

# VAPOR INTRUSION EXPOSURE ASSESSMENT REPORT

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FORMER PARK LAUNDRY SITE



MAUL  
FOSTER  
ALONGI

*Prepared for*  
**UNION RIDGE INVESTMENT COMPANY**  
RIDGEFIELD, WASHINGTON  
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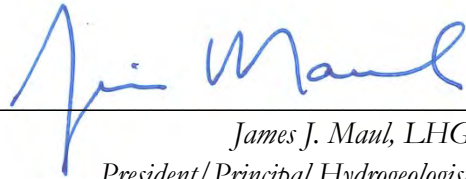
*The material and data in this report were prepared  
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## ACRONYMS AND ABBREVIATIONS

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CSM	conceptual site model
DCA	dichloroethane
DCE	dichloroethene
DOH	Washington State Department of Health
E&E	Ecology and Environment, Inc.
Ecology	Washington State Department of Ecology
GC/MS	gas chromatograph/mass spectrometer
MFA	Maul Foster & Alongi, Inc.
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
PCE	tetrachloroethene
Property	122 N. Main Avenue, Ridgefield, Washington
RI	remedial investigation
Sampling Plan	air sampling work plan
TCE	trichloroethene
URIC	Union Ridge Investment Company
VOC	volatile organic compound

## SUMMARY

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Maul Foster & Alongi, Inc. has prepared this report to summarize the vapor intrusion exposure assessment conducted for the former Park Laundry site in Ridgefield, Washington (the site). Work was coordinated with the Washington State Department of Ecology with input from the Washington State Department of Health.

Buildings on the site were prioritized for sampling, based on identified risk factors for vapor intrusion, such as proximity to groundwater with the highest concentrations of chlorinated solvents, type of building construction, and the identification of preferential exposure pathways. The exposure assessment included sampling in and around approximately ten of the highest-priority buildings in November 2012 and again in July 2013.

Despite the identification of risk factors, the evaluation failed to identify vapor intrusion into any of the buildings on the site. This supports the conclusion that there is currently no indoor air exposure resulting from vapor intrusion on the site. The potential for future exposure on the properties on the site should be considered in the human health risk assessment necessary for completion of the remedial investigation.

# 1 INTRODUCTION

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Maul Foster & Alongi, Inc. (MFA) has prepared this report on behalf of Union Ridge Investment Company (URIC) for the former Park Laundry site in Ridgefield, Washington (the site). Park Laundry was previously located at 122 N. Main Avenue (the Property). A remedial investigation (RI) is being performed pursuant to Agreed Order No. DE 6829 (Washington State Department of Ecology [Ecology], 2009a). The first phases of the RI indicated that volatile organic compounds (VOCs) are present in soil and groundwater on the Property and on neighboring properties. The Property historically was used by Park Laundry, which may have performed dry cleaning operations that resulted in the release of tetrachloroethene (PCE). In a letter dated July 30, 2012, Ecology ordered URIC to develop a plan for approval by Ecology and conduct sampling to assess the potential for vapor intrusion on the site (Ecology, 2012a).

MFA worked with Ecology and the Washington State Department of Health (DOH), to develop an Ecology-approved sampling plan (Sampling Plan) (MFA, 2012b) as part of an overall vapor intrusion assessment strategy consistent with Ecology's draft vapor intrusion guidance (Ecology, 2009b). MFA also provided a supplementary document to clarify the criteria used to select sampling locations at each property (MFA, 2012c). Ecology approved the Sampling Plan and MFA conducted assessment and sampling activities from November 12 through 17, 2012, and again from July 29 through July 31, 2013.

MFA provided Ecology with a data submittal after each of the vapor intrusion sampling events (MFA, 2013a,b). This report summarizes both sampling events and provides conclusions and recommendations based on the exposure assessment results, taking into consideration the groundwater monitoring data, historical soil gas data, and vapor intrusion modeling results.

## 2 EXPOSURE ASSESSMENT SCOPE AND METHODOLOGY

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As recommended in Ecology's draft vapor intrusion guidance (Ecology, 2009b), the vapor intrusion exposure assessment was conducted using a tiered approach, consisting of a preliminary assessment, a Tier I assessment, and a Tier II assessment.

### 2.1 Preliminary Assessment

The goal of the preliminary assessment was to determine the potential for vapor intrusion on a site. Previous site investigations have identified VOC impacts in the soil and groundwater near occupied buildings, which provided the justification for continuing with a Tier I assessment (Clark County Health, 2006; E&E, 2008; Hahn, 2006; MFA, 2001).

## 2.2 Tier I Assessment

The Tier I assessment included collecting data to define the nature and extent of contamination in the subsurface and developing preliminary conceptual site models (CSMs) for each building on or within 100 feet of the groundwater plume to identify locations with the greatest potential for vapor intrusion.

### 2.2.1 Subsurface Characterization

MFA installed groundwater monitoring wells and collected soil samples to characterize the nature and extent of contamination on the site. The results indicated a shallow source of chlorinated VOCs below several properties on the site. MFA and Ecology defined a vapor intrusion study area provided in Figure 1, which generally represents properties above, or within 100 feet of the groundwater plume boundary. The detailed results of the subsurface characterization have been provided in a series of documents previously submitted to Ecology, e.g., Data Submittal for March 2012 Investigation at Former Park Laundry Property (MFA, 2012a).

### 2.2.2 Preliminary Conceptual Site Model and Sampling Plan Development

MFA developed preliminary CSMs based on information from written building surveys issued to occupants by Ecology and information gathered from a site walk. The purpose of the CSMs was to identify possible exposure pathways and prioritize buildings for sampling based on the potential for vapor intrusion. MFA compiled the information collected from the building surveys and site walk, and then coordinated with Ecology to develop the Sampling Plan with input from DOH. The buildings included in the Sampling Plan were considered to have the highest potential for vapor intrusion on the site, based on factors such as proximity to the groundwater plume, building construction type, and identification of exposure pathways, such as foundation cracks and utility penetrations. Three vacant properties were also included in the Sampling Plan to assess the probability that indoor air could be impacted should a building be constructed in the future.

## 2.3 Tier II Assessment—Vapor Intrusion Sampling

### 2.3.1 Sampling Scope and Methodology—November, 2012

Samples were collected in stainless steel Summa canisters and analyzed for PCE and associated breakdown products (trichloroethene [TCE]; 1,1-dichloroethene [1,1-DCE]; cis-1,2-DCE; trans-1,2-DCE; 1,1-dichloroethane [1,1-DCA]; 1,2-DCA; chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency Method TO-15 selected ion monitoring. Analytical data has consistently shown that the only hazardous substance associated with the site is PCE and there is no indication of the presence of associated breakdown products from any of the media analyzed, i.e., groundwater, soil gas, or soil.

Forty-eight samples were collected and analyzed during the 2012 mobilization:

- Twenty-one indoor air samples
- Three crawlspace air samples
- Seven soil gas samples
- Eleven subslab soil gas samples
- Six outdoor background air samples

The sampling scope for properties on the site is summarized in Table 1. Figure 2 shows soil gas, outdoor air, and groundwater sampling locations for 2012 and 2013. Wind roses used to evaluate and select background sampling locations are included in Appendix A.

**Table 1**  
**2012 Sampling Summary**

ID	Property	Foundation Type	Number of Indoor Air Samples	Number of Subslab Samples	Number of Crawlspace Samples	Number of Soil Gas Samples
1*	117 N. 3rd Ave— Fire Station	Slab-on-grade	3	3	0	1
5*	210 N. Main Ave— Community Center	Slab-on-grade	3	0	0	1
7	116 N. Main Ave— Police Dept.	Slab-on-grade	2	3	0	0
9	121 N. Main Ave— Sportsman Bar & Grill	Crawlspace (inaccessible)	2	0	0	0
10*	127 N. Main Ave— Sales Office	Crawlspace	2	0	1	0
11*	201/205 N. Main Ave— Post Office	Slab-on-grade	3	4	0	1
13*	305 N. Main Ave	Slab-on-grade	2	1	0	1
24*	322 N. 1st Ave	Partial basement, partial crawlspace	2	0	1	1
27*	304 N. 1st Ave	Crawlspace	2	0	1	1
44*	122 N. Main Ave— Former Park Laundry Property, Vacant Lot	N/A	0	0	0	0
45*	126 N. Main Ave— Vacant Lot	N/A	0	0	0	1
46*	Main Ave/Mill Street Intersection— Vacant Lot	N/A	0	0	0	1

\*A soil gas sampling port was installed at the property. Soil gas samples were taken only from locations where groundwater was not encountered.

As described in the Sampling Plan, a two-phase approach was used to assess each property. The preliminary site visit included occupant interviews, an inspection to identify sampling locations, and the removal of potential indoor chemical sources. Information and representative photographs collected during the site survey and occupant interviews are summarized in Appendix B, Field Data Summary.

MFA used a portable gas chromatograph/mass spectrometer (GC/MS) to screen the indoor air in each building to identify potential indoor sources of chlorinated VOCs. Subslab and/or soil gas sampling ports, if applicable, were also installed during the preliminary visit. Samples were collected, consistent with the Sampling Plan, approximately 24 hours after the preliminary visit.

### 2.3.2 Sampling Scope and Methodology—July 2013

The sampling scope and methodology in 2013 were the same as in 2012, with the following exceptions.

Forty-seven samples were collected and analyzed during the 2013 mobilization:

- Twenty-two indoor air samples
- Two crawlspace air samples
- Nine soil gas samples
- Thirteen subslab soil gas samples
- Two outdoor background air samples

The sampling scope for properties on the site is summarized in Table 2.

**Table 2**  
**2013 Sampling Summary**

ID	Property	Foundation Type	Number of Indoor Air Samples	Number of Subslab Samples	Number of Crawlspace Samples	Number of Soil Gas Samples
1*	117 N. 3rd Ave— Fire Station	Slab-on-grade	3	3	0	0
5*	210 N. Main Ave— Community Center	Slab-on-grade	3	2	0	1
7	116 N. Main Ave— Police Dept.	Slab-on-grade	2	3	0	0
9	121 N. Main Ave— Sportsman Bar & Grill	Crawlspace (inaccessible)	2	0	0	0
10*	127 N. Main Ave— Sales Office	Crawlspace	2	0	1	0
11*	201/205 N. Main Ave— Post Office	Slab-on-grade	3	4	0	1
13*	305 N. Main Ave	Slab-on-grade	2	1	0	1
24*	322 N. 1st Ave	Partial basement, partial crawlspace	0	0	0	1
27*	304 N. 1st Ave	Crawlspace	2	0	1	1
28*	305 N. 1st Ave	Basement	3	0	0	1
44*	122 N. Main Ave—Former Park Laundry Property, Vacant Lot	N/A	0	0	0	1

ID	Property	Foundation Type	Number of Indoor Air Samples	Number of Subslab Samples	Number of Crawlspace Samples	Number of Soil Gas Samples
45*	126 N. Main Ave—Vacant Lot	N/A	0	0	0	1
46*	Main Ave/Mill Street Intersection—Vacant Lot	N/A	0	0	0	1

\*A soil gas sampling port was installed at the property. Soil gas samples were taken only from locations where groundwater was not encountered.

MFA limited the assessment of potential indoor sources of chlorinated VOCs to interviews and a visual inspection instead of using a portable GC/MS.

### 2.3.3 Refined Conceptual Site Models

MFA refined the CSM for each of the buildings included in the Sampling Plan, based on the information gathered during the visual inspection. The results are provided in Appendix C, Conceptual Site Models, and the content of the CSM is consistent with Section 3.2 of Ecology’s draft vapor intrusion guidance (Ecology, 2009b).

## 3 EXPOSURE ASSESSMENT SAMPLING CRITERIA

Results from the assessment were compared to screening levels summarized in Table 3.

**Table 3  
Analytes and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Screening Level— Air	Screening Level— Soil Gas
PCE	127-18-4	9.6	96
TCE	79-01-6	0.37	3.7
1,1-DCE	75-35-4	91	910
cis-1,2-DCE	156-59-2	16	160
trans-1,2-DCE	156-60-5	32	320
1,1-DCA	75-34-3	320	3200
1,2-DCA	107-06-2	0.096	0.96
Chloroethane	75-00-3	3	30
Vinyl chloride	75-01-4	0.28	2.8

NOTES:  
Screening levels are based on Table B-1 (Ecology, 2009b). Values for PCE and TCE are based on CLARC guidance (Ecology, 2012b).  
CAS = Chemical Abstract Service.  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

# 4 SAMPLING RESULTS

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Sampling results are summarized in the attached analytical tables (Tables 4 and 5). Complete laboratory reports and data validation are also provided in Appendices D and E, respectively.

## 4.1 Soil Gas Samples

### 4.1.1 November 2012

- PCE was detected in one soil gas sample (Property 45, Vacant Lot at 126 N. Main Avenue) that exceeded the screening level ( $96 \mu\text{g}/\text{m}^3$ ), with a concentration of  $2,800 \mu\text{g}/\text{m}^3$ .
- TCE was detected in one soil gas sample (Property 11, Post Office) that exceeded the screening level ( $3.7 \mu\text{g}/\text{m}^3$ ), with a concentration of  $4.7 \mu\text{g}/\text{m}^3$ .
- Vinyl chloride was detected in one soil gas sample (Property 11, Post Office) that exceeded the screening level ( $2.8 \mu\text{g}/\text{m}^3$ ), with a concentration of  $4.7 \mu\text{g}/\text{m}^3$ .

### 4.1.2 July 2013

- PCE results exceeded the screening level of  $96 \mu\text{g}/\text{m}^3$  in five soil gas samples. Each of the three vacant lots had exceedances, with results ranging from  $100 \mu\text{g}/\text{m}^3$  at Property 46, the corner of Main Avenue and Mill Street, to  $9,500 \mu\text{g}/\text{m}^3$  at Property 44, the Property. The soil gas result for Property 5, the Community Center, was  $250 \mu\text{g}/\text{m}^3$ , and the result for Property 28, 305 N. 1st Avenue, was  $16,000 \mu\text{g}/\text{m}^3$ .
- TCE results exceeded the screening level of  $3.7 \mu\text{g}/\text{m}^3$  in one soil gas sample. The soil gas concentration at Property 11, the Post Office, was  $5.2 \mu\text{g}/\text{m}^3$ . TCE is not a site-related hazardous substance.

## 4.2 Subslab Samples

### 4.2.1 November 2012

- No subslab sample results exceeded the screening level for any analytes.
- Helium was detected in three subslab samples, with reported concentrations of 0.24 percent and 0.59 percent (Property 7, Police Department), and 0.38% (Property 11, Post Office).



## 4.2.2 July 2013

- PCE results exceeded the screening level of  $96 \mu\text{g}/\text{m}^3$  in both of the subslab samples at Property 5, the Community Center, with results of  $320 \mu\text{g}/\text{m}^3$  and  $750 \mu\text{g}/\text{m}^3$ . PCE was not detected in indoor air samples.

## 4.3 Indoor and Outdoor Air Samples

### 4.3.1 November 2012

- TCE was detected above the screening level ( $0.37 \mu\text{g}/\text{m}^3$ ) in all three indoor air samples collected from Property 1, the Fire Station, with results between  $1 \mu\text{g}/\text{m}^3$  and  $1.2 \mu\text{g}/\text{m}^3$ . Results from all three subslab samples at the Fire Station showed that TCE concentrations were either non-detect or estimated to be  $0.35 \mu\text{g}/\text{m}^3$  or less.
- 1,2-DCA was detected above the screening level of  $0.096 \mu\text{g}/\text{m}^3$  in 15 out of 21 indoor air and two out of six outdoor air (background) samples. Reported indoor air concentrations ranged from  $0.074 \mu\text{g}/\text{m}^3$  to  $1.5 \mu\text{g}/\text{m}^3$ . Reported outdoor air concentrations ranged from  $0.056 \mu\text{g}/\text{m}^3$  to  $0.81 \mu\text{g}/\text{m}^3$ .
- 1,2-DCA was not detected above the screening level or method reporting limit in any subsurface samples, including both subslab and soil gas.
- Each sample had an initial starting canister pressure of at least -28 inches of mercury. Two samples (1-IA2-111512, collected from upstairs of the Fire Station, and sample 27-CS1-111512, collected from the crawlspace of 304 N. 1st Avenue) were received by the lab with a final canister pressure of 0 inches of mercury.

### 4.3.2 July 2013

- TCE was detected above the screening level ( $0.37 \mu\text{g}/\text{m}^3$ ) in two of the three indoor air samples collected from Property 1, the Fire Station, with results between  $0.47 \mu\text{g}/\text{m}^3$  and  $2.2 \mu\text{g}/\text{m}^3$ . TCE was not detected in any of the three subslab sampling locations at the Fire Station.
- TCE was detected above the screening level ( $0.37 \mu\text{g}/\text{m}^3$ ) in one of the three indoor air samples collected from Property 5, the Community Center, with a result of  $0.68 \mu\text{g}/\text{m}^3$ . TCE was not detected in either of the two subslab sampling locations at the Community Center.
- TCE was detected above the screening level ( $0.37 \mu\text{g}/\text{m}^3$ ) in one of the two indoor air samples collected from Property 9, the Sportsman Bar & Grill, with a result of  $1.3 \mu\text{g}/\text{m}^3$ .
- PCE and TCE were both detected in one of the two outdoor air (background) samples, but results were below the screening levels.

- 1,2-DCA was detected above the screening level of 0.096  $\mu\text{g}/\text{m}^3$  in 17 out of 22 indoor air and one out of two outdoor air (background) samples. Reported indoor air concentrations ranged from 0.069  $\mu\text{g}/\text{m}^3$  to 2.6  $\mu\text{g}/\text{m}^3$ . Reported outdoor air concentrations ranged from 0.061  $\mu\text{g}/\text{m}^3$  to 0.16  $\mu\text{g}/\text{m}^3$ .
- 1,2-DCA was not detected above the screening level or method reporting limit in any subsurface samples, including both subslab and soil gas.

## 5 DISCUSSION

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There appears to be no vapor intrusion into buildings on this site. This conclusion is based on multiple lines of evidence, including the lack of any constituents above screening levels in the indoor air that were simultaneously found in corresponding soil gas or subslab samples.

The presence of PCE above the screening level in the soil gas on the two vacant lots immediately north of the former Park Laundry property (see Figure 1) warrants consideration of possible vapor intrusion into buildings that may be constructed in the future as part of the human health risk assessment.

Although PCE was detected above the soil gas screening level near and below the slab of the Community Center, PCE was not identified in indoor air above the screening level after two rounds of sampling. Similarly, PCE was identified above the screening level in the soil gas near 305 N. 1st Avenue and near the Post Office, but was not detected in the indoor air in either location. TCE and vinyl chloride were also detected above the screening level in the soil gas near the Post Office, but were not above the screening level in the subslab sample or in indoor air.

TCE and 1,2-DCA were the only constituents detected in indoor air above the screening level in any of the buildings. Neither TCE or 1,2-DCA are site-related hazardous substances. TCE appears related to indoor sources, based on the lack of TCE in corresponding subsurface samples. The groundwater level was too high to collect a soil gas sample near the Sportsman Bar & Grill. The general lack of TCE in the subsurface throughout the site makes it unlikely that the result at the Sportsman Bar & Grill is due to vapor intrusion.

There appears to be at least one background source of 1,2-DCA, indicated by the generally consistent concentrations in the indoor air and in some of the background samples, and by the absence of 1,2-DCA above screening levels or the method reporting limit in the soil gas or subslab samples. According to literature sources, 1,2-DCA is an additive to many common products, including leaded gasoline, paints, and adhesives, such as those used in wallpaper glue or carpeting (ATSDR, 2001). The presence of TCE in one of the background samples collected in 2013 suggests that there is either a background source near the site, or that the background sample was sufficiently downwind during the sampling period to be affected by the site contaminants.

Helium detected in three of the subslab samples collected in 2012 indicates the potential infiltration of ambient air, which suggests that the detected constituents in these samples are likely to be underestimated. However, each property with subslab sampling data had at least one sample result with no helium detected. Therefore, the subslab data provide a strong line of evidence on which to base conclusions about the lack of vapor intrusion.

## 6 RECOMMENDATIONS

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Based on the results of the assessment, MFA recommends the following:

1. Communicate the assessment results to building owners and occupants.
2. The potential for future exposure on the properties on the site should be considered in the human health risk assessment necessary for completion of the RI.
3. The indoor air assessment for the site should be considered concluded.

## LIMITATIONS

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The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

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# ANALYTICAL TABLES



Table 4  
Air Results (µg/m<sup>3</sup>)  
Former Park Laundry  
Ridgefield, Washington

Property	Location	Sample ID	Date Collected	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Chloroethane	cis-1,2-Dichloroethene	PCE	trans-1,2-Dichloroethene	TCE	Vinyl Chloride
MTCMA Method B Indoor Air Screening Level <sup>a,b</sup>				320	91	0.096	3	16	9.6	32	0.37	0.28
<b>Indoor Air</b>												
117 N. 3rd Ave—Fire Station	1-IA1	1-IA1-111512	11/15/2012	0.12 U	0.059 U	<b>0.31</b>	0.2 U	0.12 U	0.2 U	0.59 U	<b>1.2</b>	0.038 U
	1-IA2	1-IA2-111512	11/15/2012	0.11 U	0.053 U	<b>0.2</b>	0.18 U	0.11 U	0.18 U	0.53 U	<b>1</b>	0.034 U
	1-IA3	1-IA3-111512	11/15/2012	0.13 U	0.063 U	<b>0.086 J</b>	0.21 U	0.12 U	0.21 U	0.63 U	<b>1</b>	0.04 U
	1-IA1	1-IA1-072913	07/29/2013	0.13 U	0.063 U	<b>0.17</b>	0.21 U	0.12 U	0.21 U	0.63 U	<b>2.2</b>	0.040 U
	1-IA2	1-IA2-072913	07/29/2013	0.12 U	0.061 U	<b>0.074 J</b>	0.20 U	0.12 U	0.21 U	0.61 U	<b>0.47</b>	0.040 U
	1-IA3	1-IA3-072913	07/29/2013	0.12 U	0.059 U	<b>0.069 J</b>	0.20 U	0.12 U	0.20 U	0.59 U	<b>0.29</b>	0.038 U
210 N. Main Ave—Community Center	5-IA1	5-IA1-111412	11/14/2012	0.12 U	0.061 U	<b>0.093 J</b>	0.2 U	0.12 U	<b>0.23</b>	0.61 U	<b>0.063 J</b>	0.04 U
	5-IA2	5-IA2-111412	11/14/2012	0.12 U	0.06 U	<b>0.11 J</b>	0.2 U	0.12 U	<b>0.22</b>	0.6 U	<b>0.17</b>	0.039 U
	5-IA3	5-IA3-111412	11/14/2012	0.13 U	0.065 U	<b>0.074 J</b>	0.22 U	0.13 U	0.22 U	0.65 U	<b>0.058 J</b>	0.042 U
	5-IA1	5-IA1-073013	07/30/2013	0.12 U	0.061 U	<b>0.064 J</b>	0.20 U	0.12 U	<b>0.44</b>	0.61 U	0.16 U	0.039 U
	5-IA2	5-IA2-073013	07/30/2013	0.12 U	0.061 U	<b>0.081 J</b>	0.20 U	0.12 U	<b>0.52</b>	0.61 U	0.16 U	0.039 U
	5-IA3	5-IA3-073013	07/30/2013	0.13 U	0.062 U	<b>0.15</b>	0.21 U	0.12 U	<b>0.81</b>	0.62 U	<b>0.68</b>	0.040 U
116 N. Main Ave—Police Department	7-IA1	7-IA1-111512	11/15/2012	0.12 U	0.06 U	<b>0.12</b>	0.2 U	0.12 U	0.2 U	0.6 U	<b>0.12 J</b>	0.039 U
	7-IA2	7-IA2-111512	11/15/2012	0.12 U	0.059 U	<b>0.08 J</b>	0.2 U	0.12 U	<b>0.2 J</b>	0.59 U	<b>0.074 J</b>	0.038 U
	7-IA1	7-IA1-072913	07/29/2013	0.13 U	0.062 U	<b>0.076 J</b>	0.20 U	0.12 U	0.21 U	0.62 U	0.17 U	0.040 U
	7-IA2	7-IA2-072913	07/29/2013	0.12 U	0.057 U	<b>0.10 J</b>	0.19 U	0.11 U	0.20 U	0.57 U	0.15 U	0.037 U
121 N. Main Ave—Sportsman Grill	9-IA1	9-IA1-111212	11/12/2012	0.23 U	0.11 U	<b>0.16 J</b>	0.38 U	0.23 U	0.39 U	1.1 U	<b>0.12 J</b>	0.074 U
	9-IA2	9-IA2-111212	11/12/2012	0.14 U	0.069 U	<b>0.12 J</b>	0.23 U	0.14 U	0.24 U	0.69 U	<b>0.056 J</b>	0.044 U
	9-IA1	9-IA1-072913	07/29/2013	0.25 U	0.12 U	<b>0.47</b>	0.41 U	0.25 U	<b>1.1</b>	1.2 U	<b>1.3</b>	<b>0.083</b>
	9-IA2	9-IA2-072913	07/29/2013	0.12 U	0.059 U	<b>0.14</b>	0.20 U	0.12 U	0.20 U	0.59 U	0.16 U	0.038 U
127 N. Main Ave—Sales Office	10-IA1	10-IA1-111512	11/15/2012	0.14 U	0.069 U	<b>0.33</b>	0.23 U	0.14 U	0.24 U	0.69 U	<b>0.03 J</b>	0.045 U
	10-IA2	10-IA2-111512	11/15/2012	0.13 U	0.064 U	<b>0.44</b>	0.21 U	0.13 U	0.22 U	0.64 U	<b>0.026 J</b>	0.041 U
	10-IA1	10-IA1-072913	07/29/2013	0.12 U	0.058 U	<b>0.37</b>	0.19 U	0.12 U	<b>0.25</b>	0.58 U	0.16 U	0.038 U
	10-IA2	10-IA2-072913	07/29/2013	0.12 U	0.060 U	<b>0.33</b>	0.20 U	0.12 U	0.20 U	0.60 U	0.16 U	0.038 U
201 / 205 N. Main Ave—Post Office	11-IA1	11-IA1-111512	11/15/2012	0.13 U	0.063 U	<b>0.22</b>	0.21 U	0.13 U	<b>0.23</b>	0.63 U	<b>0.043 J</b>	0.041 U
	11-IA2	11-IA2-111512	11/15/2012	0.12 U	0.06 U	<b>0.2</b>	0.2 U	0.12 U	0.21 U	0.6 U	<b>0.051 J</b>	0.039 U
	11-IA3	11-IA3-111512	11/15/2012	0.12 U	0.06 U	<b>0.19</b>	0.2 U	0.12 U	<b>0.27</b>	0.6 U	<b>0.035 J</b>	0.039 U
	11-IA1	11-IA1-072913	07/29/2013	0.12 U	0.059 U	<b>0.54</b>	0.20 U	0.12 U	<b>0.46</b>	0.59 U	0.16 U	<b>0.074</b>
	11-IA2	11-IA2-072913	07/29/2013	0.12 U	0.059 U	<b>0.54</b>	0.20 U	0.12 U	0.20 U	0.59 U	0.16 U	0.038 U
	11-IA3	11-IA3-072913	07/29/2013	0.12 U	0.059 U	<b>0.39</b>	0.20 U	0.12 U	<b>0.29</b>	0.59 U	0.16 U	0.038 U
305 N. Main Ave	13-IA1	13-IA1-111612	11/16/2012	0.13 U	0.062 U	<b>0.48</b>	0.2 U	0.12 U	0.21 U	0.62 U	<b>0.03 J</b>	0.04 U
	13-IA2	13-IA2-111612	11/16/2012	0.13 U	0.063 U	<b>0.67</b>	0.21 U	0.13 U	0.22 U	0.63 U	<b>0.095 J</b>	0.041 U
	13-IA1	13-IA1-073013	07/30/2013	0.13 U	0.065 U	<b>0.57</b>	0.22 U	0.13 U	0.22 U	0.65 U	0.18 U	0.042 U
	13-IA2	13-IA2-073013	07/30/2013	0.11 U	0.055 U	<b>2.2</b>	0.18 U	0.11 U	<b>0.36</b>	0.55 U	0.15 U	0.036 U
322 N. 1st Ave	24-IA1	24-IA1-111612	11/16/2012	0.12 U	0.061 U	<b>0.08 J</b>	0.2 U	0.12 U	0.21 U	0.61 U	<b>0.068 J</b>	0.039 U
	24-IA2	24-IA2-111612	11/16/2012	0.12 U	0.061 U	<b>0.08 J</b>	0.2 U	0.12 U	0.21 U	0.61 U	<b>0.029 J</b>	0.04 U



**Table 4**  
**Air Results (µg/m<sup>3</sup>)**  
**Former Park Laundry**  
**Ridgefield, Washington**

Property	Location	Sample ID	Date Collected	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Chloroethane	cis-1,2-Dichloroethene	PCE	trans-1,2-Dichloroethene	TCE	Vinyl Chloride
MTCA Method B Indoor Air Screening Level <sup>a,b</sup>				320	91	0.096	3	16	9.6	32	0.37	0.28
304 N. 1st Ave	27-IA1	27-IA1-111512	11/15/2012	0.12 U	0.061 U	<b>1.5</b>	0.20 U	0.12 U	0.21 U	0.61 U	<b>0.083 J</b>	0.04 U
	27-IA2	27-IA2-111512	11/15/2012	0.14 U	0.067 U	<b>1.5</b>	0.22 U	0.13 U	0.23 U	0.67 U	0.052 UJ	0.043 U
	27-IA1	27-IA1-073013	07/30/2013	0.12 U	0.061 U	<b>2.1</b>	0.20 U	0.12 U	<b>1.1</b>	0.61 U	0.16 U	0.039 U
	27-IA2	27-IA2-073013	07/30/2013	0.13 U	0.063 U	<b>2.6</b>	0.21 U	0.13 U	<b>1.2</b>	0.63 U	0.17 U	0.041 U
305 N. 1st Ave	28-IA1	28-IA1-073013	07/30/2013	0.14 U	0.068 U	<b>0.32</b>	0.22 U	0.14 U	<b>0.85</b>	0.68 U	0.18 U	0.044 U
	28-IA2	28-IA2-073013	07/30/2013	0.13 U	0.064 U	<b>0.82</b>	0.21 U	0.13 U	<b>0.30</b>	0.64 U	0.17 U	0.041 U
	28-IA3	28-IA3-073013	07/30/2013	0.12 U	0.060 U	<b>0.51</b>	0.20 U	0.12 U	<b>0.27</b>	0.60 U	0.16 U	<b>0.043</b>
<b>Crawlspace</b>												
127 N. Main Ave—Sales Office	10-CS1	10-CS1-111512	11/15/2012	0.11 U	0.055 U	<b>0.063 J</b>	0.18 U	0.11 U	0.19 U	0.55 U	<b>0.035 J</b>	0.035 U
	10-CS1	10-CS1-072913	07/29/2013	0.12 U	0.060 U	<b>0.055 J</b>	0.20 U	0.12 U	0.20 U	0.60 U	0.16 U	0.038 U
322 N. 1st Ave	24-CS1	24-CS1-111512	11/15/2012	0.13 U	0.065 U	<b>0.061 J</b>	0.22 U	0.13 U	0.22 U	0.65 U	0.052 UJ	0.042 U
304 N. 1st Ave	27-CS1	27-CS1-111512	11/15/2012	0.11 U	0.053 U	<b>0.17</b>	0.18 U	0.11 U	0.18 U	0.53 U	<b>0.053 J</b>	<b>0.039</b>
	27-CS1	27-CS1-073013	07/30/2013	0.12 U	0.059 U	<b>0.093 J</b>	0.20 U	0.12 U	0.20 U	0.59 U	<b>0.17</b>	0.038 U
<b>Outdoor Air (Background)</b>												
Living Center	OA1	OA1-111512	11/15/2012	0.12 U	0.06 U	<b>0.81 J</b>	0.2 U	0.12 U	0.21 U	0.6 U	<b>0.053 J</b>	0.039 U
	OA1	OA1-111612	11/16/2012	0.12 U	0.061 U	<b>0.062 J</b>	0.2 U	0.12 U	0.21 U	0.61 U	<b>0.047 J</b>	0.04 U
El Rancho Viejo	OA2	OA2-111512	11/15/2012	0.1 U	0.05 U	<b>0.056 J</b>	0.17 U	0.1 U	0.17 U	0.5 U	<b>0.048 J</b>	0.032 U
	OA2	OA2-111612	11/16/2012	0.12 U	0.057 U	<b>0.069 J</b>	0.19 U	0.11 U	0.2 U	0.57 U	<b>0.047 J</b>	0.037 U
Davis Park	OA3	OA3-111512	11/15/2012	0.12 U	0.061 U	<b>0.26</b>	0.2 U	0.12 U	0.21 U	0.61 U	<b>0.064 J</b>	0.04 U
	OA3	OA3-111612	11/16/2012	0.12 U	0.06 U	<b>0.068 J</b>	0.2 U	0.12 U	0.21 U	0.6 U	<b>0.06 J</b>	0.039 U
	OA3	OA3-072913	07/29/2013	0.12 U	0.059 U	<b>0.16</b>	0.20 U	0.12 U	<b>0.63</b>	0.59 U	<b>0.26</b>	0.038 U
	OA3	OA3-073013	07/30/2013	0.13 U	0.063 U	<b>0.061 J</b>	0.21 U	0.13 U	0.22 U	0.63 U	0.17 U	0.041 U
<p>NOTES:</p> <p>Detections are in bold font.</p> <p>Detections that exceed MTCA Method B screening levels are shaded.</p> <p>J = Result is estimated value.</p> <p>MTCA = Model Toxics Control Act.</p> <p>µg/m<sup>3</sup> = micrograms per cubic meter</p> <p>PCE = tetrachloroethene.</p> <p>TCE = trichloroethene.</p> <p>U = Result is non-detect to method detection limit for 1,2-dichloroethane results for samples collected in July 2013. Result is non-detect to method reporting limit for all other results.</p> <p><sup>a</sup>MTCA Method B for Indoor Air from Table B-1 (Ecology, 2009).</p> <p><sup>b</sup>Screening level values for PCE and TCE are based on CLARC guidance dated September 2012.</p>												

Table 5  
Soil Gas Results (µg/m<sup>3</sup>)  
Former Park Laundry  
Ridgefield, Washington

