

Mr. Jeffrey Crawford Rhode Island Department of Environmental Management Office of Waste Management 235 Promenade Street Providence, RI 02908-5767

Subject: December 2013 Quarterly Monitoring Report for Springfield Street School Complex

Dear Mr. Crawford:

ARCADIS US, Inc. (ARCADIS) conducted quarterly monitoring of soil gas, indoor air, the cap, and the sub-slab ventilation system between December 9, 2013 and December 11, 2013. The monitoring was performed in accordance with the *Long-Term Operation and Maintenance Plan and Site Contingency Plan* (O&M Plan) contained in the *Remedial Action Work Plan* prepared by ATC dated April 2, 1999, revised May 3, 1999 and May 9, 1999. The *Remedial Action Work Plan* (RAWP) was approved by the Rhode Island Department of Environmental Management (RIDEM) in a letter dated June 4, 1999.

This work is subject to the Limitations contained in Attachment A. Results of monitoring are provided in the following sections and in the attachments.

## **COVER MONITORING**

ARCADIS conducted a visual survey of the site on December 11, 2013 for evidence of significant soil cover erosion, or for any areas where the orange snow fencing indicator barrier was visible. ARCADIS did not observe any areas where the orange indicator barrier was visible during this monitoring event. No evidence of erosion or significant settling was observed.

## SUB-SLAB VENTILATION SYSTEM

## **Field Monitoring**

The sub-slab ventilation system was inspected by ARCADIS during the quarterly monitoring on December 9, 2013. The two elementary school blowers and the two middle school blowers were operating normally upon arrival.

ARCADIS U.S., Inc. 300 Metro Center Boulevard Suite 250 Warwick Rhode Island 02886 Tel 401.738.3887 Fax 401.732.1686 www.arcadis-us.com

#### ENVIRONMENTAL

Date: March 6, 2014

Contact: Donna H. Pallister, PE

Phone: 401.738.3887

Email: Donna.pallister@arcadis-us.com

Our ref: WK012152.0009

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Samples of influent and effluent (before and after the carbon canisters) air were collected at each blower and screened for methane, carbon dioxide, oxygen, carbon monoxide, hydrogen sulfide, and organic vapors using a Landtec GEM2000 Plus and a MiniRae 2000. Results of screening are provided on Table 1. Methane, carbon monoxide, and hydrogen sulfide were not detected in any of the samples. Organic vapors were detected in two samples (Elementary school inlets 1 and 2) at concentrations of 1.5 and 0.7 ppm, respectively. These concentrations are less than the RAWP Action Level of 5 ppm. Carbon dioxide was detected at concentrations of 0.2 to 0.4% at each location; all seven of the sample concentrations were greater than the RAWP Action Level of 1000 ppm (0.1%).

## **Soil Gas Laboratory Results**

Sub-slab soil gas samples were collected from the influent to each sub-slab ventilation system. The samples were collected in Tedlar bags and submitted to Con-Test Analytical Laboratories for analysis of volatile organic compounds (VOCs) by EPA method TO-14. Results of the analysis are summarized in Table 2, and the laboratory report is provided in Attachment B.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are provided in Table 2 for comparison purposes even though they are not directly applicable to soil gas, because it does not represent exposure point concentrations. The PELs are the average concentrations that OSHA allows to be present in a workplace without any respiratory protection or exposure controls. The concentrations detected in soil gas were well below the OSHA PELs.

## INDOOR AIR MONITORING

Indoor air monitoring was conducted on December 11, 2013 using a Landtec GEM 2000 Plus meter (methane, hydrogen sulfide, oxygen), a Mini Rae photoionization detector (organic vapors), and a Fluke 975 Airmeter (carbon dioxide, carbon monoxide). School was in session during the monitoring event. Results of monitoring are provided in the Table 3. Carbon dioxide measurements were made with a Fluke 975 Airmeter indoor air quality meter. The Fluke 975 has a range of 0 to 5,000 ppm, with a resolution of 1 ppm.

The outside temperature on December 11, 2013 was 29 °F. Carbon dioxide was measured outside in the school parking lot at 506 ppm.

All readings were below the RAWP Action Levels. Methane, carbon monoxide, hydrogen sulfide, and organic vapors were not detected, and carbon dioxide was within the expected range for an occupied building.

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Concentrations of carbon dioxide inside occupied buildings are expected to be higher than the concentrations in outdoor air because the building occupants expel carbon dioxide. Therefore, in indoor air, the concentration of carbon dioxide is typically used as an indicator of the effectiveness of the heating, ventilating, and air conditioning (HVAC) system in circulating outdoor air into the building. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) have prepared ASHRAE Standard 62.1-2007 titled Ventilation for Acceptable Indoor Air Quality. The purpose of the Standard is to specify minimum ventilation rates and other measures to provide indoor air quality that is acceptable to human occupants and that minimize adverse health effects. A discussion regarding carbon dioxide concentrations in indoor air contained in Informative Appendix C of the Standard states: "... maintaining a steady-state CO<sub>2</sub> concentration in a space of no greater than about 700 ppm above outdoor air levels will indicate that a substantial majority of visitors entering a space will be satisfied with respect to human bioeffluents (body odor)." This is the basis for ASHRAE's recommendations for concentrations of carbon dioxide in indoor air. The average concentrations measured inside the site buildings were less than 700 ppm above the ambient outdoor concentrations.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for carbon dioxide in the workplace is 5,000 ppm. All readings were below this concentration.

The control panels for the methane monitors at both schools were inspected on December 11, 2013. The methane monitor control panels had stickers that indicated that the monitors were calibrated by Diamond Technical Services within the month prior to the inspection. Diamond Technical Services calibrates the sensors on a monthly basis.

Calibration Certificates from Diamond Calibration indicate that many of the sensors read above 0 when calibrated to the zero gas. This prevents the sensors from giving a fault alarm if the reading drops below zero due to a sudden temperature change, and still provides a conservative measure of protection because the alarm limit does not change.

## **GROUNDWATER MONITORING**

The groundwater monitoring wells were sampled by ARCADIS on December 11, 2013. Prior to sampling, the depth to water was gauged, and a volume of water equivalent to approximately three well volumes was removed from the well. Groundwater samples were collected in laboratory prepared sample jars and delivered under chain-of-custody protocol to Contest Laboratory in East Longmeadow, Massachusetts for analysis for volatile organic compounds by EPA method 8260. The laboratory report is provided as Attachment B. Results of analysis of groundwater samples are summarized in Table 4.

The only target analytes detected in any of the wells were chlorobenzene and 1,4dichlorobenzene which were detected in a sample collected from monitoring well ATC-4 at concentrations of 1.4 and 2.3  $\mu$ g/L, respectively. The GB groundwater standard for chlorobenzene of 70 ug/l was not exceeded. There is no GB groundwater standard for 1,4-dichlorobenzene. This compound has been detected during many previous sampling events in this well at a similar concentration. No other target analytes were detected in any of the groundwater samples collected on December 10, 2013.

## SOIL GAS MONITORING

Soil gas monitoring was conducted at 29 locations on December 9, 2013. The sampling was conducted by placing an air sampling gripper cap on each well and attaching a piece of tubing. A volume of air equivalent to approximately 3 well volumes was removed from each well using a Sensidyne BDXII air sampling pump. Soil gas was then screened using a Landtec GEM 2000 Plus Landfill Gas Analyzer and a MiniRae Photoionization Detector (PID).

### **Soil Gas Field Monitoring Results**

Soil gas samples were screened for methane, carbon monoxide, hydrogen sulfide, carbon dioxide, oxygen, and total VOCs. Soil gas survey results are provided in Table 5. Methane, carbon monoxide and hydrogen sulfide, and total VOCs were not detected in any samples.

Carbon dioxide was detected in soil gas at concentrations ranging from 0.1% to 10.8% during the December monitoring event. The carbon dioxide Remedial Action Work Plan Action Level of 0.1% was exceeded at 27 of the 29 monitoring points. The maximum concentration detected during the December 2013 monitoring round was 10.8%, which was lower than the maximum detected during the September 2013 round of 12.8%. This is consistent with the pattern shown during previous rounds of



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declining carbon dioxide concentrations in the winter, and increasing concentrations in the summer and early fall. Graphs depicting carbon dioxide, oxygen, and methane concentrations over time for selected representative wells are presented in Attachment C.

The presence of carbon dioxide in soil gas is an indicator of subsurface bacterial activity and does not represent a threat to users of the property. The highest concentration of carbon dioxide was found in well MPL-6, located on the northern end of the property near Hartford Avenue. The monitoring locations on the northern end of the property adjacent to large expanses of paved parking lot, sidewalk, and streets have typically had the highest carbon dioxide concentrations.

## **ANNUAL ELUR INSPECTIONS**

After the Five Year Review of the Site was completed, RIDEM issued a letter dated August 17, 2012 which requires, among other things, that annual inspections be conducted for compliance with the Environmental Land Usage Restriction (ELUR). The Annual ELUR inspection was conducted during the December 2013 monitoring round. Annual monitoring of the vacuum produced by the subslab ventilation system, as required by the August 17, 2012 letter, will be conducted during a future monitoring round since weather conditions were not favorable during the December 2013 monitoring event.

The Site was inspected for compliance with the restrictions contained in Section A of the ELUR. The restrictions specified in the ELUR are listed below along with the current status with respect to the restriction:

- No residential use beyond current RIDEM approved use as a school compliant, no change in use.
- No groundwater on the property to be used as potable water compliant, no drinking water wells have been installed.
- No soil shall be disturbed in any manner without written permission of the Office of Waste Management except as permitted in the Long Tern Operation and Maintenance Plan (LTOMP) – compliant, no evidence of disturbance of soils not in compliance with the LTOMP.
- Humans engaged in activities at the Property shall not be exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding applicable Department approved Direct Exposure Criteria set forth in the Remediation Regulations – compliant, no evidence of breaches of cap that would allow people at the site to come in contact with underlying impacted soil.

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- No subsurface structures shall be constructed on the Property over groundwater containing Hazardous Materials and/or petroleum concentrations exceeding the applicable Department approved GB Objectives – compliant, no Hazardous Materials or petroleum have been detected in groundwater at concentrations exceeding GB Objectives.
- The engineered controls described in the LTOMP must not be disturbed and shall be properly maintained to prevent humans engaged in residential activities from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved residential Direct Exposure Criteria – compliant, engineered controls are in place and properly maintained.

## CONCLUSIONS

Methane, hydrogen sulfide, carbon monoxide and organic vapor concentrations did not exceed RAWP action levels in any soil gas or indoor air samples. Carbon dioxide concentrations exceeded the action level at 27 soil gas locations and sub slab system monitoring points. The detection of carbon dioxide in soil gas is typical of what has been detected during previous monitoring events and appears to be a result of naturally occurring bacterial activity in the subsurface.

The ELUR inspection did not reveal any evidence of non-compliance with the restrictions contained in the ELUR.

If you have any questions or require any additional information, please contact the undersigned at 401-738-3887, extension 25.

Sincerely,

ARCADIS U.S., Inc.

Donna H Pallit

Donna H. Pallister, PE, LSP Senior Environmental Engineer

Attachments

Copies: A. Sepe, City of Providence Providence Public Building Authority

Appendix A

**Limitations & Service Constraints** 

## LIMITATIONS AND SERVICE CONSTRAINTS

### **GENERAL REPORTS/DOCUMENT**

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ARCADIS and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, express or implied, is intended or given. To the extent that ARCADIS relied upon any information prepared by other parties not under contract to ARCADIS, ARCADIS makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when ARCADIS' investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ARCADIS's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in environmental investigation conclusions cannot reasonably be achieved.

ARCADIS, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

Appendix B

Laboratory Results

	-					1
	L	1	<b>13L0566 PO #:</b> 5131			
		Con-Test A	nalytical Laborato	ory		
Client: Arcadis US, Inc Warwic	k. RI		Project Manager:	Lisa	A. Worthington	
Project: Springfield St.	,		Project Number:		012152.0007	
Project Location: Springfield St.			Deliverable Package:	Non	e Requested	
			I • T			
<u>Report To:</u>			Invoice To:	Vansia		
Arcadis US, Inc Warwick, RI Donna Pallister			Arcadis US, Inc V	<i>N</i> arwic	K, KI	
			Accounts Payable 630 Plaza Drive, Suite 600			
300 Metro Center Blvd., Suite 250						
Warwick, RI 02886			Highlands Ranch, C		27	
Phone: (401) 738-3887			Phone :(401) 738-3			
Fax: (401) 732-1686			Fax: (401) 732-168	0		
Date Due: 12/20/13 18:00 (	5 day TAT)					
Received By: Rebecca Faust			Date Received:	12/1	3/13 16:20	
Logged In By: Rebecca Faust			Date Logged In:	12/1	3/13 16:57	
Samples Received at: 2.4°C						
COC Relinquish Signed	Yes Tempera	ature by Temp. Blank		No		
COC/Sample Labels Agree	-	ature by Temp. Gun			Soil VOA samples not completely covered by preserv	No
All Samples In Good Condition Samples Received at < 6 C.	Yes Receive	rom Sampling - Ambie d On Ice	ent Temp.		Container(s) not supplied by Con-Test Lab Custody Seals	No No
Analysis	Due	ТАТ	Expires	Con	uments	
13L0566-01 ATC-4 [Water] Samp	led 12/10/13 09·00 ]	Fastern	•			
8260 Standard	12/20/13 12:00	5	12/24/13 09:00			
			12/24/13 09:00			
8260 Standard 13L0566-02 MW-7 [Water] Samp	led 12/10/13 09:30 I	Eastern				
			12/24/13 09:00 12/24/13 09:30			
13L0566-02 MW-7 [Water] Sampl	led 12/10/13 09:30 I 12/20/13 12:00	Eastern 5				
13L0566-02 MW-7 [Water] Samp 3260 Standard 13L0566-03 MW-8 [Water] Samp	led 12/10/13 09:30 I 12/20/13 12:00	Eastern 5				
13L0566-02 MW-7 [Water] Samp 8260 Standard	led 12/10/13 09:30 I 12/20/13 12:00 led 12/10/13 10:00 I 12/20/13 12:00	Eastern 5 Eastern 5	12/24/13 09:30			
<b>13L0566-02 MW-7 [Water] Samp</b> 8260 Standard <b>13L0566-03 MW-8 [Water] Samp</b> 8260 Standard	led 12/10/13 09:30 I 12/20/13 12:00 led 12/10/13 10:00 I 12/20/13 12:00	Eastern 5 Eastern 5	12/24/13 09:30			
13L0566-02       MW-7       [Water]       Sample         3260       Standard       Sample         13L0566-03       MW-8       [Water]       Sample         3260       Standard       Standard       Standard         13L0566-04       ATC-1       [Water]       Sample	led 12/10/13 09:30 I 12/20/13 12:00 led 12/10/13 10:00 I 12/20/13 12:00 led 12/10/13 10:30 I 12/20/13 12:00	Eastern 5 Eastern 5 Eastern 5	12/24/13 09:30 12/24/13 10:00			

Reviewed By

Date

Invoice OK to Spool

Initials

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December 20, 2013

Donna Pallister Arcadis US, Inc. - Warwick, RI 300 Metro Center Blvd., Suite 250 Warwick, RI 02886

Project Location: Springfield St. Client Job Number: Project Number: WK012152.0007 Laboratory Work Order Number: 13L0569

Enclosed are results of analyses for samples received by the laboratory on December 13, 2013. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

fra Watthington

Lisa A. Worthington Project Manager



Arcadis US, Inc. - Warwick, RI 300 Metro Center Blvd., Suite 250 Warwick, RI 02886 ATTN: Donna Pallister REPORT DATE: 12/20/2013

PURCHASE ORDER NUMBER: 5131

PROJECT NUMBER: WK012152.0007

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 13L0569

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

PROJECT LOCATION: Springfield St.

