

April 16, 2012

Gavora, Inc.
246 Illinois Street, #3B
Fairbanks, Alaska 99707

Attn: Mr. Rudy Gavora

**RE: SUBSLAB AND INDOOR-AIR SAMPLING, SHOPPER'S FORUM MALL
ANNEX, 1255 AIRPORT WAY, FAIRBANKS, ALASKA**

This letter presents the results of soil-vapor and indoor-air sampling we conducted in February 2012 in support of ongoing vapor-intrusion assessment (VIA) activities at the Shopper's Forum Mall annex in Fairbanks, Alaska (Figure 1). We conducted this VIA in partial fulfillment of the Alaska Department of Environmental Conservation (ADEC)'s request for remaining site characterization described in their letter to you dated July 27, 2011. The objective of our services was to obtain additional information from previous sample locations and indoor-air quality information for other lease spaces in the main mall and annex.

The purpose of this letter is to document our subslab, crawlspace, and indoor-air sampling activities. Background information on the site and previous investigations is presented in our January 2011 *Work Plan, Vapor Intrusion Assessment, Shopper's Forum Mall Annex, Fairbanks, Alaska* and is not repeated here. For reference, Figure 1 shows soil-gas and groundwater locations sampled in July 2010 and reported in our *Site Characterization Report, Shopper's Forum Mall*, dated August 2010. This VIA was conducted in general accordance with our January 2011 work plan and the ADEC Draft Vapor Intrusion Guidance for Contaminated Sites, dated July 2009.

SCOPE OF SERVICES

To accomplish this objective, we performed the following services:

- sampled three subslab soil-gas probes at the mall annex;
- collected two crawlspace air samples (one at the main mall and one at the annex);
- collected six indoor-air samples (two at the mall and four at the annex); and

- prepared this letter report summarizing our activities and analytical results

This letter serves as a data report and does not include recommendations for cleanup.

Sub-Slab Soil-Gas Sampling

We collected three sub-slab samples and one field duplicate: one near the office at Miguel's Restaurant (*SubSlabA_02*); two from Miguel's bar (*SubSlabB_02A*) and its field control duplicate (*SubSlabB_02B*); and one from Miguel's new addition (*SubSlabC_02*). We collected these samples from subslab sampling ports we installed in April 2011.

We collected the sub-slab samples on February 7, 2012, using a Summa canister with a sample duration of approximately 30 minutes. We used a 100-parts-per-million (ppm) isobutylene-in-air standard as a leak-detection tracer. We collected one field-duplicate sample using a duplicate-sampling manifold from one of the two sub-slab ports in Miguel's bar. The sub-slab sample locations are shown in Figure 2.

Crawlspace sampling

We collected two crawlspace samples: one from the main mall building at the northern end, formerly Gottschalk's (*Main_ Crawlspace*), and one from the eastern half of the mall annex structure beneath the Bamboo Panda (*Annex_ Crawlspace*). The eastern half of the annex was divided into two sections by a framed wall covered in Visqueen.

We collected the two crawlspace samples using Summa canisters and a sample duration of 24 hours.

Indoor-Air Sampling

We collected six indoor-air samples: four from the annex and two from the mall. In the annex, we collected two samples from Miguel's restaurant (*Miguels_02*) and (*Miguels_ New_02*), one from Bamboo Panda, and one from Fast Foto. In the mall, we collected one from Planet Fitness and one at the stairway leading to second-floor offices. We collected the indoor-air samples using flow controllers, with a sample duration of approximately 24 hours, February 6-7, 2012. The indoor-air sample locations are shown in Figure 2.

SUMMARY OF SAMPLE LOCATIONS

Sample Type	Mall Annex					Main Mall	
	Miguel's Bar	Miguel's Office	Miguel's Addition ¹	Bamboo Panda	Fairbanks Fast Foto	Planet Fitness	Mall Stairs
Subslab	X	X	X				
Crawlspace				X			X
Indoor Air		X	X	X	X	X	X

Notes:

¹ This location corresponds to the former "Curves" sample in our May 2011 report.

We submitted the soil-gas and indoor-air samples to Air Toxics, Ltd. in Folsom, California, for analysis of volatile organic compounds (VOCs) by Method TO-15.

RESULTS

Analytical results of sub-slab and indoor-air samples are presented in Tables 1 and 2, respectively. The tables include the ADEC screening levels for Commercial Shallow Soil Gas Screening Levels and Commercial Indoor Air, respectively, for comparison.

QUALITY ASSURANCE/QUALITY CONTROL

We conducted a quality control/quality assurance (QA/QC) review of air-sample analytical data, including review of laboratory QC-sample results and our own QA assessment. Our assessment included consideration of sample-handling, analytical sensitivity, accuracy, precision, and completeness, as well as completion of an ADEC data-review checklist for each of the two laboratory data reports. The checklists and laboratory reports are appended to this report, and provide additional details regarding our QA review. The following is a summary of data quality as it pertains to the VIA.

Two sample-handling anomalies were identified; canisters for samples *Bamboo_Panda_01* and *Miguels_02* were received at the laboratory with a vacuum at 0.0 inches mercury. The data from these samples are usable but flagged with a "J" indicating they are estimated. Canisters for the remaining samples were received in good condition and with acceptable vacuum. No analytes were detected in the method blanks. Reporting limits for 1,1,2,2-tetrachloroethane in sample *Annex_Crawlspace* and multiple analytes in the subslab samples were elevated (above screening levels) due to sample dilution; however, as these samples contained trichloroethene (TCE) and tetrachloroethene (PCE) above cleanup levels, the inability to detect non-target analytes at or

below screening levels does not affect the usability of the data. Laboratory control sample and duplicate (LCS/LCSD) and field-duplicate relative percent difference calculations showed the analyses were precise.

No data were rejected as unusable; completeness objectives were met. Overall, data quality was acceptable and the results are considered representative of site conditions at the times and locations they were collected.

DISCUSSION

Laboratory results indicate PCE concentrations in sub-slab soil gas at Miguel's ranged from 5,400 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 490,000 $\mu\text{g}/\text{m}^3$, several orders of magnitude higher than the ADEC shallow-soil-gas screening level of 210 $\mu\text{g}/\text{m}^3$. Similarly, TCE, with a screening level of 11 $\mu\text{g}/\text{m}^3$, ranged from 240 $\mu\text{g}/\text{m}^3$ to 7,500 $\mu\text{g}/\text{m}^3$. Additionally, cis-1,2-dichloroethylene was detected at each of the four sub-slab sampling points, above its screening level at two. PCE and TCE were also detected above their screening levels in the sample taken from the crawlspace below Bamboo Panda.

PCE and TCE were detected in indoor-air samples at both the main mall and mall annex. PCE was found to be above the ADEC target indoor-air screening levels for commercial exposure scenarios in Miguel's, Bamboo Panda, and Fast Foto. PCE was detected in the main mall stairs, but not above its screening level. TCE was detected above screening levels at Miguel's and Bamboo Panda, but not above its screening levels inside Fast Foto and the main mall stairs.

Benzene, toluene, ethylbenzene, and xylenes (BTEX) were also detected in indoor-air samples below screening levels, but at concentrations above the previous samples taken April 12, 2011. BTEX were detected in one of the four sub-slab soil gas samples (*SubSlabB_02A*) and could therefore be attributable to a belowground source.

LIMITATIONS

This report was prepared for the use of Gavora, Inc., and its representatives for evaluating the potential for vapor intrusion at the Shopper's Forum Mall annex building. This work presents our professional judgment as to the conditions at the building. The data presented in this report should not be construed as definite conclusions about soil-gas or indoor-air conditions in the

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SHANNON & WILSON, INC.

area, and it is possible our tests may not represent the highest levels of contamination in the area. No other buildings were assessed for vapor intrusion as part of this investigation. We have not performed an independent evaluation of the accuracy or completeness of third-party information, and shall not be responsible for errors or omissions contained in such information.

The results included in this report should be considered representative of the time and locations at which the sampling occurred. It was not the intent of our investigation to detect the presence of air or soil gas affected by contaminants other than those for which laboratory analyses were performed. No conclusions can be drawn on the presence or absence of other contaminants. The observed levels of contamination may be dependent on seasonal changes and the passage of time. Due to such changes, or others beyond our control, our observations and recommendations applicable to this site may need to be revised. If substantial time has elapsed between submission of this report and the start of activities or action based upon it, we recommend this report be reviewed to determine the applicability of the conclusions and recommendations considering the lapsed time or changed conditions.

This report was prepared for the exclusive use of our Client. All documents prepared by Shannon & Wilson are instruments of service with respect to the project for the sole use of our Client. Only our Client shall have the right to rely upon such documents. Such documents are not intended or represented to be suitable for reuse by our Client or others after the passage of time, on extensions of the project, or on any other project. Any such reuse without written verification or adaptation by Shannon & Wilson, as appropriate for the specific purpose intended, shall be at the user's sole risk.