Property	Location	Sample ID	Date Collected	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Chloroethane	cis-1,2-Dichloroethene	PCE	trans-1,2-Dichloroethene	TCE	Vinyl Chloride	Helium (%)
MTCA Method B Soil Gas Screening Level <sup>a,b</sup>				3200	910	0.96	30	160	96	320	3.7	2.8	
<b>Subslab</b>													
117 N. 3rd Ave—Fire Station	1-SS1	1-SS1-111512	11/15/2012	0.92 U	0.9 U	0.075 U	3 U	0.9 U	1.5 U	0.9 U	<b>0.29 J</b>	0.58 U	0.11 U
	1-SS2	1-SS2-111512	11/15/2012	0.89 U	0.88 U	0.073 U	2.9 U	0.88 U	<b>2.2</b>	0.88 U	0.18 U	0.56 U	0.11 U
	1-SS3	1-SS3-111512	11/15/2012	0.91 U	0.9 U	0.074 U	3 U	0.9 U	1.5 U	0.9 U	<b>0.35 J</b>	0.58 U	0.11 U
	1-SS1	1-SS1-072913	07/29/2013	4.7 U	4.6 U	0.89 U	12 U	4.6 U	7.9 U	4.6 U	1.6 U	0.77 U	NA
	1-SS2	1-SS2-072913	07/29/2013	4.7 U	4.6 U	0.89 U	12 U	4.6 U	7.9 U	4.6 U	1.6 U	0.77 U	NA
	1-SS3	1-SS3-072913	07/29/2013	4.7 U	4.6 U	0.88 U	12 U	4.6 U	7.9 U	4.6 U	1.6 U	0.76 U	NA
210 N. Main Ave—Community Center	5-SS1	5-SS1-073013	07/30/2013	4.5 U	4.4 U	0.86 U	12 U	4.4 U	<b>750</b>	4.4 U	1.6 U	0.74 U	NA
	5-SS2	5-SS2-073013	07/30/2013	4.6 U	4.6 U	0.88 U	12 U	4.6 U	<b>320</b>	4.6 U	1.6 U	0.76 U	NA
116 N. Main Ave—Police Department	7-SS1	7-SS1-111512	11/15/2012	0.94 U	0.92 U	0.076 U	3 U	0.92 U	<b>12</b>	0.92 U	<b>0.31 J</b>	0.59 U	0.12 U
	7-SS2	7-SS2-111512	11/15/2012	0.97 U	0.95 U	0.079 U	3.2 U	0.95 U	<b>7.8 J</b>	0.95 U	<b>0.36 J</b>	0.61 U	0.59
	7-SS3	7-SS3-111512	11/15/2012	0.91 U	0.9 U	0.074 U	3 U	0.9 U	<b>14 J</b>	0.9 U	0.19 U	0.58 U	0.24
	7-SS1	7-SS1-072913	07/29/2013	4.8 U	4.7 U	0.90 U	12 U	4.7 U	8.0 U	4.7 U	1.6 U	0.78 U	NA
	7-SS2	7-SS2-072913	07/29/2013	4.8 U	4.6 U	0.90 U	12 U	4.6 U	8.0 U	4.6 U	1.6 U	0.78 U	NA
	7-SS3	7-SS3-072913	07/29/2013	5.0 U	4.8 U	0.94 U	13 U	4.8 U	8.3 U	4.8 U	1.7 U	0.81 U	NA
201 / 205 N. Main Ave—Post Office	11-SS1	11-SS1-111512	11/15/2012	0.82 U	0.8 U	<b>0.22 J</b>	2.7 U	0.8 U	1.4 U	0.8 U	0.17 U	0.52 U	0.1 U
	11-SS2	11-SS2-111512	11/15/2012	1.9 U	1.8 U	<b>0.72 J</b>	6.1 U	1.8 U	3.1 U	1.8 U	0.38 U	1.2 U	0.38
	11-SS3	11-SS3-111512	11/15/2012	2.1 U	2 U	0.17 U	6.8 U	2 U	3.5 U	2 U	0.42 U	1.3 U	0.13 U
	11-SS4	11-SS4-111512	11/15/2012	2.9 U	2.8 U	0.23 U	9.4 U	2.8 U	<b>6.9</b>	2.8 U	0.59 U	1.8 U	0.11 U
	11-SS1	11-SS1-073113	07/31/2013	4.8 U	4.6 U	0.78 U	12 U	4.6 U	<b>10</b>	4.6 U	1.1 U	0.88 U	NA
	11-SS2	11-SS2-073113	07/31/2013	5.0 U	4.9 U	0.81 U	13 U	4.9 U	8.3 U	4.9 U	1.2 U	0.92 U	NA
	11-SS3	11-SS3-073113	07/31/2013	4.6 U	4.5 U	0.76 U	12 U	4.5 U	7.8 U	4.5 U	1.1 U	0.85 U	NA
	11-SS4	11-SS4-073113	07/31/2013	4.6 U	4.6 U	0.76 U	12 U	4.6 U	7.8 U	4.6 U	1.1 U	0.86 U	NA
305 N. Main Ave	13-SS1	13-SS1-111612	11/16/2012	0.87 U	0.86 U	0.071 U	2.8 U	0.86 U	<b>1.9</b>	0.86 U	0.18 U	0.55 U	0.11 U
	13-SS1	13-SS1-073013	07/30/2013	5.2 U	5.1 U	0.85 U	14 U	5.1 U	8.7 U	5.1 U	1.2 U	0.96 U	NA
<b>Soil Gas</b>													
117 N. 3rd Ave—Fire Station	1-SG1	1-SG1-111512	11/15/2012	0.88 U	0.86 U	<b>0.34 J</b>	2.9 U	0.86 U	<b>16</b>	0.86 U	<b>0.95 J</b>	0.56 U	0.11 U
210 N. Main Ave—Community Center	5-SG1	5-SG1-111512	11/15/2012	0.93 U	0.91 U	<b>0.16 J</b>	3 U	0.91 U	<b>92</b>	0.91 U	<b>0.48 J</b>	0.59 U	0.12 U
	5-SG1	5-SG1-073013	07/30/2013	4.7 U	4.6 U	0.89 U	12 U	4.6 U	<b>250</b>	4.6 U	1.6 U	0.77 U	NA
201 / 205 N. Main Ave—Post Office	11-SG1	11-SG1-111612	11/16/2012	0.93 U	0.91 U	0.076 U	3 U	<b>3.3</b>	1.6 U	0.91 U	<b>4.7</b>	<b>4.7</b>	0.12 U
	11-SG1	11-SG1-073113	07/31/2013	5.0 U	4.9 U	0.94 U	13 U	<b>13</b>	<b>34</b>	4.9 U	<b>5.2 J</b>	<b>2.7 J</b>	NA
305 N. Main Ave	13-SG1	13-SG1-111512	11/15/2012	1 U	0.99 U	0.082 U	3.3 U	0.99 U	<b>26</b>	0.99 U	<b>0.4 J</b>	0.64 U	0.12 U
	13-SG1	13-SG1-073013	07/30/2013	5.3 U	5.2 U	0.99 U	14 U	5.2 U	<b>30</b>	5.2 U	<b>2.4 J</b>	0.86 U	NA
322 N. 1st Ave	24-SG1	24-SG1-111512	11/15/2012	0.99 U	0.97 U	0.08 U	3.2 U	0.97 U	<b>2.6</b>	0.97 U	<b>0.35 J</b>	0.62 U	0.12 U
	24-SG1	24-SG1-073013	07/30/2013	5.3 U	5.2 U	1.0 U	14 U	5.2 U	8.9 U	5.2 U	1.8 U	0.87 U	NA
304 N. 1st Ave	27-SG1	27-SG1-111512	11/15/2012	0.88 U	0.86 U	<b>0.21 J</b>	2.9 U	0.86 U	<b>5.9</b>	0.86 U	<b>0.5 J</b>	0.56 U	0.11 U
	27-SG1	27-SG1-072913	07/29/2013	5.1 U	5.0 U	0.96 U	13 U	5.0 U	8.5 U	5.0 U	1.7 U	0.83 U	NA

**Table 5**  
**Soil Gas Results ( $\mu\text{g}/\text{m}^3$ )**  
**Former Park Laundry**  
**Ridgefield, Washington**

Property	Location	Sample ID	Date Collected	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	Chloroethane	cis-1,2-Dichloroethene	PCE	trans-1,2-Dichloroethene	TCE	Vinyl Chloride	Helium (%)
MTCA Method B Soil Gas Screening Level <sup>a,b</sup>				3200	910	0.96	30	160	96	320	3.7	2.8	
305 N. 1st Ave	28-SG1	28-SG1-073013	07/30/2013	33 U	32 U	6.2 U	85 U	32 U	<b>16000</b>	32 U	11 U	5.3 U	NA
122 N. Main Ave—Former Park Laundry Property	44-SG1	44-SG1-073113	07/31/2013	19 U	19 U	3.6 U	50 U	19 U	<b>9500</b>	19 U	6.5 U	3.1 U	NA
126 N. Main Ave—Adjacent to Park Laundry	45-SG1	45-SG1-111512	11/15/2012	4.6 U	4.5 U	0.37 U	15 U	4.5 U	<b>2800</b>	4.5 U	<b>1.6 J</b>	2.9 U	0.11 U
	45-SG1	45-SG1-073113	07/31/2013	4.8 U	4.7 U	0.90 U	12 U	4.7 U	<b>1800</b>	4.7 U	1.6 U	0.78 U	NA
Corner of Main Ave. and Mill St.	46-SG1	46-SG1-111512	11/15/2012	0.87 U	0.85 U	0.071 U	2.8 U	0.85 U	<b>56</b>	0.85 U	<b>0.25 J</b>	0.55 U	0.11 U
	46-SG1	46-SG1-073013	07/30/2013	5.0 U	4.9 U	5.0 U	13 U	4.9 U	<b>100</b>	4.9 U	1.7 U	0.81 U	NA
<p>NOTES:</p> <p>Detections are in bold font.</p> <p>Detections that exceed MTCA Method B screening levels are shaded.</p> <p>J = Result is estimated value.</p> <p>MTCA = Model Toxics Control Act.</p> <p><math>\mu\text{g}/\text{m}^3</math> = micrograms per cubic meter.</p> <p>NA = Helium was not included in analysis for these samples.</p> <p>PCE = tetrachloroethene.</p> <p>TCE = trichloroethene.</p> <p>U = Result is non-detect to method detection limit for 1,2-dichloroethane, TCE, and vinyl chloride results for samples collected in July 2013. Result is non-detect to method reporting limit for all other results.</p> <p><sup>a</sup>MTCA Method B for Soil Gas from Table B-1 (Ecology, 2009).</p> <p><sup>b</sup>Screening level values for PCE and TCE are based on CLARC guidance dated September 2012.</p>													

# FIGURES





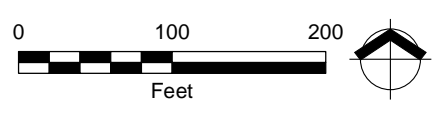




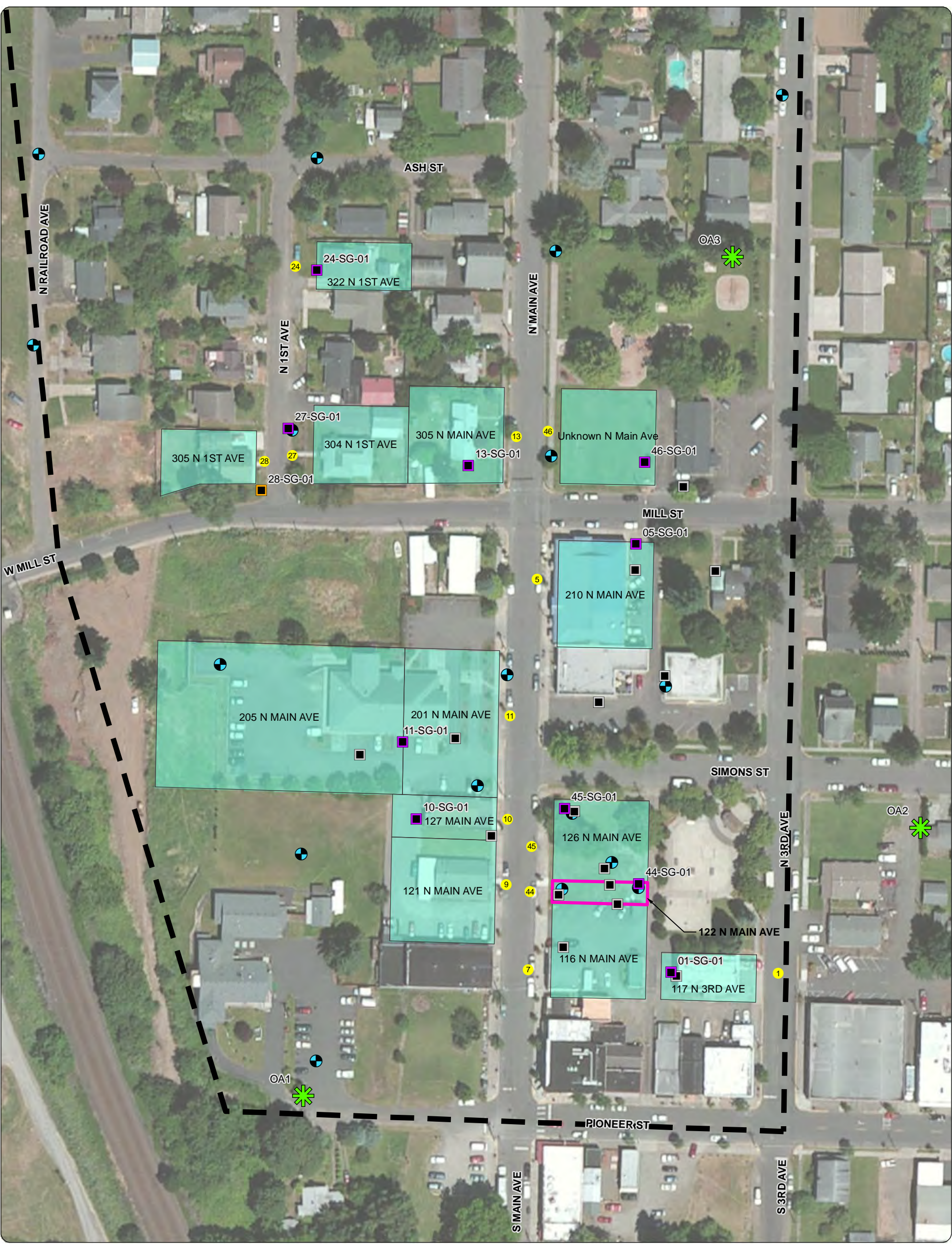
Source: Aerial photograph obtained from Esri ArcGIS Online

**Figure 1**  
**Vapor Intrusion**  
**Study Area**  
 Former Park Laundry  
 Ridgefield, Washington

- Legend**
-  Vapor Intrusion Study Area
  -  Former Park Laundry Site







Source: Aerial photograph obtained from ESRI, Inc. ArcGIS Online.

- Notes:**
- Soil gas ports not sampled in Nov. 2012: 10-SG1-01, 28-SG1-01, 44-SG1-01
  - Soil gas ports not sampled in July 2013: 1-SG1-01, 10-SG1-01

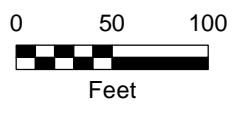
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**Legend**

- Soil Gas Monitoring Location (Installed July 2013)
- Soil Gas Monitoring Location (Installed November 2012)
- Soil Gas Monitoring Location (Installed June 2011)
- Groundwater Monitoring Well
- Vapor Intrusion Study Area
- Former Park Laundry Site
- Property Location
- Sampling Location (Property ID)
- Outdoor Air Sample Location  
*All outdoor air samples are outside of the ground contaminant boundary*

**Figure 2**  
**Soil Gas, Outdoor Air, and Groundwater Sampling Locations**  
 Former Park Laundry Ridgefield, Washington

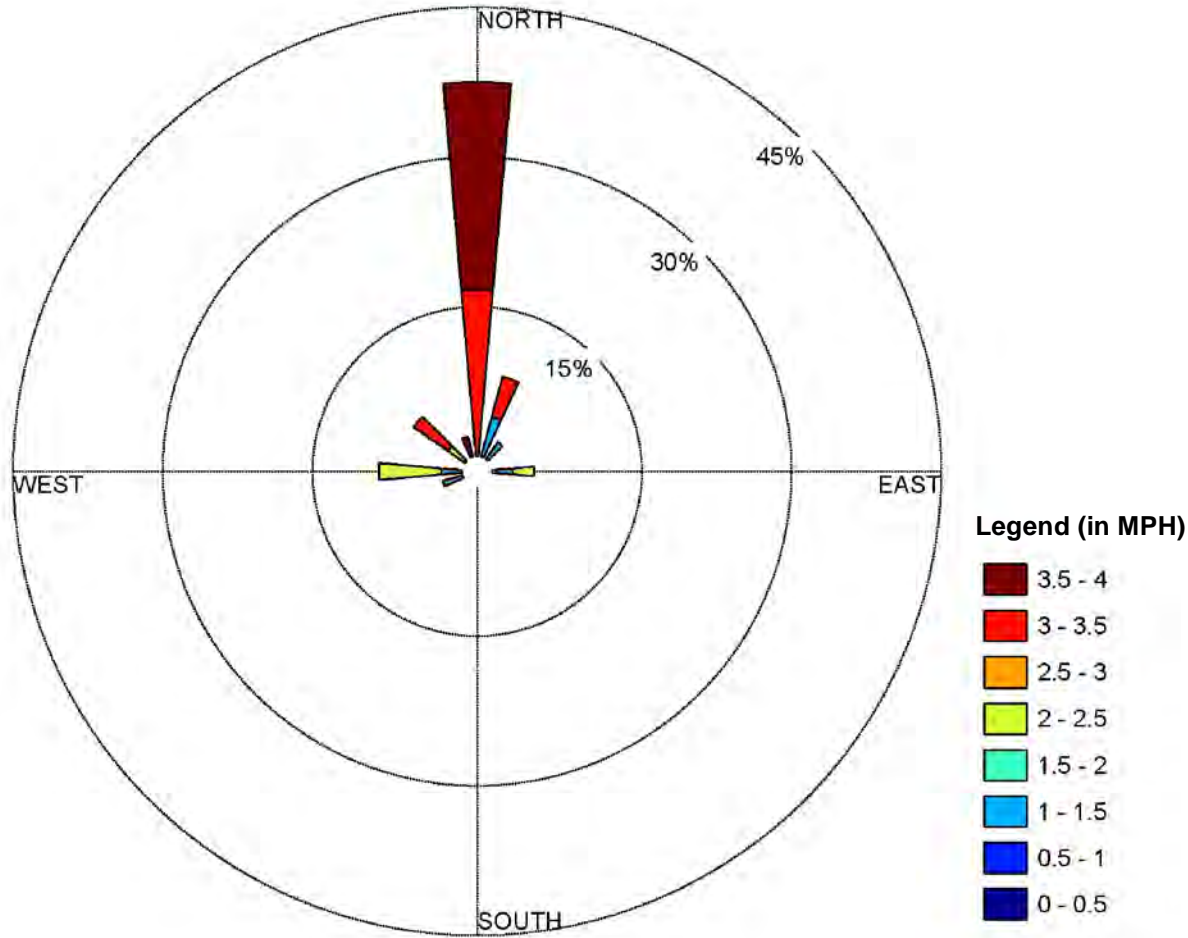




# APPENDIX A

## WIND ROSES



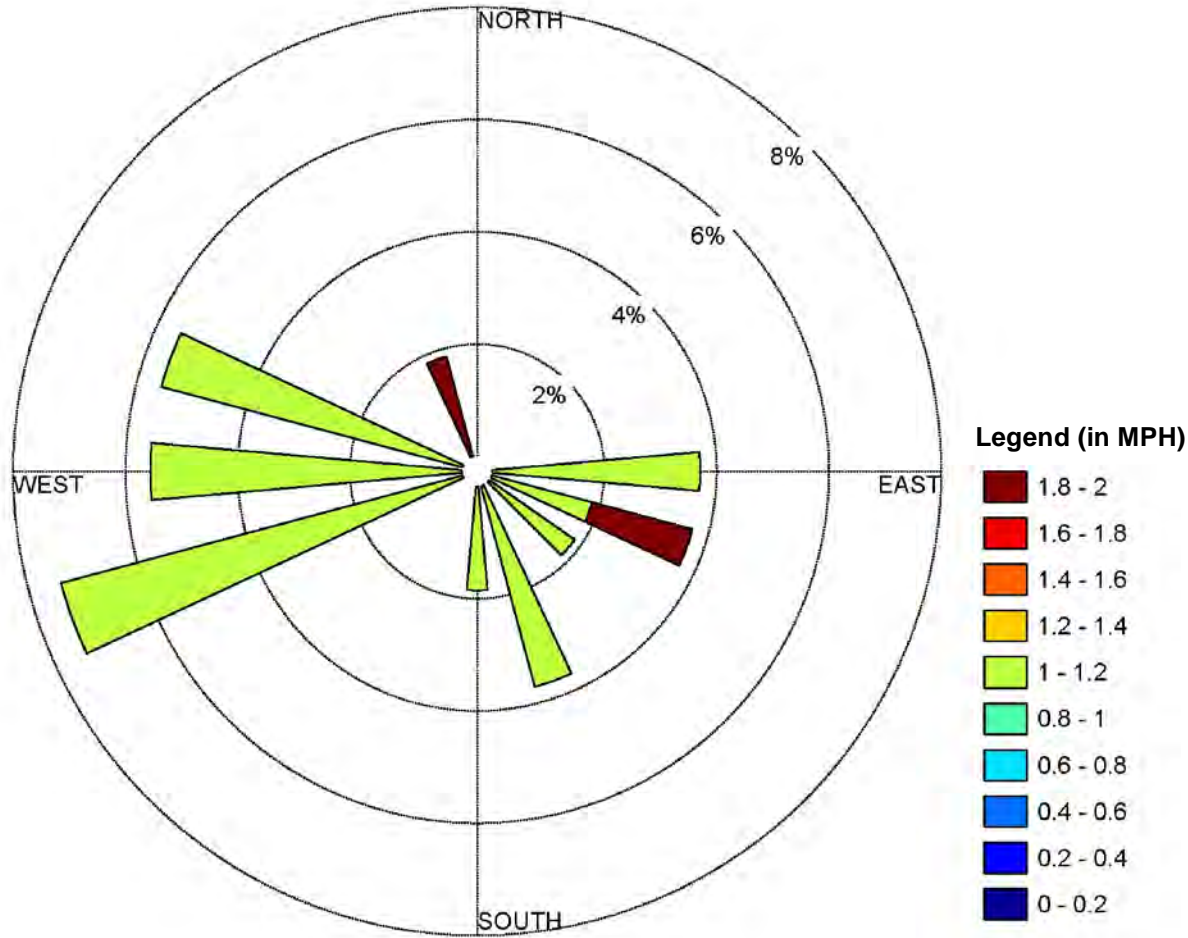


**Figure A-1  
Wind Rose from  
November 15-16, 2012**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

- Notes:
1. MPH = miles per hour
  2. Plotted data show wind origin direction.





**Figure A-2**  
**Wind Rose from**  
**November 16-17, 2012**

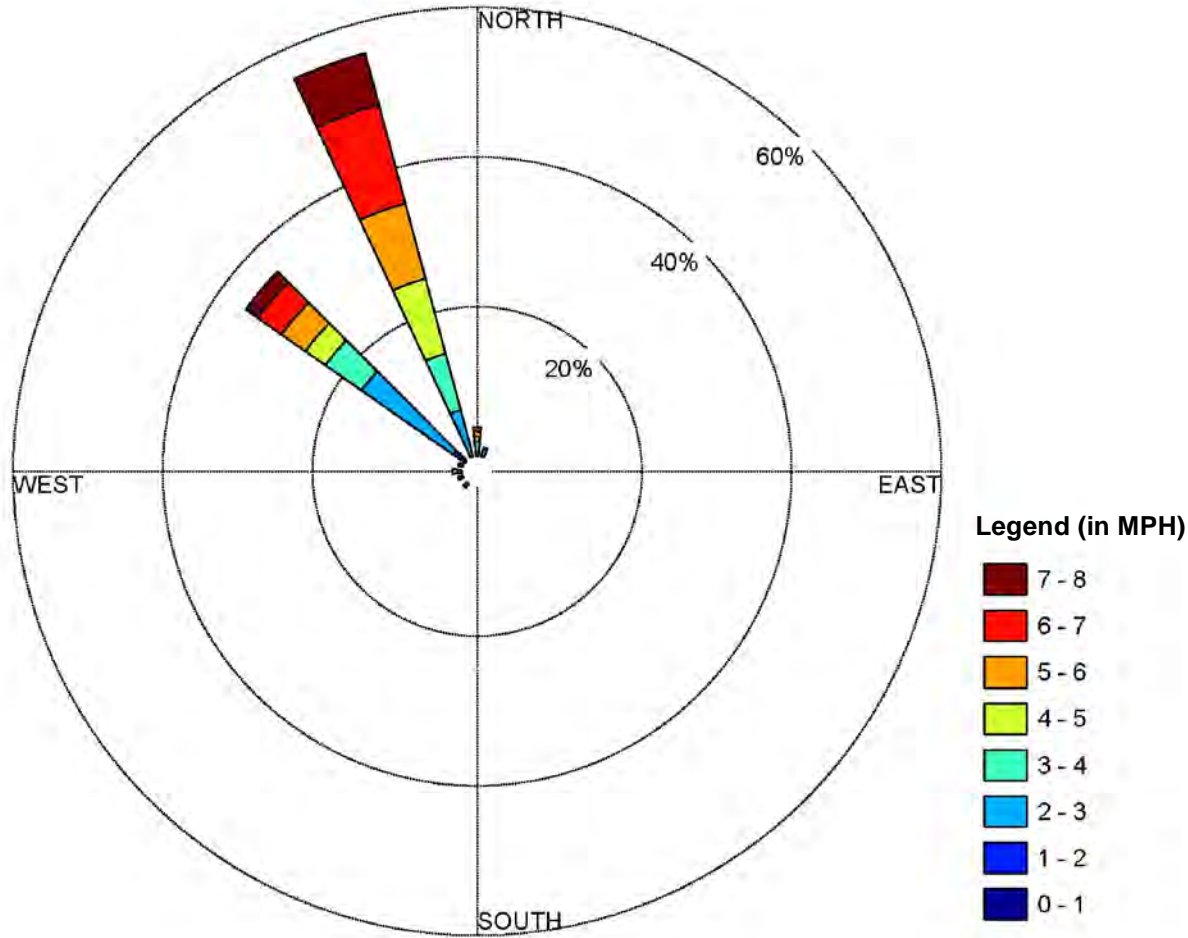
Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Notes:**  
1. MPH = miles per hour  
2. Plotted data show wind origin direction.



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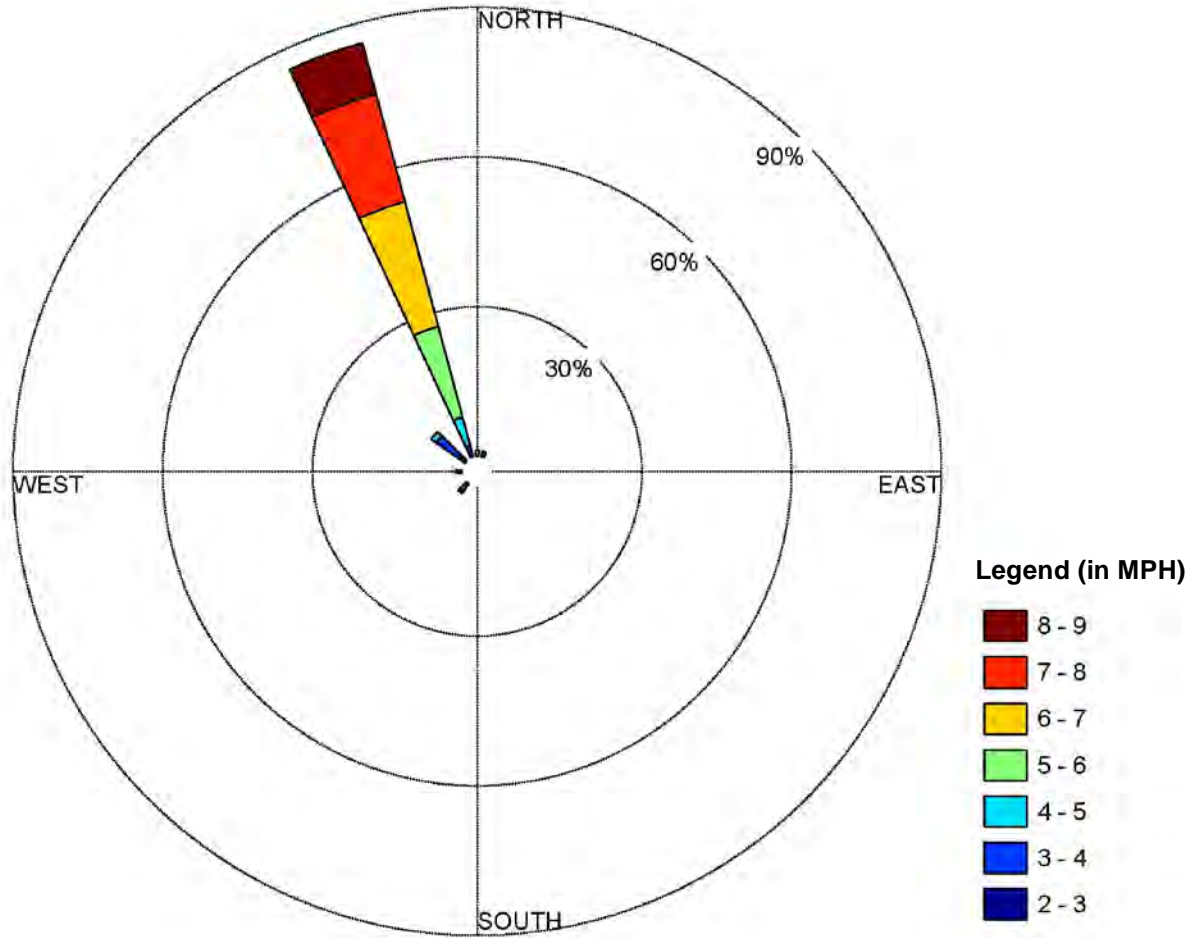
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**Figure A-3  
Wind Rose from  
July 29-30, 2013**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

- Notes:
1. MPH = miles per hour
  2. Plotted data show wind origin direction.



**Figure A-4**  
**Wind Rose from**  
**July 30-31, 2013**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

- Notes:
1. MPH = miles per hour
  2. Plotted data show wind origin direction.

# APPENDIX B

## FIELD DATA SUMMARY



**Table B-1  
Field Notes—Property Observations and Interview Results—November 2012**

Property ID	1	5	7	9	10	11	13	24	27	
<b>Property</b>	Property Address	117 N 3rd Ave—Fire Station	210 N Main Ave—Community Center	116 N Main Ave—Police Department	121 N Main Ave—Sportsman Bar & Grill	127 N Main Ave—Sales Office	201/205 N Main Ave—Post Office	305 N Main Ave	322 N 1st Ave	304 N 1st Ave
	Property Contact	Abe Rommel	Sean McGill	Carrie Greene	Terry Hurd	Catrina Johnson	Bob Welch	Shawna	Jason Laycoe	Patrick Campbell
	Type of Occupancy	Residential	Commercial	Commercial	Commercial	Office	Office	Residential	Residential	Residential
	Year Constructed	1940s	Unknown	Building in 2000, but slab in 1970s	1929	Unknown	Unknown	Unknown	1921	Original 1910, added in 1930s and 1940s, remodeled early 2000
	Building Sq. Footage (Approx.)	2500	8250	1500	2000	1575	8250	1700	940	1400
<b>Survey</b>	Date/Time	11/12/12 10:17 AM	11/13/2012	11/13/12 9:15 AM	11/12/12 8:30 AM	11/13/12 2:29 PM	11/13/2012	11/14/12 10:00 AM	11/12/12 1:31 PM	11/13/12 1:09 PM
	Bill Beadie	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Thomas Ashton	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Mike Murray	Yes	No	Yes	No	No	Yes	Yes	No	Yes
	Andy Vidourek	Yes	No	Yes	No	No	Yes	No	No	No
	Occupancy	2 to 4	Average 40	3 to 4	200 when crowded, average of 60	3	14	One adult, four children	Two adults, one child (13-18)	One adult, one child (13-18)
<b>Occupant Info</b>	Foundation Type	Slab-on-grade	Slab-on-grade	Slab-on-grade	Full crawlspace	Full crawlspace	Slab-on-grade	Slab-on-grade	Partial basement and partial crawlspace	Full crawlspace
	Foundation Notes	Some cracks visible in the slab. See photos.	None	None	None	Full crawlspace with vapor barrier on soil	None	Floating floor above slab in most of living space.	Basement, crawlspace in areas that don't have a basement.	Full crawlspace
	Number of Occupied Floors BELOW Grade	0	0	0	0	0	0	0	1	0
	Occupied Floors BELOW Grade—Notes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Unfinished basement	N/A
	Number of Occupied Floors ABOVE Grade	2	1	1	1	1	1	2	1	1
	Occupied Floors ABOVE Grade—Notes	The main floor is primarily the garage and gym. The upper floor includes the living, eating, and sleeping areas.	None	None	None	None	None	None	None	None
	Depth of Basement Below Grade (ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7-8 ft	N/A
	Basement Size (sq ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A
	Basement Floor Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Concrete	N/A
	Basement Floor Notes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No obvious cracks or drains. Concrete slab over former exposed dirt, according to interviews.	N/A
	Foundation Walls	N/A	N/A	N/A	Concrete	Concrete	N/A	N/A	Concrete	Concrete, cinder blocks
	Foundation Walls Notes	N/A	N/A	N/A	None	None	N/A	N/A	No obvious cracks. One penetration.	Combination of cmu and concrete. Will confirm.
	Type of Heating System	Forced-air furnace	Forced-air furnace	Forced-air furnace	Forced-air furnace	Forced-air furnace	Forced-air furnace	Forced-air furnace	Baseboard electric	Other
	Heating System Notes	Forced-air furnace supplies the upstairs area. A ceiling-mounted electric heater supplies the downstairs area.	None	None	Furnace is in the attic and a heat pump is outside	None	None	None	None	Equivalent of a window heating and cooling unit, but installed through the wall. One in the living room, one in kitchen. Five cadet wall heaters.
	Type of Heating Fuel	Natural gas, electric	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Electric	Electric
	Heating Fuel Notes	None	None	None	None	None	None	None	None	None
	Ventilation System(s)	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, central furnace, attic exhaust fan, kitchen range hood fan	Bathroom fan, kitchen range hood fan, central furnace, attic exhaust fan	Bathroom fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Kitchen range hood fan	Bathroom fans, kitchen range hood fan(s)
	Ventilation System Notes	There is an automatic exhaust fan that activates anytime the overhead doors are open for 10 or 15 minutes to prevent carbon monoxide buildup. Unknown CFM.	None	Fan in the interview room	None	None	None	None	None	Unknown whether there is an attic fan.
	Basement Sump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No	N/A
	Sump Pump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Water in Sump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Basement Sealed?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Neither walls nor floor sealed	N/A
	Existing Radon System in Place?	No	No	No	No	No	No	No	No	No
	Subslab Vapor Barrier in Place?	No	Unknown	Unknown—Probably no vapor barrier, based on the age of slab.	N/A	NA	Unknown	Unknown	Unknown	Unknown
	Location of Floor Drains?	None	Unknown	None	Two locations: 1) under the bar, and 2) in the kitchen	None	Four total—one in each of two bathrooms, one in the custodian room, one in the electrical room	None	Unknown	Unknown
<b>Location of Utility Penetrations?</b>	Location 1	NW area—water line	None. Just bathroom toilet penetrations.	None. Just bathroom toilet penetrations.	Gas comes in above grade in SE corner.	Natural gas line comes through floor in furnace room behind lobby.	Electrical room	No penetrations noted	Water line in basement	Unknown
	Location 2	No other penetrations noted	No penetrations noted	No penetrations noted	No penetrations noted	Floor-mounted heat registers	Custodian room drains	No penetrations noted	No other penetrations noted	Unknown
	Location 3	No other penetrations noted	No penetrations noted	No penetrations noted	No penetrations noted	Drains for bathrooms and sink	No other penetrations noted	No penetrations noted	No other penetrations noted	Unknown
<b>Potential Indoor Sources-Source Materials</b>	Gasoline Storage Cans	Yes	No	No	No	No	No	Unknown	No	No
	Gas-powered Equipment	Yes	No	No	No	No	No	Unknown	No	No
	Paints/Thinners/Strippers	Yes	Unknown	No	Outside in the shed	No	No	Unknown	No	No
	Cleaning Solvents	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Yes	Yes
	Oven Cleaners	Yes	Unknown	No	Yes	No	No	Unknown	No	No
	Insecticides	Yes	Unknown	No	No	No	No	Unknown	No	No
	Do any occupants smoke?	No	No	No	No	No	No	Unknown	Yes	No
	Notes (last time occupants smoked)	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	Smokes only outside	N/A
	Does the building have an attached garage?	Yes	No	No	No	No	No	Yes	No	No
	Notes (is the car typically in the garage?)	Yes	N/A	N/A	N/A	N/A	N/A	No	N/A	N/A
	Do the occupants have items in the house dry-cleaned?	Yes	No	No	No	No	No	Unknown	No	No
	Dry-clean—if so, how often?	Weekly	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A
	Last time something was dry-cleaned?	Week ago	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A
	Do occupants use solvents at work?	No	Unknown	No	No	No	No	Unknown	No	No
	If so, what types of solvents are used?	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A
	If so, are clothes washed at work?	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A
	Have any pesticides or herbicides been applied around the building or in the yard?	Unknown	Unknown	No	No	Presumed yes. Applied by outside landscape contractors.	Outside landscapers applied something in July or August. Rootsall weed killer.	Unknown	No	Yes
	If so, what type? Frequency? Date of application?	Unknown	Unknown	N/A	N/A	Unknown	Unknown	Unknown	N/A	Green eco-friendly applied outside for spiders in the summertime.
	Has there been a fire in the building?	No	No	No	Yes	No	No	Unknown	No	No
	Fire: Notes	N/A	N/A	N/A	Approx. 20 years ago	N/A	N/A	N/A	N/A	N/A
	Painting or staining in the last six months?	No	Unknown	No	No	No	No	Unknown	No	No
	Painting/Staining Notes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Sub-Slab Sampling Ports</b>	Location 1	Near weightlifting equipment	N/A	Outside Chief Greene's office	N/A	N/A	NW corner of mail room	Laundry room	N/A	N/A
	Location 2	Closet under stairs	N/A	Interview room	N/A	N/A	Central work station	N/A	N/A	N/A
	Location 3	East area near door to upstairs	N/A	East hallway	N/A	N/A	Central east	N/A	N/A	N/A