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MS Front	13L0569-01	Sub Slab		EPA TO-14A	
MS Back	13L0569-02	Sub Slab		EPA TO-14A	
ES #1	13L0569-03	Sub Slab		EPA TO-14A	
ES #2	13L0569-04	Sub Slab		EPA TO-14A	



CASE NARRATIVE SUMMARY

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

Qualifications:

EPA TO-14A

Holding times and stability of samples taken in tedlar bags have not been determined

#### Analyte & Samples(s) Qualified:

13L0569-01[MS Front], 13L0569-02[MS Back], 13L0569-03[ES #1], 13L0569-04[ES #2]

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:

1,3-Dichlorobenzene, Hexachlorobutadiene

B087288-BS1

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.

to J

Daren J. Damboragian Laboratory Manager

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#### ANALYTICAL RESULTS

Work Order: 13L0569 Project Location: Springfield St. Sample Description/Location: Date Received: 12/13/2013 Sub Description/Location: Initial Vacuum(in Hg): Field Sample #: MS Front Canister ID: Final Vacuum(in Hg): Sample ID: 13L0569-01 Canister Size: Receipt Vacuum(in Hg): Sample Matrix: Sub Slab Flow Controller ID: Flow Controller Type: Sampled: 12/10/2013 11:30 Sample Type: Flow Controller Calibration RPD Pre and Post-Sampling:

		El	PA TO-14A					
Sample Flags: A-09	ppl	bv		ug/n	n3		Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Benzene	0.14	0.10		0.45	0.32	2	12/14/13 14:04	TPH
Bromomethane	ND	0.10		ND	0.39	2	12/14/13 14:04	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/14/13 14:04	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	12/14/13 14:04	TPH
Chloroethane	ND	0.10		ND	0.26	2	12/14/13 14:04	TPH
Chloroform	ND	0.10		ND	0.49	2	12/14/13 14:04	TPH
Chloromethane	0.25	0.20		0.52	0.41	2	12/14/13 14:04	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/14/13 14:04	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:04	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:04	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:04	TPH
Dichlorodifluoromethane (Freon 12)	1.2	0.10		6.0	0.49	2	12/14/13 14:04	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 14:04	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 14:04	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 14:04	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 14:04	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/14/13 14:04	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 14:04	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 14:04	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.71	0.10		5.0	0.70	2	12/14/13 14:04	TPH
Ethylbenzene	0.17	0.10		0.76	0.43	2	12/14/13 14:04	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/14/13 14:04	TPH
Methylene Chloride	2.3	1.0		8.0	3.5	2	12/14/13 14:04	TPH
Styrene	0.29	0.10		1.2	0.43	2	12/14/13 14:04	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/14/13 14:04	TPH
Tetrachloroethylene	1.1	0.10		7.2	0.68	2	12/14/13 14:04	TPH
Toluene	4.6	0.10		17	0.38	2	12/14/13 14:04	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/14/13 14:04	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 14:04	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 14:04	TPH
Trichloroethylene	ND	0.10		ND	0.54	2	12/14/13 14:04	TPH
Trichlorofluoromethane (Freon 11)	1.1	0.10		6.2	0.56	2	12/14/13 14:04	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/14/13 14:04	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/14/13 14:04	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/14/13 14:04	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	12/14/13 14:04	TPH
m&p-Xylene	0.90	0.20		3.9	0.87	2	12/14/13 14:04	TPH

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#### ANALYTICAL RESULTS

Project Location: Springfield St.	Sample Description/Location:	Work Order: 13L0569
Date Received: 12/13/2013	Sub Description/Location:	Initial Vacuum(in Hg):
Field Sample #: MS Front	Canister ID:	Final Vacuum(in Hg):
Sample ID: 13L0569-01	Canister Size:	Receipt Vacuum(in Hg):
Sample Matrix: Sub Slab	Flow Controller ID:	Flow Controller Type:
Sampled: 12/10/2013 11:30	Sample Type:	Flow Controller Calibration
		RPD Pre and Post-Sampling:
	EPA TO-14A	
Sample Flags: A-09	ppbv ug/m3	Date/Time
Analyte	Results RL Flag/Qual Results RL	Dilution Analyzed Analyst

o-Xylene	0.28 0.10	1.2 0.43	2	12/14/13 14:04 TPH
Surrogates	% Recovery	% REC Limits		
4-Bromofluorobenzene (1)	102	70-130		12/14/13 14:04

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#### ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/13/2013 Field Sample #: MS Back Sample ID: 13L0569-02 Sample Matrix: Sub Slab Sampled: 12/10/2013 11:45 Sample Description/Location: Sub Description/Location: Canister ID: Canister Size: Flow Controller ID: Sample Type: Work Order: 13L0569 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type: Flow Controller Calibration RPD Pre and Post-Sampling:

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH			E	PA TO-14A					
AayeReadeReadeReadeReadeReadeMutureAnalysetBeace0.100.100.100.100.202.124131.11GenomendameND0.10ND0.322.124131.411.11Caboe trenshordeND0.10ND0.322.124131.431.11Choore trenshordeND0.10ND0.422.14131.431.11Choore trenshordeND0.100.100.100.102.14131.431.11Choore trenshordeND0.100.100.100.102.14131.431.11Choore trenshordeND0.100.100.100.102.14131.431.11Choore trenshordeND0.10ND0.010.012.14131.431.11Choore trenshordeND0.10ND0.010.012.14131.431.11Labekhorde trenshordeND0.10ND0.010.102.14131.431.11Labekhorde trenshordeND0.10ND0.100.102.14131.431.11Labekhorde trenshordeND0.10ND0.410.102.14131.431.11Labekhorde trenshordeND0.10ND0.410.102.14131.431.11Labekhorde trenshordeND0.10ND0.410.122.14131.431.11Labekhorde trenshorde	Sample Flags: A-09	рр	bv		ug/n	n3		Date/Time	
Internetional Carlos Encadencias Carlos Enca	Analyte			Flag/Qual	-		Dilution	Analyzed	Analyst
Cahoa TamehindieNDND0.10ND0.400.4021.24/131.4377ChoosenaneND0.10ND0.26212/14/31.43774ChoosenaneND0.100.200.42212/14/31.43774ChoosenaneND0.20ND0.41212/14/31.437741.2-DichorobaneND0.10ND0.60212/14/31.437741.2-DichorobanezaeND0.10ND0.60212/14/31.437741.2-DichorobanezaeND0.10ND0.60212/14/31.437741.4-DichorobanezaeND0.10ND0.60212/14/31.437741.4-DichorobanezaeND0.10ND0.40212/14/31.437741.4-DichorobanezaeND0.10ND0.40212/14/31.437741.4-DichorobaneND0.10ND0.40212/14/31.437741.2-DichorobaneND0.10ND0.46212/14/31.437741.2-DichorobaneND0.10ND0.46212/14/31.437741.2-DichorobaneND0.10ND0.46212/14/31.437741.2-DichorobaneND0.10ND0.46212/14/31.437741.2-Dichorobane	Benzene	0.12	0.10		0.40	0.32	2	12/14/13 14:43	TPH
ChlorobenzenND00ND0.4621.2.1.4.1.31.4.31.7.1.4.3ChlorochaneND0.10ND0.200.4021.2.1.4.31.4.31.7.1.4.3ChlorochaneND0.20ND0.4121.2.1.4.31.4.31.7.1.4.31.2.DehtorobenzenND0.10ND0.6021.2.1.4.31.4.31.7.1.4.3.4.31.7.1.4.3.4.31.2.DehtorobenzenND0.10ND0.6021.2.1.4.31.4.31.7.1.4.3.4.31.7.1.4.3.4.31.7.1.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.31.7.1.4.3.4.3.4.3.4.3.4.3.4.3.4.3.4.3.4.3.4	Bromomethane	ND	0.10		ND	0.39	2	12/14/13 14:43	TPH
ChlorodhaneND<	Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/14/13 14:43	TPH
Chlorofin0.150.100.720.49212.10/13.14.3113.11ChloromchancND0.20ND0.41212.14.3114.3117.111.2.DehoromchancND0.10ND0.00212.14.3114.3117.111.2.DehoromchancND0.10ND0.60212.14.3114.3117.111.3.DehoromchancND0.10ND0.60212.14.3114.3117.111.4.DehoromchancND0.10ND0.60212.14.3114.3117.111.4.DehoromchancND0.10ND0.40212.14.3114.3117.111.2.DehoromchancND0.10ND0.40212.14.3114.3117.111.2.DehoromchancND0.10ND0.40212.14.3114.3117.111.2.DehoromchancND0.10ND0.40212.14.3114.3117.111.2.DehoromchancND0.10ND0.40212.14.3114.3117.111.2.DehoromchancND0.10ND0.45212.14.3114.3117.111.2.DehoromchancND0.10ND0.45212.14.3114.3117.111.2.DehoromchancND0.10ND0.45212.14.3114.3117.111.2.DehoromchancND0.10ND0.45212.14.3114.3117.11 <td>Chlorobenzene</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.46</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	Chlorobenzene	ND	0.10		ND	0.46	2	12/14/13 14:43	TPH
Chloromethane       ND       0.20       ND       0.41       2       12.14.13       14.43       TPH         1.2.Dioknomethane (fDB)       ND       0.10       ND       0.67       2       12.14.13       14.43       TPH         1.2.Dioknomethane (fEO)       ND       0.10       ND       0.60       2       12.14.13       14.43       TPH         1.4.Dioknomethane (Freen 12)       2.8       0.10       AL       0.49       2       12.14.13       14.43       TPH         1.1.Dioknomethane (Freen 12)       2.8       0.10       ND       0.40       2       12.14.13       14.43       TPH         1.1.Dioknomethane (Freen 12)       2.8       0.10       ND       0.40       2       12.14.13       14.43       TPH         1.1.Dioknomethane       ND       0.10       ND       0.40       2       12.14.13       14.43       TPH         1.2.Dioknomethane       ND       0.10       ND       0.40       2       12.14.13       14.43       TPH         1.2.Dioknomethane (Freen 114)       2.7       0.10       ND       0.45       2       12.14.13       14.43       TPH         1.2.Dioknomethane       ND       0.10       ND <td>Chloroethane</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.26</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	Chloroethane	ND	0.10		ND	0.26	2	12/14/13 14:43	TPH
1.2.Dikromechane (EDB)       ND       0.0       ND       0.77       2       12/14/3       14/3       TPI         1.2.Dikromechane (EDB)       ND       0.0       ND       0.60       2       12/14/3       14/3       TPI         1.3.Dichlorobenzene       ND       0.0       ND       0.60       2       12/14/3       14/3       TPI         1.4.Dichlorobenzene       ND       0.0       ND       0.60       2       12/14/3       14/3       TPI         1.4.Dichlorobenzene       ND       0.0       ND       0.40       2       12/14/3       14/3       TPI         1.1.Dichloroblytene       ND       0.0       ND       0.40       2       12/14/3       14/3       TPI         1.2.Dichlorobytene       ND       0.0       ND       0.40       2       12/14/3       14/3       TPI         1.2.Dichloropytene       ND       0.10       ND       0.46       2       12/14/3       14/3       TPI         1.2.Dichloropytene       ND       0.10       ND       0.45       2       12/14/3       14/3       TPI         1.2.Dichloropytene       ND       0.10       ND       0.45       2       12/14/3 <td>Chloroform</td> <td>0.15</td> <td>0.10</td> <td></td> <td>0.72</td> <td>0.49</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	Chloroform	0.15	0.10		0.72	0.49	2	12/14/13 14:43	TPH
ND       0.0       ND       0.0       ND       0.0       ND       0.00       ND       0.00       2       12/1/3       14/3       17/1         1,4-Dichlorobenzene       ND       0.10       ND       0.60       2       12/1/3       14/3       17/1         1,4-Dichlorobenzene       ND       0.10       ND       0.60       2       12/1/3       14/3       17/1         1,1-Dichlorobenzene       ND       0.10       ND       0.40       2       12/1/3       14/3       17/1         1,1-Dichlorobenzene       ND       0.10       ND       0.40       2       12/1/3       14/3       17/1         1,1-Dichlorobenzene       ND       0.10       ND       0.40       2       12/1/3       14/3       17/1         1,2-Dichloropopane       ND       0.10       ND       0.46       2       12/1/3       14/3       17/1         cis-1,2-Dichloropopane       ND       0.10       ND       0.45       2       12/1/3       14/3       17/1         cis-1,2-Dichloropopane       ND       0.10       ND       0.45       2       12/1/1/3       14/3       17/1         1,2-Dichloropopane       ND <td< td=""><td>Chloromethane</td><td>ND</td><td>0.20</td><td></td><td>ND</td><td>0.41</td><td>2</td><td>12/14/13 14:43</td><td>TPH</td></td<>	Chloromethane	ND	0.20		ND	0.41	2	12/14/13 14:43	TPH
1.3-Dichlorobenzene       ND       0.10       ND       0.60       2       12/14/1       14.43       TPI         1.4-Dichlorobenzene       ND       0.10       ND       0.60       2       12/14/1       14.43       TPI         Dichlorodifhuoromsthane (Freon 12)       2.8       0.10       ND       0.40       0.40       2       12/14/1       14.43       TPI         1.1-Dichlorocthane       ND       0.10       ND       0.40       2       12/14/1       14.43       TPI         1.2-Dichlorocthylene       ND       0.10       ND       0.40       2       12/14/1       14.43       TPI         1.2-Dichlorocthylene       ND       0.10       ND       0.40       2       12/14/1       14.43       TPI         1.2-Dichlorocthylene       ND       0.10       ND       0.46       2       12/14/1       14.43       TPI         1.2-Dichloropopene       ND       0.10       ND       0.45       2       12/14/1       14.43       TPI         1.2-Dichloropopene       ND       0.10       ND       0.45       2       12/14/1       14.43       TPI         1.2-Dichloropopene       ND       0.10       ND <td< td=""><td>1,2-Dibromoethane (EDB)</td><td>ND</td><td>0.10</td><td></td><td>ND</td><td>0.77</td><td>2</td><td>12/14/13 14:43</td><td>TPH</td></td<>	1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/14/13 14:43	TPH
A       ND       0.10       ND       0.60       2       12/14/3       14.43       TPI         Dichlorodifluoromethane (Freon 12)       2.8       0.10       14       0.49       2       12/14/3       14.43       TPI         1,1-Dichlorodthane       ND       0.10       ND       0.40       2       12/14/3       14.43       TPI         1,2-Dichlorocthane       ND       0.10       ND       0.40       2       12/14/3       14.43       TPI         1,2-Dichlorocthylene       ND       0.10       ND       0.40       2       12/14/3       14.43       TPI         1,2-Dichlorocthylene       ND       0.10       ND       0.40       2       12/14/3       14.43       TPI         1,2-Dichloropropene       ND       0.10       ND       0.46       2       12/14/3       14.43       TPI         1,2-Dichloropropene       ND       0.10       ND       0.45       2       12/14/3       14.43       TPI         Eibylbenzene       0.16       0.10       0.68       0.43       2       12/14/3       14.43       TPI         Eibylbenzene       ND       0.10       ND       0.69       2       12/14/3 </td <td>1,2-Dichlorobenzene</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.60</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:43	TPH
Delbeloredifluoromethane (Freen 12)         2.8         0.10         14         0.49         2         12/14/13         14.43         TPH           1,1-Dichloroethane         ND         0.10         ND         0.40         2         12/14/13         14.43         TPH           1,1-Dichloroethylene         ND         0.10         ND         0.40         2         12/14/13         14.43         TPH           1,1-Dichloroethylene         ND         0.10         ND         0.40         2         12/14/13         14.43         TPH           1,2-Dichloroethylene         ND         0.10         ND         0.40         2         12/14/13         14.43         TPH           cis-1,3-Dichloropropene         ND         0.10         ND         0.45         2         12/14/13         14.43         TPH           1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freen 114)         2,7         0.10         ND         0.45         2         12/14/13         14.43         TPH           1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND         0.10         ND         0.43         2         12/14/13         14.43         TPH           1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND         0.10         ND <td< td=""><td>1,3-Dichlorobenzene</td><td>ND</td><td>0.10</td><td></td><td>ND</td><td>0.60</td><td>2</td><td>12/14/13 14:43</td><td>TPH</td></td<>	1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:43	TPH
1.1-Dickloroethane       ND       0.10       ND       0.40       2       12/14/3       14.43       TPH         1.2-Dickloroethane       ND       0.10       ND       0.40       2       12/14/3       14.43       TPH         1.1-Dickloroethylene       ND       0.10       ND       0.40       2       12/14/3       14.43       TPH         1.2-Dickloroethylene       ND       0.10       ND       0.40       2       12/14/3       14.43       TPH         1.2-Dickloropropene       ND       0.10       ND       0.40       2       12/14/3       14.43       TPH         1.2-Dickloropropene       ND       0.10       ND       0.45       2       12/14/3       14.43       TPH         1.2-Dickloropropene       ND       0.10       ND       0.45       2       12/14/3       14.43       TPH         1.2-Dicklorophane       0.16       0.10       ND       0.45       2       12/14/3       14.43       TPH         1.2-Dicklorophane       0.16       0.10       ND       0.43       2       12/14/3       14.43       TPH         1.2-Dicklorophane       0.16       0.10       ND       0.43       2       <	1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 14:43	TPH
1.2-Dichloroethane       ND       0.10       ND       0.40       2       12/14/13       1443       TPH         1.1-Dichloroethylene       ND       0.10       ND       0.40       2       12/14/13       1443       TPH         1.2-Dichloroethylene       ND       0.10       ND       0.40       2       12/14/13       1443       TPH         1.2-Dichloroethylene       ND       0.10       ND       0.46       2       12/14/13       1443       TPH         1.2-Dichloropropene       ND       0.10       ND       0.45       2       12/14/13       1443       TPH         1.2-Dichloropropene       ND       0.10       ND       0.45       2       12/14/13       1443       TPH         1.2-Dichloropropene       ND       0.16       0.10       0.68       0.43       2       12/14/13       1443       TPH         Ethylbenzene       0.16       0.10       ND       1.1       2       12/14/13       1443       TPH         Ethylbenzene       0.16       0.10       ND       0.11       2       12/14/13       1443       TPH         1.1.2-Dichloroethane       ND       0.10       ND       0.69	Dichlorodifluoromethane (Freon 12)	2.8	0.10		14	0.49	2	12/14/13 14:43	TPH
1       1.1	1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 14:43	TPH
resND0.10ND0.40212/14/314.43TPH1.2-DichloropropaneND0.10ND0.46212/14/314.43TPHcis-1,3-DichloropropeneND0.10ND0.45212/14/314.43TPH1,2-DichloropropeneND0.10ND0.45212/14/314.43TPH1,2-DichloropropeneND0.10ND0.45212/14/314.43TPHEhylbenzene0.160.100.680.43212/14/314.43TPHEhylbenzene0.160.10ND1.1212/14/314.43TPHKexachlorobutadieneND0.10ND1.1212/14/314.43TPH1,1,2,2-Tetrachloroethane2.20.107.83.5212/14/314.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/314.43TPH1,1,2,4-TrichloroethaneND0.10ND0.74212/14/314.43TPH1,1,2,4-TrichloroethaneND0.10ND0.55212/14/314.43TPH1,1,2,4-TrichloroethaneND0.10ND0.570.54212/14/314.43TPH1,1,2-TrichloroethaneND0.10ND0.570.54212/14/314.43TPH1,1,2-Trichloroethane0.110.100.570.542	1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 14:43	TPH
1.2-DichloropropeneND0.10ND0.46212/14/1314.43TPHcis-1,3-DichloropropeneND0.10ND0.45212/14/1314.43TPHtrans-1,3-DichloropropeneND0.10ND0.45212/14/1314.43TPH1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)2.70.10190.70212/14/1314.43TPHEthylbenzene0.160.100.680.43212/14/1314.43TPHMethylene Chloride2.21.07.83.5212/14/1314.43TPHStyrene0.250.101.10.43212/14/1314.43TPH1,1,2-2-TetrachloroethaneND0.10ND0.69212/14/1314.43TPH1,2,2-Tetrachloroethane1.40.109.70.68212/14/1314.43TPH1,2,4-TrichloroethaneND0.10ND0.74212/14/1314.43TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1314.43TPH1,1,2-Trichloroethane0.110.10ND0.570.54212/14/1314.43TPH1,1,2-Trichloroethane0.110.10ND0.570.54212/14/1314.43TPH1,1,2-Trichloroethane0.110.10ND0.570.54212/14/1314.43TPH1,	1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 14:43	TPH
ND <td>cis-1,2-Dichloroethylene</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.40</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 14:43	TPH
Hars 1.3-DichoropopeneND0.10ND0.45212/14/314.43TPH1.2-Dichloro-1,1,2,2-tetrafluoroethane (Freen 114)2.70.10190.70212/14/314.43TPHEthylbenzene0.160.100.680.43212/14/314.43TPHHexachlorobutadieneND0.10ND1.1212/14/314.43TPHMethylene Chloride2.21.07.83.5212/14/314.43TPHStyrene0.250.101.10.43212/14/314.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/314.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/314.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/314.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.74212/14/314.43TPH1,1,2,2-TrichloroethaneND0.10ND0.55212/14/314.43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/314.43TPH1,1,2-Trichloroethane (Freen 11)1.20.100.570.54212/14/314.43TPH1,1,2-Trichloroethane (Freen 113)ND0.10ND0.77212/14/314.43TPH1,2,4-Trimethylbenzene	1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/14/13 14:43	TPH
1.2-brichoro-1,2.2-tetrafluoroethane (Freon 114)2.70.10190.7021/2/14/131/4/3TPHEthylbenzene0.160.100.680.4321/2/14/131/4/3TPHHxxachlorobutadieneND0.10ND1.121/2/14/131/4/3TPHMethylene Chloride2.21.07.83.521/2/14/131/4/3TPHStyrene0.250.101.10.4321/2/14/131/4/3TPH1,1,2,2-TetrachloroethaneND0.10ND0.6921/2/14/131/4/3TPHTotuene3.40.109.70.6821/2/14/131/4/3TPH1,1,2-TrichloroethaneND0.10ND0.7421/2/14/131/4/3TPH1,1,1-TrichloroethaneND0.10ND0.5521/2/14/131/4/3TPH1,1,2-TrichloroethaneND0.10ND0.570.5421/2/14/131/4/3TPH1,1,2-Trichloroethane (Freon 11)1.20.100.570.5421/2/14/131/4/3TPH1,2,2-TrinethylbenzeneND0.10ND0.7721/2/14/131/4/3TPH1,2,2-TrinethylbenzeneND0.10ND0.7721/2/14/131/4/3TPH1,2,2-TrinethylbenzeneND0.10ND0.7721/2/14/131/4/3TPH1,2,4-Trimethylbenzene<	cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 14:43	TPH
Ethylbenzene0.160.100.680.43212/14/1314:43TPHHexachlorobutadieneND0.10ND1.1212/14/1314:43TPHMethylene Chloride2.21.07.83.5212/14/1314:43TPHStyrene0.250.101.10.43212/14/1314:43TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/1314:43TPHTetrachloroethane1.40.109.70.68212/14/1314:43TPHToluene3.40.10130.38212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.74212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-Trichloroethane0.110.100.570.54212/14/1314:43TPH1,1,2-Trichloroethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.492	trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 14:43	TPH
HexachlorobutadieneND0.10ND1.121.2/14/131.4:43TPHMethylene Chloride2.21.07.83.521.2/14/131.4:43TPHStyrene0.250.101.10.4321.2/14/131.4:43TPH1,1,2,2-TetrachloroethaneND0.10ND0.6921.2/14/131.4:43TPHTetrachloroethylene1.40.109.70.6821.2/14/131.4:43TPH1,2,4-Trichloroethane3.40.10130.3821.2/14/131.4:43TPH1,2,4-TrichloroethaneND0.10ND0.7421.2/14/131.4:43TPH1,1,1-TrichloroethaneND0.10ND0.5521.2/14/131.4:43TPH1,1,1-TrichloroethaneND0.10ND0.5521.2/14/131.4:43TPH1,1,2-TrichloroethaneND0.10ND0.5521.2/14/131.4:43TPH1,1,2-Trichloroethane (Freon 11)1.20.100.570.5421.2/14/131.4:43TPH1,2,4-TrimethylbenzeneND0.10ND0.7721.2/14/131.4:43TPH1,2,4-TrimethylbenzeneND0.10ND0.4921.2/14/131.4:43TPH1,3,5-TrimethylbenzeneND0.10ND0.4921.2/14/131.4:43TPH1,3,5-TrimethylbenzeneND <td>1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)</td> <td>2.7</td> <td>0.10</td> <td></td> <td>19</td> <td>0.70</td> <td>2</td> <td>12/14/13 14:43</td> <td>TPH</td>	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	2.7	0.10		19	0.70	2	12/14/13 14:43	TPH
Methylene Chloride       2.2       1.0       7.8       3.5       2       1/1/1/3       1/4/3       TPH         Styrene       0.25       0.10       1.1       0.43       2       1/2/1/13       1/4/3       TPH         1,1,2,2-Tetrachloroethane       ND       0.10       ND       0.69       2       1/2/1/13       1/4/3       TPH         Tetrachloroethylene       1.4       0.10       9.7       0.68       2       1/2/1/13       1/4/3       TPH         Tolene       3.4       0.10       13       0.38       2       1/2/1/13       1/4/3       TPH         1,1,2-Trichloroethane       ND       0.10       ND       0.74       2       1/2/1/13       1/4/3       TPH         1,1,1-Trichloroethane       ND       0.10       ND       0.74       2       1/2/1/13       1/4/3       TPH         1,1,2-Trichloroethane       ND       0.10       ND       0.55       2       1/2/1/13       1/4/3       TPH         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)       1.2       0.10       0.57       0.54       2       1/2/1/13       1/4/3       TPH         1,2,4-Trimethylbenzene       ND       0.10       ND <t< td=""><td>Ethylbenzene</td><td>0.16</td><td>0.10</td><td></td><td>0.68</td><td>0.43</td><td>2</td><td>12/14/13 14:43</td><td>TPH</td></t<>	Ethylbenzene	0.16	0.10		0.68	0.43	2	12/14/13 14:43	TPH
Number0.250.101.10.4321/2/1/131/2.43TPH1,1,2,2-TetrachloroethaneND0.10ND0.6921/2/1/131/4.33TPHTetrachloroethylene1.40.109.70.6821/2/1/131/4.33TPHToluene3.40.10130.3821/2/1/131/4.33TPH1,2,4-TrichloroethaneND0.10ND0.7421/2/1/131/4.33TPH1,1,1-TrichloroethaneND0.10ND0.5521/2/1/131/4.33TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/1/131/4.33TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/1/131/4.33TPH1,1,2-Trichloroethane (Freon 11)1.20.100.570.5421/2/1/131/4.33TPH1,2,4-TrimethylbenzeneND0.10ND0.7721/2/1/131/4.33TPH1,3,5-TrimethylbenzeneND0.10ND0.4921/2/1/131/4.33TPH1,3,5-TrimethylbenzeneND0.10ND0.2621/2/1/131/4.33TPH1,3,5-TrimethylbenzeneND0.10ND0.2621/2/1/131/4.33TPH1,3,5-TrimethylbenzeneND0.10ND0.2621/2/1/131/4.33TPH	Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/14/13 14:43	TPH
1,1,2,2-TetrachloroethaneND0.10ND0.6921/2/14/1314:43TPHTetrachloroethylene1.40.109.70.68212/14/1314:43TPHToluene3.40.10130.38212/14/1314:43TPH1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1314:43TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPHTrichloroethaneND0.10ND0.570.54212/14/1314:43TPHTrichloroethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,1,2-Trichloroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.26212/14/1314:43TPH	Methylene Chloride	2.2	1.0		7.8	3.5	2	12/14/13 14:43	TPH
Tetrachloroethylene1.40.109.70.68212/14/1314:43TPHToluene3.40.10130.38212/14/1314:43TPH1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1314:43TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-Trichloroethane (Freon 11)1.20.100.570.54212/14/1314:43TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.26212/14/1314:43TPH	Styrene	0.25	0.10		1.1	0.43	2	12/14/13 14:43	TPH
Toluene3.40.10130.38212/14/1314:43TPH1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1314:43TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPH1,1,2-Trichloroethane (Freon 11)1.20.100.570.54212/14/1314:43TPH1,1,2-Trichloroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.26212/14/1314:43TPH	1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/14/13 14:43	TPH
1,2,4-TrichlorobenzeneND0.10ND0.7421/2/14/1314:43TPH1,1,1-TrichloroethaneND0.10ND0.5521/2/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/14/1314:43TPHTrichloroethylene0.110.100.570.5421/2/14/1314:43TPHTrichloroethylene (Freon 11)1.20.106.60.5621/2/14/1314:43TPH1,2,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.7721/2/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.4921/2/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.4921/2/14/1314:43TPHVinyl ChlorideND0.10ND0.2621/2/14/1314:43TPH	Tetrachloroethylene	1.4	0.10		9.7	0.68	2	12/14/13 14:43	TPH
ND0.10ND0.55212/14/1314:43TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1314:43TPHTrichloroethylene0.110.100.570.54212/14/1314:43TPHTrichloroethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHNyl ChlorideND0.10ND0.26212/14/1314:43TPH	Toluene	3.4	0.10		13	0.38	2	12/14/13 14:43	TPH
ND0.10ND0.55212/14/1314:43TPHTrichloroethylene0.110.100.570.54212/14/1314:43TPHTrichlorofluoromethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH	1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/14/13 14:43	TPH
Trichloroethylene0.110.100.570.54212/14/1314:43TPHTrichlorofluoromethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH	1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 14:43	TPH
Trichlorofluoromethane (Freon 11)1.20.106.60.56212/14/1314:43TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH	1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 14:43	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH	Trichloroethylene	0.11	0.10		0.57	0.54	2	12/14/13 14:43	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1314:43TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH	Trichlorofluoromethane (Freon 11)								TPH
1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPH1,3,5-TrimethylbenzeneND0.10ND0.49212/14/1314:43TPHVinyl ChlorideND0.10ND0.26212/14/1314:43TPH							2		
1,3,5-Trimethylbenzene     ND     0.10     ND     0.49     2     12/14/13     14:43     TPH       Vinyl Chloride     ND     0.10     ND     0.26     2     12/14/13     14:43     TPH		ND			ND	0.49	2		
Vinyl Chloride         ND         0.10         ND         0.26         2         12/14/13         14:43         TPH									
-	-								
	m&p-Xylene	0.89	0.20		3.9	0.87	2	12/14/13 14:43	TPH

