

January 24, 2002

Mr. Mal A. Salvadore Sondler Salvadore and Associates 400 Reservoir Avenue Providence, Rhode Island 02907

Re: First Quarter, 2001-2002 Academic School Year (September 2001 -

December 2001)

Quarterly Monitoring Results

Springfield Street Schools Providence, Rhode Island

Dear Mr. Salvadore:

ATC has completed the first quarterly monitoring for the 2001-2002 academic year at the Springfield Street Schools located in Providence, Rhode Island. The monitoring was performed subject to the Long-Term Operation and Maintenance Plan and Site Contingency Plan (May 9, 1999). The Long-Term Operation and Maintenance Plan and Site Contingency Plan is part of the Remedial Action Work Plan dated April 2, 1999, revised May 3, 1999 and May 9, 1999, and approved by the Rhode Island Department on Environmental Management (RIDEM) on June 4, 1999.

On December 5th and 6th, 2001, the following monitoring processes were performed at the Springfield Street Schools: Soil Cover Monitoring, Sub Slab Ventilation System Monitoring, Soil Gas Monitoring, Groundwater Quality Monitoring, Indoor Air Quality Monitoring, and Methane Monitoring.

Soil Cover Monitoring

During construction an orange snow fence was lain as an indicator barrier. At least two feet of soil was spread over the orange snow fence to complete the cover. If the cover erodes or someone digs through the cover, the indicator barrier beneath the topsoil would become visible. Soil cover monitoring was performed to evaluate areas on-site for evidence of erosion or digging to the extent that the orange fence indicator barrier has been exposed. ATC did not observe the indicator fence exposed during the course of this monitoring episode.



Sub-Slab Ventilation System Monitoring

Monitoring of the Sub-Slab Ventilation System entailed checking all gauges, valves, and sensors; testing and evaluating the blowers; and checking and draining (if required) the moisture separators. One sample of influent and effluent gas was evaluated for the presence of methane, carbon monoxide, carbon dioxide, hydrogen sulfide, and volatile organic compounds. These constituents were not identified during the monitoring except for hydrogen sulfide at 2.0 parts per million (ppm) and carbon dioxide at 1.0% in the elementary school effluent. The hydrogen sulfide concentration is less than the OSHA prescribed Permissible Exposure Limit of 20 ppm. The OSHA Permissible Exposure Limit is used as a point of comparison even though it's typical application is for indoor air quality. The 2 ppm concentration detected is an end of pipe concentration. The anticipated concern at the ground or breathable areas of the school is expected to be In fact, ATC monitored these areas to obtain a background significantly less. concentration at the ground or breathable areas. ATC did not observe detectable concentrations of hydrogen sulfide in these areas. ATC recommends retesting the effluent from the elementary school system in January 2002. Refer to Table 1 for the volatile organic compound results.

During this inspection the Sub-Slab Ventilation System blower units for the Elementary School were not running. According to school maintenance personnel the breakers tripped during a power outage the week before this inspection. Both units were re-started at the time of the inspection.

Likewise, one of the Sub-Slab Ventilation System blower units at the Middle School was not working during the time of the inspection. ATC contracted Walco Electric Co., to perform repairs on the unit. The second unit was functioning at the time of the inspection.

Due to concerns over the ability to monitor the Sub-Slab Ventilation System's operating status, ATC is in the process of designing a "monitoring program" which will incorporate personnel training (school personnel), monthly inspections by ATC, and indicator lights to identify if a unit is down.

Soil Gas Monitoring

Twenty-nine soil gas monitoring wells were installed on-site. All wells were inspected for damage. A broken seal at well WB5 prevented monitoring of this well. All wells were sampled using an air pump and portable monitoring equipment. Approximately 30 liters of air (approximately 2 well volumes) were extracted from each well prior to sampling. The air was monitored for oxygen, hydrogen sulfide, carbon monoxide, carbon dioxide, methane, and volatile organic compounds. Refer to **Table 2** for the soil gas monitoring results.

Groundwater Quality Monitoring

Five groundwater-monitoring wells were installed in December 2000, in the northern part of the site. These wells were sampled as part of this round of monitoring. Results are included in **Table 3**.

Indoor Air Quality Monitoring

ATC inspected the methane monitors installed within the Elementary School and the Middle School. The monitors were operating at the time of our visits, however several error messages were visible on the display panels, in both buildings, indicating calibration of the equipment is needed.

ATC has contacted Diamond Calibration Company, and is scheduling the firm to calibrate the monitors. Additionally, as part of the previously noted "monitoring program", ATC will incorporate a monthly calibration visit utilizing Diamond Calibration Company to ensure the methane monitors are operating at peak performance.

The visual inspection of the operating monitors indicates methane has not been detected within the buildings. ATC used direct read instruments to monitor the Elementary School and the Middle School for the presence of hydrogen sulfide, carbon monoxide and methane during the quarter. None of these constituents were detected at any concentration during the sampling.

If you have any questions regarding this letter please contact the undersigned at 401-431-2882.

Sincerely,

ATC Associates Inc.

MOORS M FOR

James A. Pierson Project Manager

Senior Project Manager



Table 1

Vapor Phase Effluent Results Springfield Street Elementary and Middle Schools Sub-Slab Ventilation Systems Volatile Organic Compounds Fourth Quarter 2000

Constituent	Elementary School	Middle School System No.1	Middle School System No.2
Hydrogen Sulfide*	2.0	0.0	NA
Methane**	0.0%	0.0%	NA
Carbon Monoxide*	0.0	0.0	NA
Carbon Dioxide**	1.0%	0.0%	NA
Volatile Organic Vapors*	0.0	0.0	NA

^{*} Analytical results are reported in Parts Per Million according to instrument readings

