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EA Engineering, Science, and Technology, Inc.

8 August 2012

Mr. Joseph T. Martella II, Senior Engineer
Site Remediation Program
Office of Waste Management
RI Department of Environmental Management
235 Promenade Street
Providence, RI 02908

*RE: Quarterly O&M Status Report No. 19
Alvarez High School, 333 Adelaide Avenue, Providence, Rhode Island
Case No. 2005-029
EA Project No. 14687.01.0002*

Dear Mr. Martella:

On behalf of the City of Providence School Department (City), EA Engineering, Science, and Technology, Inc. (EA) is providing this Quarterly Operations and Maintenance (O&M) Status Report in accordance with Provision 6(f) of the Order of Approval and amendments (Amended OA) for the referenced Alvarez High School site (the Site, formerly Adelaide Avenue High School).

This O&M Report summarizes recently-completed Site activities related to compliance sublab vapor and indoor air sampling for the period from March through May 2012.

If you have any questions or require additional information, please contact me at (401) 736-3440, Ext. 203.

Sincerely,

EA ENGINEERING, SCIENCE,
AND TECHNOLOGY, INC.

Frank B. Postma, LSP, LEP, PG
Project Manager

cc: C. Jones, Prov. Dept. of Public Schools
Director, Prov. Redevelopment Agency
J. Padwa, City of Prov. Law Department
R. Dorr, Neighborhood Resident
Rep. Scott Slater
Knight Memorial Library Repository

A. Sepe, Prov. Dept. of Public Property
S. Fischbach, RI Legal Services
J. Ryan, Partridge, Snow, & Hahn
J. Pichardo, Senator
Principal, Alvarez High School



Quarterly O&M Status Report No. 19

Summarizing Subslab Depressurization and Indoor Air Monitoring and Sampling Activities

Alvarez High School Site (Formerly Adelaide Avenue High School) Providence, Rhode Island

Prepared for

City of Providence School Department
797 Westminster Street
Providence, Rhode Island 02903

Prepared by

EA Engineering, Science, and Technology, Inc.
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(401) 736-3440

EA Project No. 14687.01.0002
August 2012

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1. INTRODUCTION AND BACKGROUND

On behalf of the City of Providence School Department (the City), EA Engineering, Science, and Technology, Inc. (EA) has prepared this Quarterly Operations and Maintenance (O&M) Status Report No. 19 for the Parcel B area of the former Gorham Manufacturing site in Providence, Rhode Island, formerly referred to as Adelaide Avenue High School and now referred to as Alvarez High School site (the Site). A Site Location Map is provided as Figure 1. This report has been prepared to satisfy provision 6(f) of the Rhode Island Department of Environmental Management (RIDEM) Order of Approval (OA) issued in June 2006, as amended in February 2007, July 2007, and July 2009. For the purposes of this report, the original and the amended OA will collectively be referred to as the Amended OA.

The Amended OA specifies the details of the approved remedy for the Site including, but not limited to, the installation of a subslab depressurization (SSD) system, installation of a continuous indoor air methane monitoring system, and implementation of an associated periodic monitoring and sampling program. In August 2007, the RIDEM-approved remedy for the Site was completed and a Remedial Action Closure Report (RACR) was submitted to RIDEM. In July 2009, the periodic indoor air and subslab vapor sampling schedule was reduced to quarterly sampling from previously required monthly sampling.

This report summarizes the O&M, monitoring, and sampling activities completed at the Site for the 3-month period from March through May 2012 (Quarterly Reporting Period No. 19) and also includes an overall evaluation of volatile organic compound (VOC) concentrations within soil gas as they pertain to a potential rebound effect at the Site. Please refer to Quarterly O&M Status Reports No. 1 through No. 18 for information regarding monitoring and sampling at the Site during the previous quarters. The RACR and previously-submitted monthly correspondence contain details regarding the results of the monitoring and sampling program for the period between March and August 2007.

2. SUMMARY OF SSD SYSTEM AND INDOOR METHANE MONITORING SYSTEM PERFORMANCE

2.1 SSD SYSTEM

The following SSD System performance parameters were inspected and/or monitored at the frequencies indicated below in accordance with the Amended OA to evaluate system performance:

- Monthly subslab vacuum monitoring at 11 monitoring locations, as illustrated on the As-Built Subslab Monitoring and Sampling Plan provided as Figure 3.
- Monthly inspections and monitoring of rooftop fans (air velocity and vacuum) to verify proper operation.
- Continuous electronic monitoring (with automatic alarm notification via audible signal and phone notification) at each of three SSD System extraction fans to ensure continuous operation.

All vacuum measurements taken at each interior and perimeter subslab monitoring/sampling locations were between -0.01 and -0.30 in. of water column. These measurements confirm that continuous negative pressure has been maintained beneath the building slab.

Inspections and monitoring of all other system equipment revealed proper system operation, and no equipment shutdowns, failures, alarms, or interruptions of any type occurred during this reporting period. The continuous, verified zone of negative pressure beneath the school's concrete slab, along with the monthly inspections and continuous monitoring of both the indoor air monitoring system and the subslab depressurization system, confirms proper operation of the SSD System during this reporting period.

Copies of O&M field forms summarizing SSD System monitoring data collected during this reporting period are provided in Appendix A.

2.2 INDOOR METHANE MONITORING SYSTEM

Indoor methane concentrations were continuously monitored by an indoor methane monitoring system (equipped with automatic alarm notification via audible signal and phone notification) within the school at eight RIDEM-approved locations (refer to the Indoor Air Sampling and Methane Monitoring System Diagram provided as Figure 2) during this reporting period. In addition, the methane monitoring system was inspected and filters were replaced on a regular basis. The indoor methane monitoring system operated continuously throughout this reporting period with no equipment shutdowns, failures, alarms, or interruptions of any type, and no methane was detected during any of the supplemental monthly indoor methane monitoring events.

On 13 April 2012, filter discs at each of the eight continuous methane sensors were replaced in accordance with a quarterly frequency schedule. The next filter replacement is scheduled for July 2012.

No other maintenance or repairs to the methane monitoring system or components were performed or required during this reporting period.

2.3 AMBIENT OUTDOOR AND INDOOR AIR SAMPLING

One outdoor ambient air sample and eight indoor air samples within the school at RIDEM-approved sampling locations were collected and analyzed for VOCs via Method TO-15 SIM (Selective Ion Monitoring) on 13 April 2012. The outdoor ambient sample was collected from the northeast side of the school (upwind) to ensure that system emission was not captured in the sample. Sampling locations are shown on the Indoor Air Sampling and Methane Monitoring System Diagram provided as Figure 2. The indoor air sampling results were compared to the State of Connecticut's Draft Proposed Indoor Residential Targeted Air Concentrations (CT RTACs) in accordance with the Amended OA. The laboratory method reporting limits (MRLs) for several VOCs reported via TO-15 analysis, even though analyzed via the SIM procedure, were greater than the respective CT RTACs. In accordance with the Amended OA, EA contacted the laboratory prior to sample analysis to verify that the RLs provided would be the lowest currently achievable limits. An MRL verification letter from Con-Test Analytical Laboratory is provided in Appendix E. A data summary table and copies of the laboratory data reports associated with this sampling event are provided in Appendix B.

The compound 1,2-dichloroethane was detected in Room 152 at a concentration ($0.075 \mu\text{g}/\text{m}^3$) exceeding the CT RTAC ($0.07 \mu\text{g}/\text{m}^3$). This compound is not a contaminant of concern at the site. Previous detection limits were generally greater than the CT RTAC. The concentration does not exceed the Interim RIDEM-Approved Action Level for the compound ($0.08 \mu\text{g}/\text{m}^3$). 1,2-Dichloroethane was not detected above the MRL of $0.2 \mu\text{g}/\text{m}^3$ in the subslab sampling locations.

On 2 July 2012, EA resampled Room 152, Ambient Outdoor Air, and IMP-2 (the subslab sampling point directly below Room 152) to confirm the exceedance of 1,2-dichloroethane. The analyte was not detected above the MRL in any of the 2 July 2012 samples ($0.061 \mu\text{g}/\text{m}^3$ for ambient air and $1.0 \mu\text{g}/\text{m}^3$ for subslab air). Ambient outdoor air and subslab vapor results indicate subslab vapor intrusion is not occurring and further investigation into this detection is not warranted.

Methylene chloride was detected within four indoor air samples and the ambient outdoor sample at concentrations that exceed the CT RTAC ($3.0 \mu\text{g}/\text{m}^3$). Methylene chloride was detected in the Kitchen Storage Room, Cafeteria, Gymnasium, and Room 152 at concentrations ranging from $3.1 \mu\text{g}/\text{m}^3$ to $50.0 \mu\text{g}/\text{m}^3$. Additionally, methylene chloride was detected in the ambient outdoor sample at a concentration of $53.0 \mu\text{g}/\text{m}^3$. Methylene chloride is not a contaminant of concern at the site and is a laboratory contaminant that has been detected in indoor air samples sporadically.

Methylene chloride was not detected in any subslab samples collected concurrently as the indoor samples. The ambient outdoor sample exceedance verifies that methylene chloride is not related to subsurface impacts. Therefore, subslab vapor intrusion is not occurring and further investigation into this detection is not warranted.

Carbon tetrachloride, a documented background ambient compound present at the Site, has consistently been detected in ambient outdoor air and inside the school during every sampling event completed at the Site at concentrations ranging between 0.19 and 0.77 $\mu\text{g}/\text{m}^3$ (the CT RTAC is 0.5 $\mu\text{g}/\text{m}^3$). Similarly, during this reporting period the ambient outdoor and indoor air concentrations of carbon tetrachloride ranged between 0.30 and 0.49 $\mu\text{g}/\text{m}^3$. Discussions and guidance provided by the Rhode Island Department of Health, RIDEM Office of Waste Management, and RIDEM Office of Air Resources resulted in an understanding that these carbon tetrachloride results do not constitute Indoor Air Action Level exceedances for the Site since they are consistent with documented background concentrations.

All other compounds analyzed were below the applicable CT RTACs for all samples collected on 13 April 2012.

2.4 SUBSLAB VAPOR SAMPLING AND EVALUATION OF POTENTIAL VOC REBOUND EFFECT

A total of 11 RIDEM-approved subslab sampling locations are installed at the Site. Six subslab vapor samples were collected in accordance with a RIDEM-approved (Amended OA) rotating sampling schedule and analyzed for VOCs via Method TO-15 SIM on 13 April 2012 in accordance with the Amended OA. The subslab data is summarized in Appendix C, along with copies of the laboratory data reports associated with these sampling events.

The subslab data has been evaluated and there is no evidence of increasing VOCs (i.e., VOC rebound) beneath the school in accordance with the Amended OA.

2.5 SUMMARY OF ROOFTOP VOC EMISSIONS

The Amended OA requires that rooftop VOC sampling be completed on an annual basis. The latest rooftop VOC sampling event was completed on 26 July 2011 and is summarized in Appendix D. No exceedances of the RIDEM Air Pollution Control Permit Applicability Thresholds for hourly, daily, or yearly emissions were detected. The 2012 annual rooftop emission VOC sampling event is scheduled for July 2012.

Previous rooftop emission sampling rounds conducted in March 2007 (immediately after SSD system startup), June 2007, June 2008, September 2009, and July 2010 indicated compliance with all Air Pollution Control Permit Applicability Thresholds. In general, the VOC concentrations in the rooftop emission associated with the July 2011 sampling round indicate continuance of the decreasing trend of VOC concentrations in subsurface soils and do not exceed the Air Pollution Control Permit Applicability Thresholds. Tabulation of the data and the rooftop sampling analytical report is provided as Appendix D.

2.6 CONCLUSIONS

The following conclusions are made based upon the completed inspections, monitoring, and sampling performed during this reporting period:

- The consistent negative pressure maintained below the floor slab indicates that soil vapor intrusion into the Alvarez High School is not occurring.
- Subslab vapor rebound is not occurring at the school, based on analytical data from this sampling event.
- The continuous operation of the SSD System, with no equipment malfunctions or alarm conditions, and confirmation of continuous subslab vacuum beneath the school illustrates ongoing, effective operation of the SSD System. No soil vapor intrusion pathway exists at the school while the SSD System is operational.
- No SSD System modifications or other actions to address current site conditions are warranted or proposed at this time.
- The compound 1,2-dichloroethane was detected in Room 152 at a concentration exceeding the CT RTAC. This compound is not a contaminant of concern at the site. On 2 July 2012, EA resampled Room 152, Ambient Outdoor Air, and IMP-2 (the subslab sampling point directly below Room 152) to confirm the exceedance of 1,2-dichloroethane. The analyte was not detected above the MRL in any of the 2 July 2012 samples. Ambient outdoor air and subslab vapor results indicate subslab vapor intrusion is not occurring and further investigation into this detection is not warranted.
- Methylene chloride was detected within four indoor air samples and the ambient outdoor sample at concentrations that exceed the CT RTAC ($3.0 \mu\text{g}/\text{m}^3$). Methylene chloride is not a contaminant of concern at the site and is a laboratory contaminant that has been detected in indoor air samples sporadically. The ambient outdoor sample exceedance verifies that methylene chloride is not related to subsurface impacts. Therefore, subslab vapor intrusion is not occurring and further investigation into this detection is not warranted.
- Carbon tetrachloride, a documented background ambient compound present at the Site, has consistently been detected in ambient outdoor air and inside the school during every sampling event completed at the Site at concentrations ranging between 0.19 and $0.77 \mu\text{g}/\text{m}^3$. Discussions and guidance provided by the Rhode Island Department of Health, RIDEM Office of Waste Management, and RIDEM Office of Air Resources resulted in an understanding that these carbon tetrachloride results do not constitute Indoor Air Action Level exceedances for the Site since they are consistent with documented background concentrations.

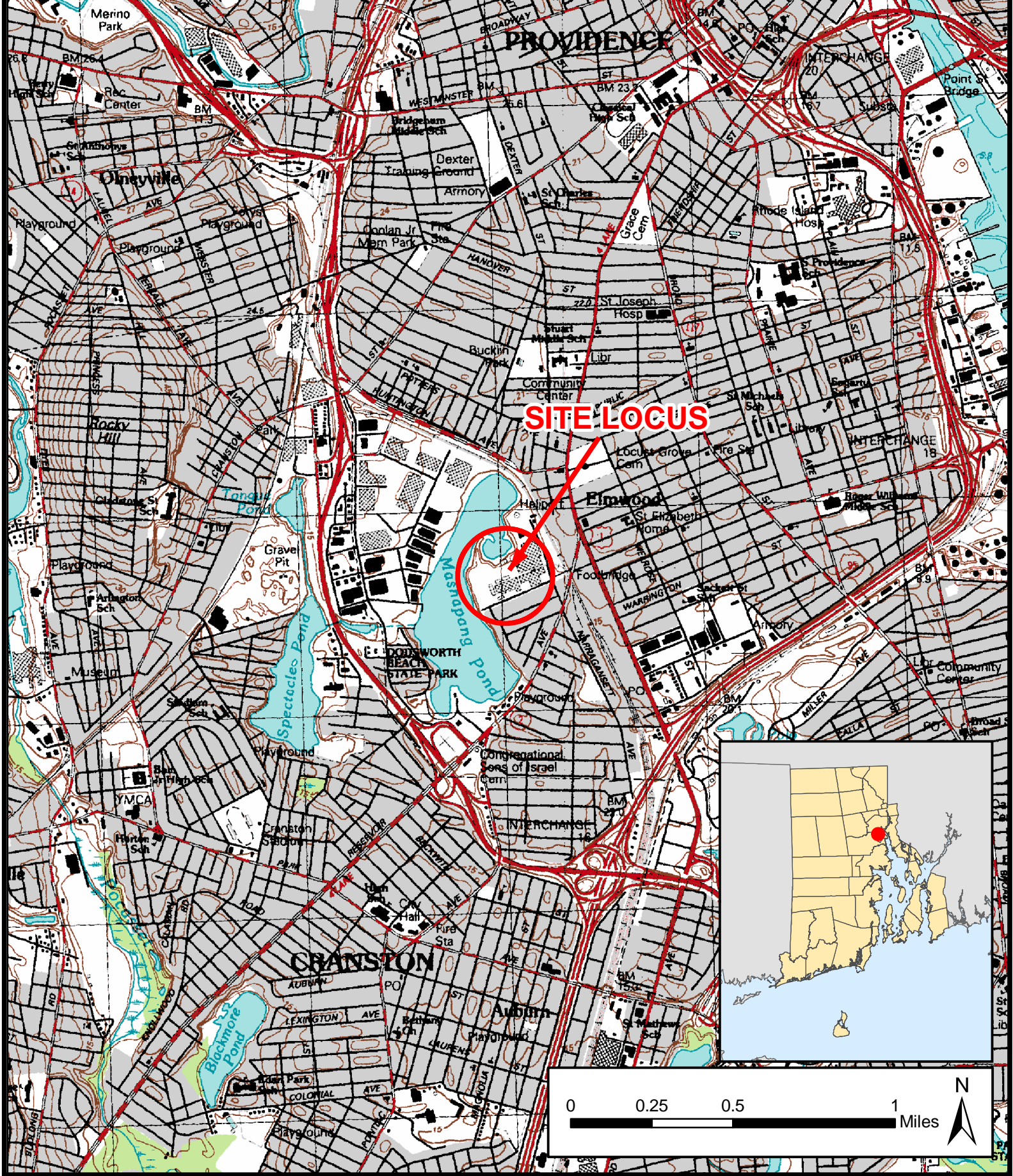
3. FUTURE ACTIVITIES AND NEXT QUARTERLY SUMMARY REPORT

The following activities will be completed in accordance with the Amended OA during the next quarterly status reporting period ending 31 August 2012:

- Continuous monitoring of the operational status of the three rooftop fans;
- Collection of rooftop emission VOC sampling from the three rooftop fans;
- Monthly site inspections and monitoring using a photoionization detector with part-per-billion sensitivity; and
- Collection of air samples from eight indoor locations, one ambient location, and six subslab monitoring points in July 2012.

These activities will be summarized in the next status report (Quarterly Status Report No. 20), expected to be submitted by the end of September 2012.

FIGURES



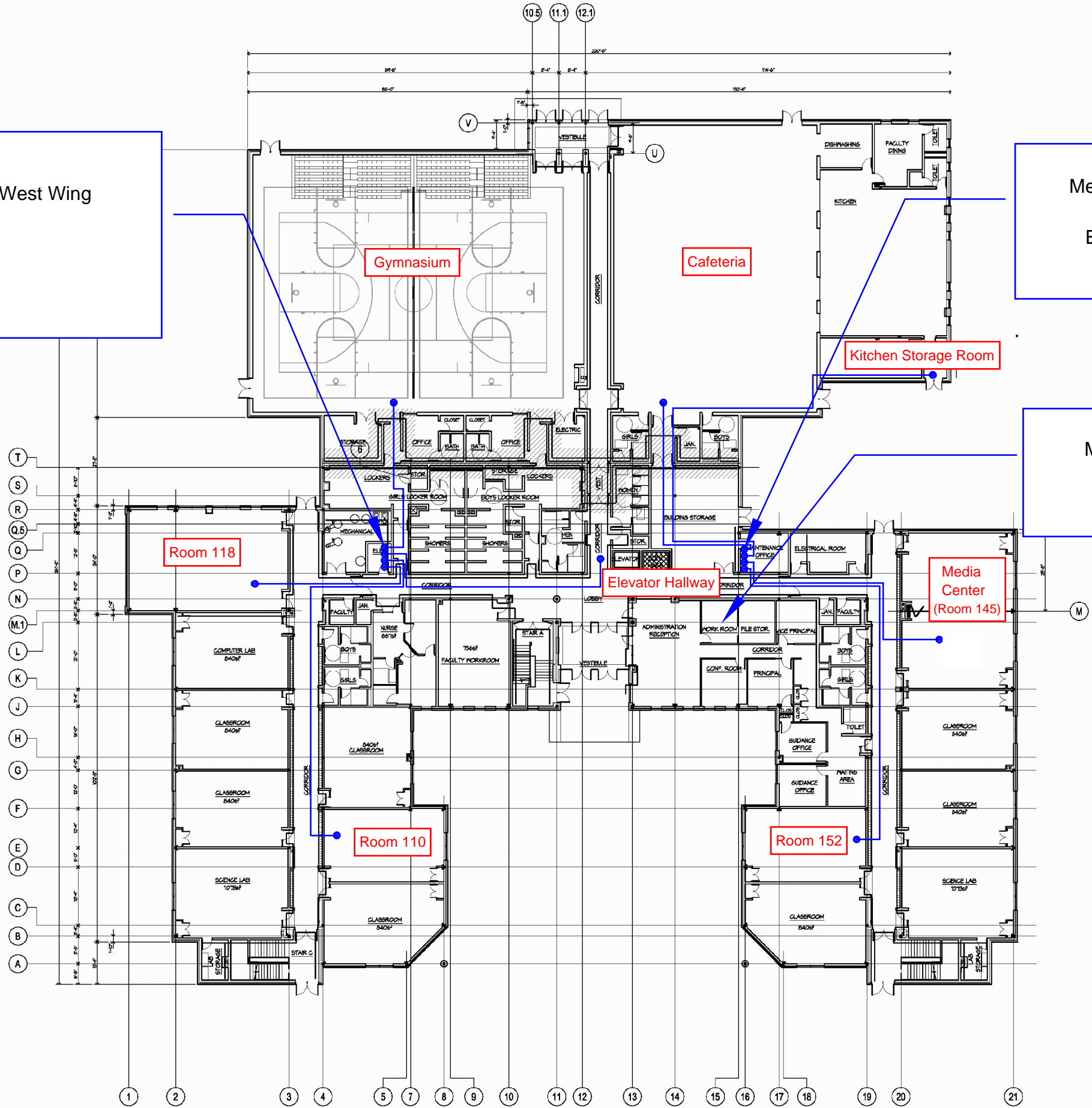
ALVAREZ HIGH SCHOOL
 333 ADELAIDE AVENUE
 PROVIDENCE, RHODE ISLAND

FIGURE 1
 SITE LOCUS

PROJECT MGR:	DESIGNED BY:	CREATED BY:	CHECKED BY:	SCALE:	DATE:	PROJECT NO:	FILE NO:
FP	PT	PT	FP	1:24,000	FEBRUARY 2010	14687.01	SITE_LOCUS.MXD

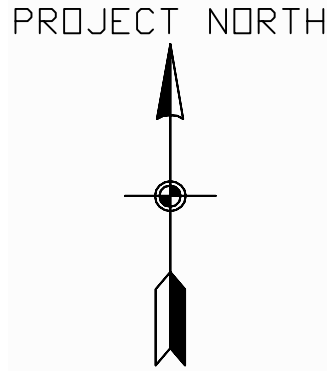
Methane Sensor Location in West Wing
Electrical Room Area

Methane Sensor Location in East Wing
Electrical Room/Maintenance Office Area.