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#### ANALYTICAL RESULTS

Sample Flags: A-09	ppbv	ug/m3	Date/Time		
	I	CPA TO-14A			
			RPD Pre and Post-Sampling:		
Sampled: 12/10/2013 11:45	Sample Type:		Flow Controller Calibration		
Sample Matrix: Sub Slab	Flow Controller ID:	Flow Controller ID:			
Sample ID: 13L0569-02	Canister Size:	Receipt Vacuum(in Hg):			
Field Sample #: MS Back	Canister ID:	Final Vacuum(in Hg):			
Date Received: 12/13/2013	Sub Description/Location:	Initial Vacuum(in Hg):			
Project Location: Springfield St.	Sample Description/Location:	Work Order: 13L0569			

o-Xylene	0.30 0.10	1.3 0.43	2	12/14/13 14:43 TPH
Surrogates	% Recovery	% REC Limits		

4-Bromofluorobenzene (1)

102

70-130

12/14/13 14:43



#### ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/13/2013 Field Sample #: ES #1 Sample ID: 13L0569-03 Sample Matrix: Sub Slab Sampled: 12/10/2013 12:05 Sample Description/Location: Sub Description/Location: Canister ID: Canister Size: Flow Controller ID: Sample Type: Work Order: 13L0569 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type: Flow Controller Calibration RPD Pre and Post-Sampling:

Any aBar			E	PA TO-14A					
AnalyteResultsResultsPerformResults <t< th=""><th>Sample Flags: A-09</th><th>pp</th><th>bv</th><th></th><th>ug/n</th><th>n3</th><th></th><th>Date/Time</th><th></th></t<>	Sample Flags: A-09	pp	bv		ug/n	n3		Date/Time	
BronenthameNDND0.10ND0.300.30212.4/315.22714Cahoa TarachioriaND0.00ND0.6320.214/315.22714ChorobanzeneND0.00ND0.6220.214/315.22714ChorobanzeneND0.01ND0.6220.214/315.22714ChorobanzeneND0.020.0720.214/315.227141.2-Defonorchane (EDB)ND0.01ND0.6020.214/315.227141.2-Defonorchane (EDB)ND0.01ND0.6020.214/315.227141.2-Defonorchane (For 12)ND0.01ND0.6020.214/315.227141.2-Defonorchane (Fron 12)ND0.01ND0.4020.214/315.227141.2-Defonorchane (Fron 12)ND0.01ND0.4020.214/315.227141.2-DefonorchaneND0.01ND0.4020.214/315.227141.2-DefonorchaneND0.01ND0.4020.214/315.227141.2-DefonorchaneND0.01ND0.4020.214/315.227141.2-DefonorchaneND0.01ND0.4020.214/315.227141.2-DefonorchaneND0.01ND0.4520.214/315.22714<	Analyte			Flag/Qual	-		Dilution	Analyzed	Analyst
Carbon TernehlorideND0.0ND0.630.20.214.0315.220.714ChoroschaneND0.10ND0.46212/14/315.221714ChoroschaneND0.20ND0.41212/14/315.221714ChoroschaneND0.20ND0.41212/14/315.2217141.2-Decknoroschane (EDB)ND0.00ND0.60212/14/315.2217141.2-DecknoroschaneND0.10ND0.60212/14/315.2217141.2-DecknoroschaneND0.10ND0.60212/14/315.2217141.2-DecknoroschaneND0.10ND0.60212/14/315.2217141.2-DecknoroschaneND0.10ND0.60212/14/315.2217141.2-DecknoroschaneND0.10ND0.40212/14/315.2217141.2-DecknoroschaneND0.10ND0.40212/14/315.2217141.2-DecknoroschaneND0.10ND0.40212/14/315.2217141.2-DecknoroschaneND0.10ND0.40212/14/315.2217141.2-DecknoroschaneND0.10ND0.40212/14/315.2217141.2-DecknoroschaneND0.10ND0.45212/14/315.221714 <td>Benzene</td> <td>0.20</td> <td>0.10</td> <td></td> <td>0.65</td> <td>0.32</td> <td>2</td> <td>12/14/13 15:22</td> <td>TPH</td>	Benzene	0.20	0.10		0.65	0.32	2	12/14/13 15:22	TPH
ChlorobenzereND0.10ND0.46212.14.1315.2217.11ChloroshaneND0.360.10ND0.26212.14.1315.2217.11Chloroshane0.360.30ND0.41212.14.1315.2217.111.2.Dichonosehane (EDB)ND0.00ND0.60212.14.1315.2217.111.2.Dichonosehane (EDB)ND0.00ND0.60212.14.1315.2217.111.2.Dichonosehane (EDB)ND0.00ND0.60212.14.1315.2217.111.2.Dichorosehane (Freen 12)1.20.10ND0.60212.14.1315.2217.111.4.Dichorosehane (Freen 12)1.20.10ND0.40212.14.1315.2217.111.1.Dichorosehane (Freen 12)1.20.10ND0.40212.14.1315.2217.111.2.DichorosehaneND0.10ND0.40212.14.1315.2217.111.1.DichorosehaneND0.10ND0.40212.14.1315.2217.111.2.DichorosehaneND0.10ND0.40212.14.1315.2217.111.2.DichorosehaneND0.10ND0.40212.14.1315.2217.111.2.DichorosehaneND0.10ND0.45212.14.1315.2217.111.2.DichorosehaneND0.10 <td>Bromomethane</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.39</td> <td>2</td> <td>12/14/13 15:22</td> <td>TPH</td>	Bromomethane	ND	0.10		ND	0.39	2	12/14/13 15:22	TPH
Chloroethane       ND       0.0       ND       0.26       2       12/14/3       15.22       TPH         Chloroferm       ND       0.20       ND       0.49       2       12/14/3       15.22       TPH         Chloromethane       ND       0.20       ND       0.47       2       12/14/3       15.22       TPH         1,2-Dichlorofhanzene       ND       0.10       ND       0.40       2       12/14/3       15.22       TPH         1,3-Dichlorofhanzene       ND       0.10       ND       0.60       2       12/14/3       15.22       TPH         1,4-Dichlorofhanzene       ND       0.10       ND       0.60       2       12/14/3       15.22       TPH         1,4-Dichlorofhanzene       ND       0.10       ND       0.40       2       12/14/3       15.22       TPH         1,4-Dichloroethane       ND       0.10       ND       0.40       2       12/14/3       15.22       TPH         1,4-Dichloroethane       ND       0.10       ND       0.40       2       12/14/3       15.22       TPH         1,4-Dichloroethane       ND       0.10       ND       0.40       2       12/14/3	Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/14/13 15:22	TPH
Chloroform0.360.01.70.4921.21.111.22.2TPHChloromethaneND0.20ND0.41212/14.11.5.22TPH1.2.DichorobethaneND0.10ND0.60212/14.11.5.22TPH1.2.DichorobethaneND0.10ND0.60212/14.11.5.22TPH1.3.DichorobethaneND0.10ND0.60212/14.11.5.22TPH1.4.DichorobethaneND0.10ND0.60212/14.11.5.22TPH1.4.DichorobethaneND0.10ND0.40212/14.11.5.22TPH1.2.DichorobethaneND0.10ND0.40212/14.11.5.22TPH1.2.DichorobethyleneND0.10ND0.40212/14.11.5.22TPH1.2.DichorobethyleneND0.10ND0.40212/14.11.5.22TPH1.2.DichorophyleneND0.10ND0.45212/14.11.5.22TPH1.2.DichorophyleneND0.10ND0.45212/14.11.5.22TPH1.2.DichorophyleneND0.10ND0.45212/14.11.5.22TPH1.2.DichorophyleneND0.10ND0.45212/14.11.5.22TPH1.2.DichorophyleneND0.10ND0.45212/14.11.5.22TPH	Chlorobenzene	ND	0.10		ND	0.46	2	12/14/13 15:22	TPH
ChloromethaneND0.20ND0.4121.21/1.131.52.2TPII1.2. Dahomoethane (EDB)ND0.10ND0.6021.21/1.131.52.2TPII1.3. DichlorobenzeneND0.10ND0.6021.21/1.131.52.2TPII1.3. DichlorobenzeneND0.10ND0.6021.21/1.131.52.2TPIIDichlorobinzeneND0.10ND0.6021.21/1.131.52.2TPIIDichlorobinzeneND0.10ND0.4021.21/1.131.52.2TPII1.4. DichlorobenzeneND0.10ND0.4021.21/1.131.52.2TPII1.1. DichlorobenzeneND0.10ND0.4021.21/1.131.52.2TPII1.2. DichlorobenzeneND0.10ND0.4021.21/1.131.52.2TPII1.2. DichlorobenzeneND0.10ND0.4021.21/1.131.52.2TPII1.2. DichlorobenzeneND0.10ND0.4021.21/1.131.52.2TPII1.2. DichlorophyneneND0.10ND0.4021.21/1.131.52.2TPII1.2. DichlorophyneneND0.10ND0.4521.21/1.131.52.2TPII1.2. DichlorophyneneND0.10ND0.4521.21/1.131.52.2TPII1.2. DichlorophyneneND0.10ND<	Chloroethane	ND	0.10		ND	0.26	2	12/14/13 15:22	TPH
1,2-Dibromechane (EDB)ND0.10ND0.77212/14/315.22TPI1,3-DichlorobenzeneND0.10ND0.60212/14/315.22TPI1,4-DichlorobenzeneND0.10ND0.60212/14/315.22TPI1,4-DichlorobenzeneND0.10ND0.60212/14/315.22TPI1,4-DichlorobenzeneND0.10ND0.40212/14/315.22TPI1,1-DichloroethaneND0.10ND0.40212/14/315.22TPI1,2-DichloroethyleneND0.10ND0.40212/14/315.22TPI1,2-DichloroethyleneND0.10ND0.40212/14/315.22TPI1,2-DichlorophynenND0.10ND0.40212/14/315.22TPI1,2-DichlorophynenND0.10ND0.46212/14/315.22TPI1,2-DichlorophynenND0.10ND0.45212/14/315.22TPI1,2-DichlorophynenND0.10ND0.45212/14/315.22TPI1,2-Dicholori,1_2-zetrafuloroethane (Feron 114)ND0.10ND0.45212/14/315.22TPI1,2-Dicholori,1_2-zetrafuloroethaneND0.10ND0.43212/14/315.22TPI1,2-Dicholori,1_2-zetrafuloroethaneND0.10	Chloroform	0.36	0.10		1.7	0.49	2	12/14/13 15:22	TPH
ND       ND       0.0       ND       0.66       2       12/14/13       15.22       TPI         1.3-Dichlorobenzene       ND       0.10       ND       0.60       2       12/14/13       15.22       TPI         1.4-Dichlorobenzene       ND       0.10       ND       0.60       2       12/14/13       15.22       TPI         1.4-Dichlorobenzene       ND       0.10       AD       0.40       2       12/14/13       15.22       TPI         1.2-Dichlorobenzene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPI         1.2-Dichlorobenzene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPI         1.2-Dichlorobenzene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPI         1.2-Dichlorophytene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPI         1.2-Dichlorophytene       ND       0.10       ND       0.46       2       12/14/13       15.22       TPI         1.2-Dichlorophytene       ND       0.10       ND       0.45       2       12/14/	Chloromethane	ND	0.20		ND	0.41	2	12/14/13 15:22	TPH
A       Deb       D <thd< th=""> <thd< th=""> <thd< th=""></thd<></thd<></thd<>	1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/14/13 15:22	TPH
A       ND       0.10       ND       0.60       2       1/1/1/3       1/2       TPH         Dichlorodifluoromethane (Freon 12)       1.2       0.10       6.2       0.49       2       1/1/1/3       15.22       TPH         J.1.Dichloroethane       ND       0.10       ND       0.40       2       1/1/1/3       15.22       TPH         J.2.Dichloroethane       ND       0.10       ND       0.40       2       1/1/1/3       15.22       TPH         J.1.Dichloroethylene       ND       0.10       ND       0.40       2       1/1/1/3       15.22       TPH         J.2.Dichloroethylene       ND       0.10       ND       0.40       2       1/1/1/3       15.22       TPH         J.2.Dichloropropene       ND       0.10       ND       0.46       2       1/1/1/3       15.22       TPH         J.2.Dichloropropene       ND       0.10       ND       0.45       2       1/1/1/1/3       15.22       TPH         J.2.Dichloropropene       ND       0.10       ND       0.45       2       1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 15:22	TPH
Delaberodifluoromethane (Freen 12)1.20.106.20.4921.2/14/131.5.22TPH1,1-DichloroethaneND0.10ND0.4021.2/14/131.5.22TPH1,2-DichloroethaneND0.10ND0.4021.2/14/131.5.22TPH1,1-DichloroethyleneND0.10ND0.4021.2/14/131.5.22TPH1,2-DichloroethyleneND0.10ND0.4021.2/14/131.5.22TPH1,2-DichloroethyleneND0.10ND0.4621.2/14/131.5.22TPH1,2-DichloropropeneND0.10ND0.4521.2/14/131.5.22TPH1,2-Dichloroethane (Freen 114)0.330.102.30.7021.2/14/131.5.22TPH1,2-Dichloroethane (Freen 114)0.330.100.820.4321.2/14/131.5.22TPH1,2-DichloroethaneND0.10ND0.4321.2/14/131.5.22TPH1,1,2-TerkaloroethaneND0.10ND0.4321.2/14/131.5.22TPH1,1,2-TerkaloroethaneND0.10ND0.4321.2/14/131.5.22TPH1,1,2-TerkaloroethaneND0.10ND0.4321.2/14/131.5.22TPH1,1,2-TerkaloroethaneND0.10ND0.4321.2/14/131.5.22TPH1,1,2-Terkaloroe	1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 15:22	TPH
I. J- Dichloroethane       ND       0.10       ND       0.40       2       12/14/13       15.22       TPH         1. J- Dichloroethylene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPH         1. J- Dichloroethylene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPH         1.2-Dichloroethylene       ND       0.10       ND       0.40       2       12/14/13       15.22       TPH         1.2-Dichloroethylene       ND       0.10       ND       0.46       2       12/14/13       15.22       TPH         1.2-Dichlorooppane       ND       0.10       ND       0.45       2       12/14/13       15.22       TPH         1.2-Dichlorooppane       ND       0.10       ND       0.45       2       12/14/13       15.22       TPH         1.2-Dichloroothane (Freon 114)       0.33       0.10       0.82       0.43       2       12/14/13       15.22       TPH         Edhylbenzene       0.10       ND       0.10       ND       1.1       2       12/14/13       15.22       TPH         L1.2-2-Tetrachoroethane       ND       0.10       ND <td>1,4-Dichlorobenzene</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.60</td> <td>2</td> <td>12/14/13 15:22</td> <td>TPH</td>	1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 15:22	TPH
N.D.N.D.0.10N.D.0.40212/14/315.22TPH1.1-DichloroethyleneN.D.0.10N.D.0.40212/14/315.22TPH1.2-DichloroethyleneN.D.0.10N.D.0.40212/14/315.22TPH1.2-DichloropropaneN.D.0.10N.D.0.46212/14/315.22TPHcis-13-DichloropropaneN.D.0.10N.D.0.45212/14/315.22TPHtrans.13-DichloropropeneN.D.0.10N.D.0.45212/14/315.22TPH1.2-Dichloro-1,12,2-tertafluoroethane (Freen 114)0.330.102.30.70212/14/315.22TPH1.2-Dichloro-1,12,2-tertafluoroethane (Freen 114)0.330.100.820.430.70212/14/315.22TPH1.2-DichlorobutidieneN.D.0.10N.D.1.1212/14/315.22TPHKexachlorobutidieneN.D.0.10N.D.0.69212/14/315.22TPH1,1,2-TrichloroethaneN.D.0.10N.D.0.69212/14/315.22TPH1,1,2-TrichloroethaneN.D.0.10N.D.0.74212/14/315.22TPH1,1,1-TrichloroethaneN.D.0.10N.D.0.55212/14/315.22TPH1,1,1-TrichloroethaneN.D.0.10N.D.0.56212/14/315.22T	Dichlorodifluoromethane (Freon 12)	1.2	0.10		6.2	0.49	2	12/14/13 15:22	TPH
ND       0.10       ND       0.40       2       12/14/3       15/22       TPH         cis-1,2-Dichloroethylene       ND       0.10       ND       0.40       2       12/14/3       15/22       TPH         1,2-Dichloropropane       ND       0.10       ND       0.46       2       12/14/3       15/22       TPH         cis-1,3-Dichloropropene       ND       0.10       ND       0.45       2       12/14/3       15/22       TPH         trans-1,3-Dichloropropene       ND       0.10       ND       0.45       2       12/14/3       15/22       TPH         Lj-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)       0.33       0.10       2,3       0.70       2       12/14/13       15/22       TPH         Ehylbenzene       0.19       0.10       0.82       0.43       2       12/14/13       15/22       TPH         Kexchorobutadiene       ND       0.10       ND       1.1       2       12/14/13       15/22       TPH         Styrene       0.30       0.10       ND       0.43       2       12/14/13       15/22       TPH         1,1,2,2-Tetrachloroethane       ND       0.10       ND       0.69       2	1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 15:22	TPH
ND0.10ND0.40212/14/1315.22TPH1.2-DichloropropaneND0.10ND0.46212/14/1315.22TPHcis-1,3-DichloropropeneND0.10ND0.45212/14/1315.22TPHtrans-1,3-DichloropropeneND0.10ND0.45212/14/1315.22TPH1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)0.330.102.30.70212/14/1315.22TPHEthylbenzene0.190.100.820.43212/14/1315.22TPHHexachlorobutadieneND0.10ND1.1212/14/1315.22TPHStyrene0.300.101.30.43212/14/1315.22TPHStyrene0.300.101.30.43212/14/1315.22TPH1,1,2,2-tritachloroethane1.10.107.80.68212/14/1315.22TPH1,1,2,2-tritachloroethaneND0.10ND0.74212/14/1315.22TPH1,1,1,-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2,-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2,-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2,-TrichloroethaneND0.10ND0.562<	1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 15:22	TPH
L2-bickloropropeneND0.10ND0.4621/2/14/1315.22TPHcis-1,3-DickloropropeneND0.10ND0.4521/2/14/1315.22TPHtrans-1,3-DickloropropeneND0.10ND0.4521/2/14/1315.22TPH1,2-Dickloro-1,1,2,2-tertafluoroethane (Freon 114)0.330.102.30.7021/2/14/1315.22TPHEdylbenzene0.190.100.820.4321/2/14/1315.22TPHMethylene Chloride2.41.08.43.521/2/14/1315.22TPH1,1,2,2-Tetrackloroethane0.300.101.30.4321/2/14/1315.22TPH1,1,2,2-TetrackloroethaneND0.10ND0.6921/2/14/1315.22TPH1,1,2,2-Tetrackloroethane1.10.107.80.6821/2/14/1315.22TPH1,1,2,4-TrickloroethaneND0.10ND0.7421/2/14/1315.22TPH1,1,2-TrickloroethaneND0.10ND0.5521/2/14/1315.22TPH1,1,2-TrickloroethaneND0.10ND0.5521/2/14/1315.22TPH1,1,2-TrickloroethaneND0.10ND0.5521/2/14/1315.22TPH1,1,2-TrickloroethaneND0.10ND0.5621/2/14/1315.22TPH1,1,2-Trick	1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 15:22	TPH
ND0.10ND0.45212/14/1315.22TPHtrans-1,3-DichloropropeneND0.10ND0.45212/14/1315.22TPH1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)0.330.102.30.70212/14/1315.22TPHEthylbenzene0.190.100.820.43212/14/1315.22TPHHexachlorobutadieneND0.10ND1.1212/14/1315.22TPHMethylene Chloride2.41.08.43.5212/14/1315.22TPHStyrene0.300.101.30.43212/14/1315.22TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/1315.22TPH1,2,2-Tetrachloroethane1.10.107.80.68212/14/1315.22TPH1,1,2,2-TetrachloroethaneND0.10ND0.74212/14/1315.22TPH1,1,2,4-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-Trichloroethane0.120.100.620.54212/14/1315.22TPH1,1,2-Trichloroethane (Freon 11)1.10.100.600.56212/14/1315.22TPH1,2,4-TrimethylbenzeneND0.10 <td< td=""><td>cis-1,2-Dichloroethylene</td><td>ND</td><td>0.10</td><td></td><td>ND</td><td>0.40</td><td>2</td><td>12/14/13 15:22</td><td>TPH</td></td<>	cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 15:22	TPH
Numerical SectorND0.10ND0.45212/14/1315.22TPH1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)0.330.102.30.70212/14/1315.22TPHEthylbenzene0.190.100.820.43212/14/1315.22TPHHexachlorobutadieneND0.10ND1.1212/14/1315.22TPHMethylene Chloride2.41.08.43.5212/14/1315.22TPHStyrene0.300.101.30.43212/14/1315.22TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/1315.22TPHTetrachloroethane1.10.107.80.68212/14/1315.22TPH1,2,4-TrichloroethaneND0.10ND0.74212/14/1315.22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-Trichloroethane (Freon 11)1.10.100.620.54212/14/1315.22TPH1,2,4-TrimethylbenzeneND0.10ND0.77212/14/1315.22TPH1,2,4-TrimethylbenzeneND0.10 </td <td>1,2-Dichloropropane</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.46</td> <td>2</td> <td>12/14/13 15:22</td> <td>TPH</td>	1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/14/13 15:22	TPH
Label 11.2.2tetrafluoroethane (Freon 114)0.330.102.30.70212/14/1315.22TPHEthylbenzene0.190.100.820.43212/14/1315.22TPHHexachlorobutadieneND0.10ND1.1212/14/1315.22TPHMethylene Chloride2.41.08.43.5212/14/1315.22TPHStyrene0.300.101.30.43212/14/1315.22TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/1315.22TPHTetrachloroethane1.10.107.80.68212/14/1315.22TPHToluene4.00.10150.38212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.74212/14/1315.22TPH1,2,4-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-Trichloroethane0.120.100.620.54212/14/1315.22TPH1,1,2-Trichloroethane0.120.100.620.54212/14/1315.22TPH1,1,2-Trichloroethane (Freon 11)1.10.106.00.56212/14/1315.22TPH1,2,4-TrimethylbenzeneND0.10 </td <td>cis-1,3-Dichloropropene</td> <td>ND</td> <td>0.10</td> <td></td> <td>ND</td> <td>0.45</td> <td>2</td> <td>12/14/13 15:22</td> <td>TPH</td>	cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 15:22	TPH
Ethylbenzene0.190.100.820.4321/2/14/1315:22TPHHexachlorobutadieneND0.10ND1.121/2/14/1315:22TPHMethylene Chloride2.41.08.43.521/2/14/1315:22TPHStyrene0.300.101.30.4321/2/14/1315:22TPH1,1,2,2-TetrachloroethaneND0.10ND0.6921/2/14/1315:22TPHTetrachloroethylene1.10.107.80.6821/2/14/1315:22TPH1,2,4-TrichloroethaneND0.10ND0.7421/2/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPH1,1,2-Trichloroethane0.120.100.620.5421/2/14/1315:22TPH1,1,2-Trichloroethane (Freon 11)1.10.106.00.5621/2/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.7721/2/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10N	trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 15:22	TPH
HexachorobutadieneND0.10ND1.121/1/1/115.22TPHMethylene Chloride2.41.08.43.5212/14/115.22TPHStyrene0.300.101.30.43212/14/115.22TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/115.22TPHTetrachloroethylene1.10.107.80.68212/14/115.22TPH1,2,4-TrichloroethaneND0.10ND0.74212/14/1315.22TPH1,1,1-TrichloroethaneND0.10ND0.74212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315.22TPH1,1,2-TrichloroethaneND0.10ND0.56212/14/1315.22TPH1,1,2-Trichloroethane0.120.100.620.54212/14/1315.22TPH1,1,2-Trichloroethane (Freon 11)1.10.106.00.56212/14/1315.22TPH1,1,2-Trichloroethane (Freon 113)ND0.10ND0.77212/14/1315.22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315.22TPH	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.33	0.10		2.3	0.70	2	12/14/13 15:22	TPH
Methylene Chloride2.41.08.43.5212/14/1315:22TPHStyrene0.300.101.30.43212/14/1315:22TPH1,1,2,2-TetrachloroethaneND0.10ND0.69212/14/1315:22TPHTetrachloroethylene1.10.107.80.68212/14/1315:22TPHToluene4.00.10150.38212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.74212/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-Trichloroethane0.120.10ND0.55212/14/1315:22TPHTrichlorofloromethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2-TrinethylbenzeneND0.10ND0.77212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2-TrinethylbenzeneND0.10ND0.77212/14/1315:22TPH	Ethylbenzene	0.19	0.10		0.82	0.43	2	12/14/13 15:22	TPH
Styrene       0.30       0.10       1.3       0.43       2       12/14/13       15:22       TPH         1,1,2,2-Tetrachloroethane       ND       0.10       ND       0.69       2       12/14/13       15:22       TPH         Tetrachloroethylene       1.1       0.10       7.8       0.68       2       12/14/13       15:22       TPH         Toluene       4.0       0.10       15       0.38       2       12/14/13       15:22       TPH         1,2,4-Trichloroethane       ND       0.10       ND       0.74       2       12/14/13       15:22       TPH         1,1,1-Trichloroethane       ND       0.10       ND       0.74       2       12/14/13       15:22       TPH         1,1,2-Trichloroethane       ND       0.10       ND       0.55       2       12/14/13       15:22       TPH         1,1,2-Trichloroethane       ND       0.10       ND       0.55       2       12/14/13       15:22       TPH         Trichlorofluoromethane (Freon 11)       1.1       0.10       6.0       0.56       2       12/14/13       15:22       TPH         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)       ND       0.10       N	Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/14/13 15:22	TPH
1,1,2,2-TetrachloroethaneND0.10ND0.6921/2/14/1315:22TPHTetrachloroethylene1.10.107.80.6821/2/14/1315:22TPHToluene4.00.10150.3821/2/14/1315:22TPH1,2,4-TrichlorobenzeneND0.10ND0.7421/2/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.5521/2/14/1315:22TPHTrichloroethane (Freon 11)1.10.100.620.5421/2/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.7721/2/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.7721/2/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.7721/2/14/1315:22TPH	Methylene Chloride	2.4	1.0		8.4	3.5	2	12/14/13 15:22	TPH
Tetrachloroethylene1.10.107.80.68212/14/1315:22TPHToluene4.00.10150.38212/14/1315:22TPH1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-Trichloroethane0.120.10ND0.55212/14/1315:22TPHTrichloroethylene0.120.100.620.54212/14/1315:22TPH1,1,2-Trichloroethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	Styrene	0.30	0.10		1.3	0.43	2	12/14/13 15:22	TPH
Toluene4.00.10150.38212/14/1315:22TPH1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-Trichloroethane0.120.100.620.54212/14/1315:22TPHTrichloroethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/14/13 15:22	TPH
1,2,4-TrichlorobenzeneND0.10ND0.74212/14/1315:22TPH1,1,1-TrichloroethaneND0.10ND0.55212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPHTrichloroethane0.120.100.620.54212/14/1315:22TPHTrichloroethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	Tetrachloroethylene	1.1	0.10		7.8	0.68	2	12/14/13 15:22	TPH
ND0.10ND0.55212/14/1315:22TPH1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPHTrichloroethylene0.120.100.620.54212/14/1315:22TPHTrichlorofluoromethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	Toluene	4.0	0.10		15	0.38	2	12/14/13 15:22	TPH
1,1,2-TrichloroethaneND0.10ND0.55212/14/1315:22TPHTrichloroethylene0.120.100.620.54212/14/1315:22TPHTrichlorofluoromethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/14/13 15:22	TPH
Trichloroethylene       0.12       0.10       0.62       0.54       2       12/14/13       15:22       TPH         Trichlorofluoromethane (Freon 11)       1.1       0.10       6.0       0.56       2       12/14/13       15:22       TPH         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)       ND       0.10       ND       0.77       2       12/14/13       15:22       TPH         1,2,4-Trimethylbenzene       ND       0.10       ND       0.49       2       12/14/13       15:22       TPH	1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 15:22	TPH
Trichlorofluoromethane (Freon 11)1.10.106.00.56212/14/1315:22TPH1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 15:22	ТРН
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)ND0.10ND0.77212/14/1315:22TPH1,2,4-TrimethylbenzeneND0.10ND0.49212/14/1315:22TPH	Trichloroethylene	0.12	0.10		0.62	0.54	2	12/14/13 15:22	TPH
ND         0.10         ND         0.49         2         12/14/13         15:22         TPH	Trichlorofluoromethane (Freon 11)	1.1	0.10		6.0	0.56	2	12/14/13 15:22	ТРН
	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/14/13 15:22	TPH
1,3,5-Trimethylbenzene ND 0.10 ND 0.49 2 12/14/13 15:22 TPH	1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/14/13 15:22	TPH
	1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2		ТРН
Vinyl Chloride ND 0.10 ND 0.26 2 12/14/13 15:22 TPH	Vinyl Chloride	ND			ND	0.26	2		
	m&p-Xylene	0.93	0.20						