**Table B-2  
Field Notes—Property Observations and Interview Results—July 2013**

Property	Property ID	1	5	7	9	10	11	13	24	27	28
	Property Address	117 N 3rd Ave—Fire Station	210 N Main Ave—Community Center	116 N Main Ave—Police Department	121 N Main Ave—Sportsman Bar & Grill	127 N Main Ave—Sales Office	201/205 N Main Ave—Post Office	305 N Main Ave	322 N 1st Ave	304 N 1st Ave	305 N 1st Ave
	Property Contact	Abe Rommel	Sean McGill	Carrie Greene	Terry Hurd	Catrina Johnson	Bob Welch	Shauna Baker	Jason Laycoe	Maureen Kenwood	Diane Geister
	Type of Occupancy	Residential	Commercial	Commercial	Commercial	Office	Office	Residential	Residential	Residential	Residential
	Year Constructed	1940s	Unknown	Building in 2000, but slab in 1970s	1929	Unknown	Unknown	Unknown	1921	Original 1910, added in 1930s and 1940s, remodeled early 2000	Unknown
	Building Sq. Footage (Approx.)	2500	8250	1500	2000	1575	8250	1700	940	1400	Unknown
Survey	Date/Time	7/29/2013	7/29/13 9:45 AM	7/29/13 9:59 AM	7/30/13 9:18 AM	7/29/13	7/29/13 1:43 PM	7/30/13 1:32 PM	N/A	7/30/13 11:32 AM	7/30/13 11:17 AM
	Bill Beadle	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
	Thomas Ashlon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
	Mike Murray	Yes	Yes	Yes	No	No	No	Yes	N/A	No	No
	Andy Vidourek	Yes	Yes	Yes	No	No	No	No	N/A	No	No
Occupant Info	Occupancy	2 to 4	Variable Occupancy	3 to 4	200 when crowded, average of 60	3	13	One adult, four children	Two adults, one child (13-18)	Two adults, one child (13-18)	Two adults, one child (13-18)
	Foundation Type	Slab-on-grade	Slab-on-grade	Slab-on-grade	Full crawlspace	Full crawlspace	Slab-on-grade	Slab-on-grade	Partial basement and partial crawlspace	Full crawlspace	Full basement
	Foundation Notes	Some cracks visible in the slab. See photos.	None	None	None	Full crawlspace with vapor barrier on soil	None	Floating floor above slab in most of living space.	Basement: crawlspace in areas that don't have a basement.	Full crawlspace	Cracks in basement floor and foundation walls noted
	Number of Occupied Floors BELOW Grade	0	0	0	0	0	0	0	1	0	1
	Occupied Floors BELOW Grade—Notes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Unfinished basement	N/A	Basement
	Number of Occupied Floors ABOVE Grade	2	1	1	1	1	1	2	1	1	2
	Occupied Floors ABOVE Grade—Notes	The main floor is primarily the garage and gym. The upper floor includes the living, eating, and sleeping areas.	None	None	None	None	None	None	None	None	None
	Depth of Basement Below Grade (ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7-8 ft	N/A	8 ft
	Basement Size (sq ft)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	N/A	N/A
	Basement Floor Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Concrete	N/A	Concrete
	Basement Floor Notes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No obvious cracks or drains. Concrete slab over former exposed dirt, according to interviews.	N/A	Cracks in floor
	Foundation Walls	N/A	N/A	N/A	Concrete	Concrete	N/A	N/A	Concrete	Concrete, cinder blocks	Cinder block and concrete
	Foundation Walls Notes	N/A	N/A	N/A	None	None	N/A	N/A	No obvious cracks. One penetration.	Combination of cmu and concrete. Will confirm.	N/A
	Type of Heating System	Forced-air furnace	Forced-air furnace	Forced-air furnace	Ductless heat pump system	Forced-air furnace	Forced-air furnace	Forced-air furnace	Baseboard electric	Other	Forced-air furnace
	Heating System Notes	Forced-air furnace supplies the upstairs area. A ceiling-mounted electric heater supplies the downstairs area.	None	None	Ductless heat pump system installed since last year. It replaced the furnace.	None	None	None	None	Equivalent of a window heating and cooling unit, but installed through the wall. One in the living room, one in kitchen. Five cadet wall heaters.	None
	Type of Heating Fuel	Natural gas, electric	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Natural gas	Electric	Electric	Natural Gas
	Heating Fuel Notes	None	None	None	None	None	None	None	None	None	None
	Ventilation System(s)	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fan, central furnace, attic exhaust fan, kitchen range hood fan	Bathroom fan, kitchen range hood fan, central furnace, attic exhaust fan	Bathroom fan, central furnace	Bathroom fan, kitchen range hood fan, central furnace	Bathroom fans, kitchen range hood fan(s)	Bathroom fans, kitchen range hood fan(s)	Bathroom fan(s), kitchen range hood fan(s)
	Ventilation System Notes	There is an automatic exhaust fan that activates anytime the overhead doors are open for 10 or 15 minutes to prevent carbon monoxide buildup. Unknown CFM.	None	Fan in the interview room	None	None	None	None	None	Unknown whether there is an attic fan.	None
	Basement Sump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sump Pump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Water in Sump?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Basement Sealed?	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Neither walls nor floor sealed	N/A	Neither walls nor floor sealed
Existing Radon System in Place?	No	No	No	No	No	No	No	No	No	No	
Subslab Vapor Barrier in Place?	No	Unknown	Unknown—Probably no vapor barrier, based on the age of slab	N/A	NA	Unknown	Unknown	Unknown	Unknown	Unknown	
Location of Floor Drains?	None	Unknown	None	Two locations: 1) under the bar, and 2) in the kitchen	None	Four total—one in each of two bathrooms, one in the custodian room, one in the electrical room	None	Unknown	Unknown	Unknown	
Location of Utility Penetrations?	Location 1	NW area—water line	None. Just bathroom toilet penetrations	None. Just bathroom toilet penetrations	Gas comes in above grade in SE corner.	Natural gas line comes through floor in furnace room behind lobby.	Electrical room	No penetrations noted	Water line in basement	Unknown	No penetrations noted
	Location 2	No other penetrations noted	No penetrations noted	No penetrations noted	No penetrations noted	Floor-mounted heat registers	Custodian room drains	No penetrations noted	No other penetrations noted	Unknown	No penetrations noted
	Location 3	No other penetrations noted	No penetrations noted	No penetrations noted	No penetrations noted	Drains for bathrooms and sink	No other penetrations noted	No penetrations noted	No other penetrations noted	Unknown	No penetrations noted
Potential Indoor Sources—Source Materials	Gasoline Storage Cans	Yes	No	No	No	No	No	Unknown	No	No	Yes
	Gas-powered Equipment	Yes	No	No	No	No	No	Unknown	No	No	Yes
	Paints/Thinners/Strippers	Yes	Unknown	No	Outside in the shed	No	Yes	Unknown	No	No	Yes
	Cleaning Solvents	Yes	Yes	Yes	Yes	Yes	Yes	Unknown	Yes	No	Yes
	Oven Cleaners	Yes	Unknown	No	Yes	No	No	Unknown	No	Yes	No
	Insecticides	Yes	Unknown	No	No	No	No	Unknown	No	No	No
	Do any occupants smoke?	No	No	No	No	No	No	Unknown	Yes	No	Yes
Occupant/ Building Details	Notes (last time occupants smoked)	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	Smokes only outside	N/A	Within 24 hours
	Does the building have an attached garage?	Yes	No	No	No	No	No	Yes	No	No	No
	Notes (is the car typically in the garage?)	Yes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Do the occupants have items in the house dry-cleaned?	Yes	No	No	No	No	No	Unknown	No	Yes	No
	Dry-clean—if so, how often?	Weekly	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	3-4 times per year	N/A
	Last time something was dry-cleaned?	Week ago	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A	N/A
	Do occupants use solvents at work?	No	Unknown	No	No	No	No	Unknown	No	No	Yes
	If so, what types of solvents are used?	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A	Unknown
	If so, are clothes washed at work?	N/A	N/A	N/A	N/A	N/A	N/A	Unknown	N/A	N/A	No
	Have any pesticides or herbicides been applied around the building or in the yard?	Unknown	Unknown	No	No	Presumed yes. Applied by outside landscape contractors.	Outside landscapers applied something in July or August. Rootsall weed killer.	Unknown	No	Yes	Yes
	If so, what type? Frequency? Date of application?	Unknown	Unknown	N/A	N/A	Unknown	Unknown	Unknown	N/A	Roundup about 1 month ago in front yard	Unknown pesticide used within last month
	Has there been a fire in the building?	No	No	No	Yes	No	No	Unknown	No	No	No
	Fire: Notes	N/A	N/A	N/A	Approx. 20 years ago	N/A	N/A	N/A	N/A	N/A	N/A
	Painting or staining in the last six months?	No	Unknown	No	Yes	No	No	Unknown	No	Unknown	Yes
	Painting/staining notes	N/A	N/A	N/A	Interior was painted April through June, 2013	N/A	N/A	N/A	N/A	N/A	May have been painted before new tenant moved in
Subslab Sampling Ports	Location 1	Near weightlifting equipment	East by kitchen door	Outside Chief Greene's office	N/A	N/A	NW corner of mail room	Laundry room	N/A	N/A	N/A
	Location 2	Closet under stairs	Central Closet	Interview room	N/A	N/A	Central work station	N/A	N/A	N/A	N/A
	Location 3	East area near door to upstairs	N/A	East hallway	N/A	N/A	Central east	N/A	N/A	N/A	N/A
	Location 4	N/A	N/A	N/A	N/A	N/A	By Safe	N/A	N/A	N/A	N/A
Notes	Property Notes	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed. Two new sub-slab sampling ports were installed in July 2013.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and new changes include recent remodeling and changes to the heating system.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed.	Information from preliminary site visit in Nov. 2012 was reviewed during July 2013 sampling visit, and no changes to property were confirmed.	Access to property for indoor air sampling was not granted during July 2013 sampling event. No updates to property were noted.	New tenant, Maureen Kerwood, confirmed updated property information.	Property was not sampled during November 2012 vapor intrusion sampling event.



Table B-3  
Field Notes—Indoor Air Sampling—November 2012

Property	Property ID	1	5	7	9	10	11	13	24	27	
Property	Property Address	117 N 3rd Ave—Fire Station	210 N Main Ave—Community Center	116 N Main Ave—Police Department	121 N Main Ave—Sportsman Bar & Grill	127 N Main Ave—Sales Office	201/205 N Main Ave—Post Office	305 N Main Ave	322 N 1st Ave	304 N 1st Ave	
Survey	Bill Beadie	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	Thomas Ashton	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
	Mike Murray	Yes	No	Yes	Yes	No	Yes	No	No	No	
	Andy Vidourek	Yes	No	Yes	Yes	No	No	No	No	No	
	Date/Time	11/15/12 1:10 PM	11/14/12 11:15 AM	11/15/12 9:45 AM	11/12/12 9:55 AM	11/15/12 10:02 AM	11/15/12 10:39 AM	11/16/12 9:34 AM	11/16/12 12:00 AM	11/15/12 8:25 AM	
Preliminary Visit Notes	Potential Indoor Sources	None	None	None	None	None	None	None	None	None	
	Source Materials (from site visit)	None	None	None	None	None	None	None	None	None	
Indoor Air Sampling—Location 1	Location 1	Downstairs	Library office	Officer's work counter	East end of the bar	Kitchen	Custodian office	Dining room table 1st floor	Living room	Kitchen	
	Indoor Temperature	65	70	70	70	70	68	68	68	68	
	Indoor RH%	30	30	30	30	32	30	30	30	30	
	Sample ID No.	1-IA1-111512	5-IA1-111412	7-IA1-111512	9-IA1-111212	10-IA1-111512	11-IA1-111512	13-IA1-111612	24-IA1-111612	27-IA1-111512	
	Canister No.	33558	924	14122	33565	34190	34241	33925	33781	33781	
	Regulator No.	33558	924	14122	33565	23925	34190	34241	33925	33781	
	Regulator Setting	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	
	Start Date/Time	11/15/12 1:17 PM	11/14/12 11:16 AM	11/15/12 9:45 AM	11/12/12 10:03 AM	11/15/12 10:03 AM	11/15/12 10:40 AM	11/16/12 9:39 AM	11/16/12 11:49 AM	11/15/12 8:26 AM	
	Stop Date/Time	11/16/12 1:17 PM	11/15/12 12:51 PM	11/16/12 12:22 PM	11/13/12 2:54 PM	11/16/12 10:38 AM	11/16/12 1:05 PM	11/17/12 11:53 AM	11/17/12 12:02 PM	11/16/12 10:11 AM	
	Vacuum Gauge Start (in Hg)	-30	-30	-30	-28	-30	-30	-29	-30	-30	
	Vacuum Gauge Final (in Hg)	-4.5	-3.5	-5	-3.5	-5	-5	-4	-4.5	-5	
	Observations	None	None	None	None	None	None	None	None	Within 8 feet of windows	
	Location 2	Upstairs in TV room	Front room—SW corner	Interview room	Kitchen	Back office	Central workstation	2nd floor	Basement	Living room	
	Indoor Temperature	70	70	70	70	70	68	68	65	68	
Indoor RH%	30	30	30	30	30	30	30	30	30		
Sample ID No.	1-IA2-111512	5-IA2-111412	7-IA2-111512	9-IA2-111212	10-IA2-111512	11-IA2-111512	13-IA2-111612	24-IA2-111612	27-IA2-111512		
Canister No.	3748	3734	35241	32130	32107	14010	5600	34737	5761		
Regulator No.	3748	3734	35241	32130	32107	14010	5600	34737	5761		
Regulator Setting	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR		
Start Date/Time	11/15/12 1:18 PM	11/14/12 11:19 AM	11/15/12 9:52 AM	11/12/12 10:02 AM	11/15/12 10:07 AM	11/15/12 10:42 AM	11/16/12 9:46 AM	11/16/12 10:58 AM	11/15/12 8:31 AM		
Stop Date/Time	11/16/12 11:59 AM	11/15/12 12:50 PM	11/16/12 12:08 PM	11/13/12 2:57 PM	11/16/12 10:26 AM	11/16/12 12:45 PM	11/17/12 11:53 AM	11/17/12 10:28 AM	11/16/12 10:46 AM		
Vacuum Gauge Start (in Hg)	-30	-30	-30	-30	-30	-30	-30	-28	-30		
Vacuum Gauge Final (in Hg)	0	-3.5	-2.5	-2	-4.5	-4	-5	-4	-5		
Observations	Canister ran out of vacuum by the time it was checked the following day.	None	None	None	None	None	Canister was brought downstairs in the morning	None	None		
Indoor Air Sampling—Location 3	Location 3	Upstairs hallway	Back room—SW corner	N/A	N/A	Crawlspace	Near customer counter on top of safe	N/A	Crawlspace	Crawlspace—center of house	
	Indoor Temperature	70	70	N/A	N/A	39-56	68	N/A	40-50	39-56	
	Indoor RH%	30	30	N/A	N/A	63-97	30	N/A	85-97	63-97	
	Sample ID No.	1-IA3-111512	5-IA3-111412	N/A	N/A	10-CS1-111512	11-IA3-111512	N/A	24-CS1-111512	27-CS1-111512	
	Canister No.	34306	4383	N/A	N/A	31432	5599	N/A	12330	21013	
	Regulator No.	34306	4383	N/A	N/A	31432	5599	N/A	12330	21013	
	Regulator Setting	24-HR	24-HR	N/A	N/A	24-HR	24-HR	N/A	24-HR	24-HR	
	Start Date/Time	11/15/12 1:20 PM	11/14/12 11:22 AM	N/A	N/A	11/15/12 10:14 AM	11/15/12 10:43 AM	N/A	11/15/12 11:34 AM	11/15/12 8:53 AM	
	Stop Date/Time	11/16/12 1:15 PM	11/15/12 12:53 PM	N/A	N/A	11/16/12 10:28 AM	11/16/12 12:46 PM	N/A	11/16/12 12:59 PM	11/16/12 10:02 AM	
	Vacuum Gauge Start (in Hg)	-29	-30	N/A	N/A	-30	-29.5	N/A	-30	-28	
	Vacuum Gauge Final (in Hg)	-4.5	-5	N/A	N/A	-1.5	-4	N/A	-5	-0.5	
	Observations	None	None	N/A	N/A	None	None	N/A	None	Some exposed soil visible in vapor barrier gaps. Estimate that vapor barrier covers 90-95% of soil.	
	Subslab Sampling—Location 1	Location 1	By weightlifting equipment	N/A	Near back door	N/A	N/A	NW corner of mail room	Laundry room	N/A	N/A
		Sample ID No.	1-SS1-111512	N/A	7-SS1-111512	N/A	N/A	11-SS1-111512	13-SS1-111612	N/A	N/A
Canister No.		94521	N/A	15748	N/A	N/A	9453	9483	N/A	N/A	
Regulator No.		94521	N/A	15748	N/A	N/A	9453	9483	N/A	N/A	
Regulator Setting		30-min	N/A	30-min	N/A	N/A	30-min	30-min	N/A	N/A	
Start Date/Time		11/15/12 4:37 PM	N/A	11/15/12 1:10 PM	N/A	N/A	11/15/12 2:35 PM	11/16/12 9:49 AM	N/A	N/A	
Stop Date/Time		11/15/12 5:09 PM	N/A	11/15/12 1:53 PM	N/A	N/A	11/15/12 3:08 PM	11/16/12 10:30 AM	N/A	N/A	
Vacuum Gauge Start (in Hg)		-28	N/A	-29	N/A	N/A	-29.5	-29	N/A	N/A	
Vacuum Gauge Final (in Hg)		-4.5	N/A	-4.5	N/A	N/A	-4.5	-2.5	N/A	N/A	
Observations		None	N/A	None	N/A	N/A	None	N/A	N/A	N/A	
Subslab Sampling—Location 2	Location 2	Closet under stairs	N/A	Interrogation room	N/A	N/A	Central workstation	N/A	N/A	N/A	
	Sample ID No.	1-SS2-111512	N/A	7-SS2-111512	N/A	N/A	11-SS1-111512	N/A	N/A	N/A	
	Canister No.	36569	N/A	35690	N/A	N/A	34609	N/A	N/A	N/A	
	Regulator No.	36569	N/A	35690	N/A	N/A	34609	N/A	N/A	N/A	
	Regulator Setting	30-min	N/A	30-min	N/A	N/A	30-min	N/A	N/A	N/A	
	Start Date/Time	11/15/12 5:10 PM	N/A	11/15/12 1:29 PM	N/A	N/A	11/15/12 3:24 PM	N/A	N/A	N/A	
	Stop Date/Time	11/15/12 6:00 PM	N/A	11/15/12 2:07 PM	N/A	N/A	11/15/12 4:13 PM	N/A	N/A	N/A	
	Vacuum Gauge Start (in Hg)	-30	N/A	-28.5	N/A	N/A	-28	N/A	N/A	N/A	
	Vacuum Gauge Final (in Hg)	-4.5	N/A	-4	N/A	N/A	-4.5	N/A	N/A	N/A	
	Observations	None	N/A	None	N/A	N/A	None	N/A	N/A	N/A	
Subslab Sampling—Location 3	Location 3	East by door	N/A	Center of building	N/A	N/A	Central east	N/A	N/A	N/A	
	Sample ID No.	1-SS3-111512	N/A	7-SS3-111512	N/A	N/A	11-SS3-111512	N/A	N/A	N/A	
	Canister No.	9495	N/A	97105	N/A	N/A	9518	N/A	N/A	N/A	
	Regulator No.	9495	N/A	97105	N/A	N/A	9518	N/A	N/A	N/A	
	Regulator Setting	30-min	N/A	30-min	N/A	N/A	30-min	N/A	N/A	N/A	
	Start Date/Time	11/15/12 5:23 PM	N/A	11/15/12 2:07 PM	N/A	N/A	11/15/12 3:30 PM	N/A	N/A	N/A	
	Stop Date/Time	11/15/12 6:15 PM	N/A	11/15/12 2:44 PM	N/A	N/A	11/15/12 4:05 PM	N/A	N/A	N/A	
	Vacuum Gauge Start (in Hg)	-30	N/A	-30	N/A	N/A	-29.5	N/A	N/A	N/A	
	Vacuum Gauge Final (in Hg)	-4.5	N/A	-4.5	N/A	N/A	-4.5	N/A	N/A	N/A	
	Observations	None	N/A	None	N/A	N/A	None	N/A	N/A	N/A	
Subslab Sampling—Location 4	Location 4	N/A	N/A	N/A	N/A	N/A	By safe	N/A	N/A	N/A	
	Sample ID No.	N/A	N/A	N/A	N/A	N/A	11-SS4-111512	N/A	N/A	N/A	
	Canister No.	N/A	N/A	N/A	N/A	N/A	93109	N/A	N/A	N/A	
	Regulator No.	N/A	N/A	N/A	N/A	N/A	93109	N/A	N/A	N/A	
	Regulator Setting	N/A	N/A	N/A	N/A	N/A	30-min	N/A	N/A	N/A	
	Start Date/Time	N/A	N/A	N/A	N/A	N/A	11/15/12 4:22 PM	N/A	N/A	N/A	
	Stop Date/Time	N/A	N/A	N/A	N/A	N/A	11/15/12 4:58 PM	N/A	N/A	N/A	
	Vacuum Gauge Start (in Hg)	N/A	N/A	N/A	N/A	N/A	-28.5	N/A	N/A	N/A	
	Vacuum Gauge Final (in Hg)	N/A	N/A	N/A	N/A	N/A	-4.5	N/A	N/A	N/A	
	Observations	N/A	N/A	N/A	N/A	N/A	None	N/A	N/A	N/A	

Table B-4  
Field Notes—Indoor Air Sampling—July 2013

Property	Property ID	1	5	7	9	10	11	13	24	27	28	
	Property Address	117 N 3rd Ave—Fire Station	210 N Main Ave—Community Center	116 N Main Ave—Police Department	121 N Main Ave—Sportsman Bar & Grill	127 N Main Ave—Sales Office	201/205 N Main Ave—Post Office	305 N Main Ave	322 N 1st Ave	304 N 1st Ave	305 N 1st Ave	
Survey	Bill Beadie	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	
	Thomas Ashton	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	
	Mike Murray	Yes	Yes	Yes	No	No	No	Yes	N/A	No	No	
	Andy Vidourek	Yes	Yes	Yes	No	No	Yes	Yes	N/A	No	No	
	Date/Time	7/29/13 12:00 PM	7/30/13 10:18 AM	7/29/13 10:09 AM	7/29/13 10:40 AM	7/29/13 11:45 AM	7/29/13 12:33 PM	7/30/13 1:30 PM	N/A	7/30/2013 10:30	7/30/2013 11:15	
Preliminary Visit Notes	Potential Indoor Sources	None	None	None	None	None	None	None	N/A	None	Yes	
	Source Materials (from site visit)	None	None	None	None	None	None	None	N/A	None	Paints, Thinners/Strippers, Coating Material in basement	
Indoor Air Sampling—Location 1	Location 1	Downstairs	Library office	Officer's work counter	East end of the bar	Kitchen	Custodian office	Dining room table 1st floor	N/A	Kitchen	Basement	
	Indoor Temperature	72	72	72	72	72	72	72	N/A	72	70	
	Indoor RH%	35	40	35	35	35	35	40	N/A	40	40	
	Sample ID No.	1-IA1-072913	5-IA1-073013	7-IA1-072913	9-IA1-072913	10-IA1-072913	11-IA1-072913	13-IA1-073013	N/A	27-IA1-073013	28-IA1-073013	
	Canister No.	10978	94301	14113	12938	34749	5365	1588	N/A	9421	21009	
	Regulator No.	10978	94301	14113	12938	34749	5365	1588	N/A	9421	21009	
	Regulator Setting	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	N/A	24-HR	24-HR	
	Start Date/Time	7/29/13 12:00 PM	7/30/13 10:18 AM	7/29/13 10:04 AM	7/29/13 10:51 AM	7/29/13 11:46 AM	7/29/13 12:34 PM	7/30/13 1:36 PM	N/A	7/30/13 10:52 AM	7/30/13 12:01 PM	
	Stop Date/Time	7/30/13 2:21 PM	7/31/13 12:27 PM	7/30/13 9:09 AM	7/30/13 9:31 AM	7/30/13 2:12 PM	7/30/13 12:55 PM	7/31/13 2:56 PM	N/A	7/31/13 11:03 AM	7/31/13 10:20 AM	
	Vacuum Gauge Start (in Hg)	-30	-30	-30	-30	-30	-30	-30	N/A	-30	-30	
	Vacuum Gauge Final (in Hg)	-5.5	-4.5	-5	-5	-5	-4	-5.5	N/A	-5	-4	
	Observations	None	None	None	None	None	None	None	N/A	None	None	
	Indoor Air Sampling—Location 2	Location 2	Upstairs in TV room	Front room—SW corner	Interview room	Kitchen	Back office	Central workstation	2nd floor	N/A	Living room	Main floor
Indoor Temperature		72	72	72	72	72	72	72	N/A	72	70	
Indoor RH%		35	40	35	35	35	35	40	N/A	40	40	
Sample ID No.		1-IA2-072913	5-IA2-073013	7-IA2-072913	9-IA2-072913	10-IA2-072913	11-IA2-072913	13-IA2-073013	N/A	27-IA2-073013	28-IA2-073013	
Canister No.		10791	5763	5086	13439	1565	33909	33376	N/A	1568	5667	
Regulator No.		10791	5763	5086	13439	1565	33909	33376	N/A	1568	5667	
Regulator Setting		24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	24-HR	N/A	24-HR	24-HR	
Start Date/Time		7/29/13 12:03 PM	7/30/13 10:07 AM	7/29/13 10:05 AM	7/29/13 10:43 AM	7/29/13 11:46 AM	7/29/13 12:36 PM	7/30/13 1:39 PM	N/A	7/30/13 10:51 AM	7/30/13 12:03 PM	
Stop Date/Time		7/30/13 12:48 PM	7/31/13 12:35 PM	7/30/13 9:11 AM	7/30/13 12:17 PM	7/30/13 12:44 PM	7/30/13 12:54 PM	7/31/13 2:56 PM	N/A	7/31/13 10:59 AM	7/31/13 2:17 PM	
Vacuum Gauge Start (in Hg)		-30	-30	-29	-30	-30	-30	-30	N/A	-28	-30	
Vacuum Gauge Final (in Hg)		-5	-5	-4.5	-4	-4.5	-3	-2.5	N/A	-4	-4.5	
Observations		None	None	None	Position in kitchen slightly altered from original	None	None	None	N/A	None	None	
Indoor Air Sampling—Location 3		Location 3	Upstairs hallway	Back room—SW corner	N/A	N/A	Crawlspace	Near customer counter on top of safe	N/A	N/A	Crawlspace—center of house	Upstairs 2nd Story
	Indoor Temperature	72	72	N/A	N/A	63	72	N/A	N/A	63	70	
	Indoor RH%	35	40	N/A	N/A	73	35	N/A	N/A	80	40	
	Sample ID No.	1-IA3-072913	5-IA3-073013	N/A	N/A	10-CS1-072913	11-IA3-072913	N/A	N/A	27-CS1-073013	28-IA3-073013	
	Canister No.	5664	4214	N/A	N/A	12958	11026	N/A	N/A	14869	9418	
	Regulator No.	5664	4214	N/A	N/A	12958	11026	N/A	N/A	14869	9418	
	Regulator Setting	24-HR	24-HR	N/A	N/A	24-HR	24-HR	N/A	N/A	24-HR	24-HR	
	Start Date/Time	7/29/13 12:04 PM	7/30/13 10:14 AM	N/A	N/A	7/29/13 11:48 AM	7/29/13 12:38 PM	N/A	N/A	7/30/13 10:52 AM	7/30/13 12:06 PM	
	Stop Date/Time	7/30/13 2:19 PM	7/31/13 3:05 PM	N/A	N/A	7/30/13 12:48 PM	7/30/13 12:53 PM	N/A	N/A	7/31/13 11:07 AM	7/31/13 1:05 PM	
	Vacuum Gauge Start (in Hg)	-29.5	-29	N/A	N/A	-30	-29	N/A	N/A	-29.5	-30	
	Vacuum Gauge Final (in Hg)	-4	-5	N/A	N/A	-4	-3.5	N/A	N/A	-3.5	-4	
	Observations	None	None	N/A	N/A	None	None	N/A	N/A	Some exposed soil visible in vapor barrier gaps. Estimate that vapor barrier covers 90-95% of soil.	None	
	Subslab Sampling—Location 1	Location 1	By weightlifting equipment	East by kitchen door	Near back door	N/A	N/A	NW corner of mail room	Laundry room	N/A	N/A	N/A
Sample ID No.		1-SS1-072913	5-SS1-073013	7-SS1-072913	N/A	N/A	11-SS1-073113	13-SS1-073013	N/A	N/A	N/A	
Canister No.		37419	34100	31796	N/A	N/A	37713	30827	N/A	N/A	N/A	
Regulator No.		37419	34100	31796	N/A	N/A	37713	30827	N/A	N/A	N/A	
Regulator Setting		30-min	30-min	30-min	N/A	N/A	30-min	30-min	N/A	N/A	N/A	
Start Date/Time		7/29/13 12:22 PM	7/30/13 10:16 AM	7/29/13 10:21 AM	N/A	N/A	7/31/13 1:02 PM	7/30/13 1:40 PM	N/A	N/A	N/A	
Stop Date/Time		7/29/13 12:52 PM	7/30/13 11:00 AM	7/29/13 10:51 AM	N/A	N/A	7/31/13 1:39 PM	7/30/13 2:11 PM	N/A	N/A	N/A	
Vacuum Gauge Start (in Hg)		-29.5	-30	-29.5	N/A	N/A	-30	-28	N/A	N/A	N/A	
Vacuum Gauge Final (in Hg)		-5	-5	-5	N/A	N/A	-5	-5	N/A	N/A	N/A	
Observations		None	None	None	N/A	N/A	None	None	N/A	N/A	N/A	
Subslab Sampling—Location 2		Location 2	Closet under stairs	Central closet	Interrogation room	N/A	N/A	Central workstation	N/A	N/A	N/A	N/A
		Sample ID No.	1-SS2-072913	5-SS2-073013	7-SS2-072913	N/A	N/A	11-SS2-073113	N/A	N/A	N/A	N/A
		Canister No.	31795	12031	34169	N/A	N/A	35649	N/A	N/A	N/A	N/A
	Regulator No.	31795	12031	34169	N/A	N/A	35649	N/A	N/A	N/A	N/A	
	Regulator Setting	30-min	30-min	30-min	N/A	N/A	30-min	N/A	N/A	N/A	N/A	
	Start Date/Time	7/29/13 12:17 PM	7/30/13 10:11 AM	7/29/13 11:10 AM	N/A	N/A	7/31/13 12:15 PM	N/A	N/A	N/A	N/A	
	Stop Date/Time	7/29/13 12:47 PM	7/30/13 10:57 AM	7/29/13 11:40 AM	N/A	N/A	7/31/13 12:52 PM	N/A	N/A	N/A	N/A	
	Vacuum Gauge Start (in Hg)	-29.5	-30	-29.5	N/A	N/A	-29	N/A	N/A	N/A	N/A	
	Vacuum Gauge Final (in Hg)	-5	-5	-5	N/A	N/A	-5	N/A	N/A	N/A	N/A	
	Observations	None	None	None	N/A	N/A	None	N/A	N/A	N/A	N/A	
	Subslab Sampling—Location 3	Location 3	East by door	N/A	Center of building	N/A	N/A	Central east	N/A	N/A	N/A	N/A
		Sample ID No.	1-SS3-072913	N/A	7-SS3-072913	N/A	N/A	11-SS3-073113	N/A	N/A	N/A	N/A
		Canister No.	15770	N/A	37795	N/A	N/A	3299	N/A	N/A	N/A	N/A
Regulator No.		15770	N/A	37795	N/A	N/A	3299	N/A	N/A	N/A	N/A	
Regulator Setting		30-min	N/A	30-min	N/A	N/A	30-min	N/A	N/A	N/A	N/A	
Start Date/Time		7/29/13 1:20 PM	N/A	7/29/13 10:31 AM	N/A	N/A	7/31/13 12:21 PM	N/A	N/A	N/A	N/A	
Stop Date/Time		7/29/13 1:50 PM	N/A	7/29/13 11:01 AM	N/A	N/A	7/31/13 1:03 PM	N/A	N/A	N/A	N/A	
Vacuum Gauge Start (in Hg)		-28	N/A	-28	N/A	N/A	-30	N/A	N/A	N/A	N/A	
Vacuum Gauge Final (in Hg)		-5	N/A	-5	N/A	N/A	-5	N/A	N/A	N/A	N/A	
Observations		None	N/A	None	N/A	N/A	None	N/A	N/A	N/A	N/A	
Subslab Sampling—Location 4		Location 4	N/A	N/A	N/A	N/A	N/A	Near safe	N/A	N/A	N/A	N/A
		Sample ID No.	N/A	N/A	N/A	N/A	N/A	11-SS4-073113	N/A	N/A	N/A	N/A
		Canister No.	N/A	N/A	N/A	N/A	N/A	34088	N/A	N/A	N/A	N/A
	Regulator No.	N/A	N/A	N/A	N/A	N/A	34088	N/A	N/A	N/A	N/A	
	Regulator Setting	N/A	N/A	N/A	N/A	N/A	30-min	N/A	N/A	N/A	N/A	
	Start Date/Time	N/A	N/A	N/A	N/A	N/A	7/31/13 1:15 PM	N/A	N/A	N/A	N/A	
	Stop Date/Time	N/A	N/A	N/A	N/A	N/A	7/31/13 1:56 PM	N/A	N/A	N/A	N/A	
	Vacuum Gauge Start (in Hg)	N/A	N/A	N/A	N/A	N/A	-30	N/A	N/A	N/A	N/A	
	Vacuum Gauge Final (in Hg)	N/A	N/A	N/A	N/A	N/A	-5	N/A	N/A	N/A	N/A	
	Observations	N/A	N/A	N/A	N/A	N/A	None	N/A	N/A	N/A	N/A	



**Table B-5  
Field Notes—Soil Gas Sampling**

	Property ID	1	5	10	11
<b>Site Details</b>	Property Address	117 N 3rd Ave—Fire Station	210 N Main Ave—Community Center	127 N Main Ave—Sales Office	201/205 N Main Ave—Post Office
	Type of Occupancy	Office	Commercial	Office	Office
	Survey Team	N/A	Mike Murray, Andy Vidourek	N/A	Andy Vidourek
	Port Install Date	11/13/2012	11/14/2012	11/13/2012	11/14/2012
<b>Port Install Details</b>	Outdoor Temp	N/A	60	N/A	62
	Outdoor RH%	N/A	85	N/A	85
	Wind Speed (MPH)	N/A	3	N/A	6
	Wind Direction	N/A	N	N/A	NNW
	Significant Precipitation in Last 24 Hrs?	No	No	No	No
	Ground Cover Outside Building	Asphalt concrete	Asphalt concrete	Asphalt concrete	Asphalt concrete
	Soil-Gas Port ID	1-SG-01	5-SG-01	10-SG-01	11-SG-01
Port Depth	6 ft bgs	6 ft bgs	5.5 ft bgs	6 ft bgs	
Depth to GW	GW not encountered during install	GW not encountered during install	4 ft bgs	GW not encountered during install	
<b>Sampling Details - Nov. 2012</b>	Location 1	1-SG-01	5-SG-01	10-SG-01	11-SG-01
	Sample ID No.	1-SG1-111512	5-SG1-111512	N/A	11-SG1-111612
	Canister/Regulator No.	36476	33727	N/A	12040
	Regulator Setting	30-min	30-min	N/A	30-min
	Start Date/Time	11/15/12 8:35 AM	11/15/12 10:17 AM	N/A	11/16/12 7:26 AM
	Stop Date/Time	11/15/12 9:21 AM	11/15/12 10:58 AM	N/A	11/16/12 8:10 AM
	Vacuum Gauge Start (in Hg)	-30	-28	N/A	-29
	Vacuum Gauge Final (in Hg)	-4.8	-4.5	N/A	-4.5
	Observations	None	None	Not sampled during November 2012 sampling event because of shallow GW level.	None
<b>Sampling Details - July 2013</b>	Location 1	1-SG-01	5-SG-01	10-SG-01	11-SG-01
	Sample ID No.	N/A	5-SG1-073013	N/A	11-SG1-073113
	Canister/Regulator No.	N/A	37786	N/A	37414
	Regulator Setting	N/A	30-min	N/A	30-min
	Start Date/Time	N/A	7/30/13 9:19 AM	N/A	7/31/13 10:27 AM
	Stop Date/Time	N/A	7/30/13 10:00 AM	N/A	7/31/13 11:03 AM
	Vacuum Gauge Start (in Hg)	N/A	-30	N/A	-29
	Vacuum Gauge Final (in Hg)	N/A	-5	N/A	-4
Observations	Not sampled during July 2013 sampling event because of shallow GW level.	None	Not sampled during July 2013 sampling event because of shallow GW level.	None	

**Table B-5  
Field Notes—Soil Gas Sampling**

Site Details	Property ID	13	24	27	28
	Property Address	305 N Main Ave	322 N 1st Ave	304 N 1st Ave	305 N 1st Ave
	Type of Occupancy	Residential	Residential	Residential	Residential
	Survey Team	Mike Murray, Andy Vidourek	Mike Murray, Andy Vidourek	Andy Vidourek	Mike Murray, Andy Vidourek
Port Install Details	Port Install Date	11/13/2012	11/13/2012	11/13/2012	7/29/2013
	Outdoor Temp	70	74	71	74
	Outdoor RH%	72	66	66	66
	Wind Speed (MPH)	2	3	5	3
	Wind Direction	NW	NW	NNW	NW
	Significant Precipitation in Last 24 Hrs?	No	No	No	No
	Ground Cover Outside Building	Grass	Grass	Grass	Grass
	Soil-Gas Port ID	13-SG-01	24-SG-01	27-SG-01	28-SG-01
Port Depth	6 ft bgs	6 ft bgs	6 ft bgs	5 ft bgs	
Depth to GW	GW not encountered during install	GW not encountered during install	GW not encountered during install	6 ft bgs	
Sampling Details - Nov. 2012	Location 1	13-SG-01	24-SG-01	27-SG-01	N/A
	Sample ID No.	13-SG1-111512	24-SG1-111512	27-SG1-111512	N/A
	Canister/Regulator No.	30818	97101	36414	N/A
	Regulator Setting	30-min	30-min	30-min	N/A
	Start Date/Time	11/15/12 11:34 AM	11/15/12 12:35 PM	11/15/12 11:38 AM	N/A
	Stop Date/Time	11/15/12 12:15 PM	11/15/12 1:16 PM	11/15/12 12:26 PM	N/A
	Vacuum Gauge Start (in Hg)	-27	-28	-30	N/A
	Vacuum Gauge Final (in Hg)	-4	-4	-4	N/A
	Observations	None	None	None	Port installed in July 2013
Sampling Details - July 2013	Location 1	13-SG-01	24-SG-01	27-SG-01	28-SG-01
	Sample ID No.	13-SG1-073013	24-SG1-073013	27-SG1-072913	28-SG1-073013
	Canister/Regulator No.	9311	36374	37341	1348
	Regulator Setting	30-min	30-min	30-min	30-min
	Start Date/Time	7/30/13 1:13 PM	7/30/13 2:49 PM	7/29/13 3:22 PM	7/30/13 2:30 PM
	Stop Date/Time	7/30/13 1:54 PM	7/30/13 3:37 PM	7/29/13 4:08 PM	7/30/13 3:17 PM
	Vacuum Gauge Start (in Hg)	-30	-29.5	-30	-30
	Vacuum Gauge Final (in Hg)	-4	-4.5	-4	-5
Observations	None	None	None	None	