NA= Not Analyzed due to blower failure

^{**}Analytical results are reported in percent according to instrument readings

Table 2
Soil Gas Survey Results
First Quarter 2001

Soil Gas Monitoring Well Designation	Methane	Oxygen	Carbon Dioxide	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors
WB 1	0.0%	17.1%	3.1%	0.0	0.0	<1
WB-2	0.0%	14.2%	5.3%	0.	0.0	<1
WB-3	0.0%	13.9%	3.2%	0.0	1.0	<1
WB-4	0.0%	21.0%	0.0%	0.0	0.0	<1
WB-5			Well	Destroyed	·	
WB-6	0.0%	20.3%	0.2%	0.0	0.0	0
WB-7	0.0%	16.7%	2.5%	0.0	0.0	0
WB-8	0.0%	20.5%	0.2%	0.0	0.0	0
EPL-1	0.0%	20.0%	0.7%	0.0	0.0	<1
EPL-2	0.0%	18.1%	1.8%	0.0	0.0	0
EPL-3	0.0%	16.8%	2.6%	0.0	1.0	0
EPL-4	0.0%	16.1%	3.2%	0.0	0.0	0
EPL-5	0.0%	14.1%	6.0%	0.0	0.0	<1
ENE-1	0.0%	13.3%	6.2%	0.0	0.0	<1
MG-5	0.0%	14.5%	3.9%	0.0	0.0	<1
MG4	0.0%	18.8%	1.4%	0.0	0.0	<1
MG3	0.0%	18.9%	1.3%	0.0	0.0	<1
MG2	0.0%	19.1%	2.3%	0.0	0.0	<1
MG1	0.0%	16.9%	3.3%	0.0	1.0	<1
MPL5	0.0%	11.4%	8.3%	0.0	0.0	<1
MPL3	0.0%	13.6%	6.1%	0.0	0.0	<1
MPL2	0.0%	15.4%	3.8%	0.0	0.0	<1
WB13	0.0%	17.0%	2.8%	0.0	1.0	<1
WB14	0.0%	20.2%	0.3%	0.0	0.0	<1
WB12	0.0%	20.3%	0.4%	0.0	1.0	<1
MPL8	0.0%	13.9%	5.4%	0.0	0.0	<1
MPL7	0.0%	12.2%	7.3%	0.0	0.0	<1
MPL6	0.0%	10.5%	6.4%	0.0	0.0	<1
MPL5	0.0%	11.4%	8.3%	0.0	0.0	<1
Remedial Action Work Plan Action Levels	0.5%	NA	1,000	9 PPM	10 PPM	5 PPM

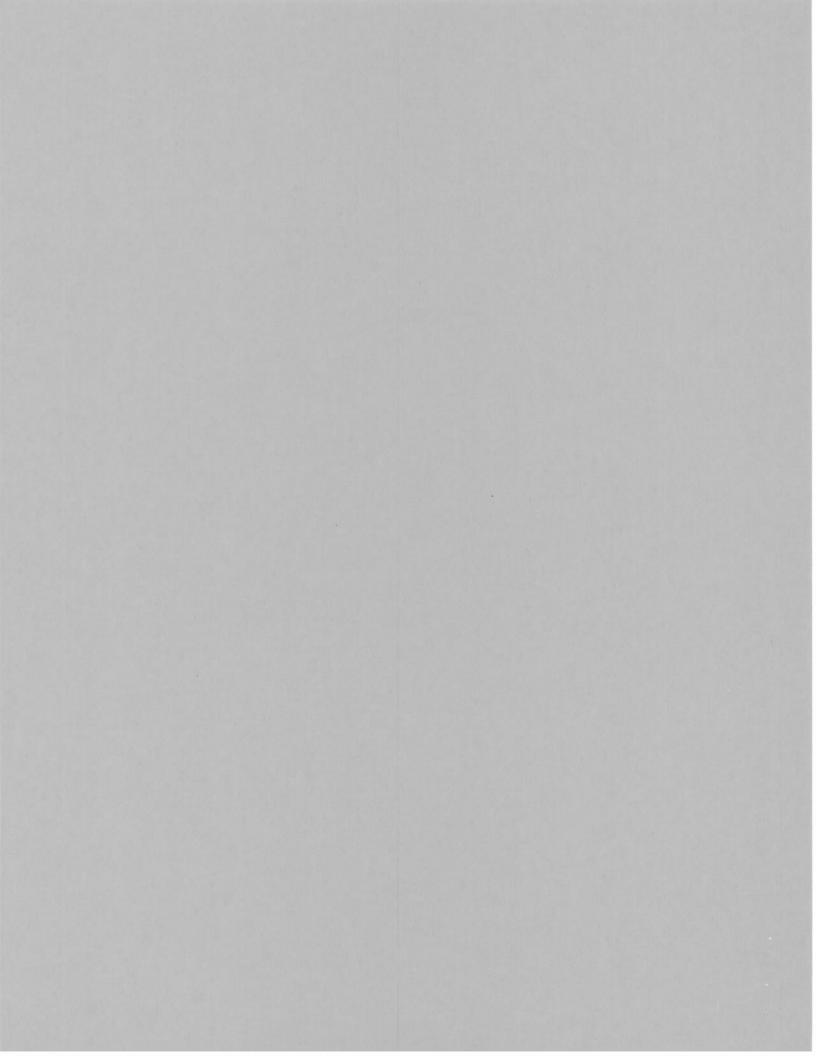
Table 2 (Continued) Confirmatory Laboratory Analysis Soil Gas Survey

Constituent	MG-1*	WB-3*
Dichlorodifluoromethane	0.81	ND
Chloromethane	0.73	ND
1,2-Dichlorotetrafluoroethane	ND	44
Trichlorofluoromethane	0.52	2.9
Methylene Chloride	32	1.5
1,1,2 Trichlorotrifluoroethane	1.1	ND
Benzene	0.85	ND
Trichloroethene	ND	1.1
Toluene	1.8	0.87
Tetrachloroethene	ND	2.0
M/P Xylene	0.57	0.55

^{*}Results above are recorded in Parts Per Billion by Volume (PPBv)

Table 3
Confirmatory Laboratory Analysis
Ground Water Results
First Quarter 2001-2002

Constituent	ATC-1	ATC-2	ATC-3	ATC-4	ATC-5
MTBE	ND	ND	ND	ND	ND
Tetrachloroethylene	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	1.0 ųg/l	ND
n-Butylbenzene	ND	ND	ND	ND	ND
sec-Butylbenzene	ND	ND	ND	ND	ND
Ethyl Benzene	ND	ND	ND	ND	ND
Isopropylbenzene	ND	ND	ND	ND	ND
n-Propylbenzene	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	4.8 ųg/l	ND
1,4-Dichlorobenzene	ND	ND	ND	4.3 ųg/l	ND
Toluene	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND
Xylene	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND
Chloroform	2.0 ug/l	ND	ND	ND	ND





REPORT DATE

12/18/01

ATC ASSOCIATES - E PROVIDENCE 1970 PAWTUCKET AVENUE EAST PROVIDENCE, RI 02914

ATTN: JIM PIERSON

CONTACT: JIM PIERSON

FIELD OFFICE: CR CONTRACT NUMBER:

PURCHASE ORDER NUMBER:

PROJECT NUMBER:

ANALYTICAL SUMMARY

LIMS BAT #:

LIMS-60373

JOB NUMBER: 83 17646.0007

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

PROJECT LOCATION: SPRINGFIELD ST

FIELD SAMPLE#	LAB ID	MATRIX	SAMPLE DESCRIPTION	TEST	
MW-1	01B35142	GRND WATER	NOT SPECIFIED	8260 water	
MW-2	01B35143	GRND WATER	NOT SPECIFIED	8260 water	
MW-3	01B35144	GRND WATER	NOT SPECIFIED	8260 water	
MW-4	01B35145	GRND WATER	NOT SPECIFIED	8260 water	
MW-5	01B35146	GRND WATER	NOT SPECIFIED	8260 water	

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

AIHA 100033

AIHA ELLAP (LEAD) 100033

MASSACHUSETTS MA0100

Edward Demon 12/19/01

NEW HAMPSHIRE 2516

CONNECTICUT PH-0567

VERMONT DOH (LEAD) No. LL015036

NEW YORK ELAP 10899

RHODE ISLAND (LIC. No. 112)

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE

DATE

Tod Kopyscinski

Director of Operations

Edward Denson

Technical Director

CON-test* FAX (413

(413) 525-2332 FAX (413) 525-6405

VIDE

0

CHAIN OF CUSTODY RECORD 39 SPRUCE ST. 2ND FLOOR • EAST LONGMEADOW, MA 01028

LIMS 6637 Normal O = OTHER Date Required HMS60372 Analysis Required 48-Hour PRESERVATIVE CODE: S = NaOH T = Na₂S₂O₃ × > 24-Hour (boo esU) for. -0 Container (Use Code) H= HC 4:50 19960 -7... I Preservative Other Turnaround Requested: C388-18h-18h Olher = HNO3 nΑ X Project #: 83 17646 Remarks/Comments *MATRIX OTHER HOS MATRIX Z MATER DKG I = ICED Ø >> GROUND Telephone: 3TSAW R3TAW Batch #: 1000 ml Amber 0 = Other Client P.O. #: Fax #: Grab X 3 Composite DATE SAMPLED 9miT\efaC dois Received by: (Signature) Received by: (Signature) 13.61 9-1 らか 0 5 6 Date/Time 0 hata 1105 0183514D 24152 2192 341.55 35143 38/145 1911/25 SSIT size) A = CONTAINER CODE 12-10-01 Date Time Date Time Date Time 10-11-0 = 40 ml vial G = Glass (No X No. PRINCESET 4011000CC Sent from PIE PRION 16/21 おかるののか Yes Yes Sample Description Tebrak (Signature) Relinquished by: (Signature) Relinquished by: (Signature) Size) V 3 Refinquished by Site Location: P: PLASTIC (_ Sampled: By: Fax Results: Client Name: Call Results: 5-10 N-19WA A.W. Min 1-34 Address: Field Sample 3 - NO W. Attn: 0



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

JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

12/18/01

1970 PAWTUCKET AVENUE

Page 1 of 16

EAST PROVIDENCE, RI 02914

Purchase Order No.:

Field Office: CR

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Date Received:

12/10/01

Job Number:

83 17646.0007

Field Sample #: MW-1

01B35142

Sampled: 12/6/01

NOT SPECIFIED

Sample Matrix:

Sample ID:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC	Limit	P/F
			Analyzed			Lo	Hi	
Acetone	ug/l	ND	12/14/01	BGL	50.0			
Acrolein	ug/l	ND	12/14/01	BGL	20.0			
Acrylonitrile	ug/l	ND	12/14/01	BGL	7.6			
Benzene	ug/l	ND	12/14/01	BGL	0.6			
Bromobenzene	ug/l	ND	12/14/01	BGL	0.5			
Bromochloromethane	ug/l	ND	12/14/01	BGL	0.7			
Bromodichloromethane	ug/l	ND	12/14/01	BGL	0.4			
Bromomethane	ug/l	ND	12/14/01	BGL	1.2			
Bromoform	ug/l	ND	12/14/01	BGL	1.2			
2-Butanone (MEK)	ug/l	ND	12/14/01	BGL	12.0			
n-Butylbenzene	ug/l	ND	12/14/01	BGL	0.7			
sec-Butylbenzene	ug/l	ND	12/14/01	BGL	0.6			
tert-Butylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Carbon Disulfide	ug/l	ND	12/14/01	BGL	3.0			
Carbon Tetrachloride	ug/l	ND	12/14/01	BGL	0.5			
Chlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
Chlorodibromomethane	ug/l	ND	12/14/01	BGL	0.5			
Chloroethane	ug/l	ND	12/14/01	BGL	8.0			
2-Chloroethylvinylether	ug/l	ND	12/14/01	BGL	9.6			
Chloroform	ug/l	2.0	12/14/01	BGL	8.0			
Chloromethane	ug/l	ND	12/14/01	BGL	1.2			
2-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
4-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/14/01	BGL	1.6			
1,2-Dibromoethane	ug/l	ND	12/14/01	BGL	0.7			
Dibromomethane	ug/l	ND	12/14/01	BGL	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/14/01	BGL	8.0			
1,3-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
1,4-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.8			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.4			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

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



Purchase Order No.:

Field Office: CR

Contact Reference: JIM PIERSON

12/18/01 Page 2 of 16

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

Date Received: 12/10/01

Field Sample #: MW-1

Sample ID:

01B35142

Sampled: 12/6/01 NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.1		
Dichlorodifluoromethane	ug/l	ND	12/14/01	BGL	1.0		
1,1-Dichloroethane	ug/l	ND	12/14/01	BGL	0.7		
1,2-Dichloroethane	ug/l	ND	12/14/01	BGL	0.9		
1,1-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.6		
cis-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.5		
trans-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	8.0		
1,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.6		
1,3-Dichloropropane	ug/l	ND	12/14/01	BGL	0.5		
2,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.9		
1,1-Dichloropropene	ug/l	ND	12/14/01	BGL	1.4		
cis-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.5		
trans-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.4		
Ethyl Benzene	ug/l	ND	12/14/01	BGL	0.6		
Ethyl Methacrylate	ug/l	ND	12/14/01	BGL	8.0		
Hexachlorobutadiene	ug/l	ND	12/14/01	BGL	1.3		
2-Hexanone	ug/l	ND	12/14/01	BGL	9.7		
lodomethane	ug/l	ND	12/14/01	BGL	0.8		
Isopropylbenzene	ug/l	ND	12/14/01	BGL	0.6		
p-Isopropyltoluene	ug/l	ND	12/14/01	BGL	0.7		
MTBE	ug/l	ND	12/14/01	BGL	0.8		
Methylene Chloride	ug/l	ND	12/14/01	BGL	3.0		
MIBK	ug/l	ND	12/14/01	BGL	8.8		
Naphthalene	ug/l	ND	12/14/01	BGL	1.0		
n-Propylbenzene	ug/l	ND	12/14/01	BGL	0.8		
Styrene	ug/l	ND	12/14/01	BGL	0.7		
1,1,1,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	0.5		
1,1,2,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	1.4		
Tetrachloroethylene	ug/l	ND	12/14/01	BGL	0.4		
Toluene	ug/l	ND	12/14/01	BGL	0.7		