#### ANALYTICAL RESULTS

					RPD Pre and Post-Sa	mpling:				
Sampled: 12/10/2013 12:05	Sample Type:				Flow Controller Calibration					
Sample ID: 13L0569-03 Sample Matrix: Sub Slab	Canister Size: Flow Controller ID:				Receipt Vacuum(in F Flow Controller Type	0,				
Field Sample #: ES #1	Canister ID:				Final Vacuum(in Hg)	<i>.,</i>				
Project Location: Springfield St. Date Received: 12/13/2013	Sample Description/Location: Sub Description/Location:	Sample Description/Location:					Work Order: 13L0569 Initial Vacuum(in Hg):			

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	102	70-130	12/14/13 15:22

o-Xylene

102

0.10

0.32

1.4

0.43

2 12/14/13 15:22

TPH



#### ANALYTICAL RESULTS

Project Location: Springfield St. Date Received: 12/13/2013 Field Sample #: ES #2 Sample ID: 13L0569-04 Sample Matrix: Sub Slab Sampled: 12/10/2013 12:00 Sample Description/Location: Sub Description/Location: Canister ID: Canister Size: Flow Controller ID: Sample Type: Work Order: 13L0569 Initial Vacuum(in Hg): Final Vacuum(in Hg): Receipt Vacuum(in Hg): Flow Controller Type: Flow Controller Calibration RPD Pre and Post-Sampling:

		E	PA TO-14A					
Sample Flags: A-09	ppl	bv		ug/n	n3		Date/Time	
Analyte	Results	RL	Flag/Qual	Results	RL	Dilution	Analyzed	Analyst
Benzene	0.20	0.10		0.65	0.32	2	12/14/13 16:02	TPH
Bromomethane	ND	0.10		ND	0.39	2	12/14/13 16:02	TPH
Carbon Tetrachloride	ND	0.10		ND	0.63	2	12/14/13 16:02	TPH
Chlorobenzene	ND	0.10		ND	0.46	2	12/14/13 16:02	TPH
Chloroethane	ND	0.10		ND	0.26	2	12/14/13 16:02	TPH
Chloroform	0.39	0.10		1.9	0.49	2	12/14/13 16:02	TPH
Chloromethane	ND	0.20		ND	0.41	2	12/14/13 16:02	TPH
1,2-Dibromoethane (EDB)	ND	0.10		ND	0.77	2	12/14/13 16:02	TPH
1,2-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 16:02	TPH
1,3-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 16:02	TPH
1,4-Dichlorobenzene	ND	0.10		ND	0.60	2	12/14/13 16:02	TPH
Dichlorodifluoromethane (Freon 12)	1.2	0.10		6.1	0.49	2	12/14/13 16:02	TPH
1,1-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 16:02	TPH
1,2-Dichloroethane	ND	0.10		ND	0.40	2	12/14/13 16:02	TPH
1,1-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 16:02	TPH
cis-1,2-Dichloroethylene	ND	0.10		ND	0.40	2	12/14/13 16:02	TPH
1,2-Dichloropropane	ND	0.10		ND	0.46	2	12/14/13 16:02	TPH
cis-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 16:02	TPH
trans-1,3-Dichloropropene	ND	0.10		ND	0.45	2	12/14/13 16:02	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	0.32	0.10		2.2	0.70	2	12/14/13 16:02	TPH
Ethylbenzene	0.21	0.10		0.91	0.43	2	12/14/13 16:02	TPH
Hexachlorobutadiene	ND	0.10		ND	1.1	2	12/14/13 16:02	TPH
Methylene Chloride	2.7	1.0		9.2	3.5	2	12/14/13 16:02	TPH
Styrene	0.29	0.10		1.2	0.43	2	12/14/13 16:02	TPH
1,1,2,2-Tetrachloroethane	ND	0.10		ND	0.69	2	12/14/13 16:02	TPH
Tetrachloroethylene	1.5	0.10		10	0.68	2	12/14/13 16:02	TPH
Toluene	3.9	0.10		15	0.38	2	12/14/13 16:02	TPH
1,2,4-Trichlorobenzene	ND	0.10		ND	0.74	2	12/14/13 16:02	TPH
1,1,1-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 16:02	TPH
1,1,2-Trichloroethane	ND	0.10		ND	0.55	2	12/14/13 16:02	TPH
Trichloroethylene	0.15	0.10		0.78	0.54	2	12/14/13 16:02	TPH
Trichlorofluoromethane (Freon 11)	0.76	0.10		4.3	0.56	2	12/14/13 16:02	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.10		ND	0.77	2	12/14/13 16:02	TPH
1,2,4-Trimethylbenzene	ND	0.10		ND	0.49	2	12/14/13 16:02	TPH
1,3,5-Trimethylbenzene	ND	0.10		ND	0.49	2	12/14/13 16:02	TPH
Vinyl Chloride	ND	0.10		ND	0.26	2	12/14/13 16:02	TPH



#### ANALYTICAL RESULTS

Sample Flags: A-09	ppbv		ug/m3	Date/Time
		EPA TO-14A		
				RPD Pre and Post-Sampling:
Sampled: 12/10/2013 12:00	Sample Type:			Flow Controller Calibration
Sample Matrix: Sub Slab	Flow Controller ID:			Flow Controller Type:
Sample ID: 13L0569-04	Canister Size:			Receipt Vacuum(in Hg):
Field Sample #: ES #2	Canister ID:			Final Vacuum(in Hg):
Date Received: 12/13/2013	Sub Description/Location:			Initial Vacuum(in Hg):
Project Location: Springfield St.	Sample Description/Location:			Work Order: 13L0569

o-Xylene	0.36 0.10	1.6 0.43	2	12/14/13 16:02 TPH
Surrogates	% Recovery	% REC Limits		

4-Bromofluorobenzene (1)

102

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70-130

12/14/13 16:02



#### Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-14A		Pressure	Pre	Pre-Dil Initial	Pre-Dil Final	Default Injection	Actual	
Lab Number [Field ID]	Batch	Dilution	Dilution	mL	mL	mL	Injection mL	Date
13L0569-01 [MS Front]	B087288	1	1	N/A	1000	400	200	12/13/13
13L0569-02 [MS Back]	B087288	1	1	N/A	1000	400	200	12/13/13
13L0569-03 [ES #1]	B087288	1	1	N/A	1000	400	200	12/13/13
13L0569-04 [ES #2]	B087288	1	1	N/A	1000	400	200	12/13/13



