



EA Engineering, Science, and Technology, Inc.

Airport Professional Park  
2350 Post Road  
Warwick, Rhode Island 02886  
Telephone: 401-736-3440  
Fax: 401-736-3423  
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20 August 2008

Mr. Joseph T. Martella II, Senior Engineer  
RIDEM - Office of Waste Management  
Site Remediation Program  
235 Promenade Street  
Providence, Rhode Island 02908

RE: June 2008 Air Sampling Event Comment Letter  
Adelaide Avenue School, 333 Adelaide Avenue, Providence, Rhode Island  
Case No. 2005-029  
EA Project No. 61965.01

Dear Mr. Martella:

On behalf of the Providence Department of Public Property (City), EA Engineering, Science, and Technology, Inc. (EA) is providing this summary of the data collected at the referenced Adelaide Avenue School site (the Site) on 27 June 2008.

On 18 July 2008 and in accordance with the Order of Approval and amendments (Amended OA) for this Site, your Office was notified via telephone that two compounds, bromodichloromethane and methylene chloride, were detected within one and two samples, respectively. Bromodichloromethane was detected at a concentration of  $0.23 \mu\text{g}/\text{m}^3$  within Room 145, the Media Center, and methylene chloride was detected within Room 110 and in the ambient air at concentrations of  $6.94$  and  $19 \mu\text{g}/\text{m}^3$ , respectively.

Upon receipt of these detections, EA contacted Alpha Analytical Laboratory to ask them to investigate these detections. Due to vacations and a high volume of samples, Alpha could not respond in a timely manner with a written letter confirming their verbal comments made 18 July 2008; and only recently provided us with a letter detailing the issue. The letter (Attachment A) details standard operating procedures for air analysis, and describes how the sample collected within Room 145, the Media Center, was cross contaminated and therefore should not be included in the ongoing data tabulation.

Regarding the detection of methylene chloride, the laboratory did not have evidence concluding cross contamination caused the detection. However, methylene chloride was also detected in the ambient sample, collected outside of the school, at a much higher concentration. Therefore, since the school ventilation system is taking in "fresh" outside air, it is reasonable for methylene chloride to also have been detected in the sample taken within the school.

Based on the factors detailed above, it has become clear that these detections are due to cross contamination and/or are anomalous, and not due to soil vapor intrusion. Therefore, the SSD System continues to operate effectively in accordance with design, and demonstrates that soil



vapor intrusion is not occurring within the Adelaide Avenue School. Copies of the laboratory analytical reports are provided in Attachment B.

No SSD System modifications or other actions to address current site conditions are warranted or proposed at this time, as per my voicemail on 18 July 2008. The next monthly air sampling event for the school will be conducted in August 2008.

EA would also like to take this opportunity to again respectfully request revisions to the Amended Order of Approval. EA, in a letter dated 4 March 2008 (Attachment C), requested approval for a revision to the sampling schedule at the school, modifying the sampling and monitoring requirements from monthly to quarterly intervals. This would provide economic relief to the City during a time of financial hardships, and would provide more than adequate protection to all building occupants as proven by the prior monthly sampling and analysis conducted since March 2007. At your earliest convenience, please review this letter again and provide us with any questions or comments you may have. We would be very pleased to attend a meeting with you and any other appropriate persons to discuss these issues further, and any other aspects of this project going forward. We appreciate your timely response to these issues.

If you have any questions or require additional information, please contact me at 401-736-3440, Ext. 202.

Sincerely,

EA ENGINEERING, SCIENCE,  
AND TECHNOLOGY, INC.

Mark K. Speer, P.E.  
Senior Engineer

#### **Attachments**

- Attachment A: Sample Submission Review Alpha Analytical Laboratory
- Attachment B: Indoor Air Analytical Report 15 July 2008
- Attachment C: Proposed Amendments to the O&M Program, EA, 4 March 2008

cc: A. Sepe, Prov. Dept. of Public Property  
J. Fernandez, City of Prov. Law Department  
J. Boehnert, Partridge, Snow, & Hahn  
T. Deller, Prov. Redevelopment Agency  
J. Langlois, RIDEM Legal Services  
K. Owens, RIDEM OWM  
S. Fischbach, RI Legal Services  
Principal Torchon, Adelaide High School  
M. Murphy, MacTec  
Knight Memorial Library Repository  
S. Rapport, City of Prov. Law Department  
J. Ryan, Partridge, Snow, & Hahn  
R. Dorr, Neighborhood Resident  
T. Gray, RIDEM Bureau of Env. Protection  
L. Hellested, RIDEM OWM  
T. Slater, Representative  
J. Pichardo, Senator  
D. Heislein, MacTec  
G. Simpson, Textron

# Attachment A

Sample Submission Review  
Alpha Analytical Laboratory



August 7, 2008

Mark Speer  
EA Engineering, Science and Technology  
2350 Post Road  
Warwick, RI 02886

**RE: Review Sample Submission L0809683-05 for Cross Contamination of Calibration Standard**

Mark;

Alpha Analytical, Inc. has investigated the detection of a significant number of positive detections in sample ROOM 145 (Alpha ID# L0809683-05), which may be due to cross-contamination from the calibration check standard. Based on further evaluation of the laboratory's standard operating procedures (SOP), we suspect that this most likely occurred as the result of insufficient flushing of the autosampler position utilized for the sample analysis. This letter is an explanation of the sequence of events that we suspect caused this event.

**Analytical System Background:** The analytical system used to analyze canisters for TO-15 target analytes consists of a 16-position autosampler that the sample canisters are attached. This autosampler is connected to a concentrator which withdraws the sample from the canisters through a trap that is cryogenically cooled, essentially freezing out the VOCs of interest and allowing nitrogen and oxygen to be removed. The sample is then transferred to the GC/MS (gas chromatograph/mass spectrometer) for analysis.

