4	0	0	20.9	0	0	0
WB-5	0	0	20.9	0	1	0
WB-6	0	0	20.9	0	1	0
WB-7	0	0	20.9	0	1	0
WB-8	0	0	20.8	0	1	0
WB-12	0	0	21.1	0	0	0
WB-13	0	0.1	20.6	0	3	0
WB-14	0	0.5	20.2	1	2	0
WB-15	0	0	20.9	0	0	0
EPL-1	0	0	21.1	0	0	0
EPL-2	0	0	19.9	0	0	0
EPL-3	0	0	21.0	0	0	0
EPL-4	0	0	21.0	0	0	0
EPL-5	0	0	21.1	0	0	0
ENE-1	0	0	21.2	2	3	0
MG1	0	0	21.4	0	2	0.2
MG2	0	0	21.5	2	1	0
MG3	0	0	21.6	0	0	0
MG4	0	0	21.4	0	0	0
MG5	0	0	21.5	0	0	0
MPL2	0	0	20.7	3	3	0
MPL3	0	0	21.1	2	2	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	21.1	2	2	0.4
MPL6	0	0	21.3	2	3	0.2
MPL7	0	0	21.3	3	4	0.3
<b>Remedial Action Work Plan Action Levels</b>	<b>0.5%</b>	<b>1,000 PPM (0.1%)</b>	<b>NA</b>	<b>9 PPM</b>	<b>10 PPM</b>	<b>5 PPM</b>

**Notes:**

Sampled by: Andrea Lang

Weather Conditions: 5/3/04- Mid 50s, overcast; 5/4/04-mid 50, sunny to partly, cloudy

Sampling Equipment: LandTec GA90, SKC Pump Industrial Scientific TMX 412, and hNU P101 PID Meter

PPM = parts per million

**Table 5**  
**Soil Gas Laboratory Analysis Results**  
**Springfield Street School Complex**  
**Providence, Rhode Island**  
**May, 2004**

Parameter	Results of Analysis in parts per billion by volume (PPBV)		OSHA Permissible Exposure Limits (PEL) TWA (ppb)
	MPL-6	WB-2	
Ethyl benzene	ND	0.8	100,000
Methylene Chloride *	ND	0.8	25,000
Tetrachloroethylene	ND	1.5	100,000
Toluene	ND	2.4	200,000
1,2,4-Trimethylbenzene	ND	1.4	25,000
1,3,5-Trimethylbenzene	ND	2.2	25,000
m/p-Xylene	ND	2.5	100,000
o-Xylene	ND	1.8	100,000

Notes:

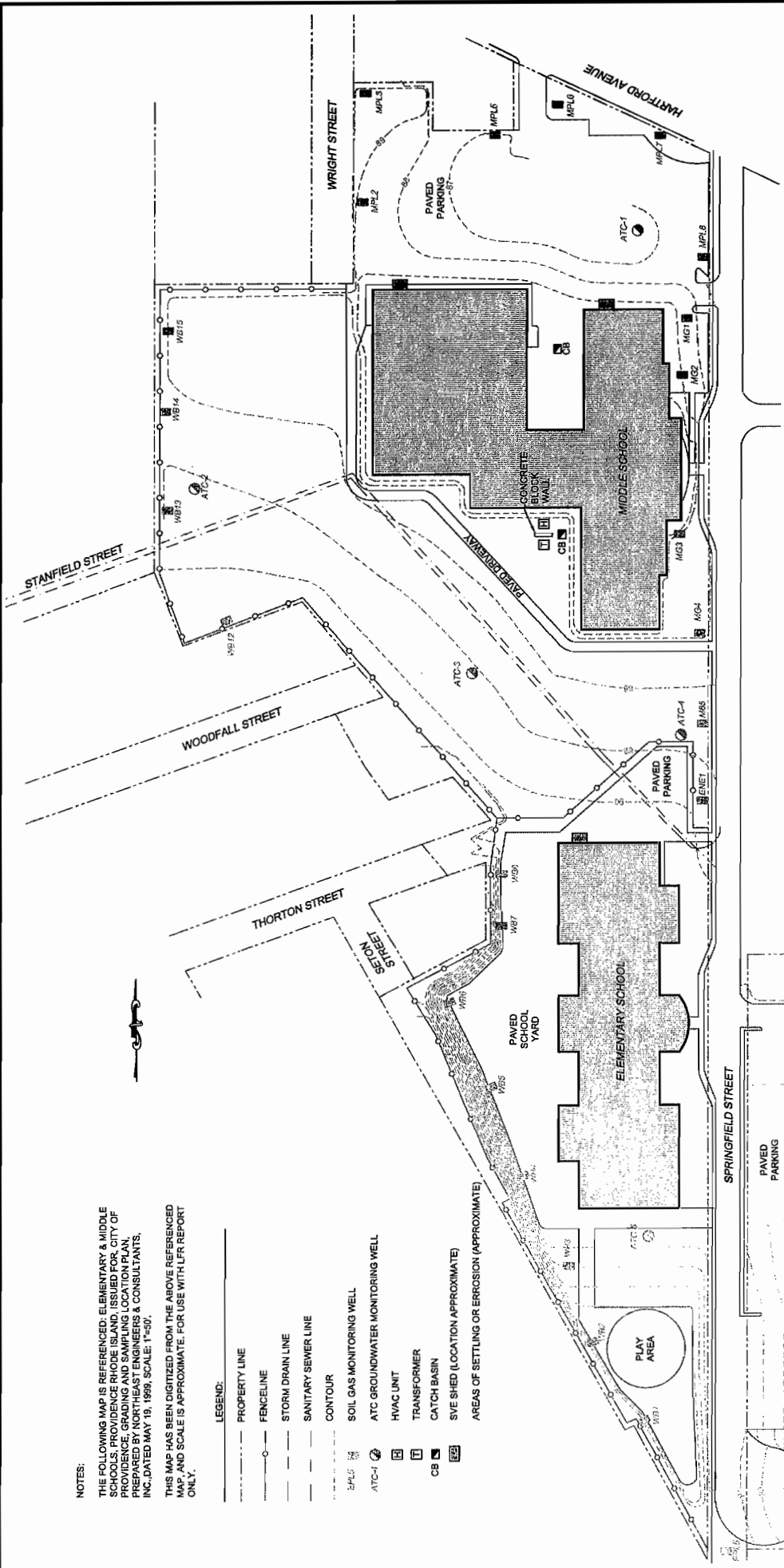
Table lists only detected compounds. See laboratory report for full list of analytes.

The laboratory reported that methylene chloride was detected in the method blank.

TWA - Time weighted average. OSHA PEL's are based on an 8 hour work day average concentration.



**FIGURE**



NOTES:

THE FOLLOWING MAP IS REFERENCED: ELEMENTARY & MIDDLE SCHOOLS THROUGH RHODE ISLAND, ISSUED FOR THE CITY OF PROVIDENCE, GRADING AND SAMPLING LOCATION PLAN, PREPARED BY NORTHEAST ENGINEERS & CONSULTANTS, INC., DATED MAY 19, 1999, SCALE: 1"=50'.

THIS MAP HAS BEEN DIGITIZED FROM THE ABOVE REFERENCED MAP, AND SCALE IS APPROXIMATE. FOR USE WITH LFR REPORT ONLY.

- LEGEND:
- PROPERTY LINE
  - - - FENCELINE
  - STORM DRAIN LINE
  - - - SANITARY SEWER LINE
  - - - CONTOUR
  - WBS-1 SOIL GAS MONITORING WELL
  - ATC-1 ATC GROUNDWATER MONITORING WELL
  - HVAC UNIT
  - TRANSFORMER
  - CATCH BASIN
  - SVE SHED (LOCATION APPROXIMATE)
  - AREAS OF SETTLING OR EROSION (APPROXIMATE)

**LFR**

250 Centerville Road  
 Building E, Suite 12  
 Warwick, Rhode Island 02886  
 Phone: (401) 798-9887  
 Fax: (401) 732-1888

DATE: 4-7-03  
 DRAWN BY: PPH  
 REVIEWED BY: DP  
 APPROVED BY: AS NOTED  
 SCALE: 081-13227-00  
 FILE NO: 081-13227-00  
 JOB NO: 081-13227-00

TITLE: **SITE PLAN**

LOCATION: **SPRINGFIELD STREET SCHOOL COMPLEX**  
**SPRINGFIELD STREET**  
**PROVIDENCE, RHODE ISLAND**

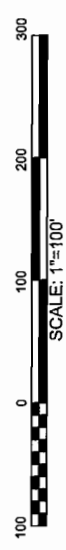


FIGURE: **1**

**Attachment 1**

**Groundwater Monitoring Logs**



Well Number: ATC-1

Site Name: Springfield Street School

Project Number: 081-12152-00

Site Address: Springfield Street  
Providence, RI

### GROUNDWATER SAMPLING LOG

Sampled By: Seth O'Connor	Date: 5/21/04
Weather: Overcast mid 60's	Purging Equipment: bailer
Sampling Equipment: 2 inch bailer	Decontamination method: soap and water
Measuring Point (top of PVC/ top of casing): PVC	Depth to water: 12.64 (feet)
Casing diameter: 2 inch (inches)	Flush mount or riser: flush mount
Depth to Product: NA (feet)	Product thickness: NA (feet)
Depth to bottom: 21.10 (feet)	Length of Water Column (depth to bottom - depth to water): 8.46 (feet)
Well measuring point elevation: (feet)	Water table elevation: (feet)
Well volume: 5.2 (liters)	Three well volumes: (1.85 x length of water column for 2 inch well): 15.65 (liters)

### FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
5	17.5	335	6.15	7.0
10	17.3	334	6.12	7.0
15	17.1	329	6.02	7.2

Total volume Removed: 15

### OBSERVATIONS:

Color of groundwater: light brown Odors: slight

Did well go dry:



Well Number: ATC-2

Site Name: Springfield Street School

### GROUNDWATER SAMPLING LOG

Project Number: 081-12152-00

Site Address: Springfield Street  
Providence, RI

Sampled By: Seth O'Connor	Date: 5/21/04
Weather: overcast mid 60's	Purging Equipment: bailer
Sampling Equipment:	Decontamination method: Soap and water
Measuring Point (top of PVC/ top of casing):	Depth to water: 11.92 (feet)
Casing diameter: 2 inches (inches)	Flush mount or riser:
Depth to Product: NA (feet)	Product thickness: (feet)
Depth to bottom: 18.69 (feet)	Length of Water Column (depth to bottom - depth to water): 6.77 (feet)
Well measuring point elevation: (feet)	Water table elevation: (feet)
Well volume: 4.1 (liters)	Three well volumes: (1.85 x length of water column for 2 inch well): 12.5 (liters) (liters)

### FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
6	15.0	480	5.61	7.3
13	14.7	472	5.56	7.1

Total volume Removed: 13 liters

### OBSERVATIONS:

Color of groundwater:  
Did well go dry: no

Odors:



Well Number: ATC-3

Site Name: Springfield Street School

Project Number: 081-12152-00

Site Address: Springfield Street  
Providence, RI

### GROUNDWATER SAMPLING LOG

Sampled By: Seth O'Connor	Date: 5/21/04
Weather: overcast mid 60s	Purging Equipment: bailer
Sampling Equipment: 2 inch bailer	Decontamination method:
Measuring Point (top of PVC/ top of casing): PVC	Depth to water: (feet) 11.99
Casing diameter: 2 inch (inches)	Flush mount or riser: flush mount
Depth to Product: (feet) NA	Product thickness: NA (feet)
Depth to bottom: 16.71 (feet)	Length of Water Column (depth to bottom - depth to water): (feet) 4.72
Well measuring point elevation: (feet)	Water table elevation: (feet)
Well volume: 2.9 (liters)	Three well volumes: (1.85 x length of water column for 2 inch well): 9.0 (liters) (liters)

### FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
5	15.1	1000	3.78	6.9
9	14.8	976	3.71	6.8

Total volume Removed: 9.0 liters

### OBSERVATIONS:

Color of groundwater: \_\_\_\_\_ Odors: \_\_\_\_\_ Did well go dry: \_\_\_\_\_

Notes:



Well Number: ATC-4

Site Name: Springfield Street School

### GROUNDWATER SAMPLING LOG

Project Number: 081-12152-00

Site Address: Springfield Street  
Providence, RI

Sampled By: Seth O'Connor	Date: 5/21/04
Weather: overcast mid 60's	Purging Equipment: bailer
Sampling Equipment: 2 inch bailer	Decontamination method: soap and water
Measuring Point (top of PVC/ top of casing): PVC	Depth to water: 13.31 (feet)
Casing diameter: 2 inch (inches)	Flush mount or riser: flush mount
Depth to Product: NA (feet)	Product thickness: NA (feet)
Depth to bottom: 23.84 (feet)	Length of Water Column (depth to bottom - depth to water): 10.53 (feet)
Well measuring point elevation: (feet)	Water table elevation: (feet)
Well volume: 6.5 (liters)	Three well volumes: (1.85 x length of water column for 2 inch well): 19.5 (liters)

### FIELD MEASUREMENT DATA

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	PH (standard units)
20	19.2	356	3.56	7.1
40	19.2	351	3.31	7.0
60	19.0	345	3.27	7.0

Total volume Removed: 60 liters

### OBSERVATIONS:

Color of groundwater: brown

Odors: no

Did well go dry: no

Notes:



Well Number: ATC-5

Site Name: Springfield Street School

GROUNDWATER SAMPLING LOG

Project Number: 081-12152-00

Site Address: Springfield Street  
Providence, RI

Sampled By: Seth O'Connor	Date: 5/21/04
Weather: overcast mid 60's	Purging Equipment: bailer
Sampling Equipment: 1 inch bailer	Decontamination method: soap and water
Measuring Point (top of PVC/ top of casing): PVC	Depth to water: 18.02 (feet)
Casing diameter: 2 inch (inches)	Flush mount or riser: flush mount
Depth to Product: NA (feet)	Product thickness: NA (feet)
Depth to bottom: 20.8 (feet)	Length of Water Column (depth to bottom - depth to water): 2.78 (feet)
Well measuring point elevation: (feet)	Water table elevation: (feet)
Well volume: 1.7 (liters)	Three well volumes: (1.85 x length of water column for 2 inch well): 5.143 (liters) (liters)

FIELD MEASUREMENTS -

Volume Removed (liters)	Temperature (°C)	Specific Conductance (uS/cm)	Dissolved Oxygen (mg/L)	pH (standard units)
3	14.9	1000	5.76	7.4

Total volume Removed: 3

OBSERVATIONS:

Color of groundwater: brown Odors: no Did well go dry: yes after 3 liters

Notes: Well went dry after 3 liters. Came back to well at 1045 and sampled



**Attachment 2**

**Laboratory Reports for Groundwater**



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

REPORT DATE 6/3/2004

LEVINE FRICKE - BRAINTREE  
194 FORBES ROAD  
BRAINTREE, MA 02184  
ATTN: DONNA PALLISTER

CONTRACT NUMBER:  
PURCHASE ORDER NUMBER:

PROJECT NUMBER:

**ANALYTICAL SUMMARY**

LIMS BAT #: LIMS-79280

JOB NUMBER: 0811215200

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

PROJECT LOCATION: SPRINGFIELD STREET

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
ATC-1	04B15275	GRND WATER	NOT SPECIFIED	8260 water
ATC-2	04B15276	GRND WATER	NOT SPECIFIED	8260 water
ATC-3	04B15277	GRND WATER	NOT SPECIFIED	8260 water
ATC-4	04B15278	GRND WATER	NOT SPECIFIED	8280 water
ATC-5	04B15279	GRND WATER	NOT SPECIFIED	8260 water

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

AIHA 100033	AIHA ELLAP (LEAD) 100033	FLORIDA NELAP E87889
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.

*Sandra S. Kocot 06/03/04*  
SIGNATURE DATE

Tod Kopyscinski  
Director of Operations

Sandra S. Kocot  
Quality Control Coordinator

Edward Denson  
Technical Director



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DONNA PALLISTER  
 LEVINE FRICKE - BRAINTREE  
 194 FORBES ROAD  
 BRAINTREE, MA 02184

6/3/2004  
 Page 1 of 16

Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-1

Sample ID : 04B15275      Sampled : 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	10.0		05/29/04	BGL
Acrolein	ug/l	ND	20.0		05/29/04	BGL
Acrylonitrile	ug/l	ND	0.5		05/29/04	BGL
tert-Amylmethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Benzene	ug/l	ND	0.6		05/29/04	BGL
Bromobenzene	ug/l	ND	0.5		05/29/04	BGL
Bromochloromethane	ug/l	ND	0.7		05/29/04	BGL
Bromodichloromethane	ug/l	ND	0.4		05/29/04	BGL
Bromoform	ug/l	ND	1.2		05/29/04	BGL
Bromomethane	ug/l	ND	1.2		05/29/04	BGL
2-Butanone (MEK)	ug/l	ND	10.0		05/29/04	BGL
tert-Butyl Alcohol	ug/l	ND	20.0		05/29/04	BGL
n-Butylbenzene	ug/l	ND	0.7		05/29/04	BGL
sec-Butylbenzene	ug/l	ND	0.6		05/29/04	BGL
tert-Butylbenzene	ug/l	ND	0.8		05/29/04	BGL
tert-Butylethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Carbon Disulfide	ug/l	ND	3.0		05/29/04	BGL
Carbon Tetrachloride	ug/l	ND	0.5		05/29/04	BGL
Chlorobenzene	ug/l	ND	0.6		05/29/04	BGL
Chlorodibromomethane	ug/l	ND	0.5		05/29/04	BGL
Chloroethane	ug/l	ND	0.8		05/29/04	BGL
2-Chloroethylvinylether	ug/l	ND	9.6		05/29/04	BGL
Chloroform	ug/l	ND	0.8		05/29/04	BGL
Chloromethane	ug/l	ND	1.2		05/29/04	BGL
2-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
4-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
1,2-Dibromo-3-Chloropropane	ug/l	ND	1.6		05/29/04	BGL
1,2-Dibromoethane	ug/l	ND	0.70		05/29/04	BGL
Dibromomethane	ug/l	ND	1.1		05/29/04	BGL
1,2-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
1,3-Dichlorobenzene	ug/l	ND	0.6		05/29/04	BGL
1,4-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
cis-1,4-Dichloro-2-Butene	ug/l	ND	2.4		05/29/04	BGL
trans-1,4-Dichloro-2-Butene	ug/l	ND	2.1		05/29/04	BGL
Dichlorodifluoromethane	ug/l	ND	1.0		05/29/04	BGL
1,1-Dichloroethane	ug/l	ND	0.7		05/29/04	BGL