#### QUALITY CONTROL

#### Air Toxics by EPA Compendium Methods - Quality Control

Analysis         R. E.         Readle         R. L         ppb/         Readle         %4EC         Linuit         Fdg. QL           Back 488728-10-15 Prop		pp	bv	ug/n	13	Spike Level	Source		%REC		RPD	
Hunk (1007258: ILK1)         Prepared & Analyzed: 12/13/13           Benzene         ND         0.025           Biomomethane         ND         0.025           Charochane         ND         0.025           L2-Dichlorochane         ND         0.025           L2-Dichlorochane         ND         0.025           L2-Dichlorochane         ND         0.025           L2-Dichlorochane         ND         0.025           L3-Dichlorochane         ND	Analyte			Results	RL	ppbv	Result	%REC	Limits	RPD	Limit	Flag/Qual
Bernare         ND         0.025           Biomonchane         ND         0.025           Cabba Terablende         ND         0.025           Chabro Atrablende         ND         0.025           L3-Dehlorobenzene         ND         0.025           L3-Dehlorophymene         ND         0.025           L3-	Batch B087288 - TO-15 Prep											
İnemonethaneNP025Carhon TrachbirdeND025ChlorobrazeneND025ChlorobrateneND025ChlorobrateneND0251.2-Dirobrothme (1D9)ND0251.2-Dirobrothme (1D9)ND0251.2-Dirobrothme (1P0)ND0251.2-Dirobrothme (1P0) <t< td=""><td>Blank (B087288-BLK1)</td><td></td><td></td><td></td><td></td><td>Prepared &amp; A</td><td>Analyzed: 12</td><td>/13/13</td><td></td><td></td><td></td><td></td></t<>	Blank (B087288-BLK1)					Prepared & A	Analyzed: 12	/13/13				
Cankon TernehondeND025ChorochanaND025ChorochanaND025ChorochanaND025Labornochane(EDB)ND0251.2-Dehonochane(EDB)ND0251.2-Dehonochane(Freen 12)ND025DichorodhanaND025DichorodhanaND025DichorodhanaND025DichorodhanaND025DichorodhanaND025DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Li-DichorodhanaND025Handona MarkonND025Handona MarkonND025Handona MarkonND025Handona MarkonND025Handona MarkonND025Handona MarkonND025Handona MarkonND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND025Li-DichorophanaND	Benzene	ND	0.025									
ChiorebaneNP025ChorednaNP025ChorednaNP025Chiorenchane (DBM)NP0251,2-Deinorobane (DBM)NP0251,2-Deinorobane (Fron 12)NP0251,4-Deinorobane (Fron 12)NP0251,2-Deinorobane (Fron 12)NP0251,1-Teinolorobane (Fron 12	Bromomethane	ND	0.025									
ChlorodhaneND025ChlorodhaneND0251,2-DichorobazerND0251,2-DichorobazerND0251,4-DichorobazerND0251,4-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,2-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND0251,1-DichorobazerND025<	Carbon Tetrachloride	ND	0.025									
ChlorofanND025ChloromchaneND0251.2-Dehromchane (DD)ND0251.3-Dehromchane (Teor 12)ND0251.4-Dehromchane (Teor 12)ND0251.2-Dehromchane (Teor 12)ND0251.2-Dehromchane (Teor 12)ND0251.2-Dehromchane (Teor 12)ND0251.2-Dehromchane (Teor 12)ND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.2-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-DehromchaneND0251.1-Dehromchane	Chlorobenzene	ND	0.025									
Chloronethane (EDB)ND0301,2-Dointoronethane (EDB)ND0251,3-Dointoronethane (For 12)ND0251,4-Dointoronethane (For 12)ND0251,1-Dointoronethane (For 12)ND0251,1-Dointoronethane (For 12)ND0251,2-Dointoronethane (For 12)ND0251,2-Tointoronethane (For 12)ND0251,1-Tointoronethane (For 12)ND </td <td>Chloroethane</td> <td>ND</td> <td>0.025</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Chloroethane	ND	0.025									
12.Dichonostane (EDB)ND0251.2.DichorostaneND0251.4.DichorostaneND025Dichorofuncomethane (Freen 12)ND0251.1.Dichorostane	Chloroform	ND	0.025									
12.DichlorobenzeneND0251.4.DichlorobenzeneND0251.4.DichlorobenzeneND025Dichlorodifuoromethane (Preon 12)ND0251.2.DichlorotophaneND0251.2.DichlorotophaneND025cis.1.2.DichlorotophaneND025cis.1.2.DichloropopaneND025cis.1.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.DichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND0251.2.J.TichloropopaneND </td <td>Chloromethane</td> <td>ND</td> <td>0.050</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Chloromethane	ND	0.050									
1,4 DicklorobenzeneND025DicklorobenzeneND025DicklorobenzeneND0251,2 DicklorobenzeneND0251,2 DicklorobenzeneND0251,2 DicklorobenzeneND0251,2 DickloropopaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,2 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND0251,1 DicklorophaneND025<	1,2-Dibromoethane (EDB)	ND	0.025									
1,4 DichlorobenzeneND025Dichlorodihuoromethane (Freon 12)ND0.0251,1 DichloroethaneND0.0251,1 DichloroethyleneND0.0251,2 DichloroethyleneND0.0251,2 DichloroethyleneND0.0251,2 DichloroethyleneND0.0251,2 DichloroethyleneND0.025trans-1,3 DichloroptopeneND0.025FalyBenzeneND0.025FalyBenzeneND0.025FalyBenzeneND0.025FalyBenzeneND0.025FalyBenzeneND0.025FalyBenzeneND0.025StyreneND0.025StyreneND0.025TerachorobethaneND0.025TerachorobethaneND0.025TerachorobethaneND0.0251,1,2 TrichlorobethaneND0.0251,1,2 TrichlorobethaneND0.0251,1,2 TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025TrichlorobethaneND0.025Trich	1,2-Dichlorobenzene	ND	0.025									
Dicklorodifuoromethane (Freon 12)         ND         0.025           1,1-Dickloromethane         ND         0.025           1,2-Dickloromethane         ND         0.025           cis.1,2-Dickloromethane         ND         0.025           Tarsel,1,2-Dickloromethane         ND         0.025           Cfreon 11,1,2-2-tertafluoromethane         ND         0.025           Hockachkorothandene         ND         0.025           Mothylene Chloride         ND         0.025           Totakene Chloride         ND         0.025           Tickhoromethane (Freon 11)         ND         0.025	1,3-Dichlorobenzene	ND	0.025									
1,1-DichloroethaneND0.0251,2-DichloroethyleneND0.0251,2-DichloroptyleneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,2-DichloroptyneneND0.0251,1,2-SternfluroethaneND0.025NewseneND0.025NereneND0.0251,1,2-TichlorobethaneND0.025TorkehorosthyleneND0.0251,1,2-TichlorobethaneND0.0251,1,2-TichlorobethaneND0.025TichlorosthyleneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025TichlorosthaneND0.025Tichlorosthane <td>1,4-Dichlorobenzene</td> <td>ND</td> <td>0.025</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,4-Dichlorobenzene	ND	0.025									
1,2-DichloroethyteneND0.0251,1-DichloroethyteneND0.0251,2-DichloroothyteneND0.0251,2-DichloroothyteneND0.025trans-1,3-DichloroothyteneND0.025trans-1,3-DichloroothyteneND0.025trans-1,3-DichloroothyteneND0.025EhythenzeneND0.025HoxachlorobutadieneND0.025HoxachlorobutadieneND0.025HoxachlorobutadieneND0.025HoxachlorobutadieneND0.025TetrachloroothaneND0.025TetrachloroothaneND0.025TetrachloroothaneND0.025TotloroothaneND0.025TotloroothaneND0.025TotloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025TichloroothaneND0.025Tichloroo	Dichlorodifluoromethane (Freon 12)	ND	0.025									
I. J. Dichloroethylene         ND         0.025           cis-1,2-Dichloroptopene         ND         0.025           cis-1,3-Dichloroptopene         ND         0.025           cis-1,3-Dichloroptopene         ND         0.025           1,2-Dichloro-1,1,2,2-tetrafluoroethane         ND         0.025           (Freen 14)         ND         0.025           Edhylbenzene         ND         0.025           Medylene Chloride         ND         0.025           Styrene         ND         0.025           Styrene         ND         0.025           Tetrachloroethylene         ND         0.025           Toluene         ND         0.025           Tetrachloroethane         ND         0.025           1,1,2-2-Tetrachloroethane         ND         0.025           1,1,2-2-Tetrachloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,1,2-Tric	1,1-Dichloroethane	ND	0.025									
train         ND         0.025           1.2-Dichloropropene         ND         0.025           trans-1.3-Dichloropropene         ND         0.025           trans-1.3-Dichloropropene         ND         0.025           freen 114)         ND         0.025           Edylbenzene         ND         0.025           Kerchorobutadiene         ND         0.025           Kyrene         ND         0.025           Styrene         ND         0.025           Tertarchloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           Trichlorofthane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,3-Trintehylbenzene         ND         0.025	1,2-Dichloroethane	ND	0.025									
1.2-Dichloropropene     ND     0.025       cisi-1.3-Dichloropropene     ND     0.025       trans-1.3-Dichloropropene     ND     0.025       1.2-Dichlorophone     ND     0.025       Ethylbenzene     ND     0.025       Ethylbenzene     ND     0.025       Methylene Chloride     ND     0.025       Styrene     ND     0.025       Totaene     ND     0.025       Tichloroethane     ND     0.025       Tichloroethane (Freon II)     ND     0.025 <tr< td=""><td>1,1-Dichloroethylene</td><td>ND</td><td>0.025</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>	1,1-Dichloroethylene	ND	0.025									
Lis-Ja-Dichloropropene         ND         0.025           trans-1,3-Dichloropropene         ND         0.025           1,2-Dichloro-1,1,2-2-tetrafluoroethane         ND         0.025           Ethylbenzene         ND         0.025           Methylene Chloride         ND         0.025           Styrene         ND         0.025           Tetrachloroethane         ND         0.025           Tetrachloroethane         ND         0.025           Tetrachloroethane         ND         0.025           Toluene         ND         0.025           Toluene         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,2,4-Trinedhylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025<	cis-1,2-Dichloroethylene	ND	0.025									
trans-1,3-DichloropropeneND0.0251,2-Dichloro-1,1,2,2-tettafluoroethaneND0.025EdhylbenzeneND0.025Methylene ChlorideND0.025Netrone Methylene ChlorideND0.025StyreneND0.025TettachloroethaneND0.025TettachloroethaneND0.025TotachloroethaneND0.025TotachloroethaneND0.025TotachloroethaneND0.025TotachloroethaneND0.025TichloroethaneND0.025TrichloroethaneND0.025TrichloroethaneND0.025TrichloroethaneND0.025TrichloroethaneND0.025TrichloroethaneND0.025Trichloroethane (Freon 11)ND0.025Trichloroethane (Freon 11)ND0.025Tichloroethane (Freon 11)ND0.025 </td <td>1,2-Dichloropropane</td> <td>ND</td> <td>0.025</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,2-Dichloropropane	ND	0.025									
1.2-Dichloro-1,1,2,2-tertafluoroethane       ND       0.025         Edhylbenzene       ND       0.025         Methylorobladiene       ND       0.25         Styrene       ND       0.025         Totkorobladiene       ND       0.025         Trichloroblane       ND       0.025         1,1,2-Trichloroblane       ND       0.025         1,1,2-Trichloroblane       ND       0.025         1,1,2-Trichloroblane       ND       0.025         1,3-Sortimethylbenzene       ND       0.025         1,3-Sortimethylbenzene	cis-1,3-Dichloropropene	ND	0.025									
(Freen 114)         ND         0.025           Haxachlorobutadiene         ND         0.025           Methylen Chloride         ND         0.025           Styrene         ND         0.025           Tettachlorobutadiene         ND         0.025           Totuene         ND         0.025           1,1,2,2-Trichlorobenzene         ND         0.025           1,1,2-Trichlorobenzene         ND         0.025           Trichlorobenzene         ND         0.025           Trichlorobenzene         ND         0.025           Trichlorobenzene         ND         0.025           Trichlorobenzene (Freon 11)         ND         0.025           1,1,2-Trichloro-1,2,2-trifluorobenzene (Freon 11)         ND         0.025           1,2,5-Trimethylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           Vinyl Chloride         ND         0.025           ND         0.025<	trans-1,3-Dichloropropene	ND	0.025									
Haxachlorobutadiene         ND         0.025           Methylene Chloride         ND         0.025           Styrene         ND         0.025           Tetrachloroethane         ND         0.025           Toluene         ND         0.025           Toluene         ND         0.025           1,1,2-Trichloroethane         ND         0.025           1,1,4-Trichloroethane         ND         0.025           1,1,1-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,2,4-Trimethylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           Vinyl Chloride         ND         0.025           Map-Sylene         ND         0.025           Vinyl Chloride         ND         0.025           Map-Sylene         ND         0.025 </td <td>1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)</td> <td>ND</td> <td>0.025</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.025									
Methylene ChlorideND0.25StyreneND0.0251,1,2,2-TetrachloroethaneND0.025TotueneND0.0251,2,4-TrichlorobenzeneND0.0251,1,1-TrichloroethaneND0.0251,1,2-TrichloroethaneND0.0251,1,2-TrichloroethaneND0.025TrichloroethaneND0.025TrichloroethaneND0.025Trichloroethane (Freon 11)ND0.0251,2,4-TrintehlybenzeneND0.0251,3,5-TrintehlybenzeneND0.0251,3,5-TrintehlybenzeneND0.025Vinyl ChlorideND0.025Yinyl ChlorideND0.025Marken MethylenzeneND0.025Vinyl ChlorideND0.025Marken MethylenzeneND0.025Yinyl ChlorideND0.025Marken MethylenzeneND0.025Marken MethylenzeneND0.025Yinyl ChlorideND0.025Marken MethylenzeneND0.025Marken Methy	Ethylbenzene	ND	0.025									
Styre         ND         0.025           1,1,2,2-Tetrachloroethane         ND         0.025           Tetrachloroethylene         ND         0.025           Toluene         ND         0.025           1,2,4-Trichloroethane         ND         0.025           1,1,1-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,2,4-Trinduroethane (Freon 11)         ND         0.025           1,2,5-Trichloro-1,2,2-trifluoroethane (Freon 11)         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           Wing Chloride         ND         0.025           m&p-Xylene         ND         0.025	Hexachlorobutadiene	ND	0.025									
1,1,2,2-Tetrachloroethane       ND       0.025         Tetrachloroethylene       ND       0.025         Toluene       ND       0.025         1,2,4-Trichlorobenzene       ND       0.025         1,1,1-Trichloroethane       ND       0.025         1,1,2-Trichloroethane       ND       0.025         Trichloroethane       ND       0.025         Trichloroethane       ND       0.025         Trichloroethane (Freon 11)       ND       0.025         1,1,2-Trichloroethane (Freon 11)       ND       0.025         1,1,2-Trichloroethane (Freon 11)       ND       0.025         1,1,2-Trichloroethane (Freon 11)       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025	Methylene Chloride	ND	0.25									
TetachloroethyleneND0.025TolueneND0.0251,2,4-TrichlorobenzeneND0.0251,1,1-TrichloroethaneND0.025TrichloroethaneND0.025Trichloroethane (Freon 11)ND0.0251,1,2-Trichloroethane (Freon 11)ND0.0251,1,2-Trichloroethane (Freon 11)ND0.0251,3,5-TrimethylbenzeneND0.0251,3,5-TrimethylbenzeneND0.025Vinyl ChlorideND0.025wing P-XyleneND0.025ND0	Styrene	ND	0.025									
Toluene         ND         0.025           1,2,4-Trichlorobenzene         ND         0.025           1,1,1-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,2,4-Trinethylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           Vinyl Chloride         ND         0.025	1,1,2,2-Tetrachloroethane	ND	0.025									
Toluene         ND         0.025           1,2,4-Trichlorobenzene         ND         0.025           1,1,1-Trichloroethane         ND         0.025           1,1,2-Trichloroethane         ND         0.025           Trichloroethane         ND         0.025           Trichloroethane (Freon 11)         ND         0.025           1,1,2-Trichloroethane (Freon 11)         ND         0.025           1,2,4-Trinethylbenzene         ND         0.025           1,3,5-Trimethylbenzene         ND         0.025           Vinyl Chloride         ND         0.025	Tetrachloroethylene	ND	0.025									
1,1,1-Trichloroethane       ND       0.025         1,1,2-Trichloroethane       ND       0.025         Trichloroethane (Freon 11)       ND       0.025         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 11)       ND       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025         nXylene       ND       0.025	Toluene	ND	0.025									
1,1,2-Trichloroethane       ND       0.025         Trichloroethylene       ND       0.025         Trichloronethane (Freon 11)       ND       0.025         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 11)       ND       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025         ND       0.025	1,2,4-Trichlorobenzene	ND	0.025									
Trichloroethylene       ND       0.025         Trichlorofluoromethane (Freon 11)       ND       0.025         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 11)       ND       0.025         113)       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025         o-Xylene       ND       0.025	1,1,1-Trichloroethane	ND	0.025									
Trichloroethylene       ND       0.025         Trichlorofluoromethane (Freon 11)       ND       0.025         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 11)       ND       0.025         113)       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025         o-Xylene       ND       0.025	1,1,2-Trichloroethane	ND	0.025									
Trichlorofluoromethane (Freon 11)       ND       0.025         1,1,2-Trichloro-1,2,2-trifluoroethane (Freon       ND       0.025         13)       ND       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.025         ND       0.025	Trichloroethylene	ND	0.025									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon       ND       0.025         113)       ND       0.025         1,2,4-Trimethylbenzene       ND       0.025         1,3,5-Trimethylbenzene       ND       0.025         Vinyl Chloride       ND       0.025         m&p-Xylene       ND       0.050         o-Xylene       ND       0.025	Trichlorofluoromethane (Freon 11)											
1,2,4-Trimethylbenzene     ND     0.025       1,3,5-Trimethylbenzene     ND     0.025       Vinyl Chloride     ND     0.025       m&p-Xylene     ND     0.050       o-Xylene     ND     0.025	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)											
1,3,5-Trimethylbenzene     ND     0.025       Vinyl Chloride     ND     0.025       m&p-Xylene     ND     0.050       o-Xylene     ND     0.025	1,2,4-Trimethylbenzene	ND	0.025									
n&p-XyleneND0.050o-XyleneND0.025	1,3,5-Trimethylbenzene	ND										
n&p-XyleneND0.050o-XyleneND0.025	Vinyl Chloride		0.025									
o-Xylene ND 0.025	m&p-Xylene											
	o-Xylene											
	Surrogate: 4-Bromofluorobenzene (1)	8.64				8.00		108	70-130			



#### QUALITY CONTROL

#### Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results RL	ug/m3 Results RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B087288 - TO-15 Prep									
LCS (B087288-BS1)			Prepared & A	Analyzed: 12/1	3/13				
Benzene	4.36		5.00		87.1	70-130			
Bromomethane	5.28		5.00		106	70-130			
Carbon Tetrachloride	6.15		5.00		123	70-130			
Chlorobenzene	5.41		5.00		108	70-130			
Chloroethane	5.53		5.00		111	70-130			
Chloroform	5.45		5.00		109	70-130			
Chloromethane	4.47		5.00		89.5	70-130			
1,2-Dibromoethane (EDB)	5.34		5.00		107	70-130			
1,2-Dichlorobenzene	6.36		5.00		127	70-130			
1,3-Dichlorobenzene	6.51		5.00		130	70-130			L-01
1,4-Dichlorobenzene	6.40		5.00		128	70-130			
Dichlorodifluoromethane (Freon 12)	6.00		5.00		120	70-130			
1,1-Dichloroethane	4.77		5.00		95.4	70-130			
1,2-Dichloroethane	6.04		5.00		121	70-130			
1,1-Dichloroethylene	5.13		5.00		103	70-130			
cis-1,2-Dichloroethylene	4.86		5.00		97.2	70-130			
1,2-Dichloropropane	4.14		5.00		82.7	70-130			
cis-1,3-Dichloropropene	5.01		5.00		100	70-130			
trans-1,3-Dichloropropene	5.58		5.00		112	70-130			
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	5.67		5.00		113	70-130			
Ethylbenzene	5.50		5.00		110	70-130			
Hexachlorobutadiene	6.89		5.00		138 *	70-130			L-01
Methylene Chloride	4.80		5.00		96.1	70-130			
Styrene	5.84		5.00		117	70-130			
1,1,2,2-Tetrachloroethane	5.10		5.00		102	70-130			
Tetrachloroethylene	5.94		5.00		119	70-130			
Toluene	5.11		5.00		102	70-130			
1,2,4-Trichlorobenzene	6.48		5.00		130	70-130			
1,1,1-Trichloroethane	5.65		5.00		113	70-130			
1,1,2-Trichloroethane	5.04		5.00		101	70-130			
Trichloroethylene	4.95		5.00		99.1	70-130			
Trichlorofluoromethane (Freon 11)	6.27		5.00		125	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	5.26		5.00		105	70-130			
1,2,4-Trimethylbenzene	6.18		5.00		124	70-130			
1,3,5-Trimethylbenzene	6.44		5.00		129	70-130			
Vinyl Chloride	5.30		5.00		106	70-130			
m&p-Xylene	12.4		10.0		124	70-130			
o-Xylene	5.99		5.00		120	70-130			
Surrogate: 4-Bromofluorobenzene (1)	8.52		8.00		106	70-130			



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

No results have been blank subtracted unless specified in the case narrative section.

- A-09 Holding times and stability of samples taken in tedlar bags have not been determined
- 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.