**Table B-5  
Field Notes—Soil Gas Sampling**

	Property ID	44	45	46
Site Details	Property Address	122 N Main Ave—Vacant Lot—Former Park Laundry	126 N Main Ave—Vacant Lot—Laundry Adjacent Property	Main Ave/Mill Street—Vacant Lot
	Type of Occupancy	Vacant Lot	Vacant Lot	Vacant Lot
	Survey Team	Andy Vidourek	Andy Vidourek	Mike Murray, Andy Vidourek
	Port Install Date	11/13/2012	11/13/2012	11/13/2012
Port Install Details	Outdoor Temp	60	60	60
	Outdoor RH%	89	89	85
	Wind Speed (MPH)	6	5	4
	Wind Direction	NNW	NNW	NNW
	Significant Precipitation in Last 24 Hrs?	No	No	No
	Ground Cover Outside Building	Grass	Grass	Grass
	Soil-Gas Port ID	44-SG-01	45-SG-01	46-SG-01
Port Depth	5.5 ft bgs	6 ft bgs	6 ft bgs	
Depth to GW	4.5 ft bgs	GW not encountered during install	GW not encountered during install	
Sampling Details - Nov. 2012	Location 1	44-SG-01	45-SG-01	46-SG-01
	Sample ID No.	N/A	45-SG1-111512	46-SG1-111512
	Canister/Regulator No.	N/A	37750	37749
	Regulator Setting	N/A	30-min	30-min
	Start Date/Time	N/A	11/15/12 9:10 AM	11/15/12 10:20 AM
	Stop Date/Time	N/A	11/15/12 9:52 AM	11/15/12 11:08 AM
	Vacuum Gauge Start (in Hg)	N/A	-30	-30
	Vacuum Gauge Final (in Hg)	N/A	-4.4	-3.5
	Observations	Not sampled during November 2012 sampling event because of shallow GW level.	On first attempt, canister 34091 had only -5 inches vacuum. Swapped out canister and tried again. Second canister operated well.	None
Sampling Details - July 2013	Location 1	44-SG-01	45-SG-01	46-SG-01
	Sample ID No.	44-SG1-073113	45-SG1-073113	46-SG1-073013
	Canister/Regulator No.	37717	37697	33400
	Regulator Setting	30-min	30-min	30-min
	Start Date/Time	7/31/13 9:17 AM	7/31/13 8:54 AM	7/30/13 9:10 AM
	Stop Date/Time	7/31/13 10:00 AM	7/31/13 9:32 AM	7/30/13 9:48 AM
	Vacuum Gauge Start (in Hg)	-30	-29	-29
	Vacuum Gauge Final (in Hg)	-4	-5	-5
	Observations	None	None	None

**Table B-6**  
**Field Notes—Outdoor Background Air**

Property Details	Property ID	OA1	OA2	OA3
	Location	Living Center—behind entrance sign	Behind El Rancho Viejo Restaurant	Davis Park
	Survey Team	Bill Beadie, Thomas Ashton	Bill Beadie, Thomas Ashton	Bill Beadie, Thomas Ashton
Nov. 2012 Background Sample 1	Outdoor Temperature	39-56°F	39-56°F	39-56°F
	Outdoor RH%	63-97%	63-97%	63-97%
	Wind Speed Average	2 MPH	2 MPH	2 MPH
	Wind Direction Average	From north	From north	From north
	Significant Precipitation in the Last 24 Hrs?	No	No	No
	Sample ID	OA1-111512	OA2-111512	OA3-111512
	Canister/Regulator No.	20938	34485	33938
	Regulator Setting	24-HR	24-HR	24-HR
	Start Date/Time	Thursday, November 15, 2012, 09:37 AM	Thursday, November 15, 2012, 09:27 AM	Thursday, November 15, 2012, 09:18 AM
	Stop Date/Time	Friday, November 16, 2012, 08:47 AM	Friday, November 16, 2012, 08:57 AM	Friday, November 16, 2012, 09:04 AM
	Vacuum Gauge Start (in. Hg)	-29.5	-30	-30
	Vacuum Gauge Final (in. Hg)	-5	0	-5
	Observations	None	0 inches of vacuum remaining after 24hr.	None
Nov. 2012 Background Sample 2	Outdoor Temperature	40-50°F	40-50°F	40-50°F
	Outdoor RH%	85-97%	85-97%	85-97%
	Wind Speed Average	1.1 MPH	1.1 MPH	1.1 MPH
	Wind Direction Average	From east	From east	From east
	Significant Precipitation in the Last 24 Hrs?	Yes	Yes	Yes
	Sample ID	OA1-111612	OA2-111612	OA3-111612
	Canister/Regulator No.	31435	9417	9925
	Regulator Setting	24-HR	24-HR	24-HR
	Start Date/Time	Friday, November 16, 2012, 08:50 AM	Friday, November 16, 2012, 08:59 AM	Friday, November 16, 2012, 09:06 AM
	Stop Date/Time	Saturday, November 17, 2012, 09:22 AM	Saturday, November 17, 2012, 09:22 AM	Saturday, November 17, 2012, 11:43 AM
	Vacuum Gauge Start (in. Hg)	-29	-30	-30
	Vacuum Gauge Final (in. Hg)	-4.5	0	-5
	Observations	Rain overnight, sampling inlet protected by funnel.	Rain overnight, sampling inlet protected by funnel. 0 inches of vacuum remaining after 24hr.	Rain overnight, sampling inlet protected by funnel.
July 2013 Background Sample 1	Outdoor Temperature	62	62	62
	Outdoor RH%	74	74	76
	Wind Speed Average	4.7 MPH	4.7 MPH	4.7 MPH
	Wind Direction Average	From NW	From NW	From NW
	Significant Precipitation in the Last 24 Hrs?	No	No	No
	Sample ID	OA1-072913	OA2-072913	OA3-072913
	Canister/Regulator No.	5361	32109	10988
	Regulator Setting	24-HR	24-HR	24-HR
	Start Date/Time	7/29/13 11:32 AM	7/29/13 11:25 AM	7/29/13 11:17 AM
	Stop Date/Time	7/30/13 11:28 AM	7/30/13 9:38 AM	7/30/13 12:56 PM
	Vacuum Gauge Start (in. Hg)	-30	-29.5	-29
	Vacuum Gauge Final (in. Hg)	-5	-5	-5
	Observations	None	None	None
July 2013 Background Sample 2	Outdoor Temperature	69	70	70
	Outdoor RH%	71	72	72
	Wind Speed Average	6.1 MPH	6.1 MPH	6.1 MPH
	Wind Direction Average	From NW	From NW	From NW
	Significant Precipitation in the Last 24 Hrs?	No	No	No
	Sample ID	OA1-073013	OA2-073013	OA3-073013
	Canister/Regulator No.	34496	34198	12957
	Regulator Setting	24-HR	24-HR	24-HR
	Start Date/Time	7/30/13 1:05 PM	7/30/13 1:15 PM	7/30/13 1:22 PM
	Stop Date/Time	7/31/13 12:15 PM	7/31/13 2:33 PM	7/31/13 3:13 PM
	Vacuum Gauge Start (in. Hg)	-30	-29.5	-30
	Vacuum Gauge Final (in. Hg)	-5	-4	-5
	Observations	None	None	None



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## PHOTOGRAPHS

Project Name: Former Park Laundry Site

Project Number: 8006.31.03

Location: Ridgefield, WA

### INDOOR AIR—PRELIMINARY VISIT

Photograph 1. Storage closet at the Fire Station, November 2012.



Photograph 2. Floor penetrations in the custodial closet of the Post Office, November 2012.







## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

Photograph 3. Basement at 322 N 1st Avenue, November 2012.



Photograph 4. Using the Hapsite GC/MS to locate indoor sources of the chemicals of concern, November 2012.





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### INDOOR AIR—SAMPLING

Photograph 5. Indoor air sampling at the Fire Station, November 2012.

## PHOTOGRAPHS

Project Name: Former Park Laundry Site

Project Number: 8006.31.03

Location: Ridgefield, WA



Photograph 6. Indoor air sampling at the Sportsman Bar & Grill, November 2012.







## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

Photograph 7. Air sampling of the crawlspace under the Sales Office, November 2012.



Photograph 8. Indoor air sampling in the living room of 304 N 1st Avenue, November 2012.







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## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

### OUTDOOR BACKGROUND

Photograph 9. Outdoor background air sampling at the Living Center, November 2012.



### SOIL GAS—PORT INSTALL

Photograph 10. Installed soil gas sampling port outside the Fire Station, November 2012.





## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

**Photograph 11. Installed soil gas sampling port outside the Fire Station, November 2012.**



**Photograph 12. Installing a soil gas sampling port outside the residence at 304 N 1st Avenue, November 2012.**







## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

Photograph 13. Installed soil gas sampling port outside the residence at 322 N 1st Avenue, November 2012.



### SOIL GAS—SAMPLING

Photograph 14. Soil gas sampling setup, November 2012.



## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

Photograph 15. Soil gas sampling at the Fire Station, November 2012.



### SUBSLAB

Photograph 16. Subslab port installed at 305 N Main Avenue, November 2012.



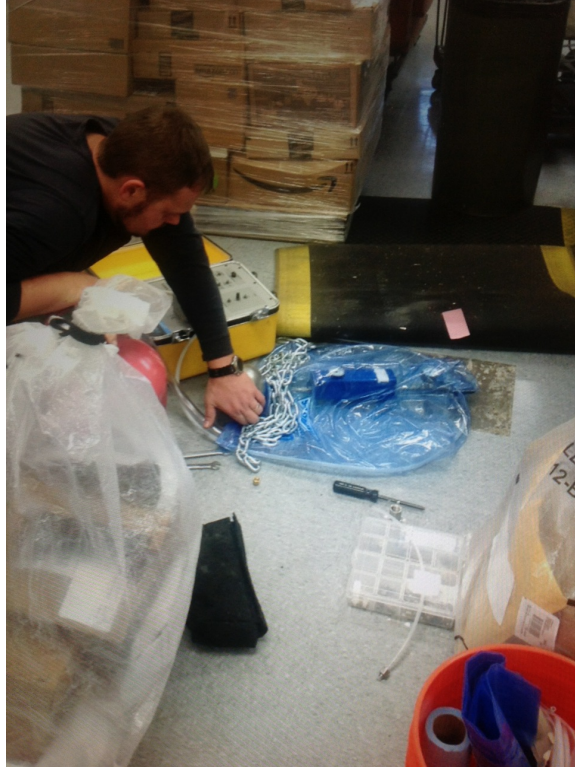




## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

**Photograph 17. Subslab sampling at the Post Office, November 2012.**



**Photograph 18. Installed subslab port in the interrogation room of the Police Department, November 2012.**



## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA

Photograph 19. Subslab sampling setup, November 2012.



Photograph 20. Installed subslab sampling port at the Ridgefield Community Center, July 2013.





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## PHOTOGRAPHS

Project Name: Former Park Laundry Site

Project Number: 8006.31.03

Location: Ridgefield, WA

Photograph 21. Foundational cracks in the walls of the basement at 305 N 1st Avenue, July 2013.



Photograph 22. Gap between the first and second foundational slabs in the basement of 305 N 1st Avenue, July 2013.







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Photograph 23. Skylights with roof vents in second floor of 305 N 1st Avenue, July 2013.



Photograph 24. Indoor air sampling on the main floor of 305 N 1st Avenue, July 2013.







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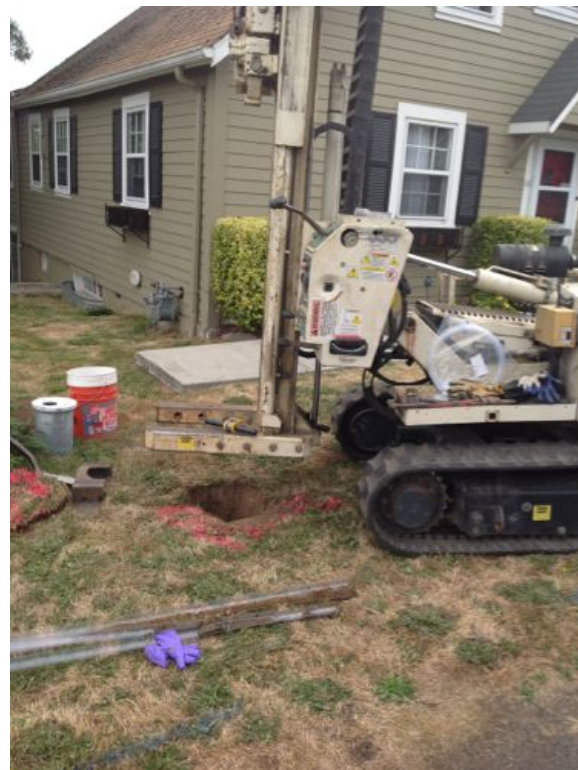
Photograph 25. Subslab sampling at the Community Center, July 2013.

## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA



Photograph 26. Installation of soil gas sampling port at 305 N 1st Avenue, July 2013.





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Photograph 27. Installed soil gas sampling port at 305 N 1st Avenue, July 2013.

## PHOTOGRAPHS

Project Name: Former Park Laundry Site  
Project Number: 8006.31.03  
Location: Ridgefield, WA



Photograph 28. Soil gas sampling at 304 N 1st Avenue, July 2013.



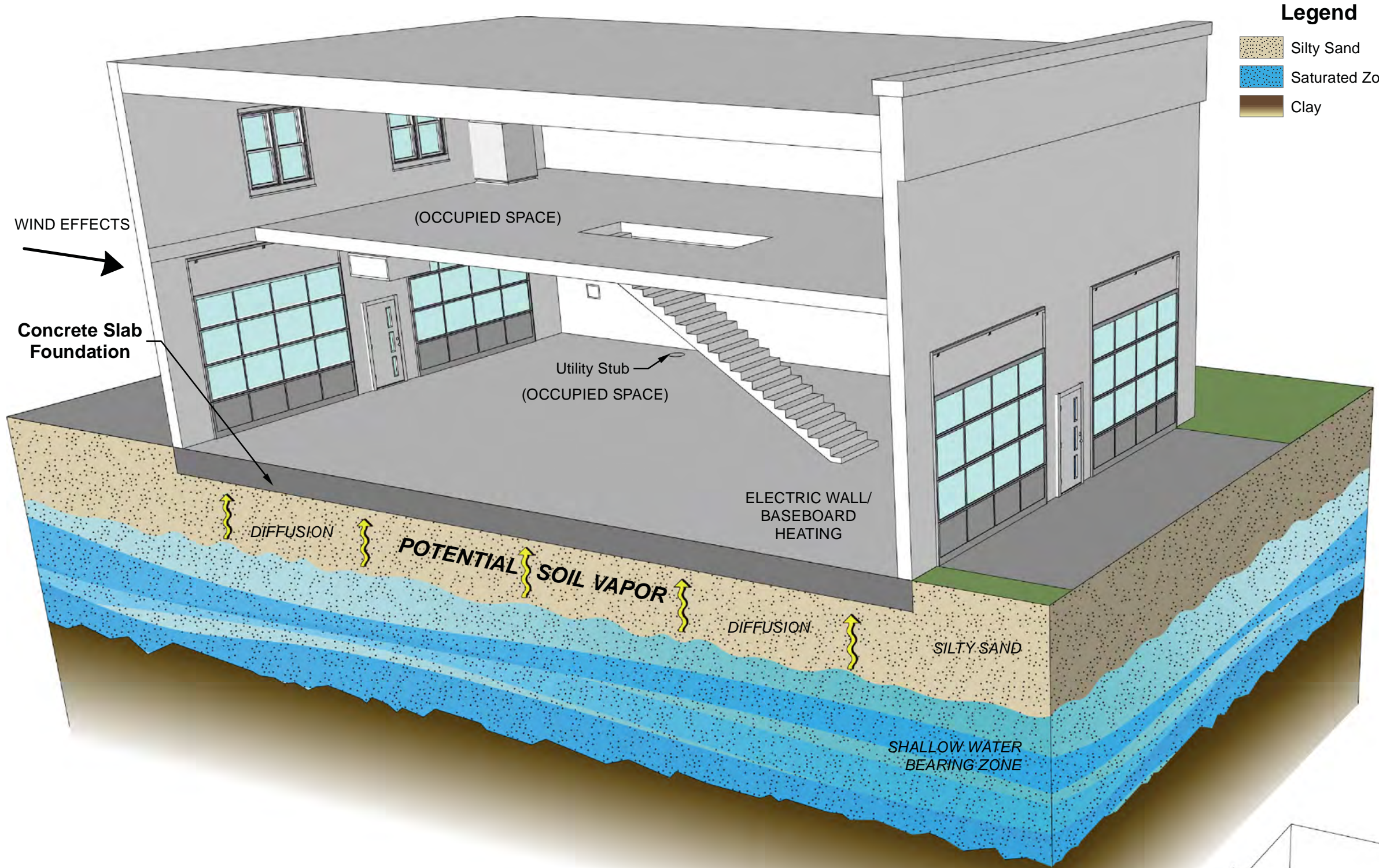
# APPENDIX C

## CONCEPTUAL SITE MODELS





Path: X:\8006.31\Projects\05 - Vapor Intrusion CSM Models\Fig. CSM Clark County Fire and Rescue.mxd  
 Produced By: J. Schane/C. Riley  
 Approved By: M. D'Andrea  
 Print Date: 9/17/2013  
 Project: 8006.31



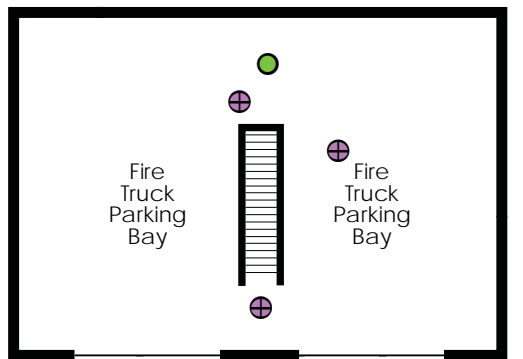
**Legend**

- Silty Sand
- Saturated Zone
- Clay

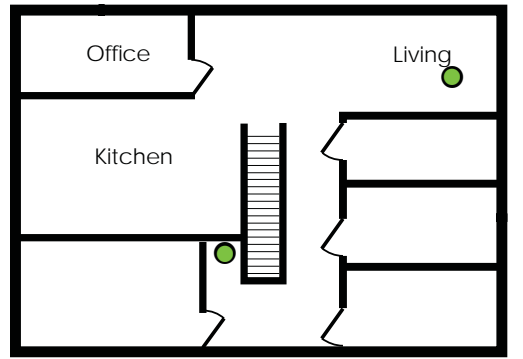
**Conceptual Site Model  
 Clark County Fire & Rescue  
 Station 24  
 117 N 3rd Ave**

Vapor Intrusion Investigation  
 Former Park Laundry  
 Ridgefield, Washington

**Floorplan  
 1st Floor**



**2nd Floor**



- = Indoor Air Sample Location
- = Subslab Sample Location

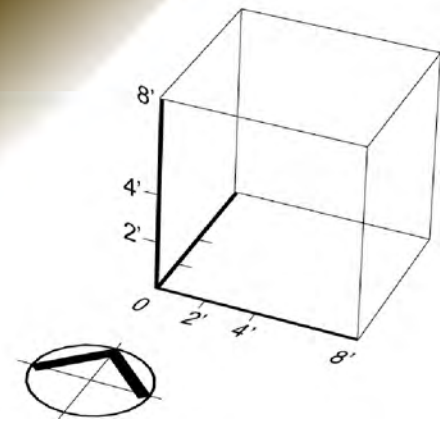
Note: Building model is a representation of the actual structure and is approximate in proportion and shape.

**Proximity Monitoring Well Data:**

<b>MW01</b>	
PCE Concentration:	8.38 ug/L (April 2012)
	9.67 ug/L (June 2013)
TCE Concentration:	0.087 U ug/L (March 2012)
	0.0870 U ug/L (June 2013)
Depth to Groundwater:	3.11 ft (March 2012)
	6.12 ft (July 2013)

**Building Characteristics:**

Date of Construction:	1940
Material of Construction:	Concrete
Type of Foundation:	Concrete Slab
Heating System:	Electric Wall/Baseboard
Roof Vents:	No

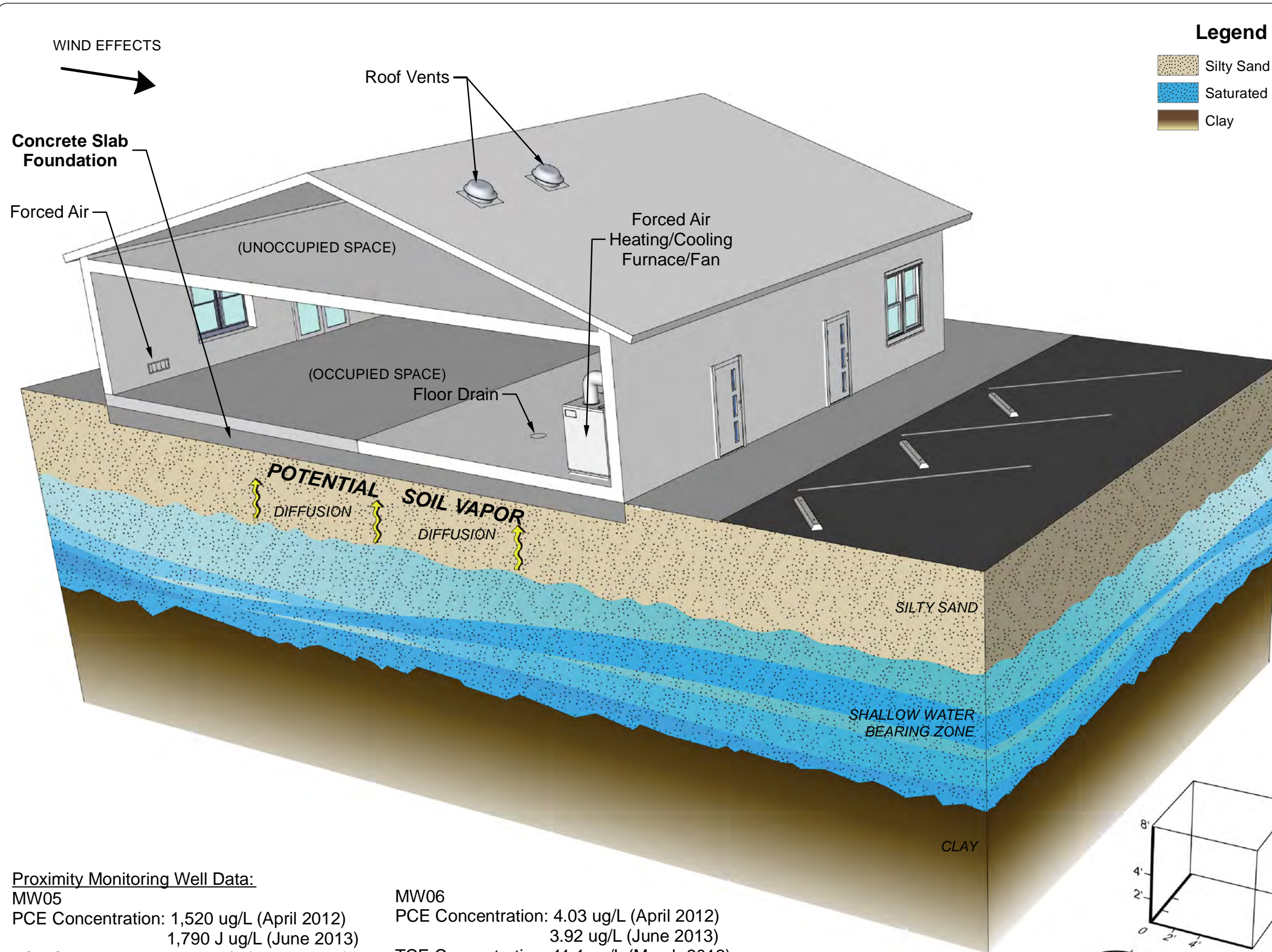


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Path: X:\8006.31\Projects\05 - Vapor Intrusion\CSMModels\Fig\_CSM Community Center.mxd  
 Produced By: J. Schane/C. Riley  
 Approved By: M. D'Andrea  
 Print Date: 9/17/2013  
 Project: 8006.31



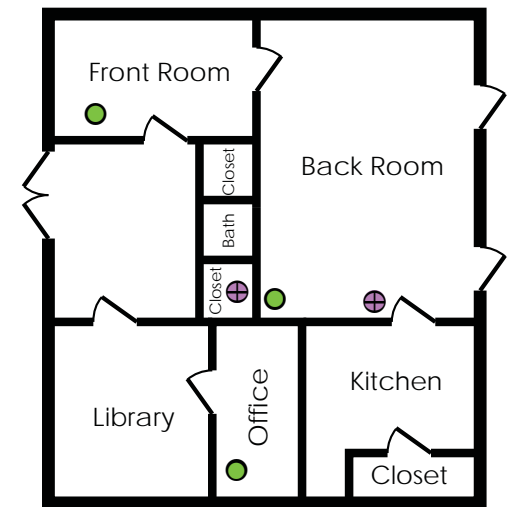
**Legend**

-  Silty Sand
-  Saturated Zone
-  Clay

**Conceptual Site Model  
 Ridgefield Community Center  
 210 N Main Ave**

Vapor Intrusion Investigation  
 Former Park Laundry  
 Ridgefield, Washington

**Floorplan**



● = Indoor Air Sample Location  
 ⊕ = Subslab Sample Location

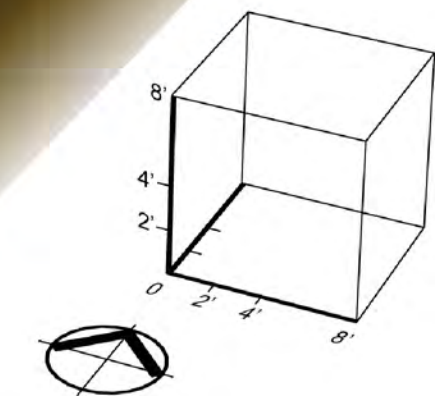
**Building Characteristics:**  
 Date of Construction: 1993  
 Material of Construction: Wood  
 Type of Foundation: Concrete Slab  
 Heating System: Forced Air/Heat Pump  
 Roof Vents: Yes

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.

**Proximity Monitoring Well Data:**

**MW05**  
 PCE Concentration: 1,520 ug/L (April 2012)  
 1,790 J ug/L (June 2013)  
 TCE Concentration: 2.22 ug/L (March 2012)  
 2.7 ug/L (June 2013)  
 Depth to Groundwater: 6.19 ft (March 2012)  
 8.88 ft (July 2013)

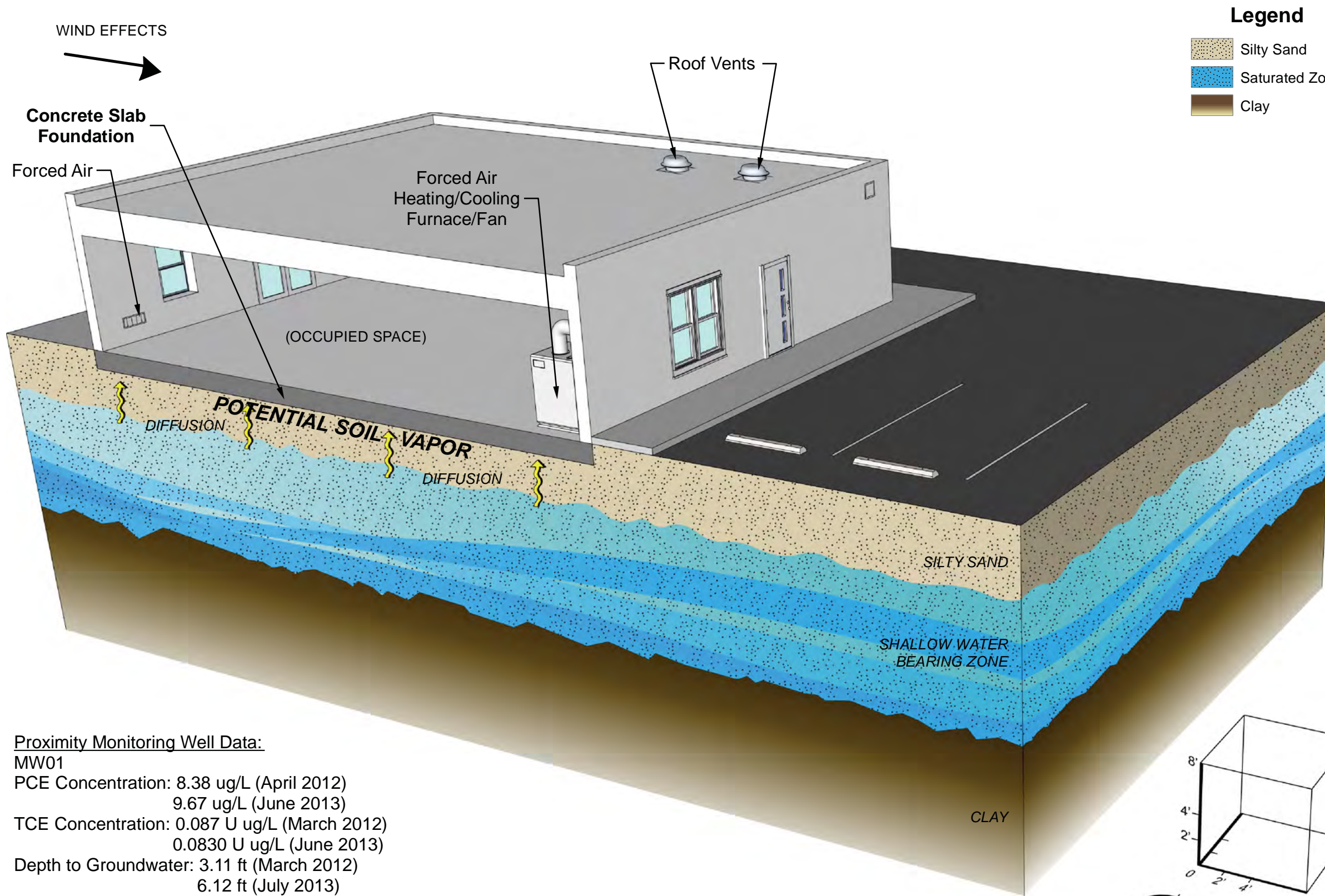
**MW06**  
 PCE Concentration: 4.03 ug/L (April 2012)  
 3.92 ug/L (June 2013)  
 TCE Concentration: 11.1 ug/L (March 2012)  
 6.61 ug/L (June 2013)  
 Depth to Groundwater: 7.45 ft (March 2012)  
 8.9 ft (July 2013)







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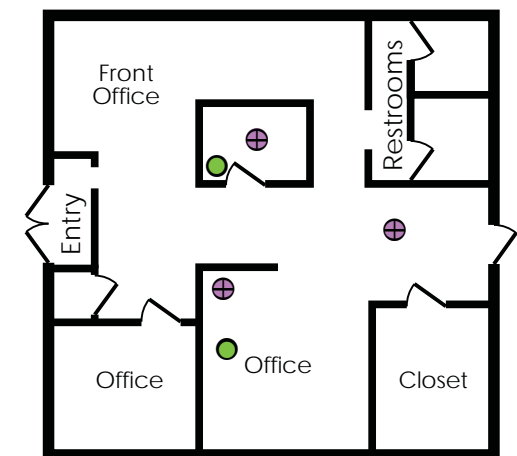
**Legend**



-  Silty Sand
-  Saturated Zone
-  Clay

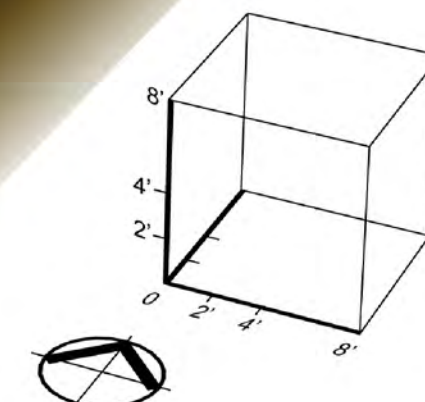
**Conceptual Site Model  
Ridgefield Police Department  
116 N Main Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Floorplan**



-  = Indoor Air Sample Location
-  = Subslab Sample Location



**Proximity Monitoring Well Data:**

**MW01**  
 PCE Concentration: 8.38 ug/L (April 2012)  
 9.67 ug/L (June 2013)  
 TCE Concentration: 0.087 U ug/L (March 2012)  
 0.0830 U ug/L (June 2013)  
 Depth to Groundwater: 3.11 ft (March 2012)  
 6.12 ft (July 2013)

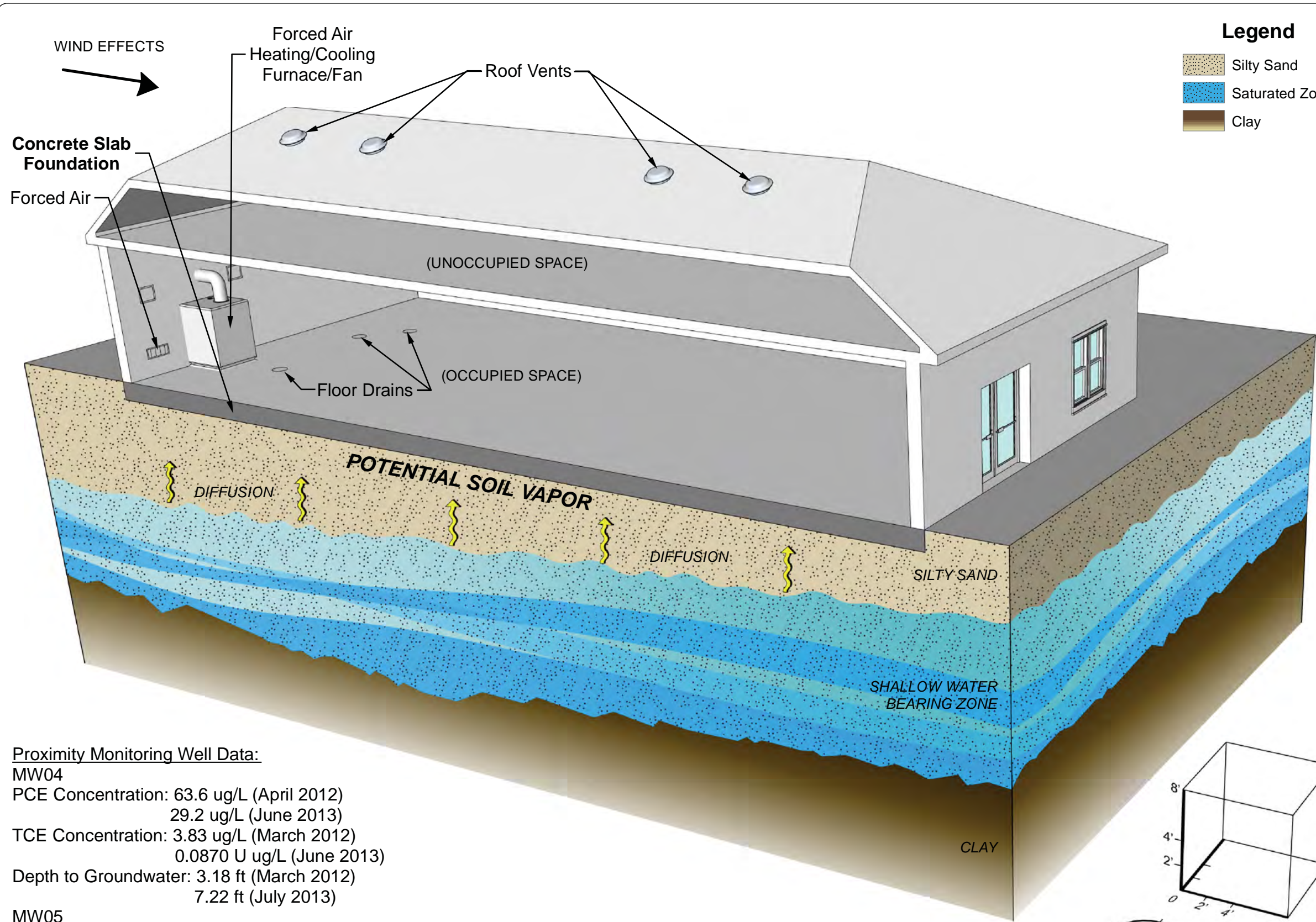
**MW02**  
 PCE Concentration: 0.88 J ug/L (April 2012)  
 0.320 J ug/L (June 2013)  
 TCE Concentration: 0.087 U ug/L (March 2012)  
 0.0870 U ug/L (June 2013)  
 Depth to Groundwater: 1.6 ft (March 2012)  
 7.11 ft (July 2013)

**Building Characteristics:**


Date of Construction: 2001  
 Material of Construction: Wood  
 Type of Foundation: Concrete Slab  
 Heating System: Forced Air/Central Air System  
 Roof Vents: Yes

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.