**SOP Review:** Prior to connecting canisters to the autosampler, the autosampler is flushed with nitrogen for a period of 3-6 minutes (depending upon the concentrations of prior analyses) at a flow rate of approximately 2 L/min, resulting in a total of 6-12 L of nitrogen passing through the tubing of each autosampler position. The canisters are then attached to the autosampler, and a leak check is conducted on each sampling position. The leak check is done by drawing a vacuum on the sampling position with the canister valve closed, then the sampling position is isolated and allowed to stand for a period of 30 seconds. To be considered "leak tight", the vacuum should not change by more than 2 psia over the 30 second period. The canisters are then opened and analysis can proceed.

**Cross Contamination Issue:** Alpha believes that the ROOM 145 sample was connected to an autosampler position that was inadvertently not flushed with nitrogen prior to connecting the canister, and the prior sample analyzed in this position was a calibration standard. If the autosampler position was not flushed prior to analysis of the sample, then the only opportunity for the sample remaining in the autosampler position tubing (i.e. calibration standard) to be removed would be during the leak check procedure. Unfortunately, the leak check procedure does not produce enough flow to sufficiently remove heavier analytes from the tubing. Once the canister is opened, the analytes remaining in the tubing are now in contact with the sample, and the concentration of compounds of the sample support this possibility. Lower molecular weight compounds (i.e. vinyl chloride, 1,1-dichloroethene) were not detected, mid-level molecular weight compounds (i.e. 1,1,2-trichloroethane, bromodichloromethane) were detected at 0.03 – 0.05



ppbV, and higher molecular weight compounds (i.e. dichlorobenzene isomers) were detected at concentrations greater than 0.1 ppbV.

Alpha considers the results of this sample suspect, and recommends that they not be included in any ongoing tabulation of results from the monthly sampling events. We apologize for any confusion this has caused and will explore other means for this not to occur in the future.

A handwritten signature in black ink, appearing to read "Andy Rezendes". The signature is fluid and cursive, with a long horizontal stroke at the end.

Andy Rezendes  
Product Line Manager-Air Testing

# Attachment B

Indoor Air Analytical Report  
15 July 2008



## ANALYTICAL REPORT

Lab Number: L0809683

Client: EA Engineering, Science and Tech  
2350 Post Road  
Warwick, RI 02886

ATTN: Mark Speer

Project Name: ADELAIDE HIGH SCHOOL

Project Number: 6196501.1009

Report Date: 07/15/08

Certifications & Approvals: MA (M-MA030), NY (11627), CT (PH-0141), NH (2206), NJ (MA015), RI (LAO00299), ME (MA0030), PA (Registration #68-02089), LA NELAC (03090), FL NELAC (E87814), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** ADELAIDE HIGH SCHOOL  
**Project Number:** 6196501.1009

**Lab Number:** L0809683  
**Report Date:** 07/15/08

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Sample Location</b>
L0809683-01	GYMNASIUM	PROVIDENCE, RI
L0809683-02	CAFETERIA	PROVIDENCE, RI
L0809683-03	KITCHEN STORAGE RM.	PROVIDENCE, RI
L0809683-04	ELEVATOR HALLWAY	PROVIDENCE, RI
L0809683-05	ROOM 145	PROVIDENCE, RI
L0809683-06	ROOM 152	PROVIDENCE, RI
L0809683-07	ROOM 118	PROVIDENCE, RI
L0809683-08	ROOM 110	PROVIDENCE, RI
L0809683-09	AMBIENT OUTDOOR	PROVIDENCE, RI



Project Name: ADELAIDE HIGH SCHOOL  
Project Number: 6196501.1009

Lab Number: L0809683  
Report Date: 07/15/08

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### TO15-SIM

L0809683-04 was re-analyzed due to quality control issues on the original analysis. Re-analysis reported.

L0809683-05 was re-analyzed due to quality control issues on the original analysis. Re-analysis reported.

The sample had a significant number of positive detections, which may be due to cross-contamination from the calibration check standard. This most likely occurred as the result of insufficient flushing of the autosampler position utilized for the sample analysis.

WG328391-3 Blank: There is a detectable amount of Methylene Chloride in the Method Blank. Methylene chloride is believed to be isolated to the canister used as the Method Blank.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Title: Technical Director/Representative

Date: 07/15/08

# AIR

Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-01  
 Client ID: GYMNASIUM  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 01:21  
 Analyst: HM

Date Collected: 06/27/08 10:36  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.432	0.020	2.12	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.224	0.020	1.10	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.065	0.020	0.391	0.120		1
Benzene	0.208	0.070	0.666	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.084	0.020	0.526	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.042	0.020	0.202	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-01  
 Client ID: GYMNASIUM  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 10:36  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifler	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.480	0.050	2.37	0.247		1
Ethylbenzene	0.249	0.020	1.08	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.757	0.040	3.28	0.174		1
o-Xylene	0.237	0.020	1.03	0.087		1
Styrene	0.026	0.020	0.112	0.085		1
Tetrachloroethene	0.059	0.020	0.397	0.136		1
Toluene	0.851	0.020	3.20	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.230	0.050	1.29	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylontrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acelone	8.65	2.00	20.5	4.75		1
2-Butanone	1.29	0.500	3.81	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-02  
 Client ID: CAFETERIA  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 01:58  
 Analyst: HM

Date Collected: 06/27/08 10:35  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.090	0.020	0.443	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.047	0.020	0.232	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.029	0.020	0.176	0.120		1
Benzene	0.189	0.070	0.603	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.085	0.020	0.535	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.053	0.020	0.257	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-02  
 Client ID: CAFETERIA  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 10:35  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.462	0.050	2.28	0.247		1
Ethylbenzene	0.095	0.020	0.412	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.250	0.040	1.08	0.174		1
o-Xylene	0.091	0.020	0.393	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	0.066	0.020	0.449	0.136		1
Toluene	0.812	0.020	3.06	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.218	0.050	1.22	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	8.44	2.00	20.0	4.75		1
2-Butanone	0.857	0.500	2.52	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-03  
 Client ID: KITCHEN STORAGE RM.  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 02:35  
 Analyst: HM