RL = Reporting Limit

ND = Not Detected NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR 12/18/01

1970 PAWTUCKET AVENUE

Page 3 of 16

EAST PROVIDENCE, RI 02914

Purchase Order No.:

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Date Received:

12/10/01

Job Number: 83 17646.0007

Field Sample #: MW-1

Sampled: 12/6/01

Sample ID:

01B35142

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Limit Lo Hi	P/F
1,2,3-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7		
1,2,4-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7		
1,1,1-Trichloroethane	ug/l	ND	12/14/01	BGL	0.9		
1,1,2-Trichloroethane	ug/l	ND	12/14/01	BGL	0.7		
Trichloroethylene	ug/l	ND	12/14/01	BGL	1.0		
Trichlorofluoromethane	ug/l	ND	12/14/01	BGL	0.7		
1,2,3-Trichloropropane	ug/l	ND	12/14/01	BGL	1.3		
1,2,4-Trimethylbenzene	ug/l	ND	12/14/01	BGL	0.7		
1,3,5-Trimethylbenzene	ug/l	ND	12/14/01	BGL	1.0		
Vinyl Acetate	ug/l	ND	12/14/01	BGL	16.4		
Vinyl Chloride	ug/l	ND	12/14/01	BGL	0.3		
m + p Xylene	ug/l	ND	12/14/01	BGL	1.3		
o-Xylene	ug/l	ND	12/14/01	BGL	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

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

Purchase Order No.:

12/18/01

1970 PAWTUCKET AVENUE

Page 4 of 16

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Date Received:

Field Sample #: MW-2

12/10/01

Job Number: 83 17646.0007

Sampled: 12/6/01

Sample ID:

01B35143

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Acetone	ug/l	ND	12/14/01	BGL	50.0			
Acrolein	ug/l	ND	12/14/01	BGL	20.0			
Acrylonitrile	ug/l	ND	12/14/01	BGL	7.6			
Benzene	ug/l	ND	12/14/01	BGL	0.6			
Bromobenzene	ug/l	ND	12/14/01	BGL	0.5			
Bromochloromethane	ug/l	ND	12/14/01	BGL	0.7			
Bromodichloromethane	ug/l	ND	12/14/01	BGL	0.4			
Bromomethane	ug/l	ND	12/14/01	BGL	1.2			
Bromoform	ug/l	ND	12/14/01	BGL	1.2			
2-Butanone (MEK)	ug/l	ND	12/14/01	BGL	12.0			
n-Butylbenzene	ug/l	ND	12/14/01	BGL	0.7			
sec-Butylbenzene	ug/l	ND	12/14/01	BGL	0.6			
tert-Butylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Carbon Disulfide	ug/l	ND	12/14/01	BGL	3.0			
Carbon Tetrachloride	ug/l	ND	12/14/01	BGL	0.5			
Chlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
Chlorodibromomethane	ug/l	ND	12/14/01	BGL	0.5			
Chloroethane	ug/l	ND	12/14/01	BGL	0.8			
2-Chloroethylvinylether	ug/l	ND	12/14/01	BGL	9.6			
Chloroform	ug/l	ND	12/14/01	BGL	0.8			
Chloromethane	ug/l	ND	12/14/01	BGL	1.2			
2-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
4-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/14/01	BGL	1.6			
1,2-Dibromoethane	ug/l	ND	12/14/01	BGL	0.7			
Dibromomethane	ug/l	ND	12/14/01	BGL	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/14/01	BGL	8.0			
1,3-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
1,4-Dichlorobenzene	ug/l	ND	12/14/01	BGL	8.0			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.4			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON Field Office: CR ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Purchase Order No.:

12/18/01

Page 5 of 16

Project Location: SPRINGFIELD ST

Date Received:

12/10/01

Field Sample #: MW-2

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

Sample ID:

01B35143

Sampled: 12/6/01

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC		P/F
		V15021	Analyzed			Lo	Hi	
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.1			
Dichlorodifluoromethane	ug/l	ND	12/14/01	BGL	1.0			
1,1-Dichloroethane	ug/l	ND	12/14/01	BGL	0.7			
1,2-Dichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.6			
cis-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.8			
1,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.6			
1,3-Dichloropropane	ug/l	ND	12/14/01	BGL	0.5			
2,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloropropene	ug/l	ND	12/14/01	BGL	1.4			
cis-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.4			
Ethyl Benzene	ug/l	ND	12/14/01	BGL	0.6			
Ethyl Methacrylate	ug/l	ND	12/14/01	BGL	0.8			
Hexachlorobutadiene	ug/l	ND	12/14/01	BGL	1.3			
2-Hexanone	ug/l	ND	12/14/01	BGL	9.7			
lodomethane	ug/l	ND	12/14/01	BGL	0.8			
Isopropylbenzene	ug/l	ND	12/14/01	BGL	0.6			
p-Isopropyltoluene	ug/l	ND	12/14/01	BGL	0.7			
MTBE	ug/l	ND	12/14/01	BGL	8.0			
Methylene Chloride	ug/l	ND	12/14/01	BGL	3.0			
MIBK	ug/l	ND	12/14/01	BGL	8.8			
Naphthalene	ug/l	ND	12/14/01	BGL	1.0			
n-Propylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Styrene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	1.4			
Tetrachloroethylene	ug/l	ND	12/14/01	BGL	0.4			
Toluene	ug/l	ND	12/14/01	BGL	0.7			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

1970 PAWTUCKET AVENUE

12/18/01

EAST PROVIDENCE, RI 02914

Page 6 of 16

Purchase Order No.:

LIMS-BAT #: LIMS-60373

Project Location: SPRINGFIELD ST

Job Number: 83 17646.0007

Date Received: Field Sample #: MW-2

12/10/01

01B35143

Sampled: 12/6/01 NOT SPECIFIED

Sample Matrix:

Sample ID:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC Limit	P/F	
			Analyzed	Analyzed		Lo Hi		
1,2,3-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/14/01	BGL	0.7			
Trichloroethylene	ug/l	ND	12/14/01 I	BGL	1.0			
Trichlorofluoromethane	ug/l	ND	12/14/01 I	BGL	0.7			
,2,3-Trichloropropane	ug/l	ND	12/14/01 I	BGL	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/14/01 I	BGL	0.7			
,3,5-Trimethylbenzene	ug/l	ND	12/14/01 I	BGL	1.0			
/inyl Acetate	ug/l	ND	12/14/01 I	BGL	16.4			
/inyl Chloride	ug/l	ND	12/14/01	BGL	0.3			
n + p Xylene	ug/l	ND	12/14/01 I	BGL	1.3			
o-Xylene	ug/l	ND	12/14/01	BGL	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

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



JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

Contact Reference: JIM PIERSON

Field Office: CR

Purchase Order No.:

12/18/01

LIMS-BAT #:

Page 7 of 16

LIMS-60373

Job Number: 83 17646.0007

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

Date Received: Field Sample #: MW-3

12/10/01

Sample ID:

01B35144

Sampled: 12/6/01

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Acetone	ug/l	ND	12/14/01	BGL	50.0			
Acrolein	ug/l	ND	12/14/01	BGL	20.0			
Acrylonitrile	ug/l	ND	12/14/01	BGL	7.6			
Benzene	ug/l	ND	12/14/01	BGL	0.6			
Bromobenzene	ug/l	ND	12/14/01	BGL	0.5			
Bromochloromethane	ug/l	ND	12/14/01	BGL	0.7			
Bromodichloromethane	ug/l	ND	12/14/01	BGL	0.4			
Bromomethane	ug/l	ND	12/14/01	BGL	1.2			
Bromoform	ug/l	ND	12/14/01	BGL	1.2			
2-Butanone (MEK)	ug/l	ND	12/14/01	BGL	12.0			
n-Butylbenzene	ug/l	ND	12/14/01	BGL	0.7			
sec-Butylbenzene	ug/l	ND	12/14/01	BGL	0.6			
tert-Butylbenzene	ug/l	ND	12/14/01	BGL	0.8			
Carbon Disulfide	ug/l	ND	12/14/01	BGL	3.0			
Carbon Tetrachloride	ug/l	ND	12/14/01	BGL	0.5			
Chlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
Chlorodibromomethane	ug/l	ND	12/14/01	BGL	0.5			
Chloroethane	ug/l	ND	12/14/01	BGL	8.0			
2-Chloroethylvinylether	ug/l	ND	12/14/01	BGL	9.6			
Chloroform	ug/l	ND	12/14/01	BGL	8.0			
Chloromethane	ug/l	ND	12/14/01	BGL	1.2			
2-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
4-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/14/01	BGL	1.6			
1,2-Dibromoethane	ug/l	ND	12/14/01	BGL	0.7			
Dibromomethane	ug/l	ND	12/14/01	BGL	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/14/01	BGL	8.0			
1,3-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
1,4-Dichlorobenzene	ug/l	ND	12/14/01	BGL	8.0			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.4			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE 1970 PAWTUCKET AVENUE

Field Office: CR

Purchase Order No.:

12/18/01 Page 8 of 16

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Date Received:

12/10/01

Job Number: 83 17646.0007

Field Sample #: MW-3

Sampled: 12/6/01

Sample ID:

01B35144

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.1			
Dichlorodifluoromethane	ug/l	ND	12/14/01	BGL	1.0			
1,1-Dichloroethane	ug/l	ND	12/14/01	BGL	0.7			
1,2-Dichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.6			
cis-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	8.0			
1,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.6			
1,3-Dichloropropane	ug/l	ND	12/14/01	BGL	0.5			
2,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloropropene	ug/l	ND	12/14/01	BGL	1.4			
cis-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.4			
Ethyl Benzene	ug/l	ND	12/14/01	BGL	0.6			
Ethyl Methacrylate	ug/l	ND	12/14/01	BGL	8.0			
Hexachlorobutadiene	ug/l	ND	12/14/01	BGL	1.3			
2-Hexanone	ug/l	ND	12/14/01	BGL	9.7			
Iodomethane	ug/l	ND	12/14/01	BGL	8.0			
Isopropylbenzene	ug/l	ND	12/14/01	BGL	0.6			
p-Isopropyltoluene	ug/l	ND	12/14/01	BGL	0.7			
MTBE	ug/l	ND	12/14/01	BGL	8.0			
Methylene Chloride	ug/l	ND	12/14/01	BGL	3.0			
MIBK	ug/l	ND	12/14/01	BGL	8.8			
Naphthalene	ug/l	ND	12/14/01	BGL	1.0			
n-Propylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Styrene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	1.4			
Tetrachloroethylene	ug/l	ND	12/14/01	BGL	0.4			
Toluene	ug/l	ND	12/14/01	BGL	0.7			

RL = Reporting Limit

ND = Not Detected NM = Not Measured

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



JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Contact Reference : JIM PIERSON

Field Office: CR

12/18/01

Page 9 of 16

Purchase Order No.:

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

Date Received:

12/10/01

Sample ID:

Field Sample #: MW-3 01B35144

Sampled: 12/6/01 NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC L Lo	imit Hi	P/F
1,2,3-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/14/01	BGL	0.7			
Trichloroethylene	ug/l	ND	12/14/01	BGL	1.0			
Trichlorofluoromethane	ug/l	ND	12/14/01	BGL	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/14/01	BGL	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/14/01	BGL	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/14/01	BGL	1.0			
Vinyl Acetate	ug/l	ND	12/14/01	BGL	16.4			
Vinyl Chloride	ug/l	ND	12/14/01	BGL	0.3			
m + p Xylene	ug/l	ND	12/14/01	BGL	1.3			
o-Xylene	ug/l	ND	12/14/01	BGL	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

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



Field Office: CR

Purchase Order No.:

Contact Reference: JIM PIERSON

12/18/01

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

Page 10 of 16

JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

Date Received: 12/10/01

Field Sample #: MW-4

01B35145

Sampled: 12/6/01

NOT SPECIFIED

Sample Matrix:

Sample ID:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
Acetone	ug/l	ND	12/14/01	BGL	50.0			
Acrolein	ug/l	ND	12/14/01	BGL	20.0			
Acrylonitrile	ug/l	ND	12/14/01	BGL	7.6			
Benzene	ug/l	1.0	12/14/01	BGL	0.6			
Bromobenzene	ug/l	ND	12/14/01	BGL	0.5			
Bromochloromethane	ug/l	ND	12/14/01	BGL	0.7			
Bromodichloromethane	ug/l	ND	12/14/01	BGL	0.4			
Bromomethane	ug/l	ND	12/14/01	BGL	1.2			
Bromoform	ug/l	ND	12/14/01	BGL	1.2			
2-Butanone (MEK)	ug/l	ND	12/14/01	BGL	12.0			
n-Butylbenzene	ug/l	ND	12/14/01	BGL	0.7			
sec-Butylbenzene	ug/l	ND	12/14/01	BGL	0.6			
tert-Butylbenzene	ug/l	ND	12/14/01	BGL	0.8			
Carbon Disulfide	ug/l	ND	12/14/01	BGL	3.0			
Carbon Tetrachloride	ug/l	ND	12/14/01	BGL	0.5			
Chlorobenzene	ug/l	4.8	12/14/01	BGL	0.6			
Chlorodibromomethane	ug/l	ND	12/14/01	BGL	0.5			
Chloroethane	ug/l	ND	12/14/01	BGL	0.8			
2-Chloroethylvinylether	ug/l	ND	12/14/01	BGL	9.6			
Chloroform	ug/l	ND	12/14/01	BGL	0.8			
Chloromethane	ug/l	ND	12/14/01	BGL	1.2			
2-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
4-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6			
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/14/01	BGL	1.6			
1,2-Dibromoethane	ug/l	ND	12/14/01	BGL	0.7			
Dibromomethane	ug/l	ND	12/14/01	BGL	1.1			
1,2-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.8			
1,3-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.6			
1,4-Dichlorobenzene	ug/l	4.3	12/14/01	BGL	8.0			
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.4			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



Purchase Order No.:

Field Office: CR

Contact Reference : JIM PIERSON

12/18/01 Page 11 of 16

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

Date Received: Field Sample #: MW-4

12/10/01

Sample ID:

01B35145

Sampled: 12/6/01

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.1			
Dichlorodifluoromethane	ug/l	ND	12/14/01	BGL	1.0			
1,1-Dichloroethane	ug/l	ND	12/14/01	BGL	0.7			
1,2-Dichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.6			
cis-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	8.0			
1,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.6			
1,3-Dichloropropane	ug/l	ND	12/14/01	BGL	0.5			
2,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloropropene	ug/l	ND	12/14/01	BGL	1.4			
cis-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.4			
Ethyl Benzene	ug/l	ND	12/14/01	BGL	0.6			
Ethyl Methacrylate	ug/l	ND	12/14/01	BGL	0.8			
Hexachlorobutadiene	ug/l	ND	12/14/01	BGL	1.3			
2-Hexanone	ug/l	ND	12/14/01	BGL	9.7			
lodomethane	ug/l	ND	12/14/01	BGL	0.8			
Isopropylbenzene	ug/l	ND	12/14/01	BGL	0.6			
p-Isopropyltoluene	ug/l	ND	12/14/01	BGL	0.7			
MTBE	ug/l	ND	12/14/01	BGL	8.0			
Methylene Chloride	ug/l	ND	12/14/01	BGL	3.0			
MIBK	ug/l	ND	12/14/01	BGL	8.8			
Naphthalene	ug/l	ND	12/14/01	BGL	1.0			
n-Propylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Styrene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	1.4			
Tetrachloroethylene	ug/l	ND	12/14/01	BGL	0.4			
Toluene	ug/l	ND	12/14/01	BGL	0.7			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

12/18/01

1970 PAWTUCKET AVENUE

Page 12 of 16

EAST PROVIDENCE, RI 02914

Purchase Order No.:

LIMS-BAT #: LIMS-60373

Date Received:

Project Location: SPRINGFIELD ST

Job Number: 83 17646.0007

Field Sample #: MW-4

12/10/01

Sampled: 12/6/01

Sample ID:

01B35145

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
1,2,3-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/14/01	BGL	0.7			
Trichloroethylene	ug/l	ND	12/14/01	BGL	1.0			
Trichlorofluoromethane	ug/l	ND	12/14/01	BGL	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/14/01	BGL	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/14/01	BGL	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/14/01	BGL	1.0			
Vinyl Acetate	ug/l	ND	12/14/01	BGL	16.4			
Vinyl Chloride	ug/l	ND	12/14/01	BGL	0.3			
m + p Xylene	ug/l	ND	12/14/01	BGL	1.3			
o-Xylene	ug/l	ND	12/14/01	BGL	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

^{* =} 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

JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

Purchase Order No.:

12/18/01

1970 PAWTUCKET AVENUE EAST PROVIDENCE, RI 02914 Page 13 of 16

Project Location: SPRINGFIELD ST

LIMS-BAT #:

Date Received:

LIMS-60373

Field Sample #: MW-5

12/10/01

Job Number: 83 17646.0007

Sampled: 12/6/01

Sample ID:

01B35146

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date	Analyst	RL	SPEC Limit	P/F
Acatana	/1	ND	Analyzed	BGL	50.0	Lo Hi	
Acetone	ug/l	ND	12/14/01				
Acrolein	ug/l	ND	12/14/01	BGL	20.0		
Acrylonitrile	ug/l	ND	12/14/01	BGL	7.6		
Benzene	ug/l	ND	12/14/01	BGL	0.6		
Bromobenzene	ug/l	ND	12/14/01	BGL	0.5		
Bromochloromethane	ug/l	ND	12/14/01	BGL	0.7		
Bromodichloromethane	ug/l	ND	12/14/01	BGL	0.4		
Bromomethane	ug/l	ND	12/14/01	BGL	1.2		
Bromoform	ug/l	ND	12/14/01	BGL	1.2		
2-Butanone (MEK)	ug/l	ND	12/14/01	BGL	12.0		
n-Butylbenzene	ug/l	ND	12/14/01	BGL	0.7		
sec-Butylbenzene	ug/l	ND	12/14/01	BGL	0.6		
tert-Butylbenzene	ug/l	ND	12/14/01	BGL	8.0		
Carbon Disulfide	ug/l	ND	12/14/01	BGL	3.0		
Carbon Tetrachloride	ug/l	ND	12/14/01	BGL	0.5		
Chlorobenzene	ug/l	ND	12/14/01	BGL	0.6		
Chlorodibromomethane	ug/l	ND	12/14/01	BGL	0.5		
Chloroethane	ug/l	ND	12/14/01	BGL	0.8		
2-Chloroethylvinylether	ug/l	ND	12/14/01	BGL	9.6		
Chloroform	ug/l	ND	12/14/01	BGL	0.8		
Chloromethane	ug/l	ND	12/14/01	BGL	1.2		
2-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6		
4-Chlorotoluene	ug/l	ND	12/14/01	BGL	0.6		
1,2-Dibromo-3-Chloropropane	ug/l	ND	12/14/01	BGL	1.6		
1,2-Dibromoethane	ug/l	ND	12/14/01	BGL	0.7		
Dibromomethane	ug/l	ND	12/14/01	BGL	1.1		
1,2-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.8		
1,3-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.6		
1,4-Dichlorobenzene	ug/l	ND	12/14/01	BGL	0.8		
cis-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.4		