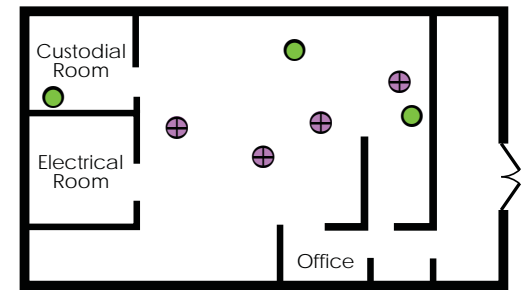
**Legend**



-  Silty Sand
-  Saturated Zone
-  Clay

**Conceptual Site Model  
Ridgefield Post Office  
201-205 N Main Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Floorplan**



-  = Indoor Air Sample Location
-  = Subslab Sample Location

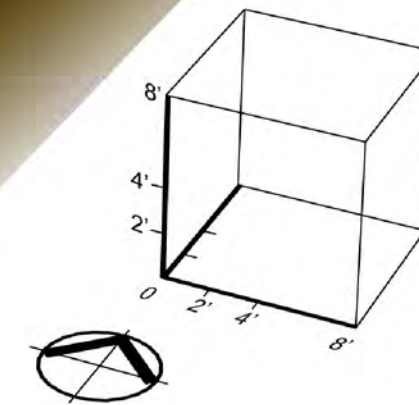
Proximity Monitoring Well Data:

**MW04**  
 PCE Concentration: 63.6 ug/L (April 2012)  
 29.2 ug/L (June 2013)  
 TCE Concentration: 3.83 ug/L (March 2012)  
 0.0870 U ug/L (June 2013)  
 Depth to Groundwater: 3.18 ft (March 2012)  
 7.22 ft (July 2013)

**MW05**  
 PCE Concentration: 1,520 ug/L (April 2012)  
 1,790 J ug/L (June 2013)  
 TCE Concentration: 2.22 ug/L (March 2012)  
 2.70 ug/L (June 2013)  
 Depth to Groundwater: 6.19 ft (March 2012)  
 8.88 ft (July 2013)

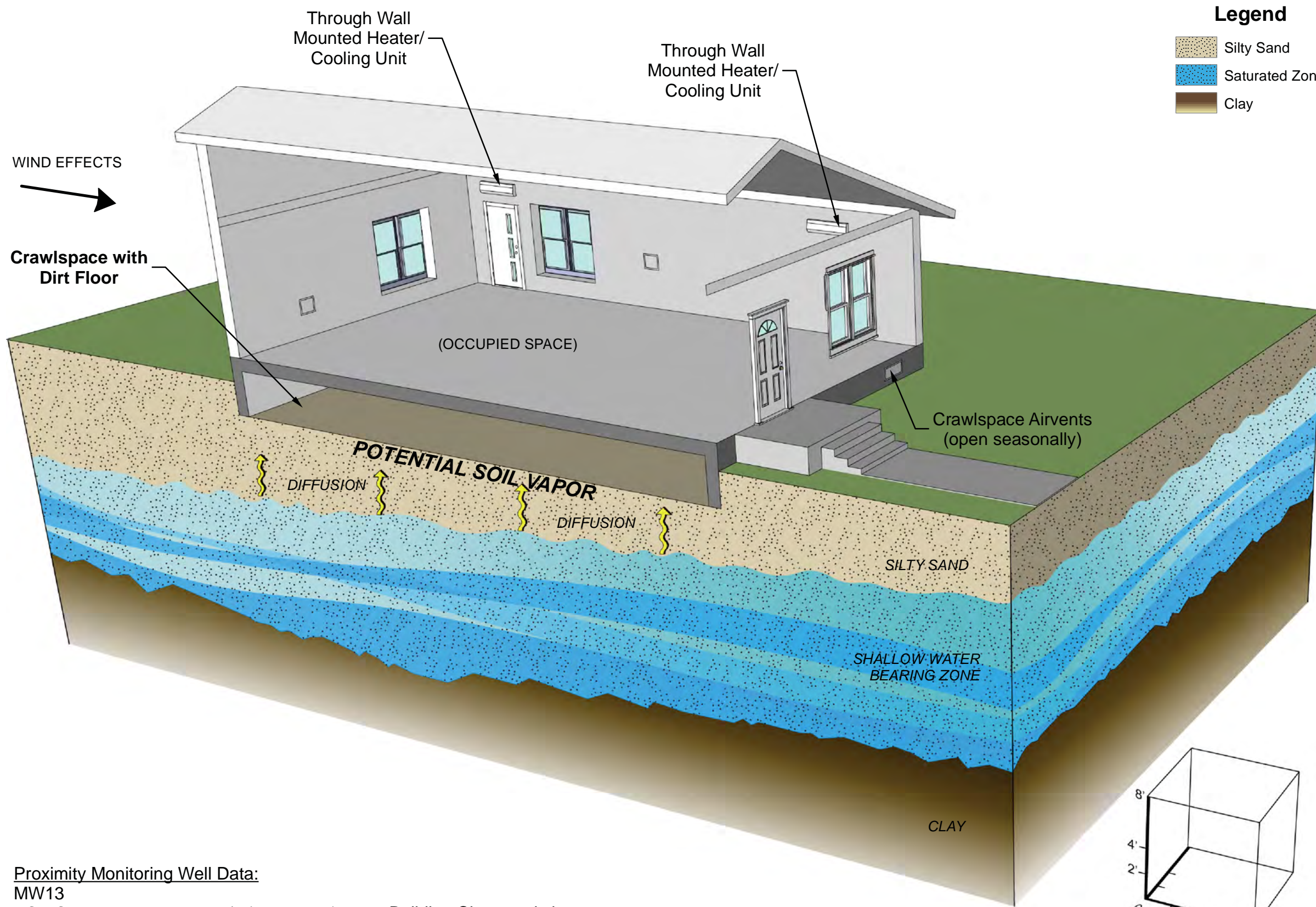
Building Characteristics:

Date of Construction: 1999  
 Material of Construction: Wood  
 Type of Foundation: Concrete Slab  
 Heating System: Forced Air/Central Air Conditioning  
 Roof Vents: Yes



Note: Building model is a representation of the actual structure and is approximate in proportion and shape.





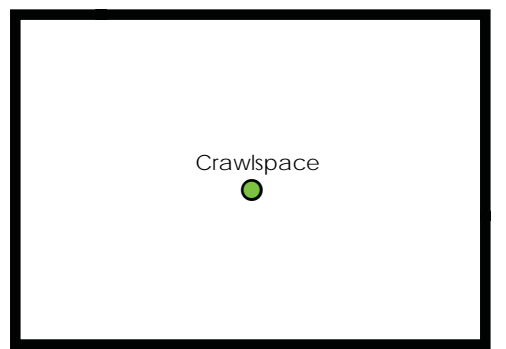
**Legend**

- Silty Sand
- Saturated Zone
- Clay

**Conceptual Site Model  
Private Residence  
304 N 1st Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

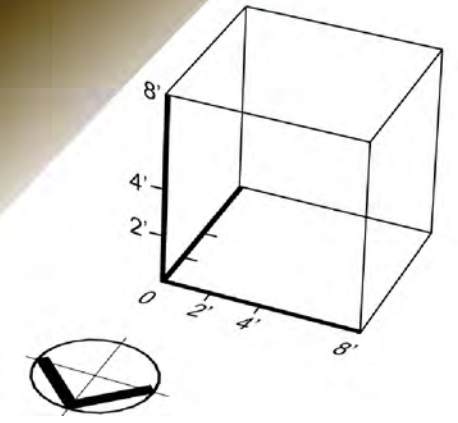
**Floorplan**



● = Indoor Air Sample Location

**Proximity Monitoring Well Data:**  
 MW13  
 PCE Concentration: 447 ug/L (April 2012)  
                                   114 ug/L (June 2013)  
 TCE Concentration: 65.4 ug/L (March 2012)  
                                   21 ug/L (June 2013)  
 Depth to Groundwater: 6 ft (March 2012)  
                                   8.72 ft (July 2013)

**Building Characteristics:**  
 Date of Construction: 1920  
 Material of Construction: Wood  
 Type of Foundation: Crawlspace with Concrete Floor  
 Heating System: Electric Wall/Baseboard  
 Roof Vents: No

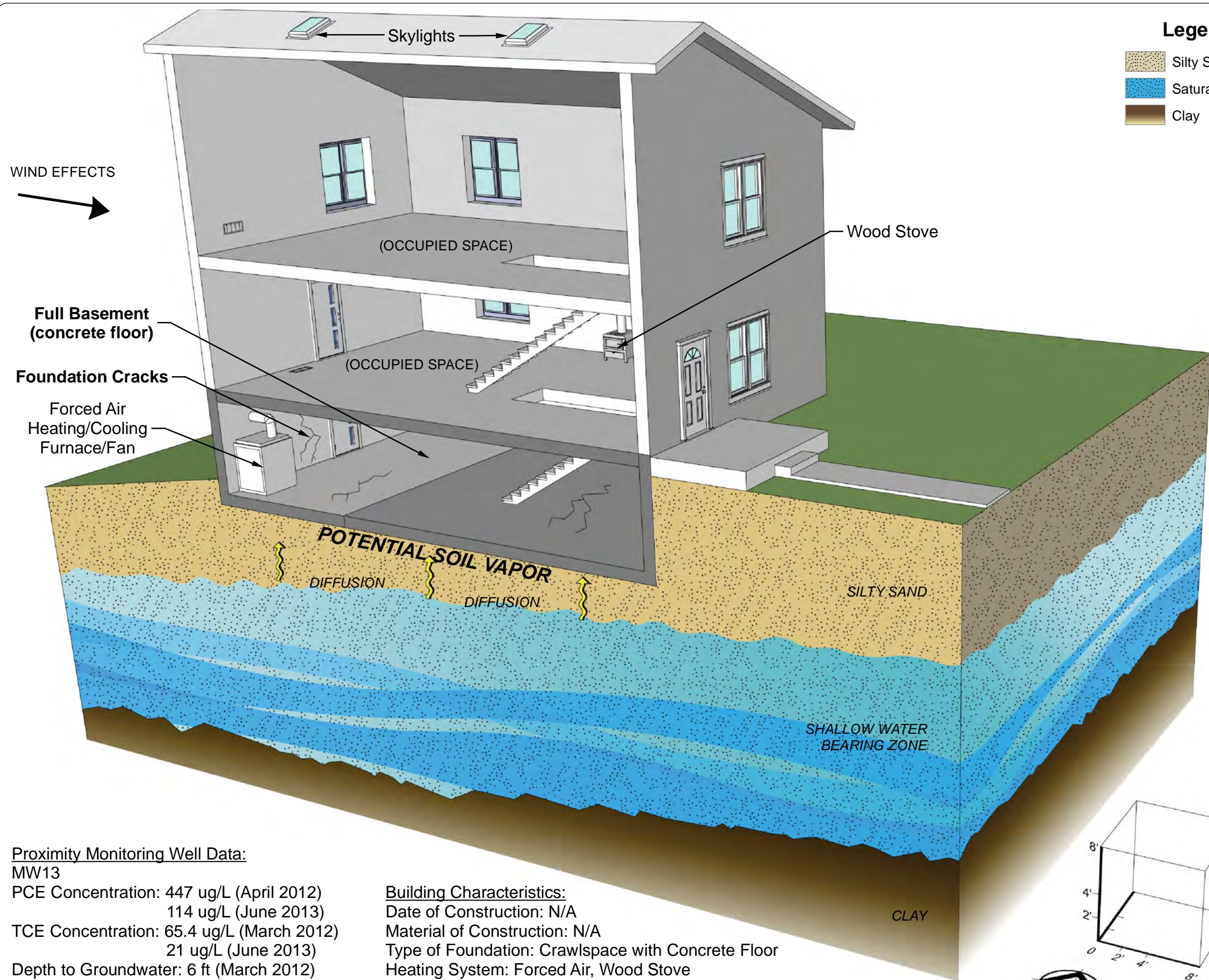


Note: Building model is a representation of the actual structure and is approximate in proportion and shape.

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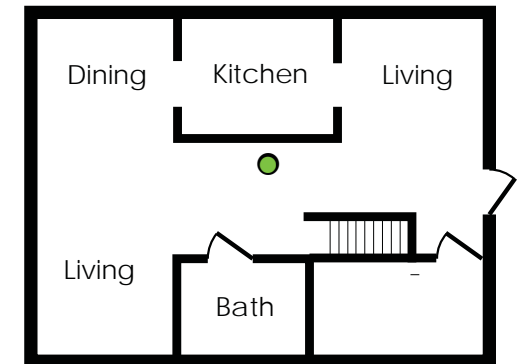
**Legend**

- Silty Sand
- Saturated Zone
- Clay

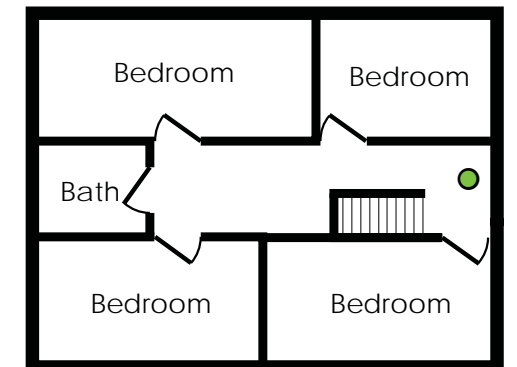
**Conceptual Site Model  
Private Residence  
305 N 1st Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

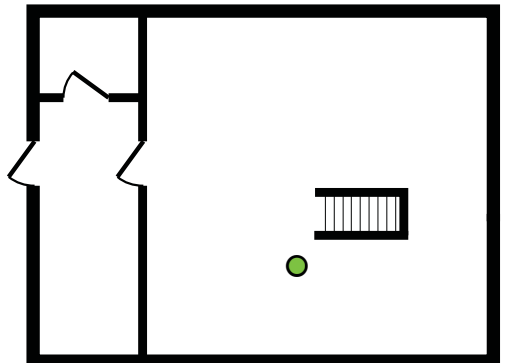
**Floorplan  
1st Floor**



**2nd Floor**



**Basement**



= Indoor Air Sample Location

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.

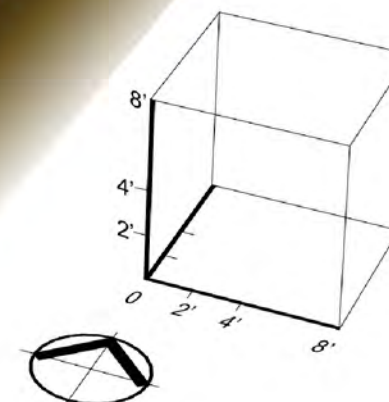
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**Proximity Monitoring Well Data:**

MW13  
 PCE Concentration: 447 ug/L (April 2012)  
 114 ug/L (June 2013)  
 TCE Concentration: 65.4 ug/L (March 2012)  
 21 ug/L (June 2013)  
 Depth to Groundwater: 6 ft (March 2012)  
 8.72 ft (July 2013)

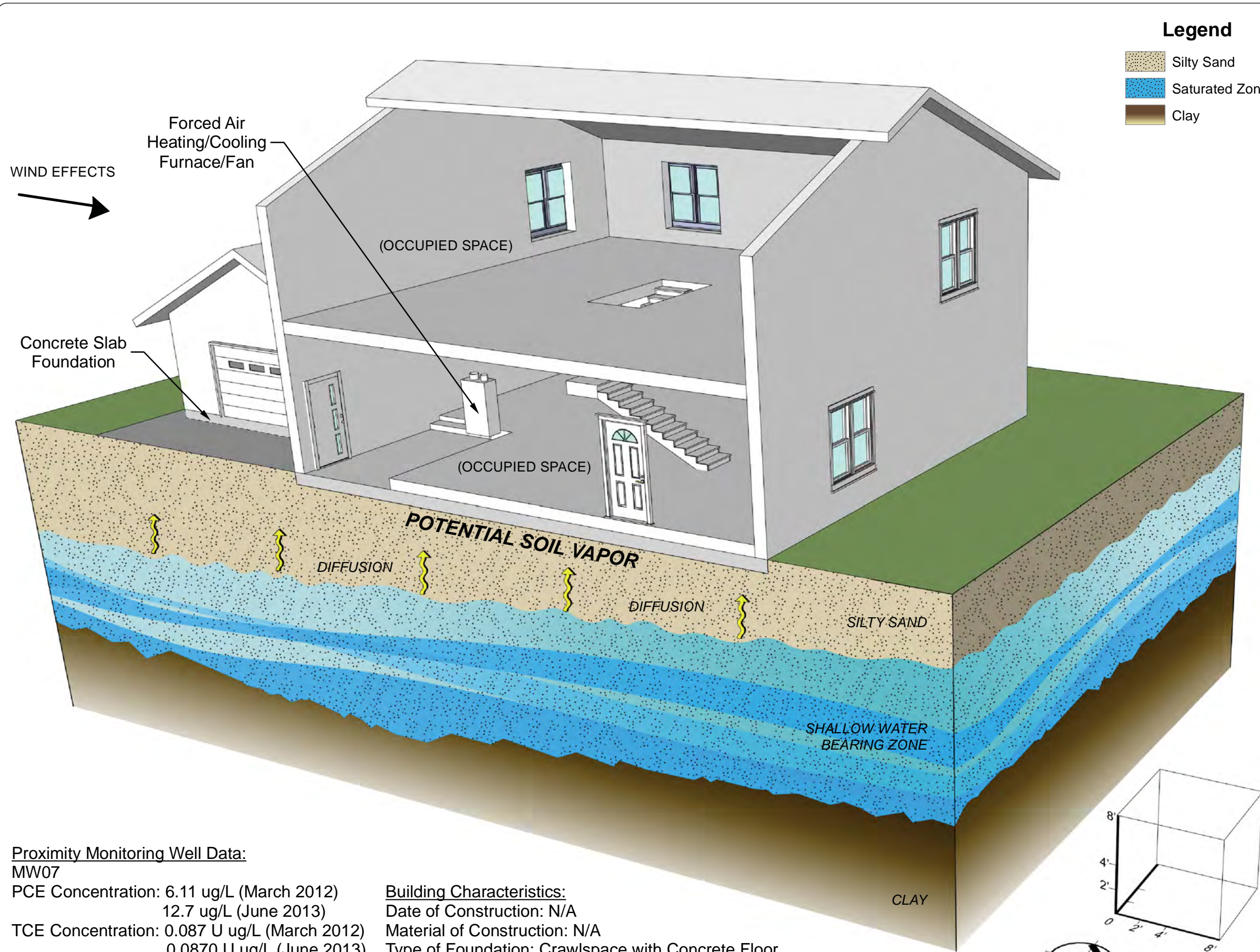
**Building Characteristics:**

Date of Construction: N/A  
 Material of Construction: N/A  
 Type of Foundation: Crawlspace with Concrete Floor  
 Heating System: Forced Air, Wood Stove  
 Roof Vents: Yes (Skylights can be opened)



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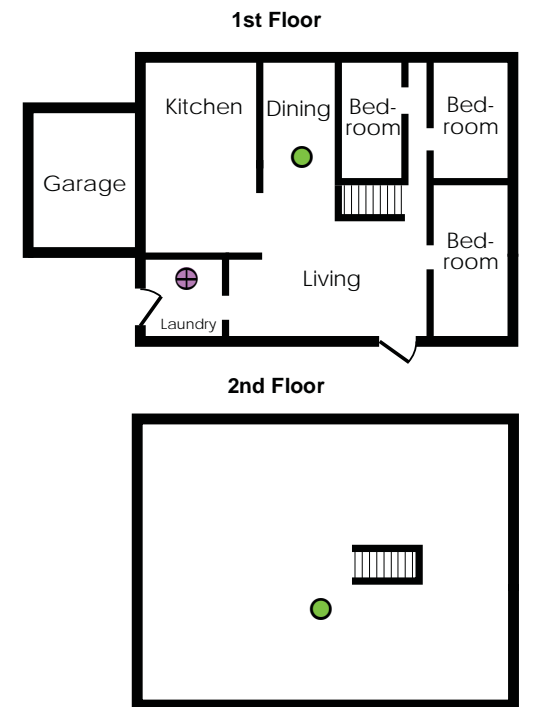
**Legend**



-  Silty Sand
-  Saturated Zone
-  Clay

**Conceptual Site Model  
Private Residence  
305 N Main Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Floorplan**



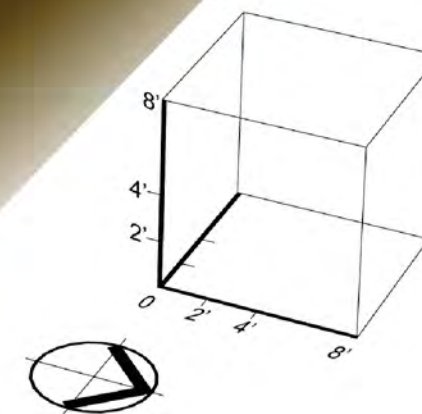
-  = Indoor Air Sample Location
-  = Subslab Sample Location

**Proximity Monitoring Well Data:**

MW07  
 PCE Concentration: 6.11 ug/L (March 2012)  
 12.7 ug/L (June 2013)  
 TCE Concentration: 0.087 U ug/L (March 2012)  
 0.0870 U ug/L (June 2013)  
 Depth to Groundwater: 8.85 ft (March 2012)  
 10.67 ft (July 2013)

**Building Characteristics:**

Date of Construction: N/A  
 Material of Construction: N/A  
 Type of Foundation: Crawlspace with Concrete Floor  
 Heating System: Forced Air, Wood Stove  
 Roof Vents: No

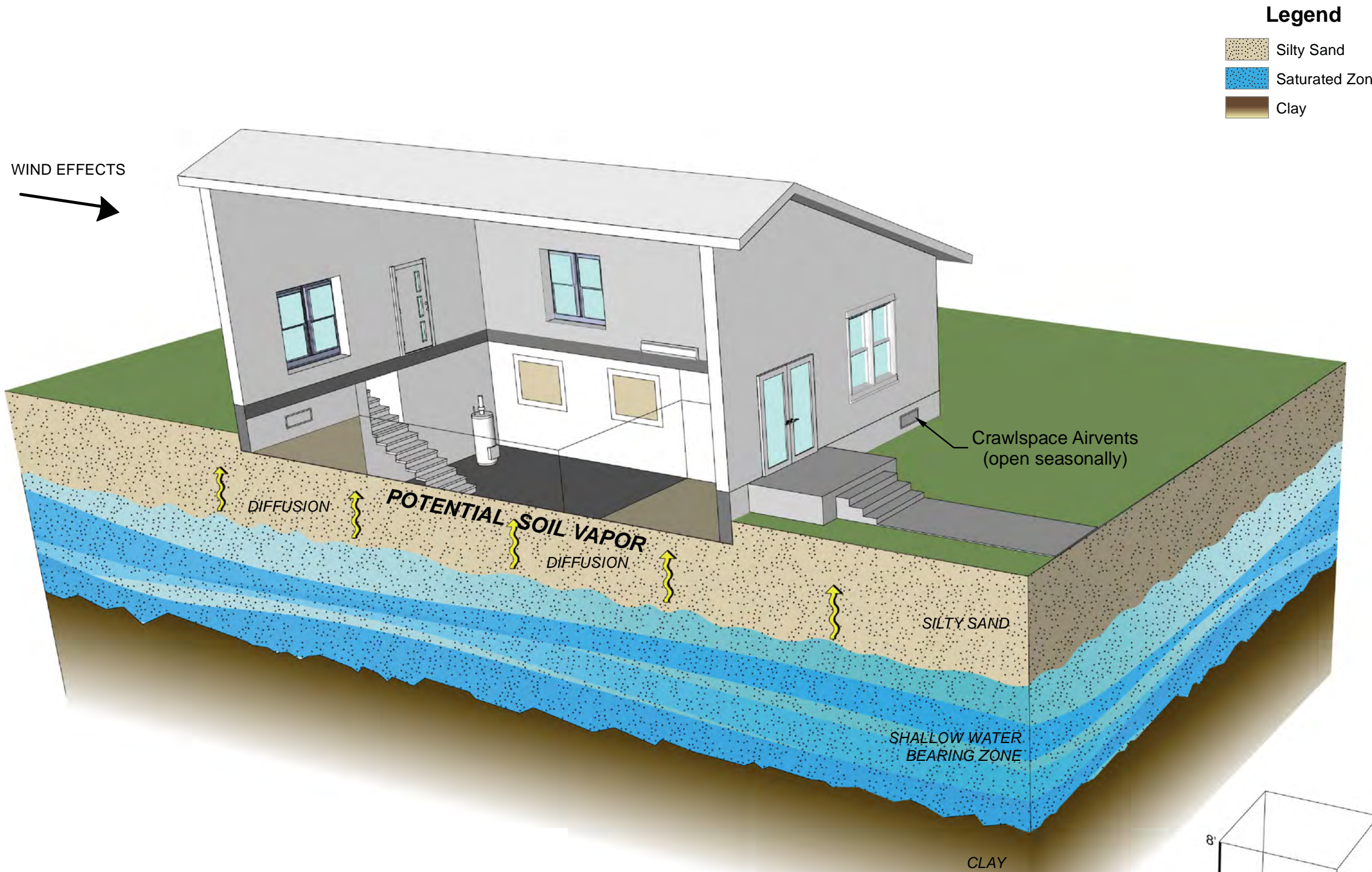


Note: Building model is a representation of the actual structure and is approximate in proportion and shape.




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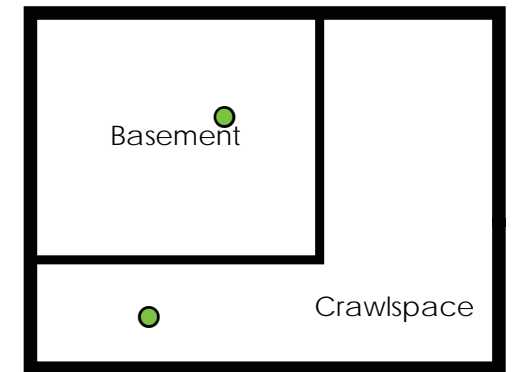
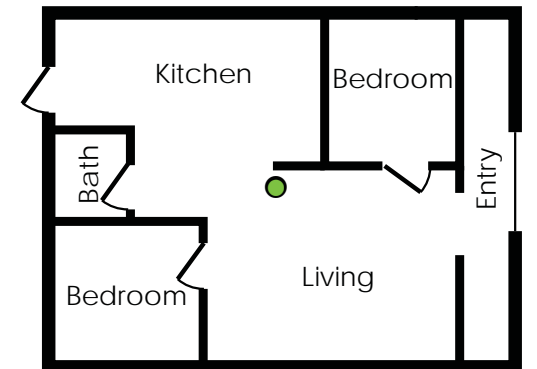
**Legend**

-  Silty Sand
-  Saturated Zone
-  Clay

**Conceptual Site Model  
Private Residence  
322 N 1st Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Floorplan**



● = Indoor Air Sample Location

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.



**Proximity Monitoring Well Data:**

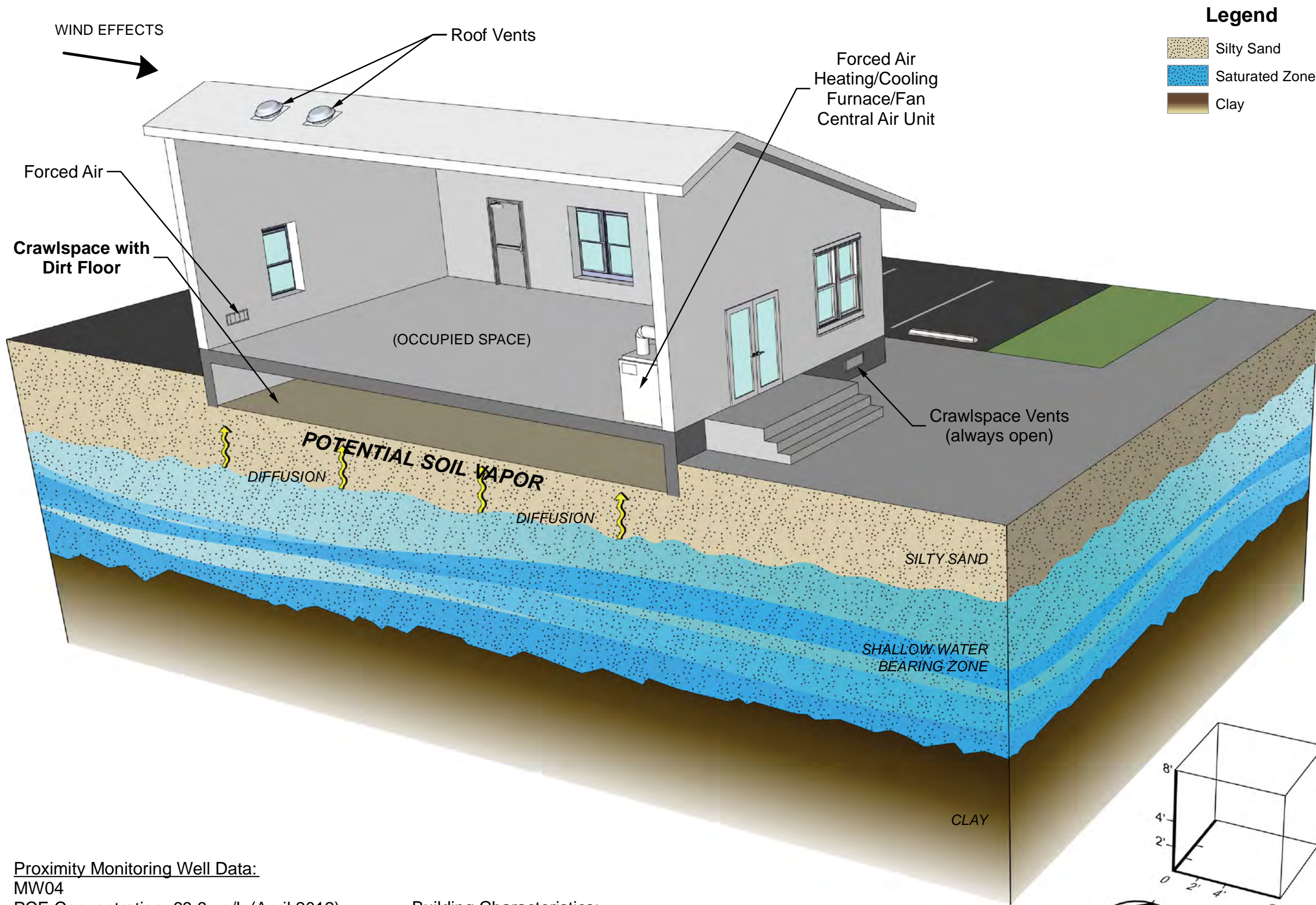
**MW11**  
 PCE Concentration: 32.9 ug/L (March 2012)  
                                   49.8 ug/L (June 2013)  
 TCE Concentration: 1.49 ug/L (March 2012)  
                                   3.56 ug/L (June 2013)  
 Depth to Groundwater: 9.75 ft (March 2012)  
                                   11.4 ft (July 2013)

**Building Characteristics:**

Date of Construction: 1920  
 Material of Construction: Wood  
 Type of Foundation: Crawlspace with Concrete Floor  
 Heating System: Electric Wall/Baseboard  
 Roof Vents: No

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.





**Proximity Monitoring Well Data:**

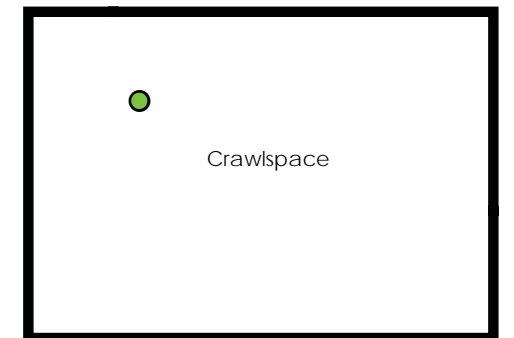
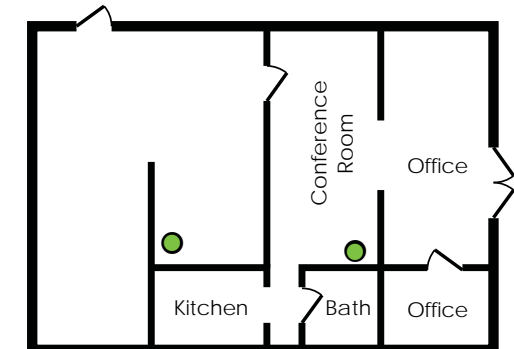
**MW04**  
 PCE Concentration: 63.6 ug/L (April 2012)  
 29.2 ug/L (June 2013)  
 TCE Concentration: 3.83 ug/L (March 2012)  
 0.0870 U ug/L (June 2013)  
 Depth to Groundwater: 3.18 ft (March 2012)  
 7.22 ft (July 2013)

**Building Characteristics:**

Date of Construction: N/A  
 Material of Construction: Wood  
 Type of Foundation: Crawlspace with Dirt Floor  
 Heating System: Forced Air/Central Air System  
 Roof Vents: Yes

**Conceptual Site Model  
 Sales Office  
 127 N Main Ave  
 Vapor Intrusion Investigation  
 Former Park Laundry  
 Ridgefield, Washington**

**Floorplan**



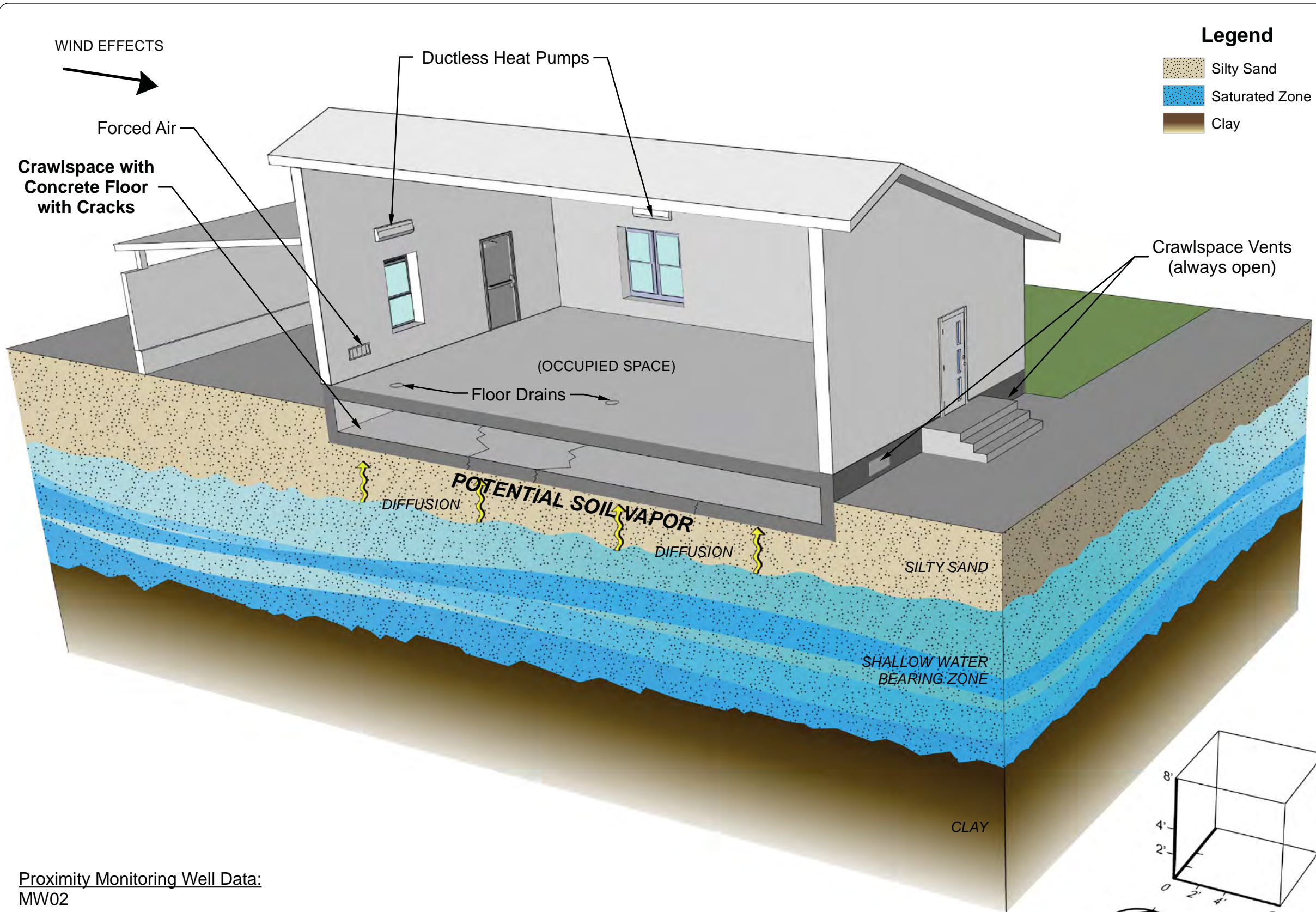
● = Indoor Air Sample Location

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.




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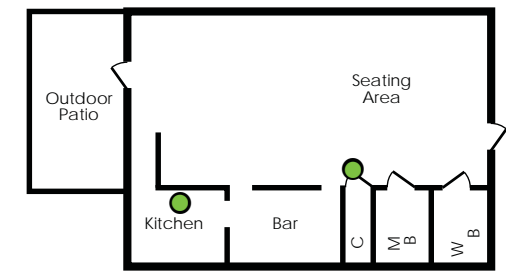
**Legend**

-  Silty Sand
-  Saturated Zone
-  Clay

**Conceptual Site Model  
Sportsman Bar & Grill  
121 N Main Ave**

Vapor Intrusion Investigation  
Former Park Laundry  
Ridgefield, Washington

**Floorplan**



 = Indoor Air Sample Location

**Proximity Monitoring Well Data:**

MW02  
 PCE Concentration: 0.88 J ug/L (April 2012)  
 9.67 ug/L (June 2013)  
 TCE Concentration: 0.087 U ug/L (March 2012)  
 0.0870 U ug/L (June 2013)  
 Depth to Groundwater: 1.6 ft (March 2012)  
 7.11 ft (July 2013)

**Building Characteristics:**

Date of Construction: 1920's  
 Material of Construction: Wood  
 Type of Foundation: Crawl space with Concrete Floor  
 Heating System: Forced Air/Central Air  
 Roof Vents: Yes

Note: Building model is a representation of the actual structure and is approximate in proportion and shape.



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# APPENDIX D

## LABORATORY REPORTS



12/13/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513A

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513A**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	1-IA1-111512	Modified TO-15 SIM	3.0 "Hg	5 psi
02A	1-IA2-111512	Modified TO-15 SIM	0.0 "Hg	5 psi
03A	1-IA3-111512	Modified TO-15 SIM	4.5 "Hg	5 psi
04A	5-IA1-111412	Modified TO-15 SIM	4.0 "Hg	5 psi
05A	5-IA2-111412	Modified TO-15 SIM	3.5 "Hg	5 psi
06A	5-IA3-111412	Modified TO-15 SIM	5.5 "Hg	5 psi
07A	7-IA1-111512	Modified TO-15 SIM	3.5 "Hg	5 psi
08A	7-IA2-111512	Modified TO-15 SIM	3.0 "Hg	5 psi
09A	9-IA1-111212	Modified TO-15 SIM	2.0 "Hg	5 psi
10A	9-IA2-111212	Modified TO-15 SIM	1.0 "Hg	5 psi
11A	24-CS1-111512	Modified TO-15 SIM	5.5 "Hg	5 psi
12A	27-IA1-111512	Modified TO-15 SIM	4.0 "Hg	5 psi
13A	27-IA2-111512	Modified TO-15 SIM	6.0 "Hg	5 psi
14A	27-CS1-111512	Modified TO-15 SIM	0.0 "Hg	5 psi
15A	Lab Blank	Modified TO-15 SIM	NA	NA
16A	CCV	Modified TO-15 SIM	NA	NA
17A	LCS	Modified TO-15 SIM	NA	NA
17AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

DATE: 12/13/12

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513A**

Fourteen 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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 flow controllers for sample collection, the final canister vacuums for samples 1-IA2-111512 and 27-CS1-111512 were measured at ambient pressure in the field. These ambient pressure readings were confirmed by the laboratory upon sample receipt.