#### CERTIFICATIONS

#### Certified Analyses included in this Report

Analyte	Certifications
PA TO-14A in Air	
Benzene	AIHA,FL,NY
Bromomethane	AIHA,FL,NY
Carbon Tetrachloride	AIHA,FL,NY
Chlorobenzene	AIHA,FL,NY
Chloroethane	AIHA,FL,NY
Chloroform	AIHA,FL,NY
Chloromethane	AIHA,FL,NY
1,2-Dibromoethane (EDB)	NY
1,2-Dichlorobenzene	AIHA,FL,NY
1,3-Dichlorobenzene	AIHA,FL,NY
1,4-Dichlorobenzene	AIHA,FL,NY
Dichlorodifluoromethane (Freon 12)	AIHA,FL,NY
1,1-Dichloroethane	AIHA,FL,NY
1.2-Dichloroethane	AIHA,FL,NY
1,1-Dichloroethylene	AIHA,FL,NY
cis-1,2-Dichloroethylene	AIHA,FL,NY
1,2-Dichloropropane	AIHA,FL,NY
cis-1,3-Dichloropropene	AIHA,FL,NY
trans-1,3-Dichloropropene	NY
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	AIHA,FL,NY
Ethylbenzene	AIHA,FL,NY
Hexachlorobutadiene	AIHA,FL,NY
Methylene Chloride	AIHA,FL,NY
Styrene	AIHA,FL,NY
1,1,2,2-Tetrachloroethane	AIHA,FL,NY
Tetrachloroethylene	AIHA,FL,NY
Toluene	AIHA,FL,NY
1,2,4-Trichlorobenzene	AIHA,FL,NY
1,1,1-Trichloroethane	AIHA,FL,NY
1,1,2-Trichloroethane	AIHA,FL,NY
Trichloroethylene	AIHA,FL,NY
Trichlorofluoromethane (Freon 11)	AIHA,FL,NY
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY
1,2,4-Trimethylbenzene	AIHA,FL,NY
1,3,5-Trimethylbenzene	AIHA,FL,NY
Vinyl Chloride	AIHA,FL,NY
m&p-Xylene	AIHA,FL,NY
o-Xylene	AIHA,FL,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	06/30/2014
СТ	Connecticut Department of Publilc Health	PH-0567	09/30/2015
NY	New York State Department of Health	10899 NELAP	04/1/2014
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2014
RI	Rhode Island Department of Health	LAO00112	12/30/2013
NC	North Carolina Div. of Water Quality	652	12/31/2013
NJ	New Jersey DEP	MA007 NELAP	06/30/2014
FL	Florida Department of Health	E871027 NELAP	06/30/2014
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2014
WA	State of Washington Department of Ecology	C2065	02/23/2014
ME	State of Maine	2011028	06/9/2015
VA	Commonwealth of Virginia	460217	12/14/2014
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2014

AIHA,
NELA
: & WE
BE/DBE
E Certified

IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS AIHA. NELAC & WBE/DBE Certified	ELAC & V	AIHA, N		THIS FO	HAIN. IF	ON YOUR CI	UESTIONS (	RE ARE QUE C	NLESS THE	RECEIPT UNLES	アルルスアンディールロンシン 101011 100 「Approval Required 」 ** TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN.	LM. THE	ARTS AT 9:00 A	ND TIME STA	TURNAROU
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Please fill out	Hg	=				~ -	()				www.contestlabs.com	5			. (11).
	*	EAST LONGMEADOW, MA 01028	ADOW, N	ONGME	EAST L	Q	)RD 川 の の		_	)s.com	Fax: 413-525-6405 Email: info@contestlabs.com	•	TICAL LABORATORY	ANALYTICAL	
e   of	Page			UCE ST	39 SPRUCE ST	'ODY	AIR SAMPLE CHAIN OF CUSTODY	HAIN O	MPLE C	AIR SA	Phone: 413-525-2332				

	Page 1 of 2 Ceceipt Checklist	39 Spruce St. East Longmeadow, MA. 01028 P: 413-525-2332 F: 413-525-6405
CLIENT NAME: Arcadis	RECEIVED BY: RUF	DATE: 12/13/13
1) Was the chain(s) of custody relinquished and sign	ed? (Yes No	
2) Does the chain agree with the samples? If not, explain:	Ves No	
3) Are all the samples in good condition? If not, explain:	Yes No	
4) Are there any samples "On Hold"?	Yes 😡	Stored where:
5) Are there any RUSH or SHORT HOLDING TIME sar	nples? Yes (No)	Lannanan naturing any and a second
Who was notified Date		
6) Location where samples are stored: Qに し	Permission to subco	ntract samples? Yes No ) if not already approved
7) Temperature °C by Temp blank	Temperature °C by Temp g	un
Containers rec	eived at Con-Tes	t
	# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		
Tedlar Bags TO-17 Tubes	4	14
10-17 Tubes		
Regulators		
Restrictors		
Hg/Hopcalite Tube (NIOSH 6009)		
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs		
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs PCB Florisil Tubes (NIOSH 5503)		
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs PCB Florisil Tubes (NIOSH 5503) Air cassette		
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs PCB Florisil Tubes (NIOSH 5503) Air cassette PM 2.5/PM 10		
Hg/Hopcalite Tube (NIOSH 6009) (TO-4A/ TO-10A/TO-13) PUFs PCB Florisil Tubes (NIOSH 5503) Air cassette		

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

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

Laboratory Comments:

Login Samp	Page 2 of 2 <u>lle Receipt Checkli</u> st	
<u>(Rejection Criteria Listin</u>	g - Using Sample Accentanc	e Policy)
Question	be brought to the attention Answer (True/False)	
	T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	4	
<ol> <li>The cooler or samples do not appear to have been compromised or tampered with.</li> </ol>	T	
3) Samples were received on ice.	NA	
4) Cooler Temperature is acceptable.	NA	
5) Cooler Temperature is recorded.	NA	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	τ	
<ol> <li>There are no discrepancies between the sample IDs on the container and the COC.</li> </ol>	7	
10) Samples are received within Holding Time.		
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	7	
13) Air Cassettes are not broken/open.		
14) Sample collection date/times are provided.		
15) Appropriate sample containers are used.	T	
16) Proper collection media used.		
17) No headspace sample bottles are completely filled.	7	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.		
Doc #278 Rev. 3 August 2013	Who notified of False state Log-In Technician Initials:	ments? Date/Time: Date/Time:
	RIT	AB13131620

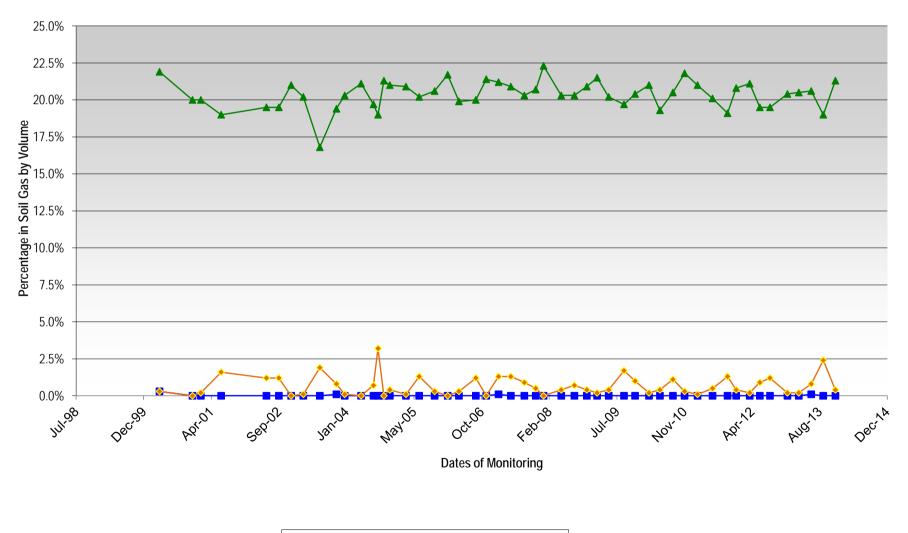
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Page 20 of 20	13L0569	_1	Contes	st_Fi	nal 12	20 13	0540

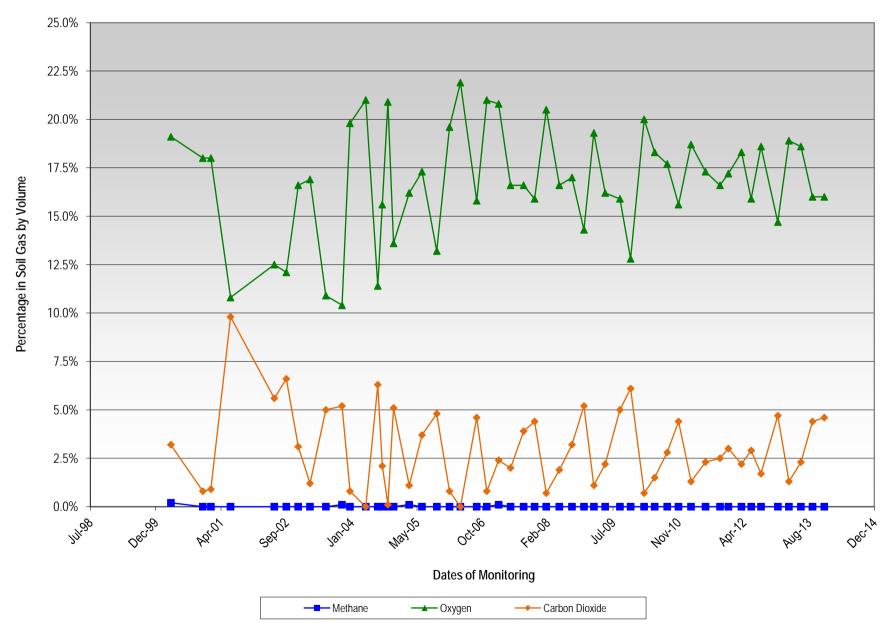
Appendix C

Soil Gas Parameter Graphs

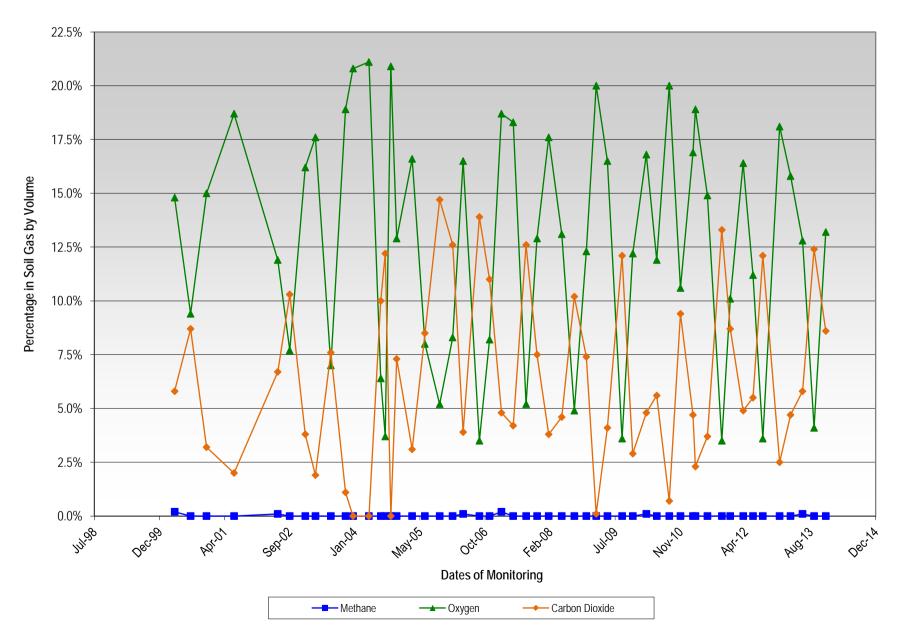
Soil Gas Well EPL1 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



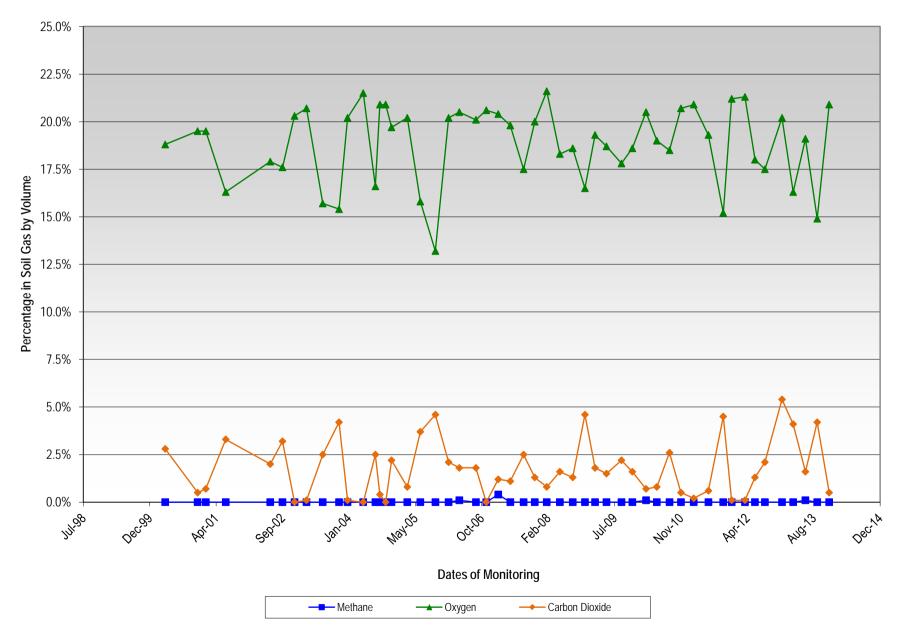
Soil Gas Well EPL4 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



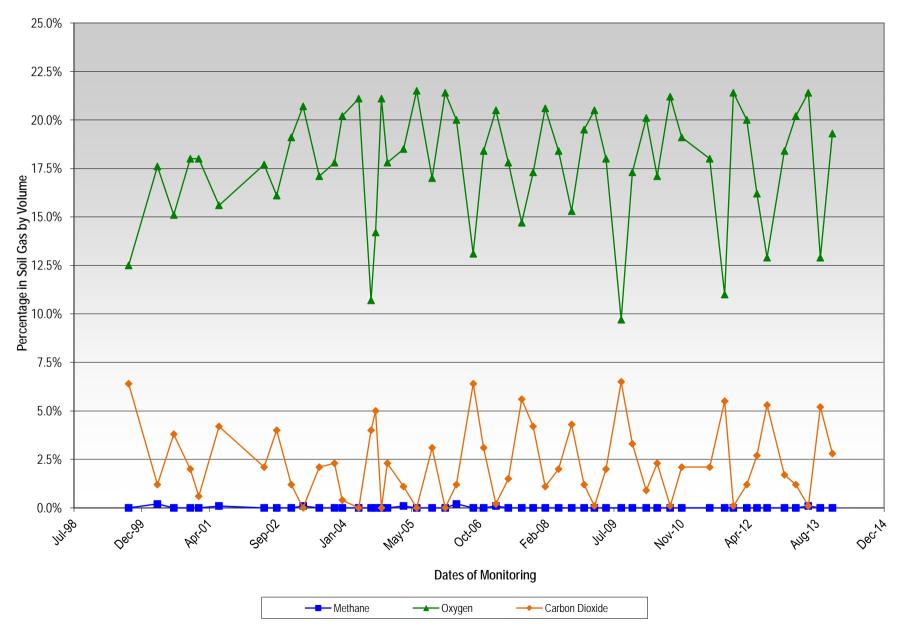
Soil Gas Well MPL5 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



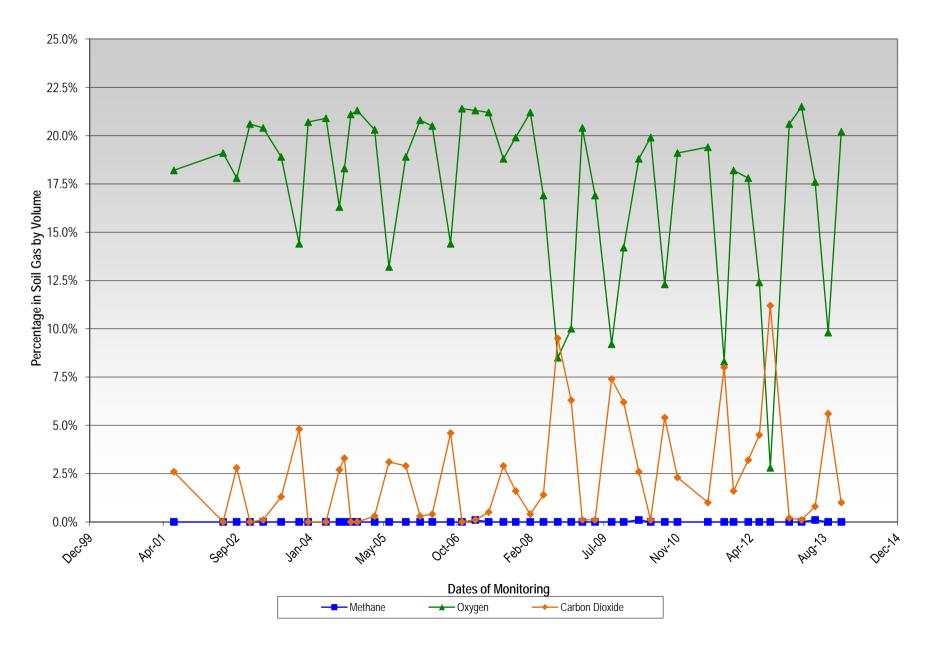
Soil Gas Well MG2 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



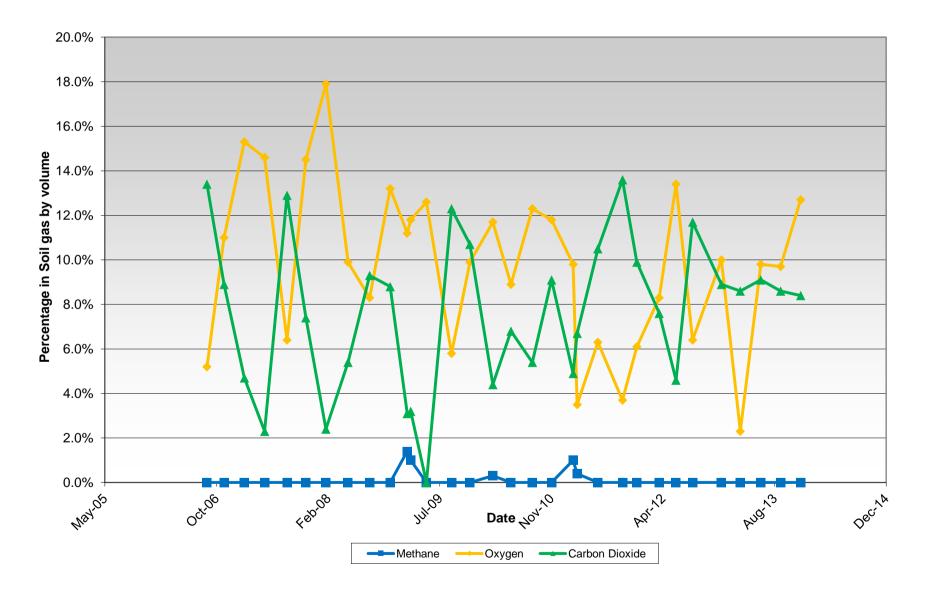
Soil Gas Well WB1 Fluctuation in Methane, Oxygen, and Carbon Dioxide Percentages over Time Springfield Street School Complex Providence, Rhode Island



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







# ARCADIS

Tables

# Table 1System Monitoring NotesSpringfield Street School ComplexProvidence, Rhode IslandDecember 9, 2013

Monitoring Location	Methane % by volume Landtec	Carbon Dioxide % by volume	Oxygen Carbon % by volume Monoxide PPM		Hydrogen Sulfide PPM	Organic Vapors PPM
Elementary School inlet 1	0.0	0.4	21.1	0	0	1.5
Elementary School inlet 2	0.0	0.4	21.1	0	0	0.7
Elementary School Outlet	0.0	0.4	0.4 21.1 0		0	0.0
Middle School front shed inlet	0.0	0.2	20.7	0	0	0.0
Middle School front shed after 2 <sup>nd</sup> carbon	0.0	0.2	20.8	0	0	0.0
Middle School back shed inlet	0.0	0.4	20.7	0	0	0.0
Middle School back shed after 2 <sup>nd</sup> carbon	0.0	0.4	20.7	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)			10 ppm	5 ppm