Methane System Controller Location
Administration Work Room

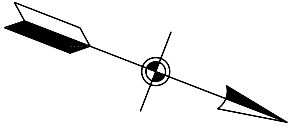
NOTE: NOT TO SCALE



DESIGNED BY PMG	DRAWN BY PMG	DATE 4-3-07	PROJECT NO. 61965.01	FILE NAME Gorham Layout
CHECKED BY PMG	PROJECT MGR. PMG	SCALE NTS	DRAWING NO. -	FIGURE N/A

INDOOR AIR SAMPLING AND METHANE MONITORING
SYSTEM DIAGRAM - GORHAM HIGH SCHOOL
PROVIDENCE, RHODE ISLAND

QUARTERLY STATUS REPORT
FIGURE 2



LEGEND :

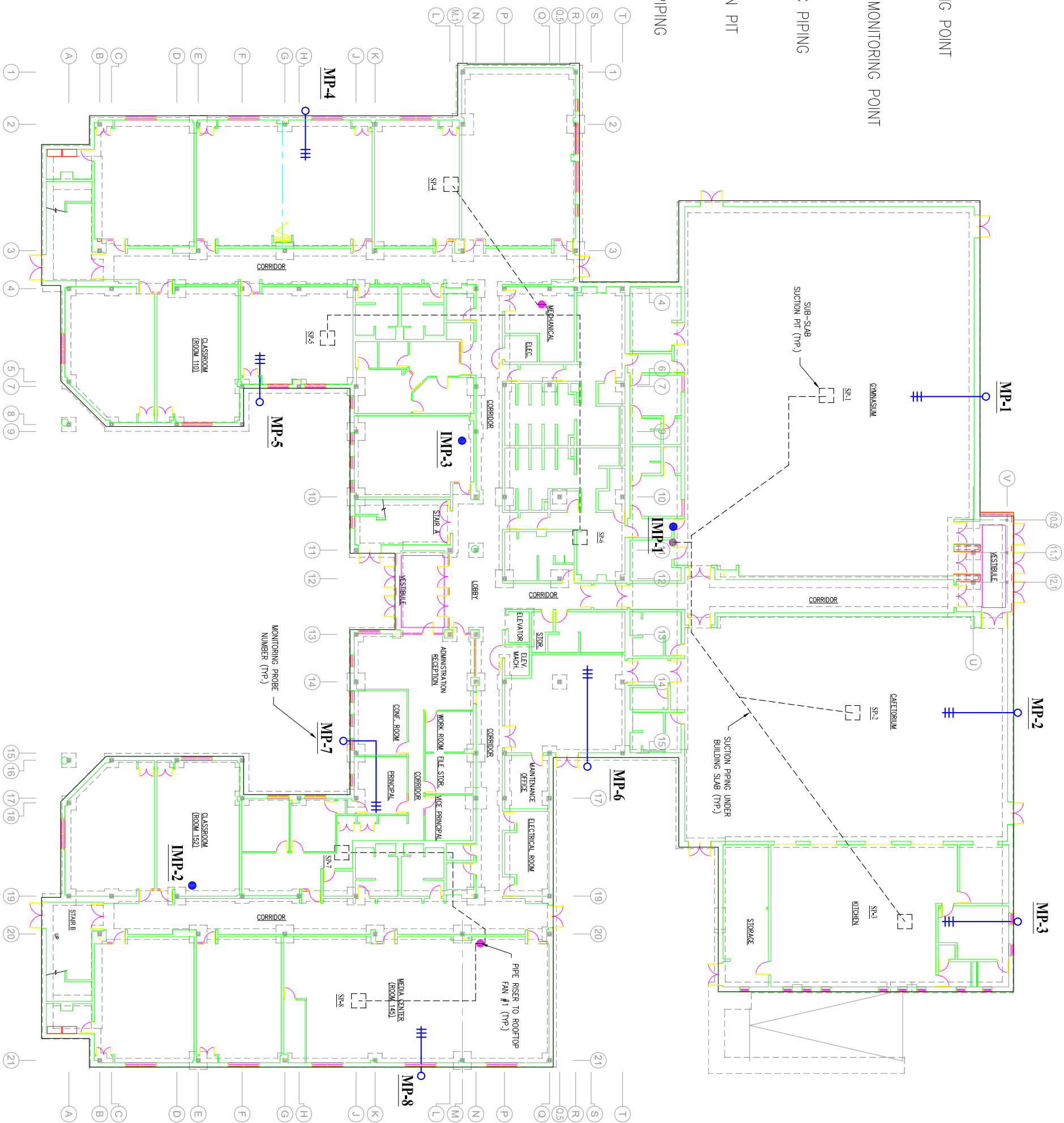
MP-1 SUB-SLAB MONITORING POINT

IMP-1 INTERIOR SUB-SLAB MONITORING POINT

—#— SLOTTED 1 INCH PVC PIPING

SP-4
[] SSD SYSTEM SUCTION PIT

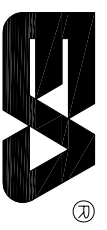
----- SOLID 4 INCH PVC PIPING



DESIGNED BY	PMG	DRAWN BY	DMA	DATE	AUG 27 2007	PROJECT NO.	14687.01	FILE NAME	FIG 3
CHECKED BY	PMG	PROJECT MGR.	PMG	SCALE	NTS	DRAWING NO.	N/A	FIGURE	3

AS-BUILT
SUB SLAB MONITORING AND SAMPLING LOCATIONS
ALVAREZ HIGH SCHOOL
PROVIDENCE, RHODE ISLAND

QUARTERLY STATUS REPORT
FIGURE 3



APPENDIX A

O&M Field Forms

Alvarez High School - SSD & Interior Methane Monitoring System O&M Form

Date of O&M: 3/23/2012

Performed by: P. Theroux

PID/Methane Calibration? US Environmental (yes/no)

Date of last Methane Sensor Filter Replacement: 1/23/12

Replaced this O&M Visit? No (yes/no)

General Status of SSD System: online and operational

General Status of Methane Monitoring System: online and operational

Eng. Cap/Fence Inspection Performed/Notes: observed in good condition

Monitoring/ Sampling Location	Sub-slab or gauge vacuum	Air Velocity (fpm)	VOC Monitoring	Methane Monitoring			Air/Vapor Sample Collection						Comments/Notes (Ambient weather conditions, status of HVAC, possible monitoring/sampling interferences, etc continue on separate sheet if needed)
			PID (ppb)	Indoor Sensor (ppm)	(% Gas)	(% LEL)*	Summa Can ID	Controller ID	Start Time	Start Vac (inches Hg)	End Time	End Vac (inches Hg)	
Gymnasium	NA	NA	124	0	0	0	--	--	--	--	--	--	
Cafeteria	NA	NA	0	0	0	0	--	--	--	--	--	--	
Kitchen Storage Room	NA	NA	0	0	0	0	--	--	--	--	--	--	
Elevator Hallway	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 145	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 152	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 118	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 110	NA	NA	0	0	0	0	--	--	--	--	--	--	
MP-1	-0.08	NA	1194	NA	0	0	--	--	--	--	--	--	
MP-2	-0.08	NA	724	NA	0	0	--	--	--	--	--	--	
MP-3	-0.05	NA	1618	NA	0	0	--	--	--	--	--	--	
MP-4	-0.05	NA	280	NA	0	0	--	--	--	--	--	--	
MP-5	-0.07	NA	518	NA	0	0	--	--	--	--	--	--	
MP-6	-0.05	NA	4194	NA	0	0	--	--	--	--	--	--	
MP-7	-0.04	NA	275	NA	0	0	--	--	--	--	--	--	
MP-8	-0.08	NA	477	NA	0	0	--	--	--	--	--	--	
IMP-1	-0.04	NA	1423	NA	0	0	--	--	--	--	--	--	
IMP-2	-0.02	NA	1302	NA	0	0	--	--	--	--	--	--	
IMP-3	-0.01	NA	942	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 1	-2.0	2901	498	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 2	-2.0	2121	664	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 3	-2.3	2334	609	NA	0	0	--	--	--	--	--	--	
Ambient Outdoor Air	NA	NA	0	NA	0	0	--	--	--	--	--	--	

NA: not applicable.

NM: not monitored on this date.

NS : not sampled on this date.

* RIDEM Action Level for methane %LEL beneath the building is 10% and within the building is 1%. If these methane levels are exceeded, immediately notify EA Project Manager to initiate response protocol.

Alvarez High School - SSD & Interior Methane Monitoring System O&M Form

Date of O&M: 4/13/2012

Performed by: P. Theroux & M. Travers

PID/Methane Calibration? US Environmental (yes/no)

Date of last Methane Sensor Filter Replacement: 1/23/2012 - 4/13/12

Replaced this O&M Visit? Yes (yes/no)

General Status of SSD System: online

General Status of Methane Monitoring System: online

Eng. Cap/Fence Inspection Performed/Notes: observed in good condition

Monitoring/ Sampling Location	Sub-slab or gauge vacuum	Air Velocity (fpm)	VOC Monitoring	Methane Monitoring			Air/Vapor Sample Collection					Comments/Notes (Ambient weather conditions, status of HVAC, possible monitoring/sampling interferences, etc continue on separate sheet if needed)	
			PID (ppb)	Indoor Sensor (ppm)	(% Gas)	(% LEL)*	Summa Can ID	Controller ID	Start Time	Start Vac (inches Hg)	End Time		End Vac (inches Hg)
Gymnasium	NA	NA	0	0	0	0	1304	4075	732	-29	802	-7	
Cafeteria	NA	NA	0	0	0	0	1878	4042	733	-30	803	-11	
Kitchen Storage Room	NA	NA	0	0	0	0	1301	4094	735	-29.5	805	-6	
Elevator Hallway	NA	NA	0	0	0	0	1509	4074	737	-29	810	0	Sample was closed and moved by staff at Alvarez at an unknown time prior to scheduled pickup. Sample duration
Room 145	NA	NA	0	0	0	0	1504	4107	743	-30.5	814	-1	
Room 152	NA	NA	0	0	0	0	1840	4081	744	-23	815	-2	
Room 118	NA	NA	0	0	0	0	1064	4039	746	-30	817	-1	
Room 110	NA	NA	0	0	0	0	1075	4078	748	-30	818	-6	
MP-1	-0.07	NA	1874	NA	0	0	--	--	--	--	--	--	
MP-2	-0.10	NA	3789	NA	0	0	1735	4071	948	-30	1018	-9	
MP-3	-0.08	NA	2072	NA	0	0	--	--	--	--	--	--	
MP-4	-0.10	NA	1804	NA	0	0	--	--	--	--	--	--	
MP-5	-0.13	NA	2279	NA	0	0	1853	4069	1009	-29	1037	-6	
MP-6	-0.12	NA	2416	NA	0	0	--	--	--	--	--	--	
MP-7	-0.375	NA	2891	NA	0	0	1083	4076	1004	-29.5	1034	-3	
MP-8	-0.16	NA	4118	NA	0	0	1859	4068	956	-30	1025	-6	
IMP-1	-0.01	NA	5644	NA	0	0	1664	4077	836	-29	906	-3	
IMP-2	-0.01	NA	7422	NA	0	0	--	--	--	--	--	--	
IMP-3	-0.01	NA	5413	NA	0	0	1130	4070	832	-30	901	0	
Roof-Top Fan 1	-2.0	2950	3453	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 2	-2.0	2216	2588	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 3	-2.4	2488	2702	NA	0	0	--	--	--	--	--	--	
Ambient Outdoor Air	NA	NA	-	NA	0	0	1114	4080	945	0?	1012	0?	gage not functioning

NA: not applicable.

NM: not monitored on this date.

NS : not sampled on this date.

* RIDEM Action Level for methane %LEL beneath the building is 10% and within the building is 1%. If these methane levels are exceeded, immediately notify EA Project Manager to initiate response protocol.

Alvarez High School - SSD & Interior Methane Monitoring System O&M Form

Date of O&M: 5/11/2012

Performed by: P. Theroux

PID/Methane Calibration? US Environmental (yes/no)

Date of last Methane Sensor Filter Replacement: 4/13/12

Replaced this O&M Visit? No (yes/no)

General Status of SSD System: online and operational

General Status of Methane Monitoring System: online and operational

Eng. Cap/Fence Inspection Performed/Notes: observed in good condition

Monitoring/ Sampling Location	Sub-slab or gauge vacuum	Air Velocity (fpm)	VOC Monitoring	Methane Monitoring			Air/Vapor Sample Collection						Comments/Notes (Ambient weather conditions, status of HVAC, possible monitoring/sampling interferences, etc continue on separate sheet if needed)
			PID (ppb)	Indoor Sensor (ppm)	(% Gas)	(% LEL)*	Summa Can ID	Controller ID	Start Time	Start Vac (inches Hg)	End Time	End Vac (inches Hg)	
Gymnasium	NA	NA	0	0	0	0	--	--	--	--	--	--	
Cafeteria	NA	NA	0	0	0	0	--	--	--	--	--	--	
Kitchen Storage Room	NA	NA	0	0	0	0	--	--	--	--	--	--	
Elevator Hallway	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 145	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 152	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 118	NA	NA	0	0	0	0	--	--	--	--	--	--	
Room 110	NA	NA	0	0	0	0	--	--	--	--	--	--	
MP-1	-0.20	NA	499	NA	0	0	--	--	--	--	--	--	
MP-2	-0.23	NA	593	NA	0	0	--	--	--	--	--	--	
MP-3	-0.17	NA	556	NA	0	0	--	--	--	--	--	--	
MP-4	-0.16	NA	34.8 ppm	NA	0	0	--	--	--	--	--	--	
MP-5	-0.17	NA	451	NA	0	0	--	--	--	--	--	--	
MP-6	-0.18	NA	623	NA	0	0	--	--	--	--	--	--	
MP-7	-0.30	NA	730	NA	0	0	--	--	--	--	--	--	
MP-8	-0.20	NA	584	NA	0	0	--	--	--	--	--	--	
IMP-1	-0.05	NA	1256	NA	0	0	--	--	--	--	--	--	
IMP-2	-0.02	NA	1760	NA	0	0	--	--	--	--	--	--	
IMP-3	-0.01	NA	906	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 1	-2.0	2703	598	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 2	-2.0	2174	1266	NA	0	0	--	--	--	--	--	--	
Roof-Top Fan 3	-2.4	2445	914	NA	0	0	--	--	--	--	--	--	
Ambient Outdoor Air	NA	NA	0	NA	0	0	--	--	--	--	--	--	

NA: not applicable.

NM: not monitored on this date.

NS : not sampled on this date.

* RIDEM Action Level for methane %LEL beneath the building is 10% and within the building is 1%. If these methane levels are exceeded, immediately notify EA Project Manager to initiate response protocol.

APPENDIX B

Indoor and Ambient Outdoor Air Analytical Summary and Lab Report

Table 1: Summary of Indoor and Ambient Outdoor Air Sampling Data - Alvarez School Project - Volatile Organic Compounds February 2008 - July 2012

Volatile Organic Compounds via TO-15	Sample Date	CT Draft Proposed Indoor Residential Target Air Concentrations/Interim RIDEM-Approved Action Level	Kitchen Storage Rm		Cafeteria		Gymnasium		Elevator Hallway		Room 118		Room 110		Media Cntr (Rm 145)		Room 152		Room 149		Room 234		Ambient Outdoor						
			Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level	Qual	Level			
Methyl tert butyl ether (MTBE)	8-Feb-08	160.0	0.070	U	0.070	U	0.070	U	0.070	U	0.070	U	0.070	U	0.070	U	0.070	U	0.070	U			0.070	U					
	2-Jul-12 resample		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				
	Methylene chloride		8-Feb-08	3.0	1.740	U	1.740	U	1.740	U	1.740	U	1.740	U	1.740	U	1.740	U	1.740	U	1.740	U			1.740	U			
			2-Jul-12 resample		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
			4-Methyl-2-pentanone		8-Feb-08	37.0	2.050	U	2.050	U	2.050	U	2.050	U	2.050	U	2.050	U	2.050	U	2.050	U	2.050	U			2.050	U	
					2-Jul-12 resample		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

April 24, 2012

Paul Theroux
EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886

Project Location: Alvarex High School
Client Job Number:
Project Number: 14687.01
Laboratory Work Order Number: 12D0511

Enclosed are results of analyses for samples received by the laboratory on April 13, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa A. Worthington
Project Manager

EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886
ATTN: Paul Theroux

REPORT DATE: 4/24/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14687.01

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12D0511

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

PROJECT LOCATION: Alvarex High School

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Gymnasium	12D0511-01	Ambient Air		EPA TO-15	
Cafeteria	12D0511-02	Ambient Air		EPA TO-15	
Kitchen Storage	12D0511-03	Ambient Air		EPA TO-15	
Elevator Hallway	12D0511-04	Ambient Air		EPA TO-15	
Rm 145	12D0511-05	Ambient Air		EPA TO-15	
Rm 152	12D0511-06	Ambient Air		EPA TO-15	
Rm 118	12D0511-07	Ambient Air		EPA TO-15	
Rm 110	12D0511-08	Ambient Air		EPA TO-15	
Ambient	12D0511-09	Ambient Air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

Elevated method reporting limit due to insufficient sample volume

Analyte & Samples(s) Qualified:

12D0511-09[Ambient]

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Acrylonitrile

B050122-BS1, B050229-BS1

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

4-Methyl-2-pentanone (MIBK)

12D0511-01[Gymnasium], 12D0511-02[Cafeteria], 12D0511-03[Kitchen Storage], 12D0511-04[Elevator Hallway], 12D0511-05[Rm 145], 12D0511-06[Rm 152], 12D0511-07[Rm 118], 12D0511-08[Rm 110], 12D0511-09[Ambient], B050122-BLK1, B050122-BS1, B050122-DUP1, B050229-BLK1, B050229-BS1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

4-Methyl-2-pentanone (MIBK)

12D0511-09[Ambient], B050229-BLK1, B050229-BS1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Acrylonitrile

B050122-BS1, B050229-BS1


EPA TO-15

Initial and continuing calibrations met all required performance standards for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative.

Laboratory control sample recoveries and sample replicate RPDs were all within limits specified by the method for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative. Recovery limits of 50-150% are used for propene, acetone, ethanol, isopropanol, ethyl acetate, tetrahydrofuran, cyclohexane, heptane, 2-hexanone, 4-ethyltoluene, n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and 1,1,1,2-tetrachloroethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

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.

A handwritten signature in black ink, appearing to read "M. Erickson", is written on a light gray rectangular background.

Michael A. Erickson
Laboratory Director

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Gymnasium
Sample ID: 12D0511-01
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:02

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1304
 Canister Size: 6 liter
 Flow Controller ID: 4075
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -6.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.7	1.2		11	2.9	0.6	4/20/12 15:50	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 15:50	TPH	
Benzene	0.18	0.030		0.59	0.096	0.6	4/20/12 15:50	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 15:50	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 15:50	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 15:50	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 15:50	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 15:50	TPH	
Carbon Tetrachloride	0.067	0.015		0.42	0.094	0.6	4/20/12 15:50	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 15:50	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 15:50	TPH	
Chloroform	0.029	0.015		0.14	0.073	0.6	4/20/12 15:50	TPH	
Chloromethane	0.69	0.030		1.4	0.062	0.6	4/20/12 15:50	TPH	
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 15:50	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 15:50	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 15:50	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 15:50	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 15:50	TPH	
Dichlorodifluoromethane (Freon 12)	0.41	0.030		2.0	0.15	0.6	4/20/12 15:50	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 15:50	TPH	
1,2-Dichloroethane	0.015	0.015		0.061	0.061	0.6	4/20/12 15:50	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 15:50	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 15:50	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 15:50	TPH	
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 15:50	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 15:50	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 15:50	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 15:50	TPH	
Ethylbenzene	0.070	0.030		0.30	0.13	0.6	4/20/12 15:50	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 15:50	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 15:50	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 15:50	TPH	
Methylene Chloride	0.90	0.30		3.1	1.0	0.6	4/20/12 15:50	TPH	
4-Methyl-2-pentanone (MIBK)	0.050	0.030	L-03	0.20	0.12	0.6	4/20/12 15:50	TPH	
Styrene	ND	0.030		ND	0.13	0.6	4/20/12 15:50	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 15:50	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 15:50	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Gymnasium
Sample ID: 12D0511-01
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:02

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1304
 Canister Size: 6 liter
 Flow Controller ID: 4075
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -7
 Receipt Vacuum(in Hg): -6.7
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.018	0.015		0.12	0.10	0.6	4/20/12	15:50	TPH
Toluene	0.36	0.030		1.3	0.11	0.6	4/20/12	15:50	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12	15:50	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12	15:50	TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12	15:50	TPH
Trichlorofluoromethane (Freon 11)	0.30	0.030		1.7	0.17	0.6	4/20/12	15:50	TPH
1,2,4-Trimethylbenzene	0.15	0.030		0.76	0.15	0.6	4/20/12	15:50	TPH
1,3,5-Trimethylbenzene	0.055	0.030		0.27	0.15	0.6	4/20/12	15:50	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12	15:50	TPH
m&p-Xylene	0.19	0.060		0.81	0.26	0.6	4/20/12	15:50	TPH
o-Xylene	0.073	0.030		0.32	0.13	0.6	4/20/12	15:50	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	109	70-130	4/20/12 15:50
4-Bromofluorobenzene (2)	105	70-130	4/20/12 15:50

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Cafeteria
Sample ID: 12D0511-02
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:03

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1878
 Canister Size: 6 liter
 Flow Controller ID: 4042
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -11
 Receipt Vacuum(in Hg): -6.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	6.7	1.2		16	2.9	0.6	4/20/12 16:37	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 16:37	TPH	
Benzene	0.21	0.030		0.67	0.096	0.6	4/20/12 16:37	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 16:37	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 16:37	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 16:37	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 16:37	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 16:37	TPH	
Carbon Tetrachloride	0.079	0.015		0.49	0.094	0.6	4/20/12 16:37	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 16:37	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 16:37	TPH	
Chloroform	0.086	0.015		0.42	0.073	0.6	4/20/12 16:37	TPH	
Chloromethane	0.66	0.030		1.4	0.062	0.6	4/20/12 16:37	TPH	
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 16:37	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 16:37	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 16:37	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 16:37	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 16:37	TPH	
Dichlorodifluoromethane (Freon 12)	0.43	0.030		2.1	0.15	0.6	4/20/12 16:37	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 16:37	TPH	
1,2-Dichloroethane	0.017	0.015		0.068	0.061	0.6	4/20/12 16:37	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 16:37	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 16:37	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 16:37	TPH	
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 16:37	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 16:37	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 16:37	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 16:37	TPH	
Ethylbenzene	0.058	0.030		0.25	0.13	0.6	4/20/12 16:37	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 16:37	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 16:37	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 16:37	TPH	
Methylene Chloride	1.3	0.30		4.6	1.0	0.6	4/20/12 16:37	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.030	L-03	ND	0.12	0.6	4/20/12 16:37	TPH	
Styrene	0.034	0.030		0.14	0.13	0.6	4/20/12 16:37	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 16:37	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 16:37	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Cafeteria
Sample ID: 12D0511-02
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:03

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1878
 Canister Size: 6 liter
 Flow Controller ID: 4042
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -11
 Receipt Vacuum(in Hg): -6.1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.017	0.015		0.11	0.10	0.6	4/20/12 16:37		TPH
Toluene	0.41	0.030		1.5	0.11	0.6	4/20/12 16:37		TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 16:37		TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 16:37		TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12 16:37		TPH
Trichlorofluoromethane (Freon 11)	0.36	0.030		2.0	0.17	0.6	4/20/12 16:37		TPH
1,2,4-Trimethylbenzene	0.084	0.030		0.41	0.15	0.6	4/20/12 16:37		TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12 16:37		TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 16:37		TPH
m&p-Xylene	0.16	0.060		0.69	0.26	0.6	4/20/12 16:37		TPH
o-Xylene	0.063	0.030		0.27	0.13	0.6	4/20/12 16:37		TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	114	70-130	4/20/12 16:37
4-Bromofluorobenzene (2)	115	70-130	4/20/12 16:37

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Kitchen Storage
Sample ID: 12D0511-03
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:05