RL = Reporting Limit

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NM = Not Measured

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



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DONNA PALLISTER  
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 194 FORBES ROAD  
 BRAINTREE, MA 02184

6/3/2004  
 Page 2 of 16

Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-1

Sample ID : 04B15275      Sampled : 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,2-Dichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloroethylene	ug/l	ND	0.6		05/29/04	BGL
cis-1,2-Dichloroethylene	ug/l	ND	0.5		05/29/04	BGL
trans-1,2-Dichloroethylene	ug/l	ND	0.8		05/29/04	BGL
1,2-Dichloropropane	ug/l	ND	0.6		05/29/04	BGL
1,3-Dichloropropane	ug/l	ND	0.5		05/29/04	BGL
2,2-Dichloropropane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
cis-1,3-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
trans-1,3-Dichloropropene	ug/l	ND	0.4		05/29/04	BGL
Diethyl Ether	ug/l	ND	2.0		05/29/04	BGL
Diisopropyl Ether	ug/l	ND	0.5		05/29/04	BGL
1,4-Dioxane	ug/l	ND	50.0		05/29/04	BGL
Ethyl Benzene	ug/l	ND	0.6		05/29/04	BGL
Ethyl Methacrylate	ug/l	ND	0.8		05/29/04	BGL
Hexachlorobutadiene	ug/l	ND	1.3		05/29/04	BGL
2-Hexanone	ug/l	ND	9.7		05/29/04	BGL
Iodomethane	ug/l	ND	0.8		05/29/04	BGL
Isopropylbenzene	ug/l	ND	0.4		05/29/04	BGL
p-Isopropyltoluene	ug/l	ND	0.7		05/29/04	BGL
MTBE	ug/l	ND	0.8		05/29/04	BGL
Methylene Chloride	ug/l	ND	3.0		05/29/04	BGL
MIBK	ug/l	ND	8.8		05/29/04	BGL
Naphthalene	ug/l	ND	1.0		05/29/04	BGL
n-Propylbenzene	ug/l	ND	0.8		05/29/04	BGL
Styrene	ug/l	ND	0.7		05/29/04	BGL
1,1,1,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
1,1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
Tetrachloroethylene	ug/l	ND	0.4		05/29/04	BGL
Tetrahydrofuran	ug/l	ND	5.0		05/29/04	BGL
Toluene	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,2,4-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,1,1-Trichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1,2-Trichloroethane	ug/l	ND	0.7		05/29/04	BGL
Trichloroethylene	ug/l	ND	1.0		05/29/04	BGL

RL = Reporting Limit  
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194 FORBES ROAD  
BRAINTREE, MA 02184

6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-1

Sample ID : 04B15275      Sampled : 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Trichlorofluoromethane	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichloropropane	ug/l	ND	1.3		05/29/04	BGL
1,2,4-Trimethylbenzene	ug/l	ND	0.7		05/29/04	BGL
1,3,5-Trimethylbenzene	ug/l	ND	1.0		05/29/04	BGL
Vinyl Acetate	ug/l	ND	16.4		05/29/04	BGL
Vinyl Chloride	ug/l	ND	0.3		05/29/04	BGL
m + p Xylene	ug/l	ND	1.3		05/29/04	BGL
o-Xylene	ug/l	ND	0.5		05/29/04	BGL

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 BRAINTREE, MA 02184

6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-2

Sample ID: 04B15276      Sampled: 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	10.0		05/29/04	BGL
Acrolein	ug/l	ND	20.0		05/29/04	BGL
Acrylonitrile	ug/l	ND	0.5		05/29/04	BGL
tert-Amylmethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Benzene	ug/l	ND	0.6		05/29/04	BGL
Bromobenzene	ug/l	ND	0.5		05/29/04	BGL
Bromochloromethane	ug/l	ND	0.7		05/29/04	BGL
Bromodichloromethane	ug/l	ND	0.4		05/29/04	BGL
Bromoform	ug/l	ND	1.2		05/29/04	BGL
Bromomethane	ug/l	ND	1.2		05/29/04	BGL
2-Butanone (MEK)	ug/l	ND	10.0		05/29/04	BGL
tert-Butyl Alcohol	ug/l	ND	20.0		05/29/04	BGL
n-Butylbenzene	ug/l	ND	0.7		05/29/04	BGL
sec-Butylbenzene	ug/l	ND	0.6		05/29/04	BGL
tert-Butylbenzene	ug/l	ND	0.8		05/29/04	BGL
tert-Butylethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Carbon Disulfide	ug/l	ND	3.0		05/29/04	BGL
Carbon Tetrachloride	ug/l	ND	0.5		05/29/04	BGL
Chlorobenzene	ug/l	ND	0.6		05/29/04	BGL
Chlorodibromomethane	ug/l	ND	0.5		05/29/04	BGL
Chloroethane	ug/l	ND	0.8		05/29/04	BGL
2-Chloroethylvinylether	ug/l	ND	9.6		05/29/04	BGL
Chloroform	ug/l	1.1	0.8		05/29/04	BGL
Chloromethane	ug/l	ND	1.2		05/29/04	BGL
2-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
4-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
1,2-Dibromo-3-Chloropropane	ug/l	ND	1.6		05/29/04	BGL
1,2-Dibromoethane	ug/l	ND	0.70		05/29/04	BGL
Dibromomethane	ug/l	ND	1.1		05/29/04	BGL
1,2-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
1,3-Dichlorobenzene	ug/l	ND	0.6		05/29/04	BGL
1,4-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
cis-1,4-Dichloro-2-Butene	ug/l	ND	2.4		05/29/04	BGL
trans-1,4-Dichloro-2-Butene	ug/l	ND	2.1		05/29/04	BGL
Dichlorodifluoromethane	ug/l	ND	1.0		05/29/04	BGL
1,1-Dichloroethane	ug/l	ND	0.7		05/29/04	BGL

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DONNA PALLISTER  
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 BRAINTREE, MA 02184

6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-2

Sample ID: 04B15276  
 Sampled: 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,2-Dichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloroethylene	ug/l	ND	0.6		05/29/04	BGL
cis-1,2-Dichloroethylene	ug/l	ND	0.5		05/29/04	BGL
trans-1,2-Dichloroethylene	ug/l	ND	0.8		05/29/04	BGL
1,2-Dichloropropane	ug/l	ND	0.6		05/29/04	BGL
1,3-Dichloropropane	ug/l	ND	0.5		05/29/04	BGL
2,2-Dichloropropane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
cis-1,3-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
trans-1,3-Dichloropropene	ug/l	ND	0.4		05/29/04	BGL
Diethyl Ether	ug/l	ND	2.0		05/29/04	BGL
Diisopropyl Ether	ug/l	ND	0.5		05/29/04	BGL
1,4-Dioxane	ug/l	ND	50.0		05/29/04	BGL
Ethyl Benzene	ug/l	ND	0.6		05/29/04	BGL
Ethyl Methacrylate	ug/l	ND	0.8		05/29/04	BGL
Hexachlorobutadiene	ug/l	ND	1.3		05/29/04	BGL
2-Hexanone	ug/l	ND	9.7		05/29/04	BGL
Iodomethane	ug/l	ND	0.8		05/29/04	BGL
Isopropylbenzene	ug/l	ND	0.4		05/29/04	BGL
p-Isopropyltoluene	ug/l	ND	0.7		05/29/04	BGL
MTBE	ug/l	ND	0.8		05/29/04	BGL
Methylene Chloride	ug/l	ND	3.0		05/29/04	BGL
MIBK	ug/l	ND	8.8		05/29/04	BGL
Naphthalene	ug/l	ND	1.0		05/29/04	BGL
n-Propylbenzene	ug/l	ND	0.8		05/29/04	BGL
Styrene	ug/l	ND	0.7		05/29/04	BGL
1,1,1,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
Tetrachloroethylene	ug/l	ND	0.4		05/29/04	BGL
Tetrahydrofuran	ug/l	ND	5.0		05/29/04	BGL
Toluene	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,2,4-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,1,1-Trichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1,2-Trichloroethane	ug/l	ND	0.7		05/29/04	BGL
Trichloroethylene	ug/l	ND	1.0		05/29/04	BGL