Copies of documents that may be relied upon by our Client are limited to the printed copies (also known as hard copies) signed or sealed by Shannon & Wilson. Text, data, or graphics files in electronic media format are furnished solely for the convenience of our Client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

Because data stored in electronic media can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the Client should perform acceptance tests or procedures within 60 days after its receipt, after which, unless notice of any errors are given in writing to Shannon & Wilson, the Client shall be deemed to have accepted the data thus

31-1-11554-001

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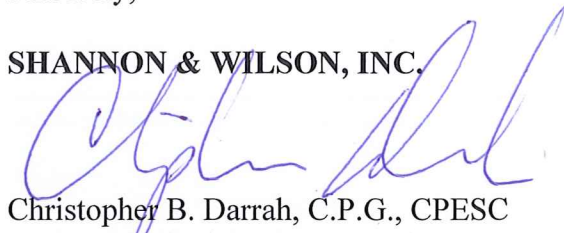
transferred. Any errors reported within the 60-day acceptance period shall be corrected by Shannon & Wilson. Shannon & Wilson shall not be responsible for maintaining documents stored in electronic media format after acceptance by the Client.

When transferring documents in electronic media format, Shannon & Wilson does not make any representations as to long-term compatibility, usability, or readability of documents, resulting from the use of software application packages, operating systems, or computer hardware differing from those used for the document's creation.

We are pleased to have this opportunity to assist you with this project. Please contact me if you have any questions.

Sincerely,

SHANNON & WILSON, INC.



Christopher B. Darrah, C.P.G., CPESC
Senior Principal Geologist

- Enclosures:
- Figure 1 – Site Map and February 2012 Mall Sample Locations
 - Figure 2 – February 2012 Annex Sample Locations
 - Table 1 – Sub-Slab Soil Gas and Crawlspace Analytical Results
 - Table 2 – Indoor Air Analytical Results
 - Air Toxics, Inc. Laboratory Data Report (Work Orders 1202218 and 1202222)
 - ADEC Laboratory Data Review Checklist for Air Samples



©2009 FNSB (Image courtesy of Kasilak Mapping)

Aerial photograph source: FNSB Maps and GIS Internet web site, Fairbanks City, 2003.

Note: This figure shows crawlspace and indoor air sample locations at the main mall building. Refer to Figure 2 for sample locations at the mall annex.

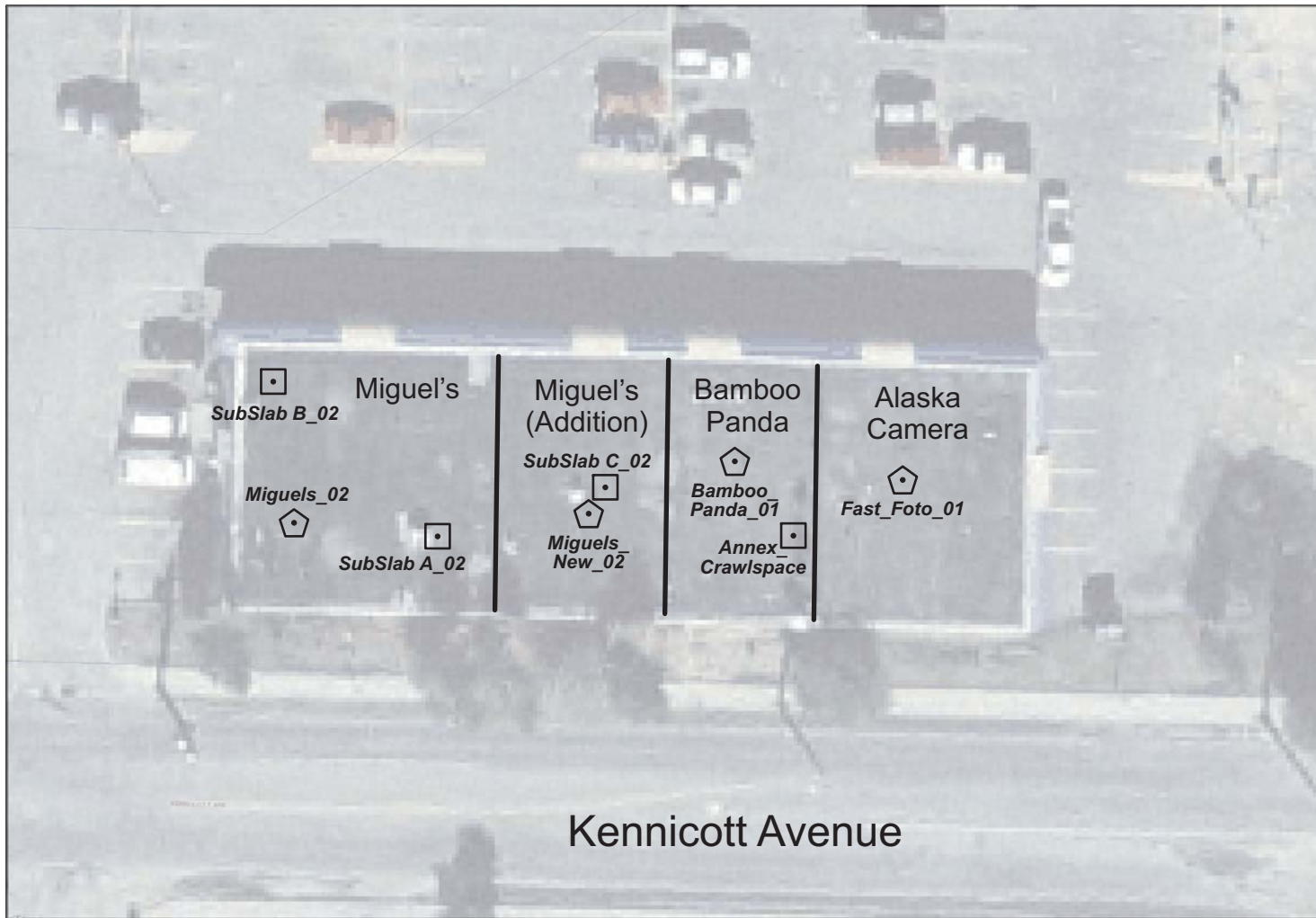
Key:

- Sub-Slab or Crawlspace Sample • *Main_Crawlspace*
- Indoor Air Sample ◡ *Planet_Fit_Desk*

Shopper's Forum Mall
Vapor Intrusion Assessment
Fairbanks, Alaska

**SITE MAP AND FEBRUARY 2012
MALL SAMPLE LOCATIONS**

April 2012 31-1-11554-001



(C) 2008 FNSB (Image courtesy of Kasiluk Maps)

Aerial photograph source: FNSB Maps and GIS Internet web site, Fairbanks City, 2003.

Key:

- Sub-Slab Sample □ SubSlab A_02
- Indoor Air (IA) Sample ⬠ Miguels_02

Shopper's Forum Mall
Vapor Intrusion Assessment
Fairbanks, Alaska

**FEBRUARY 2012 ANNEX
SAMPLE LOCATIONS**

April 2012

31-1-11554-001

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 2

Table 1. Subslab Soil Gas and Crawlspace Analytical Results
Shopper's Forum Mall Vapor Intrusion Assessment

SHANNON & WILSON, INC.

Analyte	CAS Number	Commercial Shallow Soil Gas Screening Level (µg/m ³)	Miguel's, near office	Miguel's bar		Miguel's new addition	Bamboo Panda	Main_ Crawlspace (µg/m ³)
			SubSlabA_02 (µg/m ³)	SubSlabB_02A (µg/m ³)	SubSlabB_02B ^α (µg/m ³)	SubSlabC_02 (µg/m ³)	Annex_ Crawlspace (µg/m ³)	
Tetrachloroethylene (PCE)	127-18-4	210	490,000	5,400	6,100	400,000	3,600	62
Trichloroethylene (TCE)	79-01-6	11	7,500	240	250	5,000	20	0.94
Acetone	67-64-1	138,000	< 1,900	110	100	< 1,900	NA	NA
Benzene	71-43-2	160	< 640	24	16	< 650	12	9.0
1,2-Dichloroethane	107-06-2	47	<810	<13	<13	<820	< 2.8	0.56
cis-1,2-Dichloroethene	156-59-2	1,500	3,700	88	91	11,000	15	< 0.13
trans-1,2-Dichloroethene	156-60-5	2,600	1,400	22	27	< 800	< 14	< 0.65
Ethanol	64-17-5	N/SL	< 1,500	140	150	< 1,500	NA	NA
Ethylbenzene	100-41-4	1,100	< 870	16	< 14	< 880	5.0	4.7
4-Ethyltoluene	622-96-8	N/SL	< 990	18	< 15	< 1,000	NA	NA
Freon 11	75-69-4	30,700	2,800	180	180	< 1,100	NA	NA
Hexane	110-54-3	N/SL	< 710	55	53	< 710	NA	NA
4-Methyl-2-pentanone	108-10-1	131,000	< 820	16	20	< 830	NA	NA
2-Propanol	67-63-0	N/SL	< 2,000	110	120	< 2,000	NA	NA
Tetrahydrofuran	109-99-9	N/SL	< 590	45	44	< 600	NA	NA
Toluene	108-88-3	219,000	< 760	65 J	39 J	< 760	35	35
1,2,4-Trimethylbenzene	95-63-6	310	< 990	25	< 15	< 1,000	NA	NA
m,p-Xylene	108-38-3/ 106-42-3	4,400 (total xylenes)	< 870	66	< 14	< 880	11	14
o-Xylene	95-47-6		< 870	25	< 14	< 880	3.7	5.0
Isobutylene (leak-detection compound)	115-11-7	N/SL	< 1,800	640 ^β	680 ^β	< 1,800	NA	NA

Notes:

µg/m³ micrograms per cubic meter

J Result is estimated (field-duplicate precision did not meet data-quality objective).