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1301
 Canister Size: 6 liter
 Flow Controller ID: 4094
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -7.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Acetone	4.8	1.2		11	2.9	0.6	4/20/12 17:25	TPH
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 17:25	TPH
Benzene	0.21	0.030		0.68	0.096	0.6	4/20/12 17:25	TPH
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 17:25	TPH
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 17:25	TPH
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 17:25	TPH
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 17:25	TPH
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 17:25	TPH
Carbon Tetrachloride	0.077	0.015		0.48	0.094	0.6	4/20/12 17:25	TPH
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 17:25	TPH
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 17:25	TPH
Chloroform	0.056	0.015		0.27	0.073	0.6	4/20/12 17:25	TPH
Chloromethane	0.62	0.030		1.3	0.062	0.6	4/20/12 17:25	TPH
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 17:25	TPH
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 17:25	TPH
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 17:25	TPH
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 17:25	TPH
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 17:25	TPH
Dichlorodifluoromethane (Freon 12)	0.42	0.030		2.1	0.15	0.6	4/20/12 17:25	TPH
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 17:25	TPH
1,2-Dichloroethane	0.016	0.015		0.066	0.061	0.6	4/20/12 17:25	TPH
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 17:25	TPH
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 17:25	TPH
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 17:25	TPH
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 17:25	TPH
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 17:25	TPH
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 17:25	TPH
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 17:25	TPH
Ethylbenzene	0.070	0.030		0.30	0.13	0.6	4/20/12 17:25	TPH
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 17:25	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 17:25	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 17:25	TPH
Methylene Chloride	1.7	0.30		5.8	1.0	0.6	4/20/12 17:25	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.030	L-03	ND	0.12	0.6	4/20/12 17:25	TPH
Styrene	0.13	0.030		0.56	0.13	0.6	4/20/12 17:25	TPH
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 17:25	TPH
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 17:25	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Kitchen Storage
Sample ID: 12D0511-03
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:05

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1301
 Canister Size: 6 liter
 Flow Controller ID: 4094
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -7.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.022	0.015		0.15	0.10	0.6	4/20/12 17:25		TPH
Toluene	0.48	0.030		1.8	0.11	0.6	4/20/12 17:25		TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 17:25		TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 17:25		TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12 17:25		TPH
Trichlorofluoromethane (Freon 11)	0.40	0.030		2.2	0.17	0.6	4/20/12 17:25		TPH
1,2,4-Trimethylbenzene	0.081	0.030		0.40	0.15	0.6	4/20/12 17:25		TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12 17:25		TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 17:25		TPH
m&p-Xylene	0.19	0.060		0.81	0.26	0.6	4/20/12 17:25		TPH
o-Xylene	0.073	0.030		0.32	0.13	0.6	4/20/12 17:25		TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	110	70-130	4/20/12 17:25
4-Bromofluorobenzene (2)	112	70-130	4/20/12 17:25

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Elevator Hallway
Sample ID: 12D0511-04
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1509
 Canister Size: 6 liter
 Flow Controller ID: 4074
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): -.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Acetone	4.6	1.2		11	2.9	0.6	4/20/12 18:09	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 18:09	TPH	
Benzene	0.19	0.030		0.60	0.096	0.6	4/20/12 18:09	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 18:09	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 18:09	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 18:09	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 18:09	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 18:09	TPH	
Carbon Tetrachloride	0.073	0.015		0.46	0.094	0.6	4/20/12 18:09	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 18:09	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 18:09	TPH	
Chloroform	0.055	0.015		0.27	0.073	0.6	4/20/12 18:09	TPH	
Chloromethane	0.74	0.030		1.5	0.062	0.6	4/20/12 18:09	TPH	
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 18:09	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 18:09	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 18:09	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 18:09	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 18:09	TPH	
Dichlorodifluoromethane (Freon 12)	0.41	0.030		2.0	0.15	0.6	4/20/12 18:09	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 18:09	TPH	
1,2-Dichloroethane	0.015	0.015		0.061	0.061	0.6	4/20/12 18:09	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 18:09	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 18:09	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 18:09	TPH	
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 18:09	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 18:09	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 18:09	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 18:09	TPH	
Ethylbenzene	0.056	0.030		0.24	0.13	0.6	4/20/12 18:09	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 18:09	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 18:09	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 18:09	TPH	
Methylene Chloride	0.33	0.30		1.1	1.0	0.6	4/20/12 18:09	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.030	L-03	ND	0.12	0.6	4/20/12 18:09	TPH	
Styrene	ND	0.030		ND	0.13	0.6	4/20/12 18:09	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 18:09	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 18:09	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Elevator Hallway
Sample ID: 12D0511-04
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:10

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1509
 Canister Size: 6 liter
 Flow Controller ID: 4074
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): -.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.037	0.015		0.25	0.10	0.6	4/20/12 18:09		TPH
Toluene	0.36	0.030		1.4	0.11	0.6	4/20/12 18:09		TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 18:09		TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 18:09		TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12 18:09		TPH
Trichlorofluoromethane (Freon 11)	0.35	0.030		2.0	0.17	0.6	4/20/12 18:09		TPH
1,2,4-Trimethylbenzene	0.098	0.030		0.48	0.15	0.6	4/20/12 18:09		TPH
1,3,5-Trimethylbenzene	0.034	0.030		0.17	0.15	0.6	4/20/12 18:09		TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 18:09		TPH
m&p-Xylene	0.15	0.060		0.66	0.26	0.6	4/20/12 18:09		TPH
o-Xylene	0.062	0.030		0.27	0.13	0.6	4/20/12 18:09		TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	112	70-130	4/20/12 18:09
4-Bromofluorobenzene (2)	113	70-130	4/20/12 18:09

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 145
Sample ID: 12D0511-05
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:14

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1504
 Canister Size: 6 liter
 Flow Controller ID: 4107
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -1
 Receipt Vacuum(in Hg): -1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.8	1.2		9.1	2.9	0.6	4/20/12 19:38	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 19:38	TPH	
Benzene	0.18	0.030		0.58	0.096	0.6	4/20/12 19:38	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 19:38	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 19:38	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 19:38	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 19:38	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 19:38	TPH	
Carbon Tetrachloride	0.075	0.015		0.47	0.094	0.6	4/20/12 19:38	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 19:38	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 19:38	TPH	
Chloroform	0.027	0.015		0.13	0.073	0.6	4/20/12 19:38	TPH	
Chloromethane	0.48	0.030		1.0	0.062	0.6	4/20/12 19:38	TPH	
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 19:38	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 19:38	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 19:38	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 19:38	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 19:38	TPH	
Dichlorodifluoromethane (Freon 12)	0.34	0.030		1.7	0.15	0.6	4/20/12 19:38	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 19:38	TPH	
1,2-Dichloroethane	0.015	0.015		0.061	0.061	0.6	4/20/12 19:38	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 19:38	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 19:38	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 19:38	TPH	
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 19:38	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 19:38	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 19:38	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 19:38	TPH	
Ethylbenzene	0.055	0.030		0.24	0.13	0.6	4/20/12 19:38	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 19:38	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 19:38	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 19:38	TPH	
Methylene Chloride	ND	0.30		ND	1.0	0.6	4/20/12 19:38	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.030	L-03	ND	0.12	0.6	4/20/12 19:38	TPH	
Styrene	ND	0.030		ND	0.13	0.6	4/20/12 19:38	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 19:38	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 19:38	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 145
Sample ID: 12D0511-05
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:14

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1504
 Canister Size: 6 liter
 Flow Controller ID: 4107
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -1
 Receipt Vacuum(in Hg): -1
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.028	0.015		0.19	0.10	0.6	4/20/12	19:38	TPH
Toluene	0.38	0.030		1.4	0.11	0.6	4/20/12	19:38	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12	19:38	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12	19:38	TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12	19:38	TPH
Trichlorofluoromethane (Freon 11)	0.40	0.030		2.3	0.17	0.6	4/20/12	19:38	TPH
1,2,4-Trimethylbenzene	0.060	0.030		0.29	0.15	0.6	4/20/12	19:38	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12	19:38	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12	19:38	TPH
m&p-Xylene	0.15	0.060		0.64	0.26	0.6	4/20/12	19:38	TPH
o-Xylene	0.061	0.030		0.27	0.13	0.6	4/20/12	19:38	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	119	70-130	4/20/12 19:38
4-Bromofluorobenzene (2)	119	70-130	4/20/12 19:38

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 152
Sample ID: 12D0511-06
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:15

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1840
 Canister Size: 6 liter
 Flow Controller ID: 4081
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -23
 Final Vacuum(in Hg): -2
 Receipt Vacuum(in Hg): -2.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Acetone	8.0	1.2		19	2.9	0.6	4/20/12 20:23	TPH
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 20:23	TPH
Benzene	0.16	0.030		0.52	0.096	0.6	4/20/12 20:23	TPH
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 20:23	TPH
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 20:23	TPH
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 20:23	TPH
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 20:23	TPH
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 20:23	TPH
Carbon Tetrachloride	0.073	0.015		0.46	0.094	0.6	4/20/12 20:23	TPH
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 20:23	TPH
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 20:23	TPH
Chloroform	0.058	0.015		0.28	0.073	0.6	4/20/12 20:23	TPH
Chloromethane	0.58	0.030		1.2	0.062	0.6	4/20/12 20:23	TPH
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 20:23	TPH
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 20:23	TPH
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 20:23	TPH
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 20:23	TPH
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 20:23	TPH
Dichlorodifluoromethane (Freon 12)	0.34	0.030		1.7	0.15	0.6	4/20/12 20:23	TPH
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 20:23	TPH
1,2-Dichloroethane	0.019	0.015		0.075	0.061	0.6	4/20/12 20:23	TPH
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 20:23	TPH
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 20:23	TPH
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 20:23	TPH
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 20:23	TPH
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 20:23	TPH
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 20:23	TPH
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 20:23	TPH
Ethylbenzene	0.046	0.030		0.20	0.13	0.6	4/20/12 20:23	TPH
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 20:23	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 20:23	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 20:23	TPH
Methylene Chloride	14	0.30		50	1.0	0.6	4/20/12 20:23	TPH
4-Methyl-2-pentanone (MIBK)	0.034	0.030	L-03	0.14	0.12	0.6	4/20/12 20:23	TPH
Styrene	ND	0.030		ND	0.13	0.6	4/20/12 20:23	TPH
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 20:23	TPH
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 20:23	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 152
Sample ID: 12D0511-06
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:15

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1840
 Canister Size: 6 liter
 Flow Controller ID: 4081
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -23
 Final Vacuum(in Hg): -2
 Receipt Vacuum(in Hg): -2.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	0.028	0.015		0.19	0.10	0.6	4/20/12 20:23	TPH
Toluene	0.33	0.030		1.2	0.11	0.6	4/20/12 20:23	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 20:23	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 20:23	TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	4/20/12 20:23	TPH
Trichlorofluoromethane (Freon 11)	0.42	0.030		2.4	0.17	0.6	4/20/12 20:23	TPH
1,2,4-Trimethylbenzene	0.074	0.030		0.36	0.15	0.6	4/20/12 20:23	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12 20:23	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 20:23	TPH
m&p-Xylene	0.12	0.060		0.52	0.26	0.6	4/20/12 20:23	TPH
o-Xylene	0.050	0.030		0.22	0.13	0.6	4/20/12 20:23	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	120	70-130	4/20/12 20:23
4-Bromofluorobenzene (2)	120	70-130	4/20/12 20:23

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 118
Sample ID: 12D0511-07
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:17

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1064
 Canister Size: 6 liter
 Flow Controller ID: 4039
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -1
 Receipt Vacuum(in Hg): .5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	4.6	1.2		11	2.9	0.6	4/20/12 21:06	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 21:06	TPH	
Benzene	0.18	0.030		0.58	0.096	0.6	4/20/12 21:06	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 21:06	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 21:06	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	4/20/12 21:06	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 21:06	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 21:06	TPH	
Carbon Tetrachloride	0.071	0.015		0.45	0.094	0.6	4/20/12 21:06	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 21:06	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 21:06	TPH	
Chloroform	0.028	0.015		0.13	0.073	0.6	4/20/12 21:06	TPH	
Chloromethane	0.55	0.030		1.1	0.062	0.6	4/20/12 21:06	TPH	
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 21:06	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 21:06	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:06	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:06	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:06	TPH	
Dichlorodifluoromethane (Freon 12)	0.37	0.030		1.8	0.15	0.6	4/20/12 21:06	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 21:06	TPH	
1,2-Dichloroethane	0.016	0.015		0.063	0.061	0.6	4/20/12 21:06	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:06	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:06	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:06	TPH	
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 21:06	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 21:06	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 21:06	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 21:06	TPH	
Ethylbenzene	0.058	0.030		0.25	0.13	0.6	4/20/12 21:06	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 21:06	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 21:06	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 21:06	TPH	
Methylene Chloride	ND	0.30		ND	1.0	0.6	4/20/12 21:06	TPH	
4-Methyl-2-pentanone (MIBK)	0.038	0.030	L-03	0.15	0.12	0.6	4/20/12 21:06	TPH	
Styrene	0.13	0.030		0.55	0.13	0.6	4/20/12 21:06	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 21:06	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 21:06	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 118
Sample ID: 12D0511-07
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:17

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1064
 Canister Size: 6 liter
 Flow Controller ID: 4039
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -1
 Receipt Vacuum(in Hg): .5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	0.022	0.015		0.15	0.10	0.6	4/20/12 21:06	TPH
Toluene	0.37	0.030		1.4	0.11	0.6	4/20/12 21:06	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 21:06	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 21:06	TPH
Trichloroethylene	0.017	0.015		0.090	0.081	0.6	4/20/12 21:06	TPH
Trichlorofluoromethane (Freon 11)	0.41	0.030		2.3	0.17	0.6	4/20/12 21:06	TPH
1,2,4-Trimethylbenzene	0.068	0.030		0.34	0.15	0.6	4/20/12 21:06	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12 21:06	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 21:06	TPH
m&p-Xylene	0.15	0.060		0.67	0.26	0.6	4/20/12 21:06	TPH
o-Xylene	0.064	0.030		0.28	0.13	0.6	4/20/12 21:06	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	118	70-130	4/20/12 21:06
4-Bromofluorobenzene (2)	117	70-130	4/20/12 21:06

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 110
Sample ID: 12D0511-08
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1075
 Canister Size: 6 liter
 Flow Controller ID: 4038
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -3.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Acetone	8.9	1.2		21	2.8	0.6	4/20/12 21:52	TPH
Acrylonitrile	ND	0.17		ND	0.37	0.6	4/20/12 21:52	TPH
Benzene	0.20	0.030		0.65	0.096	0.6	4/20/12 21:52	TPH
Bromodichloromethane	ND	0.015		ND	0.10	0.6	4/20/12 21:52	TPH
Bromoform	ND	0.030		ND	0.31	0.6	4/20/12 21:52	TPH
2-Butanone (MEK)	1.2	1.2		3.6	3.5	0.6	4/20/12 21:52	TPH
n-Butylbenzene	ND	0.086		ND	0.47	0.6	4/20/12 21:52	TPH
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	4/20/12 21:52	TPH
Carbon Tetrachloride	0.073	0.015		0.46	0.094	0.6	4/20/12 21:52	TPH
Chlorobenzene	ND	0.030		ND	0.14	0.6	4/20/12 21:52	TPH
Chloroethane	ND	0.030		ND	0.079	0.6	4/20/12 21:52	TPH
Chloroform	0.027	0.015		0.13	0.073	0.6	4/20/12 21:52	TPH
Chloromethane	0.51	0.030		1.0	0.062	0.6	4/20/12 21:52	TPH
Dibromochloromethane	ND	0.030		ND	0.26	0.6	4/20/12 21:52	TPH
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	4/20/12 21:52	TPH
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:52	TPH
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:52	TPH
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	4/20/12 21:52	TPH
Dichlorodifluoromethane (Freon 12)	0.38	0.030		1.9	0.15	0.6	4/20/12 21:52	TPH
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	4/20/12 21:52	TPH
1,2-Dichloroethane	0.016	0.015		0.063	0.061	0.6	4/20/12 21:52	TPH
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:52	TPH
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:52	TPH
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	4/20/12 21:52	TPH
1,2-Dichloropropane	ND	0.030		ND	0.14	0.6	4/20/12 21:52	TPH
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	4/20/12 21:52	TPH
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 21:52	TPH
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	4/20/12 21:52	TPH
Ethylbenzene	0.065	0.030		0.28	0.13	0.6	4/20/12 21:52	TPH
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	4/20/12 21:52	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	4/20/12 21:52	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	4/20/12 21:52	TPH
Methylene Chloride	0.49	0.30		1.7	1.0	0.6	4/20/12 21:52	TPH
4-Methyl-2-pentanone (MIBK)	0.057	0.030	L-03	0.23	0.12	0.6	4/20/12 21:52	TPH
Styrene	0.065	0.030		0.28	0.13	0.6	4/20/12 21:52	TPH
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	4/20/12 21:52	TPH
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	4/20/12 21:52	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Rm 110
Sample ID: 12D0511-08
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 08:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1075
 Canister Size: 6 liter
 Flow Controller ID: 4038
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -3.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	0.024	0.015		0.16	0.10	0.6	4/20/12 21:52	TPH
Toluene	0.41	0.030		1.5	0.11	0.6	4/20/12 21:52	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 21:52	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	4/20/12 21:52	TPH
Trichloroethylene	0.015	0.015		0.081	0.081	0.6	4/20/12 21:52	TPH
Trichlorofluoromethane (Freon 11)	0.44	0.030		2.4	0.17	0.6	4/20/12 21:52	TPH
1,2,4-Trimethylbenzene	0.068	0.030		0.34	0.15	0.6	4/20/12 21:52	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	4/20/12 21:52	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	4/20/12 21:52	TPH
m&p-Xylene	0.17	0.060		0.74	0.26	0.6	4/20/12 21:52	TPH
o-Xylene	0.070	0.030		0.30	0.13	0.6	4/20/12 21:52	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	117	70-130	4/20/12 21:52
4-Bromofluorobenzene (2)	115	70-130	4/20/12 21:52

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Ambient
Sample ID: 12D0511-09
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 10:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1114
 Canister Size: 6 liter
 Flow Controller ID: 4080
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): --
 Final Vacuum(in Hg): --
 Receipt Vacuum(in Hg): -20.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Sample Flags: DL-02

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	10	1.6		24	3.8	0.8	4/23/12 14:58	TPH	
Acrylonitrile	ND	0.23		ND	0.50	0.8	4/23/12 14:58	TPH	
Benzene	0.070	0.040		0.22	0.13	0.8	4/23/12 14:58	TPH	
Bromodichloromethane	ND	0.020		ND	0.13	0.8	4/23/12 14:58	TPH	
Bromoform	ND	0.040		ND	0.41	0.8	4/23/12 14:58	TPH	
2-Butanone (MEK)	ND	1.6		ND	4.7	0.8	4/23/12 14:58	TPH	
n-Butylbenzene	ND	0.12		ND	0.63	0.8	4/23/12 14:58	TPH	
sec-Butylbenzene	ND	0.091		ND	0.50	0.8	4/23/12 14:58	TPH	
Carbon Tetrachloride	0.047	0.020		0.30	0.13	0.8	4/23/12 14:58	TPH	
Chlorobenzene	ND	0.040		ND	0.18	0.8	4/23/12 14:58	TPH	
Chloroethane	ND	0.040		ND	0.11	0.8	4/23/12 14:58	TPH	
Chloroform	ND	0.020		ND	0.098	0.8	4/23/12 14:58	TPH	
Chloromethane	0.40	0.040		0.84	0.083	0.8	4/23/12 14:58	TPH	
Dibromochloromethane	ND	0.040		ND	0.34	0.8	4/23/12 14:58	TPH	
1,2-Dibromoethane (EDB)	ND	0.020		ND	0.15	0.8	4/23/12 14:58	TPH	
1,2-Dichlorobenzene	ND	0.040		ND	0.24	0.8	4/23/12 14:58	TPH	
1,3-Dichlorobenzene	ND	0.040		ND	0.24	0.8	4/23/12 14:58	TPH	
1,4-Dichlorobenzene	ND	0.040		ND	0.24	0.8	4/23/12 14:58	TPH	
Dichlorodifluoromethane (Freon 12)	0.27	0.040		1.3	0.20	0.8	4/23/12 14:58	TPH	
1,1-Dichloroethane	ND	0.020		ND	0.081	0.8	4/23/12 14:58	TPH	
1,2-Dichloroethane	ND	0.020		ND	0.081	0.8	4/23/12 14:58	TPH	
1,1-Dichloroethylene	ND	0.020		ND	0.079	0.8	4/23/12 14:58	TPH	
cis-1,2-Dichloroethylene	ND	0.020		ND	0.079	0.8	4/23/12 14:58	TPH	
trans-1,2-Dichloroethylene	ND	0.020		ND	0.079	0.8	4/23/12 14:58	TPH	
1,2-Dichloropropane	ND	0.040		ND	0.18	0.8	4/23/12 14:58	TPH	
1,3-Dichloropropane	ND	0.11		ND	0.50	0.8	4/23/12 14:58	TPH	
cis-1,3-Dichloropropene	ND	0.020		ND	0.091	0.8	4/23/12 14:58	TPH	
trans-1,3-Dichloropropene	ND	0.020		ND	0.091	0.8	4/23/12 14:58	TPH	
Ethylbenzene	ND	0.040		ND	0.17	0.8	4/23/12 14:58	TPH	
Isopropylbenzene (Cumene)	ND	0.10		ND	0.50	0.8	4/23/12 14:58	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.091		ND	0.50	0.8	4/23/12 14:58	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.040		ND	0.14	0.8	4/23/12 14:58	TPH	
Methylene Chloride	15	0.40		53	1.4	0.8	4/23/12 14:58	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.040	L-03, V-05	ND	0.16	0.8	4/23/12 14:58	TPH	
Styrene	ND	0.040		ND	0.17	0.8	4/23/12 14:58	TPH	
1,1,1,2-Tetrachloroethane	ND	0.073		ND	0.50	0.8	4/23/12 14:58	TPH	
1,1,2,2-Tetrachloroethane	ND	0.020		ND	0.14	0.8	4/23/12 14:58	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: Ambient
Sample ID: 12D0511-09
 Sample Matrix: Ambient Air
 Sampled: 4/13/2012 10:12

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1114
 Canister Size: 6 liter
 Flow Controller ID: 4080
 Sample Type: 30 min

Work Order: 12D0511
 Initial Vacuum(in Hg): --
 Final Vacuum(in Hg): --
 Receipt Vacuum(in Hg): -20.9
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Sample Flags: DL-02

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	ND	0.020		ND	0.14	0.8	4/23/12 14:58		TPH
Toluene	0.084	0.040		0.32	0.15	0.8	4/23/12 14:58		TPH
1,1,1-Trichloroethane	ND	0.020		ND	0.11	0.8	4/23/12 14:58		TPH
1,1,2-Trichloroethane	ND	0.020		ND	0.11	0.8	4/23/12 14:58		TPH
Trichloroethylene	0.020	0.020		0.11	0.11	0.8	4/23/12 14:58		TPH
Trichlorofluoromethane (Freon 11)	0.21	0.040		1.2	0.22	0.8	4/23/12 14:58		TPH
1,2,4-Trimethylbenzene	0.049	0.040		0.24	0.20	0.8	4/23/12 14:58		TPH
1,3,5-Trimethylbenzene	0.054	0.040		0.27	0.20	0.8	4/23/12 14:58		TPH
Vinyl Chloride	ND	0.040		ND	0.10	0.8	4/23/12 14:58		TPH
m&p-Xylene	ND	0.080		ND	0.35	0.8	4/23/12 14:58		TPH
o-Xylene	0.047	0.040		0.20	0.17	0.8	4/23/12 14:58		TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	108	70-130	4/23/12 14:58
4-Bromofluorobenzene (2)	103	70-130	4/23/12 14:58