RL = Reporting Limit

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NM = Not Measured

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



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DONNA PALLISTER  
LEVINE FRICKE - BRAINTREE  
194 FORBES ROAD  
BRAINTREE, MA 02184

6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-2

Sample ID: 04B15276  
Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Trichlorofluoromethane	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichloropropane	ug/l	ND	1.3		05/29/04	BGL
1,2,4-Trimethylbenzene	ug/l	ND	0.7		05/29/04	BGL
1,3,5-Trimethylbenzene	ug/l	ND	1.0		05/29/04	BGL
Vinyl Acetate	ug/l	ND	16.4		05/29/04	BGL
Vinyl Chloride	ug/l	ND	0.3		05/29/04	BGL
m + p Xylene	ug/l	ND	1.3		05/29/04	BGL
o-Xylene	ug/l	ND	0.5		05/29/04	BGL

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NM = Not Measured

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





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 194 FORBES ROAD  
 BRAINTREE, MA 02184

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Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

Purchase Order No.:

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-3

Sample ID : 04B15277      Sampled : 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	10.0		05/29/04	BGL
Acrolein	ug/l	ND	20.0		05/29/04	BGL
Acrylonitrile	ug/l	ND	0.5		05/29/04	BGL
tert-Amylmethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Benzene	ug/l	ND	0.6		05/29/04	BGL
Bromobenzene	ug/l	ND	0.5		05/29/04	BGL
Bromochloromethane	ug/l	ND	0.7		05/29/04	BGL
Bromodichloromethane	ug/l	ND	0.4		05/29/04	BGL
Bromoform	ug/l	ND	1.2		05/29/04	BGL
Bromomethane	ug/l	ND	1.2		05/29/04	BGL
2-Butanone (MEK)	ug/l	ND	10.0		05/29/04	BGL
tert-Butyl Alcohol	ug/l	ND	20.0		05/29/04	BGL
n-Butylbenzene	ug/l	ND	0.7		05/29/04	BGL
sec-Butylbenzene	ug/l	ND	0.6		05/29/04	BGL
tert-Butylbenzene	ug/l	ND	0.8		05/29/04	BGL
tert-Butylethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Carbon Disulfide	ug/l	ND	3.0		05/29/04	BGL
Carbon Tetrachloride	ug/l	ND	0.5		05/29/04	BGL
Chlorobenzene	ug/l	ND	0.6		05/29/04	BGL
Chlorodibromomethane	ug/l	ND	0.5		05/29/04	BGL
Chloroethane	ug/l	ND	0.8		05/29/04	BGL
2-Chloroethylvinylether	ug/l	ND	9.6		05/29/04	BGL
Chloroform	ug/l	ND	0.8		05/29/04	BGL
Chloromethane	ug/l	ND	1.2		05/29/04	BGL
2-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
4-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
1,2-Dibromo-3-Chloropropane	ug/l	ND	1.6		05/29/04	BGL
1,2-Dibromoethane	ug/l	ND	0.70		05/29/04	BGL
Dibromomethane	ug/l	ND	1.1		05/29/04	BGL
1,2-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
1,3-Dichlorobenzene	ug/l	ND	0.6		05/29/04	BGL
1,4-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
cis-1,4-Dichloro-2-Butene	ug/l	ND	2.4		05/29/04	BGL
trans-1,4-Dichloro-2-Butene	ug/l	ND	2.1		05/29/04	BGL
Dichlorodifluoromethane	ug/l	ND	1.0		05/29/04	BGL
1,1-Dichloroethane	ug/l	ND	0.7		05/29/04	BGL

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



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DONNA PALLISTER  
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 194 FORBES ROAD  
 BRAINTREE, MA 02184

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-3

Sample ID : 04B15277      Sampled : 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,2-Dichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloroethylene	ug/l	ND	0.6		05/29/04	BGL
cis-1,2-Dichloroethylene	ug/l	ND	0.5		05/29/04	BGL
trans-1,2-Dichloroethylene	ug/l	ND	0.8		05/29/04	BGL
1,2-Dichloropropane	ug/l	ND	0.6		05/29/04	BGL
1,3-Dichloropropane	ug/l	ND	0.5		05/29/04	BGL
2,2-Dichloropropane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
cis-1,3-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
trans-1,3-Dichloropropene	ug/l	ND	0.4		05/29/04	BGL
Diethyl Ether	ug/l	ND	2.0		05/29/04	BGL
Diisopropyl Ether	ug/l	ND	0.5		05/29/04	BGL
1,4-Dioxane	ug/l	ND	50.0		05/29/04	BGL
Ethyl Benzene	ug/l	ND	0.6		05/29/04	BGL
Ethyl Methacrylate	ug/l	ND	0.8		05/29/04	BGL
Hexachlorobutadiene	ug/l	ND	1.3		05/29/04	BGL
2-Hexanone	ug/l	ND	9.7		05/29/04	BGL
Iodomethane	ug/l	ND	0.8		05/29/04	BGL
Isopropylbenzene	ug/l	ND	0.4		05/29/04	BGL
p-Isopropyltoluene	ug/l	ND	0.7		05/29/04	BGL
MTBE	ug/l	ND	0.8		05/29/04	BGL
Methylene Chloride	ug/l	ND	3.0		05/29/04	BGL
MIBK	ug/l	ND	8.8		05/29/04	BGL
Naphthalene	ug/l	ND	1.0		05/29/04	BGL
n-Propylbenzene	ug/l	ND	0.8		05/29/04	BGL
Styrene	ug/l	ND	0.7		05/29/04	BGL
1,1,1,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
1,1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
Tetrachloroethylene	ug/l	ND	0.4		05/29/04	BGL
Tetrahydrofuran	ug/l	ND	5.0		05/29/04	BGL
Toluene	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,2,4-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,1,1-Trichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1,2-Trichloroethane	ug/l	ND	0.7		05/29/04	BGL
Trichloroethylene	ug/l	ND	1.0		05/29/04	BGL

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BRAINTREE, MA 02184

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-3

Sample ID: 04B15277      Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Trichlorofluoromethane	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichloropropane	ug/l	ND	1.3		05/29/04	BGL
1,2,4-Trimethylbenzene	ug/l	ND	0.7		05/29/04	BGL
1,3,5-Trimethylbenzene	ug/l	ND	1.0		05/29/04	BGL
Vinyl Acetate	ug/l	ND	16.4		05/29/04	BGL
Vinyl Chloride	ug/l	ND	0.3		05/29/04	BGL
m + p Xylene	ug/l	ND	1.3		05/29/04	BGL
o-Xylene	ug/l	ND	0.5		05/29/04	BGL

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-4

Sample ID: 04B15278      Sampled: 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	10.0		05/29/04	BGL
Acrolein	ug/l	ND	20.0		05/29/04	BGL
Acrylonitrile	ug/l	ND	0.5		05/29/04	BGL
tert-Amylmethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Benzene	ug/l	ND	0.6		05/29/04	BGL
Bromobenzene	ug/l	ND	0.5		05/29/04	BGL
Bromochloromethane	ug/l	ND	0.7		05/29/04	BGL
Bromodichloromethane	ug/l	ND	0.4		05/29/04	BGL
Bromoform	ug/l	ND	1.2		05/29/04	BGL
Bromomethane	ug/l	ND	1.2		05/29/04	BGL
2-Butanone (MEK)	ug/l	ND	10.0		05/29/04	BGL
tert-Butyl Alcohol	ug/l	ND	20.0		05/29/04	BGL
n-Butylbenzene	ug/l	ND	0.7		05/29/04	BGL
sec-Butylbenzene	ug/l	ND	0.6		05/29/04	BGL
tert-Butylbenzene	ug/l	ND	0.8		05/29/04	BGL
tert-Butylethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Carbon Disulfide	ug/l	ND	3.0		05/29/04	BGL
Carbon Tetrachloride	ug/l	ND	0.5		05/29/04	BGL
Chlorobenzene	ug/l	ND	0.6		05/29/04	BGL
Chlorodibromomethane	ug/l	ND	0.5		05/29/04	BGL
Chloroethane	ug/l	ND	0.8		05/29/04	BGL
2-Chloroethylvinylether	ug/l	ND	9.6		05/29/04	BGL
Chloroform	ug/l	ND	0.8		05/29/04	BGL
Chloromethane	ug/l	ND	1.2		05/29/04	BGL
2-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
4-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
1,2-Dibromo-3-Chloropropane	ug/l	ND	1.6		05/29/04	BGL
1,2-Dibromoethane	ug/l	ND	0.70		05/29/04	BGL
Dibromomethane	ug/l	ND	1.1		05/29/04	BGL
1,2-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
1,3-Dichlorobenzene	ug/l	ND	0.6		05/29/04	BGL
1,4-Dichlorobenzene	ug/l	0.8	0.8		05/29/04	BGL
cis-1,4-Dichloro-2-Butene	ug/l	ND	2.4		05/29/04	BGL
trans-1,4-Dichloro-2-Butene	ug/l	ND	2.1		05/29/04	BGL
Dichlorodifluoromethane	ug/l	ND	1.0		05/29/04	BGL
1,1-Dichloroethane	ug/l	ND	0.7		05/29/04	BGL