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

^{* =} 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

JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

12/18/01

1970 PAWTUCKET AVENUE EAST PROVIDENCE, RI 02914

Purchase Order No.:

Page 14 of 16

Project Location: SPRINGFIELD ST

LIMS-BAT #: LIMS-60373

Date Received:

12/10/01

Job Number: 83 17646.0007

Field Sample #: MW-5

Sampled: 12/6/01

01B35146 Sample ID:

NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC	Limit Hi	P/F
trans-1,4-Dichloro-2-Butene	ug/l	ND	12/14/01	BGL	2.1			
Dichlorodifluoromethane	ug/l	ND	12/14/01	BGL	1.0			
1,1-Dichloroethane	ug/l	ND	12/14/01	BGL	0.7			
1,2-Dichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.6			
cis-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,2-Dichloroethylene	ug/l	ND	12/14/01	BGL	8.0			
1,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.6			
1,3-Dichloropropane	ug/l	ND	12/14/01	BGL	0.5			
2,2-Dichloropropane	ug/l	ND	12/14/01	BGL	0.9			
1,1-Dichloropropene	ug/l	ND	12/14/01	BGL	1.4			
cis-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.5			
trans-1,3-Dichloropropene	ug/l	ND	12/14/01	BGL	0.4			
Ethyl Benzene	ug/l	ND	12/14/01	BGL	0.6			
Ethyl Methacrylate	ug/l	ND	12/14/01	BGL	0.8			
Hexachlorobutadiene	ug/l	ND	12/14/01	BGL	1.3			
2-Hexanone	ug/I	ND	12/14/01	BGL	9.7			
lodomethane	ug/l	ND	12/14/01	BGL	0.8			
Isopropylbenzene	ug/l	ND	12/14/01	BGL	0.6			
p-Isopropyltoluene	ug/l	ND	12/14/01	BGL	0.7			
MTBE	ug/l	ND	12/14/01	BGL	8.0			
Methylene Chloride	ug/l	ND	12/14/01	BGL	3.0			
MIBK	ug/l	ND	12/14/01	BGL	8.8			
Naphthalene	ug/l	ND	12/14/01	BGL	1.0			
n-Propylbenzene	ug/l	ND	12/14/01	BGL	8.0			
Styrene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	0.5			
1,1,2,2-Tetrachloroethane	ug/l	ND	12/14/01	BGL	1.4			
Tetrachloroethylene	ug/l	ND	12/14/01	BGL	0.4			
Toluene	ug/l	ND	12/14/01	BGL	0.7			

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

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



JIM PIERSON

Contact Reference: JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

Field Office: CR

12/18/01

1970 PAWTUCKET AVENUE

Purchase Order No.:

Page 15 of 16

EAST PROVIDENCE, RI 02914

LIMS-BAT #: LIMS-60373

Date Received:

Project Location: SPRINGFIELD ST

12/10/01

Job Number: 83 17646.0007

Field Sample #: MW-5

Sample ID:

01B35146

Sampled: 12/6/01 NOT SPECIFIED

Sample Matrix:

GRND WATER

	Units	Results	Date Analyzed	Analyst	RL	SPEC Lo	Limit Hi	P/F
1,2,3-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,2,4-Trichlorobenzene	ug/l	ND	12/14/01	BGL	0.7			
1,1,1-Trichloroethane	ug/l	ND	12/14/01	BGL	0.9			
1,1,2-Trichloroethane	ug/l	ND	12/14/01	BGL	0.7			
Trichloroethylene	ug/l	ND	12/14/01	BGL	1.0			
Trichlorofluoromethane	ug/l	ND	12/14/01	BGL	0.7			
1,2,3-Trichloropropane	ug/l	ND	12/14/01	BGL	1.3			
1,2,4-Trimethylbenzene	ug/l	ND	12/14/01	BGL	0.7			
1,3,5-Trimethylbenzene	ug/l	ND	12/14/01	BGL	1.0			
Vinyl Acetate	ug/l	ND	12/14/01	BGL	16.4			
Vinyl Chloride	ug/l	ND	12/14/01	BGL	0.3			
m + p Xylene	ug/l	ND	12/14/01	BGL	1.3			
o-Xylene	ug/l	ND	12/14/01	BGL	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

^{* =} 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

JIM PIERSON

ATC ASSOCIATES - E PROVIDENCE

1970 PAWTUCKET AVENUE

EAST PROVIDENCE, RI 02914

Project Location: SPRINGFIELD ST

Date Received: 12/10/01

Contact Reference: JIM PIERSON

Field Office: CR

12/18/01

Page 16 of 16

Purchase Order No.:

LIMS-BAT #: LIMS-60373

Job Number: 83 17646.0007

** END OF REPORT **

RL = Reporting Limit

ND = Not Detected

NM = Not Measured

^{* =} 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:	12/18/01	Lims Bat #: LIMS-60373		Page	1015
QC Batch Numb	per: GCMS/VOL-6877				
Sample Id	Analysis	QC Analysis	Values	Units	Limits
1B35142					
	Benzene	Sample Amount	<0.6	ug/l	
		Matrix Spk Amt Added	40.0	ug/l	
		MS Amt Measured	38.0	ug/l	
		Matrix Spike % Rec.	95.0	%	59-143
	Chloroform	Sample Amount	2.0	ug/l	
		Duplicate Value	1.5	ug/l	
		Duplicate RPD	26.1	%	
	Toluene	Sample Amount	<0.7	ug/l	
		Matrix Spk Amt Added	40.0	ug/l	
		MS Amt Measured	34.0	ug/l	
		Matrix Spike % Rec.	85.0	%	63-138
	Trichloroethylene	Sample Amount	<1.0	ug/l	
		Matrix Spk Amt Added	40.0	ug/l	
		MS Amt Measured	34.0	ug/l	
		Matrix Spike % Rec.	85.0	%	61-121
	1,1-Dichloroethylene	Sample Amount	<0.6	ug/l	
		Matrix Spk Amt Added	40.0	ug/l	
		MS Amt Measured	34.0	ug/l	
		Matrix Spike % Rec.	85.0	%	49-144
	Chlorobenzene	Sample Amount	<0.6	ug/l	
		Matrix Spk Amt Added	40.0	ug/l	
		MS Amt Measured	35.0	ug/l	
		Matrix Spike % Rec.	87.5	%	64-127
	1,2-Dichloroethane-d4	Surrogate Recovery	118.0	%	56-128
	Toluene-d8	Surrogate Recovery	97.6	%	65-113
	Bromofluorobenzene	Surrogate Recovery	104.0	%	62-137
1B35143					
	1,2-Dichloroethane-d4	Surrogate Recovery	108.0	%	56-128
	Toluene-d8	Surrogate Recovery	96.0	%	65-113
	Bromofluorobenzene	Surrogate Recovery	100.0	%	62-137
1B35144					
	1,2-Dichloroethane-d4	Surrogate Recovery	112.0	%	56-128
	Toluene-d8	Surrogate Recovery	96.0	%	65-113
	Bromofluorobenzene	Surrogate Recovery	96.0	%	62-137
1B35145					
	1,2-Dichloroethane-d4	Surrogate Recovery	109.6	%	56-128
	Toluene-d8	Surrogate Recovery	94.0	%	65-113
	Bromofluorobenzene	Surrogate Recovery	98.4	%	62-137
1B35146					
	1,2-Dichloroethane-d4	Surrogate Recovery	109.6	%	56-128
	Toluene-d8	Surrogate Recovery	96.0	%	65-113
	Bromofluorobenzene	Surrogate Recovery	96.0	%	62-137
3LANK-38601					



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.

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date:	12/18/01	Lims Bat #: LIMS-60373		Page 2 of 5				
QC Batch Number:	GCMS/VOL-6877							
Sample Id	Analysis	QC Analysis	Values	Units	Limits			
3LANK-38601								
	Acetone	Blank	<50.0	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	<12.0	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				
	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	3.6	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	<1.4	ug/l				
	2-Chlorotoluene	Blank	<0.6	ug/l				
	Hexachlorobutadiene	Blank	<1.3	ug/l				
	Isopropylbenzene	Blank	<0.6	ug/l				
	p-Isopropyltoluene	Blank	<0.7	ug/l				
	n-Propylbenzene	Blank	<0.8	ug/l				
	sec-Butylbenzene	Blank	<0.6	ug/l				



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

103.5

%

12/18/01 Lims Bat #: LIMS-60373 Page 3 of 5 Report Date: QC Batch Number: GCMS/VOL-6877 QC Analysis Values Units Limits Sample Id Analysis BLANK-38601 tert-Butylbenzene Blank < 0.8 ug/l Blank < 0.7 ug/l 1,2,3-Trichlorobenzene Blank < 0.7 1,2,4-Trichlorobenzene ug/l < 0.7 1,2,4-Trimethylbenzene Blank ug/l 1,3,5-Trimethylbenzene Blank <1.0 ug/l Dibromomethane Blank <1.1 ug/l < 0.5 cis-1,2-Dichloroethylene Blank ug/l Blank < 0.6 ug/l 4-Chlorotoluene <1.4 Blank 1,1-Dichloropropene ug/l 1,2-Dichloropropane Blank < 0.6 ug/l Blank < 0.5 1,3-Dichloropropane ug/l < 0.9 Blank ug/l 2,2-Dichloropropane 1,1,1,2-Tetrachloroethane Blank < 0.5 ug/l Blank <1.3 1,2,3-Trichloropropane ug/l Blank < 0.7 n-Butylbenzene ug/l Blank <1.0 ug/l Dichlorodifluoromethane < 0.7 Bromochloromethane Blank ug/l < 0.5 Bromobenzene Blank ug/l lodomethane Blank <0.8 ug/l Acrolein Blank <20.0 ug/l Blank <7.6 Acrylonitrile ug/l Carbon Disulfide Blank <3.0 ug/l <16.4 Blank Vinyl Acetate ug/l 2-Hexanone Blank <9.7 ug/l <2.1 Blank trans-1,4-Dichloro-2-Butene ug/l < 0.8 Ethyl Methacrylate Blank ug/l Blank <2.4 cis-1,4-Dichloro-2-Butene ug/l < 0.4 Bromodichloromethane Blank ug/l 1,2-Dibromo-3-Chloropropane Blank <1.6 ug/l Blank < 0.7 1,2-Dibromoethane ug/l LFBLANK-18615 Lab Fort Blank Amt. 40.0 ug/l Benzene 44.5 Lab Fort Blk. Found ug/l 111.2 % Lab Fort Blk. % Rec. Lab Fort Blank Amt. 40.0 Toluene ug/l 40.5 Lab Fort Blk. Found ug/l Lab Fort Blk. % Rec. 101.2 % Trichloroethylene Lab Fort Blank Amt. 40.0 ug/l Lab Fort Blk. Found 38.0 ug/l 95.0 Lab Fort Blk. % Rec. % Lab Fort Blank Amt. 40.0 1,1-Dichloroethylene ug/l Lab Fort Blk. Found 41.4 ug/l

Lab Fort Blk. % Rec.



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.

BATCH QC: Lab fortified Blanks and Duplicates

Sample Matrix Spikes and Matrix Spike Duplicates

Standard Reference Materials and Duplicates

Method Blanks

Report Date:	12/18/01	Lims Bat #: LIMS-60373	Page 4 of 5				
QC Batch Numi	ber: GCMS/VOL-6877						
Sample Id	Analysis	QC Analysis	Values	Units	Limits		
LFBLANK-1861	15						
	Chlorobenzene	Lab Fort Blank Amt.	40.0	ug/l			
		Lab Fort Blk. Found	40.3	ug/l			
		Lab Fort Blk. % Rec.	100.8	%			



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:

12/18/01

Lims Bat #: LIMS-60373

Page 5 of 5

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 ControlLimits 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 Aboratory 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 Laboratory Fortified Blank Amount Added Laboratory Fortified Blank Amount Rond Laboratory Fortified Blank % Recovered

Duplicate Laboratory Fortified Blank Amount Added Duplicate Laboratory Fortified Blank Amount Found

Duplicate Laboratory Fortifid 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.

Lab Fort Blank Range

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