α SubSlabB_02B is a quality-control duplicate of SubSlabB_02A.

β The calculated leakage, based on a flooding concentration of 100 ppm isobutylene in air, is approximately 0.3 percent for the sample/duplicate collected from SubSlabB.

bold Result or reporting limit exceeds screening level.

N/SL No screening level has been established for this analyte.

NA Sample not analyzed for this analyte.

Table 2. Indoor Air Analytical Results
Shopper's Forum Mall Vapor Intrusion Assessment

SHANNON & WILSON, INC.

Analyte	CAS Number	Commercial Indoor Air Screening Level (µg/m ³)	Miguels_02 (µg/m ³)	Miguels_New_02 (µg/m ³)	Bamboo_Panda_01 (µg/m ³)	Fast_Foto_01 (µg/m ³)	Main_Mall_Stairs (µg/m ³)	Planet_Fit_Desk (µg/m ³)
Tetrachloroethylene (PCE)	127-18-4	21	280 J	940	730 J	25	6.9	1.6
Trichloroethylene (TCE)	79-01-6	1.1	1.7 J	4.6	3.6 J	0.41	0.19	< 0.20
1,2-Dichloroethane	107-06-2	4.7	1.7 J	< 0.85	< 0.69 J	1.6	0.98	< 0.15
Benzene	71-43-2	16	10 J	14	13 J	13	13	12
cis-1,2-Dichloroethene	156-59-2	150	2.2 J	3.9	3.2 J	< 0.14	< 0.14	< 0.14
Ethyl Benzene	100-41-4	110	10 J	8.4	7.0 J	6.8	6.8	5.2
m,p-Xylene	108-38-3/ 106-42-3	440 (total xylenes)	30 J	30	24 J	18	19	15
o-Xylene	95-47-6		9.5 J	10	8.2 J	6.5	7.0	6.0
Toluene	108-88-3	21,900	79 J	59	60 J	47	49	37
trans-1,2-Dichloroethene	156-60-5	260	< 0.89 J	< 4.2	< 3.4 J	< 0.71	< 0.68	< 0.72
Vinyl Chloride	75-01-4	1.1	< 0.057 J	< 0.27	< 0.22 J	< 0.046	< 0.044	< 0.047

Notes:

µg/m³ micrograms per cubic meter

bold Result or reporting limit exceeds screening level.

J Sample result estimated; sample container was received at the laboratory with a vacuum of 0 inches mercury

2/22/2012

Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road

Fairbanks AK 99709

Project Name: Shopper's Forum Rd. 256
Project #: 31-1-11554-001
Workorder #: 1202218

Dear Mr. Rodney Guritz

The following report includes the data for the above referenced project for sample(s) received on 2/9/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1202218

Work Order Summary

CLIENT: Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road
Fairbanks, AK 99709

BILL TO: Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road
Fairbanks, AK 99709

PHONE: 907-479-0600

P.O. #

FAX: 907-479-5691

PROJECT # 31-1-11554-001 Shopper's Forum Rd.

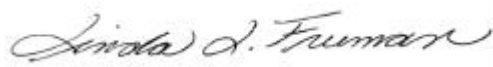
DATE RECEIVED: 02/09/2012

CONTACT: ²⁵⁶
Kelly Buettner

DATE COMPLETED: 02/22/2012

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SubSlabA_02	Modified TO-15	5.0 "Hg	5 psi
02A	SubSlabB_02A	Modified TO-15	5.0 "Hg	5 psi
03A	SubSlabB_02B	Modified TO-15	4.2 "Hg	5 psi
04A	SubSlabC_02	Modified TO-15	5.2 "Hg	5 psi
05A	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:



Laboratory Director

DATE: 02/22/12

Certification numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE
EPA Method TO-15
Shannon & Wilson, Inc.
Workorder# 1202218**

Four 1 Liter Summa Canister samples were received on February 09, 2012. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds.

Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

Dilution was performed on all of the samples due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: SubSlabA_02

Lab ID#: 1202218-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	200	500	1100	2800
trans-1,2-Dichloroethene	200	360	800	1400
cis-1,2-Dichloroethene	200	920	800	3700
Trichloroethene	200	1400	1100	7500
Tetrachloroethene	200	72000	1400	490000

Client Sample ID: SubSlabB_02A

Lab ID#: 1202218-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	3.2	31	18	180
Ethanol	13	73	24	140
Acetone	13	45	30	110
2-Propanol	13	46	32	110
trans-1,2-Dichloroethene	3.2	5.6	13	22
Hexane	3.2	15	11	55
cis-1,2-Dichloroethene	3.2	22	13	88
Tetrahydrofuran	3.2	15	9.5	45
Benzene	3.2	7.6	10	24
Trichloroethene	3.2	44	17	240
4-Methyl-2-pentanone	3.2	4.0	13	16
Toluene	3.2	17	12	65
Tetrachloroethene	3.2	790	22	5400
Ethyl Benzene	3.2	3.6	14	16
m,p-Xylene	3.2	15	14	66
o-Xylene	3.2	5.8	14	25
4-Ethyltoluene	3.2	3.6	16	18
1,2,4-Trimethylbenzene	3.2	5.0	16	25
Isobutylene	13	280	30	640

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: SubSlabB_02B

Lab ID#: 1202218-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	3.1	33	18	180
Ethanol	12	82	24	150
Acetone	12	43	30	100
2-Propanol	12	47	31	120
trans-1,2-Dichloroethene	3.1	6.9	12	27
Hexane	3.1	15	11	53
cis-1,2-Dichloroethene	3.1	23	12	91
Tetrahydrofuran	3.1	15	9.2	44
Benzene	3.1	5.0	10	16
Trichloroethene	3.1	46	17	250
4-Methyl-2-pentanone	3.1	5.0	13	20
Toluene	3.1	10	12	39
Tetrachloroethene	3.1	890	21	6100
Isobutylene	12	300	29	680

Client Sample ID: SubSlabC_02

Lab ID#: 1202218-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	200	2800	800	11000
Trichloroethene	200	940	1100	5000
Tetrachloroethene	200	59000	1400	400000

Client Sample ID: SubSlabA_02

Lab ID#: 1202218-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021512	Date of Collection: 2/7/12 9:36:00 AM
Dil. Factor:	402	Date of Analysis: 2/15/12 04:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	200	Not Detected	990	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	800	Not Detected	1700	Not Detected
Vinyl Chloride	200	Not Detected	510	Not Detected
1,3-Butadiene	200	Not Detected	440	Not Detected
Bromomethane	200	Not Detected	780	Not Detected
Chloroethane	800	Not Detected	2100	Not Detected
Freon 11	200	500	1100	2800
Ethanol	800	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1500	Not Detected
1,1-Dichloroethene	200	Not Detected	800	Not Detected
Acetone	800	Not Detected	1900	Not Detected
2-Propanol	800	Not Detected	2000	Not Detected
Carbon Disulfide	800	Not Detected	2500	Not Detected
3-Chloropropene	800	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	700	Not Detected
Methyl tert-butyl ether	200	Not Detected	720	Not Detected
trans-1,2-Dichloroethene	200	360	800	1400
Hexane	200	Not Detected	710	Not Detected
1,1-Dichloroethane	200	Not Detected	810	Not Detected
2-Butanone (Methyl Ethyl Ketone)	800	Not Detected	2400	Not Detected
cis-1,2-Dichloroethene	200	920	800	3700
Tetrahydrofuran	200	Not Detected	590	Not Detected
Chloroform	200	Not Detected	980	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	Not Detected	690	Not Detected
Carbon Tetrachloride	200	Not Detected	1300	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	940	Not Detected
Benzene	200	Not Detected	640	Not Detected
1,2-Dichloroethane	200	Not Detected	810	Not Detected
Heptane	200	Not Detected	820	Not Detected
Trichloroethene	200	1400	1100	7500
1,2-Dichloropropane	200	Not Detected	930	Not Detected
1,4-Dioxane	800	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	910	Not Detected
4-Methyl-2-pentanone	200	Not Detected	820	Not Detected
Toluene	200	Not Detected	760	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	910	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	72000	1400	490000