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
12D0511-01 [Gymnasium]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-02 [Cafeteria]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-03 [Kitchen Storage]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-04 [Elevator Hallway]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-05 [Rm 145]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-06 [Rm 152]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-07 [Rm 118]	B050122	1	1	N/A	1000	400	667	04/20/12
12D0511-08 [Rm 110]	B050122	1	1	N/A	1000	400	667	04/20/12

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
12D0511-09 [Ambient]	B050229	2	1	N/A	1000	400	1000	04/23/12

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	%REC	Limits	RPD	

Batch B050122 - TO-15 Prep

Blank (B050122-BLK1)

Prepared & Analyzed: 04/20/12

Acetone	ND	0.80
Acrylonitrile	ND	0.12
Benzene	ND	0.020
Bromodichloromethane	ND	0.010
Bromoform	ND	0.020
2-Butanone (MEK)	ND	0.80
n-Butylbenzene	ND	0.058
sec-Butylbenzene	ND	0.046
Carbon Tetrachloride	ND	0.010
Chlorobenzene	ND	0.020
Chloroethane	ND	0.020
Chloroform	ND	0.010
Chloromethane	ND	0.020
Dibromochloromethane	ND	0.020
1,2-Dibromoethane (EDB)	ND	0.010
1,2-Dichlorobenzene	ND	0.020
1,3-Dichlorobenzene	ND	0.020
1,4-Dichlorobenzene	ND	0.020
Dichlorodifluoromethane (Freon 12)	ND	0.020
1,1-Dichloroethane	ND	0.010
1,2-Dichloroethane	ND	0.010
1,1-Dichloroethylene	ND	0.010
cis-1,2-Dichloroethylene	ND	0.010
trans-1,2-Dichloroethylene	ND	0.010
1,2-Dichloropropane	ND	0.020
1,3-Dichloropropane	ND	0.054
cis-1,3-Dichloropropene	ND	0.010
trans-1,3-Dichloropropene	ND	0.010
Ethylbenzene	ND	0.020
Isopropylbenzene (Cumene)	ND	0.051
p-Isopropyltoluene (p-Cymene)	ND	0.046
Methyl tert-Butyl Ether (MTBE)	ND	0.020
Methylene Chloride	ND	0.20
4-Methyl-2-pentanone (MIBK)	ND	0.020
Styrene	ND	0.020
1,1,1,2-Tetrachloroethane	ND	0.036
1,1,2,2-Tetrachloroethane	ND	0.010
Tetrachloroethylene	ND	0.010
Toluene	ND	0.020
1,1,1-Trichloroethane	ND	0.010
1,1,2-Trichloroethane	ND	0.010
Trichloroethylene	ND	0.010
Trichlorofluoromethane (Freon 11)	ND	0.020
1,2,4-Trimethylbenzene	ND	0.020
1,3,5-Trimethylbenzene	ND	0.020
Vinyl Chloride	ND	0.010

L-03

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
Batch B050122 - TO-15 Prep											
Blank (B050122-BLK1)						Prepared & Analyzed: 04/20/12					
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.46				8.00		106	70-130			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.23				8.00		103	70-130			
LCS (B050122-BS1)						Prepared & Analyzed: 04/20/12					
Acetone	5.52				5.00		110	50-150			
Acrylonitrile	5.29				2.88		184 *	70-130			L-01, V-06
Benzene	3.91				5.00		78.2	70-130			
Bromodichloromethane	4.38				5.00		87.5	70-130			
Bromoform	4.65				5.00		93.0	70-130			
2-Butanone (MEK)	3.77				5.00		75.3	70-130			
n-Butylbenzene	1.25				1.14		109	50-150			
sec-Butylbenzene	1.18				1.14		104	50-150			
Carbon Tetrachloride	4.42				5.00		88.3	70-130			
Chlorobenzene	4.48				5.00		89.6	70-130			
Chloroethane	5.21				5.00		104	70-130			
Chloroform	5.01				5.00		100	70-130			
Chloromethane	4.41				5.00		88.3	70-130			
Dibromochloromethane	4.43				5.00		88.6	70-130			
1,2-Dibromoethane (EDB)	4.30				5.00		86.0	70-130			
1,2-Dichlorobenzene	5.14				5.00		103	70-130			
1,3-Dichlorobenzene	4.96				5.00		99.1	70-130			
1,4-Dichlorobenzene	4.84				5.00		96.8	70-130			
Dichlorodifluoromethane (Freon 12)	4.83				5.00		96.7	70-130			
1,1-Dichloroethane	4.78				5.00		95.6	70-130			
1,2-Dichloroethane	4.50				5.00		90.0	70-130			
1,1-Dichloroethylene	4.51				5.00		90.2	70-130			
cis-1,2-Dichloroethylene	4.78				5.00		95.7	70-130			
trans-1,2-Dichloroethylene	4.51				5.00		90.3	70-130			
1,2-Dichloropropane	4.21				5.00		84.3	70-130			
1,3-Dichloropropane	1.24				1.35		91.8	70-130			
cis-1,3-Dichloropropene	4.52				5.00		90.5	70-130			
trans-1,3-Dichloropropene	4.20				5.00		84.1	70-130			
Ethylbenzene	4.26				5.00		85.2	70-130			
Isopropylbenzene (Cumene)	1.20				1.27		94.3	70-130			
p-Isopropyltoluene (p-Cymene)	1.25				1.14		110	50-150			
Methyl tert-Butyl Ether (MTBE)	4.72				5.00		94.3	70-130			
Methylene Chloride	4.23				5.00		84.7	70-130			
4-Methyl-2-pentanone (MIBK)	3.43				5.00		68.5 *	70-130			L-03
Styrene	4.49				5.00		89.7	70-130			
1,1,1,2-Tetrachloroethane	0.866				0.910		95.2	50-150			
1,1,2,2-Tetrachloroethane	4.48				5.00		89.6	70-130			
Tetrachloroethylene	5.03				5.00		101	70-130			
Toluene	4.26				5.00		85.2	70-130			
1,1,1-Trichloroethane	4.18				5.00		83.6	70-130			
1,1,2-Trichloroethane	4.64				5.00		92.8	70-130			

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

Batch B050122 - TO-15 Prep

LCS (B050122-BS1)

Prepared & Analyzed: 04/20/12

Trichloroethylene	4.38				5.00		87.5	70-130			
Trichlorofluoromethane (Freon 11)	4.90				5.00		97.9	70-130			
1,2,4-Trimethylbenzene	4.55				5.00		91.0	70-130			
1,3,5-Trimethylbenzene	4.40				5.00		87.9	70-130			
Vinyl Chloride	4.65				5.00		93.1	70-130			
m&p-Xylene	8.56				10.0		85.6	70-130			
o-Xylene	4.23				5.00		84.7	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.63				8.00		108	70-130			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.70				8.00		109	70-130			

Duplicate (B050122-DUP1)

Source: 12D0511-04

Prepared & Analyzed: 04/20/12

Acetone	4.6	1.2	11	2.9		4.6			1.15	25	
Acrylonitrile	ND	0.17	ND	0.37		ND				25	
Benzene	0.17	0.030	0.56	0.096		0.19			7.31	25	
Bromodichloromethane	ND	0.015	ND	0.10		ND				25	
Bromoform	ND	0.030	ND	0.31		ND				25	
2-Butanone (MEK)	ND	1.2	ND	3.5		ND				25	
n-Butylbenzene	ND	0.086	ND	0.47		ND				25	
sec-Butylbenzene	ND	0.068	ND	0.38		ND				25	
Carbon Tetrachloride	0.073	0.015	0.46	0.094		0.073			0.00	25	
Chlorobenzene	ND	0.030	ND	0.14		ND				25	
Chloroethane	ND	0.030	ND	0.079		ND				25	
Chloroform	0.055	0.015	0.27	0.073		0.055			0.00	25	
Chloromethane	0.67	0.030	1.4	0.062		0.74			9.97	25	
Dibromochloromethane	ND	0.030	ND	0.26		ND				25	
1,2-Dibromoethane (EDB)	ND	0.015	ND	0.12		ND				25	
1,2-Dichlorobenzene	ND	0.030	ND	0.18		ND				25	
1,3-Dichlorobenzene	ND	0.030	ND	0.18		ND				25	
1,4-Dichlorobenzene	ND	0.030	ND	0.18		ND				25	
Dichlorodifluoromethane (Freon 12)	0.33	0.030	1.6	0.15		0.41			21.5	25	
1,1-Dichloroethane	ND	0.015	ND	0.061		ND				25	
1,2-Dichloroethane	0.016	0.015	0.063	0.061		0.015			3.92	25	
1,1-Dichloroethylene	ND	0.015	ND	0.059		ND				25	
cis-1,2-Dichloroethylene	ND	0.015	ND	0.059		ND				25	
trans-1,2-Dichloroethylene	ND	0.015	ND	0.059		ND				25	
1,2-Dichloropropane	ND	0.030	ND	0.14		ND				25	
1,3-Dichloropropane	ND	0.081	ND	0.37		ND				25	
cis-1,3-Dichloropropene	ND	0.015	ND	0.068		ND				25	
trans-1,3-Dichloropropene	ND	0.015	ND	0.068		ND				25	
Ethylbenzene	0.058	0.030	0.25	0.13		0.056			3.17	25	
Isopropylbenzene (Cumene)	ND	0.076	ND	0.37		ND				25	
p-Isopropyltoluene (p-Cymene)	ND	0.068	ND	0.38		ND				25	
Methyl tert-Butyl Ether (MTBE)	ND	0.030	ND	0.11		ND				25	
Methylene Chloride	0.42	0.30	1.5	1.0		0.33			24.9	25	
4-Methyl-2-pentanone (MIBK)	ND	0.030	ND	0.12		ND				25	L-03
Styrene	ND	0.030	ND	0.13		ND				25	
1,1,1,2-Tetrachloroethane	ND	0.055	ND	0.37		ND				25	

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level ppbv	Source Result	%REC Limits	RPD	RPD Limit	Flag
	Results	RL	Results	RL						

Batch B050122 - TO-15 Prep

Duplicate (B050122-DUP1)

Source: 12D0511-04

Prepared & Analyzed: 04/20/12

1,1,2,2-Tetrachloroethane	ND	0.015	ND	0.10		ND			25	
Tetrachloroethylene	0.039	0.015	0.26	0.10		0.037		4.72	25	
Toluene	0.37	0.030	1.4	0.11		0.36		1.32	25	
1,1,1-Trichloroethane	ND	0.015	ND	0.082		ND			25	
1,1,2-Trichloroethane	ND	0.015	ND	0.082		ND			25	
Trichloroethylene	ND	0.015	ND	0.081		ND			25	
Trichlorofluoromethane (Freon 11)	0.37	0.030	2.1	0.17		0.35		4.18	25	
1,2,4-Trimethylbenzene	0.10	0.030	0.50	0.15		0.098		3.02	25	
1,3,5-Trimethylbenzene	0.035	0.030	0.17	0.15		0.034		1.74	25	
Vinyl Chloride	ND	0.015	ND	0.038		ND			25	
m&p-Xylene	0.16	0.060	0.68	0.26		0.15		2.33	25	
o-Xylene	0.062	0.030	0.27	0.13		0.062		0.966	25	
Surrogate: 4-Bromofluorobenzene (1)	9.36				8.00		117	70-130		
Surrogate: 4-Bromofluorobenzene (2)	9.39				8.00		117	70-130		

Batch B050229 - TO-15 Prep

Blank (B050229-BLK1)

Prepared & Analyzed: 04/23/12

Acetone	ND	0.80								
Acrylonitrile	ND	0.12								
Benzene	ND	0.020								
Bromodichloromethane	ND	0.010								
Bromoform	ND	0.020								
2-Butanone (MEK)	ND	0.80								
n-Butylbenzene	ND	0.058								
sec-Butylbenzene	ND	0.046								
Carbon Tetrachloride	ND	0.010								
Chlorobenzene	ND	0.020								
Chloroethane	ND	0.020								
Chloroform	ND	0.010								
Chloromethane	ND	0.020								
Dibromochloromethane	ND	0.020								
1,2-Dibromoethane (EDB)	ND	0.010								
1,2-Dichlorobenzene	ND	0.020								
1,3-Dichlorobenzene	ND	0.020								
1,4-Dichlorobenzene	ND	0.020								
Dichlorodifluoromethane (Freon 12)	ND	0.020								
1,1-Dichloroethane	ND	0.010								
1,2-Dichloroethane	ND	0.010								
1,1-Dichloroethylene	ND	0.010								
cis-1,2-Dichloroethylene	ND	0.010								
trans-1,2-Dichloroethylene	ND	0.010								
1,2-Dichloropropane	ND	0.020								
1,3-Dichloropropane	ND	0.054								
cis-1,3-Dichloropropene	ND	0.010								
trans-1,3-Dichloropropene	ND	0.010								
Ethylbenzene	ND	0.020								

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

Batch B050229 - TO-15 Prep

Blank (B050229-BLK1)

Prepared & Analyzed: 04/23/12

Isopropylbenzene (Cumene)	ND	0.051									
p-Isopropyltoluene (p-Cymene)	ND	0.046									
Methyl tert-Butyl Ether (MTBE)	ND	0.020									
Methylene Chloride	ND	0.20									
4-Methyl-2-pentanone (MIBK)	ND	0.020									L-03, V-05
Styrene	ND	0.020									
1,1,1,2-Tetrachloroethane	ND	0.036									
1,1,2,2-Tetrachloroethane	ND	0.010									
Tetrachloroethylene	ND	0.010									
Toluene	ND	0.020									
1,1,1-Trichloroethane	ND	0.010									
1,1,2-Trichloroethane	ND	0.010									
Trichloroethylene	ND	0.010									
Trichlorofluoromethane (Freon 11)	ND	0.020									
1,2,4-Trimethylbenzene	ND	0.020									
1,3,5-Trimethylbenzene	ND	0.020									
Vinyl Chloride	ND	0.020									
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.68</i>				<i>8.00</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>8.44</i>				<i>8.00</i>		<i>106</i>	<i>70-130</i>			

LCS (B050229-BS1)

Prepared & Analyzed: 04/23/12

Acetone	5.76				5.00		115	50-150			
Acrylonitrile	5.23				2.88		182 *	70-130			L-01, V-06
Benzene	3.93				5.00		78.6	70-130			
Bromodichloromethane	4.44				5.00		88.7	70-130			
Bromoform	4.74				5.00		94.8	70-130			
2-Butanone (MEK)	3.81				5.00		76.1	70-130			
n-Butylbenzene	1.19				1.14		104	50-150			
sec-Butylbenzene	1.14				1.14		100	50-150			
Carbon Tetrachloride	4.50				5.00		90.0	70-130			
Chlorobenzene	4.55				5.00		91.1	70-130			
Chloroethane	5.33				5.00		107	70-130			
Chloroform	5.20				5.00		104	70-130			
Chloromethane	4.59				5.00		91.8	70-130			
Dibromochloromethane	4.51				5.00		90.2	70-130			
1,2-Dibromoethane (EDB)	4.35				5.00		87.1	70-130			
1,2-Dichlorobenzene	5.25				5.00		105	70-130			
1,3-Dichlorobenzene	5.12				5.00		102	70-130			
1,4-Dichlorobenzene	4.92				5.00		98.5	70-130			
Dichlorodifluoromethane (Freon 12)	5.11				5.00		102	70-130			
1,1-Dichloroethane	4.94				5.00		98.8	70-130			
1,2-Dichloroethane	4.77				5.00		95.4	70-130			
1,1-Dichloroethylene	4.65				5.00		93.1	70-130			
cis-1,2-Dichloroethylene	4.95				5.00		99.0	70-130			
trans-1,2-Dichloroethylene	4.65				5.00		93.0	70-130			

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

Batch B050229 - TO-15 Prep

LCS (B050229-BS1)

Prepared & Analyzed: 04/23/12

1,2-Dichloropropane	4.22				5.00		84.5	70-130			
1,3-Dichloropropane	1.20				1.35		88.9	70-130			
cis-1,3-Dichloropropene	4.50				5.00		89.9	70-130			
trans-1,3-Dichloropropene	4.12				5.00		82.4	70-130			
Ethylbenzene	4.30				5.00		86.1	70-130			
Isopropylbenzene (Cumene)	1.15				1.27		90.6	70-130			
p-Isopropyltoluene (p-Cymene)	1.21				1.14		106	50-150			
Methyl tert-Butyl Ether (MTBE)	4.85				5.00		97.1	70-130			
Methylene Chloride	4.35				5.00		86.9	70-130			
4-Methyl-2-pentanone (MIBK)	3.39				5.00		67.9 *	70-130			L-03, V-05
Styrene	4.49				5.00		89.8	70-130			
1,1,1,2-Tetrachloroethane	0.836				0.910		91.9	50-150			
1,1,2,2-Tetrachloroethane	4.49				5.00		89.8	70-130			
Tetrachloroethylene	5.16				5.00		103	70-130			
Toluene	4.33				5.00		86.6	70-130			
1,1,1-Trichloroethane	4.29				5.00		85.7	70-130			
1,1,2-Trichloroethane	4.71				5.00		94.1	70-130			
Trichloroethylene	4.44				5.00		88.8	70-130			
Trichlorofluoromethane (Freon 11)	5.16				5.00		103	70-130			
1,2,4-Trimethylbenzene	4.60				5.00		91.9	70-130			
1,3,5-Trimethylbenzene	4.42				5.00		88.4	70-130			
Vinyl Chloride	4.75				5.00		94.9	70-130			
m&p-Xylene	8.72				10.0		87.2	70-130			
o-Xylene	4.32				5.00		86.3	70-130			
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.69</i>				<i>8.00</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>8.49</i>				<i>8.00</i>		<i>106</i>	<i>70-130</i>			

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
DL-02	Elevated method reporting limit due to insufficient sample volume
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
L-03	Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY
Acrylonitrile	AIHA,NJ
Benzene	AIHA,FL,NJ,NY
Bromodichloromethane	AIHA,NJ,NY
Bromoform	AIHA,NJ,NY
2-Butanone (MEK)	AIHA,FL,NJ,NY
n-Butylbenzene	AIHA
sec-Butylbenzene	AIHA
Carbon Tetrachloride	AIHA,FL,NJ,NY
Chlorobenzene	AIHA,FL,NJ,NY
Chloroethane	AIHA,FL,NJ,NY
Chloroform	AIHA,FL,NJ,NY
Chloromethane	AIHA,FL,NJ,NY
Dibromochloromethane	AIHA,NY
1,2-Dibromoethane (EDB)	AIHA,NJ,NY
1,2-Dichlorobenzene	AIHA,FL,NJ,NY
1,3-Dichlorobenzene	AIHA,NJ,NY
1,4-Dichlorobenzene	AIHA,FL,NJ,NY
Dichlorodifluoromethane (Freon 12)	AIHA,NY
1,1-Dichloroethane	AIHA,FL,NJ,NY
1,2-Dichloroethane	AIHA,FL,NJ,NY
1,1-Dichloroethylene	AIHA,FL,NJ,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
trans-1,2-Dichloroethylene	AIHA,NJ,NY
1,2-Dichloropropane	AIHA,FL,NJ,NY
1,3-Dichloropropane	AIHA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY
trans-1,3-Dichloropropene	AIHA,NY
Ethylbenzene	AIHA,FL,NJ,NY
Isopropylbenzene (Cumene)	AIHA,NJ,NY
p-Isopropyltoluene (p-Cymene)	AIHA
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY
Methylene Chloride	AIHA,FL,NJ,NY
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY
Styrene	AIHA,FL,NJ,NY
1,1,1,2-Tetrachloroethane	AIHA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY
Tetrachloroethylene	AIHA,FL,NJ,NY
Toluene	AIHA,FL,NJ,NY
1,1,1-Trichloroethane	AIHA,FL,NJ,NY
1,1,2-Trichloroethane	AIHA,FL,NJ,NY
Trichloroethylene	AIHA,FL,NJ,NY
Trichlorofluoromethane (Freon 11)	AIHA,NY
1,2,4-Trimethylbenzene	AIHA,NJ,NY
1,3,5-Trimethylbenzene	AIHA,NJ,NY
Vinyl Chloride	AIHA,FL,NJ,NY
m&p-Xylene	AIHA,FL,NJ,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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EPA TO-15 in Air

o-Xylene AIHA,FL,NJ,NY

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2012
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2012
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



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

12D0511

Company Name: EA Engineering
 Address: 2374 Post Road
 Suite 102
 Paul Theroux

Project Location: Alwax High School, Providence, RI
 Sampled By: P.T. and M.T.

Proposal Provided? (For Billing purposes)
 yes no

AIR SAMPLE CHAIN OF CUSTODY RECORD

39 SPRUCE ST
 EAST LONGMEADOW, MA 01028

Page 1 of 2
 DOC#284
 Rev. July 2010

Please fill out completely, sign, date and retain the yellow copy for your record.

Summa canisters and flow controllers must be returned within 14 days of receipt or rental fees will apply.

Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.