Date Collected: 06/27/08 12:40  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.317	0.020	1.56	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.192	0.020	0.942	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.084	0.020	0.506	0.120		1
Benzene	0.198	0.070	0.631	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.087	0.020	0.544	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.049	0.020	0.238	0.098		1
Chloromethane	0.543	0.500	2.65	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-03 Date Collected: 06/27/08 12:40  
 Client ID: KITCHEN STORAGE RM. Date Received: 06/27/08  
 Sample Location: PROVIDENCE, RI Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.462	0.050	2.28	0.247		1
Ethylbenzene	0.128	0.020	0.555	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.244	0.040	1.06	0.174		1
o-Xylene	0.107	0.020	0.463	0.087		1
Styrene	0.430	0.020	1.83	0.085		1
Tetrachloroethene	0.037	0.020	0.249	0.136		1
Toluene	1.03	0.020	3.87	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.222	0.050	1.24	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	37.0	2.00	87.9	4.75		1
2-Butanone	2.66	0.500	7.85	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1





Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-04 R  
 Client ID: ELEVATOR HALLWAY  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 16:22  
 Analyst: HM

Date Collected: 06/27/08 10:37  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.620	0.020	3.04	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	0.021	0.020	0.084	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.322	0.020	1.58	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.053	0.020	0.315	0.120		1
Benzene	0.202	0.070	0.644	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.085	0.020	0.534	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.043	0.020	0.207	0.098		1
Chloromethane	0.580	0.500	2.83	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-04 R  
 Client ID: ELEVATOR HALLWAY  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 10:37  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.472	0.050	2.33	0.247		1
Ethylbenzene	0.227	0.020	0.987	0.087		1
Methylene chloride	0.925	0.800	3.21	2.78		1
Methyl tert butyl ether	0.021	0.020	0.074	0.072		1
p/m-Xylene	0.691	0.040	3.00	0.174		1
o-Xylene	0.237	0.020	1.03	0.087		1
Styrene	0.044	0.020	0.186	0.085		1
Tetrachloroethene	0.068	0.020	0.459	0.136		1
Toluene	1.02	0.020	3.85	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	0.020	0.020	0.107	0.107		1
Trichlorofluoromethane	0.231	0.050	1.30	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	11.7	2.00	27.7	4.75		1
2-Butanone	1.32	0.500	3.89	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-05 R  
 Client ID: ROOM 145  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 17:00  
 Analyst: HM

Date Collected: 06/27/08 10:50  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	0.026	0.020	0.179	0.137		1
1,1,2,2-Tetrachloroethane	0.145	0.020	0.992	0.137		1
1,1,2-Trichloroethane	0.056	0.020	0.302	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.147	0.020	0.722	0.098		1
1,2-Dibromoethane	0.082	0.020	0.629	0.154		1
1,2-Dichlorobenzene	0.137	0.020	0.822	0.120		1
1,2-Dichloroethane	0.044	0.020	0.178	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.079	0.020	0.387	0.098		1
1,3-Dichlorobenzene	0.134	0.020	0.802	0.120		1
1,4-Dichlorobenzene	0.223	0.020	1.34	0.120		1
Benzene	0.266	0.070	0.849	0.223		1
Bromodichloromethane	0.035	0.020	0.231	0.134		1
Bromoform	0.126	0.020	1.30	0.206		1
Carbon tetrachloride	0.088	0.020	0.555	0.126		1
Chlorobenzene	0.068	0.020	0.314	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.050	0.020	0.245	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	0.041	0.020	0.185	0.091		1
Dibromochloromethane	0.064	0.020	0.308	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-05 R  
 Client ID: ROOM 145  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 10:50  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.455	0.050	2.25	0.247		1
Ethylbenzene	0.185	0.020	0.802	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.498	0.040	2.16	0.174		1
o-Xylene	0.192	0.020	0.833	0.087		1
Styrene	0.113	0.020	0.481	0.085		1
Tetrachloroethene	0.068	0.020	0.460	0.136		1
Toluene	1.20	0.020	4.52	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	0.075	0.020	0.340	0.091		1
Trichloroethene	0.027	0.020	0.143	0.107		1
Trichlorofluoromethane	0.208	0.050	1.17	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acelone	11.0	2.00	26.0	4.75		1
2-Butanone	0.965	0.500	2.84	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-06  
 Client ID: ROOM 152  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 17:39  
 Analyst: HM

Date Collected: 06/27/08 10:51  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.042	0.020	0.206	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	ND	0.020	ND	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.097	0.020	0.582	0.120		1
Benzene	0.182	0.070	0.582	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.087	0.020	0.547	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.046	0.020	0.223	0.098		1
Chloromethane	0.512	0.500	2.50	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-06  
 Client ID: ROOM 152  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 10:51  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.456	0.050	2.25	0.247		1
Ethylbenzene	0.083	0.020	0.360	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.214	0.040	0.926	0.174		1
o-Xylene	0.078	0.020	0.339	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	0.036	0.020	0.246	0.136		1
Toluene	0.801	0.020	3.02	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	0.036	0.020	0.195	0.107		1
Trichlorofluoromethane	0.208	0.050	1.16	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	12.6	2.00	29.8	4.75		1
2-Butanone	0.795	0.500	2.34	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-07  
 Client ID: ROOM 118  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 18:15  
 Analyst: HM

Date Collected: 06/27/08 11:05  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.129	0.020	0.634	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.078	0.020	0.385	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.022	0.020	0.130	0.120		1
Benzene	0.206	0.070	0.657	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.084	0.020	0.526	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.040	0.020	0.196	0.098		1
Chloromethane	0.668	0.500	3.26	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-07  
 Client ID: ROOM 118  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 11:05  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.452	0.050	2.24	0.247		1
Ethylbenzene	0.110	0.020	0.478	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.288	0.040	1.25	0.174		1
o-Xylene	0.112	0.020	0.485	0.087		1
Styrene	0.045	0.020	0.191	0.085		1
Tetrachloroethene	0.063	0.020	0.424	0.136		1
Toluene	1.09	0.020	4.11	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.208	0.050	1.16	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	12.2	2.00	28.9	4.75		1
2-Butanone	1.03	0.500	3.05	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1





Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-08  
 Client ID: ROOM 110  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 18:54  
 Analyst: HM

Date Collected: 06/27/08 11:06  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.050	0.020	0.246	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	0.021	0.020	0.102	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.045	0.020	0.273	0.120		1
Benzene	0.189	0.070	0.604	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.086	0.020	0.538	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.041	0.020	0.200	0.098		1
Chloromethane	0.537	0.500	2.62	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-08  
 Client ID: ROOM 110  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 11:06  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.449	0.050	2.22	0.247		1
Ethylbenzene	0.092	0.020	0.400	0.087		1
Methylene chloride	2.00	0.800	6.94	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.229	0.040	0.994	0.174		1
o-Xylene	0.082	0.020	0.358	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	0.036	0.020	0.243	0.136		1
Toluene	1.02	0.020	3.84	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.205	0.050	1.15	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	12.2	2.00	29.0	4.75		1
2-Butanone	0.820	0.500	2.42	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-09  
 Client ID: AMBIENT OUTDOOR  
 Sample Location: PROVIDENCE, RI  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 19:32  
 Analyst: HM

Date Collected: 06/27/08 13:52  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	0.036	0.020	0.175	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	ND	0.020	ND	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	0.022	0.020	0.132	0.120		1
Benzene	0.228	0.070	0.726	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	0.086	0.020	0.537	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	0.034	0.020	0.167	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**SAMPLE RESULTS**

Lab ID: L0809683-09  
 Client ID: AMBIENT OUTDOOR  
 Sample Location: PROVIDENCE, RI

Date Collected: 06/27/08 13:52  
 Date Received: 06/27/08  
 Field Prep: Not Specified

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM</b>						
Dichlorodifluoromethane	0.448	0.050	2.22	0.247		1
Ethylbenzene	0.085	0.020	0.369	0.087		1
Methylene chloride	5.48	0.800	19.0	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	0.183	0.040	0.795	0.174		1
o-Xylene	0.077	0.020	0.332	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	0.032	0.020	0.216	0.136		1
Toluene	0.641	0.020	2.41	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	0.211	0.050	1.18	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acelone	8.29	2.00	19.7	4.75		1
2-Butanone	1.04	0.500	3.08	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/08/08 17:13

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organic Compounds in Air by SIM for sample(s): 01-03 Batch: WG328391-3						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	ND	0.020	ND	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	ND	0.020	ND	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	ND	0.020	ND	0.120		1
Benzene	ND	0.070	ND	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	ND	0.020	ND	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	ND	0.020	ND	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/08/08 17:13

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
<b>Volatile Organic Compounds in Air by SIM for sample(s): 01-03 Batch: WG328391-3</b>						
Dichlorodifluoromethane	ND	0.050	ND	0.247		1
Ethylbenzene	ND	0.020	ND	0.087		1
Methylene chloride	1.29	0.800	4.49	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	ND	0.040	ND	0.174		1
o-Xylene	ND	0.020	ND	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	ND	0.020	ND	0.136		1
Toluene	ND	0.020	ND	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	ND	0.050	ND	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	ND	2.00	ND	4.75		1
2-Butanone	ND	0.500	ND	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 12:53

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organic Compounds in Air by SIM for sample(s): 04-09 Batch: WG328391-7						
1,1,1-Trichloroethane	ND	0.020	ND	0.109		1
1,1,1,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2,2-Tetrachloroethane	ND	0.020	ND	0.137		1
1,1,2-Trichloroethane	ND	0.020	ND	0.109		1
1,1-Dichloroethane	ND	0.020	ND	0.081		1
1,1-Dichloroethene	ND	0.020	ND	0.079		1
1,2,4-Trimethylbenzene	ND	0.020	ND	0.098		1
1,2-Dibromoethane	ND	0.020	ND	0.154		1
1,2-Dichlorobenzene	ND	0.020	ND	0.120		1
1,2-Dichloroethane	ND	0.020	ND	0.081		1
1,2-Dichloropropane	ND	0.020	ND	0.092		1
1,3,5-Trimethylbenzene	ND	0.020	ND	0.098		1
1,3-Dichlorobenzene	ND	0.020	ND	0.120		1
1,4-Dichlorobenzene	ND	0.020	ND	0.120		1
Benzene	ND	0.070	ND	0.223		1
Bromodichloromethane	ND	0.020	ND	0.134		1
Bromoform	ND	0.020	ND	0.206		1
Carbon tetrachloride	ND	0.020	ND	0.126		1
Chlorobenzene	ND	0.020	ND	0.092		1
Chloroethane	ND	0.020	ND	0.053		1
Chloroform	ND	0.020	ND	0.098		1
Chloromethane	ND	0.500	ND	2.44		1
cis-1,2-Dichloroethene	ND	0.020	ND	0.079		1
cis-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Dibromochloromethane	ND	0.020	ND	0.096		1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Number: L0809683  
 Report Date: 07/15/08

**Method Blank Analysis  
 Batch Quality Control**

Analytical Method: 48,TO-15-SIM  
 Analytical Date: 07/09/08 12:53

Parameter	ppbV		ug/m3		Qualifier	Dilution Factor
	Results	RDL	Results	RDL		
Volatile Organic Compounds in Air by SIM for sample(s): 04-09 Batch: WG328391-7						
Dichlorodifluoromethane	ND	0.050	ND	0.247		1
Ethylbenzene	ND	0.020	ND	0.087		1
Methylene chloride	ND	0.800	ND	2.78		1
Methyl tert butyl ether	ND	0.020	ND	0.072		1
p/m-Xylene	ND	0.040	ND	0.174		1
o-Xylene	ND	0.020	ND	0.087		1
Styrene	ND	0.020	ND	0.085		1
Tetrachloroethene	ND	0.020	ND	0.136		1
Toluene	ND	0.020	ND	0.075		1
trans-1,2-Dichloroethene	ND	0.020	ND	0.079		1
trans-1,3-Dichloropropene	ND	0.020	ND	0.091		1
Trichloroethene	ND	0.020	ND	0.107		1
Trichlorofluoromethane	ND	0.050	ND	0.281		1
Vinyl chloride	ND	0.020	ND	0.051		1
Acrylonitrile	ND	0.500	ND	1.08		1
n-Butylbenzene	ND	0.500	ND	2.74		1
sec-Butylbenzene	ND	0.500	ND	2.74		1
Isopropylbenzene	ND	0.500	ND	2.46		1
p-Isopropyltoluene	ND	0.500	ND	2.74		1
Acetone	ND	2.00	ND	4.75		1
2-Butanone	ND	0.500	ND	1.47		1
4-Methyl-2-pentanone	ND	0.500	ND	2.05		1