Measurements made with: Landtec GEM2000 Plus, MiniRae 2000

Sampling date: December 9, 2013

Measured by: Andrew DaSilva

#### Table 2 Soil Gas Samples Collected from System Influent Springfield Street School Complex

		5	oringfield Street Scho	ol Complex			
		CT DEP Proposed Residental Volatization Criteria For Soil Vapor		Middle School Back	Middle School Front	Elementary School #1	Elementary School # 2
Parameter	Sample Date	(ug/m3)*	OSHA PEL's (ug/m3)	(ug/m3)	(ug/m3)	(ug/m3) 0.7	(ug/m3) 0.7
	8/23/2012 1/4/2013			0.87	0.26	0.7	0.7
	3/20/2013	0.047	0.000	ND	0.44	0.57	0.54
Benzene	6/6/13 and 6/11/13	3,247	3,000	2.2	2.2	1.7	0.76
	9/11/2013			0.51	0.47	0.49	0.43
	12/10/2013			0.14	0.12	0.2	0.2
	8/23/2012 1/4/2013			ND	ND ND	0.65 ND	ND ND
	3/20/2013			ND ND	ND	ND	ND
Carbon Tetrachloride	6/6/13 and 6/11/13	6,395	62,900	ND	ND	ND	ND
	9/11/2013			ND	ND	ND	ND
	12/10/2013			ND	ND	ND	ND
	8/23/2012			ND	ND	1.7	1.7
	1/4/2013 3/20/2013			0.26 ND	ND ND	0.51	0.58 0.6
Chloroform	6/6/13 and 6/11/13	22,334	240,000	ND	ND	2.1	1.7
	9/11/2013			1.3	ND	1.9	2.1
	12/10/2013			ND	0.15	0.36	0.39
	8/23/2012			ND	2	ND	ND
	1/4/2013			0.18	0.23	ND	ND
Chloromethane	3/20/2013 6/6/13 and 6/11/13	NA	207,000	ND ND	ND 1.2	ND ND	ND ND
	9/11/2013			ND	ND	ND	ND
	12/10/2013			0.25	ND	ND	ND
	8/23/2012			1.9	ND	1.9	ND
	1/4/2013			ND	ND	ND	ND
1,4-Dichlorobenzene	3/20/2013	5,805,840	450,000	ND	ND	ND	ND
,	3/20/2013	-,500,010		ND	ND	ND	ND ND
	9/11/2013 12/10/2013			ND ND	ND ND	ND ND	ND ND
	8/23/2012			ND 7	2.3	11	6.6
	1/4/2013			2.6	1.7	2.6	3.5
Dichlorodifluoromethane	3/20/2013	NA	4 050 000	3.2	2.6	3	3
(Freon 12)	6/6/13 and 6/11/13	NA	4,950,000	5.5	2.5	4.4	3.9
	9/11/2013			10	4.6	3.6	3.9
	12/10/2013			1.2	2.8	1.2	1.2
	8/23/2012			ND	ND	ND	0.61
	1/4/2013 3/20/2013			ND ND	ND ND	ND ND	ND ND
trans- 1,3- Dichloropropene	6/6/13 and 6/11/13	4,613	5,000	ND	ND	ND	ND
	9/11/2013			ND	ND	ND	ND
	12/10/2013			ND	ND	ND	ND
	8/23/2012			17	0.78	20	2
1.0 Disblars 1.1.0.0	1/4/2013			2.7	1.3	1.7	0.83
1,2-Dichloro-1,1,2,2-	3/20/2013 6/6/13 and 6/11/13	NA	7,000,000	<u>6.4</u> 7.6	1.7 ND	1.2 1.1	1.2 0.98
tetrafluoroethane (Freon 114)	9/11/2013			16	6.1	2	2.2
	12/10/2013			0.71	2.7	0.33	0.32
	8/23/2012			0.49	ND	0.49	ND
	1/4/2013			1.2	1.3	1.6	1
Ethylbenzene	3/20/2013	7,281,812	435,000	3	2.1	2.4	2
	6/6/13 and 6/11/13 9/11/2013			0.95 ND	1.2 ND	0.87 ND	0.44 ND
	12/10/2013			0.17	0.16	0.19	0.21
	8/23/2012			19	52	18	46
	1/4/2013			5.8	6.8	10	5.9
Mathulana Chlarida	3/20/2013	4,237,289	86,750	55	33	29	36
Methylene Chloride	6/6/13 and 6/11/13			38	42	49	24
	9/11/2013			34	32	35	29
	12/10/2013			2.3	2.2	2.4	2.7 6.7
	8/23/2012 1/4/2013		456,000	27 6.8	6.6 7.4	28 7.2	5.3
	3/20/2013			6.8	7.1	9.7	9.2
Styrene	6/6/13 and 6/11/13	34,633		2.1	1.9	2.3	1.2
	9/11/2013			0.82	0.95	0.89	0.97
	12/10/2013			0.29	0.25	0.3	0.29
	8/23/2012			1.4	ND	29	3.6
	1/4/2013 3/20/2013			<u> </u>	3.1 5.7	8.6 5.5	3.3 7.7
Tetrachloroethylene	6/6/13 and 6/11/13	75,840	678,000	2.8	ND	3	8.1
	9/11/2013			8.2	5.5	7.9	7.4
	12/10/2013			1.1	1.4	1.1	1.5
	8/23/2012			280	150	300	140
	1/4/2013			31	41 32	44	25
Toluene	3/20/2013 6/6/13 and 6/11/13	2,910,779	750,000	45 63	32 59	50 71	<u>48</u> 16
	9/11/2013			3.8	4.3	4.1	3.9
	12/10/2013			4.6	3.4	4	3.9
	8/23/2012			ND	ND	4.5	0.63
	1/4/2013			1	1.3	3.7	1.3
Trichloroethylene	3/20/2013 6/6/13 and 6/11/13	38,237	537,000	7 ND	3.1 ND	2.9 ND	3.9 3.2
	9/11/2013			2.1	1.4	1.9	<u> </u>
	12/10/2013			ND	0.11	0.12	0.15
	8/23/2012			8.5	8	17	14
<b>T</b> 1.11 <b>2</b> 1	1/4/2013			1.6	1.1	1.2	0.18
Trichlorofluoromethane	3/20/2013	NA	5,600,000	3	2.1	2	1.9
(Freon 11)	6/6/13 and 6/11/13 9/11/2013			4.4	3.4	9.6 8.3	6.7 7.3
	12/10/2013			1.1	1.2	1.1	0.76
	8/23/2012			ND	ND	ND	ND
	1/4/2013			ND	ND	ND	ND
1,2,4-Trimethylbenzene	3/20/2013	NA	125,000	ND	ND	ND	ND
, ,	6/6/13 and 6/11/14	NA	0,000	ND	1	ND 0.71	ND 0.62
	9/11/2013 12/10/2013			ND ND	ND ND	0.71 ND	0.63 ND
	8/23/2012			1.2	0.9	1.1	ND
	1/4/2013			6	6.3	7.1	4.3
		2,215,755 <sup>#</sup>	125 000	11	8.7	9.7	8.1
M/n-Yulono	3/20/2013	( ( ) D ( D D	435,000	3.2	3.8	2.8	2.2
M/p-Xylene	6/6/13 and 6/11/13	2,213,733					4.4
M/p-Xylene	6/6/13 and 6/11/13 9/11/2013	2,213,735		1.1	1.1	1.1	1.1
M/p-Xylene	6/6/13 and 6/11/13 9/11/2013 12/10/2013	2,213,733		0.9	0.89	0.93	1.1
M/p-Xylene	6/6/13 and 6/11/13 9/11/2013 12/10/2013 8/23/2012	2,210,700		0.9 0.45	0.89 ND	0.93 0.45	1.1 ND
	6/6/13 and 6/11/13 9/11/2013 12/10/2013 8/23/2012 1/4/2013		405.000	0.9 0.45 1.3	0.89 ND 1.4	0.93 0.45 1.4	1.1 ND 0.88
M/p-Xylene o-Xylene	6/6/13 and 6/11/13 9/11/2013 12/10/2013 8/23/2012	2,215,755 <sup>#</sup>	435,000	0.9 0.45 1.3 3.5 1.2	0.89 ND 1.4 2.8 1.4	0.93 0.45 1.4 3.2 1.1	1.1 ND 0.88 2.7 0.83
	6/6/13 and 6/11/13 9/11/2013 12/10/2013 8/23/2012 1/4/2013 3/20/2013		435,000	0.9 0.45 1.3 3.5	0.89 ND 1.4 2.8	0.93 0.45 1.4 3.2	1.1 ND 0.88 2.7

Notes: Samples collected in Tedlar bags and analyzed via EPA method TO-14 Only detected compounds are listed, see laboratory certificate for complete list of analyses OSHA PEL's = Occupational Safety and Health Administration Permissable Exposure Limits CT DEP= Connecticut Dpeartment of Environmental Protection ug/m3 = micrograms per cubic meter \* From Appendix F to Sections 22a-133k-1 through 22a-133k-3 of the Regulations of Connecticut State Agencies #- Represents Total Xylenes

#### Table 3 Indoor Air Monitoring Results Springfield Street School Complex Providence, Rhode Island December 11, 2013

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	% by Monoxide		Organic Vapors PPM	
E.S. Front office	0.0	704	21.3	0	0	0.0	
E.S. Elevator	0.0	868	21.3	0	0	0.0	
<b>E.S.</b> Faculty Work Room	0.0	540	21.4	0	0	0.0	
E.S. Gym	0.0	744	21.3	0	0	0.0	
E.S. Stairway B	0.0	731	21.4	0	0	0.0	
<b>E.S.</b> Stairway C	0.0	744	21.2	0	0	0.0	
E.S. Library	0.0	757	21.3	0	0	0.0	
<b>E.S.</b> Front Stairs	0.0	744	21.2	21.2 0		0.0	
E.S. Cafeteria	0.0	736	21.1	21.1 0		0.0	
E.S. Hall Near Gym	0.0	625	21.2	0	0	0.0	
E.S. Electricity Closet	0.0	718	21.3	0	0	0.0	

# Table 3Indoor Air Monitoring ResultsSpringfield Street School ComplexDecember 11, 2013

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM	
M.S. Front Office	0.0	791	21.2	0	0	0.0	
M.S. Elevator	0.0	790	21.2	0	0	0.0	
M.S. Stairway near Elem. School GS-01	0.0	863	21.2	0	0	0.0	
M.S. Near sensor #16 in hall outside cafeteria	0.0	765	21.2	21.2 0		0.0	
M.S. Faculty Work Room	0.0	673	21.1	0	0	0.0	
M.S. Sensor #15 Outside Gym	0.0	757	21.2	0	0	0.0	
M.S. GS-03 Across from Boys Bathroom	0.0	862	21.2	0	0	0.0	
M.S. Second Floor - Library	0.0	795	21.2	21.2 0		0.0	
M.S. Janitor Office	0.0	635	21.3	0 0		0.0	
M.S. Cafeteria	0.0	865	21.1	0	0	0.2	
<b>M.S. GS-13</b> Gym	0.0	832	21.2	0	0	0.0	

#### Table 3 Indoor Air Monitoring Results Springfield Street School Complex December 11, 2013

Monitoring Location	Methane as % LEL	Carbon Dioxide PPM	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
M.S. Front Hall near sensor #4	0.0	747	21.0	0	0	0.0
M.S. Hallway across from elevator near sensor #9	0.0	770	770 21.2 0 0		0.0	
M.S. Near sensor GS 06 hallway right end	0.0	710	21.2	0	0	0.0
M.S. stairway near Hartford Ave. sensor GS-7	0.0	670	21.2	0	0	0.0
Remedial Action Work Plan Action Levels	0.5	1,000 ppm (0.1%)	NA	9 ppm 5 ppm		5 ppm

Notes:

E.S. indicates Elementary School, M.S. indicates Middle School Measurements made with: MiniRae photoionization detector, Fluke 975 Airmeter, Landtec Gem 2000 Plus PPM = Parts per million Outdoor conditions: Carbon dioxide = 506 ppm Temperature = 29 degrees F

### Table 4 Groundwater Monitoring Results Springfield Street School Providence, Rhode Island

		Sampling Dates and Results in ug/L							ampling Da	tes and Re	esults in ug	ı/L						RIDEM GB
Well ID	Detected Compounds			0/05/004.0		010.1100.1.1		4.0/0/0044		0/4 5/0040	<b>E</b> /00/00/0	0.004.004.0		0/04/0040	0/0/0040	0/4/0040	10/10/00/0	Groundwater
	Detected Compounds	3/1/2010	5/20/2010	8/25/2010	11/19/2010	2/24/2011	6/16/2011	10/3/2011	12/6/2011	3/15/2012	5/29/2012	8/21/2012	12/19/2012	3/21/2013	6/6/2013	9/11/2013	12/10/2013	Objective
ATC-1	Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
		ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	NA
	n-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	NA
	sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	tert-Butylbenzene Ethylbenzene	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND	ND	ND	
		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	1600 NA
		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	n-Propylbenzene				ND													
	MTBE	ND	ND	ND		ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5000
	Trichloroethylene	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	540
		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1700
	1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
ATC-2																		
	Chloroform	NS	NS	NS	NS	NS	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	NA
							4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	
MW-6																		
	Chloroform						ND	2.0	ND	ND	ND	2.2	ND	ND	2.9	2.5	NS	NA
	ed 4/2011																	
ATC-3	<b>—</b> ·									<b>.</b>		<b>.</b>						
	Toluene	NS	NS	NS	NS	NS	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	1700
							4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	
MW-7							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	ed 4/2011																	
ATC-4	1																	
	Benzene	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140
	Chlorobenzene	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	70
	1,4-dichlorobenzene	ND	ND	ND	1.5	NS	NS	ND	ND	ND	1.9	ND	2.1	1.2	1.7	1.8	2.3	NA
	MTBE	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5000
	1,2,4-Trimethylbenzene	ND	ND	ND	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	tert-Amyl Methyl Ether (TAME)	ND	ND	0.5	ND	NS	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
	Trichloroethylene	ND	ND	ND	ND	NS	NS	1.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND	540
ATC-5														<u> </u>	<u> </u>			
	МТВЕ	ND	ND	NS	NS	NS	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	5000
	Chloroform	ND	ND	NS	NS	NS	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	4/2011	NA
							7/2011	7/2011	-7/2011	7/2011		7/2011	-7/2011	-7/2011	-7/2011	-72011	-7/2011	
MW-8							ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Installe	ed 4/2011																	
Sampled	By:	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	ARCADIS	
	-																	

ND = not detected above method detection limit

NS = not sampled

NA = No applicable standard published

MTBE = Methyl tert-Butyl Ether  $\mu g/L$  = micrograms per liter

#### Table 5 Soil Gas Survey Field Notes Springfield Street School Complex Providence, Rhode Island December 9, 2013

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	% by Monoxide		Organic Vapors PPM
WB-1	0.0	2.8	11.3	0	0	0.0
WB-2	0.0	0.7	21.1	0	0	0.0
WB-3	0.0	0.3	21.6	0	0	0.0
WB-4	0.0	0.2	21.7	0	0	0.0
WB-5	0.0	0.1	21.8	0	0	0.0
WB-6	0.0	0.1	21.8	0	0	0.0
WB-7 R	0.0	0.3	21.3	0	0	0.0
WB-8	0.0	0.8	21.2	0	0	0.0
WB-12	0.0	1.0	20.7	0	0	0.0
WB-13	0.0	0.8	20.3	0	0	0.0
WB-14	0.0	0.3	21.3	0	0	0.0
WB-15	0.0	1.0	20.2	0	0	0.0
EPL-1	0.0	0.4	21.3	0	0	0.0
EPL-2	0.0	0.8	20.6	0	0	0.0
EPL-3	0.0	1.3	19.9	0	0	0.0
EPL-4	0.0	4.6	16.0	0	0	0.0
EPL-5	0.0	3.6	17.0	0	0	0.0
ENE-1	0.0	4.5	16.7	0	0	0.0

#### Table 5 Soil Gas Survey Field Notes Springfield Street School Complex Providence, Rhode Island September 10, 2013

Monitoring Well	Methane % by volume	Carbon Dioxide % by volume	Oxygen % by volume	Carbon Monoxide PPM	Hydrogen Sulfide PPM	Organic Vapors PPM
MG1	0.0	3.3	17.7	0	0	0.0
MG2	0.0	0.5	20.9	0	0	0.0
MG3	0.0	2.5	19.0	0	0	0.0
MG4	0.0	1.7	19.2	0	0	0.0
MG5	0.0	4.5 16.0 0		0	0	0.0
MPL2	0.0	5.1	16.3	0	0	0.0
MPL3	0.0	8.3	12.6	0	0	0.0
MPL5	0.0	8.6	13.2	0	0	0.0
MPL6	0.0	10.8	4.5	0	0	0.0
MPL7	0.0	8.4	12.7	0	0	0.0
MPL8	0.0	3.5	17.4	0	0	0.0
Remedial Action Work Plan Action Levels	0.5%	0.1% (1,000 PPM)	NA	9 PPM	10 PPM	5 PPM

Sampled by: Andrew DaSilva Weather Conditions: Snowing/raining, 40 degrees Fahrenheit Sampling Equipment: Landtec GEM 2000 Plus, MiniRae 2000 PID

# ARCADIS

Figure