Field ID	Sample Description	Media Lab #	Date Sampled		Total Minutes Sampled	Flow Rate M ³ /Min. or L/Min.	Volume Liters or M ³	Matrix Code*	TO-15 SIM per contract	"Hg	Summa Canister ID	Flow Controller ID	
			Start	Stop									
Gymnasium		S	4/13/12 0732	4/13/12 0802				AMB	✓	29	7	1304	4075
Cafeteria		S	4/13/12 0733	4/13/12 0803				AMB	✓	30	11	1878	4042
Kitchen Storage		S	4/13/12 0735	4/13/12 0805				AMB	✓	30	6	1301	4094
Elevator Hallway		S	4/13/12 0737	4/13/12 0810				AMB	✓	29	0	1509	4074
Rm 145		S	4/13/12 0743	4/13/12 0814				AMB	✓	30	1	1504	4107
Rm 152		S	4/13/12 0744	4/13/12 0815				AMB	✓	23	2	1840	4081
Rm 118		S	4/13/12 0746	4/13/12 0817				AMB	✓	30	1	1064	4039
Rm 110		S	4/13/12 0748	4/13/12 0818				AMB	✓	30+	6	1075	4038

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)
 Date/Time: 4/13/12 1210

Received by: (signature)
 Date/Time: 4/13/12 1210

Relinquished by: (signature)
 Date/Time: 4/13/12 1700

Received by: (signature)
 Date/Time: 4/13/12 1700

Turnaround **

- 7-Day
- 10-Day
- Other
- *24-Hr
- *48-Hr
- *72-Hr
- *4-Day

Special Requirements

Regulations: _____
 Data Enhancement/RCP? Y N
 Enhanced Data Package Y N
 Required Detection Limits: per contract
 Other: _____

***Matrix Code:**

SG= SOIL GAS
 IA= INDOOR AIR
 AMB= AMBIENT
 SS= SUB SLAB
 D= DUP
 BL= BLANK
 O= other

****Media Codes:**

S= summa can
 T= tedlar bag
 P= PUF
 T= tube
 F= filter
 C= cassette
 O= Other

** TURNAROUND TIME STARTS AT 9:00 AM. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.



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Fax: 413-525-6405
Email: info@contestlabs.com
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AIR SAMPLE CHAIN OF CUSTODY RECORD

39 SPRUCE ST
EAST LONGMEADOW, MA 01028

Page 2 of 2
DOC#284
Rev. July 2010

Company Name: EA Engineering

Address: 2374 Post Road
Suite 102
Paul Theroux

Telephone: (401) 736-3440
Project #: 14687.01
Client PO #

Project Location: Alvarex High School, Providence, RI

Sampled By: P.T. and M.T.
Email: ptheroux@eaest.com

Proposal Provided? (For Billing purposes)
 Yes No

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT
Format: EXCEL PDF GIS KEY OTHER

Date Sampled	Start	Stop	Total	Flow Rate	Volume	Matrix Code*
Date	Date	Date	Minutes	M ³ /Min. or L / Min.	Liters or M ³	
4/13/12	0945	4/13/12	1012			AMB

Field ID	Sample Description	Media	Lab #	Summa Canister ID	Flow Controller ID
Ambient	S		09	1114	4080

Laboratory Comments:

CLIENT COMMENTS:
regulator gauge not functioning

Relinquished by: (signature) *[Signature]* Date/Time: 4/13/12 12:10

Received by: (signature) *[Signature]* Date/Time: 4/13/12 12:10

Relinquished by: (signature) *[Signature]* Date/Time: 4/13/12 1:30

Received by: (signature) *[Signature]* Date/Time: 4/13/12 1:30

Turnaround **

7-Day
 10-Day
 Other

RUSH *

*24-Hr *48-Hr
 *72-Hr *4-Day

Special Requirements

Regulations: _____

Data Enhancement/RCP? Y N
Enhanced Data Package Y N
(Surcharge Applies)

Required Detection Limits: *per contract*

***Matrix Code:**
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = other

****Media Codes:**
S = Summa can
T = Tedlar bag
P = PUF
T = tube
F = filter
C = cassette
O = Other

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT. AIHA, NELAP & WBE/DBE Certified



39 Spruce St.
 East Longmeadow, MA.
 01028
 P: 413-525-2332
 F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME: EA Engineering RECEIVED BY: PB DATE: 4/10/12

- 1) Was the chain(s) of custody relinquished and signed? Yes No
- 2) Does the chain agree with the samples? Yes No
 If not, explain:
- 3) Are all the samples in good condition? Yes No
 If not, explain:
- 4) Are there any samples "On Hold"? Yes No Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified _____ Date _____ Time _____

6) Location where samples are stored: Air Lab
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

Air Media received at Con-Test

		# of Containers	Types (Size, Duration)
Air Sampling Media	Summa Cans	9	6 lit
	Tedlar Bags		
	Tubes		
Flow Controllers	Regulators	9	30 min
	Restrictors		
Extras	Tubing		
	Other		

Unused Summas: 1509 1114 1878
 1301 1304 1504
 1840 1064
 1075

Unused Regulators: 4081 4080 4038
 4075 4107 4094
 4039 4042 4074

- 1) Was all media (used & unused checked into the WASP?
- 2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

July 13, 2012

Paul Theroux
EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886

Project Location: 14687.01 - Alvarez High School
Client Job Number:
Project Number: 14687.01
Laboratory Work Order Number: 12G0139

Enclosed are results of analyses for samples received by the laboratory on July 3, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa A. Worthington
Project Manager

EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886
ATTN: Paul Theroux

REPORT DATE: 7/13/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14687.01

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12G0139

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

PROJECT LOCATION: 14687.01 - Alvarez High School

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Rm 152	12G0139-01	Indoor air		EPA TO-15	
Ambient	12G0139-02	Ambient Air		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Bromoform

B054885-BS1

EPA TO-15

Initial and continuing calibrations met all required performance standards for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative.

Laboratory control sample recoveries and sample replicate RPDs were all within limits specified by the method for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative. Recovery limits of 50-150% are used for propene, acetone, ethanol, isopropanol, ethyl acetate, tetrahydrofuran, cyclohexane, heptane, 2-hexanone, 4-ethyltoluene, n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and 1,1,1,2-tetrachloroethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

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.



Michael A. Erickson
Laboratory Director

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: Rm 152
Sample ID: 12G0139-01
 Sample Matrix: Indoor air
 Sampled: 7/2/2012 11:56

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1499
 Canister Size: 6 liter
 Flow Controller ID: 4177
 Sample Type: 30 min

Work Order: 12G0139
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -4.6
 Flow Controller Type: fixed orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	8.7	1.2		21	2.9	0.6	7/6/12 9:32	TPH	
Acrylonitrile	ND	0.17		ND	0.37	0.6	7/6/12 9:32	TPH	
Benzene	0.089	0.030		0.29	0.096	0.6	7/6/12 9:32	TPH	
Bromodichloromethane	ND	0.015		ND	0.10	0.6	7/6/12 9:32	TPH	
Bromoform	ND	0.030		ND	0.31	0.6	7/6/12 9:32	TPH	
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	7/6/12 9:32	TPH	
n-Butylbenzene	ND	0.086		ND	0.47	0.6	7/6/12 9:32	TPH	
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	7/6/12 9:32	TPH	
Carbon Tetrachloride	0.062	0.015		0.39	0.094	0.6	7/6/12 9:32	TPH	
Chlorobenzene	ND	0.030		ND	0.14	0.6	7/6/12 9:32	TPH	
Chloroethane	ND	0.030		ND	0.079	0.6	7/6/12 9:32	TPH	
Chloroform	0.020	0.015		0.100	0.073	0.6	7/6/12 9:32	TPH	
Chloromethane	0.75	0.030		1.5	0.062	0.6	7/6/12 9:32	TPH	
Dibromochloromethane	ND	0.015		ND	0.13	0.6	7/6/12 9:32	TPH	
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	7/6/12 9:32	TPH	
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12 9:32	TPH	
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12 9:32	TPH	
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12 9:32	TPH	
Dichlorodifluoromethane (Freon 12)	0.55	0.030		2.7	0.15	0.6	7/6/12 9:32	TPH	
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	7/6/12 9:32	TPH	
1,2-Dichloroethane	ND	0.015		ND	0.061	0.6	7/6/12 9:32	TPH	
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12 9:32	TPH	
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12 9:32	TPH	
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12 9:32	TPH	
1,2-Dichloropropane	ND	0.015		ND	0.069	0.6	7/6/12 9:32	TPH	
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	7/6/12 9:32	TPH	
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	7/6/12 9:32	TPH	
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	7/6/12 9:32	TPH	
Ethylbenzene	ND	0.030		ND	0.13	0.6	7/6/12 9:32	TPH	
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	7/6/12 9:32	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	7/6/12 9:32	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	7/6/12 9:32	TPH	
Methylene Chloride	ND	0.30		ND	1.0	0.6	7/6/12 9:32	TPH	
4-Methyl-2-pentanone (MIBK)	0.033	0.030		0.14	0.12	0.6	7/6/12 9:32	TPH	
Styrene	ND	0.030		ND	0.13	0.6	7/6/12 9:32	TPH	
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	7/6/12 9:32	TPH	
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	7/6/12 9:32	TPH	

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: Rm 152
Sample ID: 12G0139-01
 Sample Matrix: Indoor air
 Sampled: 7/2/2012 11:56

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1499
 Canister Size: 6 liter
 Flow Controller ID: 4177
 Sample Type: 30 min

Work Order: 12G0139
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -4
 Receipt Vacuum(in Hg): -4.6
 Flow Controller Type: fixed orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.028	0.015		0.19	0.10	0.6	7/6/12	9:32	TPH
Toluene	0.15	0.030		0.55	0.11	0.6	7/6/12	9:32	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	7/6/12	9:32	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	7/6/12	9:32	TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	7/6/12	9:32	TPH
Trichlorofluoromethane (Freon 11)	0.28	0.030		1.5	0.17	0.6	7/6/12	9:32	TPH
1,2,4-Trimethylbenzene	ND	0.030		ND	0.15	0.6	7/6/12	9:32	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	7/6/12	9:32	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	7/6/12	9:32	TPH
m&p-Xylene	ND	0.060		ND	0.26	0.6	7/6/12	9:32	TPH
o-Xylene	ND	0.030		ND	0.13	0.6	7/6/12	9:32	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	107	70-130	7/6/12 9:32
4-Bromofluorobenzene (2)	117	70-130	7/6/12 9:32

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: Ambient
Sample ID: 12G0139-02
 Sample Matrix: Ambient Air
 Sampled: 7/2/2012 12:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1152
 Canister Size: 6 liter
 Flow Controller ID: 4105
 Sample Type: 30 min

Work Order: 12G0139
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -6.8
 Flow Controller Type: fixed orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	3.8	1.2		9.1	2.9	0.6	7/6/12	8:44	TPH
Acrylonitrile	ND	0.17		ND	0.37	0.6	7/6/12	8:44	TPH
Benzene	0.045	0.030		0.14	0.096	0.6	7/6/12	8:44	TPH
Bromodichloromethane	ND	0.015		ND	0.10	0.6	7/6/12	8:44	TPH
Bromoform	ND	0.030		ND	0.31	0.6	7/6/12	8:44	TPH
2-Butanone (MEK)	ND	1.2		ND	3.5	0.6	7/6/12	8:44	TPH
n-Butylbenzene	ND	0.086		ND	0.47	0.6	7/6/12	8:44	TPH
sec-Butylbenzene	ND	0.068		ND	0.38	0.6	7/6/12	8:44	TPH
Carbon Tetrachloride	0.064	0.015		0.40	0.094	0.6	7/6/12	8:44	TPH
Chlorobenzene	ND	0.030		ND	0.14	0.6	7/6/12	8:44	TPH
Chloroethane	ND	0.030		ND	0.079	0.6	7/6/12	8:44	TPH
Chloroform	0.019	0.015		0.094	0.073	0.6	7/6/12	8:44	TPH
Chloromethane	0.51	0.030		1.1	0.062	0.6	7/6/12	8:44	TPH
Dibromochloromethane	ND	0.015		ND	0.13	0.6	7/6/12	8:44	TPH
1,2-Dibromoethane (EDB)	ND	0.015		ND	0.12	0.6	7/6/12	8:44	TPH
1,2-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12	8:44	TPH
1,3-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12	8:44	TPH
1,4-Dichlorobenzene	ND	0.030		ND	0.18	0.6	7/6/12	8:44	TPH
Dichlorodifluoromethane (Freon 12)	0.51	0.030		2.5	0.15	0.6	7/6/12	8:44	TPH
1,1-Dichloroethane	ND	0.015		ND	0.061	0.6	7/6/12	8:44	TPH
1,2-Dichloroethane	ND	0.015		ND	0.061	0.6	7/6/12	8:44	TPH
1,1-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12	8:44	TPH
cis-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12	8:44	TPH
trans-1,2-Dichloroethylene	ND	0.015		ND	0.059	0.6	7/6/12	8:44	TPH
1,2-Dichloropropane	ND	0.015		ND	0.069	0.6	7/6/12	8:44	TPH
1,3-Dichloropropane	ND	0.081		ND	0.37	0.6	7/6/12	8:44	TPH
cis-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	7/6/12	8:44	TPH
trans-1,3-Dichloropropene	ND	0.015		ND	0.068	0.6	7/6/12	8:44	TPH
Ethylbenzene	ND	0.030		ND	0.13	0.6	7/6/12	8:44	TPH
Isopropylbenzene (Cumene)	ND	0.076		ND	0.37	0.6	7/6/12	8:44	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.068		ND	0.38	0.6	7/6/12	8:44	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.030		ND	0.11	0.6	7/6/12	8:44	TPH
Methylene Chloride	ND	0.30		ND	1.0	0.6	7/6/12	8:44	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.030		ND	0.12	0.6	7/6/12	8:44	TPH
Styrene	ND	0.030		ND	0.13	0.6	7/6/12	8:44	TPH
1,1,1,2-Tetrachloroethane	ND	0.055		ND	0.37	0.6	7/6/12	8:44	TPH
1,1,2,2-Tetrachloroethane	ND	0.015		ND	0.10	0.6	7/6/12	8:44	TPH

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: Ambient
Sample ID: 12G0139-02
 Sample Matrix: Ambient Air
 Sampled: 7/2/2012 12:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1152
 Canister Size: 6 liter
 Flow Controller ID: 4105
 Sample Type: 30 min

Work Order: 12G0139
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -8
 Receipt Vacuum(in Hg): -6.8
 Flow Controller Type: fixed orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	0.019	0.015		0.13	0.10	0.6	7/6/12	8:44	TPH
Toluene	0.15	0.030		0.55	0.11	0.6	7/6/12	8:44	TPH
1,1,1-Trichloroethane	ND	0.015		ND	0.082	0.6	7/6/12	8:44	TPH
1,1,2-Trichloroethane	ND	0.015		ND	0.082	0.6	7/6/12	8:44	TPH
Trichloroethylene	ND	0.015		ND	0.081	0.6	7/6/12	8:44	TPH
Trichlorofluoromethane (Freon 11)	0.32	0.030		1.8	0.17	0.6	7/6/12	8:44	TPH
1,2,4-Trimethylbenzene	ND	0.030		ND	0.15	0.6	7/6/12	8:44	TPH
1,3,5-Trimethylbenzene	ND	0.030		ND	0.15	0.6	7/6/12	8:44	TPH
Vinyl Chloride	ND	0.015		ND	0.038	0.6	7/6/12	8:44	TPH
m&p-Xylene	ND	0.060		ND	0.26	0.6	7/6/12	8:44	TPH
o-Xylene	ND	0.030		ND	0.13	0.6	7/6/12	8:44	TPH

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	107	70-130	7/6/12	8:44
4-Bromofluorobenzene (2)	118	70-130	7/6/12	8:44

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
12G0139-01 [Rm 152]	B054885	1.5	1	N/A	1000	400	1000	07/05/12
12G0139-02 [Ambient]	B054885	1.5	1	N/A	1000	400	1000	07/05/12

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD Limit	Flag
	Results	RL	Results	RL	ppbv	Result	%REC Limits	RPD		

Batch B054885 - TO-15 Prep

Blank (B054885-BLK1)

Prepared & Analyzed: 07/05/12

Acetone	ND	1.0
Acrylonitrile	ND	0.14
Benzene	ND	0.025
Bromodichloromethane	ND	0.012
Bromoform	ND	0.025
2-Butanone (MEK)	ND	1.0
n-Butylbenzene	ND	0.072
sec-Butylbenzene	ND	0.057
Carbon Tetrachloride	ND	0.012
Chlorobenzene	ND	0.025
Chloroethane	ND	0.025
Chloroform	ND	0.012
Chloromethane	ND	0.025
Dibromochloromethane	ND	0.012
1,2-Dibromoethane (EDB)	ND	0.012
1,2-Dichlorobenzene	ND	0.025
1,3-Dichlorobenzene	ND	0.025
1,4-Dichlorobenzene	ND	0.025
Dichlorodifluoromethane (Freon 12)	ND	0.025
1,1-Dichloroethane	ND	0.012
1,2-Dichloroethane	ND	0.012
1,1-Dichloroethylene	ND	0.012
cis-1,2-Dichloroethylene	ND	0.012
trans-1,2-Dichloroethylene	ND	0.012
1,2-Dichloropropane	ND	0.012
1,3-Dichloropropane	ND	0.068
cis-1,3-Dichloropropene	ND	0.012
trans-1,3-Dichloropropene	ND	0.012
Ethylbenzene	ND	0.025
Isopropylbenzene (Cumene)	ND	0.064
p-Isopropyltoluene (p-Cymene)	ND	0.057
Methyl tert-Butyl Ether (MTBE)	ND	0.025
Methylene Chloride	ND	0.25
4-Methyl-2-pentanone (MIBK)	ND	0.025
Styrene	ND	0.025
1,1,1,2-Tetrachloroethane	ND	0.046
1,1,2,2-Tetrachloroethane	ND	0.012
Tetrachloroethylene	ND	0.012
Toluene	ND	0.025
1,1,1-Trichloroethane	ND	0.012
1,1,2-Trichloroethane	ND	0.012
Trichloroethylene	ND	0.012
Trichlorofluoromethane (Freon 11)	ND	0.025
1,2,4-Trimethylbenzene	ND	0.025
1,3,5-Trimethylbenzene	ND	0.025
Vinyl Chloride	ND	0.012

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

Batch B054885 - TO-15 Prep

Blank (B054885-BLK1)

Prepared & Analyzed: 07/05/12

m&p-Xylene	ND	0.050									
o-Xylene	ND	0.025									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.63				8.00	108	70-130				
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.77				8.00	110	70-130				

LCS (B054885-BS1)

Prepared & Analyzed: 07/05/12

Acetone	4.78				5.00	95.7	50-150				
Acrylonitrile	2.58				2.88	89.7	70-130				
Benzene	4.23				5.00	84.6	70-130				
Bromodichloromethane	4.70				5.00	94.0	70-130				
Bromoform	6.30				5.00	126	70-130				V-06
2-Butanone (MEK)	4.72				5.00	94.3	70-130				
n-Butylbenzene	1.45				1.14	127	50-150				
sec-Butylbenzene	1.42				1.14	125	50-150				
Carbon Tetrachloride	5.14				5.00	103	70-130				
Chlorobenzene	4.63				5.00	92.6	70-130				
Chloroethane	5.80				5.00	116	70-130				
Chloroform	5.25				5.00	105	70-130				
Chloromethane	5.07				5.00	101	70-130				
Dibromochloromethane	5.56				5.00	111	70-130				
1,2-Dibromoethane (EDB)	4.96				5.00	99.1	70-130				
1,2-Dichlorobenzene	4.84				5.00	96.8	70-130				
1,3-Dichlorobenzene	4.96				5.00	99.2	70-130				
1,4-Dichlorobenzene	4.84				5.00	96.8	70-130				
Dichlorodifluoromethane (Freon 12)	5.89				5.00	118	70-130				
1,1-Dichloroethane	4.83				5.00	96.6	70-130				
1,2-Dichloroethane	4.77				5.00	95.4	70-130				
1,1-Dichloroethylene	4.72				5.00	94.4	70-130				
cis-1,2-Dichloroethylene	4.80				5.00	96.0	70-130				
trans-1,2-Dichloroethylene	4.50				5.00	90.0	70-130				
1,2-Dichloropropane	4.22				5.00	84.4	70-130				
1,3-Dichloropropane	1.43				1.35	106	70-130				
cis-1,3-Dichloropropene	4.74				5.00	94.8	70-130				
trans-1,3-Dichloropropene	4.47				5.00	89.5	70-130				
Ethylbenzene	4.65				5.00	93.0	70-130				
Isopropylbenzene (Cumene)	1.51				1.27	119	70-130				
p-Isopropyltoluene (p-Cymene)	1.35				1.14	118	50-150				
Methyl tert-Butyl Ether (MTBE)	4.89				5.00	97.8	70-130				
Methylene Chloride	4.91				5.00	98.2	70-130				
4-Methyl-2-pentanone (MIBK)	3.89				5.00	77.8	70-130				
Styrene	4.86				5.00	97.3	70-130				
1,1,1,2-Tetrachloroethane	1.12				0.910	123	50-150				
1,1,2,2-Tetrachloroethane	4.79				5.00	95.8	70-130				
Tetrachloroethylene	4.91				5.00	98.2	70-130				
Toluene	4.60				5.00	91.9	70-130				
1,1,1-Trichloroethane	4.55				5.00	90.9	70-130				
1,1,2-Trichloroethane	4.70				5.00	94.0	70-130				

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Limit	Flag
	Results	RL	Results	RL	ppbv	Result	%REC				

Batch B054885 - TO-15 Prep

LCS (B054885-BS1)

Prepared & Analyzed: 07/05/12

Trichloroethylene	4.63				5.00		92.6			70-130	
Trichlorofluoromethane (Freon 11)	5.59				5.00		112			70-130	
1,2,4-Trimethylbenzene	4.77				5.00		95.4			70-130	
1,3,5-Trimethylbenzene	4.78				5.00		95.5			70-130	
Vinyl Chloride	5.53				5.00		111			70-130	
m&p-Xylene	9.54				10.0		95.4			70-130	
o-Xylene	4.78				5.00		95.6			70-130	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.54</i>				<i>8.00</i>		<i>107</i>			<i>70-130</i>	
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>8.92</i>				<i>8.00</i>		<i>112</i>			<i>70-130</i>	

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY
Acrylonitrile	AIHA,NJ
Benzene	AIHA,FL,NJ,NY
Bromodichloromethane	AIHA,NJ,NY
Bromoform	AIHA,NJ,NY
2-Butanone (MEK)	AIHA,FL,NJ,NY
n-Butylbenzene	AIHA
sec-Butylbenzene	AIHA
Carbon Tetrachloride	AIHA,FL,NJ,NY
Chlorobenzene	AIHA,FL,NJ,NY
Chloroethane	AIHA,FL,NJ,NY
Chloroform	AIHA,FL,NJ,NY
Chloromethane	AIHA,FL,NJ,NY
Dibromochloromethane	AIHA,NY
1,2-Dibromoethane (EDB)	AIHA,NJ,NY
1,2-Dichlorobenzene	AIHA,FL,NJ,NY
1,3-Dichlorobenzene	AIHA,NJ,NY
1,4-Dichlorobenzene	AIHA,FL,NJ,NY
Dichlorodifluoromethane (Freon 12)	AIHA,NY
1,1-Dichloroethane	AIHA,FL,NJ,NY
1,2-Dichloroethane	AIHA,FL,NJ,NY
1,1-Dichloroethylene	AIHA,FL,NJ,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
trans-1,2-Dichloroethylene	AIHA,NJ,NY
1,2-Dichloropropane	AIHA,FL,NJ,NY
1,3-Dichloropropane	AIHA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY
trans-1,3-Dichloropropene	AIHA,NY
Ethylbenzene	AIHA,FL,NJ,NY
Isopropylbenzene (Cumene)	AIHA,NJ,NY
p-Isopropyltoluene (p-Cymene)	AIHA
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY
Methylene Chloride	AIHA,FL,NJ,NY
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY
Styrene	AIHA,FL,NJ,NY
1,1,1,2-Tetrachloroethane	AIHA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY
Tetrachloroethylene	AIHA,FL,NJ,NY
Toluene	AIHA,FL,NJ,NY
1,1,1-Trichloroethane	AIHA,FL,NJ,NY
1,1,2-Trichloroethane	AIHA,FL,NJ,NY
Trichloroethylene	AIHA,FL,NJ,NY
Trichlorofluoromethane (Freon 11)	AIHA,NY
1,2,4-Trimethylbenzene	AIHA,NJ,NY
1,3,5-Trimethylbenzene	AIHA,NJ,NY
Vinyl Chloride	AIHA,FL,NJ,NY
m&p-Xylene	AIHA,FL,NJ,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
---------	----------------

EPA TO-15 in Air

o-Xylene AIHA,FL,NJ,NY

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



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Email: info@contestlabs.com

1960139

www.contestlabs.com

RECORDER

39 SPRUCE ST
EAST LONGMEADOW, MA 01028

Company Name: EA Engineering
Address: 2374 Post Road, Suite 102
Warwick, RI 02886

Telephone: (401) 736-3440
Project # 14687.01
Client PO #

Attention: Paul Theroux

Project Location: Alvarez High School - Providence, RI

Sampled By: Paul Theroux

Proposal Provided? (For Billing purposes)

Yes No proposal date

DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT
Email: _____
Fax #: _____
Format: EXCEL PDF GIS KEY OTHER

ONLY USE WHEN USING PUMPS

TO-15 SIM per contract

Field ID	Sample Description	Media	Lab #	Date Sampled		Total Minutes Sampled	Flow Rate M ³ /Min. or L / Min.	Volume Liters or M ³	Matrix Code*	ANALYSIS REQUESTED		Summa Canister ID	Flow Controller ID
				Start Date Time	Stop Date Time					"	Hg		
Rm 152		S	01	7/2/12	7/2/12				IA	✓		1499	4177
Ambient	Ambient Outdoor Air	S	02	7/2/12 1148	7/2/12 1218				AMB	✓	30+	8 1552	4105

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)

Turnaround **

Special Requirements

Matrix Code:

Media Codes:

Received by: (signature)

7-Day
 10-Day
 Other _____

Regulations: _____
Data Enhancement/RCP? Y N
Enhanced Data Package Y N
(Surcharge Applies)
Required Detection Limits: _____
Other: _____

SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = other

S = summa can
T = tedar bag
P = PUF
T = tube
F = filter
C = cassette
O = Other

Relinquished by: (signature)

*24-Hr *48-Hr
 *72-Hr *4-Day

RUSH *

Approval Required

Date/Time: 7/3/12 1940

Received by: (signature)

Date/Time: 7/3/12 1940

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.