### Analytical Notes

Dilution was performed on samples 9-IA1-111212 and 9-IA2-111212 due to the presence of high level non-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

### MODIFIED EPA METHOD TO-15 GC/MS SIM

**Client Sample ID: 1-IA1-111512**

**Lab ID#: 1211513A-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	0.030	0.076	0.12	0.31
Trichloroethene	0.030	0.23	0.16	1.2

**Client Sample ID: 1-IA2-111512**

**Lab ID#: 1211513A-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	0.027	0.050	0.11	0.20
Trichloroethene	0.027	0.19	0.14	1.0

**Client Sample ID: 1-IA3-111512**

**Lab ID#: 1211513A-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.032	0.18	0.17	1.0

**Client Sample ID: 5-IA1-111412**

**Lab ID#: 1211513A-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.031	0.034	0.21	0.23

**Client Sample ID: 5-IA2-111412**

**Lab ID#: 1211513A-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.030	0.031	0.16	0.17
Tetrachloroethene	0.030	0.032	0.21	0.22

**Client Sample ID: 5-IA3-111412**

**Lab ID#: 1211513A-06A**

No Detections Were Found.

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

**Client Sample ID: 7-IA1-111512**

**Lab ID#: 1211513A-07A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.030	0.030	0.12	0.12
Tetrachloroethene	0.030	0.030	0.21	0.20

**Client Sample ID: 7-IA2-111512**

**Lab ID#: 1211513A-08A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.030	0.029 J	0.20	0.20 J

**Client Sample ID: 9-IA1-111212**

**Lab ID#: 1211513A-09A**

No Detections Were Found.

**Client Sample ID: 9-IA2-111212**

**Lab ID#: 1211513A-10A**

No Detections Were Found.

**Client Sample ID: 24-CS1-111512**

**Lab ID#: 1211513A-11A**

No Detections Were Found.

**Client Sample ID: 27-IA1-111512**

**Lab ID#: 1211513A-12A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.031	0.36	0.12	1.5

**Client Sample ID: 27-IA2-111512**

**Lab ID#: 1211513A-13A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
-----------------	--------------------------	----------------------	---------------------------	-----------------------



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

**Client Sample ID: 27-IA2-111512**

**Lab ID#: 1211513A-13A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.034	0.37	0.14	1.5

**Client Sample ID: 27-CS1-111512**

**Lab ID#: 1211513A-14A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	0.013	0.015	0.034	0.039
1,2-Dichloroethane	0.027	0.041	0.11	0.17



Air Toxics

Client Sample ID: 1-IA1-111512

Lab ID#: 1211513A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120407sim	Date of Collection:	11/15/12 1:17:00 PM
Dil. Factor:	1.49	Date of Analysis:	12/4/12 02:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	0.076	0.12	0.31
Trichloroethene	0.030	0.23	0.16	1.2
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Chloroethane	0.074	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	111	70-130



Client Sample ID: 1-IA2-111512

Lab ID#: 1211513A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120408sim	Date of Collection:	11/15/12 1:18:00 PM
Dil. Factor:	1.34	Date of Analysis:	12/4/12 02:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.027	0.050	0.11	0.20
Trichloroethene	0.027	0.19	0.14	1.0
Tetrachloroethene	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Chloroethane	0.067	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	114	70-130



Air Toxics

Client Sample ID: 1-IA3-111512

Lab ID#: 1211513A-03A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120409sim	<b>Date of Collection:</b> 11/15/12 1:20:00 PM
<b>Dil. Factor:</b>	1.58	<b>Date of Analysis:</b> 12/4/12 03:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.032	Not Detected	0.13	Not Detected
Trichloroethene	0.032	0.18	0.17	1.0
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloroethane	0.079	Not Detected	0.21	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	114	70-130



Air Toxics

Client Sample ID: 5-IA1-111412

Lab ID#: 1211513A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120410sim	Date of Collection:	11/14/12 11:16:00 A
Dil. Factor:	1.55	Date of Analysis:	12/4/12 04:18 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	0.034	0.21	0.23
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	113	70-130



Client Sample ID: 5-IA2-111412

Lab ID#: 1211513A-05A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120411sim	<b>Date of Collection:</b> 11/14/12 11:19:00 A
<b>Dil. Factor:</b>	1.52	<b>Date of Analysis:</b> 12/4/12 04:54 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	0.031	0.16	0.17
Tetrachloroethene	0.030	0.032	0.21	0.22
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	119	70-130



Air Toxics

Client Sample ID: 5-IA3-111412

Lab ID#: 1211513A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120412sim	Date of Collection:	11/14/12 11:22:00 A
Dil. Factor:	1.64	Date of Analysis:	12/4/12 05:32 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
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	113	70-130



Air Toxics

Client Sample ID: 7-IA1-111512

Lab ID#: 1211513A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120413sim	Date of Collection:	11/15/12 9:51:00 AM
Dil. Factor:	1.52	Date of Analysis:	12/4/12 06:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	0.030	0.12	0.12
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	0.030	0.21	0.20
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: 7-IA2-111512

Lab ID#: 1211513A-08A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120414sim	<b>Date of Collection:</b> 11/15/12 9:51:00 AM
<b>Dil. Factor:</b>	1.49	<b>Date of Analysis:</b> 12/4/12 07:08 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.038	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	0.029 J	0.20	0.20 J
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
Chloroethane	0.074	Not Detected	0.20	Not Detected

J = Estimated value.

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	110	70-130





Air Toxics

Client Sample ID: 9-IA1-111212

Lab ID#: 1211513A-09A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120419sim	<b>Date of Collection:</b> 11/12/12 10:03:00 A
<b>Dil. Factor:</b>	2.88	<b>Date of Analysis:</b> 12/4/12 10:35 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.029	Not Detected	0.074	Not Detected
1,1-Dichloroethene	0.029	Not Detected	0.11	Not Detected
1,1-Dichloroethane	0.058	Not Detected	0.23	Not Detected
cis-1,2-Dichloroethene	0.058	Not Detected	0.23	Not Detected
1,2-Dichloroethane	0.058	Not Detected	0.23	Not Detected
Trichloroethene	0.058	Not Detected	0.31	Not Detected
Tetrachloroethene	0.058	Not Detected	0.39	Not Detected
trans-1,2-Dichloroethene	0.29	Not Detected	1.1	Not Detected
Chloroethane	0.14	Not Detected	0.38	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	111	70-130



Air Toxics

Client Sample ID: 9-IA2-111212

Lab ID#: 1211513A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120420sim	Date of Collection:	11/12/12 10:02:00 A
Dil. Factor:	1.74	Date of Analysis:	12/4/12 11:11 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	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.69	Not Detected
Chloroethane	0.087	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	113	70-130



Client Sample ID: 24-CS1-111512

Lab ID#: 1211513A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120415sim	Date of Collection:	11/15/12 11:34:00 A
Dil. Factor:	1.64	Date of Analysis:	12/4/12 08:02 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
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	112	70-130



Air Toxics

Client Sample ID: 27-IA1-111512

Lab ID#: 1211513A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120416sim	Date of Collection:	11/15/12 8:26:00 AM
Dil. Factor:	1.55	Date of Analysis:	12/4/12 08:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	0.36	0.12	1.5
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	109	70-130





Air Toxics

Client Sample ID: 27-IA2-111512

Lab ID#: 1211513A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v120417sim	Date of Collection:	11/15/12 8:31:00 AM
Dil. Factor:	1.68	Date of Analysis:	12/4/12 09:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	Not Detected	0.13	Not Detected
1,2-Dichloroethane	0.034	0.37	0.14	1.5
Trichloroethene	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Chloroethane	0.084	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: 27-CS1-111512

Lab ID#: 1211513A-14A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120418sim	<b>Date of Collection:</b> 11/15/12 8:53:00 AM
<b>Dil. Factor:</b>	1.34	<b>Date of Analysis:</b> 12/4/12 09:59 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.013	0.015	0.034	0.039
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.027	0.041	0.11	0.17
Trichloroethene	0.027	Not Detected	0.14	Not Detected
Tetrachloroethene	0.027	Not Detected	0.18	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Chloroethane	0.067	Not Detected	0.18	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	112	70-130

Client Sample ID: Lab Blank

Lab ID#: 1211513A-15A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v120406asim	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	1.00	<b>Date of Analysis:</b> 12/4/12 01:32 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
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: CCV

Lab ID#: 1211513A-16A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	v120402sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 09:25 AM

Compound	%Recovery
Vinyl Chloride	78
1,1-Dichloroethene	88
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	92
1,2-Dichloroethane	93
Trichloroethene	81
Tetrachloroethene	96
trans-1,2-Dichloroethene	91
Chloroethane	88

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	103	70-130



Client Sample ID: LCS

Lab ID#: 1211513A-17A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	v120404sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 11:20 AM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	93
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	92
1,2-Dichloroethane	91
Trichloroethene	80
Tetrachloroethene	93
trans-1,2-Dichloroethene	101
Chloroethane	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCSD

Lab ID#: 1211513A-17AA

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	v120405sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 12:39 PM

Compound	%Recovery
Vinyl Chloride	80
1,1-Dichloroethene	93
1,1-Dichloroethane	90
cis-1,2-Dichloroethene	92
1,2-Dichloroethane	91
Trichloroethene	80
Tetrachloroethene	91
trans-1,2-Dichloroethene	102
Chloroethane	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	112	70-130

# Air Toxics LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

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Page 1 of 5

Project Manager Bill Beattie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maufoster.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-944-9715 <sup>suite 200</sup> Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas:  N <sub>2</sub> He
P.O. # _____		
Project # <u>8006-31-01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	1-IA1-111512	33558	11/15/12	13:17	TO-15 SIM <small>see notes</small>	-30	-4.5		
02A	1-IA2-111512	3748	11/15/12	13:18	hold	-30	0		
03A	1-IA3-111512	34306	11/15/12	13:20	TO-15 SIM <small>see notes</small>	-29	-4.5		
04A	5-IA1-111412	424	11/14/12	11:16		-30	-3.5		
05A	5-IA2-111412	3734	11/14/12	11:19		-30	-3.5		
06A	5-IA3-111412	4383	11/14/12	11:22		-30	-5		
07A	7-IA1-111512	14122	11/15/12	09:51		-30	-5		
08A	7-IA2-111512	35241	11/15/12	09:51		-30	-2.5		
09A	9-IA1-111212	33565	11/12/12	10:03		-28	-3.5		
10A	9-IA2-111212	32130	11/12/12	10:02		-30	-2		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>	Notes: TO-15 SIM for select compounds, see attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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# Air Toxics LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 2 of 3

Project Manager Bill Beattie / Meredith D. Anderson  
 Collected by: (Print and Sign) Thomas Ashton  
 Company UFA Email tashton@maui-foster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97229  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	P.O. # _____	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Lab Use Only
	Project # <u>8006-31.01-05</u>		Pressurized by:
Project Name <u>Park Laundry</u>			Date:
			Pressurization Gas: <u>N<sub>2</sub></u> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
12A	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
13A	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
14A	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	0A1-111512	20438	11/15/12	09:37		-29.5	-5		
16A	<del>0A2-111512</del> 0A1-111612	31435	11/16/12	08:50		-29	-4.5		
17A	<del>0A3-339</del> 0A3-111512	33938	11/15/12	09:18		-30	-5		
18A	0A3-111612	9925	11/16/12	09:06		-30	-5		
19A	0A2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	0A2-111612	9417	11/16/12	08:59	hold	-30	0		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
TO-15 SIM for select compounds.  
see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>WPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
 Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
 CAS = Chemical Abstract Service  
 NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/14/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513B

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513B**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/14/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16A	OA1-111612	Modified TO-15 SIM	4.0 "Hg	5 psi
17A	OA3-111512	Modified TO-15 SIM	4.0 "Hg	5 psi
18A	Lab Blank	Modified TO-15 SIM	NA	NA
19A	CCV	Modified TO-15 SIM	NA	NA
20A	LCS	Modified TO-15 SIM	NA	NA
20AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 12/14/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513B**

Two 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**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.



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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: OA1-111612**

**Lab ID#: 1211513B-16A**

No Detections Were Found.

**Client Sample ID: OA3-111512**

**Lab ID#: 1211513B-17A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.031	0.064	0.12	0.26



Air Toxics

Client Sample ID: OA1-111612

Lab ID#: 1211513B-16A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120417sim	Date of Collection:	11/16/12 8:50:00 AM
Dil. Factor:	1.55	Date of Analysis:	12/5/12 07:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: OA3-111512

Lab ID#: 1211513B-17A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120418sim	Date of Collection:	11/15/12 9:18:00 AM
Dil. Factor:	1.55	Date of Analysis:	12/5/12 08:09 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	0.064	0.12	0.26
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130





Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1211513B-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120416sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/4/12 10:19 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
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: CCV

Lab ID#: 1211513B-19A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120412sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 06:01 PM

Compound	%Recovery
Vinyl Chloride	91
1,1-Dichloroethene	102
1,1-Dichloroethane	117
cis-1,2-Dichloroethene	108
1,2-Dichloroethane	125
Trichloroethene	101
Tetrachloroethene	98
trans-1,2-Dichloroethene	108
Chloroethane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1211513B-20A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120413sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 06:51 PM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	102
1,1-Dichloroethane	113
cis-1,2-Dichloroethene	101
1,2-Dichloroethane	120
Trichloroethene	95
Tetrachloroethene	86
trans-1,2-Dichloroethene	112
Chloroethane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: LCSD

Lab ID#: 1211513B-20AA

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120414sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 07:46 PM

Compound	%Recovery
Vinyl Chloride	104
1,1-Dichloroethene	95
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	99
1,2-Dichloroethane	116
Trichloroethene	96
Tetrachloroethene	89
trans-1,2-Dichloroethene	105
Chloroethane	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	101	70-130



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beakie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maulfooster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	P.O. # _____	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Lab Use Only Pressurized by:
	Project # <u>8006.31.01-05</u>		Date:
Project Name <u>Park Laundry</u>			Pressurization Gas: N <sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
<del>12A</del>	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
<del>13A</del>	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
<del>14A</del>	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	OA1-111512	20938	11/15/12	09:37		-29.5	-5		
16A	<del>OA2-111512</del> OA1-111612	31435	11/15/12	08:50		-29	-4.5		
17A	<del>OA3-339</del> OA3-111512	33938	11/15/12	09:18		-30	-5		
18A	OA3-111612	9925	11/16/12	09:06		-30	-5		
19A	OA2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	OA2-111612	9417	11/16/12	08:59	hold	-30	0		

11/17  
11/20

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
TO-15 SIM for select compounds.  
see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE
NOTES: Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012. CAS = Chemical Abstract Service NE = Not Established $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.				

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/26/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513C

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513C**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/26/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
15A	OA1-111512	Modified TO-15 SIM	3.5 "Hg	5 psi
18A	OA3-111612	Modified TO-15 SIM	3.5 "Hg	5 psi
19A	OA2-111512	Modified TO-15 SIM	0.8 psi	5 psi
20A	OA2-111612	Modified TO-15 SIM	2.0 "Hg	5 psi
21A	Lab Blank	Modified TO-15 SIM	NA	NA
22A	CCV	Modified TO-15 SIM	NA	NA
23A	LCS	Modified TO-15 SIM	NA	NA
23AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 12/26/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513C**

Four 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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 flow controllers for sample collection, the final canister vacuum for sample OA2-111512 was measured at ambient pressure in the field. This ambient pressure reading was confirmed by the laboratory upon sample receipt.

Samples OA1-111512, OA3-111612, OA2-111512 and OA2-111612 were removed from "Hold" and placed on "Active" status per client request on December 14, 2012.

**Analytical Notes**

There were no analytical discrepancies.

**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





Air Toxics

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

**Client Sample ID: OA1-111512**

**Lab ID#: 1211513C-15A**

No Detections Were Found.

**Client Sample ID: OA3-111612**

**Lab ID#: 1211513C-18A**

No Detections Were Found.

**Client Sample ID: OA2-111512**

**Lab ID#: 1211513C-19A**

No Detections Were Found.

**Client Sample ID: OA2-111612**

**Lab ID#: 1211513C-20A**

No Detections Were Found.



Air Toxics

Client Sample ID: OA1-111512

Lab ID#: 1211513C-15A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	v121407sim	<b>Date of Collection:</b> 11/15/12 9:37:00 AM
<b>Dil. Factor:</b>	1.52	<b>Date of Analysis:</b> 12/14/12 11:29 AM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	111	70-130



Air Toxics

Client Sample ID: OA3-111612

Lab ID#: 1211513C-18A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v121408sim	Date of Collection:	11/16/12 9:06:00 AM
Dil. Factor:	1.52	Date of Analysis:	12/14/12 12:22 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	Not Detected	0.12	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: OA2-111512

Lab ID#: 1211513C-19A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v121409sim	Date of Collection:	11/15/12 9:27:00 AM
Dil. Factor:	1.27	Date of Analysis:	12/14/12 01:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.013	Not Detected	0.032	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.050	Not Detected
1,1-Dichloroethane	0.025	Not Detected	0.10	Not Detected
cis-1,2-Dichloroethene	0.025	Not Detected	0.10	Not Detected
1,2-Dichloroethane	0.025	Not Detected	0.10	Not Detected
Trichloroethene	0.025	Not Detected	0.14	Not Detected
Tetrachloroethene	0.025	Not Detected	0.17	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.50	Not Detected
Chloroethane	0.064	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: OA2-111612

Lab ID#: 1211513C-20A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v121410sim	Date of Collection:	11/16/12 8:59:00 AM
Dil. Factor:	1.44	Date of Analysis:	12/14/12 02:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.037	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.057	Not Detected
1,1-Dichloroethane	0.029	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.029	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.029	Not Detected	0.12	Not Detected
Trichloroethene	0.029	Not Detected	0.15	Not Detected
Tetrachloroethene	0.029	Not Detected	0.20	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.57	Not Detected
Chloroethane	0.072	Not Detected	0.19	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	111	70-130





Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1211513C-21A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	v121406sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/14/12 10:32 AM

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
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	113	70-130

Client Sample ID: CCV

Lab ID#: 1211513C-22A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	<b>v121402sim</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 12/14/12 07:14 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	78
1,1-Dichloroethene	83
1,1-Dichloroethane	84
cis-1,2-Dichloroethene	87
1,2-Dichloroethane	80
Trichloroethene	73
Tetrachloroethene	81
trans-1,2-Dichloroethene	86
Chloroethane	87

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCS

Lab ID#: 1211513C-23A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	v121403sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/14/12 08:15 AM

Compound	%Recovery
Vinyl Chloride	77
1,1-Dichloroethene	84
1,1-Dichloroethane	80
cis-1,2-Dichloroethene	84
1,2-Dichloroethane	75
Trichloroethene	72
Tetrachloroethene	76
trans-1,2-Dichloroethene	92
Chloroethane	81

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	109	70-130

Client Sample ID: LCSD

Lab ID#: 1211513C-23AA

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	<b>v121404sim</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 12/14/12 09:00 AM

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	84
1,1-Dichloroethene	91
1,1-Dichloroethane	88
cis-1,2-Dichloroethene	91
1,2-Dichloroethane	82
Trichloroethene	79
Tetrachloroethene	85
trans-1,2-Dichloroethene	100
Chloroethane	88

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	109	70-130



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beakie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maulfooster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

**Project Info:**  
 P.O. # \_\_\_\_\_  
 Project # 8006.31.01-05  
 Project Name Park Laundry

**Turn Around Time:**  
 Normal  
 Rush  
specify  
 Lab Use Only  
 Pressurized by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Pressurization Gas: N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
<del>12A</del>	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
<del>13A</del>	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
<del>14A</del>	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	OA1-111512	20938	11/15/12	09:37		-29.5	-5		
16A	<del>OA2-111512</del> OA1-111612	31435	11/15/12	08:50		-29	-4.5		
17A	<del>OA3-339</del> OA3-111512	33938	11/15/12	09:18		-30	-5		
18A	OA3-111612	9925	11/16/12	09:06		-30	-5		
19A	OA2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	OA2-111612	9417	11/16/12	08:59	hold	-30	0		

11/20  
11/20

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TO-15 SIM for select compounds.  
 see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE
NOTES: Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012. CAS = Chemical Abstract Service NE = Not Established $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.				

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/10/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513D

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513D**

Work Order Summary

**CLIENT:** Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland, OR 97209

**BILL TO:** Accounts Payable  
Maul Foster and Alongi Inc.  
400 E. Mill Plain Blvd  
Suite 400  
Vancouver, WA 98660

**PHONE:** 971-544-2139

**P.O. #**

**FAX:** 971-544-2140

**PROJECT #** 8006.31.01-05 Park Laundry

**DATE RECEIVED:** 11/26/2012

**CONTACT:** Kelly Buettner

**DATE COMPLETED:** 12/13/2012

**DATE REISSUED:** 01/10/2013

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	1-IA1-111512	Modified TO-15 SIM	3.0 "Hg	5 psi
02A	1-IA2-111512	Modified TO-15 SIM	0.0 "Hg	5 psi
03A	1-IA3-111512	Modified TO-15 SIM	4.5 "Hg	5 psi
04A	5-IA1-111412	Modified TO-15 SIM	4.0 "Hg	5 psi
05A	5-IA2-111412	Modified TO-15 SIM	3.5 "Hg	5 psi
06A	5-IA3-111412	Modified TO-15 SIM	5.5 "Hg	5 psi
07A	7-IA1-111512	Modified TO-15 SIM	3.5 "Hg	5 psi
08A	7-IA2-111512	Modified TO-15 SIM	3.0 "Hg	5 psi
09A	9-IA1-111212	Modified TO-15 SIM	2.0 "Hg	5 psi
10A	9-IA2-111212	Modified TO-15 SIM	1.0 "Hg	5 psi
11A	24-CS1-111512	Modified TO-15 SIM	5.5 "Hg	5 psi
12A	27-IA1-111512	Modified TO-15 SIM	4.0 "Hg	5 psi
13A	27-IA2-111512	Modified TO-15 SIM	6.0 "Hg	5 psi
14A	27-CS1-111512	Modified TO-15 SIM	0.0 "Hg	5 psi
15A	Lab Blank	Modified TO-15 SIM	NA	NA
16A	CCV	Modified TO-15 SIM	NA	NA
17A	LCS	Modified TO-15 SIM	NA	NA
17AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

DATE: 01/10/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513D**

Fourteen 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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 flow controllers for sample collection, the final canister vacuums for samples 1-IA2-111512 and 27-CS1-111512 were measured at ambient pressure in the field. These ambient pressure readings were confirmed by the laboratory upon sample receipt.

### Analytical Notes

Dilution was performed on samples 9-IA1-111212 and 9-IA2-111212 due to the presence of high level non-target species.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211513A on 12-13-12.

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

**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

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





Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	1-IA1-111512	<b>Date/Time Analyzed:</b>	12/4/12 02:23 PM
<b>Lab ID:</b>	1211513D-01A	<b>Dilution Factor:</b>	1.49
<b>Date/Time Collecte</b>	11/15/12 01:17 PM	<b>Instrument/Filename:</b>	msdv.i / v120407simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0075	0.030	0.12	0.31
Trichloroethene	79-01-6	0.0038	0.040	0.16	1.2

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	111
Toluene-d8	2037-26-5	70-130	101



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	1-IA2-111512	<b>Date/Time Analyzed:</b>	12/4/12 02:59 PM
<b>Lab ID:</b>	1211513D-02A	<b>Dilution Factor:</b>	1.34
<b>Date/Time Collecte</b>	11/15/12 01:18 PM	<b>Instrument/Filename:</b>	msdv.i / v120408simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.027	0.11	0.20
Trichloroethene	79-01-6	0.0034	0.036	0.14	1.0

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	114
Toluene-d8	2037-26-5	70-130	102



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	1-IA3-111512	<b>Date/Time Analyzed:</b>	12/4/12 03:39 PM
<b>Lab ID:</b>	1211513D-03A	<b>Dilution Factor:</b>	1.58
<b>Date/Time Collecte</b>	11/15/12 01:20 PM	<b>Instrument/Filename:</b>	msdv.i / v120409simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0080	0.032	0.13	0.086 J
Trichloroethene	79-01-6	0.0040	0.042	0.17	1.0

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	114
Toluene-d8	2037-26-5	70-130	102



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	5-IA1-111412	<b>Date/Time Analyzed:</b>	12/4/12 04:18 PM
<b>Lab ID:</b>	1211513D-04A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	11/14/12 11:16 AM	<b>Instrument/Filename:</b>	msdv.i / v120410simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0078	0.031	0.12	0.093 J
Trichloroethene	79-01-6	0.0039	0.042	0.17	0.063 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	113
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	5-IA2-111412	<b>Date/Time Analyzed:</b>	12/4/12 04:54 PM
<b>Lab ID:</b>	1211513D-05A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/14/12 11:19 AM	<b>Instrument/Filename:</b>	msdv.i / v120411simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0077	0.031	0.12	0.11 J
Trichloroethene	79-01-6	0.0038	0.041	0.16	0.17

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	119
Toluene-d8	2037-26-5	70-130	104



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	5-IA3-111412	<b>Date/Time Analyzed:</b>	12/4/12 05:32 PM
<b>Lab ID:</b>	1211513D-06A	<b>Dilution Factor:</b>	1.64
<b>Date/Time Collecte</b>	11/14/12 11:22 AM	<b>Instrument/Filename:</b>	msdv.i / v120412simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0083	0.033	0.13	0.074 J
Trichloroethene	79-01-6	0.0041	0.044	0.18	0.058 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	113
Toluene-d8	2037-26-5	70-130	102



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	7-IA1-111512	<b>Date/Time Analyzed:</b>	12/4/12 06:12 PM
<b>Lab ID:</b>	1211513D-07A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/15/12 09:51 AM	<b>Instrument/Filename:</b>	msdv.i / v120413simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0077	0.031	0.12	0.12
Trichloroethene	79-01-6	0.0038	0.041	0.16	0.12 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	7-IA2-111512	<b>Date/Time Analyzed:</b>	12/4/12 07:08 PM
<b>Lab ID:</b>	1211513D-08A	<b>Dilution Factor:</b>	1.49
<b>Date/Time Collecte</b>	11/15/12 09:51 AM	<b>Instrument/Filename:</b>	msdv.i / v120414simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0075	0.030	0.12	0.080 J
Trichloroethene	79-01-6	0.0038	0.040	0.16	0.074 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	9-IA1-111212	<b>Date/Time Analyzed:</b>	12/4/12 10:35 PM
<b>Lab ID:</b>	1211513D-09A	<b>Dilution Factor:</b>	2.88
<b>Date/Time Collecte</b>	11/12/12 10:03 AM	<b>Instrument/Filename:</b>	msdv.i / v120419simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.014	0.058	0.23	0.16 J
Trichloroethene	79-01-6	0.0073	0.077	0.31	0.12 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	111
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	9-IA2-111212	<b>Date/Time Analyzed:</b>	12/4/12 11:11 PM
<b>Lab ID:</b>	1211513D-10A	<b>Dilution Factor:</b>	1.74
<b>Date/Time Collecte</b>	11/12/12 10:02 AM	<b>Instrument/Filename:</b>	msdv.i / v120420simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0088	0.035	0.14	0.12 J
Trichloroethene	79-01-6	0.0044	0.047	0.19	0.056 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	113
Toluene-d8	2037-26-5	70-130	103





MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	24-CS1-111512	<b>Date/Time Analyzed:</b>	12/4/12 08:02 PM
<b>Lab ID:</b>	1211513D-11A	<b>Dilution Factor:</b>	1.64
<b>Date/Time Collecte</b>	11/15/12 11:34 AM	<b>Instrument/Filename:</b>	msdv.i / v120415simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0083	0.033	0.13	0.061 J
Trichloroethene	79-01-6	0.0041	0.044	0.18	0.051 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	109
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	103



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	27-IA1-111512	<b>Date/Time Analyzed:</b>	12/4/12 08:45 PM
<b>Lab ID:</b>	1211513D-12A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	11/15/12 08:26 AM	<b>Instrument/Filename:</b>	msdv.i / v120416simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0078	0.031	0.12	1.5
Trichloroethene	79-01-6	0.0039	0.042	0.17	0.083 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	103



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	27-IA2-111512	<b>Date/Time Analyzed:</b>	12/4/12 09:23 PM
<b>Lab ID:</b>	1211513D-13A	<b>Dilution Factor:</b>	1.68
<b>Date/Time Collecte</b>	11/15/12 08:31 AM	<b>Instrument/Filename:</b>	msdv.i / v120417simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0085	0.034	0.14	1.5
Trichloroethene	79-01-6	0.0042	0.045	0.18	0.050 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	27-CS1-111512	<b>Date/Time Analyzed:</b>	12/4/12 09:59 PM
<b>Lab ID:</b>	1211513D-14A	<b>Dilution Factor:</b>	1.34
<b>Date/Time Collecte</b>	11/15/12 08:53 AM	<b>Instrument/Filename:</b>	msdv.i / v120418simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.027	0.11	0.17
Trichloroethene	79-01-6	0.0034	0.036	0.14	0.053 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	12/4/12 01:32 PM
<b>Lab ID:</b>	1211513D-15A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120406simD
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0050	0.020	0.081	0.025 J
Trichloroethene	79-01-6	0.0025	0.027	0.11	0.052 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	106

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	12/4/12 09:25 AM
<b>Lab ID:</b>	1211513D-16A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120402sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	93
Trichloroethene	79-01-6	81

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	109
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	101



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	12/4/12 11:20 AM
<b>Lab ID:</b>	1211513D-17A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120404sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	91
Trichloroethene	79-01-6	80

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	101

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	12/4/12 12:39 PM
<b>Lab ID:</b>	1211513D-17AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120405sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	91
Trichloroethene	79-01-6	80

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	102

\* % Recovery is calculated using unrounded analytical results.

# Air Toxics LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 1 of 5

Project Manager Bill Beattie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashon@maufoster.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-944-9715 <sup>suite 200</sup> Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas:  N <sub>2</sub> He
P.O. # _____		
Project # <u>8006-31-01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	1-IA1-111512	33558	11/15/12	13:17	TO-15 SIM <small>see notes</small>	-30	-4.5		
02A	1-IA2-111512	3748	11/15/12	13:18	hold	-30	0		
03A	1-IA3-111512	34306	11/15/12	13:20	TO-15 SIM <small>see notes</small>	-29	-4.5		
04A	5-IA1-111412	424	11/14/12	11:16		-30	-3.5		
05A	5-IA2-111412	3734	11/14/12	11:19		-30	-3.5		
06A	5-IA3-111412	4383	11/14/12	11:22		-30	-5		
07A	7-IA1-111512	14122	11/15/12	09:51		-30	-5		
08A	7-IA2-111512	35241	11/15/12	09:51		-30	-2.5		
09A	9-IA1-111212	33565	11/12/12	10:03		-28	-3.5		
10A	9-IA2-111212	32130	11/12/12	10:02		-30	-2		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>	Notes: TO-15 SIM for select compounds, see attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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# Air Toxics LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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Page 2 of 3

Project Manager Bill Beattie / Meredith D. Anderson  
 Collected by: (Print and Sign) Thomas Ashton  
 Company UFA Email tashon@maui-foster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97229  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	P.O. # _____	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Lab Use Only
	Project # <u>8006-31.01-05</u>		Pressurized by:
Project Name <u>Park Laundry</u>			Date:
			Pressurization Gas: <u>N<sub>2</sub></u> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
12A	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
13A	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
14A	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	0A1-111512	20438	11/15/12	09:37		-29.5	-5		
16A	<del>0A2-111512</del> 0A1-111612	31435	11/16/12	08:50		-29	-4.5		
17A	<del>0A3-339</del> 0A3-111512	33938	11/15/12	09:18		-30	-5		
18A	0A3-111612	9925	11/16/12	09:06		-30	-5		
19A	0A2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	0A2-111612	9417	11/16/12	08:59	hold	-30	0		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
TO-15 SIM for select compounds.  
see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>WPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
 Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
 CAS = Chemical Abstract Service  
 NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/10/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513E

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513E**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/14/2012		
<b>DATE REISSUED:</b>	01/10/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
16A	OA1-111612	Modified TO-15 SIM	4.0 "Hg	5 psi
17A	OA3-111512	Modified TO-15 SIM	4.0 "Hg	5 psi
18A	Lab Blank	Modified TO-15 SIM	NA	NA
19A	CCV	Modified TO-15 SIM	NA	NA
20A	LCS	Modified TO-15 SIM	NA	NA
20AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 01/10/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513E**

Two 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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 $< 40\%$ RSD	Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to $< 40\%$ RSD
Daily Calibration	$\pm 30\%$ 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**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211513A on 12-14-12.

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

**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

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



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA1-111612	<b>Date/Time Analyzed:</b>	12/5/12 07:21 AM
<b>Lab ID:</b>	1211513E-16A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	11/16/12 08:50 AM	<b>Instrument/Filename:</b>	msda.i / a120417simE
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.031	0.12	0.062 J
Trichloroethene	79-01-6	0.023	0.042	0.17	0.047 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	0-130	118
4-Bromofluorobenzene	460-00-4	0-130	100
Toluene-d8	2037-26-5	0-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA3-111512	<b>Date/Time Analyzed:</b>	12/5/12 08:09 AM
<b>Lab ID:</b>	1211513E-17A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	11/15/12 09:18 AM	<b>Instrument/Filename:</b>	msda.i / a120418simE
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.031	0.12	0.26
Trichloroethene	79-01-6	0.023	0.042	0.17	0.064 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	0-130	115
4-Bromofluorobenzene	460-00-4	0-130	96
Toluene-d8	2037-26-5	0-130	100



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	12/4/12 10:19 PM
<b>Lab ID:</b>	1211513E-18A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120416simE
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0044	0.020	0.081	Not Detected
Trichloroethene	79-01-6	0.015	0.027	0.11	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	0-130	118
4-Bromofluorobenzene	460-00-4	0-130	99
Toluene-d8	2037-26-5	0-130	102



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	12/4/12 06:01 PM
<b>Lab ID:</b>	1211513E-19A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120412sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	125
Trichloroethene	79-01-6	101

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	12/4/12 06:51 PM
<b>Lab ID:</b>	1211513E-20A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120413sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	120
Trichloroethene	79-01-6	95

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	121
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	106

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	12/4/12 07:46 PM
<b>Lab ID:</b>	1211513E-20AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120414sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	116
Trichloroethene	79-01-6	96

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	122
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	110

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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Page 2 of 5

Project Manager Bill Beakie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maulfooster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	P.O. # _____	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Lab Use Only Pressurized by:
	Project # <u>8006.31.01-05</u>		Date:
Project Name <u>Park Laundry</u>			Pressurization Gas: N <sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
<del>12A</del>	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
<del>13A</del>	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
<del>14A</del>	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	OA1-111512	20938	11/15/12	09:37		-29.5	-5		
16A	<del>OA2-111512</del> OA1-111612	31435	11/15/12	08:50		-29	-4.5		
17A	<del>OA3-339</del> OA3-111512	33938	11/15/12	09:18		-30	-5		
18A	OA3-111612	9925	11/16/12	09:06		-30	-5		
19A	OA2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	OA2-111612	9417	11/16/12	08:59	hold	-30	0		

11/20  
11/20

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
TO-15 SIM for select compounds.  
see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE
NOTES: Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012. CAS = Chemical Abstract Service NE = Not Established $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.				

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/13/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211513FR1

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211513FR1**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/26/2012		
<b>DATE REISSUED:</b>	01/13/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
15A	OA1-111512	Modified TO-15 SIM	3.5 "Hg	5 psi
18A	OA3-111612	Modified TO-15 SIM	3.5 "Hg	5 psi
19A	OA2-111512	Modified TO-15 SIM	0.8 psi	5 psi
20A	OA2-111612	Modified TO-15 SIM	2.0 "Hg	5 psi
21A	Lab Blank	Modified TO-15 SIM	NA	NA
22A	CCV	Modified TO-15 SIM	NA	NA
23A	LCS	Modified TO-15 SIM	NA	NA
23AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 01/13/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211513FR1**

Four 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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 flow controllers for sample collection, the final canister vacuum for sample OA2-111512 was measured at ambient pressure in the field. This ambient pressure reading was confirmed by the laboratory upon sample receipt.

Samples OA1-111512, OA3-111612, OA2-111512 and OA2-111612 were removed from "Hold" and placed on "Active" status per client request on December 14, 2012.

### Analytical Notes

There were no analytical discrepancies.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211513C on 12-26-12.

---

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

THE WORK ORDER WAS RE-ISSUED ON 1/13/13 TO INCLUDE THE MDL VALUES IN THE FINAL REPORT.