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BRAINTREE, MA 02184

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-4

Sample ID: 04B15278  
Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,2-Dichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloroethylene	ug/l	ND	0.6		05/29/04	BGL
cis-1,2-Dichloroethylene	ug/l	ND	0.5		05/29/04	BGL
trans-1,2-Dichloroethylene	ug/l	ND	0.8		05/29/04	BGL
1,2-Dichloropropane	ug/l	ND	0.6		05/29/04	BGL
1,3-Dichloropropane	ug/l	ND	0.5		05/29/04	BGL
2,2-Dichloropropane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
cis-1,3-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
trans-1,3-Dichloropropene	ug/l	ND	0.4		05/29/04	BGL
Diethyl Ether	ug/l	ND	2.0		05/29/04	BGL
Diisopropyl Ether	ug/l	ND	0.5		05/29/04	BGL
1,4-Dioxane	ug/l	ND	50.0		05/29/04	BGL
Ethyl Benzene	ug/l	ND	0.6		05/29/04	BGL
Ethyl Methacrylate	ug/l	ND	0.8		05/29/04	BGL
Hexachlorobutadiene	ug/l	ND	1.3		05/29/04	BGL
2-Hexanone	ug/l	ND	9.7		05/29/04	BGL
Iodomethane	ug/l	ND	0.8		05/29/04	BGL
Isopropylbenzene	ug/l	ND	0.4		05/29/04	BGL
p-Isopropyltoluene	ug/l	ND	0.7		05/29/04	BGL
MTBE	ug/l	2.9	0.8		05/29/04	BGL
Methylene Chloride	ug/l	ND	3.0		05/29/04	BGL
MIBK	ug/l	ND	8.8		05/29/04	BGL
Naphthalene	ug/l	ND	1.0		05/29/04	BGL
n-Propylbenzene	ug/l	ND	0.8		05/29/04	BGL
Styrene	ug/l	ND	0.7		05/29/04	BGL
1,1,1,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
Tetrachloroethylene	ug/l	ND	0.4		05/29/04	BGL
Tetrahydrofuran	ug/l	ND	5.0		05/29/04	BGL
Toluene	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,2,4-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,1,1-Trichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1,2-Trichloroethane	ug/l	ND	0.7		05/29/04	BGL
Trichloroethylene	ug/l	ND	1.0		05/29/04	BGL

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BRAINTREE, MA 02184

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-4

Sample ID: 04B15278  
Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Trichlorofluoromethane	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichloropropane	ug/l	ND	1.3		05/29/04	BGL
1,2,4-Trimethylbenzene	ug/l	ND	0.7		05/29/04	BGL
1,3,5-Trimethylbenzene	ug/l	ND	1.0		05/29/04	BGL
Vinyl Acetate	ug/l	ND	16.4		05/29/04	BGL
Vinyl Chloride	ug/l	ND	0.3		05/29/04	BGL
m + p Xylene	ug/l	ND	1.3		05/29/04	BGL
o-Xylene	ug/l	ND	0.5		05/29/04	BGL

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DONNA PALLISTER  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
 Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
 Job Number: 0811215200

Field Sample #: ATC-5

Sample ID: 04B15279      Sampled: 5/21/2004  
 NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Acetone	ug/l	ND	10.0		05/29/04	BGL
Acrolein	ug/l	ND	20.0		05/29/04	BGL
Acrylonitrile	ug/l	ND	0.5		05/29/04	BGL
tert-Amylmethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Benzene	ug/l	ND	0.6		05/29/04	BGL
Bromobenzene	ug/l	ND	0.5		05/29/04	BGL
Bromochloromethane	ug/l	ND	0.7		05/29/04	BGL
Bromodichloromethane	ug/l	ND	0.4		05/29/04	BGL
Bromoform	ug/l	ND	1.2		05/29/04	BGL
Bromomethane	ug/l	ND	1.2		05/29/04	BGL
2-Butanone (MEK)	ug/l	ND	10.0		05/29/04	BGL
tert-Butyl Alcohol	ug/l	ND	20.0		05/29/04	BGL
n-Butylbenzene	ug/l	ND	0.7		05/29/04	BGL
sec-Butylbenzene	ug/l	ND	0.6		05/29/04	BGL
tert-Butylbenzene	ug/l	ND	0.8		05/29/04	BGL
tert-Butylethyl Ether	ug/l	ND	0.5		05/29/04	BGL
Carbon Disulfide	ug/l	ND	3.0		05/29/04	BGL
Carbon Tetrachloride	ug/l	ND	0.5		05/29/04	BGL
Chlorobenzene	ug/l	ND	0.6		05/29/04	BGL
Chlorodibromomethane	ug/l	ND	0.5		05/29/04	BGL
Chloroethane	ug/l	ND	0.8		05/29/04	BGL
2-Chloroethylvinylether	ug/l	ND	9.6		05/29/04	BGL
Chloroform	ug/l	ND	0.8		05/29/04	BGL
Chloromethane	ug/l	ND	1.2		05/29/04	BGL
2-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
4-Chlorotoluene	ug/l	ND	0.6		05/29/04	BGL
1,2-Dibromo-3-Chloropropane	ug/l	ND	1.6		05/29/04	BGL
1,2-Dibromoethane	ug/l	ND	0.70		05/29/04	BGL
Dibromomethane	ug/l	ND	1.1		05/29/04	BGL
1,2-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
1,3-Dichlorobenzene	ug/l	ND	0.6		05/29/04	BGL
1,4-Dichlorobenzene	ug/l	ND	0.8		05/29/04	BGL
cis-1,4-Dichloro-2-Butene	ug/l	ND	2.4		05/29/04	BGL
trans-1,4-Dichloro-2-Butene	ug/l	ND	2.1		05/29/04	BGL
Dichlorodifluoromethane	ug/l	ND	1.0		05/29/04	BGL
1,1-Dichloroethane	ug/l	ND	0.7		05/29/04	BGL

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BRAINTREE, MA 02184

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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-5

Sample ID: 04B15279  
Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
1,2-Dichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloroethylene	ug/l	ND	0.6		05/29/04	BGL
cis-1,2-Dichloroethylene	ug/l	ND	0.5		05/29/04	BGL
trans-1,2-Dichloroethylene	ug/l	ND	0.8		05/29/04	BGL
1,2-Dichloropropane	ug/l	ND	0.6		05/29/04	BGL
1,3-Dichloropropane	ug/l	ND	0.5		05/29/04	BGL
2,2-Dichloropropane	ug/l	ND	0.9		05/29/04	BGL
1,1-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
cis-1,3-Dichloropropene	ug/l	ND	0.5		05/29/04	BGL
trans-1,3-Dichloropropene	ug/l	ND	0.4		05/29/04	BGL
Diethyl Ether	ug/l	ND	2.0		05/29/04	BGL
Diisopropyl Ether	ug/l	ND	0.5		05/29/04	BGL
1,4-Dioxane	ug/l	ND	50.0		05/29/04	BGL
Ethyl Benzene	ug/l	ND	0.6		05/29/04	BGL
Ethyl Methacrylate	ug/l	ND	0.8		05/29/04	BGL
Hexachlorobutadiene	ug/l	ND	1.3		05/29/04	BGL
2-Hexanone	ug/l	ND	9.7		05/29/04	BGL
Iodomethane	ug/l	ND	0.8		05/29/04	BGL
Isopropylbenzene	ug/l	ND	0.4		05/29/04	BGL
p-Isopropyltoluene	ug/l	ND	0.7		05/29/04	BGL
MTBE	ug/l	ND	0.8		05/29/04	BGL
Methylene Chloride	ug/l	ND	3.0		05/29/04	BGL
MIBK	ug/l	ND	8.8		05/29/04	BGL
Naphthalene	ug/l	ND	1.0		05/29/04	BGL
n-Propylbenzene	ug/l	ND	0.8		05/29/04	BGL
Styrene	ug/l	ND	0.7		05/29/04	BGL
1,1,1,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
1,1,2,2-Tetrachloroethane	ug/l	ND	0.5		05/29/04	BGL
Tetrachloroethylene	ug/l	ND	0.4		05/29/04	BGL
Tetrahydrofuran	ug/l	ND	5.0		05/29/04	BGL
Toluene	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,2,4-Trichlorobenzene	ug/l	ND	0.7		05/29/04	BGL
1,1,1-Trichloroethane	ug/l	ND	0.9		05/29/04	BGL
1,1,2-Trichloroethane	ug/l	ND	0.7		05/29/04	BGL
Trichloroethylene	ug/l	ND	1.0		05/29/04	BGL

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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





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DONNA PALLISTER  
LEVINE FRICKE - BRAINTREE  
194 FORBES ROAD  
BRAINTREE, MA 02184