39 Spruce St.
 East Longmeadow, MA.
 01028
 P: 413-525-2332
 F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME: EA Engineering RECEIVED BY: PB DATE: 7.3.12

1) Was the chain(s) of custody relinquished and signed? Yes No

2) Does the chain agree with the samples? Yes No
 If not, explain:

3) Are all the samples in good condition? Yes No
 If not, explain:

4) Are there any samples "On Hold"? Yes No Stored where:

5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified _____ Date _____ Time _____

6) Location where samples are stored: Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

Containers received at Con-Test		
	# of Containers	Types (Size, Duration)
Summa Cans	2	6 Lit
Tedlar Bags		
Tubes		
Regulators	2	30 min
Restrictors		
Tubing		
Other		

Unused Summas: 1499
 1152

Unused Regulators: 4177
 4105

1) Was all media (used & unused checked into the WASP?

2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

APPENDIX C

Subslab Vapor Analytical Summary and Lab Report

Table 2: Summary of Subslab Air Sampling Data - Alvarez School Project - Volatile Organic Compounds
February 2008 - July 2012

Volatile Organic Compounds via TO-15		MP-1		MP-2		MP-3		MP-4		MP-5		MP-6		MP-7		MP-8		IMP-1		IMP-2		IMP-3	
Sample Date	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual
Chloromethane	8-Feb-08 27-Mar-08 25-Apr-08 29-May-08 27-Jun-08 31-Jul-08 28-Aug-08 30-Sep-08 27-Oct-08 25-Nov-08 18-Dec-08 21-Jan-09 25-Feb-09 26-Mar-09 23-Apr-09 22-Jul-09 9-Oct-09 15-Jan-10 21-Apr-10 16-Jul-10 15-Oct-10 26-Jan-11 28-Feb-11 27-Apr-11 26-Jul-11 28-Oct-11 23-Jan-12 13-Apr-12 2-Jul-12 (resample)	2.440 NS NS NS 3.800 NS NS NS 1.000 NS NS NS 1.000 NS NS 18.500 NS 2.440 NS 1.320 NS NS 10.300 NS 1.230 3.450 NS 0.210 NS NS	U U	NS 2.670 2.440 NS NS 4.640 NS NS NS 1.000 1.000 NS NS 12.200 22.400 497.000 NS 2.440 NS 3.250 62.800 NS NS 10.300 NS 1.230 3.450 1.000 NS 0.210 NS NS	U U	NS NS NS 2.440 NS NS NS 1.000 NS NS 1.000 NS 1.000 NS NS 32.000 NS 2.440 NS NS 1.480 NS NS NS NS 1.030 NS 1.030 NS 0.210 NS NS	U U	NS 2.440 NS NS 2.440 NS NS 1.000 NS NS NS NS 1.000 NS NS 41.900 NS 2.440 NS NS 12.200 7.790 NS 1.030 NS NS NS 5.160 NS NS 0.210 NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U
Dibromochloromethane	8-Feb-08 27-Mar-08 25-Apr-08 29-May-08 27-Jun-08 31-Jul-08 28-Aug-08 30-Sep-08 27-Oct-08 25-Nov-08 18-Dec-08 21-Jan-09 25-Feb-09 26-Mar-09 29-Apr-09 22-Jul-09 9-Oct-09 15-Jan-10 21-Apr-10 16-Jul-10 15-Oct-10 26-Jan-11 28-Feb-11 27-Apr-11 26-Jul-11 28-Oct-11 23-Jan-12 13-Apr-12 2-Jul-12 (resample)	0.100 NS NS NS 0.150 NS NS NS 4.200 NS NS NS 4.200 NS NS NS NS NS 0.480 NS 0.480 NS 0.096 NS 0.096 NS 0.170 NS 0.170 NS 1.700 NS NS NS 0.568 NS 0.850 NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U								
1,2-Dibromoethane	8-Feb-08 27-Mar-08 25-Apr-08 29-May-08 27-Jun-08 31-Jul-08 28-Aug-08 30-Sep-08 27-Oct-08 25-Nov-08 18-Dec-08 21-Jan-09 25-Feb-09 26-Mar-09 29-Apr-09 22-Jul-09 9-Oct-09 15-Jan-10 21-Apr-10 16-Jul-10 15-Oct-10 26-Jan-11 28-Feb-11 27-Apr-11 26-Jul-11 28-Oct-11 23-Jan-12 13-Apr-12 2-Jul-12 (resample)	0.150 NS NS NS 0.239 NS NS NS NS NS NS NS 0.150 NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U	NS NS	U U						

Table 2: Summary of Subslab Air Sampling Data - Alvarez School Project - Volatile Organic Compounds
February 2008 - July 2012

Volatile Organic Compounds via TO-15	Sample Date	MP-1	MP-2	MP-3	MP-4	MP-5	MP-6	MP-7	MP-8	IMP-1	IMP-2	IMP-3	
		Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	Qual	
p/m-Xylene	8-Feb-08	0.550	NS	NS	NS	0.630	NS	NS	NS	1.040	18.300	NS	
	27-Mar-08	0.893	NS	NS	NS	NS	0.389	NS	NS	NS	2.170	1.330	
	25-Apr-08	NS	NS	0.815	NS	NS	NS	0.970	NS	2.540	NS	1.810	
	29-May-08	NS	NS	NS	5.000	NS	NS	NS	7.580	10.100	3.340	NS	
	27-Jun-08	12.600	NS	NS	NS	1.500	NS	NS	NS	NS	1.910	2.330	
	31-Jul-08	NS	2.400	NS	NS	NS	NS	NS	NS	2.080	NS	1.550	
	28-Aug-08	NS	NS	2.330	NS	NS	1.440	NS	2.130	NS	1.940	NS	
	30-Sep-08	NS	NS	NS	4.300	U	NS	NS	4.300	U	NS	4.300	U
	27-Oct-08	41.600	NS	NS	NS	4.300	U	NS	NS	NS	4.300	NS	4.300
	25-Nov-08	NS	4.700	NS	NS	NS	NS	4.300	U	NS	8.500	8.900	NS
	18-Dec-08	NS	NS	4.300	U	NS	NS	4.300	U	NS	NS	4.300	U
	21-Jan-09	NS	NS	NS	4.300	U	NS	NS	NS	4.300	U	NS	4.300
	25-Feb-09	37.600	NS	NS	NS	4.300	U	NS	NS	NS	8.000	9.300	NS
	26-Mar-09	NS	1.350	NS	NS	NS	1.740	U	NS	NS	NS	2.590	3.560
	29-Apr-09	NS	NS	0.468	NS	NS	NS	0.516	NS	NS	0.933	NS	1.060
	22-Jul-09	25.600	NS	25.600	1.740	U	NS	3.880	NS	NS	165.000	3.520	NS
	9-Oct-09	NS	1.620	NS	NS	1.630	NS	NS	0.915	36.200	U	1.740	1.700
	15-Jan-10	18.400	NS	1.520	NS	1.480	NS	1.760	NS	NS	2.350	2.650	NS
	21-Apr-10	NS	0.703	NS	NS	NS	3.280	NS	4.580	4.340	6.220	NS	4.770
	16-Jul-10	21.800	NS	7.010	6.360	NS	NS	4.820	NS	NS	4.950	4.910	NS
	15-Oct-10	NS	1.810	NS	NS	2.180	NS	NS	1.700	1.880	3.400	NS	2.880
	26-Jan-11	3.080	4.240	NS	4.370	NS	3.060	NS	11.500	3.170	13.600	NS	NS
	28-Feb-11	NS	NS	1.740	U	NS	NS	NS	NS	NS	NS	NS	NS
	27-Apr-11	NS	0.694	NS	NS	0.707	NS	NS	0.889	1.150	1.090	NS	1.440
	26-Jul-11	9.990	NS	3.960	NS	1.020	NS	0.999	NS	NS	0.956	1.260	NS
	28-Oct-11	NS	4.300	U	NS	4.300	U	NS	4.300	U	4.300	NS	4.300
	23-Jan-12	7.900	NS	2.000	NS	1.300	NS	2.000	NS	NS	4.400	14.000	NS
	13-Apr-12	NS	0.870	U	NS	NS	0.870	U	NS	U	0.870	3.600	1.100
	2-Jul-12 (resample)	NS	NS	NS	NS	NS	NS	NS	NS	U	NS	4.300	NS
	o-Xylene	8-Feb-08	0.200	NS	NS	NS	0.230	NS	NS	NS	0.480	7.730	NS
		27-Mar-08	NS	0.273	NS	NS	NS	0.142	NS	NS	NS	0.844	0.478
		25-Apr-08	NS	0.370	NS	NS	NS	NS	0.406	NS	NS	0.735	0.620
29-May-08		NS	NS	NS	1.480	NS	NS	NS	2.260	2.840	1.020	NS	
27-Jun-08		4.120	NS	NS	NS	0.550	NS	NS	NS	NS	0.672	0.794	
31-Jul-08		NS	0.835	NS	NS	NS	NS	NS	NS	NS	0.748	0.564	
28-Aug-08		NS	NS	0.804	NS	NS	NS	0.511	NS	NS	0.797	0.725	
30-Sep-08		NS	NS	NS	2.200	U	NS	NS	NS	2.200	U	2.200	U
27-Oct-08		9.800	NS	NS	NS	2.200	U	NS	NS	NS	2.200	NS	4.000
25-Nov-08		NS	2.200	U	NS	NS	NS	2.200	U	NS	N	2.200	NS
18-Dec-08		NS	NS	2.200	U	NS	NS	NS	2.200	U	NS	2.200	U
21-Jan-09		NS	NS	NS	2.200	U	NS	NS	NS	2.200	U	NS	2.200
25-Feb-09		8.900	NS	NS	NS	NS	2.200	U	NS	NS	2.200	NS	NS
26-Mar-09		NS	0.486	NS	NS	NS	0.868	U	NS	NS	NS	0.922	1.280
29-Apr-09		NS	0.174	NS	NS	NS	NS	NS	0.208	NS	0.369	NS	0.499
22-Jul-09		5.340	NS	5.340	0.868	U	NS	1.390	NS	NS	72.700	1.270	NS
9-Oct-09		NS	0.542	NS	NS	0.586	NS	NS	0.343	18.100	U	0.629	0.616
15-Jan-10		4.510	NS	0.490	NS	0.490	NS	0.560	NS	NS	NS	0.833	0.846
21-Apr-10		NS	0.256	NS	NS	1.170	NS	NS	1.560	1.410	NS	1.240	1.140
16-Jul-10		5.070	NS	2.840	NS	2.630	NS	2.100	NS	NS	NS	1.880	2.050
15-Oct-10		NS	0.672	NS	NS	NS	0.837	NS	0.659	0.729	NS	1.220	NS
26-Jan-11		1.080	1.500	NS	1.540	NS	NS	1.110	NS	1.150	NS	4.320	NS
28-Feb-11		NS	NS	0.868	NS	NS	NS	NS	NS	NS	NS	NS	NS
27-Apr-11		NS	0.286	U	NS	NS	0.286	NS	0.369	0.456	NS	0.451	NS
26-Jul-11		1.870	NS	1.450	NS	0.334	NS	0.434	U	NS	NS	0.365	0.434
28-Oct-11		NS	2.200	U	NS	NS	2.200	U	NS	2.200	U	3.300	NS
23-Jan-12		2.300	NS	0.760	NS	0.540	NS	0.790	NS	NS	NS	1.700	4.600
13-Apr-12		NS	0.430	U	NS	NS	0.430	U	NS	U	0.430	NS	0.430
2-Jul-12 (resample)		NS	NS	NS	NS	NS	NS	NS	NS	U	NS	2.200	NS

Notes:
 All data presented in micrograms per cubic meter (ug/m3).
 U: designation indicates that the compound was not detected by the laboratory. Reporting limit shown in the data column.
 NS: not sampled.
 * = Site Specific Compound of Concern per ATSDR Health Consultation, December 4, 2006.

April 24, 2012

Paul Theroux
EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886

Project Location: Alvarex High School
Client Job Number:
Project Number: 14687.01
Laboratory Work Order Number: 12D0510

Enclosed are results of analyses for samples received by the laboratory on April 13, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa A. Worthington
Project Manager

EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886
ATTN: Paul Theroux

REPORT DATE: 4/24/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14687.01

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12D0510

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

PROJECT LOCATION: Alvarex High School

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MP-2	12D0510-01	Sub Slab		EPA TO-15	
MP-5	12D0510-02	Sub Slab		EPA TO-15	
MP-7	12D0510-03	Sub Slab		EPA TO-15	
MP-8	12D0510-04	Sub Slab		EPA TO-15	
IMP-1	12D0510-05	Sub Slab		EPA TO-15	
IMP-3	12D0510-06	Sub Slab		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Acrylonitrile
B050122-BS1

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

4-Methyl-2-pentanone (MIBK)

12D0510-01[MP-2], 12D0510-02[MP-5], 12D0510-03[MP-7], 12D0510-04[MP-8], 12D0510-05[IMP-1], 12D0510-06[IMP-3], B050122-BLK1, B050122-BS1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Acrylonitrile
B050122-BS1

EPA TO-15

Initial and continuing calibrations met all required performance standards for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative.

Laboratory control sample recoveries and sample replicate RPDs were all within limits specified by the method for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative. Recovery limits of 50-150% are used for propene, acetone, ethanol, isopropanol, ethyl acetate, tetrahydrofuran, cyclohexane, heptane, 2-hexanone, 4-ethyltoluene, n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and 1,1,1,2-tetrachloroethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

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.



Michael A. Erickson
Laboratory Director

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-2
Sample ID: 12D0510-01
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1735
 Canister Size: 6 liter
 Flow Controller ID: 4071
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	13	4.0		32	9.5	2	4/20/12 23:21	TPH	
Acrylonitrile	ND	0.58		ND	1.2	2	4/20/12 23:21	TPH	
Benzene	ND	0.10		ND	0.32	2	4/20/12 23:21	TPH	
Bromodichloromethane	ND	0.050		ND	0.34	2	4/20/12 23:21	TPH	
Bromoform	ND	0.10		ND	1.0	2	4/20/12 23:21	TPH	
2-Butanone (MEK)	5.4	4.0		16	12	2	4/20/12 23:21	TPH	
n-Butylbenzene	ND	0.29		ND	1.6	2	4/20/12 23:21	TPH	
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/20/12 23:21	TPH	
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/20/12 23:21	TPH	
Chlorobenzene	ND	0.10		ND	0.46	2	4/20/12 23:21	TPH	
Chloroethane	ND	0.10		ND	0.26	2	4/20/12 23:21	TPH	
Chloroform	ND	0.050		ND	0.24	2	4/20/12 23:21	TPH	
Chloromethane	ND	0.10		ND	0.21	2	4/20/12 23:21	TPH	
Dibromochloromethane	ND	0.10		ND	0.85	2	4/20/12 23:21	TPH	
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/20/12 23:21	TPH	
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/20/12 23:21	TPH	
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	4/20/12 23:21	TPH	
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/20/12 23:21	TPH	
Dichlorodifluoromethane (Freon 12)	0.51	0.10		2.5	0.49	2	4/20/12 23:21	TPH	
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/20/12 23:21	TPH	
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/20/12 23:21	TPH	
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/20/12 23:21	TPH	
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/20/12 23:21	TPH	
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/20/12 23:21	TPH	
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/20/12 23:21	TPH	
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/20/12 23:21	TPH	
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/20/12 23:21	TPH	
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/20/12 23:21	TPH	
Ethylbenzene	ND	0.10		ND	0.43	2	4/20/12 23:21	TPH	
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/20/12 23:21	TPH	
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/20/12 23:21	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/20/12 23:21	TPH	
Methylene Chloride	1.3	1.0		4.6	3.5	2	4/20/12 23:21	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/20/12 23:21	TPH	
Styrene	ND	0.10		ND	0.43	2	4/20/12 23:21	TPH	
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/20/12 23:21	TPH	
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/20/12 23:21	TPH	

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-2
Sample ID: 12D0510-01
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:18

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1735
 Canister Size: 6 liter
 Flow Controller ID: 4071
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -9
 Receipt Vacuum(in Hg): -8.6
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	2.8	0.050		19	0.34	2	4/20/12 23:21	TPH
Toluene	0.20	0.10		0.75	0.38	2	4/20/12 23:21	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/20/12 23:21	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/20/12 23:21	TPH
Trichloroethylene	ND	0.050		ND	0.27	2	4/20/12 23:21	TPH
Trichlorofluoromethane (Freon 11)	0.34	0.10		1.9	0.56	2	4/20/12 23:21	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	4/20/12 23:21	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	4/20/12 23:21	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/20/12 23:21	TPH
m&p-Xylene	ND	0.20		ND	0.87	2	4/20/12 23:21	TPH
o-Xylene	ND	0.10		ND	0.43	2	4/20/12 23:21	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	117	70-130	4/20/12 23:21
4-Bromofluorobenzene (2)	117	70-130	4/20/12 23:21

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-5
Sample ID: 12D0510-02
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:37

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1853
 Canister Size: 6 liter
 Flow Controller ID: 4069
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -5.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	29	4.0		70	9.5	2	4/21/12	0:01	TPH
Acrylonitrile	ND	0.58		ND	1.2	2	4/21/12	0:01	TPH
Benzene	ND	0.10		ND	0.32	2	4/21/12	0:01	TPH
Bromodichloromethane	ND	0.050		ND	0.34	2	4/21/12	0:01	TPH
Bromoform	ND	0.10		ND	1.0	2	4/21/12	0:01	TPH
2-Butanone (MEK)	25	4.0		74	12	2	4/21/12	0:01	TPH
n-Butylbenzene	ND	0.29		ND	1.6	2	4/21/12	0:01	TPH
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/21/12	0:01	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/21/12	0:01	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	4/21/12	0:01	TPH
Chloroethane	ND	0.10		ND	0.26	2	4/21/12	0:01	TPH
Chloroform	ND	0.050		ND	0.24	2	4/21/12	0:01	TPH
Chloromethane	ND	0.10		ND	0.21	2	4/21/12	0:01	TPH
Dibromochloromethane	ND	0.10		ND	0.85	2	4/21/12	0:01	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/21/12	0:01	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	0:01	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	0:01	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	0:01	TPH
Dichlorodifluoromethane (Freon 12)	0.59	0.10		2.9	0.49	2	4/21/12	0:01	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	0:01	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	0:01	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	0:01	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	0:01	TPH
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	0:01	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/21/12	0:01	TPH
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/21/12	0:01	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	0:01	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	0:01	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	4/21/12	0:01	TPH
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/21/12	0:01	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/21/12	0:01	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/21/12	0:01	TPH
Methylene Chloride	2.1	1.0		7.3	3.5	2	4/21/12	0:01	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/21/12	0:01	TPH
Styrene	ND	0.10		ND	0.43	2	4/21/12	0:01	TPH
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/21/12	0:01	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/21/12	0:01	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-5
Sample ID: 12D0510-02
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:37

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1853
 Canister Size: 6 liter
 Flow Controller ID: 4069
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -5.5
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	2.7	0.050		18	0.34	2	4/21/12 0:01	TPH
Toluene	ND	0.10		ND	0.38	2	4/21/12 0:01	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12 0:01	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12 0:01	TPH
Trichloroethylene	16	0.050		83	0.27	2	4/21/12 0:01	TPH
Trichlorofluoromethane (Freon 11)	2.6	0.10		15	0.56	2	4/21/12 0:01	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12 0:01	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12 0:01	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/21/12 0:01	TPH
m&p-Xylene	ND	0.20		ND	0.87	2	4/21/12 0:01	TPH
o-Xylene	ND	0.10		ND	0.43	2	4/21/12 0:01	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	120	70-130	4/21/12 0:01
4-Bromofluorobenzene (2)	120	70-130	4/21/12 0:01

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-7
Sample ID: 12D0510-03
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:34

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1083
 Canister Size: 6 liter
 Flow Controller ID: 4076
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -3.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Acetone	14	4.0		32	9.5	2	4/21/12 0:39	TPH
Acrylonitrile	ND	0.58		ND	1.2	2	4/21/12 0:39	TPH
Benzene	ND	0.10		ND	0.32	2	4/21/12 0:39	TPH
Bromodichloromethane	ND	0.050		ND	0.34	2	4/21/12 0:39	TPH
Bromoform	ND	0.10		ND	1.0	2	4/21/12 0:39	TPH
2-Butanone (MEK)	ND	4.0		ND	12	2	4/21/12 0:39	TPH
n-Butylbenzene	ND	0.29		ND	1.6	2	4/21/12 0:39	TPH
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/21/12 0:39	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/21/12 0:39	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	4/21/12 0:39	TPH
Chloroethane	ND	0.10		ND	0.26	2	4/21/12 0:39	TPH
Chloroform	ND	0.050		ND	0.24	2	4/21/12 0:39	TPH
Chloromethane	ND	0.10		ND	0.21	2	4/21/12 0:39	TPH
Dibromochloromethane	ND	0.10		ND	0.85	2	4/21/12 0:39	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/21/12 0:39	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12 0:39	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12 0:39	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12 0:39	TPH
Dichlorodifluoromethane (Freon 12)	0.49	0.10		2.4	0.49	2	4/21/12 0:39	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12 0:39	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12 0:39	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12 0:39	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12 0:39	TPH
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12 0:39	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/21/12 0:39	TPH
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/21/12 0:39	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12 0:39	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12 0:39	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	4/21/12 0:39	TPH
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/21/12 0:39	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/21/12 0:39	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/21/12 0:39	TPH
Methylene Chloride	ND	1.0		ND	3.5	2	4/21/12 0:39	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/21/12 0:39	TPH
Styrene	ND	0.10		ND	0.43	2	4/21/12 0:39	TPH
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/21/12 0:39	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/21/12 0:39	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-7
Sample ID: 12D0510-03
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:34

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1083
 Canister Size: 6 liter
 Flow Controller ID: 4076
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -3.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time Analyzed	Analyst
	Results	RL		Results	RL			
Tetrachloroethylene	1.7	0.050		12	0.34	2	4/21/12 0:39	TPH
Toluene	ND	0.10		ND	0.38	2	4/21/12 0:39	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12 0:39	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12 0:39	TPH
Trichloroethylene	0.27	0.050		1.5	0.27	2	4/21/12 0:39	TPH
Trichlorofluoromethane (Freon 11)	1.1	0.10		6.4	0.56	2	4/21/12 0:39	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12 0:39	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12 0:39	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/21/12 0:39	TPH
m&p-Xylene	ND	0.20		ND	0.87	2	4/21/12 0:39	TPH
o-Xylene	ND	0.10		ND	0.43	2	4/21/12 0:39	TPH

Surrogates	% Recovery	% REC Limits	Date/Time Analyzed
4-Bromofluorobenzene (1)	115	70-130	4/21/12 0:39
4-Bromofluorobenzene (2)	114	70-130	4/21/12 0:39

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-8
Sample ID: 12D0510-04
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:25