Client Sample ID: SubSlabA_02

Lab ID#: 1202218-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021512	Date of Collection: 2/7/12 9:36:00 AM
Dil. Factor:	402	Date of Analysis: 2/15/12 04:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	800	Not Detected	3300	Not Detected
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1500	Not Detected
Chlorobenzene	200	Not Detected	920	Not Detected
Ethyl Benzene	200	Not Detected	870	Not Detected
m,p-Xylene	200	Not Detected	870	Not Detected
o-Xylene	200	Not Detected	870	Not Detected
Styrene	200	Not Detected	860	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	990	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	990	Not Detected
4-Ethyltoluene	200	Not Detected	990	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	990	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	990	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	800	Not Detected	6000	Not Detected
Hexachlorobutadiene	800	Not Detected	8600	Not Detected
Isobutylene	800	Not Detected	1800	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	112	70-130

Client Sample ID: SubSlabB_02A

Lab ID#: 1202218-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021510	Date of Collection: 2/7/12 9:15:00 AM
Dil. Factor:	6.44	Date of Analysis: 2/15/12 03:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.2	Not Detected	16	Not Detected
Freon 114	3.2	Not Detected	22	Not Detected
Chloromethane	13	Not Detected	26	Not Detected
Vinyl Chloride	3.2	Not Detected	8.2	Not Detected
1,3-Butadiene	3.2	Not Detected	7.1	Not Detected
Bromomethane	3.2	Not Detected	12	Not Detected
Chloroethane	13	Not Detected	34	Not Detected
Freon 11	3.2	31	18	180
Ethanol	13	73	24	140
Freon 113	3.2	Not Detected	25	Not Detected
1,1-Dichloroethene	3.2	Not Detected	13	Not Detected
Acetone	13	45	30	110
2-Propanol	13	46	32	110
Carbon Disulfide	13	Not Detected	40	Not Detected
3-Chloropropene	13	Not Detected	40	Not Detected
Methylene Chloride	3.2	Not Detected	11	Not Detected
Methyl tert-butyl ether	3.2	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	3.2	5.6	13	22
Hexane	3.2	15	11	55
1,1-Dichloroethane	3.2	Not Detected	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	13	Not Detected	38	Not Detected
cis-1,2-Dichloroethene	3.2	22	13	88
Tetrahydrofuran	3.2	15	9.5	45
Chloroform	3.2	Not Detected	16	Not Detected
1,1,1-Trichloroethane	3.2	Not Detected	18	Not Detected
Cyclohexane	3.2	Not Detected	11	Not Detected
Carbon Tetrachloride	3.2	Not Detected	20	Not Detected
2,2,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
Benzene	3.2	7.6	10	24
1,2-Dichloroethane	3.2	Not Detected	13	Not Detected
Heptane	3.2	Not Detected	13	Not Detected
Trichloroethene	3.2	44	17	240
1,2-Dichloropropane	3.2	Not Detected	15	Not Detected
1,4-Dioxane	13	Not Detected	46	Not Detected
Bromodichloromethane	3.2	Not Detected	22	Not Detected
cis-1,3-Dichloropropene	3.2	Not Detected	15	Not Detected
4-Methyl-2-pentanone	3.2	4.0	13	16
Toluene	3.2	17	12	65
trans-1,3-Dichloropropene	3.2	Not Detected	15	Not Detected
1,1,2-Trichloroethane	3.2	Not Detected	18	Not Detected
Tetrachloroethene	3.2	790	22	5400

Client Sample ID: SubSlabB_02A

Lab ID#: 1202218-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021510	Date of Collection: 2/7/12 9:15:00 AM
Dil. Factor:	6.44	Date of Analysis: 2/15/12 03:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	13	Not Detected	53	Not Detected
Dibromochloromethane	3.2	Not Detected	27	Not Detected
1,2-Dibromoethane (EDB)	3.2	Not Detected	25	Not Detected
Chlorobenzene	3.2	Not Detected	15	Not Detected
Ethyl Benzene	3.2	3.6	14	16
m,p-Xylene	3.2	15	14	66
o-Xylene	3.2	5.8	14	25
Styrene	3.2	Not Detected	14	Not Detected
Bromoform	3.2	Not Detected	33	Not Detected
Cumene	3.2	Not Detected	16	Not Detected
1,1,2,2-Tetrachloroethane	3.2	Not Detected	22	Not Detected
Propylbenzene	3.2	Not Detected	16	Not Detected
4-Ethyltoluene	3.2	3.6	16	18
1,3,5-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.2	5.0	16	25
1,3-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.2	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.2	Not Detected	17	Not Detected
1,2-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	13	Not Detected	96	Not Detected
Hexachlorobutadiene	13	Not Detected	140	Not Detected
Isobutylene	13	280	30	640

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: SubSlabB_02B

Lab ID#: 1202218-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021511	Date of Collection: 2/7/12 9:00:00 AM
Dil. Factor:	6.24	Date of Analysis: 2/15/12 03:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.1	Not Detected	15	Not Detected
Freon 114	3.1	Not Detected	22	Not Detected
Chloromethane	12	Not Detected	26	Not Detected
Vinyl Chloride	3.1	Not Detected	8.0	Not Detected
1,3-Butadiene	3.1	Not Detected	6.9	Not Detected
Bromomethane	3.1	Not Detected	12	Not Detected
Chloroethane	12	Not Detected	33	Not Detected
Freon 11	3.1	33	18	180
Ethanol	12	82	24	150
Freon 113	3.1	Not Detected	24	Not Detected
1,1-Dichloroethene	3.1	Not Detected	12	Not Detected
Acetone	12	43	30	100
2-Propanol	12	47	31	120
Carbon Disulfide	12	Not Detected	39	Not Detected
3-Chloropropene	12	Not Detected	39	Not Detected
Methylene Chloride	3.1	Not Detected	11	Not Detected
Methyl tert-butyl ether	3.1	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	3.1	6.9	12	27
Hexane	3.1	15	11	53
1,1-Dichloroethane	3.1	Not Detected	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	12	Not Detected	37	Not Detected
cis-1,2-Dichloroethene	3.1	23	12	91
Tetrahydrofuran	3.1	15	9.2	44
Chloroform	3.1	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.1	Not Detected	17	Not Detected
Cyclohexane	3.1	Not Detected	11	Not Detected
Carbon Tetrachloride	3.1	Not Detected	20	Not Detected
2,2,4-Trimethylpentane	3.1	Not Detected	14	Not Detected
Benzene	3.1	5.0	10	16
1,2-Dichloroethane	3.1	Not Detected	13	Not Detected
Heptane	3.1	Not Detected	13	Not Detected
Trichloroethene	3.1	46	17	250
1,2-Dichloropropane	3.1	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	45	Not Detected
Bromodichloromethane	3.1	Not Detected	21	Not Detected
cis-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
4-Methyl-2-pentanone	3.1	5.0	13	20
Toluene	3.1	10	12	39
trans-1,3-Dichloropropene	3.1	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.1	Not Detected	17	Not Detected
Tetrachloroethene	3.1	890	21	6100

Client Sample ID: SubSlabB_02B

Lab ID#: 1202218-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021511	Date of Collection: 2/7/12 9:00:00 AM
Dil. Factor:	6.24	Date of Analysis: 2/15/12 03:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	12	Not Detected	51	Not Detected
Dibromochloromethane	3.1	Not Detected	26	Not Detected
1,2-Dibromoethane (EDB)	3.1	Not Detected	24	Not Detected
Chlorobenzene	3.1	Not Detected	14	Not Detected
Ethyl Benzene	3.1	Not Detected	14	Not Detected
m,p-Xylene	3.1	Not Detected	14	Not Detected
o-Xylene	3.1	Not Detected	14	Not Detected
Styrene	3.1	Not Detected	13	Not Detected
Bromoform	3.1	Not Detected	32	Not Detected
Cumene	3.1	Not Detected	15	Not Detected
1,1,2,2-Tetrachloroethane	3.1	Not Detected	21	Not Detected
Propylbenzene	3.1	Not Detected	15	Not Detected
4-Ethyltoluene	3.1	Not Detected	15	Not Detected
1,3,5-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,2,4-Trimethylbenzene	3.1	Not Detected	15	Not Detected
1,3-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.1	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.1	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.1	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	93	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected
Isobutylene	12	300	29	680