## Lab Control Sample Analysis

Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL

Project Number: 6196501.1009

Lab Numl

Report D:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 01-03 Batch: WG328391-2				
1,1,1-Trichloroethane	103	-	70-130	-
1,1,1,2-Tetrachloroethane	111	-	70-130	-
1,1,1,2,2-Tetrachloroethane	91	-	70-130	-
1,1,2-Trichloroethane	105	-	70-130	-
1,1-Dichloroethane	118	-	70-130	-
1,1-Dichloroethene	103	-	70-130	-
1,2,4-Trimethylbenzene	83	-	70-130	-
1,2-Dibromoethane	97	-	70-130	-
1,2-Dichlorobenzene	87	-	70-130	-
1,2-Dichloroethane	114	-	70-130	-
1,2-Dichloropropane	113	-	70-130	-
1,3,5-Trimethylbenzene	81	-	70-130	-
1,3-Butadiene	108	-	70-130	-
1,3-Dichlorobenzene	82	-	70-130	-
1,4-Dichlorobenzene	83	-	70-130	-
Benzene	93	-	70-130	-
Bromodichloromethane	118	-	70-130	-
Bromoform	100	-	70-130	-
Bromomethane	95	-	70-130	-
Carbon tetrachloride	106	-	70-130	-
Chlorobenzene	100	-	70-130	-

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL  
Project Number: 6196501.1009

Lab Numl  
Report D:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
<b>Volatile Organic Compounds in Air by SIM Associated sample(s): 01-03 Batch: WG328391-2</b>				
Chloroethane	105	-	70-130	-
Chloroform	118	-	70-130	-
Chloromethane	92	-	70-130	-
cis-1,2-Dichloroethene	119	-	70-130	-
cis-1,3-Dichloropropene	103	-	70-130	-
Dibromochloromethane	111	-	70-130	-
Dichlorodifluoromethane	107	-	70-130	-
Ethylbenzene	93	-	70-130	-
1,1,2-Trichloro-1,2,2-Trifluoroethane	103	-	70-130	-
1,2-Dichloro-1,1,2,2-tetrafluoroethane	110	-	70-130	-
Methylene chloride	88	-	70-130	-
Methyl tert butyl ether	98	-	70-130	-
p/m-Xylene	91	-	70-130	-
o-Xylene	92	-	70-130	-
Styrene	85	-	70-130	-
Tetrachloroethene	115	-	70-130	-
Toluene	99	-	70-130	-
trans-1,2-Dichloroethene	108	-	70-130	-
trans-1,3-Dichloropropene	86	-	70-130	-
Trichloroethene	111	-	70-130	-
1,2,4-Trichlorobenzene	157	-	70-130	-

## Lab Control Sample Analysis

Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL

Project Number: 6196501.1009

Lab Numl

Report D:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
<b>Volatile Organic Compounds in Air by SIM Associated sample(s): 01-03 Batch: WG328391-2</b>				
Trichlorofluoromethane	106	-	70-130	-
Vinyl chloride	107	-	70-130	-
Acrylonitrile	84	-	70-130	-
n-Butylbenzene	105	-	70-130	-
sec-Butylbenzene	86	-	70-130	-
Isopropylbenzene	87	-	70-130	-
p-Isopropyltoluene	89	-	70-130	-
Acetone	84	-	70-130	-
2-Butanone	94	-	70-130	-
4-Methyl-2-pentanone	104	-	70-130	-

## Lab Control Sample Analysis

Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL

Project Number: 6196501.1009

Lab Numl

Report D:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 04-09 Batch: WG328391-6				
1,1,1-Trichloroethane	117	-	70-130	-
1,1,1,2-Tetrachloroethane	122	-	70-130	-
1,1,1,2,2-Tetrachloroethane	107	-	70-130	-
1,1,2-Trichloroethane	118	-	70-130	-
1,1-Dichloroethane	121	-	70-130	-
1,1-Dichloroethene	105	-	70-130	-
1,2,4-Trimethylbenzene	92	-	70-130	-
1,2-Dibromoethane	107	-	70-130	-
1,2-Dichlorobenzene	91	-	70-130	-
1,2-Dichloroethane	117	-	70-130	-
1,2-Dichloropropane	126	-	70-130	-
1,3,5-Trimethylbenzene	97	-	70-130	-
1,3-Butadiene	107	-	70-130	-
1,3-Dichlorobenzene	93	-	70-130	-
1,4-Dichlorobenzene	92	-	70-130	-
Benzene	100	-	70-130	-
Bromodichloromethane	123	-	70-130	-
Bromoform	110	-	70-130	-
Bromomethane	93	-	70-130	-
Carbon tetrachloride	111	-	70-130	-
Chlorobenzene	111	-	70-130	-