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1859
 Canister Size: 6 liter
 Flow Controller ID: 4068
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -6.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Acetone	35	4.0		83	9.5	2	4/21/12	1:19	TPH
Acrylonitrile	ND	0.58		ND	1.2	2	4/21/12	1:19	TPH
Benzene	ND	0.10		ND	0.32	2	4/21/12	1:19	TPH
Bromodichloromethane	ND	0.050		ND	0.34	2	4/21/12	1:19	TPH
Bromoform	ND	0.10		ND	1.0	2	4/21/12	1:19	TPH
2-Butanone (MEK)	ND	4.0		ND	12	2	4/21/12	1:19	TPH
n-Butylbenzene	ND	0.29		ND	1.6	2	4/21/12	1:19	TPH
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/21/12	1:19	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/21/12	1:19	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	4/21/12	1:19	TPH
Chloroethane	ND	0.10		ND	0.26	2	4/21/12	1:19	TPH
Chloroform	ND	0.050		ND	0.24	2	4/21/12	1:19	TPH
Chloromethane	ND	0.10		ND	0.21	2	4/21/12	1:19	TPH
Dibromochloromethane	ND	0.10		ND	0.85	2	4/21/12	1:19	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/21/12	1:19	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	1:19	TPH
1,3-Dichlorobenzene	0.33	0.10		2.0	0.60	2	4/21/12	1:19	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	1:19	TPH
Dichlorodifluoromethane (Freon 12)	0.66	0.10		3.2	0.49	2	4/21/12	1:19	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	1:19	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	1:19	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:19	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:19	TPH
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:19	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/21/12	1:19	TPH
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/21/12	1:19	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	1:19	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	1:19	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	4/21/12	1:19	TPH
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/21/12	1:19	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/21/12	1:19	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/21/12	1:19	TPH
Methylene Chloride	1.3	1.0		4.6	3.5	2	4/21/12	1:19	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/21/12	1:19	TPH
Styrene	ND	0.10		ND	0.43	2	4/21/12	1:19	TPH
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/21/12	1:19	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/21/12	1:19	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: MP-8
Sample ID: 12D0510-04
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 10:25

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1859
 Canister Size: 6 liter
 Flow Controller ID: 4068
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): -6
 Receipt Vacuum(in Hg): -6.4
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	2.6	0.050		18	0.34	2	4/21/12	1:19	TPH
Toluene	0.35	0.10		1.3	0.38	2	4/21/12	1:19	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	1:19	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	1:19	TPH
Trichloroethylene	ND	0.050		ND	0.27	2	4/21/12	1:19	TPH
Trichlorofluoromethane (Freon 11)	0.37	0.10		2.1	0.56	2	4/21/12	1:19	TPH
1,2,4-Trimethylbenzene	0.23	0.10		1.1	0.49	2	4/21/12	1:19	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12	1:19	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/21/12	1:19	TPH
m&p-Xylene	0.20	0.20		0.87	0.87	2	4/21/12	1:19	TPH
o-Xylene	ND	0.10		ND	0.43	2	4/21/12	1:19	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	122	70-130	4/21/12 1:19
4-Bromofluorobenzene (2)	122	70-130	4/21/12 1:19

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: IMP-1
Sample ID: 12D0510-05
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 09:06

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1664
 Canister Size: 6 liter
 Flow Controller ID: 4077
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -4.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	23	4.0		54	9.5	2	4/21/12	1:58	TPH
Acrylonitrile	ND	0.58		ND	1.2	2	4/21/12	1:58	TPH
Benzene	ND	0.10		ND	0.32	2	4/21/12	1:58	TPH
Bromodichloromethane	ND	0.050		ND	0.34	2	4/21/12	1:58	TPH
Bromoform	ND	0.10		ND	1.0	2	4/21/12	1:58	TPH
2-Butanone (MEK)	ND	4.0		ND	12	2	4/21/12	1:58	TPH
n-Butylbenzene	ND	0.29		ND	1.6	2	4/21/12	1:58	TPH
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/21/12	1:58	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/21/12	1:58	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	4/21/12	1:58	TPH
Chloroethane	ND	0.10		ND	0.26	2	4/21/12	1:58	TPH
Chloroform	ND	0.050		ND	0.24	2	4/21/12	1:58	TPH
Chloromethane	0.59	0.10		1.2	0.21	2	4/21/12	1:58	TPH
Dibromochloromethane	ND	0.10		ND	0.85	2	4/21/12	1:58	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/21/12	1:58	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	1:58	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	1:58	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	1:58	TPH
Dichlorodifluoromethane (Freon 12)	0.50	0.10		2.5	0.49	2	4/21/12	1:58	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	1:58	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	1:58	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:58	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:58	TPH
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	1:58	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/21/12	1:58	TPH
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/21/12	1:58	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	1:58	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	1:58	TPH
Ethylbenzene	0.33	0.10		1.5	0.43	2	4/21/12	1:58	TPH
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/21/12	1:58	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/21/12	1:58	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/21/12	1:58	TPH
Methylene Chloride	1.1	1.0		3.9	3.5	2	4/21/12	1:58	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/21/12	1:58	TPH
Styrene	ND	0.10		ND	0.43	2	4/21/12	1:58	TPH
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/21/12	1:58	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/21/12	1:58	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: IMP-1
Sample ID: 12D0510-05
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 09:06

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1664
 Canister Size: 6 liter
 Flow Controller ID: 4077
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -4.3
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	2.7	0.050		18	0.34	2	4/21/12	1:58	TPH
Toluene	0.63	0.10		2.4	0.38	2	4/21/12	1:58	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	1:58	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	1:58	TPH
Trichloroethylene	ND	0.050		ND	0.27	2	4/21/12	1:58	TPH
Trichlorofluoromethane (Freon 11)	0.35	0.10		2.0	0.56	2	4/21/12	1:58	TPH
1,2,4-Trimethylbenzene	0.79	0.10		3.9	0.49	2	4/21/12	1:58	TPH
1,3,5-Trimethylbenzene	0.23	0.10		1.1	0.49	2	4/21/12	1:58	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/21/12	1:58	TPH
m&p-Xylene	0.82	0.20		3.6	0.87	2	4/21/12	1:58	TPH
o-Xylene	0.33	0.10		1.4	0.43	2	4/21/12	1:58	TPH

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	115	70-130	4/21/12	1:58
4-Bromofluorobenzene (2)	116	70-130	4/21/12	1:58

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: IMP-3
Sample ID: 12D0510-06
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 09:01

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1130
 Canister Size: 6 liter
 Flow Controller ID: 4070
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): -.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Acetone	18	4.0		43	9.5	2	4/21/12	2:36	TPH
Acrylonitrile	ND	0.58		ND	1.2	2	4/21/12	2:36	TPH
Benzene	ND	0.10		ND	0.32	2	4/21/12	2:36	TPH
Bromodichloromethane	ND	0.050		ND	0.34	2	4/21/12	2:36	TPH
Bromoform	ND	0.10		ND	1.0	2	4/21/12	2:36	TPH
2-Butanone (MEK)	ND	4.0		ND	12	2	4/21/12	2:36	TPH
n-Butylbenzene	ND	0.29		ND	1.6	2	4/21/12	2:36	TPH
sec-Butylbenzene	ND	0.23		ND	1.3	2	4/21/12	2:36	TPH
Carbon Tetrachloride	ND	0.050		ND	0.31	2	4/21/12	2:36	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	4/21/12	2:36	TPH
Chloroethane	ND	0.10		ND	0.26	2	4/21/12	2:36	TPH
Chloroform	ND	0.050		ND	0.24	2	4/21/12	2:36	TPH
Chloromethane	0.47	0.10		0.97	0.21	2	4/21/12	2:36	TPH
Dibromochloromethane	ND	0.10		ND	0.85	2	4/21/12	2:36	TPH
1,2-Dibromoethane (EDB)	ND	0.050		ND	0.38	2	4/21/12	2:36	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	2:36	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	2:36	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	4/21/12	2:36	TPH
Dichlorodifluoromethane (Freon 12)	0.56	0.10		2.8	0.49	2	4/21/12	2:36	TPH
1,1-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	2:36	TPH
1,2-Dichloroethane	ND	0.050		ND	0.20	2	4/21/12	2:36	TPH
1,1-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	2:36	TPH
cis-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	2:36	TPH
trans-1,2-Dichloroethylene	ND	0.050		ND	0.20	2	4/21/12	2:36	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	4/21/12	2:36	TPH
1,3-Dichloropropane	ND	0.27		ND	1.2	2	4/21/12	2:36	TPH
cis-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	2:36	TPH
trans-1,3-Dichloropropene	ND	0.050		ND	0.23	2	4/21/12	2:36	TPH
Ethylbenzene	ND	0.10		ND	0.43	2	4/21/12	2:36	TPH
Isopropylbenzene (Cumene)	ND	0.25		ND	1.2	2	4/21/12	2:36	TPH
p-Isopropyltoluene (p-Cymene)	ND	0.23		ND	1.3	2	4/21/12	2:36	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.10		ND	0.36	2	4/21/12	2:36	TPH
Methylene Chloride	ND	1.0		ND	3.5	2	4/21/12	2:36	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.10	L-03	ND	0.41	2	4/21/12	2:36	TPH
Styrene	ND	0.10		ND	0.43	2	4/21/12	2:36	TPH
1,1,1,2-Tetrachloroethane	ND	0.18		ND	1.2	2	4/21/12	2:36	TPH
1,1,2,2-Tetrachloroethane	ND	0.050		ND	0.34	2	4/21/12	2:36	TPH

ANALYTICAL RESULTS

Project Location: Alvarex High School
 Date Received: 4/13/2012
Field Sample #: IMP-3
Sample ID: 12D0510-06
 Sample Matrix: Sub Slab
 Sampled: 4/13/2012 09:01

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1130
 Canister Size: 6 liter
 Flow Controller ID: 4070
 Sample Type: 30 min

Work Order: 12D0510
 Initial Vacuum(in Hg): -30
 Final Vacuum(in Hg): 0
 Receipt Vacuum(in Hg): -.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	2.2	0.050		15	0.34	2	4/21/12	2:36	TPH
Toluene	0.39	0.10		1.5	0.38	2	4/21/12	2:36	TPH
1,1,1-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	2:36	TPH
1,1,2-Trichloroethane	ND	0.050		ND	0.27	2	4/21/12	2:36	TPH
Trichloroethylene	0.76	0.050		4.1	0.27	2	4/21/12	2:36	TPH
Trichlorofluoromethane (Freon 11)	1.6	0.10		8.8	0.56	2	4/21/12	2:36	TPH
1,2,4-Trimethylbenzene	0.26	0.10		1.3	0.49	2	4/21/12	2:36	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	4/21/12	2:36	TPH
Vinyl Chloride	ND	0.050		ND	0.13	2	4/21/12	2:36	TPH
m&p-Xylene	0.25	0.20		1.1	0.87	2	4/21/12	2:36	TPH
o-Xylene	ND	0.10		ND	0.43	2	4/21/12	2:36	TPH

Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	119	70-130	4/21/12	2:36
4-Bromofluorobenzene (2)	117	70-130	4/21/12	2:36

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
12D0510-01 [MP-2]	B050122	1	1	N/A	1000	400	200	04/20/12
12D0510-02 [MP-5]	B050122	1	1	N/A	1000	400	200	04/20/12
12D0510-03 [MP-7]	B050122	1	1	N/A	1000	400	200	04/20/12
12D0510-04 [MP-8]	B050122	1	1	N/A	1000	400	200	04/20/12
12D0510-05 [IMP-1]	B050122	1	1	N/A	1000	400	200	04/20/12
12D0510-06 [IMP-3]	B050122	1	1	N/A	1000	400	200	04/20/12

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD Limit	Flag
	Results	RL	Results	RL	ppbv	Result	%REC Limits	RPD		

Batch B050122 - TO-15 Prep

Blank (B050122-BLK1)

Prepared & Analyzed: 04/20/12

Acetone	ND	0.80
Acrylonitrile	ND	0.12
Benzene	ND	0.020
Bromodichloromethane	ND	0.010
Bromoform	ND	0.020
2-Butanone (MEK)	ND	0.80
n-Butylbenzene	ND	0.058
sec-Butylbenzene	ND	0.046
Carbon Tetrachloride	ND	0.010
Chlorobenzene	ND	0.020
Chloroethane	ND	0.020
Chloroform	ND	0.010
Chloromethane	ND	0.020
Dibromochloromethane	ND	0.020
1,2-Dibromoethane (EDB)	ND	0.010
1,2-Dichlorobenzene	ND	0.020
1,3-Dichlorobenzene	ND	0.020
1,4-Dichlorobenzene	ND	0.020
Dichlorodifluoromethane (Freon 12)	ND	0.020
1,1-Dichloroethane	ND	0.010
1,2-Dichloroethane	ND	0.010
1,1-Dichloroethylene	ND	0.010
cis-1,2-Dichloroethylene	ND	0.010
trans-1,2-Dichloroethylene	ND	0.010
1,2-Dichloropropane	ND	0.020
1,3-Dichloropropane	ND	0.054
cis-1,3-Dichloropropene	ND	0.010
trans-1,3-Dichloropropene	ND	0.010
Ethylbenzene	ND	0.020
Isopropylbenzene (Cumene)	ND	0.051
p-Isopropyltoluene (p-Cymene)	ND	0.046
Methyl tert-Butyl Ether (MTBE)	ND	0.020
Methylene Chloride	ND	0.20
4-Methyl-2-pentanone (MIBK)	ND	0.020
Styrene	ND	0.020
1,1,1,2-Tetrachloroethane	ND	0.036
1,1,2,2-Tetrachloroethane	ND	0.010
Tetrachloroethylene	ND	0.010
Toluene	ND	0.020
1,1,1-Trichloroethane	ND	0.010
1,1,2-Trichloroethane	ND	0.010
Trichloroethylene	ND	0.010
Trichlorofluoromethane (Freon 11)	ND	0.020
1,2,4-Trimethylbenzene	ND	0.020
1,3,5-Trimethylbenzene	ND	0.020
Vinyl Chloride	ND	0.010

L-03

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		
Batch B050122 - TO-15 Prep											
Blank (B050122-BLK1)						Prepared & Analyzed: 04/20/12					
m&p-Xylene	ND	0.040									
o-Xylene	ND	0.020									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.46				8.00		106	70-130			
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.23				8.00		103	70-130			
LCS (B050122-BS1)						Prepared & Analyzed: 04/20/12					
Acetone	5.52				5.00		110	50-150			
Acrylonitrile	5.29				2.88		184 *	70-130			L-01, V-06
Benzene	3.91				5.00		78.2	70-130			
Bromodichloromethane	4.38				5.00		87.5	70-130			
Bromoform	4.65				5.00		93.0	70-130			
2-Butanone (MEK)	3.77				5.00		75.3	70-130			
n-Butylbenzene	1.25				1.14		109	50-150			
sec-Butylbenzene	1.18				1.14		104	50-150			
Carbon Tetrachloride	4.42				5.00		88.3	70-130			
Chlorobenzene	4.48				5.00		89.6	70-130			
Chloroethane	5.21				5.00		104	70-130			
Chloroform	5.01				5.00		100	70-130			
Chloromethane	4.41				5.00		88.3	70-130			
Dibromochloromethane	4.43				5.00		88.6	70-130			
1,2-Dibromoethane (EDB)	4.30				5.00		86.0	70-130			
1,2-Dichlorobenzene	5.14				5.00		103	70-130			
1,3-Dichlorobenzene	4.96				5.00		99.1	70-130			
1,4-Dichlorobenzene	4.84				5.00		96.8	70-130			
Dichlorodifluoromethane (Freon 12)	4.83				5.00		96.7	70-130			
1,1-Dichloroethane	4.78				5.00		95.6	70-130			
1,2-Dichloroethane	4.50				5.00		90.0	70-130			
1,1-Dichloroethylene	4.51				5.00		90.2	70-130			
cis-1,2-Dichloroethylene	4.78				5.00		95.7	70-130			
trans-1,2-Dichloroethylene	4.51				5.00		90.3	70-130			
1,2-Dichloropropane	4.21				5.00		84.3	70-130			
1,3-Dichloropropane	1.24				1.35		91.8	70-130			
cis-1,3-Dichloropropene	4.52				5.00		90.5	70-130			
trans-1,3-Dichloropropene	4.20				5.00		84.1	70-130			
Ethylbenzene	4.26				5.00		85.2	70-130			
Isopropylbenzene (Cumene)	1.20				1.27		94.3	70-130			
p-Isopropyltoluene (p-Cymene)	1.25				1.14		110	50-150			
Methyl tert-Butyl Ether (MTBE)	4.72				5.00		94.3	70-130			
Methylene Chloride	4.23				5.00		84.7	70-130			
4-Methyl-2-pentanone (MIBK)	3.43				5.00		68.5 *	70-130			L-03
Styrene	4.49				5.00		89.7	70-130			
1,1,1,2-Tetrachloroethane	0.866				0.910		95.2	50-150			
1,1,2,2-Tetrachloroethane	4.48				5.00		89.6	70-130			
Tetrachloroethylene	5.03				5.00		101	70-130			
Toluene	4.26				5.00		85.2	70-130			
1,1,1-Trichloroethane	4.18				5.00		83.6	70-130			
1,1,2-Trichloroethane	4.64				5.00		92.8	70-130			

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Limit	Flag
	Results	RL	Results	RL	ppbv	Result	%REC				

Batch B050122 - TO-15 Prep

LCS (B050122-BS1)

Prepared & Analyzed: 04/20/12

Trichloroethylene	4.38				5.00		87.5			70-130	
Trichlorofluoromethane (Freon 11)	4.90				5.00		97.9			70-130	
1,2,4-Trimethylbenzene	4.55				5.00		91.0			70-130	
1,3,5-Trimethylbenzene	4.40				5.00		87.9			70-130	
Vinyl Chloride	4.65				5.00		93.1			70-130	
m&p-Xylene	8.56				10.0		85.6			70-130	
o-Xylene	4.23				5.00		84.7			70-130	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.63				8.00		108			70-130	
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.70				8.00		109			70-130	

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- L-01 Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
 - L-03 Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the low side.
 - V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY
Acrylonitrile	AIHA,NJ
Benzene	AIHA,FL,NJ,NY
Bromodichloromethane	AIHA,NJ,NY
Bromoform	AIHA,NJ,NY
2-Butanone (MEK)	AIHA,FL,NJ,NY
n-Butylbenzene	AIHA
sec-Butylbenzene	AIHA
Carbon Tetrachloride	AIHA,FL,NJ,NY
Chlorobenzene	AIHA,FL,NJ,NY
Chloroethane	AIHA,FL,NJ,NY
Chloroform	AIHA,FL,NJ,NY
Chloromethane	AIHA,FL,NJ,NY
Dibromochloromethane	AIHA,NY
1,2-Dibromoethane (EDB)	AIHA,NJ,NY
1,2-Dichlorobenzene	AIHA,FL,NJ,NY
1,3-Dichlorobenzene	AIHA,NJ,NY
1,4-Dichlorobenzene	AIHA,FL,NJ,NY
Dichlorodifluoromethane (Freon 12)	AIHA,NY
1,1-Dichloroethane	AIHA,FL,NJ,NY
1,2-Dichloroethane	AIHA,FL,NJ,NY
1,1-Dichloroethylene	AIHA,FL,NJ,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
trans-1,2-Dichloroethylene	AIHA,NJ,NY
1,2-Dichloropropane	AIHA,FL,NJ,NY
1,3-Dichloropropane	AIHA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY
trans-1,3-Dichloropropene	AIHA,NY
Ethylbenzene	AIHA,FL,NJ,NY
Isopropylbenzene (Cumene)	AIHA,NJ,NY
p-Isopropyltoluene (p-Cymene)	AIHA
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY
Methylene Chloride	AIHA,FL,NJ,NY
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY
Styrene	AIHA,FL,NJ,NY
1,1,1,2-Tetrachloroethane	AIHA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY
Tetrachloroethylene	AIHA,FL,NJ,NY
Toluene	AIHA,FL,NJ,NY
1,1,1-Trichloroethane	AIHA,FL,NJ,NY
1,1,2-Trichloroethane	AIHA,FL,NJ,NY
Trichloroethylene	AIHA,FL,NJ,NY
Trichlorofluoromethane (Freon 11)	AIHA,NY
1,2,4-Trimethylbenzene	AIHA,NJ,NY
1,3,5-Trimethylbenzene	AIHA,NJ,NY
Vinyl Chloride	AIHA,FL,NJ,NY
m&p-Xylene	AIHA,FL,NJ,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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EPA TO-15 in Air

o-Xylene AIHA,FL,NJ,NY

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2012
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2012
FL	Florida Department of Health	E871027 NELAP	06/30/2012
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



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

12D0510

AIR SAMPLE CHAIN OF CUSTODY RECORD
 39 SPRUCE ST
 EAST LONGMEADOW, MA 01028

Page 1 of 1
 DOC#284
 Rev. July 2010

Company Name: EA Engineering
 Address: 2374 Post Road
 Suite 102
 Paul Theroux
 Attention: Paul Theroux
 Project Location: Alvarex High School, Providence, RI
 Sampled By: P. T. and M. T.

Telephone: (401) 736-3440
 Project #: 14687.01
 Client PO #
 DATA DELIVERY (check one):
 FAX EMAIL WEBSITE CLIENT
 Fax #: (401) 736-3423
 Email: ptheroux@eaest.com
 Format: EXCEL PDF GIS KEY OTHER

Proposal Provided? (For Billing purposes)
 yes no

Field ID	Sample Description	Media Lab #	Date Sampled		Total Minutes Sampled	Flow Rate M ³ /Min. or L/Min.	Volume Liters or M ³	Matrix Code*	TO-15 SIM per contract	"Hg	Flow Controller ID	
			Start Time	Stop Time								
MP-2	S	01	4/13/12 0948	4/13/12 1018				SS	✓	309	1735	4071
MP-5	S	02	4/13/12 1009	4/13/12 1037				SS	✓	296	1853	4069
MP-7	S	03	4/13/12 1004	4/13/12 1034				SS	✓	303	1083	4076
MP-8	S	04	4/13/12 0956	4/13/12 1025				SS	✓	306	1859	4068
IMP-1	S	05	4/13/12 0836	4/13/12 0906				SS	✓	293	1664	4077
IMP-3	S	06	4/13/12 0832	4/13/12 0901				SS	✓	300	1130	4070

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature) Date/Time: 4/13/12 1210
 Received by: (signature) Date/Time: 4/13/12 1215
 Reindustrialized by: (signature) Date/Time: 4/13/12 1700
 Received by: (signature) Date/Time: 4/13/12 1200

Turnaround **
 7-Day
 10-Day
 Other
 RUSH *
 *24-Hr *48-Hr
 *72-Hr *4-Day
 Approval Required

Special Requirements
 Regulations:
 Data Enhancement/RCP? Y N
 Enhanced Data Package Y N
 (Surcharge Applies)
 Required Detection Limits: per Contract
 Other:

*Matrix Code:
 SG = SOIL GAS
 IA = INDOOR AIR
 AMB = AMBIENT
 SS = SUB SLAB
 D = DUP
 BL = BLANK
 O = other
 **Media Codes:
 S = summa can
 T = tedlar bag
 P = PUF
 T = tube
 F = filter
 C = cassette
 O = Other

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.
 AIHA, NELAP & WBE/DBE Certified



39 Spruce St.
 East Longmeadow, MA.
 01028
 P: 413-525-2332
 F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME: EA Engineering RECEIVED BY: PB DATE: 4/16/12

- 1) Was the chain(s) of custody relinquished and signed? Yes No
- 2) Does the chain agree with the samples? Yes No
 If not, explain:
- 3) Are all the samples in good condition? Yes No
 If not, explain:
- 4) Are there any samples "On Hold"? Yes No Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified _____ Date _____ Time _____

6) Location where samples are stored: Air Lab
 Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

Air Media received at Con-Test			
		# of Containers	Types (Size, Duration)
Air Sampling Media	Summa Cans	6	6 lit
	Tedlar Bags		
	Tubes		
Flow Controllers	Regulators	6	30 min
	Restrictors		
Extras	Tubing		
	Other		

Unused Summas: 1664 1859
 1130 1735
 1083 1853

Unused Regulators: 4069 4071
 4076 4070
 4068 4077

- 1) Was all media (used & unused checked into the WASP?
- 2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

July 13, 2012

Paul Theroux
EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886

Project Location: 14687.01 - Alvarez High School
Client Job Number:
Project Number: 14687.01
Laboratory Work Order Number: 12G0138

Enclosed are results of analyses for samples received by the laboratory on July 3, 2012. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Lisa A. Worthington
Project Manager

EA Engineering Science & Tech. - RI
2374 Post Road, Suite 102
Warwick, RI 02886
ATTN: Paul Theroux

REPORT DATE: 7/13/2012

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 14687.01

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 12G0138

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

PROJECT LOCATION: 14687.01 - Alvarez High School

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
IMP-2	12G0138-01	Sub Slab		EPA TO-15	

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Bromoform

B054885-BS1

EPA TO-15

Initial and continuing calibrations met all required performance standards for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative.