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: SubSlabC_02

Lab ID#: 1202218-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021513	Date of Collection: 2/7/12 9:58:00 AM
Dil. Factor:	405	Date of Analysis: 2/15/12 05:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	200	Not Detected	1000	Not Detected
Freon 114	200	Not Detected	1400	Not Detected
Chloromethane	810	Not Detected	1700	Not Detected
Vinyl Chloride	200	Not Detected	520	Not Detected
1,3-Butadiene	200	Not Detected	450	Not Detected
Bromomethane	200	Not Detected	790	Not Detected
Chloroethane	810	Not Detected	2100	Not Detected
Freon 11	200	Not Detected	1100	Not Detected
Ethanol	810	Not Detected	1500	Not Detected
Freon 113	200	Not Detected	1600	Not Detected
1,1-Dichloroethene	200	Not Detected	800	Not Detected
Acetone	810	Not Detected	1900	Not Detected
2-Propanol	810	Not Detected	2000	Not Detected
Carbon Disulfide	810	Not Detected	2500	Not Detected
3-Chloropropene	810	Not Detected	2500	Not Detected
Methylene Chloride	200	Not Detected	700	Not Detected
Methyl tert-butyl ether	200	Not Detected	730	Not Detected
trans-1,2-Dichloroethene	200	Not Detected	800	Not Detected
Hexane	200	Not Detected	710	Not Detected
1,1-Dichloroethane	200	Not Detected	820	Not Detected
2-Butanone (Methyl Ethyl Ketone)	810	Not Detected	2400	Not Detected
cis-1,2-Dichloroethene	200	2800	800	11000
Tetrahydrofuran	200	Not Detected	600	Not Detected
Chloroform	200	Not Detected	990	Not Detected
1,1,1-Trichloroethane	200	Not Detected	1100	Not Detected
Cyclohexane	200	Not Detected	700	Not Detected
Carbon Tetrachloride	200	Not Detected	1300	Not Detected
2,2,4-Trimethylpentane	200	Not Detected	940	Not Detected
Benzene	200	Not Detected	650	Not Detected
1,2-Dichloroethane	200	Not Detected	820	Not Detected
Heptane	200	Not Detected	830	Not Detected
Trichloroethene	200	940	1100	5000
1,2-Dichloropropane	200	Not Detected	940	Not Detected
1,4-Dioxane	810	Not Detected	2900	Not Detected
Bromodichloromethane	200	Not Detected	1400	Not Detected
cis-1,3-Dichloropropene	200	Not Detected	920	Not Detected
4-Methyl-2-pentanone	200	Not Detected	830	Not Detected
Toluene	200	Not Detected	760	Not Detected
trans-1,3-Dichloropropene	200	Not Detected	920	Not Detected
1,1,2-Trichloroethane	200	Not Detected	1100	Not Detected
Tetrachloroethene	200	59000	1400	400000

Client Sample ID: SubSlabC_02

Lab ID#: 1202218-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021513	Date of Collection: 2/7/12 9:58:00 AM
Dil. Factor:	405	Date of Analysis: 2/15/12 05:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	810	Not Detected	3300	Not Detected
Dibromochloromethane	200	Not Detected	1700	Not Detected
1,2-Dibromoethane (EDB)	200	Not Detected	1600	Not Detected
Chlorobenzene	200	Not Detected	930	Not Detected
Ethyl Benzene	200	Not Detected	880	Not Detected
m,p-Xylene	200	Not Detected	880	Not Detected
o-Xylene	200	Not Detected	880	Not Detected
Styrene	200	Not Detected	860	Not Detected
Bromoform	200	Not Detected	2100	Not Detected
Cumene	200	Not Detected	1000	Not Detected
1,1,2,2-Tetrachloroethane	200	Not Detected	1400	Not Detected
Propylbenzene	200	Not Detected	1000	Not Detected
4-Ethyltoluene	200	Not Detected	1000	Not Detected
1,3,5-Trimethylbenzene	200	Not Detected	1000	Not Detected
1,2,4-Trimethylbenzene	200	Not Detected	1000	Not Detected
1,3-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	200	Not Detected	1200	Not Detected
alpha-Chlorotoluene	200	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	200	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	810	Not Detected	6000	Not Detected
Hexachlorobutadiene	810	Not Detected	8600	Not Detected
Isobutylene	810	Not Detected	1800	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	112	70-130

Client Sample ID: Lab Blank

Lab ID#: 1202218-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021509c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 02:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 1202218-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021509c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 02:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Isobutylene	2.0	Not Detected	4.6	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: CCV

Lab ID#: 1202218-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021505	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 01:15 PM

Compound	%Recovery
Freon 12	96
Freon 114	95
Chloromethane	98
Vinyl Chloride	97
1,3-Butadiene	99
Bromomethane	105
Chloroethane	98
Freon 11	96
Ethanol	111
Freon 113	96
1,1-Dichloroethene	94
Acetone	110
2-Propanol	98
Carbon Disulfide	96
3-Chloropropene	103
Methylene Chloride	95
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	96
Hexane	102
1,1-Dichloroethane	96
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	97
Tetrahydrofuran	98
Chloroform	96
1,1,1-Trichloroethane	99
Cyclohexane	101
Carbon Tetrachloride	97
2,2,4-Trimethylpentane	107
Benzene	98
1,2-Dichloroethane	98
Heptane	102
Trichloroethene	99
1,2-Dichloropropane	101
1,4-Dioxane	100
Bromodichloromethane	99
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	103
Toluene	99
trans-1,3-Dichloropropene	99
1,1,2-Trichloroethane	94
Tetrachloroethene	94

Client Sample ID: CCV

Lab ID#: 1202218-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021505	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 01:15 PM

Compound	%Recovery
2-Hexanone	97
Dibromochloromethane	98
1,2-Dibromoethane (EDB)	97
Chlorobenzene	95
Ethyl Benzene	96
m,p-Xylene	99
o-Xylene	102
Styrene	92
Bromoform	100
Cumene	102
1,1,2,2-Tetrachloroethane	98
Propylbenzene	101
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	107
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	102
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	107
1,2-Dichlorobenzene	100
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	100
Isobutylene	91

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCS

Lab ID#: 1202218-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021506	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 01:44 PM

Compound	%Recovery
Freon 12	110
Freon 114	107
Chloromethane	109
Vinyl Chloride	110
1,3-Butadiene	113
Bromomethane	116
Chloroethane	106
Freon 11	104
Ethanol	110
Freon 113	108
1,1-Dichloroethene	112
Acetone	111
2-Propanol	112
Carbon Disulfide	130
3-Chloropropene	126
Methylene Chloride	101
Methyl tert-butyl ether	112
trans-1,2-Dichloroethene	118
Hexane	110
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	102
Tetrahydrofuran	101
Chloroform	104
1,1,1-Trichloroethane	107
Cyclohexane	108
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	112
Benzene	102
1,2-Dichloroethane	100
Heptane	105
Trichloroethene	104
1,2-Dichloropropane	104
1,4-Dioxane	104
Bromodichloromethane	104
cis-1,3-Dichloropropene	107
4-Methyl-2-pentanone	108
Toluene	101
trans-1,3-Dichloropropene	109
1,1,2-Trichloroethane	101
Tetrachloroethene	101

Client Sample ID: LCS

Lab ID#: 1202218-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021506	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 01:44 PM

Compound	%Recovery
2-Hexanone	116
Dibromochloromethane	107
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	104
m,p-Xylene	110
o-Xylene	111
Styrene	109
Bromoform	106
Cumene	110
1,1,2,2-Tetrachloroethane	105
Propylbenzene	108
4-Ethyltoluene	104
1,3,5-Trimethylbenzene	117
1,2,4-Trimethylbenzene	117
1,3-Dichlorobenzene	107
1,4-Dichlorobenzene	108
alpha-Chlorotoluene	117
1,2-Dichlorobenzene	105
1,2,4-Trichlorobenzene	103
Hexachlorobutadiene	98
Isobutylene	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	107	70-130

Client Sample ID: LCSD

Lab ID#: 1202218-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021507	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 02:02 PM

Compound	%Recovery
Freon 12	108
Freon 114	105
Chloromethane	106
Vinyl Chloride	109
1,3-Butadiene	108
Bromomethane	113
Chloroethane	106
Freon 11	104
Ethanol	117
Freon 113	106
1,1-Dichloroethene	112
Acetone	105
2-Propanol	112
Carbon Disulfide	127
3-Chloropropene	126
Methylene Chloride	99
Methyl tert-butyl ether	111
trans-1,2-Dichloroethene	118
Hexane	109
1,1-Dichloroethane	104
2-Butanone (Methyl Ethyl Ketone)	108
cis-1,2-Dichloroethene	103
Tetrahydrofuran	101
Chloroform	103
1,1,1-Trichloroethane	105
Cyclohexane	107
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	112
Benzene	104
1,2-Dichloroethane	101
Heptane	109
Trichloroethene	106
1,2-Dichloropropane	105
1,4-Dioxane	106
Bromodichloromethane	105
cis-1,3-Dichloropropene	107
4-Methyl-2-pentanone	112
Toluene	103
trans-1,3-Dichloropropene	116
1,1,2-Trichloroethane	104
Tetrachloroethene	103

Client Sample ID: LCSD

Lab ID#: 1202218-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p021507	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 02:02 PM

Compound	%Recovery
2-Hexanone	116
Dibromochloromethane	106
1,2-Dibromoethane (EDB)	108
Chlorobenzene	104
Ethyl Benzene	105
m,p-Xylene	110
o-Xylene	113
Styrene	113
Bromoform	105
Cumene	115
1,1,2,2-Tetrachloroethane	107
Propylbenzene	114
4-Ethyltoluene	108
1,3,5-Trimethylbenzene	124
1,2,4-Trimethylbenzene	122
1,3-Dichlorobenzene	113
1,4-Dichlorobenzene	114
alpha-Chlorotoluene	120
1,2-Dichlorobenzene	110
1,2,4-Trichlorobenzene	115
Hexachlorobutadiene	107
Isobutylene	Not Spiked

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	111	70-130

Laboratory Data Review Checklist For Air Samples

Completed by:

Title:

Date:

CS Report Name:

Report Date:

Consultant Firm:

Laboratory Name:

Laboratory Report Number:

ADEC File Number:

ADEC Hazard ID:

1. Laboratory

a. Did a NELAP certified laboratory receive and perform all of the submitted sample analyses?