## Lab Control Sample Analysis

Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

Lab Numl  
 Report Di

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 04-09 Batch: WG328391-6				
Chloroethane	108	-	70-130	-
Chloroform	118	-	70-130	-
Chloromethane	92	-	70-130	-
cis-1,2-Dichloroethene	121	-	70-130	-
cis-1,3-Dichloropropene	111	-	70-130	-
Dibromochloromethane	114	-	70-130	-
Dichlorodifluoromethane	105	-	70-130	-
Ethylbenzene	111	-	70-130	-
1,1,2-Trichloro-1,2,2-Trifluoroethane	104	-	70-130	-
1,2-Dichloro-1,1,2,2-tetrafluoroethane	108	-	70-130	-
Methylene chloride	89	-	70-130	-
Methyl tert butyl ether	103	-	70-130	-
p/m-Xylene	112	-	70-130	-
o-Xylene	113	-	70-130	-
Styrene	107	-	70-130	-
Tetrachloroethene	113	-	70-130	-
Toluene	110	-	70-130	-
trans-1,2-Dichloroethene	109	-	70-130	-
trans-1,3-Dichloropropene	100	-	70-130	-
Trichloroethene	111	-	70-130	-
1,2,4-Trichlorobenzene	130	-	70-130	-

**Lab Control Sample Analysis**  
Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL  
Project Number: 6196501.1009

Lab Numl  
Report D:

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 04-09 Batch: WG328391-6				
Trichlorofluoromethane	105	-	70-130	-
Vinyl chloride	106	-	70-130	-
Acrylonitrile	102	-	70-130	-
n-Butylbenzene	101	-	70-130	-
sec-Butylbenzene	94	-	70-130	-
Isopropylbenzene	108	-	70-130	-
p-Isopropyltoluene	89	-	70-130	-
Acetone	97	-	70-130	-
2-Butanone	102	-	70-130	-
4-Methyl-2-pentanone	115	-	70-130	-

**Lab Duplicate Analysis**  
Batch Quality Control

Project Name: ADELAIDE HIGH SCHOOL  
Project Number: 6196501.1009

Lab  
Rep:

Parameter	Native Sample	Duplicate Sample	Units	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 01-09 QC Batch ID: WG328391-4 QC Sample: L0809679-04				
1,1,1-Trichloroethane	0.025	0.025	ppbV	2
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC
1,1,2-Trichloroethane	ND	ND	ppbV	NC
1,1-Dichloroethane	ND	ND	ppbV	NC
1,1-Dichloroethene	ND	ND	ppbV	NC
1,2,4-Trimethylbenzene	0.150	0.178	ppbV	17
1,2-Dibromoethane	ND	ND	ppbV	NC
1,2-Dichlorobenzene	ND	ND	ppbV	NC
1,2-Dichloroethane	ND	ND	ppbV	NC
1,2-Dichloropropane	ND	ND	ppbV	NC
1,3,5-Trimethylbenzene	0.051	0.059	ppbV	15
1,3-Dichlorobenzene	ND	ND	ppbV	NC
1,4-Dichlorobenzene	9.63	10.7	ppbV	11
Benzene	0.125	0.129	ppbV	3
Bromodichloromethane	ND	ND	ppbV	NC
Bromoform	ND	ND	ppbV	NC
Carbon tetrachloride	0.088	0.088	ppbV	0
Chlorobenzene	ND	ND	ppbV	NC

**Lab Duplicate Analysis**  
Batch Quality Control

**Project Name:** ADELAIDE HIGH SCHOOL  
**Project Number:** 6196501.1009

**Lab**  
**Repr**

Parameter	Native Sample	Duplicate Sample	Units	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 01-09 QC Batch ID: WG328391-4 QC Sample: L0809679-04				
Chloroethane	ND	ND	ppbV	NC
Chloroform	0.081	0.081	ppbV	0
Chloromethane	ND	ND	ppbV	NC
cis-1,2-Dichloroethene	ND	ND	ppbV	NC
cis-1,3-Dichloropropene	ND	ND	ppbV	NC
Dibromochloromethane	ND	ND	ppbV	NC
Dichlorodifluoromethane	0.501	0.490	ppbV	2
Ethylbenzene	0.161	0.160	ppbV	1
Methylene chloride	ND	ND	ppbV	NC
Methyl tert butyl ether	ND	ND	ppbV	NC
p/m-Xylene	0.537	0.536	ppbV	0
o-Xylene	0.183	0.182	ppbV	1
Styrene	0.139	0.142	ppbV	2
Tetrachloroethene	0.265	0.257	ppbV	3
Toluene	5.89	5.75	ppbV	2
trans-1,2-Dichloroethene	ND	ND	ppbV	NC
trans-1,3-Dichloropropene	ND	ND	ppbV	NC
Trichloroethene	1.22	1.15	ppbV	6
Trichlorofluoromethane	1.58	1.56	ppbV	1



Project Name: ADELAIDE HIGH SCHOOL  
 Project Number: 6196501.1009

**Lab Duplicate Analysis**  
 Batch Quality Control

Lab  
 Rep

Parameter	Native Sample	Duplicate Sample	Units	RPD
Volatile Organic Compounds in Air by SIM Associated sample(s): 01-09 QC Batch ID: WG328391-4 QC Sample: L0809679-04				
Vinyl chloride	ND	ND	ppbV	NC
Acrylonitrile	ND	ND	ppbV	NC
n-Butylbenzene	ND	ND	ppbV	NC
sec-Butylbenzene	ND	ND	ppbV	NC
Isopropylbenzene	ND	ND	ppbV	NC
p-Isopropyltoluene	ND	ND	ppbV	NC
Acetone	4.10	4.14	ppbV	1
2-Butanone	1.24	1.27	ppbV	2
4-Methyl-2-pentanone	ND	ND	ppbV	NC