6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

Field Sample #: ATC-5

Sample ID: 04B15279  
Sampled: 5/21/2004  
NOT SPECIFIED

Sample Matrix: GRND WATER

	Units	Results	RL	Method	Date Analyzed	Analyst
8260 water				SW846 8260		
Trichlorofluoromethane	ug/l	ND	0.7		05/29/04	BGL
1,2,3-Trichloropropane	ug/l	ND	1.3		05/29/04	BGL
1,2,4-Trimethylbenzene	ug/l	ND	0.7		05/29/04	BGL
1,3,5-Trimethylbenzene	ug/l	ND	1.0		05/29/04	BGL
Vinyl Acetate	ug/l	ND	16.4		05/29/04	BGL
Vinyl Chloride	ug/l	ND	0.3		05/29/04	BGL
m + p Xylene	ug/l	ND	1.3		05/29/04	BGL
o-Xylene	ug/l	ND	0.5		05/29/04	BGL

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6/3/2004  
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Purchase Order No.:

Project Location: SPRINGFIELD STREET  
Date Received: 5/24/2004

LIMS-BAT #: LIMS-79260  
Job Number: 0811215200

\*\* END OF REPORT \*\*

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**QC SUMMARY REPORT**

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 6/3/2004

Lims Bat # : LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
04B15275	1,2-Dichloroethane-d4	Surrogate Recovery	106.3	%	70-130
	Toluene-d8	Surrogate Recovery	96.5	%	70-130
	Bromofluorobenzene	Surrogate Recovery	94.1	%	70-130
04B15276	1,2-Dichloroethane-d4	Surrogate Recovery	108.7	%	70-130
	Toluene-d8	Surrogate Recovery	95.4	%	70-130
	Bromofluorobenzene	Surrogate Recovery	94.8	%	70-130
04B15277	1,2-Dichloroethane-d4	Surrogate Recovery	107.4	%	70-130
	Toluene-d8	Surrogate Recovery	98.2	%	70-130
	Bromofluorobenzene	Surrogate Recovery	86.6	%	70-130
04B15278	1,2-Dichloroethane-d4	Surrogate Recovery	105.6	%	70-130
	Toluene-d8	Surrogate Recovery	96.4	%	70-130
	Bromofluorobenzene	Surrogate Recovery	89.8	%	70-130
04B15279	1,2-Dichloroethane-d4	Surrogate Recovery	104.0	%	70-130
	Toluene-d8	Surrogate Recovery	84.0	%	70-130
	Bromofluorobenzene	Surrogate Recovery	90.4	%	70-130
BLANK-60777	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	
	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		



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Method Blanks

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Lims Bat #: LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-60777	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	3.3	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/l	
	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	
	Bromochloromethane	Blank	<0.7	ug/l	
	Bromobenzene	Blank	<0.5	ug/l	
	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	



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**QC SUMMARY REPORT**

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

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

Report Date: 6/3/2004 Lims Bat # : LIMS-79260 Page 3 of 10

QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
BLANK-60777					
	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-Amylmethyl Ether	Blank	<0.5	ug/l	
LFBLANK-32781					
	Acetone	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	31.9	ug/l	
		Lab Fort Blk. % Rec.	159.6	%	50-155
	Benzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.0	ug/l	
		Lab Fort Blk. % Rec.	90.0	%	70-130
	Carbon Tetrachloride	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.8	ug/l	
		Lab Fort Blk. % Rec.	104.1	%	70-130
	Chloroform	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.5	ug/l	
		Lab Fort Blk. % Rec.	97.6	%	70-130
	1,2-Dichloroethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	21.6	ug/l	
		Lab Fort Blk. % Rec.	108.2	%	70-130
	1,4-Dichlorobenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.7	ug/l	
		Lab Fort Blk. % Rec.	93.4	%	70-130
	Ethyl Benzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.6	ug/l	
		Lab Fort Blk. % Rec.	97.8	%	70-130
	2-Butanone (MEK)	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	23.4	ug/l	
		Lab Fort Blk. % Rec.	117.0	%	50-155
	MIBK	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	24.2	ug/l	
		Lab Fort Blk. % Rec.	121.2	%	50-155
	Naphthalene	Lab Fort Blank Amt.	20.0	ug/l	



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**QC SUMMARY REPORT**

SAMPLE QC: Sample Results with Duplicates

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Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 6/3/2004

Lims Bat # : LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-32781	Naphthalene	Lab Fort Blk. Found	21.7	ug/l	
		Lab Fort Blk. % Rec.	108.4	%	70-130
	Styrene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.6	ug/l	
	Tetrachloroethylene	Lab Fort Blk. % Rec.	98.1	%	70-130
		Lab Fort Blank Amt.	40.0	ug/l	
	Toluene	Lab Fort Blk. Found	35.8	ug/l	
		Lab Fort Blk. % Rec.	89.5	%	70-130
	1,1,1-Trichloroethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.3	ug/l	
	Trichloroethylene	Lab Fort Blk. % Rec.	96.4	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
	Trichlorofluoromethane	Lab Fort Blk. Found	19.2	ug/l	
		Lab Fort Blk. % Rec.	96.1	%	70-130
	o-Xylene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	26.0	ug/l	
	m + p Xylene	Lab Fort Blk. % Rec.	130.0	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
	1,2-Dichlorobenzene	Lab Fort Blk. Found	19.4	ug/l	
		Lab Fort Blk. % Rec.	97.1	%	70-130
	1,3-Dichlorobenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.4	ug/l	
	1,1-Dichloroethane	Lab Fort Blk. % Rec.	96.8	%	70-130
		Lab Fort Blank Amt.	40.0	ug/l	
	1,1-Dichloroethylene	Lab Fort Blk. Found	40.4	ug/l	
		Lab Fort Blk. % Rec.	101.0	%	70-130
	1,4-Dioxane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.1	ug/l	
	MTBE	Lab Fort Blk. % Rec.	95.4	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.9	ug/l	
		Lab Fort Blk. % Rec.	94.4	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.3	ug/l	
		Lab Fort Blk. % Rec.	96.6	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.3	ug/l	
		Lab Fort Blk. % Rec.	91.3	%	70-130
		Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	108.1	ug/l	
		Lab Fort Blk. % Rec.	108.1	%	
		Lab Fort Blank Amt.	40.0	ug/l	
		Lab Fort Blk. Found	42.9	ug/l	



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**QC SUMMARY REPORT**

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

Report Date: 6/3/2004 Lims Bat #: LIMS-79260 Page 5 of 10

QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-32781	MTBE	Lab Fort Blk. % Rec.	107.2	%	70-130
	trans-1,2-Dichloroethylene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.5	ug/l	
		Lab Fort Blk. % Rec.	102.7	%	70-130
	Vinyl Chloride	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	15.7	ug/l	
		Lab Fort Blk. % Rec.	78.5	%	70-130
	Methylene Chloride	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.7	ug/l	
		Lab Fort Blk. % Rec.	98.6	%	70-130
	Chlorobenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.6	ug/l	
		Lab Fort Blk. % Rec.	93.2	%	70-130
	Chloromethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	15.5	ug/l	
		Lab Fort Blk. % Rec.	77.3	%	70-130
	Bromomethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.2	ug/l	
		Lab Fort Blk. % Rec.	95.8	%	70-130
	Chloroethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	17.7	ug/l	
		Lab Fort Blk. % Rec.	88.4	%	70-130
	cis-1,3-Dichloropropene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	15.6	ug/l	
		Lab Fort Blk. % Rec.	77.8	%	70-130
	trans-1,3-Dichloropropene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	16.3	ug/l	
		Lab Fort Blk. % Rec.	81.4	%	70-130
	Chlorodibromomethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.0	ug/l	
		Lab Fort Blk. % Rec.	99.8	%	70-130
	1,1,2-Trichloroethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.8	ug/l	
		Lab Fort Blk. % Rec.	103.8	%	70-130
	Bromoform	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.4	ug/l	
		Lab Fort Blk. % Rec.	102.2	%	70-130
	1,1,2,2-Tetrachloroethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	13.0	ug/l	
		Lab Fort Blk. % Rec.	64.8	%	70-130
	2-Chlorotoluene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.8	ug/l	
		Lab Fort Blk. % Rec.	103.9	%	70-130



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**QC SUMMARY REPORT**

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Sample Matrix Spikes and Matrix Spike Duplicates