Yes No

Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses NELAP approved?

Yes No

Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample condition documented—Samples collected in gas tight, opaque/dark Summa canisters or other ADEC approved container? Canister vacuum/pressure checked, recorded upon receipt and contained no open valves?

Yes No

Comments:

b. If there were any discrepancies, were they documented? For example, incorrect sample containers, sample holding times outside of acceptable range, insufficient or missing samples, canister not holding a vacuum etc.?

N/A; there were no discrepancies.

Yes No

Comments:

c. Data quality or usability affected? Explain.

Comments:

Data quality and usability were not affected.

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

N/A; there were no QC failures.

c. Were all corrective actions documented?

Yes No

Comments:

N/A; no corrective action was required/performed.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

None.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. Samples analyzed within 30 days of collection or within the time required by the method?

Yes No

Comments:

c. Is the data reported in micrograms per meter cube volume ($\mu\text{g}/\text{m}^3$)?

Yes No

Comments:

d. Are the reported PQLs less than the Target Screening Level or the minimum required detection level for the project?

Due to high levels of PCE in the samples, each sample was diluted. Multiple non-target analytes had elevated PQLs.

Yes No

Comments:

e. Data quality or usability affected? Explain.

Comments:

In our opinion, data usability is not affected by the elevated non-target PQLs; the samples contained PCE in excess of commercial sub-slab screening levels and are usable for purposes of assessing vapor intrusion of PCE at the site.

6. QC Samples

a. Method Blank

i. One method blank reported per analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

v. Data quality or usability affected? Please Explain.

Comments:

No analytes were detected in the method blank; data quality and usability were unaffected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD or one LCS and a sample/sample duplicate pair reported per analysis and 20 samples?

Yes No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable.

Yes No

Comments:

iii. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable.

Yes No

Comments:

iv. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

N/A

vi. Data quality or usability affected? Explain.

Comments:

Data quality and usability were unaffected.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – QC and laboratory samples?

Yes No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits?
And project specified DQOs, if applicable.

Yes No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

N/A

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Data quality and usability were unaffected.

d. Field Duplicate

i. One field duplicate submitted per analysis and 10 soil gas or indoor air samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 25 %)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

RPDs were within the recommended DQO of 25%, with the exception of toluene, with an RPD of 50%. The toluene result for the field-duplicate pair will be considered estimated, and flagged J.

Yes No Comments:

iv. Data quality or usability affected? Explain.

Comments:

The toluene result for the field-duplicate pair will be considered estimated, flagged J.

7. Other Data Flags/Qualifiers

a. Defined and appropriate?

Yes No Comments:

N/A

2/25/2012

Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road

Fairbanks AK 99709

Project Name: Shoppers Forum Rd. 2
Project #: 31-1-11554-001
Workorder #: 1202222

Dear Mr. Rodney Guritz

The following report includes the data for the above referenced project for sample(s) received on 2/9/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1202222

Work Order Summary

CLIENT: Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road
Fairbanks, AK 99709

BILL TO: Mr. Rodney Guritz
Shannon & Wilson, Inc.
2355 Hill Road
Fairbanks, AK 99709

PHONE: 907-479-0600

P.O. #

FAX: 907-479-5691

PROJECT # 31-1-11554-001 Shoppers Forum Rd. 2

DATE RECEIVED: 02/09/2012

CONTACT: Kelly Buettner

DATE COMPLETED: 02/25/2012

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	Miguels_New_02	Modified TO-15 SIM	6.0 "Hg	5 psi
02A	Miguels_02	Modified TO-15 SIM	0.0 "Hg	5 psi
03A	Bamboo_Panda_01	Modified TO-15 SIM	0.5 "Hg	5 psi
04A	Fast_Foto_01	Modified TO-15 SIM	7.5 "Hg	5 psi
05A	Annex_Crawlspace	Modified TO-15 SIM	7.0 "Hg	5 psi
06A	Main_Crawlspace	Modified TO-15 SIM	5.5 "Hg	5 psi
07A	Main_Mall_Stairs	Modified TO-15 SIM	6.5 "Hg	5 psi
08A	Planet_Fit_Desk	Modified TO-15 SIM	8.0 "Hg	5 psi
09A	Lab Blank	Modified TO-15 SIM	NA	NA
09B	Lab Blank	Modified TO-15 SIM	NA	NA
10A	CCV	Modified TO-15 SIM	NA	NA
10B	CCV	Modified TO-15 SIM	NA	NA
11A	LCS	Modified TO-15 SIM	NA	NA
11AA	LCSD	Modified TO-15 SIM	NA	NA
11B	LCS	Modified TO-15 SIM	NA	NA
11BB	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

DATE: 02/25/12

Laboratory Director

Certification numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089,
NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP -CA009332011-1, WA NELAP - C935
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/11 , Expiration date: 06/30/12.

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 SIM
Shannon & Wilson, Inc.
Workorder# 1202222

Eight 6 Liter Summa Canister (SIM Certified) samples were received on February 09, 2012. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+ - 30% Difference	Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$. ; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

Despite the use of a flow controller for sample collection, the final canister vacuum for sample Miguels_02 was measured at ambient pressure by the laboratory upon sample receipt.

There was a significant difference (greater than 5.0" Hg) between the measured canister receipt vacuum and that which was reported on the Chain of Custody (COC) for sample Miguels_02. A leak test indicated that the valve was functioning properly.

Analytical Notes

Dilution was performed on samples Miguels_New_02, Miguels_02, Bamboo_Panda_01, and Annex_Crawlspace due to the presence of high level target species.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV and/or LCS.

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: Miguels_New_02

Lab ID#: 1202222-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.21	0.99	0.83	3.9
Benzene	0.52	4.6	1.7	14
Trichloroethene	0.21	0.85	1.1	4.6
Toluene	0.21	16	0.79	59
Tetrachloroethene	0.21	140	1.4	940
Ethyl Benzene	0.21	1.9	0.91	8.4
m,p-Xylene	0.42	6.9	1.8	30
o-Xylene	0.21	2.3	0.91	10

Client Sample ID: Miguels_02

Lab ID#: 1202222-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.045	0.57	0.18	2.2
Benzene	0.11	3.2	0.36	10
1,2-Dichloroethane	0.045	0.42	0.18	1.7
Trichloroethene	0.045	0.31	0.24	1.7
Toluene	0.045	21	0.17	79
Tetrachloroethene	0.045	42	0.30	280
Ethyl Benzene	0.045	2.4	0.19	10
m,p-Xylene	0.090	6.8	0.39	30
o-Xylene	0.045	2.2	0.19	9.5

Client Sample ID: Bamboo_Panda_01

Lab ID#: 1202222-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.17	0.81	0.67	3.2
Benzene	0.42	4.0	1.4	13
Trichloroethene	0.17	0.68	0.91	3.6
Toluene	0.17	16	0.64	60

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: Bamboo_Panda_01

Lab ID#: 1202222-03A

Tetrachloroethene	0.17	110	1.2	730
Ethyl Benzene	0.17	1.6	0.74	7.0
m,p-Xylene	0.34	5.6	1.5	24
o-Xylene	0.17	1.9	0.74	8.2

Client Sample ID: Fast_Foto_01

Lab ID#: 1202222-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.090	4.0	0.28	13
1,2-Dichloroethane	0.036	0.39	0.14	1.6
Trichloroethene	0.036	0.076	0.19	0.41
Toluene	0.036	12	0.13	47
Tetrachloroethene	0.036	3.7	0.24	25
Ethyl Benzene	0.036	1.6	0.16	6.8
m,p-Xylene	0.072	4.1	0.31	18
o-Xylene	0.036	1.5	0.16	6.5