Project Name: ADELAIDE HIGH SCHOOL

Lab Number: L0809683

Project Number: 6196501.1009

Report Date: 07/15/08

### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Cleaning Batch ID	Initial Pressure (In. Hg)	Pressure on Receipt (In. Hg)	Flow Out mL/min	Flow In mL/min	% RSD
L0809683-01	GYMNASIUM	0330	#90 AMB		-	-	78	79	1
L0809683-01	GYMNASIUM	474	2.7L Can	10808740	-29.6	-1.6	-	-	-
L0809683-02	CAFETERIA	0447	#90 SV		-	-	80	81	1
L0809683-02	CAFETERIA	225	2.7L Can	10808740	-29.7	-0.7	-	-	-
L0809683-03	KITCHEN STORAGE RM.	0301	#90 SV		-	-	78	78	0
L0809683-03	KITCHEN STORAGE RM	548	2.7L Can	10808740	-29.6	0.3	-	-	-
L0809683-04	ELEVATOR HALLWAY	0041	#90 AMB		-	-	76	80	5
L0809683-04	ELEVATOR HALLWAY	496	2.7L Can	10808740	-29.6	-1.0	-	-	-
L0809683-05	ROOM 145	0300	#90 AMB		-	-	79	80	1
L0809683-05	ROOM 145	220	2.7L Can	10808740	-29.7	-0.5	-	-	-
L0809683-06	ROOM 152	0074	#90 AMB		-	-	76	81	6
L0809683-06	ROOM 152	133	2.7L Can	10808740	-29.7	-0.1	-	-	-
L0809683-07	ROOM 118	407	2.7L Can	10808740	-29.5	0.4	-	-	-
L0809683-08	ROOM 110	0451	#90 AMB		-	-	76	72	5
L0809683-08	ROOM 110	197	2.7L Can	10808740	-29.7	-4.4	-	-	-
L0809683-09	AMBIENT OUTDOOR	467	2.7L Can	10808740	-29.6	-3.0	-	-	-



**Project Name:** ADELAIDE HIGH SCHOOL  
**Project Number:** 6196501.1009

**Lab Number:** L0809683  
**Report Date:** 07/15/08

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

#### Cooler Information

Cooler	Custody Seal
NA	Present/Intact

#### Container Information

Container ID	Container Type	Cooler	pH	Temp	Pres	Seal	Analysis
L0809683-01A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-02A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-03A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-04A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-05A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-06A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-07A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-08A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM
L0809683-09A	Canister - 2.7 Liter	NA	NA		NA	Absent	TO15-SIM

Project Name: ADELAIDE HIGH SCHOOL  
Project Number: 6196501.1009

Lab Number: L0809683  
Report Date: 07/15/08

## GLOSSARY

### Acronyms

- EPA - Environmental Protection Agency.  
LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.  
LCSD- Laboratory Control Sample Duplicate: Refer to LCS.  
MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.  
MSD - Matrix Spike Sample Duplicate: Refer to MS.  
NA - Not Applicable.  
NI - Not Ignitable.  
NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.  
ND - Not detected at the reported detection limit for the sample.  
RDL - Reported Detection Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.  
RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

### Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

### Data Qualifiers

The following data qualifiers have been identified for use under the CT DEP Reasonable Confidence Protocols.

- A - Spectra identified as "Aldol Condensation Product".  
B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte.  
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.  
J - Estimated value. The analyte was tentatively identified; the quantitation is an estimation. (Tentatively identified compounds only.)

### Standard Qualifiers

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

Report Format: Data Usability Report



**Project Name:** ADELAIDE HIGH SCHOOL  
**Project Number:** 6196501.1009

**Lab Number:** L0809683  
**Report Date:** 07/15/08

## REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Woods Hole Labs performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Woods Hole Labs shall be to re-perform the work at it's own expense. In no event shall Alpha Woods Hole Labs be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Woods Hole Labs.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



# ALPHA ANALYSIS CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048  
 TEL: 508-822-9300 FAX: 508-822-3288

AIR ANALYSIS PAGE 1 OF 1

### Client Information

Client: **EA Engineering**  
 Address: **2350 Post Rd**  
**Mansfield, RI**  
 Phone: **736-3440 (461)**  
 Fax: \_\_\_\_\_  
 Email: **mspeer@east.com**

### Project Information

Project Name: **Adelaide Ave H.S.**  
 Project Location: **Providence, RI**  
 Project #: **6196501.1009**  
 Project Manager: **Mark Spear**  
 ALPHA Quote #: \_\_\_\_\_  
 Turn-Around Time: \_\_\_\_\_

### Date Rec'd In Lab:

### Report Information - Data Deliverables

FAX  
 EMAIL (standard pdf report)  
 Additional Deliverables:  
 Report to: (if different than Project Manager)

ALPHA Job #: **10809683**

### Billing Information

Same as Client info PO #: **5239**

### ANALYSIS

Regulatory Requirements/Report Limits  
 State/Fed Program Criteria  
**CF Paper Proposal Residential TACs**

Other Project Specific Requirements/Comments: **Include results for samples listed on this chain only in lab report. Separate lab report for samples on other chains. Note new EA Project Mgr and email.**

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection				Sample Matrix	Sampler's Initials	Can Size	I.D. Can	I.D. Flow Controller	ANALYSIS		Sample Comments (i.e. PID)
		Date	Start Time	End Time	Initial Vacuum						Final Vacuum	TO-14A by TO-15	
9683-01	Gymnasium	6/27	1606	1036	-26	-3	AA	DA	27L	474	0330	X	ED = 0.47 ppm
-02	Cafeteria		1005	1035	-30	-2				225	0447	X	ND
-03	Kitchen Storage Rm		1210	1240	-30	-1				548	0301	X	0.138 ppm
-04	Elevator Hallway		1007	1037	-30	-4				496	0041	X	ND
-05	Room 145		1020	1050	-30	-2				220	0300	X	0.164 ppm
-06	Room 152		1021	1051	-30	-2				133	0074	X	ND
-07	Room 118		1035	1105	-28	-1				407		X	ND
-08	Room 110		1036	1106	-30	-2				197	0451	X	ND
-09	Ambient Outdoor		1352	-	-27	-1							0.1 ppm

### \*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

### Container Type

CS

### Relinquished By:

*[Signature]*

### Date/Time

6/27/08 12:30

### Received By:

*[Signature]* Nancy A. Roth

### Date/Time:

6/27/08 17:30

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

# Attachment C

Proposed Amendments to the O&M Program  
EA, 4 March 2008



EA Engineering, Science, and Technology, Inc.