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Method Blanks

Report Date: 6/3/2004

Lims Bat # : LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-32781	Hexachlorobutadiene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	16.8	ug/l	
		Lab Fort Blk. % Rec.	84.1	%	70-130
	Isopropylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.5	ug/l	
		Lab Fort Blk. % Rec.	97.3	%	70-130
	p-Isopropyltoluene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.1	ug/l	
		Lab Fort Blk. % Rec.	95.4	%	70-130
	n-Propylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.0	ug/l	
		Lab Fort Blk. % Rec.	100.1	%	70-130
	sec-Butylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.1	ug/l	
		Lab Fort Blk. % Rec.	95.6	%	70-130
	tert-Butylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	18.6	ug/l	
		Lab Fort Blk. % Rec.	92.8	%	70-130
	1,2,3-Trichlorobenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.3	ug/l	
		Lab Fort Blk. % Rec.	101.5	%	70-130
	1,2,4-Trichlorobenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	16.3	ug/l	
		Lab Fort Blk. % Rec.	81.6	%	70-130
	1,2,4-Trimethylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.6	ug/l	
		Lab Fort Blk. % Rec.	97.8	%	70-130
	1,3,5-Trimethylbenzene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.7	ug/l	
		Lab Fort Blk. % Rec.	103.4	%	70-130
	Dibromomethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	21.1	ug/l	
		Lab Fort Blk. % Rec.	105.7	%	70-130
	cis-1,2-Dichloroethylene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	16.8	ug/l	
		Lab Fort Blk. % Rec.	84.1	%	70-130
	4-Chlorotoluene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	21.3	ug/l	
		Lab Fort Blk. % Rec.	106.5	%	70-130
	1,1-Dichloropropene	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	22.7	ug/l	
		Lab Fort Blk. % Rec.	113.7	%	70-130
	1,2-Dichloropropane	Lab Fort Blank Amt.	20.0	ug/l	





**QC SUMMARY REPORT**

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Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

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Lims Bat # : LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-32781	1,2-Dichloropropane	Lab Fort Blk. Found	19.8	ug/l	
		Lab Fort Blk. % Rec.	99.0	%	70-130
	1,3-Dichloropropane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	19.7	ug/l	
	2,2-Dichloropropane	Lab Fort Blk. % Rec.	98.3	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
	1,1,1,2-Tetrachloroethane	Lab Fort Blk. Found	6.7	ug/l	
		Lab Fort Blk. % Rec.	33.6	%	70-130
	1,2,3-Trichloropropane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.9	ug/l	
	n-Butylbenzene	Lab Fort Blk. % Rec.	104.6	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
	Dichlorodifluoromethane	Lab Fort Blk. Found	20.0	ug/l	
		Lab Fort Blk. % Rec.	14.4	ug/l	70-130
	Bromochloromethane	Lab Fort Blank Amt.	72.2	%	
		Lab Fort Blk. Found	20.0	ug/l	
	Bromobenzene	Lab Fort Blk. % Rec.	57.9	%	70-130
		Lab Fort Blank Amt.	20.0	ug/l	
	Iodomethane	Lab Fort Blk. Found	20.7	ug/l	
		Lab Fort Blk. % Rec.	103.4	%	70-130
	Acrylonitrile	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	29.2	ug/l	
	Carbon Disulfide	Lab Fort Blk. % Rec.	146.2	%	
		Lab Fort Blank Amt.	20.0	ug/l	
	2-Hexanone	Lab Fort Blk. Found	20.0	ug/l	
		Lab Fort Blk. % Rec.	25.6	ug/l	70-130
	trans-1,4-Dichloro-2-Butene	Lab Fort Blank Amt.	127.8	%	50-155
		Lab Fort Blk. Found	20.0	ug/l	
	Ethyl Methacrylate	Lab Fort Blk. % Rec.	16.0	ug/l	
		Lab Fort Blank Amt.	79.8	%	
		Lab Fort Blk. Found	20.0	ug/l	



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**QC SUMMARY REPORT**

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 6/3/2004

Lims Bat #: LIMS-79260

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QC Batch Number: GCMS/VOL-9875

Sample Id	Analysis	QC Analysis	Values	Units	Limits
LFBLANK-32781	Ethyl Methacrylate	Lab Fort Blk. % Rec.	99.8	%	
	Diethyl Ether	Lab Fort Blank Amt.	40.0	ug/l	
		Lab Fort Blk. Found	37.3	ug/l	
		Lab Fort Blk. % Rec.	93.3	%	50-155
	Bromodichloromethane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	20.2	ug/l	
		Lab Fort Blk. % Rec.	101.1	%	70-130
	1,2-Dibromo-3-Chloropropane	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	21.9	ug/l	
		Lab Fort Blk. % Rec.	109.5	%	70-130
	1,2-Dibromoethane	Lab Fort Blank Amt.	20.00	ug/l	
		Lab Fort Blk. Found	19.81	ug/l	
		Lab Fort Blk. % Rec.	99.05	%	70-130
	Tetrahydrofuran	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	32.7	ug/l	
		Lab Fort Blk. % Rec.	163.4	%	50-155
	tert-Butyl Alcohol	Lab Fort Blank Amt.	100.0	ug/l	
		Lab Fort Blk. Found	141.9	ug/l	
		Lab Fort Blk. % Rec.	141.9	%	
	Diisopropyl Ether	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	14.1	ug/l	
		Lab Fort Blk. % Rec.	70.4	%	70-130
	tert-Butylethyl Ether	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	15.4	ug/l	
		Lab Fort Blk. % Rec.	77.2	%	70-130
	tert-Amylmethyl Ether	Lab Fort Blank Amt.	20.0	ug/l	
		Lab Fort Blk. Found	16.6	ug/l	
		Lab Fort Blk. % Rec.	83.2	%	70-130



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**QC SUMMARY REPORT**

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

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

Report Date: 6/3/2004

Lims Bat # : LIMS-79260

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NOTES:

QC Batch No. : GCMS/VOL-9875  
Sample ID : LFBLANK-32781  
Analysis : 1,1,2,2-Tetrachloroethane

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : GCMS/VOL-9875  
Sample ID : LFBLANK-32781  
Analysis : 2,2-Dichloropropane

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : GCMS/VOL-9875  
Sample ID : LFBLANK-32781  
Analysis : Acetone

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. DATA VALIDATION IS NOT AFFECTED SINCE ALL RESULTS ARE "NOT DETECTED" FOR ALL SAMPLES IN THIS BATCH FOR THIS COMPOUND AND BIAS IS ON THE HIGH SIDE.

QC Batch No. : GCMS/VOL-9875  
Sample ID : LFBLANK-32781  
Analysis : Dichlorodifluoromethane

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. ANY REPORTED RESULT FOR THIS COMPOUND IN THIS BATCH IS LIKELY TO BE BIASED ON THE LOW SIDE.

QC Batch No. : GCMS/VOL-9875  
Sample ID : LFBLANK-32781  
Analysis : Tetrahydrofuran

LABORATORY FORTIFIED BLANK RECOVERY OUTSIDE OF CONTROL LIMITS. DATA VALIDATION IS NOT AFFECTED SINCE ALL RESULTS ARE "NOT DETECTED" FOR ALL SAMPLES IN THIS BATCH FOR THIS COMPOUND AND BIAS IS ON THE HIGH SIDE.





Phone: 413-525-2332  
 Fax: 413-525-8405  
 Email: info@contestlabs.com  
 www.contestlabs.com

**CHAIN OF CUSTODY RECORD**  
 Form # 7926

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

Company Name: LEP  
 Address: 250 Centerville Road Building  
Suite 2A Warwick, RI  
 Attention: Donna Pallister  
 Project Location: Springfield Street  
 Sampled By: Seth O'Connor

Telephone: (401) 738-3887  
 Project # 081215200  
 Client PO # \_\_\_\_\_  
**DATA DELIVERY (check one):**  
 FAX  EMAIL  WEBSITE CLIENT  
 Fax #: 401-738-1886  
 Email: donna.pallister@lep.com  
 Format:  EXCEL  PDF  GIS KEY

Proposal Provided? (For Billing purposes)  
 Yes  No  
 Proposal date \_\_\_\_\_

Field ID	Sample Description	Lab #	Date Sampled		Comp- osite	Grab	Matrix Code	ANALYSIS REQUESTED	# of containers
			Start Date/Time	Stop Date/Time					
ATC-1	-15235	12379226	5/21/04 0900		X	GW	X	3	
ATC-2	-15236	14221		0940	X	GW	X	3	
ATC-3	15232	14262		1005	X	GW	X	3	
ATC-4	-15238	14263		1030	X	GW	X	3	
ATC-5	-15239	14264		1115	X	GW	X	3	

Signature by: (signature)  
Seth O'Connor  
 Date/Time: 5/21/04  
 Signature by: (signature)  
Seth O'Connor  
 Date/Time: 5/21/04  
 Signature by: (signature)  
Seth O'Connor  
 Date/Time: 5/21/04  
 Signature by: (signature)  
Seth O'Connor  
 Date/Time: 5/21/04

Turnaround  
 24 Hour\*  
 48 Hour\*  
 72 Hour\*  
 Std.  
 Other\*\*  
 Date needed\*\* \_\_\_\_\_

Detection Limit Requirements  
 Regulations? RIDEM GR  
 Data Enhancement Project?  Y  N  
 (MA MCP sites only)  
 Special Requirements or DL's: \_\_\_\_\_

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

\*\*Preservation Codes:  
 I = Iodine  
 H = HCL  
 M = Methanol  
 N = Nitric Acid  
 S = Sulfuric Acid  
 B = Sodium bisulfate  
 O = Other

Con-Test Laboratory is the ONLY Independent Laboratory in all of New England with both prestigious AIHA and NELAP Certifications!  
 15m m2