Client Sample ID: Annex_Crawlspace

Lab ID#: 1202222-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.70	3.8	2.8	15
Benzene	1.8	3.6	5.6	12
Trichloroethene	0.70	3.8	3.8	20
Toluene	0.70	9.3	2.6	35
Tetrachloroethene	0.70	540	4.7	3600
Ethyl Benzene	0.70	1.2	3.0	5.0
m,p-Xylene	1.4	2.6	6.1	11
o-Xylene	0.70	0.84	3.0	3.7

Client Sample ID: Main_Crawlspace

Lab ID#: 1202222-06A

**Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: Main_Crawlspace

Lab ID#: 1202222-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.082	2.8	0.26	9.0
1,2-Dichloroethane	0.033	0.14	0.13	0.56
Trichloroethene	0.033	0.18	0.18	0.94
Toluene	0.033	9.2	0.12	35
Tetrachloroethene	0.033	9.2	0.22	62
Ethyl Benzene	0.033	1.1	0.14	4.7
m,p-Xylene	0.066	3.1	0.28	14
o-Xylene	0.033	1.2	0.14	5.0

Client Sample ID: Main_Mall_Stairs

Lab ID#: 1202222-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.086	4.1	0.27	13
1,2-Dichloroethane	0.034	0.24	0.14	0.98
Trichloroethene	0.034	0.035	0.18	0.19
Toluene	0.034	13	0.13	49
Tetrachloroethene	0.034	1.0	0.23	6.9
Ethyl Benzene	0.034	1.6	0.15	6.8
m,p-Xylene	0.068	4.4	0.30	19
o-Xylene	0.034	1.6	0.15	7.0

Client Sample ID: Planet_Fit_Desk

Lab ID#: 1202222-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.092	3.7	0.29	12
Toluene	0.037	9.8	0.14	37
Tetrachloroethene	0.037	0.24	0.25	1.6
Ethyl Benzene	0.037	1.2	0.16	5.2
m,p-Xylene	0.073	3.4	0.32	15

Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: Planet_Fit_Desk

Lab ID#: 1202222-08A

o-Xylene	0.037	1.4	0.16	6.0
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Client Sample ID: Miguels_New_02

Lab ID#: 1202222-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021316	Date of Collection: 2/7/12 9:37:00 AM
Dil. Factor:	10.5	Date of Analysis: 2/13/12 10:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.10	Not Detected	0.27	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.42	Not Detected
1,1-Dichloroethane	0.21	Not Detected	0.85	Not Detected
cis-1,2-Dichloroethene	0.21	0.99	0.83	3.9
1,1,1-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Benzene	0.52	4.6	1.7	14
1,2-Dichloroethane	0.21	Not Detected	0.85	Not Detected
Trichloroethene	0.21	0.85	1.1	4.6
Toluene	0.21	16	0.79	59
1,1,2-Trichloroethane	0.21	Not Detected	1.1	Not Detected
Tetrachloroethene	0.21	140	1.4	940
Ethyl Benzene	0.21	1.9	0.91	8.4
m,p-Xylene	0.42	6.9	1.8	30
o-Xylene	0.21	2.3	0.91	10
1,1,2,2-Tetrachloroethane	0.21	Not Detected	1.4	Not Detected
trans-1,2-Dichloroethene	1.0	Not Detected	4.2	Not Detected
Methyl tert-butyl ether	1.0	Not Detected	3.8	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: Miguels_02

Lab ID#: 1202222-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021317	Date of Collection: 2/7/12 9:15:00 AM
Dil. Factor:	2.24	Date of Analysis: 2/13/12 10:58 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.022	Not Detected	0.057	Not Detected
1,1-Dichloroethene	0.022	Not Detected	0.089	Not Detected
1,1-Dichloroethane	0.045	Not Detected	0.18	Not Detected
cis-1,2-Dichloroethene	0.045	0.57	0.18	2.2
1,1,1-Trichloroethane	0.045	Not Detected	0.24	Not Detected
Benzene	0.11	3.2	0.36	10
1,2-Dichloroethane	0.045	0.42	0.18	1.7
Trichloroethene	0.045	0.31	0.24	1.7
Toluene	0.045	21	0.17	79
1,1,2-Trichloroethane	0.045	Not Detected	0.24	Not Detected
Tetrachloroethene	0.045	42	0.30	280
Ethyl Benzene	0.045	2.4	0.19	10
m,p-Xylene	0.090	6.8	0.39	30
o-Xylene	0.045	2.2	0.19	9.5
1,1,2,2-Tetrachloroethane	0.045	Not Detected	0.31	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.89	Not Detected
Methyl tert-butyl ether	0.22	Not Detected	0.81	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: Bamboo_Panda_01

Lab ID#: 1202222-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021318	Date of Collection: 2/7/12 10:08:00 AM
Dil. Factor:	8.50	Date of Analysis: 2/14/12 07:32 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.085	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.085	Not Detected	0.34	Not Detected
1,1-Dichloroethane	0.17	Not Detected	0.69	Not Detected
cis-1,2-Dichloroethene	0.17	0.81	0.67	3.2
1,1,1-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Benzene	0.42	4.0	1.4	13
1,2-Dichloroethane	0.17	Not Detected	0.69	Not Detected
Trichloroethene	0.17	0.68	0.91	3.6
Toluene	0.17	16	0.64	60
1,1,2-Trichloroethane	0.17	Not Detected	0.93	Not Detected
Tetrachloroethene	0.17	110	1.2	730
Ethyl Benzene	0.17	1.6	0.74	7.0
m,p-Xylene	0.34	5.6	1.5	24
o-Xylene	0.17	1.9	0.74	8.2
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
trans-1,2-Dichloroethene	0.85	Not Detected	3.4	Not Detected
Methyl tert-butyl ether	0.85	Not Detected	3.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: Fast_Foto_01

Lab ID#: 1202222-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021511sim	Date of Collection: 2/7/12 10:15:00 AM
Dil. Factor:	1.79	Date of Analysis: 2/15/12 04:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.046	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.071	Not Detected
1,1-Dichloroethane	0.036	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.036	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Benzene	0.090	4.0	0.28	13
1,2-Dichloroethane	0.036	0.39	0.14	1.6
Trichloroethene	0.036	0.076	0.19	0.41
Toluene	0.036	12	0.13	47
1,1,2-Trichloroethane	0.036	Not Detected	0.20	Not Detected
Tetrachloroethene	0.036	3.7	0.24	25
Ethyl Benzene	0.036	1.6	0.16	6.8
m,p-Xylene	0.072	4.1	0.31	18
o-Xylene	0.036	1.5	0.16	6.5
1,1,2,2-Tetrachloroethane	0.036	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.71	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.64	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: Annex_Crawlspace

Lab ID#: 1202222-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021512sim	Date of Collection: 2/7/12 10:22:00 AM
Dil. Factor:	35.0	Date of Analysis: 2/15/12 05:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.35	Not Detected	0.89	Not Detected
1,1-Dichloroethene	0.35	Not Detected	1.4	Not Detected
1,1-Dichloroethane	0.70	Not Detected	2.8	Not Detected
cis-1,2-Dichloroethene	0.70	3.8	2.8	15
1,1,1-Trichloroethane	0.70	Not Detected	3.8	Not Detected
Benzene	1.8	3.6	5.6	12
1,2-Dichloroethane	0.70	Not Detected	2.8	Not Detected
Trichloroethene	0.70	3.8	3.8	20
Toluene	0.70	9.3	2.6	35
1,1,2-Trichloroethane	0.70	Not Detected	3.8	Not Detected
Tetrachloroethene	0.70	540	4.7	3600
Ethyl Benzene	0.70	1.2	3.0	5.0
m,p-Xylene	1.4	2.6	6.1	11
o-Xylene	0.70	0.84	3.0	3.7
1,1,2,2-Tetrachloroethane	0.70	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	3.5	Not Detected	14	Not Detected
Methyl tert-butyl ether	3.5	Not Detected	13	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: Main_Crawlspace

Lab ID#: 1202222-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021513sim	Date of Collection: 2/7/12 10:40:00 AM
Dil. Factor:	1.64	Date of Analysis: 2/15/12 06:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Benzene	0.082	2.8	0.26	9.0
1,2-Dichloroethane	0.033	0.14	0.13	0.56
Trichloroethene	0.033	0.18	0.18	0.94
Toluene	0.033	9.2	0.12	35
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	9.2	0.22	62
Ethyl Benzene	0.033	1.1	0.14	4.7
m,p-Xylene	0.066	3.1	0.28	14
o-Xylene	0.033	1.2	0.14	5.0
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: Main_Mall_Stairs