Airport Professional Park  
2350 Post Road  
Warwick, Rhode Island 02886  
Telephone: 401-736-3440  
Fax: 401-736-3423  
www.eaest.com

4 March 2008

Mr. Joseph T. Martella II, Senior Engineer  
RIDEM - Office of Waste Management  
Site Remediation Program  
235 Promenade Street  
Providence, Rhode Island 02908

RE: Proposed Amendments to the O&M Program at the Adelaide Avenue School  
333 Adelaide Avenue, Providence, Rhode Island  
Case No. 2005-029  
EA Project No. 61965.01

Dear Mr. Martella:

On behalf of the Providence Department of Public Property (City), EA Engineering, Science, and Technology, Inc. (EA) is requesting that your office review and approve amendments to the sampling and monitoring program stipulated by the Amended Order of Approval (Amended OA) currently being implemented at the Adelaide Avenue School Site (the Site).

During the one year period between March 2007 and February 2008, approximately 200 air and soil vapor samples have been collected, and over 10,000 sampling and monitoring data points have been evaluated. The comprehensive overall body of data collected to date clearly demonstrates that the sub-slab depressurization (SSD) system operating at the site has eliminated the soil vapor intrusion pathway, and that neither soil vapor intrusion of volatile organic compounds (VOCs) into the school, nor the accumulation of methane beneath or within the school is occurring. The reliability of the sub-slab depressurization (SSD) system is evidenced by the fact that no SSD system malfunctions or equipment failures have occurred throughout the first year of SSD system operation. This high level of reliability and performance is expected to continue over time, and ongoing continuous monitoring of the SSD system via the existing alarm system will ensure that redundancies remain in place to ensure prompt notifications and responses to any interruptions in SSD system operation. Based on the overwhelming supporting data and SSD system effectiveness and reliability, continuation of the current monthly sampling/monitoring frequency of site parameters is excessive, disproportionately costly to the City, and not necessary to demonstrate ongoing safety to building occupants.

The proposed amendments, in conjunction with all other elements of the Amended OA, collectively comprise an O&M Program that meets or exceeds all state guidance policies reviewed by EA regarding performing O&M at sites where SSD Systems have been installed, and will therefore effectively provide the appropriate amount of data necessary to continue to demonstrate the high level of site safety with respect to potential soil vapor intrusion. A copy of





all sampling data collected to date and a figure indicating the first floor school building layout are attached for reference. The requested O&M Program amendments are presented below:

- Revise the indoor air sampling frequency to quarterly. No changes to the number of indoor air samples is proposed, however, one change regarding the sampling locations is requested. With respect to the Kitchen Storage Room indoor sampling location, EA has found that the door to the outside and the door to the main kitchen area are frequently open to allow for daily food/supply deliveries and routine kitchen operations. These factors compromise the ability to collect representative indoor air quality data within the Kitchen Storage Room. Therefore, EA requests that a substitute and more representative indoor air sampling location be allowed. The Main Kitchen Area was considered due to its proximity to the Kitchen Storage Room, however, this location is not recommended since it is "open" to the cafeteria which is already included as a sampling location, and as explained previously, is usually open to outside air via the external door in the adjacent storage room. Instead, EA proposes to replace the Kitchen Storage Room sampling location with a new location in the Teacher's Lounge/Workroom where an "interior" sub-slab monitoring/sampling location (IMP-3) was installed in August 2007. A corresponding indoor sampling location is a reasonable location since the Teacher's Lounge/Workroom is a closed room where the teachers gather. This data will improve the overall effectiveness of the O&M program since we would be able to correlate sub-slab and indoor air from this part of the school.
- Revise the sub-slab soil vapor sampling frequency to quarterly. No changes are proposed to the number of samples or to the practice of rotating interior and perimeter sub-slab sampling locations (i.e., 2 interior and 2 perimeter sub-slab locations per sampling event) as requested by RIDEM last year.
- Revise the current ambient outdoor air sampling frequency to quarterly to coincide with proposed indoor and sub-slab sampling frequencies.
- Revise all field inspection and monitoring currently performed on a monthly basis to quarterly to coincide with proposed indoor and sub-slab sampling frequencies.

No changes are proposed to the current annual schedule of roof-top fan effluent sampling, to the continuous monitoring frequency for SSD system operation and indoor methane levels, to any of the quarterly summary reporting requirements, or to any of the Amended OA provisions regarding emergency response, document repository maintenance, and verbal/written RIDEM notifications. In order to address RIDEM's concern that an Indoor Air Action Level exceedence resultant from soil vapor intrusion may not automatically trigger a timely increase in sampling frequency, EA proposes to include language in the Amended Order that states:

- In the event that an Indoor Air Action Level exceedence demonstrated to be resultant from soil vapor intrusion occurs, then the City shall collect additional monthly samples from the indoor area and the corresponding closest sub-slab sampling location until such time that the exceeding VOC(s) return to levels below the applicable Action Level for a period of three consecutive months.



We trust that this letter and the summary correspondence and data previously submitted provide the Department with the necessary supporting documentation to approve these proposed changes to the O&M Program. If you need more information, or if the Department disagrees with the proposed changes, please provide written justification for not approving this request so that the City may respond accordingly. Thank you for your timely attention.

Sincerely,

EA ENGINEERING, SCIENCE,  
AND TECHNOLOGY, INC.

A handwritten signature in black ink that reads "Peter M. Grivers". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Peter M. Grivers, P.E., LSP  
Project Manager

#### Attachments

cc: A. Sepe, Providence Dept. of Public Property  
J. Boehnert, Partridge, Snow, & Hahn  
T. Gray, RIDEM Bureau of Env. Protection  
L. Hellested, RIDEM OWM  
R. Dorr, Neighborhood Resident  
Principal Torchon, Adelaide High School  
J. Pichardo, Senator  
M. Murphy, MacTec  
Knight Memorial Library Repository  
T. Deller, Prov. Redevelopment Agency  
J. Ryan, Partridge, Snow, & Hahn  
J. Langlois, RIDEM Legal Services  
K. Owens, RIDEM OWM  
S. Fischbach, RI Legal Services  
T. Slater, Representative  
D. Heislein, MacTec  
G. Simpson, Textron