**Attachment 3**

**GB Groundwater Objective Calculation**

**GB Groundwater Objectives Algorithm**

VOCs (ug/L)	Ca	T	WS	VP	MW	C <sub>w</sub> (mg/L)	C <sub>w</sub> (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  
 C<sub>w</sub> = Water Concentration (mg/L) - calculated

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

**Attachment 4**

**Laboratory Report for Soil Gas**





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REPORT DATE 5/14/2004

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-78741  
JOB NUMBER: 081-12152-00

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

FIELD SAMPLE #	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST
WB-2	04B12526	AIR	NOT SPECIFIED	to-14 ppbv
WB-2	04B12526	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	FLORIDA NELAP E87889
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* 5/14/04  
SIGNATURE DATE

Tod Kopyscinski  
Director of Operations

Sondra S. Kocot  
Quality Control Coordinator

Edward Denson  
Technical Director

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

5/14/2004  
 Page 1 of 5

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL

LIMS-BAT #: LIMS-78741

Date Received: 5/5/2004

Job Number: 081-12152-00

Field Sample #: **WB-2**

Sample ID : **04B12526**

Sampled : 5/4/2004

NOT SPECIFIED

Sample Matrix: AIR

Sample Medium : SMALL TEDLARS

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Benzene	PPBv	ND	05/07/04	WSD	0.5			
Bromomethane	PPBv	ND	05/07/04	WSD	0.5			
Carbon Tetrachloride	PPBv	ND	05/07/04	WSD	0.5			
Chlorobenzene	PPBv	ND	05/07/04	WSD	0.5			
Chloroethane	PPBv	ND	05/07/04	WSD	0.5			
Chloroform	PPBv	ND	05/07/04	WSD	0.5			
Chloromethane	PPBv	ND	05/07/04	WSD	0.5			
1,2-Dibromoethane	PPBv	ND	05/07/04	WSD	0.5			
1,2-Dichlorobenzene	PPBv	ND	05/07/04	WSD	0.5			
1,3-Dichlorobenzene	PPBv	ND	05/07/04	WSD	0.5			
1,4-Dichlorobenzene	PPBv	ND	05/07/04	WSD	0.5			
Dichlorodifluoromethane	PPBv	ND	05/07/04	WSD	0.5			
1,1-Dichloroethane	PPBv	ND	05/07/04	WSD	0.5			
1,2-Dichloroethane	PPBv	ND	05/07/04	WSD	0.5			
1,1-Dichloroethylene	PPBv	ND	05/07/04	WSD	0.5			
cis-1,2-Dichloroethylene	PPBv	ND	05/07/04	WSD	0.5			
1,2-Dichloropropane	PPBv	ND	05/07/04	WSD	0.5			
cis-1,3-Dichloropropene	PPBv	ND	05/07/04	WSD	0.5			
trans-1,3-Dichloropropene	PPBv	ND	05/07/04	WSD	0.5			
1,2-Dichlorotetrafluoroethane (114)	PPBv	ND	05/07/04	WSD	0.5			
Ethylbenzene	PPBv	0.8	05/07/04	WSD	0.5			
Hexachlorobutadiene	PPBv	ND	05/07/04	WSD	0.5			
Methylene Chloride	PPBv	0.8	05/07/04	WSD	0.5			
Styrene	PPBv	ND	05/07/04	WSD	0.5			
1,1,2,2-Tetrachloroethane	PPBv	ND	05/07/04	WSD	0.5			
Tetrachloroethylene	PPBv	1.5	05/07/04	WSD	0.5			
Toluene	PPBv	2.4	05/07/04	WSD	0.5			
1,2,4-Trichlorobenzene	PPBv	ND	05/07/04	WSD	0.5			
1,1,1-Trichloroethane	PPBv	ND	05/07/04	WSD	0.5			
1,1,2-Trichloroethane	PPBv	ND	05/07/04	WSD	0.5			

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

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





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

5/14/2004  
Page 3 of 5

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL  
Date Received: 5/5/2004  
Field Sample #: WB-2

LIMS-BAT #: LIMS-78741  
Job Number: 081-12152-00

Sample ID : 04B12526                      Sampled : 5/4/2004  
NOT SPECIFIED  
Sample Matrix: AIR                      Sample Medium : SMALL TEDLARS

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Benzene	ug/m3	ND	05/07/04	WSD	1.6			
Bromomethane	ug/m3	ND	05/07/04	WSD	1.9			
Carbon Tetrachloride	ug/m3	ND	05/07/04	WSD	3.1			
Chlorobenzene	ug/m3	ND	05/07/04	WSD	2.3			
Chloroethane	ug/m3	ND	05/07/04	WSD	1.3			
Chloroform	ug/m3	ND	05/07/04	WSD	2.4			
Chloromethane	ug/m3	ND	05/07/04	WSD	1.0			
1,2-Dibromoethane	ug/m3	ND	05/07/04	WSD	3.8			
1,2-Dichlorobenzene	ug/m3	ND	05/07/04	WSD	3.0			
1,3-Dichlorobenzene	ug/m3	ND	05/07/04	WSD	3.0			
1,4-Dichlorobenzene	ug/m3	ND	05/07/04	WSD	3.0			
Dichlorodifluoromethane	ug/m3	ND	05/07/04	WSD	2.5			
1,1-Dichloroethane	ug/m3	ND	05/07/04	WSD	2.0			
1,2-Dichloroethane	ug/m3	ND	05/07/04	WSD	2.0			
1,1-Dichloroethylene	ug/m3	ND	05/07/04	WSD	2.0			
cis-1,2-Dichloroethylene	ug/m3	ND	05/07/04	WSD	2.0			
1,2-Dichloropropane	ug/m3	ND	05/07/04	WSD	2.3			
cis-1,3-Dichloropropene	ug/m3	ND	05/07/04	WSD	2.3			
trans-1,3-Dichloropropene	ug/m3	ND	05/07/04	WSD	2.3			
1,2-Dichlorotetrafluoroethane (114)	ug/m3	ND	05/07/04	WSD	3.5			
Ethylbenzene	ug/m3	3.6	05/07/04	WSD	2.2			
Hexachlorobutadiene	ug/m3	ND	05/07/04	WSD	5.3			
Methylene Chloride	ug/m3	3.0	05/07/04	WSD	1.7			
Styrene	ug/m3	ND	05/07/04	WSD	2.1			
1,1,2,2-Tetrachloroethane	ug/m3	ND	05/07/04	WSD	3.4			
Tetrachloroethylene	ug/m3	10.1	05/07/04	WSD	3.4			
Toluene	ug/m3	9.1	05/07/04	WSD	1.9			
1,2,4-Trichlorobenzene	ug/m3	ND	05/07/04	WSD	3.7			
1,1,1-Trichloroethane	ug/m3	ND	05/07/04	WSD	2.7			
1,1,2-Trichloroethane	ug/m3	ND	05/07/04	WSD	2.7			

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WARWICK, RI 02886

5/14/2004  
Page 4 of 5

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL  
Date Received: 5/5/2004  
Field Sample #: WB-2

LIMS-BAT #: LIMS-78741  
Job Number: 081-12152-00

Sample ID : 04B12526      Sampled : 5/4/2004  
NOT SPECIFIED  
Sample Matrix: AIR      Sample Medium : SMALL TEDLARS

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit		P/ F
						Lo	Hi	
Trichloroethylene	ug/m3	ND	05/07/04	WSD	2.7			
Trichlorofluoromethane	ug/m3	ND	05/07/04	WSD	2.8			
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/m3	ND	05/07/04	WSD	3.8			
1,2,4-Trimethylbenzene	ug/m3	6.9	05/07/04	WSD	2.5			
1,3,5-Trimethylbenzene	ug/m3	10.9	05/07/04	WSD	2.5			
Vinyl Chloride	ug/m3	ND	05/07/04	WSD	1.3			
m/p-Xylene	ug/m3	10.7	05/07/04	WSD	2.2			
o-Xylene	ug/m3	8.0	05/07/04	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

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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.

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



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5/14/2004  
Page 5 of 5

Purchase Order No.:

Project Location: SPRINGFIELD ST SCHOOL  
Date Received: 5/5/2004

LIMS-BAT #: LIMS-78741  
Job Number: 081-12152-00

\*\* END OF REPORT \*\*

RL = Reporting Limit  
ND = Not Detected  
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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.

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



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**QC SUMMARY REPORT**

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 5/14/2004

Lims Bat # : LIMS-78741

Page 1 of 2

QC Batch Number: BATCH-6651

Sample Id	Analysis	QC Analysis	Values	Units	Limits
04B12526	4-Bromofluorobenzene	Surrogate Recovery	98.0	%	70-130
BLANK-60066	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	



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### QC SUMMARY REPORT

SAMPLE QC: Sample Results with Duplicates

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date: 5/14/2004

Lims Bat #: LIMS-78741

Page 2 of 2

### QUALITY CONTROL DEFINITIONS AND ABBREVIATIONS

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





**Attachment 5**

**Repair List**