Lab ID#: 1202222-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021514sim	Date of Collection: 2/7/12 11:05:00 AM
Dil. Factor:	1.71	Date of Analysis: 2/15/12 07:30 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.044	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.068	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Benzene	0.086	4.1	0.27	13
1,2-Dichloroethane	0.034	0.24	0.14	0.98
Trichloroethene	0.034	0.035	0.18	0.19
Toluene	0.034	13	0.13	49
1,1,2-Trichloroethane	0.034	Not Detected	0.19	Not Detected
Tetrachloroethene	0.034	1.0	0.23	6.9
Ethyl Benzene	0.034	1.6	0.15	6.8
m,p-Xylene	0.068	4.4	0.30	19
o-Xylene	0.034	1.6	0.15	7.0
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.62	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	91	70-130

Client Sample ID: Planet_Fit_Desk

Lab ID#: 1202222-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021517sim	Date of Collection: 2/7/12 10:55:00 AM
Dil. Factor:	1.83	Date of Analysis: 2/15/12 09:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.047	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.072	Not Detected
1,1-Dichloroethane	0.037	Not Detected	0.15	Not Detected
cis-1,2-Dichloroethene	0.037	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Benzene	0.092	3.7	0.29	12
1,2-Dichloroethane	0.037	Not Detected	0.15	Not Detected
Trichloroethene	0.037	Not Detected	0.20	Not Detected
Toluene	0.037	9.8	0.14	37
1,1,2-Trichloroethane	0.037	Not Detected	0.20	Not Detected
Tetrachloroethene	0.037	0.24	0.25	1.6
Ethyl Benzene	0.037	1.2	0.16	5.2
m,p-Xylene	0.073	3.4	0.32	15
o-Xylene	0.037	1.4	0.16	6.0
1,1,2,2-Tetrachloroethane	0.037	Not Detected	0.25	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.72	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.66	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: Lab Blank

Lab ID#: 1202222-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021306	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/12 01:00 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: Lab Blank

Lab ID#: 1202222-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021510sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 03:37 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: CCV

Lab ID#: 1202222-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/12 10:05 AM

Compound	%Recovery
Vinyl Chloride	102
1,1-Dichloroethene	110
1,1-Dichloroethane	99
cis-1,2-Dichloroethene	107
1,1,1-Trichloroethane	112
Benzene	83
1,2-Dichloroethane	110
Trichloroethene	84
Toluene	85
1,1,2-Trichloroethane	86
Tetrachloroethene	95
Ethyl Benzene	92
m,p-Xylene	92
o-Xylene	89
1,1,2,2-Tetrachloroethane	86
trans-1,2-Dichloroethene	104
Methyl tert-butyl ether	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: CCV

Lab ID#: 1202222-10B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021502sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 08:08 AM

Compound	%Recovery
Vinyl Chloride	89
1,1-Dichloroethene	100
1,1-Dichloroethane	103
cis-1,2-Dichloroethene	101
1,1,1-Trichloroethane	108
Benzene	94
1,2-Dichloroethane	108
Trichloroethene	102
Toluene	92
1,1,2-Trichloroethane	113
Tetrachloroethene	103
Ethyl Benzene	99
m,p-Xylene	93
o-Xylene	91
1,1,2,2-Tetrachloroethane	105
trans-1,2-Dichloroethene	101
Methyl tert-butyl ether	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: LCS

Lab ID#: 1202222-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/12 10:58 AM

Compound	%Recovery
Vinyl Chloride	100
1,1-Dichloroethene	125
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	116
1,1,1-Trichloroethane	117
Benzene	91
1,2-Dichloroethane	106
Trichloroethene	92
Toluene	95
1,1,2-Trichloroethane	92
Tetrachloroethene	101
Ethyl Benzene	119
m,p-Xylene	127
o-Xylene	130
1,1,2,2-Tetrachloroethane	89
trans-1,2-Dichloroethene	128
Methyl tert-butyl ether	120

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	111	70-130

Client Sample ID: LCSD

Lab ID#: 1202222-11AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	c021304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/13/12 11:43 AM

Compound	%Recovery
Vinyl Chloride	103
1,1-Dichloroethene	123
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	112
1,1,1-Trichloroethane	112
Benzene	88
1,2-Dichloroethane	102
Trichloroethene	88
Toluene	95
1,1,2-Trichloroethane	86
Tetrachloroethene	97
Ethyl Benzene	119
m,p-Xylene	132 Q
o-Xylene	135 Q
1,1,2,2-Tetrachloroethane	88
trans-1,2-Dichloroethene	124
Methyl tert-butyl ether	114

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	114	70-130

Client Sample ID: LCS

Lab ID#: 1202222-11B

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021503sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 09:07 AM

Compound	%Recovery
Vinyl Chloride	91
1,1-Dichloroethene	106
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	110
Benzene	95
1,2-Dichloroethane	106
Trichloroethene	101
Toluene	91
1,1,2-Trichloroethane	112
Tetrachloroethene	101
Ethyl Benzene	97
m,p-Xylene	93
o-Xylene	90
1,1,2,2-Tetrachloroethane	107
trans-1,2-Dichloroethene	114
Methyl tert-butyl ether	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130

Client Sample ID: LCSD

Lab ID#: 1202222-11BB

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a021504sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/15/12 09:43 AM

Compound	%Recovery
Vinyl Chloride	90
1,1-Dichloroethene	105
1,1-Dichloroethane	104
cis-1,2-Dichloroethene	102
1,1,1-Trichloroethane	110
Benzene	94
1,2-Dichloroethane	105
Trichloroethene	100
Toluene	91
1,1,2-Trichloroethane	110
Tetrachloroethene	100
Ethyl Benzene	97
m,p-Xylene	93
o-Xylene	90
1,1,2,2-Tetrachloroethane	107
trans-1,2-Dichloroethene	113
Methyl tert-butyl ether	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

Laboratory Data Review Checklist For Air Samples

Completed by:

Title:

Date:

CS Report Name:

Report Date:

Consultant Firm:

Laboratory Name:

Laboratory Report Number:

ADEC File Number:

ADEC Hazard ID:

1. Laboratory

a. Did a NELAP certified laboratory receive and perform all of the submitted sample analyses?

Yes No

Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses NELAP approved?

Yes No

Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample condition documented—Samples collected in gas tight, opaque/dark Summa canisters or other ADEC approved container? Canister vacuum/pressure checked, recorded upon receipt and contained no open valves?

Yes No

Comments:

b. If there were any discrepancies, were they documented? For example, incorrect sample containers, sample holding times outside of acceptable range, insufficient or missing samples, canister not holding a vacuum etc.?

Sample Bamboo_Panda_01 was at 0.0 in. Hg following collection (possibly faulty flow controller); sample Miguels_02 was received at the laboratory at ambient pressure (0.0 in. Hg), though the vacuum following sample collection was -6.5 in. Hg. Positive results will be considered estimated, and flagged J, for these two samples.

Yes No

Comments:

c. Data quality or usability affected? Explain.

Comments:

We consider the results for the two samples affected by sample-handling anomalies to be estimated (flagged J).

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

The laboratory noted the sample-handling issue with Miguels_02 in the case narrative.

c. Were all corrective actions documented?

Yes No

Comments:

The laboratory leak-tested the valve on the canister for Miguels_02, which was found to be in working order.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

The laboratory did not note an affect on data quality/usability; we consider the results affected by sample-handling anomalies to be estimated (see Section 3.c.)

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. Samples analyzed within 30 days of collection or within the time required by the method?

Yes No

Comments:

c. Is the data reported in micrograms per meter cube volume ($\mu\text{g}/\text{m}^3$)?

Yes No

Comments:

d. Are the reported PQLs less than the Target Screening Level or the minimum required detection level for the project?

The PQL for 1,1,2,2-tetrachloroethane was elevated for sample Annex_Crawlspace, due to dilution.

Yes No

Comments:

e. Data quality or usability affected? Explain.

Comments:

In our opinion, data usability is not affected by the elevated non-target PQL; the sample contained PCE in excess of commercial sub-slab screening levels and is usable for purposes of assessing vapor intrusion of PCE at the site.

6. QC Samples

a. Method Blank

i. One method blank reported per analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

v. Data quality or usability affected? Please Explain.

Comments:

No analytes were detected in the method blank; data quality and usability were unaffected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD or one LCS and a sample/sample duplicate pair reported per analysis and 20 samples?

Yes No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable.

Yes No

Comments:

iii. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable.

Yes No

Comments:

iv. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

N/A

vi. Data quality or usability affected? Explain.

Comments:

Data quality and usability were unaffected.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – QC and laboratory samples?

Yes No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable.

Yes No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

N/A

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Data quality and usability were unaffected.

d. Field Duplicate

i. One field duplicate submitted per analysis and 10 soil gas or indoor air samples?

Yes No

Comments:

The field-duplicate sample for this sampling event was submitted for a sub-slab soil gas sample, and is evaluated in the checklist for work order 1202218.

ii. Submitted blind to lab?

Yes No

Comments:

N/A; see above.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?
(Recommended: 25 %)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

N/A; see above

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

N/A; see above

7. Other Data Flags/Qualifiers

a. Defined and appropriate?

Yes No

Comments:

N/A