Laboratory control sample recoveries and sample replicate RPDs were all within limits specified by the method for RCP compounds that are Title III Clean Air Act Amendment compounds listed in table 1 of the TO-15 method unless otherwise specified in this narrative. Recovery limits of 50-150% are used for propene, acetone, ethanol, isopropanol, ethyl acetate, tetrahydrofuran, cyclohexane, heptane, 2-hexanone, 4-ethyltoluene, n-butylbenzene, sec-butylbenzene, 4-isopropyltoluene, and 1,1,1,2-tetrachloroethane.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

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.



Michael A. Erickson
Laboratory Director

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: IMP-2
Sample ID: 12G0138-01
 Sample Matrix: Sub Slab
 Sampled: 7/2/2012 12:01

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1626
 Canister Size: 6 liter
 Flow Controller ID: 4176
 Sample Type: 30 min

Work Order: 12G0138
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -4.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analized		
Acetone	ND	20		ND	48	10	7/6/12 11:37	TPH	
Acrylonitrile	ND	2.9		ND	6.2	10	7/6/12 11:37	TPH	
Benzene	ND	0.50		ND	1.6	10	7/6/12 11:37	TPH	
Bromodichloromethane	ND	0.25		ND	1.7	10	7/6/12 11:37	TPH	
Bromoform	ND	0.50		ND	5.2	10	7/6/12 11:37	TPH	
2-Butanone (MEK)	ND	20		ND	59	10	7/6/12 11:37	TPH	
n-Butylbenzene	ND	1.4		ND	7.9	10	7/6/12 11:37	TPH	
sec-Butylbenzene	ND	1.1		ND	6.3	10	7/6/12 11:37	TPH	
Carbon Tetrachloride	ND	0.25		ND	1.6	10	7/6/12 11:37	TPH	
Chlorobenzene	ND	0.50		ND	2.3	10	7/6/12 11:37	TPH	
Chloroethane	ND	0.50		ND	1.3	10	7/6/12 11:37	TPH	
Chloroform	ND	0.25		ND	1.2	10	7/6/12 11:37	TPH	
Chloromethane	0.55	0.50		1.1	1.0	10	7/6/12 11:37	TPH	
Dibromochloromethane	ND	0.25		ND	2.1	10	7/6/12 11:37	TPH	
1,2-Dibromoethane (EDB)	ND	0.25		ND	1.9	10	7/6/12 11:37	TPH	
1,2-Dichlorobenzene	ND	0.50		ND	3.0	10	7/6/12 11:37	TPH	
1,3-Dichlorobenzene	ND	0.50		ND	3.0	10	7/6/12 11:37	TPH	
1,4-Dichlorobenzene	ND	0.50		ND	3.0	10	7/6/12 11:37	TPH	
Dichlorodifluoromethane (Freon 12)	0.57	0.50		2.8	2.5	10	7/6/12 11:37	TPH	
1,1-Dichloroethane	ND	0.25		ND	1.0	10	7/6/12 11:37	TPH	
1,2-Dichloroethane	ND	0.25		ND	1.0	10	7/6/12 11:37	TPH	
1,1-Dichloroethylene	ND	0.25		ND	0.99	10	7/6/12 11:37	TPH	
cis-1,2-Dichloroethylene	ND	0.25		ND	0.99	10	7/6/12 11:37	TPH	
trans-1,2-Dichloroethylene	ND	0.25		ND	0.99	10	7/6/12 11:37	TPH	
1,2-Dichloropropane	ND	0.25		ND	1.2	10	7/6/12 11:37	TPH	
1,3-Dichloropropane	ND	1.4		ND	6.2	10	7/6/12 11:37	TPH	
cis-1,3-Dichloropropene	ND	0.25		ND	1.1	10	7/6/12 11:37	TPH	
trans-1,3-Dichloropropene	ND	0.25		ND	1.1	10	7/6/12 11:37	TPH	
Ethylbenzene	ND	0.50		ND	2.2	10	7/6/12 11:37	TPH	
Isopropylbenzene (Cumene)	ND	1.3		ND	6.2	10	7/6/12 11:37	TPH	
p-Isopropyltoluene (p-Cymene)	ND	1.1		ND	6.3	10	7/6/12 11:37	TPH	
Methyl tert-Butyl Ether (MTBE)	ND	0.50		ND	1.8	10	7/6/12 11:37	TPH	
Methylene Chloride	ND	5.0		ND	17	10	7/6/12 11:37	TPH	
4-Methyl-2-pentanone (MIBK)	ND	0.50		ND	2.0	10	7/6/12 11:37	TPH	
Styrene	ND	0.50		ND	2.1	10	7/6/12 11:37	TPH	
1,1,1,2-Tetrachloroethane	ND	0.91		ND	6.2	10	7/6/12 11:37	TPH	
1,1,2,2-Tetrachloroethane	ND	0.25		ND	1.7	10	7/6/12 11:37	TPH	

ANALYTICAL RESULTS

Project Location: 14687.01 - Alvarez High School
 Date Received: 7/3/2012
Field Sample #: IMP-2
Sample ID: 12G0138-01
 Sample Matrix: Sub Slab
 Sampled: 7/2/2012 12:01

Sample Description/Location:
 Sub Description/Location:
 Canister ID: 1626
 Canister Size: 6 liter
 Flow Controller ID: 4176
 Sample Type: 30 min

Work Order: 12G0138
 Initial Vacuum(in Hg): -29
 Final Vacuum(in Hg): -3
 Receipt Vacuum(in Hg): -4.2
 Flow Controller Type: Fixed-Orifice
 Flow Controller Calibration
 RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv		Flag	ug/m3		Dilution	Date/Time		Analyst
	Results	RL		Results	RL		Analyzed		
Tetrachloroethylene	1.4	0.25		9.6	1.7	10	7/6/12	11:37	TPH
Toluene	ND	0.50		ND	1.9	10	7/6/12	11:37	TPH
1,1,1-Trichloroethane	ND	0.25		ND	1.4	10	7/6/12	11:37	TPH
1,1,2-Trichloroethane	ND	0.25		ND	1.4	10	7/6/12	11:37	TPH
Trichloroethylene	6.0	0.25		32	1.3	10	7/6/12	11:37	TPH
Trichlorofluoromethane (Freon 11)	3.7	0.50		21	2.8	10	7/6/12	11:37	TPH
1,2,4-Trimethylbenzene	ND	0.50		ND	2.5	10	7/6/12	11:37	TPH
1,3,5-Trimethylbenzene	ND	0.50		ND	2.5	10	7/6/12	11:37	TPH
Vinyl Chloride	ND	0.25		ND	0.64	10	7/6/12	11:37	TPH
m&p-Xylene	ND	1.0		ND	4.3	10	7/6/12	11:37	TPH
o-Xylene	ND	0.50		ND	2.2	10	7/6/12	11:37	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	108	70-130	7/6/12 11:37
4-Bromofluorobenzene (2)	116	70-130	7/6/12 11:37

Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
12G0138-01 [IMP-2]	B054885	1	1	N/A	1000	400	40	07/05/12

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	

Batch B054885 - TO-15 Prep

Blank (B054885-BLK1)

Prepared & Analyzed: 07/05/12

Acetone	ND	1.0
Acrylonitrile	ND	0.14
Benzene	ND	0.025
Bromodichloromethane	ND	0.012
Bromoform	ND	0.025
2-Butanone (MEK)	ND	1.0
n-Butylbenzene	ND	0.072
sec-Butylbenzene	ND	0.057
Carbon Tetrachloride	ND	0.012
Chlorobenzene	ND	0.025
Chloroethane	ND	0.025
Chloroform	ND	0.012
Chloromethane	ND	0.025
Dibromochloromethane	ND	0.012
1,2-Dibromoethane (EDB)	ND	0.012
1,2-Dichlorobenzene	ND	0.025
1,3-Dichlorobenzene	ND	0.025
1,4-Dichlorobenzene	ND	0.025
Dichlorodifluoromethane (Freon 12)	ND	0.025
1,1-Dichloroethane	ND	0.012
1,2-Dichloroethane	ND	0.012
1,1-Dichloroethylene	ND	0.012
cis-1,2-Dichloroethylene	ND	0.012
trans-1,2-Dichloroethylene	ND	0.012
1,2-Dichloropropane	ND	0.012
1,3-Dichloropropane	ND	0.068
cis-1,3-Dichloropropene	ND	0.012
trans-1,3-Dichloropropene	ND	0.012
Ethylbenzene	ND	0.025
Isopropylbenzene (Cumene)	ND	0.064
p-Isopropyltoluene (p-Cymene)	ND	0.057
Methyl tert-Butyl Ether (MTBE)	ND	0.025
Methylene Chloride	ND	0.25
4-Methyl-2-pentanone (MIBK)	ND	0.025
Styrene	ND	0.025
1,1,1,2-Tetrachloroethane	ND	0.046
1,1,2,2-Tetrachloroethane	ND	0.012
Tetrachloroethylene	ND	0.012
Toluene	ND	0.025
1,1,1-Trichloroethane	ND	0.012
1,1,2-Trichloroethane	ND	0.012
Trichloroethylene	ND	0.012
Trichlorofluoromethane (Freon 11)	ND	0.025
1,2,4-Trimethylbenzene	ND	0.025
1,3,5-Trimethylbenzene	ND	0.025
Vinyl Chloride	ND	0.012

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	%REC	RPD	RPD	Flag
	Results	RL	Results	RL	ppbv	Result	Limits	RPD	Limit		

Batch B054885 - TO-15 Prep

Blank (B054885-BLK1)

Prepared & Analyzed: 07/05/12

m&p-Xylene	ND	0.050									
o-Xylene	ND	0.025									
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	8.63				8.00	108	70-130				
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	8.77				8.00	110	70-130				

LCS (B054885-BS1)

Prepared & Analyzed: 07/05/12

Acetone	4.78				5.00	95.7	50-150				
Acrylonitrile	2.58				2.88	89.7	70-130				
Benzene	4.23				5.00	84.6	70-130				
Bromodichloromethane	4.70				5.00	94.0	70-130				
Bromoform	6.30				5.00	126	70-130				V-06
2-Butanone (MEK)	4.72				5.00	94.3	70-130				
n-Butylbenzene	1.45				1.14	127	50-150				
sec-Butylbenzene	1.42				1.14	125	50-150				
Carbon Tetrachloride	5.14				5.00	103	70-130				
Chlorobenzene	4.63				5.00	92.6	70-130				
Chloroethane	5.80				5.00	116	70-130				
Chloroform	5.25				5.00	105	70-130				
Chloromethane	5.07				5.00	101	70-130				
Dibromochloromethane	5.56				5.00	111	70-130				
1,2-Dibromoethane (EDB)	4.96				5.00	99.1	70-130				
1,2-Dichlorobenzene	4.84				5.00	96.8	70-130				
1,3-Dichlorobenzene	4.96				5.00	99.2	70-130				
1,4-Dichlorobenzene	4.84				5.00	96.8	70-130				
Dichlorodifluoromethane (Freon 12)	5.89				5.00	118	70-130				
1,1-Dichloroethane	4.83				5.00	96.6	70-130				
1,2-Dichloroethane	4.77				5.00	95.4	70-130				
1,1-Dichloroethylene	4.72				5.00	94.4	70-130				
cis-1,2-Dichloroethylene	4.80				5.00	96.0	70-130				
trans-1,2-Dichloroethylene	4.50				5.00	90.0	70-130				
1,2-Dichloropropane	4.22				5.00	84.4	70-130				
1,3-Dichloropropane	1.43				1.35	106	70-130				
cis-1,3-Dichloropropene	4.74				5.00	94.8	70-130				
trans-1,3-Dichloropropene	4.47				5.00	89.5	70-130				
Ethylbenzene	4.65				5.00	93.0	70-130				
Isopropylbenzene (Cumene)	1.51				1.27	119	70-130				
p-Isopropyltoluene (p-Cymene)	1.35				1.14	118	50-150				
Methyl tert-Butyl Ether (MTBE)	4.89				5.00	97.8	70-130				
Methylene Chloride	4.91				5.00	98.2	70-130				
4-Methyl-2-pentanone (MIBK)	3.89				5.00	77.8	70-130				
Styrene	4.86				5.00	97.3	70-130				
1,1,1,2-Tetrachloroethane	1.12				0.910	123	50-150				
1,1,2,2-Tetrachloroethane	4.79				5.00	95.8	70-130				
Tetrachloroethylene	4.91				5.00	98.2	70-130				
Toluene	4.60				5.00	91.9	70-130				
1,1,1-Trichloroethane	4.55				5.00	90.9	70-130				
1,1,2-Trichloroethane	4.70				5.00	94.0	70-130				

QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv		ug/m3		Spike Level	Source	%REC	RPD	RPD	Limit	Flag
	Results	RL	Results	RL	ppbv	Result	%REC				

Batch B054885 - TO-15 Prep

LCS (B054885-BS1)

Prepared & Analyzed: 07/05/12

Trichloroethylene	4.63				5.00		92.6			70-130	
Trichlorofluoromethane (Freon 11)	5.59				5.00		112			70-130	
1,2,4-Trimethylbenzene	4.77				5.00		95.4			70-130	
1,3,5-Trimethylbenzene	4.78				5.00		95.5			70-130	
Vinyl Chloride	5.53				5.00		111			70-130	
m&p-Xylene	9.54				10.0		95.4			70-130	
o-Xylene	4.78				5.00		95.6			70-130	
<i>Surrogate: 4-Bromofluorobenzene (1)</i>	<i>8.54</i>				<i>8.00</i>		<i>107</i>			<i>70-130</i>	
<i>Surrogate: 4-Bromofluorobenzene (2)</i>	<i>8.92</i>				<i>8.00</i>		<i>112</i>			<i>70-130</i>	

FLAG/QUALIFIER SUMMARY

- * QC result is outside of established limits.
 - † Wide recovery limits established for difficult compound.
 - ‡ Wide RPD limits established for difficult compound.
 - # Data exceeded client recommended or regulatory level
- Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
- V-06 Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>EPA TO-15 in Air</i>	
Acetone	AIHA,NY
Acrylonitrile	AIHA,NJ
Benzene	AIHA,FL,NJ,NY
Bromodichloromethane	AIHA,NJ,NY
Bromoform	AIHA,NJ,NY
2-Butanone (MEK)	AIHA,FL,NJ,NY
n-Butylbenzene	AIHA
sec-Butylbenzene	AIHA
Carbon Tetrachloride	AIHA,FL,NJ,NY
Chlorobenzene	AIHA,FL,NJ,NY
Chloroethane	AIHA,FL,NJ,NY
Chloroform	AIHA,FL,NJ,NY
Chloromethane	AIHA,FL,NJ,NY
Dibromochloromethane	AIHA,NY
1,2-Dibromoethane (EDB)	AIHA,NJ,NY
1,2-Dichlorobenzene	AIHA,FL,NJ,NY
1,3-Dichlorobenzene	AIHA,NJ,NY
1,4-Dichlorobenzene	AIHA,FL,NJ,NY
Dichlorodifluoromethane (Freon 12)	AIHA,NY
1,1-Dichloroethane	AIHA,FL,NJ,NY
1,2-Dichloroethane	AIHA,FL,NJ,NY
1,1-Dichloroethylene	AIHA,FL,NJ,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
trans-1,2-Dichloroethylene	AIHA,NJ,NY
1,2-Dichloropropane	AIHA,FL,NJ,NY
1,3-Dichloropropane	AIHA
cis-1,3-Dichloropropene	AIHA,FL,NJ,NY
trans-1,3-Dichloropropene	AIHA,NY
Ethylbenzene	AIHA,FL,NJ,NY
Isopropylbenzene (Cumene)	AIHA,NJ,NY
p-Isopropyltoluene (p-Cymene)	AIHA
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY
Methylene Chloride	AIHA,FL,NJ,NY
4-Methyl-2-pentanone (MIBK)	AIHA,FL,NJ,NY
Styrene	AIHA,FL,NJ,NY
1,1,1,2-Tetrachloroethane	AIHA
1,1,2,2-Tetrachloroethane	AIHA,FL,NJ,NY
Tetrachloroethylene	AIHA,FL,NJ,NY
Toluene	AIHA,FL,NJ,NY
1,1,1-Trichloroethane	AIHA,FL,NJ,NY
1,1,2-Trichloroethane	AIHA,FL,NJ,NY
Trichloroethylene	AIHA,FL,NJ,NY
Trichlorofluoromethane (Freon 11)	AIHA,NY
1,2,4-Trimethylbenzene	AIHA,NJ,NY
1,3,5-Trimethylbenzene	AIHA,NJ,NY
Vinyl Chloride	AIHA,FL,NJ,NY
m&p-Xylene	AIHA,FL,NJ,NY

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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EPA TO-15 in Air

o-Xylene AIHA,FL,NJ,NY

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2014
MA	Massachusetts DEP	M-MA100	06/30/2013
CT	Connecticut Department of Public Health	PH-0567	09/30/2013
NY	New York State Department of Health	10899 NELAP	04/1/2013
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2013
RI	Rhode Island Department of Health	LAO00112	12/30/2012
NC	North Carolina Div. of Water Quality	652	12/31/2012
NJ	New Jersey DEP	MA007 NELAP	06/30/2013
FL	Florida Department of Health	E871027 NELAP	06/30/2013
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2012
WA	State of Washington Department of Ecology	C2065	02/23/2013
ME	State of Maine	2011028	06/9/2013
VA	Commonwealth of Virginia	1381	12/14/2012



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

1260138

AIR SAMPLE CHAIN OF CUSTODY RECORD

39 SPRUCE ST
 EAST LONGMEADOW, MA 01028

Page 2 of 8
 DOC# 284
 Rev. July 2010

Company Name: EA Engineering
 Address: 2374 Post Road, Suite 102
 Warwick, RI 02886

Telephone: (401) 736-3440
 Project # 14687.01
 Client PO #

Attention: Paul Theroux

Project Location: Alvarez High School - Providence, RI

Sampled By: Paul Theroux

Proposal Provided? (For Billing purposes)

yes no proposal date

Field ID	Sample Description	Media	Lab #
IMP-2		S	01

Date Sampled	Start Date	Stop Date	Total Minutes Sampled	Flow Rate M ³ /Min. or L / Min.	Volume Liters or M ³	Matrix Code*	ONLY USE WHEN USING PUMPS		
							EXCEL	PDF	GIS KEY
7/2/12	7/2/12	7/2/12	131	1201		SS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ANALYSIS REQUESTED	"Hg	Please fill out completely, sign, date and retain the yellow copy for your record.	
		Summa canisters and flow controllers must be returned within 14 days of receipt or rental fees will apply.	Summa canisters will be retained for a minimum of 14 days after sampling date prior to cleaning.
TO-15 SIM per contract	✓	29	3

Laboratory Comments:

CLIENT COMMENTS:

Relinquished by: (signature)

Date/Time: 7/3/12 17:10

Turnaround **

7-Day

Received by: (signature)

Date/Time: 7/3/12 17:10

Relinquished by: (signature)

Date/Time: 7/3/12 1940

Received by: (signature)

Date/Time: 7/3/12 1940

Approval Required

*24-Hr *48-Hr *72-Hr *4-Day

Special Requirements

Regulations: _____
 Data Enhancement/RCP? Y N
 Enhanced Data Package Y N
 (Surcharge Applies)
 Required Detection Limits: _____
 Other: _____

*Matrix Code:

SG = SOIL GAS
 IA = INDOOR AIR
 AMB = AMBIENT
 SS = SUB SLAB
 D = DUP
 BL = BLANK
 O = Other

**Media Codes:

S = summa can
 T = tedlar bag
 P = PUF
 T = tube
 F = filter
 C = cassette
 O = Other

** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

AIHA, NELAP & WBE/DBE Certified



39 Spruce St.
 East Longmeadow, MA.
 01028
 P: 413-525-2332
 F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME: EA Engineering RECEIVED BY: PB DATE: 7.3.12

- 1) Was the chain(s) of custody relinquished and signed? Yes No
- 2) Does the chain agree with the samples? Yes No
 If not, explain:
- 3) Are all the samples in good condition? Yes No
 If not, explain:
- 4) Are there any samples "On Hold"? Yes No Stored where:
- 5) Are there any RUSH or SHORT HOLDING TIME samples? Yes No
 Who was notified _____ Date _____ Time _____

6) Location where samples are stored: Permission to subcontract samples? Yes No
 (Walk-in clients only) if not already approved
 Client Signature: _____

Containers received at Con-Test		
	# of Containers	Types (Size, Duration)
Summa Cans	1	6 lit
Tedlar Bags		
Tubes		
Regulators	1	30 min
Restrictors		
Tubing		
Other		

Unused Summas: 1626

Unused Regulators: 4176

- 1) Was all media (used & unused checked into the WASP?
- 2) Were all returned summa cans, Restrictors, & Regulators documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:

APPENDIX D

Rooftop Emission Analytical Summary

APPENDIX E

Laboratory Method Reporting Limits Correspondence



39 Spruce Street
East Longmeadow, MA 01089

August 8, 2012

Mr. Ron Mack
EA Engineering Science & Technology
2350 Post Road
Warwick, RI 02886
RE: CT Remediation Standard Regulations – Work Order 12D0511

Dear Mr. Mack:

This letter is in response to the Residential Target Indoor Air numbers published in the Remediation Standard Regulations. Several of the TAC's, which are calculated based on risk, appear to be beyond the scope of the current methodologies available, as well as, the current analytical instrumentation available for these methods. The following compounds that Con-Test Laboratory had issues meeting the limits are listed below:

Bromodichloromethane
1,1,2,2-Tetrachloroethane
1,1,1,2-Tetrachloroethane
1,2-Dibromoethane

In addition to these, the following compounds were slightly higher than the TAC's due to an injection volume issue where the highest possible injection volume was not used:

1,1-Dichloroethylene
Cis-1,2-Dichloroethylene
Trans-1,2-Dichloroethylene
1,2-Dichloropropane
Vinyl Chloride

The laboratory could revise the report and evaluate the data down to the MDL and the above list would meet the required limits. Please advise.

If you have any questions please feel free to call me at (413) 525-2332 ext. 41.

Sincerely,

A handwritten signature in black ink that reads "Tod Kopyscinski". The signature is written in a cursive, somewhat stylized script.

Tod Kopyscinski
Air Laboratory Manager