**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

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



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA1-111512	<b>Date/Time Analyzed:</b>	12/14/12 11:29 AM
<b>Lab ID:</b>	1211513FR1-15A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/15/12 09:37 AM	<b>Instrument/Filename:</b>	msdv.i / v121407simF
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0077	0.031	0.12	0.081 J
Trichloroethene	79-01-6	0.0038	0.041	0.16	0.053 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	111
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA3-111612	<b>Date/Time Analyzed:</b>	12/14/12 12:22 PM
<b>Lab ID:</b>	1211513FR1-18A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/16/12 09:06 AM	<b>Instrument/Filename:</b>	msdv.i / v121408simF
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0077	0.031	0.12	0.068 J
Trichloroethene	79-01-6	0.0038	0.041	0.16	0.060 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	107
Toluene-d8	2037-26-5	70-130	104



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA2-111512	<b>Date/Time Analyzed:</b>	12/14/12 01:57 PM
<b>Lab ID:</b>	1211513FR1-19A	<b>Dilution Factor:</b>	1.27
<b>Date/Time Collecte</b>	11/15/12 09:27 AM	<b>Instrument/Filename:</b>	msdv.i / v121409simF
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0064	0.026	0.10	0.056 J
Trichloroethene	79-01-6	0.0032	0.034	0.14	0.048 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	101
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	106





Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	OA2-111612	<b>Date/Time Analyzed:</b>	12/14/12 02:33 PM
<b>Lab ID:</b>	1211513FR1-20A	<b>Dilution Factor:</b>	1.44
<b>Date/Time Collecte</b>	11/16/12 08:59 AM	<b>Instrument/Filename:</b>	msdv.i / v121410simF
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0073	0.029	0.12	0.069 J
Trichloroethene	79-01-6	0.0036	0.039	0.15	0.047 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	111
Toluene-d8	2037-26-5	70-130	107

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	12/14/12 10:32 AM
<b>Lab ID:</b>	1211513FR1-21A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v121406simF
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0050	0.020	0.081	0.016 J
Trichloroethene	79-01-6	0.0025	0.027	0.11	0.023 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	113
Toluene-d8	2037-26-5	70-130	106

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	12/14/12 07:14 AM
<b>Lab ID:</b>	1211513FR1-22A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v121402sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	80
Trichloroethene	79-01-6	73

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	12/14/12 08:15 AM
<b>Lab ID:</b>	1211513FR1-23A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v121403sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	75
Trichloroethene	79-01-6	72

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	104

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	12/14/12 09:00 AM
<b>Lab ID:</b>	1211513FR1-23AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v121404sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	82
Trichloroethene	79-01-6	79

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	103

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beakie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maulfooster.com  
 Address 2001 NW 14th Ave Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

**Project Info:**  
 P.O. # \_\_\_\_\_  
 Project # 8006.31.01-05  
 Project Name Park Laundry

**Turn Around Time:**  
 Normal  
 Rush  
specify  
 Lab Use Only  
 Pressurized by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Pressurization Gas: N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	24-CSI-111512	12330	11/15/12	11:34	TO-15 SIM <small>see notes</small>	-30	-5		
<del>12A</del>	27-IA1-111512	33781	11/15/12	08:26		-30	-5		
<del>13A</del>	27-IA2-111512	5761	11/15/12	08:31		-30	-5		
<del>14A</del>	27-CSI-111512	21013	11/15/12	08:53		-28	-0.5		
15A	OA1-111512	20938	11/15/12	09:37		-29.5	-5		
16A	<del>OA2-111512</del> OA1-111612	31435	11/15/12	08:50		-29	-4.5		
17A	<del>OA3-339</del> OA3-111512	33938	11/15/12	09:18		-30	-5		
18A	OA3-111612	9925	11/16/12	09:06		-30	-5		
19A	OA2-111512	34485	11/15/12	09:27	hold	-30	0		
20A	OA2-111612	9417	11/16/12	08:59	hold	-30	0		

11/17  
11/20

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TO-15 SIM for select compounds.  
 see attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211513</u>
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WEST PRINTING & GRAPHICS (916) 704-6000



1211513

Mr. Guy Barrett  
 October 12, 2012  
 Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE
NOTES: Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012. CAS = Chemical Abstract Service NE = Not Established $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter.				

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/13/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211514A

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211514A**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	10-IA1-111512	Modified TO-15 SIM	7.0 "Hg	5 psi
02A	10-IA2-111512	Modified TO-15 SIM	5.0 "Hg	5 psi
03A	10-CS1-111512	Modified TO-15 SIM	0.8 "Hg	5 psi
04A	11-IA1-111512	Modified TO-15 SIM	4.8 "Hg	5 psi
05A	11-IA2-111512	Modified TO-15 SIM	3.6 "Hg	5 psi
06A	11-IA3-111512	Modified TO-15 SIM	3.6 "Hg	5 psi
07A	13-IA1-111612	Modified TO-15 SIM	4.2 "Hg	5 psi
08A	13-IA2-111612	Modified TO-15 SIM	4.8 "Hg	5 psi
09A	24-IA1-111612	Modified TO-15 SIM	3.8 "Hg	5 psi
10A	24-IA2-111612	Modified TO-15 SIM	4.0 "Hg	5 psi
11A	Lab Blank	Modified TO-15 SIM	NA	NA
12A	CCV	Modified TO-15 SIM	NA	NA
13A	LCS	Modified TO-15 SIM	NA	NA
13AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 12/13/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211514A**

Ten 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**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.

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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: 10-IA1-111512**

**Lab ID#: 1211514A-01A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.035	0.082	0.14	0.33

**Client Sample ID: 10-IA2-111512**

**Lab ID#: 1211514A-02A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.032	0.11	0.13	0.44

**Client Sample ID: 10-CS1-111512**

**Lab ID#: 1211514A-03A**

No Detections Were Found.

**Client Sample ID: 11-IA1-111512**

**Lab ID#: 1211514A-04A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.032	0.056	0.13	0.22
Tetrachloroethene	0.032	0.034	0.22	0.23

**Client Sample ID: 11-IA2-111512**

**Lab ID#: 1211514A-05A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.030	0.050	0.12	0.20

**Client Sample ID: 11-IA3-111512**

**Lab ID#: 1211514A-06A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
1,2-Dichloroethane	0.030	0.048	0.12	0.19
Tetrachloroethene	0.030	0.040	0.21	0.27



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

**Client Sample ID: 13-IA1-111612**

**Lab ID#: 1211514A-07A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	0.031	0.12	0.13	0.48

**Client Sample ID: 13-IA2-111612**

**Lab ID#: 1211514A-08A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	0.032	0.16	0.13	0.67

**Client Sample ID: 24-IA1-111612**

**Lab ID#: 1211514A-09A**

No Detections Were Found.

**Client Sample ID: 24-IA2-111612**

**Lab ID#: 1211514A-10A**

No Detections Were Found.



Air Toxics

Client Sample ID: 10-IA1-111512

Lab ID#: 1211514A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120419sim	Date of Collection:	11/15/12 10:03:00 A
Dil. Factor:	1.75	Date of Analysis:	12/5/12 08:53 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,2-Dichloroethane	0.035	0.082	0.14	0.33
Trichloroethene	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Chloroethane	0.088	Not Detected	0.23	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Client Sample ID: 10-IA2-111512

Lab ID#: 1211514A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120420sim	Date of Collection:	11/15/12 10:07:00 A
Dil. Factor:	1.61	Date of Analysis:	12/5/12 09:30 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,2-Dichloroethane	0.032	0.11	0.13	0.44
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: 10-CS1-111512

Lab ID#: 1211514A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120421sim	Date of Collection:	11/15/12 10:14:00 A
Dil. Factor:	1.38	Date of Analysis:	12/5/12 10:06 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Chloroethane	0.069	Not Detected	0.18	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: 11-IA1-111512

Lab ID#: 1211514A-04A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	a120422sim	<b>Date of Collection:</b> 11/15/12 10:40:00 A
<b>Dil. Factor:</b>	1.60	<b>Date of Analysis:</b> 12/5/12 10:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,2-Dichloroethane	0.032	0.056	0.13	0.22
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	0.034	0.22	0.23
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: 11-IA2-111512

Lab ID#: 1211514A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120423sim	Date of Collection:	11/15/12 10:42:00 A
Dil. Factor:	1.52	Date of Analysis:	12/5/12 11:21 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	0.050	0.12	0.20
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	94	70-130



Air Toxics

Client Sample ID: 11-IA3-111512

Lab ID#: 1211514A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120424sim	Date of Collection:	11/15/12 10:43:00 A
Dil. Factor:	1.52	Date of Analysis:	12/5/12 12:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.030	0.048	0.12	0.19
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	0.040	0.21	0.27
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130





Air Toxics

Client Sample ID: 13-IA1-111612

Lab ID#: 1211514A-07A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	a120425sim	<b>Date of Collection:</b> 11/16/12 9:39:00 AM
<b>Dil. Factor:</b>	1.56	<b>Date of Analysis:</b> 12/5/12 12:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	0.12	0.13	0.48
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

**Container Type: 6 Liter Summa Canister (SIM Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: 13-IA2-111612

Lab ID#: 1211514A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120426sim	Date of Collection:	11/16/12 9:46:00 AM
Dil. Factor:	1.60	Date of Analysis:	12/5/12 01:24 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.041	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,2-Dichloroethane	0.032	0.16	0.13	0.67
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
Chloroethane	0.080	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: 24-IA1-111612

Lab ID#: 1211514A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120427sim	Date of Collection:	11/16/12 11:49:00 A
Dil. Factor:	1.53	Date of Analysis:	12/5/12 02:00 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.015	Not Detected	0.039	Not Detected
1,1-Dichloroethene	0.015	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.16	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
Chloroethane	0.076	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: 24-IA2-111612

Lab ID#: 1211514A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120428sim	Date of Collection:	11/16/12 10:58:00 A
Dil. Factor:	1.55	Date of Analysis:	12/5/12 02:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.016	Not Detected	0.040	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.061	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,2-Dichloroethane	0.031	Not Detected	0.12	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.61	Not Detected
Chloroethane	0.078	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130



Client Sample ID: Lab Blank

Lab ID#: 1211514A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	a120416sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/4/12 10:19 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
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

Client Sample ID: CCV

Lab ID#: 1211514A-12A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120412sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 06:01 PM

Compound	%Recovery
Vinyl Chloride	91
1,1-Dichloroethene	102
1,1-Dichloroethane	117
cis-1,2-Dichloroethene	108
1,2-Dichloroethane	125
Trichloroethene	101
Tetrachloroethene	98
trans-1,2-Dichloroethene	108
Chloroethane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCS

Lab ID#: 1211514A-13A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120413sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 06:51 PM

Compound	%Recovery
Vinyl Chloride	101
1,1-Dichloroethene	102
1,1-Dichloroethane	113
cis-1,2-Dichloroethene	101
1,2-Dichloroethane	120
Trichloroethene	95
Tetrachloroethene	86
trans-1,2-Dichloroethene	112
Chloroethane	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	121	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: LCSD

Lab ID#: 1211514A-13AA

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

File Name:	a120414sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/4/12 07:46 PM

Compound	%Recovery
Vinyl Chloride	104
1,1-Dichloroethene	95
1,1-Dichloroethane	108
cis-1,2-Dichloroethene	99
1,2-Dichloroethane	116
Trichloroethene	96
Tetrachloroethene	89
trans-1,2-Dichloroethene	105
Chloroethane	99

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	101	70-130

# Air TOXICS LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

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Page 3 of 5

Project Manager Bill Beaudie / Merideth D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 suite 200 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	10-IA1-111512	23925	11/15/12	10:03	TO-15 SIM <small>see notes</small>	-30	-5		
02A	10-IA2-111512	32107	11/15/12	10:07		-30	-4.5		
03A	10-CSI-111512	31432	11/15/12	10:14		-30	-1.5		
04A	11-IA1-111512	34190	11/15/12	10:40		-30	-5		
05A	11-IA2-111512	14010	11/15/12	10:42		-30	-4		
06A	11-IA3-111512	5599	11/15/12	10:43		-29.5	-4		
07A	13-IA1-111612	34241	11/16/12	09:39		-29	-4		
08A	13-IA2-111612	5600	11/16/12	09:46		-30	-5		
09A	24-IA1-111612	33925	11/16/12	11:49		-30	4.5		
10A	24-IA2-111612	34737	11/16/12	10:58		-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>	Notes: TO-15 SIM for select compounds. see attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>FedEx</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
	<u>UPS</u> <u>11/26/12</u>					



**CHAIN-OF-CUSTODY RECORD**

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Barchia / Meredith DiAndrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Max Foster + Abongi Email taskforce@maxfoster.com  
 Address 2001 NW 14th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 <sup>Suite 200</sup> Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	1-SS1-111512	94521	11/15/12	16:37	TO-15 SEM	-28	-4.5		
<del>12A</del>	1-SS2-111512	36569	11/15/12	17:10		-30	-4.5		
<del>13A</del>	1-SS3-111512	9495	11/15/12	17:23		-30	-4.5		
<del>14A</del>	7-SS1-111512	15748	11/15/12	13:10		-29	-4.5		
<del>15A</del>	7-SS2-111512	35690	11/15/12	13:29		-28.5	-4		
<del>16A</del>	7-SS3-111512	97105	11/15/12	14:07		-30	-4.5		
<del>17A</del>	11-SS1-111512	9453	11/15/12	14:35		-29.5	-4.5		
<del>18A</del>	11-SS2-111512	34609	11/15/12	15:24		-28	-4.5		
<del>19A</del>	11-SS3-111512	9518	11/15/12	15:30		-29.5	-4.5		
<del>20A</del>	11-SS4-111512	93109	11/15/12	16:22		-28.5	-4.5		

TOP 11/20/12

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>1300 11/20/12</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>1000 11/20/12</u>	Notes: TO-15 SEM for select compounds. See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
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1211514

### SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/13/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211514B

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211514B**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
11A	1-SS1-111512	Modified TO-15	3.4 "Hg	15 psi
12A	1-SS2-111512	Modified TO-15	2.6 "Hg	15 psi
13A	1-SS3-111512	Modified TO-15	3.2 "Hg	15 psi
14A	7-SS1-111512	Modified TO-15	3.8 "Hg	15 psi
15A	7-SS2-111512	Modified TO-15	4.8 "Hg	15 psi
16A	7-SS3-111512	Modified TO-15	3.2 "Hg	15 psi
17A	11-SS1-111512	Modified TO-15	0.2 "Hg	15 psi
18A	11-SS2-111512	Modified TO-15	3.8 "Hg	15 psi
19A	11-SS3-111512	Modified TO-15	6.4 "Hg	15 psi
20A	11-SS4-111512	Modified TO-15	3.4 "Hg	15 psi
21A	Lab Blank	Modified TO-15	NA	NA
22A	CCV	Modified TO-15	NA	NA
23A	LCS	Modified TO-15	NA	NA
23AA	LCS D	Modified TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 12/13/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

Eurofins 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211514B**

Ten 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via modified 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.

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>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples 11-SS2-111512, 11-SS3-111512, and 11-SS4-111512 due to the presence of high level non-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 MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: 1-SS1-111512**

**Lab ID#: 1211514B-11A**

No Detections Were Found.

**Client Sample ID: 1-SS2-111512**

**Lab ID#: 1211514B-12A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.22	0.33	1.5	2.2

**Client Sample ID: 1-SS3-111512**

**Lab ID#: 1211514B-13A**

No Detections Were Found.

**Client Sample ID: 7-SS1-111512**

**Lab ID#: 1211514B-14A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.23	1.8	1.6	12

**Client Sample ID: 7-SS2-111512**

**Lab ID#: 1211514B-15A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.24	1.2	1.6	7.8

**Client Sample ID: 7-SS3-111512**

**Lab ID#: 1211514B-16A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.23	2.0	1.5	14

**Client Sample ID: 11-SS1-111512**

**Lab ID#: 1211514B-17A**

No Detections Were Found.

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

**Client Sample ID: 11-SS2-111512**

**Lab ID#: 1211514B-18A**

No Detections Were Found.

**Client Sample ID: 11-SS3-111512**

**Lab ID#: 1211514B-19A**

No Detections Were Found.

**Client Sample ID: 11-SS4-111512**

**Lab ID#: 1211514B-20A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.71	1.0	4.8	6.9



Client Sample ID: 1-SS1-111512

Lab ID#: 1211514B-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113010	Date of Collection:	11/15/12 4:37:00 PM
Dil. Factor:	2.28	Date of Analysis:	11/30/12 02:10 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	Not Detected	0.58	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.90	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.92	Not Detected
cis-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,2-Dichloroethane	0.23	Not Detected	0.92	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	Not Detected	1.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: 1-SS2-111512

Lab ID#: 1211514B-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113011	Date of Collection:	11/15/12 5:10:00 PM
Dil. Factor:	2.21	Date of Analysis:	11/30/12 03:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.22	Not Detected	0.56	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.88	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.88	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.89	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.88	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.89	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.33	1.5	2.2

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: 1-SS3-111512

Lab ID#: 1211514B-13A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	v113012	<b>Date of Collection:</b> 11/15/12 5:23:00 PM
<b>Dil. Factor:</b>	2.26	<b>Date of Analysis:</b> 11/30/12 04:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	Not Detected	0.58	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.90	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.91	Not Detected
cis-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,2-Dichloroethane	0.23	Not Detected	0.91	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	Not Detected	1.5	Not Detected

**Container Type: 1 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	110	70-130



Client Sample ID: 7-SS1-111512

Lab ID#: 1211514B-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113013	Date of Collection:	11/15/12 1:10:00 PM
Dil. Factor:	2.31	Date of Analysis:	11/30/12 05:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	Not Detected	0.59	Not Detected
Chloroethane	1.2	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.92	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.92	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.94	Not Detected
cis-1,2-Dichloroethene	0.23	Not Detected	0.92	Not Detected
1,2-Dichloroethane	0.23	Not Detected	0.93	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	1.8	1.6	12

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: 7-SS2-111512

Lab ID#: 1211514B-15A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113014	Date of Collection:	11/15/12 1:29:00 PM
Dil. Factor:	2.40	Date of Analysis:	11/30/12 05:52 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.24	Not Detected	0.61	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
1,1-Dichloroethene	0.24	Not Detected	0.95	Not Detected
trans-1,2-Dichloroethene	0.24	Not Detected	0.95	Not Detected
1,1-Dichloroethane	0.24	Not Detected	0.97	Not Detected
cis-1,2-Dichloroethene	0.24	Not Detected	0.95	Not Detected
1,2-Dichloroethane	0.24	Not Detected	0.97	Not Detected
Trichloroethene	0.24	Not Detected	1.3	Not Detected
Tetrachloroethene	0.24	1.2	1.6	7.8

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	109	70-130





Client Sample ID: 7-SS3-111512

Lab ID#: 1211514B-16A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113015	Date of Collection:	11/15/12 2:07:00 PM
Dil. Factor:	2.26	Date of Analysis:	11/30/12 06:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	Not Detected	0.58	Not Detected
Chloroethane	1.1	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.90	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.91	Not Detected
cis-1,2-Dichloroethene	0.23	Not Detected	0.90	Not Detected
1,2-Dichloroethane	0.23	Not Detected	0.91	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	2.0	1.5	14

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: 11-SS1-111512

Lab ID#: 1211514B-17A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113016	Date of Collection:	11/15/12 2:35:00 PM
Dil. Factor:	2.03	Date of Analysis:	11/30/12 07:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.20	Not Detected	0.52	Not Detected
Chloroethane	1.0	Not Detected	2.7	Not Detected
1,1-Dichloroethene	0.20	Not Detected	0.80	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.80	Not Detected
1,1-Dichloroethane	0.20	Not Detected	0.82	Not Detected
cis-1,2-Dichloroethene	0.20	Not Detected	0.80	Not Detected
1,2-Dichloroethane	0.20	Not Detected	0.82	Not Detected
Trichloroethene	0.20	Not Detected	1.1	Not Detected
Tetrachloroethene	0.20	Not Detected	1.4	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: 11-SS2-111512

Lab ID#: 1211514B-18A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113017	Date of Collection:	11/15/12 3:24:00 PM
Dil. Factor:	4.62	Date of Analysis:	11/30/12 08:55 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.46	Not Detected	1.2	Not Detected
Chloroethane	2.3	Not Detected	6.1	Not Detected
1,1-Dichloroethene	0.46	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.46	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.46	Not Detected	1.9	Not Detected
cis-1,2-Dichloroethene	0.46	Not Detected	1.8	Not Detected
1,2-Dichloroethane	0.46	Not Detected	1.9	Not Detected
Trichloroethene	0.46	Not Detected	2.5	Not Detected
Tetrachloroethene	0.46	Not Detected	3.1	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics

Client Sample ID: 11-SS3-111512

Lab ID#: 1211514B-19A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v113018	Date of Collection:	11/15/12 3:30:00 PM
Dil. Factor:	5.14	Date of Analysis:	11/30/12 09:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.51	Not Detected	1.3	Not Detected
Chloroethane	2.6	Not Detected	6.8	Not Detected
1,1-Dichloroethene	0.51	Not Detected	2.0	Not Detected
trans-1,2-Dichloroethene	0.51	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.51	Not Detected	2.1	Not Detected
cis-1,2-Dichloroethene	0.51	Not Detected	2.0	Not Detected
1,2-Dichloroethane	0.51	Not Detected	2.1	Not Detected
Trichloroethene	0.51	Not Detected	2.8	Not Detected
Tetrachloroethene	0.51	Not Detected	3.5	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	109	70-130



Air Toxics

Client Sample ID: 11-SS4-111512

Lab ID#: 1211514B-20A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	v113019	<b>Date of Collection:</b> 11/15/12 4:22:00 PM
<b>Dil. Factor:</b>	7.12	<b>Date of Analysis:</b> 11/30/12 10:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
Chloroethane	3.6	Not Detected	9.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Trichloroethene	0.71	Not Detected	3.8	Not Detected
Tetrachloroethene	0.71	1.0	4.8	6.9

**Container Type: 1 Liter Summa Canister (100% Certified)**

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: Lab Blank

Lab ID#: 1211514B-21A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v113009</b>	<b>Date of Collection:</b>	<b>NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b>	<b>11/30/12 01:08 PM</b>

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: CCV

Lab ID#: 1211514B-22A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v113004</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 11/30/12 09:02 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	92
Chloroethane	92
1,1-Dichloroethene	102
trans-1,2-Dichloroethene	100
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	99
1,2-Dichloroethane	110
Trichloroethene	98
Tetrachloroethene	107

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	108	70-130



Client Sample ID: LCS

Lab ID#: 1211514B-23A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v113005</b>	<b>Date of Collection: NA</b>
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis: 11/30/12 09:49 AM</b>

<b>Compound</b>	<b>%Recovery</b>
Vinyl Chloride	88
Chloroethane	87
1,1-Dichloroethene	99
trans-1,2-Dichloroethene	104
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,2-Dichloroethane	104
Trichloroethene	92
Tetrachloroethene	100

**Container Type: NA - Not Applicable**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1211514B-23AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v113006	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/30/12 10:32 AM

Compound	%Recovery
Vinyl Chloride	89
Chloroethane	86
1,1-Dichloroethene	101
trans-1,2-Dichloroethene	105
1,1-Dichloroethane	93
cis-1,2-Dichloroethene	90
1,2-Dichloroethane	102
Trichloroethene	91
Tetrachloroethene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	102	70-130



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Bendie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 suite 200 Fax \_\_\_\_\_

**Project Info:**  
 P.O. # \_\_\_\_\_  
 Project # 8006.31.01-05  
 Project Name Park Laundry

**Turn Around Time:**  
 Normal  
 Rush  
specify  
**Lab Use Only**  
 Pressurized by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Pressurization Gas: \_\_\_\_\_  
 N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>01A</del>	10-IA1-111512	23925	11/15/12	10:03	TO-15 SIM <sup>see notes</sup>	-30	-5		
02A	10-IA2-111512	32107	11/15/12	10:07		-30	-4.5		
03A	10-CS1-111512	31432	11/15/12	10:14		-30	-1.5		
04A	11-IA1-111512	34190	11/15/12	10:40		-30	-5		
05A	11-IA2-111512	14010	11/15/12	10:42		-30	-4		
06A	11-IA3-111512	5599	11/15/12	10:43		-29.5	-4		
07A	13-IA1-111612	34241	11/16/12	09:39		-29	-4		
08A	13-IA2-111612	5600	11/16/12	09:46		-30	-5		
09A	24-IA1-111612	33925	11/16/12	11:49		-30	4.5		
10A	24-IA2-111612	34737	11/16/12	10:58		-28	-4		

TRW  
11/20/12

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>TRW</u> Date/Time <u>11/26/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TO-15 SIM for select compounds  
 see attachment for list of  
 compounds and reporting limits.

Lab Use Only	Shipper Name <u>FedEx TRW</u> <u>UPS 11/26/12</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
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**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Bessie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Max Foster + Abingi Email taskton@maxfoster.com  
 Address 2001 NW 14th Ave. Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	1-551-111512	94521	11/15/12	16:37	TO-15 SIM	-28	-4.5		
12A	1-552-111512	36569	11/15/12	17:10		-30	-4.5		
13A	1-553-111512	9495	11/15/12	17:23		-30	-4.5		
14A	7-551-111512	15748	11/15/12	13:10		-29	-4.5		
15A	7-552-111512	35690	11/15/12	13:29		-28.5	-4		
16A	7-553-111512	97105	11/15/12	14:07		-30	-4.5		
17A	11-551-111512	9453	11/15/12	14:35		-29.5	-4.5		
18A	11-552-111512	34609	11/15/12	15:24		-28	-4.5		
19A	11-553-111512	9518	11/15/12	15:30		-29.5	-4.5		
20A	11-554-111512	93109	11/15/12	16:22		-28.5	-4.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>1300 11/20/12</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>1000 11/26/12</u>	Notes: TO-15 SIM for select compounds See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
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WEST PRINTING & GRAPHICS (916) 704-8000

1211514

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/5/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211514C

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 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 #: 1211514C**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/05/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
11A	1-SS1-111512	Modified ASTM D-1946	3.4 "Hg	15 psi
12A	1-SS2-111512	Modified ASTM D-1946	2.6 "Hg	15 psi
13A	1-SS3-111512	Modified ASTM D-1946	3.2 "Hg	15 psi
14A	7-SS1-111512	Modified ASTM D-1946	3.8 "Hg	15 psi
15A	7-SS2-111512	Modified ASTM D-1946	4.8 "Hg	15 psi
16A	7-SS3-111512	Modified ASTM D-1946	3.2 "Hg	15 psi
17A	11-SS1-111512	Modified ASTM D-1946	0.2 "Hg	15 psi
18A	11-SS2-111512	Modified ASTM D-1946	3.8 "Hg	15 psi
18AA	11-SS2-111512 Lab Duplicate	Modified ASTM D-1946	3.8 "Hg	15 psi
19A	11-SS3-111512	Modified ASTM D-1946	6.4 "Hg	15 psi
20A	11-SS4-111512	Modified ASTM D-1946	3.4 "Hg	15 psi
21A	Lab Blank	Modified ASTM D-1946	NA	NA
22A	LCS	Modified ASTM D-1946	NA	NA
22AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 12/05/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

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

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
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**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211514C**

Ten 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

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>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$ 's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

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 detection limit.

M - Reported value may be biased due to apparent matrix interferences.

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  
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: 1-SS1-111512**

**Lab ID#: 1211514C-11A**

No Detections Were Found.

**Client Sample ID: 1-SS2-111512**

**Lab ID#: 1211514C-12A**

No Detections Were Found.

**Client Sample ID: 1-SS3-111512**

**Lab ID#: 1211514C-13A**

No Detections Were Found.

**Client Sample ID: 7-SS1-111512**

**Lab ID#: 1211514C-14A**

No Detections Were Found.

**Client Sample ID: 7-SS2-111512**

**Lab ID#: 1211514C-15A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.59

**Client Sample ID: 7-SS3-111512**

**Lab ID#: 1211514C-16A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	0.24

**Client Sample ID: 11-SS1-111512**

**Lab ID#: 1211514C-17A**

No Detections Were Found.

**Client Sample ID: 11-SS2-111512**

**Lab ID#: 1211514C-18A**

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: 11-SS2-111512**

**Lab ID#: 1211514C-18A**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.38

**Client Sample ID: 11-SS2-111512 Lab Duplicate**

**Lab ID#: 1211514C-18AA**

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.36

**Client Sample ID: 11-SS3-111512**

**Lab ID#: 1211514C-19A**

No Detections Were Found.

**Client Sample ID: 11-SS4-111512**

**Lab ID#: 1211514C-20A**

No Detections Were Found.



Air Toxics

Client Sample ID: 1-SS1-111512

Lab ID#: 1211514C-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113006	Date of Collection:	11/15/12 4:37:00 PM
Dil. Factor:	2.28	Date of Analysis:	11/30/12 09:17 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 1-SS2-111512

Lab ID#: 1211514C-12A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113007	Date of Collection:	11/15/12 5:10:00 PM
Dil. Factor:	2.21	Date of Analysis:	11/30/12 09:28 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 1-SS3-111512

Lab ID#: 1211514C-13A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113005	Date of Collection:	11/15/12 5:23:00 PM
Dil. Factor:	2.26	Date of Analysis:	11/30/12 09:08 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)





Air Toxics

Client Sample ID: 7-SS1-111512

Lab ID#: 1211514C-14A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113008	Date of Collection:	11/15/12 1:10:00 PM
Dil. Factor:	2.31	Date of Analysis:	11/30/12 09:37 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 7-SS2-111512

Lab ID#: 1211514C-15A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113009	Date of Collection:	11/15/12 1:29:00 PM
Dil. Factor:	2.40	Date of Analysis:	11/30/12 09:45 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.59

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 7-SS3-111512

Lab ID#: 1211514C-16A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113010	Date of Collection:	11/15/12 2:07:00 PM
Dil. Factor:	2.26	Date of Analysis:	11/30/12 09:56 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	0.24

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 11-SS1-111512

Lab ID#: 1211514C-17A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113011	Date of Collection:	11/15/12 2:35:00 PM
Dil. Factor:	2.03	Date of Analysis:	11/30/12 10:06 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 11-SS2-111512

Lab ID#: 1211514C-18A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113012	Date of Collection:	11/15/12 3:24:00 PM
Dil. Factor:	2.31	Date of Analysis:	11/30/12 10:15 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.38

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 11-SS2-111512 Lab Duplicate

Lab ID#: 1211514C-18AA

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113013	Date of Collection:	11/15/12 3:24:00 PM
Dil. Factor:	2.31	Date of Analysis:	11/30/12 10:24 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	0.36

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 11-SS3-111512

Lab ID#: 1211514C-19A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113014	Date of Collection:	11/15/12 3:30:00 PM
Dil. Factor:	2.57	Date of Analysis:	11/30/12 10:36 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)





Air Toxics

Client Sample ID: 11-SS4-111512

Lab ID#: 1211514C-20A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113015	Date of Collection:	11/15/12 4:22:00 PM
Dil. Factor:	2.28	Date of Analysis:	11/30/12 10:43 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1211514C-21A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113004	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/30/12 08:53 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1211514C-22A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/30/12 08:41 AM

<b>Compound</b>	<b>%Recovery</b>
Helium	103

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1211514C-22AA

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113026	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/30/12 12:34 PM

<b>Compound</b>	<b>%Recovery</b>
Helium	107

Container Type: NA - Not Applicable

# @Air TOXICS LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 3 of 5

Project Manager Bill Bendie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 suite 200 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

TRW  
11/16/12

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>01A</del>	10-IA1-111512	23925	11/15/12	10:03	TO-15 SIM <small>see notes</small>	-30	-5		
02A	10-IA2-111512	32107	11/15/12	10:07		-30	-4.5		
03A	10-CS1-111512	31432	11/15/12	10:14		-30	-1.5		
04A	11-IA1-111512	34190	11/15/12	10:40		-30	-5		
05A	11-IA2-111512	14010	11/15/12	10:42		-30	-4		
06A	11-IA3-111512	5599	11/15/12	10:43		-29.5	-4		
07A	13-IA1-111612	34241	11/16/12	09:39		-29	-4		
08A	13-IA2-111612	5600	11/16/12	09:46		-30	-5		
09A	24-IA1-111612	33925	11/16/12	11:49		-30	4.5		
10A	24-IA2-111612	34737	11/16/12	10:58		-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>TRW</u> Date/Time <u>11/26/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
 TO-15 SIM for select compounds  
 see attachment for list of  
 compounds and reporting limits.

Lab Use Only	Shipper Name <u>FedEx TRW</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
	<u>UPS 11/26/12</u>					



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Bessie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Max Foster + Abingi Email taskton@maxfoster.com  
 Address 2001 NW 14th Ave. Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	1-551-111512	94521	11/15/12	16:37	TO-15 SIM	-28	-4.5		
12A	1-552-111512	36569	11/15/12	17:10		-30	-4.5		
13A	1-553-111512	9495	11/15/12	17:23		-30	-4.5		
14A	7-551-111512	15748	11/15/12	13:10		-29	-4.5		
15A	7-552-111512	35690	11/15/12	13:29		-28.5	-4		
16A	7-553-111512	97105	11/15/12	14:07		-30	-4.5		
17A	11-551-111512	9453	11/15/12	14:35		-29.5	-4.5		
18A	11-552-111512	34609	11/15/12	15:24		-28	-4.5		
19A	11-553-111512	9518	11/15/12	15:30		-29.5	-4.5		
20A	11-554-111512	93109	11/15/12	16:22		-28.5	-4.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>1300 11/20/12</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>1000 11/20/12</u>	Notes: TO-15 SIM for select compounds See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
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WEST PRINTING & GRAPHICS (916) 704-8000

1211514

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/13/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211514DR1

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211514DR1**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		
<b>DATE REISSUED:</b>	01/13/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	10-IA1-111512	Modified TO-15 SIM	7.0 "Hg	5 psi
02A	10-IA2-111512	Modified TO-15 SIM	5.0 "Hg	5 psi
03A	10-CS1-111512	Modified TO-15 SIM	0.8 "Hg	5 psi
04A	11-IA1-111512	Modified TO-15 SIM	4.8 "Hg	5 psi
05A	11-IA2-111512	Modified TO-15 SIM	3.6 "Hg	5 psi
06A	11-IA3-111512	Modified TO-15 SIM	3.6 "Hg	5 psi
07A	13-IA1-111612	Modified TO-15 SIM	4.2 "Hg	5 psi
08A	13-IA2-111612	Modified TO-15 SIM	4.8 "Hg	5 psi
09A	24-IA1-111612	Modified TO-15 SIM	3.8 "Hg	5 psi
10A	24-IA2-111612	Modified TO-15 SIM	4.0 "Hg	5 psi
11A	Lab Blank	Modified TO-15 SIM	NA	NA
12A	CCV	Modified TO-15 SIM	NA	NA
13A	LCS	Modified TO-15 SIM	NA	NA
13AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 01/13/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

Eurofins 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 Eurofins Air Toxics, Inc.

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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211514DR1**

Ten 6 Liter Summa Canister (SIM Certified) samples were received on November 26, 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211514A on 12-13-12.

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

THE WORK ORDER WAS RE-ISSUED ON 1/13/13 TO INCLUDE THE MDL VALUES IN THE FINAL REPORT.

**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

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

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	10-IA1-111512	<b>Date/Time Analyzed:</b>	12/5/12 08:53 AM
<b>Lab ID:</b>	1211514DR1-01A	<b>Dilution Factor:</b>	1.75
<b>Date/Time Collecte</b>	11/15/12 10:03 AM	<b>Instrument/Filename:</b>	msda.i / a120419simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0076	0.035	0.14	0.33
Trichloroethene	79-01-6	0.026	0.047	0.19	0.030 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	116
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	10-IA2-111512	<b>Date/Time Analyzed:</b>	12/5/12 09:30 AM
<b>Lab ID:</b>	1211514DR1-02A	<b>Dilution Factor:</b>	1.61
<b>Date/Time Collecte</b>	11/15/12 10:07 AM	<b>Instrument/Filename:</b>	msda.i / a120420simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0070	0.032	0.13	0.44
Trichloroethene	79-01-6	0.024	0.043	0.17	0.026 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	117
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	102



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	10-CS1-111512	<b>Date/Time Analyzed:</b>	12/5/12 10:06 AM
<b>Lab ID:</b>	1211514DR1-03A	<b>Dilution Factor:</b>	1.38
<b>Date/Time Collecte</b>	11/15/12 10:14 AM	<b>Instrument/Filename:</b>	msda.i / a120421simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0060	0.028	0.11	0.063 J
Trichloroethene	79-01-6	0.021	0.037	0.15	0.035 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	11-IA1-111512	<b>Date/Time Analyzed:</b>	12/5/12 10:42 AM
<b>Lab ID:</b>	1211514DR1-04A	<b>Dilution Factor:</b>	1.60
<b>Date/Time Collecte</b>	11/15/12 10:40 AM	<b>Instrument/Filename:</b>	msda.i / a120422simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0070	0.032	0.13	0.22
Trichloroethene	79-01-6	0.024	0.043	0.17	0.043 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	11-IA2-111512	<b>Date/Time Analyzed:</b>	12/5/12 11:21 AM
<b>Lab ID:</b>	1211514DR1-05A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/15/12 10:42 AM	<b>Instrument/Filename:</b>	msda.i / a120423simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0066	0.031	0.12	0.20
Trichloroethene	79-01-6	0.023	0.041	0.16	0.051 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	113
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	100





MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	11-IA3-111512	<b>Date/Time Analyzed:</b>	12/5/12 12:12 PM
<b>Lab ID:</b>	1211514DR1-06A	<b>Dilution Factor:</b>	1.52
<b>Date/Time Collecte</b>	11/15/12 10:43 AM	<b>Instrument/Filename:</b>	msda.i / a120424simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0066	0.031	0.12	0.19
Trichloroethene	79-01-6	0.023	0.041	0.16	0.035 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	119
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	13-IA1-111612	<b>Date/Time Analyzed:</b>	12/5/12 12:48 PM
<b>Lab ID:</b>	1211514DR1-07A	<b>Dilution Factor:</b>	1.56
<b>Date/Time Collecte</b>	11/16/12 09:39 AM	<b>Instrument/Filename:</b>	msda.i / a120425simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.032	0.13	0.48
Trichloroethene	79-01-6	0.023	0.042	0.17	0.030 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	115
4-Bromofluorobenzene	460-00-4	70-130	92
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	13-IA2-111612	<b>Date/Time Analyzed:</b>	12/5/12 01:24 PM
<b>Lab ID:</b>	1211514DR1-08A	<b>Dilution Factor:</b>	1.60
<b>Date/Time Collecte</b>	11/16/12 09:46 AM	<b>Instrument/Filename:</b>	msda.i / a120426simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0070	0.032	0.13	0.67
Trichloroethene	79-01-6	0.024	0.043	0.17	0.095 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	116
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	24-IA1-111612	<b>Date/Time Analyzed:</b>	12/5/12 02:00 PM
<b>Lab ID:</b>	1211514DR1-09A	<b>Dilution Factor:</b>	1.53
<b>Date/Time Collecte</b>	11/16/12 11:49 AM	<b>Instrument/Filename:</b>	msda.i / a120427simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0067	0.031	0.12	0.080 J
Trichloroethene	79-01-6	0.023	0.041	0.16	0.068 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	118
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	101



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	24-IA2-111612	<b>Date/Time Analyzed:</b>	12/5/12 02:36 PM
<b>Lab ID:</b>	1211514DR1-10A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	11/16/12 10:58 AM	<b>Instrument/Filename:</b>	msda.i / a120428simD
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0068	0.031	0.12	0.080 J
Trichloroethene	79-01-6	0.023	0.042	0.17	0.029 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	119
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	12/4/12 10:19 PM
<b>Lab ID:</b>	1211514DR1-11A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120416simE
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.0044	0.020	0.081	Not Detected
Trichloroethene	79-01-6	0.015	0.027	0.11	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	118
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	12/4/12 06:01 PM
<b>Lab ID:</b>	1211514DR1-12A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120412sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	125
Trichloroethene	79-01-6	101

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	12/4/12 06:51 PM
<b>Lab ID:</b>	1211514DR1-13A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120413sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	120
Trichloroethene	79-01-6	95

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	121
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	106

\* % Recovery is calculated using unrounded analytical results.



MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	12/4/12 07:46 PM
<b>Lab ID:</b>	1211514DR1-13AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msda.i / a120414sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	116
Trichloroethene	79-01-6	96

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	122
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	110

\* % Recovery is calculated using unrounded analytical results.

# Air TOXICS LTD.

## CHAIN-OF-CUSTODY RECORD

### Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 3 of 5

Project Manager Bill Beaudie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 201 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 Suite 200 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	10-IA1-111512	23925	11/15/12	10:03	TO-15 SIM <small>see notes</small>	-30	-5		
02A	10-IA2-111512	32107	11/15/12	10:07		-30	-4.5		
03A	10-CSI-111512	31432	11/15/12	10:14		-30	-1.5		
04A	11-IA1-111512	34190	11/15/12	10:40		-30	-5		
05A	11-IA2-111512	14010	11/15/12	10:42		-30	-4		
06A	11-IA3-111512	5599	11/15/12	10:43		-29.5	-4		
07A	13-IA1-111612	34241	11/16/12	09:39		-29	-4		
08A	13-IA2-111612	5600	11/16/12	09:46		-30	-5		
09A	24-IA1-111612	33925	11/16/12	11:49		-30	4.5		
10A	24-IA2-111612	34737	11/16/12	10:58		-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>	Notes: TO-15 SIM for select compounds. see attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>FedEx</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
	<u>UPS</u> <u>11/26/12</u>					



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Barchia / Meredith DiAndrea  
 Collected by: (Print and Sign) Thomas Achten  
 Company Max Foster + Abongi Email taskforce@maxfoster.com  
 Address 2001 NW 14th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 <sup>Suite 200</sup> Fax \_\_\_\_\_

<b>Project Info:</b>	P.O. # _____	<b>Turn Around Time:</b>	Lab Use Only
	Project # <u>8006.31.01-05</u>		Pressurized by:
Project Name <u>Park Laundry</u>	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Rush	Date: _____
	specify _____		Pressurization Gas: _____
			N <sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>11A</del>	1-SS1-111512	94521	11/15/12	16:37	TO-15 SEM	-28	-4.5		
<del>12A</del>	1-SS2-111512	36569	11/15/12	17:10		-30	-4.5		
<del>13A</del>	1-SS3-111512	9495	11/15/12	17:23		-30	-4.5		
<del>14A</del>	7-SS1-111512	15748	11/15/12	13:10		-29	-4.5		
<del>15A</del>	7-SS2-111512	35690	11/15/12	13:29		-28.5	-4		
<del>16A</del>	7-SS3-111512	97105	11/15/12	14:07		-30	-4.5		
<del>17A</del>	11-SS1-111512	9453	11/15/12	14:35		-29.5	-4.5		
<del>18A</del>	11-SS2-111512	34609	11/15/12	15:24		-28	-4.5		
<del>19A</del>	11-SS3-111512	9518	11/15/12	15:30		-29.5	-4.5		
<del>20A</del>	11-SS4-111512	93109	11/15/12	16:22		-28.5	-4.5		

TOP 11/20/12

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>1300 11/20/12</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>1000 11/20/12</u>	<b>Notes:</b> TO-15 SEM for select compounds. See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>UPS</u>		<u>N/A</u>	<u>Good</u>	Yes No <u>None</u>	<u>1211514</u>

1211514

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action, Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/14/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211514ER2

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211514ER2**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		
<b>DATE REISSUED:</b>	01/14/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
11A	1-SS1-111512	Modified TO-15	3.4 "Hg	15 psi
12A	1-SS2-111512	Modified TO-15	2.6 "Hg	15 psi
13A	1-SS3-111512	Modified TO-15	3.2 "Hg	15 psi
14A	7-SS1-111512	Modified TO-15	3.8 "Hg	15 psi
15A	7-SS2-111512	Modified TO-15	4.8 "Hg	15 psi
16A	7-SS3-111512	Modified TO-15	3.2 "Hg	15 psi
17A	11-SS1-111512	Modified TO-15	0.2 "Hg	15 psi
18A	11-SS2-111512	Modified TO-15	3.8 "Hg	15 psi
19A	11-SS3-111512	Modified TO-15	6.4 "Hg	15 psi
20A	11-SS4-111512	Modified TO-15	3.4 "Hg	15 psi
21A	Lab Blank	Modified TO-15	NA	NA
22A	CCV	Modified TO-15	NA	NA
23A	LCS	Modified TO-15	NA	NA
23AA	LCS D	Modified TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 01/14/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211514ER2**

Ten 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via modified 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.

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>
Initial Calibration	$\leq 30\%$ RSD with 2 compounds allowed out to $< 40\%$ RSD	$\leq 30\%$ RSD with 4 compounds allowed out to $< 40\%$ RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on samples 11-SS2-111512, 11-SS3-111512, and 11-SS4-111512 due to the presence of high level non-target species.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211514B on 12-13-12.

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

THE WORK ORDER WAS RE-ISSUED ON 1/14/13 TO INCLUDE THE MDL VALUES IN THE FINAL REPORT.

THE WORK ORDER WAS REISSUED ON 1/14/13 TO APPLY THE REPORTING LIMITS AND ASSOCIATED RESULTS GENERATED FROM THE FULL SCAN TO-15 DATA FILE CONSISTENT WITH WORKORDER 1211515A, RATHER THAN THE LOWER SIM REPORTING LIMITS AND RESULTS GENERATED FROM THE TO-15 SIM DATA FILE. CHANGING THE REPORTING LIMITS FROM SIM TO FULL SCAN CAUSED SOME

---

PREVIOUSLY REPORTED COMPOUNDS TO BE BELOW THE REPORTING LIMIT AND WERE THEREFORE REPORTED AS "NOT DETECTED".

**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

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



## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	1-SS1-111512	<b>Date/Time Analyzed:</b>	11/30/12 02:10 PM
<b>Lab ID:</b>	1211514ER2-11A	<b>Dilution Factor:</b>	2.28
<b>Date/Time Collecte</b>	11/15/12 04:37 PM	<b>Instrument/Filename:</b>	msdv.i / v113010er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.075	0.46	0.92	Not Detected
Trichloroethene	79-01-6	0.19	0.61	1.2	0.29 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	103

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	1-SS2-111512	<b>Date/Time Analyzed:</b>	11/30/12 03:04 PM
<b>Lab ID:</b>	1211514ER2-12A	<b>Dilution Factor:</b>	2.21
<b>Date/Time Collecte</b>	11/15/12 05:10 PM	<b>Instrument/Filename:</b>	msdv.i / v113011er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.073	0.45	0.89	Not Detected
Trichloroethene	79-01-6	0.18	0.59	1.2	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	97



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	1-SS3-111512	<b>Date/Time Analyzed:</b>	11/30/12 04:25 PM
<b>Lab ID:</b>	1211514ER2-13A	<b>Dilution Factor:</b>	2.26
<b>Date/Time Collecte</b>	11/15/12 05:23 PM	<b>Instrument/Filename:</b>	msdv.i / v113012er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.074	0.46	0.91	Not Detected
Trichloroethene	79-01-6	0.19	0.61	1.2	0.35 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	101
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	100



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	7-SS1-111512	<b>Date/Time Analyzed:</b>	11/30/12 05:02 PM
<b>Lab ID:</b>	1211514ER2-14A	<b>Dilution Factor:</b>	2.31
<b>Date/Time Collecte</b>	11/15/12 01:10 PM	<b>Instrument/Filename:</b>	msdv.i / v113013er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.076	0.47	0.93	Not Detected
Trichloroethene	79-01-6	0.19	0.62	1.2	0.31 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	99



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	7-SS2-111512	<b>Date/Time Analyzed:</b>	11/30/12 05:52 PM
<b>Lab ID:</b>	1211514ER2-15A	<b>Dilution Factor:</b>	2.40
<b>Date/Time Collecte</b>	11/15/12 01:29 PM	<b>Instrument/Filename:</b>	msdv.i / v113014er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.079	0.48	0.97	Not Detected
Trichloroethene	79-01-6	0.20	0.64	1.3	0.36 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	103

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	7-SS3-111512	<b>Date/Time Analyzed:</b>	11/30/12 06:43 PM
<b>Lab ID:</b>	1211514ER2-16A	<b>Dilution Factor:</b>	2.26
<b>Date/Time Collecte</b>	11/15/12 02:07 PM	<b>Instrument/Filename:</b>	msdv.i / v113015er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.074	0.46	0.91	Not Detected
Trichloroethene	79-01-6	0.19	0.61	1.2	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	101



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	11-SS1-111512	<b>Date/Time Analyzed:</b>	11/30/12 07:19 PM
<b>Lab ID:</b>	1211514ER2-17A	<b>Dilution Factor:</b>	2.03
<b>Date/Time Collecte</b>	11/15/12 02:35 PM	<b>Instrument/Filename:</b>	msdv.i / v113016er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.067	0.41	0.82	0.22 J
Trichloroethene	79-01-6	0.17	0.54	1.1	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	98

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	11-SS2-111512	<b>Date/Time Analyzed:</b>	11/30/12 08:55 PM
<b>Lab ID:</b>	1211514ER2-18A	<b>Dilution Factor:</b>	4.62
<b>Date/Time Collecte</b>	11/15/12 03:24 PM	<b>Instrument/Filename:</b>	msdv.i / v113017er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.15	0.93	1.9	0.72 J
Trichloroethene	79-01-6	0.38	1.2	2.5	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	107
Toluene-d8	2037-26-5	70-130	100





MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	11-SS3-111512	<b>Date/Time Analyzed:</b>	11/30/12 09:31 PM
<b>Lab ID:</b>	1211514ER2-19A	<b>Dilution Factor:</b>	5.14
<b>Date/Time Collecte</b>	11/15/12 03:30 PM	<b>Instrument/Filename:</b>	msdv.i / v113018er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.17	1.0	2.1	Not Detected
Trichloroethene	79-01-6	0.42	1.4	2.8	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	101
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	100



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	11-SS4-111512	<b>Date/Time Analyzed:</b>	11/30/12 10:17 PM
<b>Lab ID:</b>	1211514ER2-20A	<b>Dilution Factor:</b>	7.12
<b>Date/Time Collecte</b>	11/15/12 04:22 PM	<b>Instrument/Filename:</b>	msdv.i / v113019er1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.23	1.4	2.9	Not Detected
Trichloroethene	79-01-6	0.59	1.9	3.8	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	103

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	11/30/12 01:08 PM
<b>Lab ID:</b>	1211514ER2-21A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v113009er1
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.033	0.20	0.40	Not Detected
Trichloroethene	79-01-6	0.082	0.27	0.54	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	98
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	99

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	11/30/12 09:02 AM
<b>Lab ID:</b>	1211514ER2-22A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v113004
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	110
Trichloroethene	79-01-6	98

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	100

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	11/30/12 09:49 AM
<b>Lab ID:</b>	1211514ER2-23A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v113005
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	104
Trichloroethene	79-01-6	92

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	99

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	11/30/12 10:32 AM
<b>Lab ID:</b>	1211514ER2-23AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v113006
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	102
Trichloroethene	79-01-6	91

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	96

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Bendie / Meredith D. Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 suite 200 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

TRW  
11/16/12

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<del>01A</del>	10-IA1-111512	23925	11/15/12	10:03	TO-15 SIM <sup>see notes</sup>	-30	-5		
02A	10-IA2-111512	32107	11/15/12	10:07		-30	-4.5		
03A	10-CS1-111512	31432	11/15/12	10:14		-30	-1.5		
04A	11-IA1-111512	34190	11/15/12	10:40		-30	-5		
05A	11-IA2-111512	14010	11/15/12	10:42		-30	-4		
06A	11-IA3-111512	5599	11/15/12	10:43		-29.5	-4		
07A	13-IA1-111612	34241	11/16/12	09:39		-29	-4		
08A	13-IA2-111612	5600	11/16/12	09:46		-30	-5		
09A	24-IA1-111612	33925	11/16/12	11:49		-30	4.5		
10A	24-IA2-111612	34737	11/16/12	10:58		-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>TRW</u> Date/Time <u>11/26/12 1000</u>	Notes: TO-15 SIM for select compounds. see attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>FedEx TRW</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
	<u>UPS 11/26/12</u>					



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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Page 4 of 5

Project Manager Bill Bessie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Max Foster + Abingi Email taskton@maxfoster.com  
 Address 2001 NW 14th Ave. Suite 200 City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by:  Date:  Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
11A	1-551-111512	94521	11/15/12	16:37	TO-15 SIM	-28	-4.5		
12A	1-552-111512	36569	11/15/12	17:10		-30	-4.5		
13A	1-553-111512	9495	11/15/12	17:23		-30	-4.5		
14A	7-551-111512	15748	11/15/12	13:10		-29	-4.5		
15A	7-552-111512	35690	11/15/12	13:29		-28.5	-4		
16A	7-553-111512	97105	11/15/12	14:07		-30	-4.5		
17A	11-551-111512	9453	11/15/12	14:35		-29.5	-4.5		
18A	11-552-111512	34609	11/15/12	15:24		-28	-4.5		
19A	11-553-111512	9518	11/15/12	15:30		-29.5	-4.5		
20A	11-554-111512	93109	11/15/12	16:22		-28.5	-4.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>1300 11/20/12</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>1000 11/26/12</u>	Notes: TO-15 SIM for select compounds See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211514</u>
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WEST PRINTING & GRAPHICS (916) 704-8000



121151X

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

## SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table**  
**Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey© database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/13/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211515A

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211515A**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	13-SS1-111612	Modified TO-15	2.0 "Hg	15 psi
02A	1-SG1-111512	Modified TO-15	2.2 "Hg	15 psi
03A	5-SG1-111512	Modified TO-15	3.6 "Hg	15 psi
04A	11-SG1-111612	Modified TO-15	3.6 "Hg	15 psi
05A	13-SG1-111512	Modified TO-15	5.8 "Hg	15 psi
06A	24-SG1-111512	Modified TO-15	5.2 "Hg	15 psi
07A	27-SG1-111512	Modified TO-15	2.2 "Hg	15 psi
08A	45-SG1-111512	Modified TO-15	3.2 "Hg	15 psi
09A	46-SG1-111512	Modified TO-15	1.8 "Hg	15 psi
10A	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

DATE: 12/13/12

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

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

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211515A**

Nine 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via modified 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.

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>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on sample 45-SG1-111512 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 MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

**Client Sample ID: 13-SS1-111612**

**Lab ID#: 1211515A-01A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.22	0.29	1.5	1.9

**Client Sample ID: 1-SG1-111512**

**Lab ID#: 1211515A-02A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.22	2.3	1.5	16

**Client Sample ID: 5-SG1-111512**

**Lab ID#: 1211515A-03A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.23	14	1.6	92

**Client Sample ID: 11-SG1-111612**

**Lab ID#: 1211515A-04A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	1.8	0.59	4.7
cis-1,2-Dichloroethene	0.23	0.83	0.91	3.3
Trichloroethene	0.23	0.87	1.2	4.7

**Client Sample ID: 13-SG1-111512**

**Lab ID#: 1211515A-05A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrachloroethene	0.25	3.8	1.7	26

**Client Sample ID: 24-SG1-111512**

**Lab ID#: 1211515A-06A**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

**Client Sample ID: 24-SG1-111512**

**Lab ID#: 1211515A-06A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.24	0.39	1.6	2.6

**Client Sample ID: 27-SG1-111512**

**Lab ID#: 1211515A-07A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.22	0.87	1.5	5.9

**Client Sample ID: 45-SG1-111512**

**Lab ID#: 1211515A-08A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	1.1	420	7.7	2800

**Client Sample ID: 46-SG1-111512**

**Lab ID#: 1211515A-09A**

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Tetrachloroethene	0.22	8.3	1.4	56



Client Sample ID: 13-SS1-111612

Lab ID#: 1211515A-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120308	Date of Collection:	11/16/12 9:49:00 AM
Dil. Factor:	2.16	Date of Analysis:	12/3/12 02:36 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.22	Not Detected	0.55	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.86	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.87	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.87	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.29	1.5	1.9

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: 1-SG1-111512

Lab ID#: 1211515A-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120309	Date of Collection:	11/15/12 8:35:00 AM
Dil. Factor:	2.18	Date of Analysis:	12/3/12 03:12 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.22	Not Detected	0.56	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.86	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.88	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.88	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	2.3	1.5	16

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	112	70-130





Air Toxics

Client Sample ID: 5-SG1-111512

Lab ID#: 1211515A-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120310	Date of Collection:	11/15/12 10:17:00 A
Dil. Factor:	2.30	Date of Analysis:	12/3/12 03:49 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	Not Detected	0.59	Not Detected
Chloroethane	1.2	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.91	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.93	Not Detected
cis-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
1,2-Dichloroethane	0.23	Not Detected	0.93	Not Detected
Trichloroethene	0.23	Not Detected	1.2	Not Detected
Tetrachloroethene	0.23	14	1.6	92

Container Type: 1 Liter Summa Canister (100% Certified)

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



Client Sample ID: 11-SG1-111612

Lab ID#: 1211515A-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120311	Date of Collection:	11/16/12 7:26:00 AM
Dil. Factor:	2.30	Date of Analysis:	12/3/12 04:31 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.23	1.8	0.59	4.7
Chloroethane	1.2	Not Detected	3.0	Not Detected
1,1-Dichloroethene	0.23	Not Detected	0.91	Not Detected
trans-1,2-Dichloroethene	0.23	Not Detected	0.91	Not Detected
1,1-Dichloroethane	0.23	Not Detected	0.93	Not Detected
cis-1,2-Dichloroethene	0.23	0.83	0.91	3.3
1,2-Dichloroethane	0.23	Not Detected	0.93	Not Detected
Trichloroethene	0.23	0.87	1.2	4.7
Tetrachloroethene	0.23	Not Detected	1.6	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130



Client Sample ID: 13-SG1-111512

Lab ID#: 1211515A-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120312	Date of Collection:	11/15/12 11:34:00 A
Dil. Factor:	2.50	Date of Analysis:	12/3/12 05:27 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.25	Not Detected	0.64	Not Detected
Chloroethane	1.2	Not Detected	3.3	Not Detected
1,1-Dichloroethene	0.25	Not Detected	0.99	Not Detected
trans-1,2-Dichloroethene	0.25	Not Detected	0.99	Not Detected
1,1-Dichloroethane	0.25	Not Detected	1.0	Not Detected
cis-1,2-Dichloroethene	0.25	Not Detected	0.99	Not Detected
1,2-Dichloroethane	0.25	Not Detected	1.0	Not Detected
Trichloroethene	0.25	Not Detected	1.3	Not Detected
Tetrachloroethene	0.25	3.8	1.7	26

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: 24-SG1-111512

Lab ID#: 1211515A-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120313	Date of Collection:	11/15/12 12:35:00 P
Dil. Factor:	2.44	Date of Analysis:	12/3/12 06:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.24	Not Detected	0.62	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
1,1-Dichloroethene	0.24	Not Detected	0.97	Not Detected
trans-1,2-Dichloroethene	0.24	Not Detected	0.97	Not Detected
1,1-Dichloroethane	0.24	Not Detected	0.99	Not Detected
cis-1,2-Dichloroethene	0.24	Not Detected	0.97	Not Detected
1,2-Dichloroethane	0.24	Not Detected	0.99	Not Detected
Trichloroethene	0.24	Not Detected	1.3	Not Detected
Tetrachloroethene	0.24	0.39	1.6	2.6

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: 27-SG1-111512

Lab ID#: 1211515A-07A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v120314</b>	<b>Date of Collection:</b> 11/15/12 11:38:00 A
<b>Dil. Factor:</b>	<b>2.18</b>	<b>Date of Analysis:</b> 12/3/12 07:21 PM

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	0.22	Not Detected	0.56	Not Detected
Chloroethane	1.1	Not Detected	2.9	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.86	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.88	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.86	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.88	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	0.87	1.5	5.9

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	108	70-130



Air Toxics

Client Sample ID: 45-SG1-111512

Lab ID#: 1211515A-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120317	Date of Collection:	11/15/12 9:10:00 AM
Dil. Factor:	11.3	Date of Analysis:	12/3/12 10:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Chloroethane	5.6	Not Detected	15	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	420	7.7	2800

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: 46-SG1-111512

Lab ID#: 1211515A-09A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

<b>File Name:</b>	<b>v120318</b>	<b>Date of Collection:</b>	<b>11/15/12 10:20:00 A</b>	
<b>Dil. Factor:</b>	<b>2.15</b>	<b>Date of Analysis:</b>	<b>12/4/12 07:10 AM</b>	

<b>Compound</b>	<b>Rpt. Limit (ppbv)</b>	<b>Amount (ppbv)</b>	<b>Rpt. Limit (ug/m3)</b>	<b>Amount (ug/m3)</b>
Vinyl Chloride	0.22	Not Detected	0.55	Not Detected
Chloroethane	1.1	Not Detected	2.8	Not Detected
1,1-Dichloroethene	0.22	Not Detected	0.85	Not Detected
trans-1,2-Dichloroethene	0.22	Not Detected	0.85	Not Detected
1,1-Dichloroethane	0.22	Not Detected	0.87	Not Detected
cis-1,2-Dichloroethene	0.22	Not Detected	0.85	Not Detected
1,2-Dichloroethane	0.22	Not Detected	0.87	Not Detected
Trichloroethene	0.22	Not Detected	1.2	Not Detected
Tetrachloroethene	0.22	8.3	1.4	56

**Container Type: 1 Liter Summa Canister (100% Certified)**

<b>Surrogates</b>	<b>%Recovery</b>	<b>Method Limits</b>
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130



Client Sample ID: Lab Blank

Lab ID#: 1211515A-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	v120306	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	12/3/12 01:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	105	70-130





Air Toxics

Client Sample ID: CCV

Lab ID#: 1211515A-11A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v120302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/12 09:45 AM

Compound	%Recovery
Vinyl Chloride	93
Chloroethane	96
1,1-Dichloroethene	100
trans-1,2-Dichloroethene	100
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	98
1,2-Dichloroethane	110
Trichloroethene	96
Tetrachloroethene	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	107	70-130

Client Sample ID: LCS

Lab ID#: 1211515A-12A

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v120303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/12 10:49 AM

Compound	%Recovery
Vinyl Chloride	93
Chloroethane	92
1,1-Dichloroethene	103
trans-1,2-Dichloroethene	109
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	95
1,2-Dichloroethane	117
Trichloroethene	93
Tetrachloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCSD

Lab ID#: 1211515A-12AA

**MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN**

File Name:	v120304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/3/12 11:25 AM

Compound	%Recovery
Vinyl Chloride	91
Chloroethane	89
1,1-Dichloroethene	101
trans-1,2-Dichloroethene	105
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	93
1,2-Dichloroethane	106
Trichloroethene	93
Tetrachloroethene	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	108	70-130



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 457-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Maul Foster & Alangi Email tashton@maul-foster.com  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_  
 Suite 200

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8026 31.01-05</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	13-561-111612	9483	11/16/12	09:44	TD-15 SIM	-29	-2.5		
02A	1-561-111512	36476	11/15/12	08:35		-30	-4.3		
03A	5-561-111512	33727	11/15/12	10:17		-28	-4.5		
04A	11-561-111612	12040	11/16/12	07:26		-29	-4.5		
05A	13-561-111512	30818	11/15/12	11:34		-27	-4		
06A	24-561-111512	97101	11/15/12	12:35		-28	-4		
07A	27-561-111512	36414	11/15/12	11:38		-30	-4		
08A	45-561-111512	37750	11/15/12	09:10		-30	-4.4		
09A	46-561-111512	37749	11/15/12	10:20		-30	-3.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TD-15 SIM for select compounds.  
 See attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211515</u>
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1211575

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

### SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table  
Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey® database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

12/5/2012

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211515B

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 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 #: 1211515B**

Work Order Summary

**CLIENT:** Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland, OR 97209

**BILL TO:** Accounts Payable  
Maul Foster and Alongi Inc.  
400 E. Mill Plain Blvd  
Suite 400  
Vancouver, WA 98660

**PHONE:** 971-544-2139

**P.O. #**

**FAX:** 971-544-2140

**PROJECT #** 8006.31.01-05 Park Laundry

**DATE RECEIVED:** 11/26/2012

**CONTACT:** Kelly Buettner

**DATE COMPLETED:** 12/05/2012

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	13-SS1-111612	Modified ASTM D-1946	2.0 "Hg	15 psi
02A	1-SG1-111512	Modified ASTM D-1946	2.2 "Hg	15 psi
03A	5-SG1-111512	Modified ASTM D-1946	3.6 "Hg	15 psi
04A	11-SG1-111612	Modified ASTM D-1946	3.6 "Hg	15 psi
05A	13-SG1-111512	Modified ASTM D-1946	5.8 "Hg	15 psi
06A	24-SG1-111512	Modified ASTM D-1946	5.2 "Hg	15 psi
07A	27-SG1-111512	Modified ASTM D-1946	2.2 "Hg	15 psi
08A	45-SG1-111512	Modified ASTM D-1946	3.2 "Hg	15 psi
09A	46-SG1-111512	Modified ASTM D-1946	1.8 "Hg	15 psi
09AA	46-SG1-111512 Lab Duplicate	Modified ASTM D-1946	1.8 "Hg	15 psi
10A	Lab Blank	Modified ASTM D-1946	NA	NA
11A	LCS	Modified ASTM D-1946	NA	NA
11AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:



Technical Director

DATE: 12/05/12

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2011, Expiration date: 10/17/2012.

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

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**LABORATORY NARRATIVE**  
**Modified ASTM D-1946**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211515B**

Nine 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

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>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A 3-point calibration curve is performed. Quantitation is based on a daily calibration standard which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 X$ 's the RL.

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.



**Definition of Data Qualifying Flags**

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

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 detection limit.

M - Reported value may be biased due to apparent matrix interferences.

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 NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

**Client Sample ID: 13-SS1-111612**

**Lab ID#: 1211515B-01A**

No Detections Were Found.

**Client Sample ID: 1-SG1-111512**

**Lab ID#: 1211515B-02A**

No Detections Were Found.

**Client Sample ID: 5-SG1-111512**

**Lab ID#: 1211515B-03A**

No Detections Were Found.

**Client Sample ID: 11-SG1-111612**

**Lab ID#: 1211515B-04A**

No Detections Were Found.

**Client Sample ID: 13-SG1-111512**

**Lab ID#: 1211515B-05A**

No Detections Were Found.

**Client Sample ID: 24-SG1-111512**

**Lab ID#: 1211515B-06A**

No Detections Were Found.

**Client Sample ID: 27-SG1-111512**

**Lab ID#: 1211515B-07A**

No Detections Were Found.

**Client Sample ID: 45-SG1-111512**

**Lab ID#: 1211515B-08A**

No Detections Were Found.

**Client Sample ID: 46-SG1-111512**

**Lab ID#: 1211515B-09A**

**Summary of Detected Compounds**  
**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

**Client Sample ID: 46-SG1-111512**

**Lab ID#: 1211515B-09A**

No Detections Were Found.

**Client Sample ID: 46-SG1-111512 Lab Duplicate**

**Lab ID#: 1211515B-09AA**

No Detections Were Found.



Air Toxics

Client Sample ID: 13-SS1-111612

Lab ID#: 1211515B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113016	Date of Collection:	11/16/12 9:49:00 AM
Dil. Factor:	2.16	Date of Analysis:	11/30/12 10:54 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 1-SG1-111512

Lab ID#: 1211515B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113017	Date of Collection:	11/15/12 8:35:00 AM
Dil. Factor:	2.18	Date of Analysis:	11/30/12 11:10 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 5-SG1-111512

Lab ID#: 1211515B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113018	Date of Collection:	11/15/12 10:17:00 A
Dil. Factor:	2.30	Date of Analysis:	11/30/12 11:17 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 11-SG1-111612

Lab ID#: 1211515B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113019	Date of Collection:	11/16/12 7:26:00 AM
Dil. Factor:	2.30	Date of Analysis:	11/30/12 11:29 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 13-SG1-111512

Lab ID#: 1211515B-05A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113020	Date of Collection:	11/15/12 11:34:00 A
Dil. Factor:	2.50	Date of Analysis:	11/30/12 11:46 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)





Air Toxics

Client Sample ID: 24-SG1-111512

Lab ID#: 1211515B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9113021	Date of Collection:	11/15/12 12:35:00 P
Dil. Factor:	2.44	Date of Analysis:	11/30/12 11:54 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 27-SG1-111512

Lab ID#: 1211515B-07A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113022	Date of Collection:	11/15/12 11:38:00 A
Dil. Factor:	2.18	Date of Analysis:	11/30/12 12:02 PM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 45-SG1-111512

Lab ID#: 1211515B-08A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113023	Date of Collection:	11/15/12 9:10:00 AM
Dil. Factor:	2.26	Date of Analysis:	11/30/12 12:09 PM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 46-SG1-111512

Lab ID#: 1211515B-09A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113024	Date of Collection:	11/15/12 10:20:00 A
Dil. Factor:	2.15	Date of Analysis:	11/30/12 12:18 PM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: 46-SG1-111512 Lab Duplicate

Lab ID#: 1211515B-09AA

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113025	Date of Collection:	11/15/12 10:20:00 A
Dil. Factor:	2.15	Date of Analysis:	11/30/12 12:25 PM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1211515B-10A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113004	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	11/30/12 08:53 AM

<b>Compound</b>	<b>Rpt. Limit (%)</b>	<b>Amount (%)</b>
Helium	0.050	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 1211515B-11A

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113003	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/30/12 08:41 AM

<b>Compound</b>	<b>%Recovery</b>
Helium	103

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1211515B-11AA

**NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

File Name:	9113026	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 11/30/12 12:34 PM

<b>Compound</b>	<b>%Recovery</b>
Helium	107

Container Type: NA - Not Applicable





**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 457-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Maul Foster & Alangi Email tashton@maul-foster.com  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____	Project # <u>8026 31.01-05</u>	Project Name <u>Park Laundry</u>
specify		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	13-561-111612	9483	11/16/12	09:44	TD-15 SIM	-29	-2.5		
02A	1-561-111512	36476	11/15/12	08:35		-30	-4.3		
03A	5-561-111512	33727	11/15/12	10:17		-28	-4.5		
04A	11-561-111612	12040	11/16/12	07:26		-29	-4.5		
05A	13-561-111512	30818	11/15/12	11:34		-27	-4		
06A	24-561-111512	97101	11/15/12	12:35		-28	-4		
07A	27-561-111512	36414	11/15/12	11:38		-30	-4		
08A	45-561-111512	37750	11/15/12	09:10		-30	-4.4		
09A	46-561-111512	37749	11/15/12	10:20		-30	-3.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TD-15 SIM for select compounds.  
 See attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211515</u>
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1211575

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

### SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table  
Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey® database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

1/14/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01-05  
Workorder #: 1211515CR1

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 11/26/2012 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 #: 1211515CR1**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01-05 Park Laundry
<b>DATE RECEIVED:</b>	11/26/2012	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	12/13/2012		
<b>DATE REISSUED:</b>	01/14/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	13-SS1-111612	Modified TO-15	2.0 "Hg	15 psi
02A	1-SG1-111512	Modified TO-15	2.2 "Hg	15 psi
03A	5-SG1-111512	Modified TO-15	3.6 "Hg	15 psi
04A	11-SG1-111612	Modified TO-15	3.6 "Hg	15 psi
05A	13-SG1-111512	Modified TO-15	5.8 "Hg	15 psi
06A	24-SG1-111512	Modified TO-15	5.2 "Hg	15 psi
07A	27-SG1-111512	Modified TO-15	2.2 "Hg	15 psi
08A	45-SG1-111512	Modified TO-15	3.2 "Hg	15 psi
09A	46-SG1-111512	Modified TO-15	1.8 "Hg	15 psi
10A	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 01/14/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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**LABORATORY NARRATIVE**  
**Modified TO-15**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1211515CR1**

Nine 1 Liter Summa Canister (100% Certified) samples were received on November 26, 2012. The laboratory performed analysis via modified 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.

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>
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

Dilution was performed on sample 45-SG1-111512 due to the presence of high level target species.

This workorder was created to evaluate Trichloroethene (TCE) and 1,2-Dichloroethane (1,2-DCA) in all samples down to the Method Detection Limit to allow for comparison of results to the required screening levels. Please note that this workorder fraction contains only a subset of the requested analytes. The full list evaluated to the Reporting Limit (RL), including TCE and 1,2-DCA, were reported in workorder 1211515A on 12-13-12.

All canisters used for this project have been certified to the RL for the target analytes. Concentrations that are below the level at which the canister was certified may be false positives.

THE WORK ORDER WAS REISSUED ON 1/14/13 TO APPLY THE REPORTING LIMITS AND ASSOCIATED RESULTS GENERATED FROM THE FULL SCAN TO-15 DATA FILE CONSISTENT WITH WORKORDER 1211515A, RATHER THAN THE LOWER SIM REPORTING LIMITS AND RESULTS GENERATED FROM THE TO-15 SIM DATA FILE. CHANGING THE REPORTING LIMITS FROM SIM TO FULL SCAN CAUSED SOME PREVIOUSLY REPORTED COMPOUNDS TO BE BELOW THE REPORTING LIMIT AND WERE THEREFORE REPORTED AS "NOT DETECTED".

**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

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

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	13-SS1-111612	<b>Date/Time Analyzed:</b>	12/3/12 02:36 PM
<b>Lab ID:</b>	1211515CR1-01A	<b>Dilution Factor:</b>	2.16
<b>Date/Time Collecte</b>	11/16/12 09:49 AM	<b>Instrument/Filename:</b>	msdv.i / v120308cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.071	0.44	0.87	Not Detected
Trichloroethene	79-01-6	0.18	0.58	1.2	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	102



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	1-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 03:12 PM
<b>Lab ID:</b>	1211515CR1-02A	<b>Dilution Factor:</b>	2.18
<b>Date/Time Collecte</b>	11/15/12 08:35 AM	<b>Instrument/Filename:</b>	msdv.i / v120309cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.072	0.44	0.88	0.34 J
Trichloroethene	79-01-6	0.18	0.58	1.2	0.95 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	102





MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	5-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 03:49 PM
<b>Lab ID:</b>	1211515CR1-03A	<b>Dilution Factor:</b>	2.30
<b>Date/Time Collecte</b>	11/15/12 10:17 AM	<b>Instrument/Filename:</b>	msdv.i / v120310cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.076	0.46	0.93	0.16 J
Trichloroethene	79-01-6	0.19	0.62	1.2	0.48 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	99



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	11-SG1-111612	<b>Date/Time Analyzed:</b>	12/3/12 04:31 PM
<b>Lab ID:</b>	1211515CR1-04A	<b>Dilution Factor:</b>	2.30
<b>Date/Time Collecte</b>	11/16/12 07:26 AM	<b>Instrument/Filename:</b>	msdv.i / v120311cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.076	0.46	0.93	Not Detected
Trichloroethene	79-01-6	0.19	0.62	1.2	4.7

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	102

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	13-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 05:27 PM
<b>Lab ID:</b>	1211515CR1-05A	<b>Dilution Factor:</b>	2.50
<b>Date/Time Collecte</b>	11/15/12 11:34 AM	<b>Instrument/Filename:</b>	msdv.i / v120312cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.082	0.50	1.0	Not Detected
Trichloroethene	79-01-6	0.21	0.67	1.3	0.40 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	101



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	24-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 06:20 PM
<b>Lab ID:</b>	1211515CR1-06A	<b>Dilution Factor:</b>	2.44
<b>Date/Time Collecte</b>	11/15/12 12:35 PM	<b>Instrument/Filename:</b>	msdv.i / v120313cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.080	0.49	0.99	Not Detected
Trichloroethene	79-01-6	0.20	0.66	1.3	0.35 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	98
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	104

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	27-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 07:21 PM
<b>Lab ID:</b>	1211515CR1-07A	<b>Dilution Factor:</b>	2.18
<b>Date/Time Collecte</b>	11/15/12 11:38 AM	<b>Instrument/Filename:</b>	msdv.i / v120314cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.072	0.44	0.88	0.21 J
Trichloroethene	79-01-6	0.18	0.58	1.2	0.50 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	97



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	45-SG1-111512	<b>Date/Time Analyzed:</b>	12/3/12 10:46 PM
<b>Lab ID:</b>	1211515CR1-08A	<b>Dilution Factor:</b>	11.3
<b>Date/Time Collecte</b>	11/15/12 09:10 AM	<b>Instrument/Filename:</b>	msdv.i / v120317cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.37	2.3	4.6	Not Detected
Trichloroethene	79-01-6	0.93	3.0	6.1	1.6 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	105
Toluene-d8	2037-26-5	70-130	99

## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	46-SG1-111512	<b>Date/Time Analyzed:</b>	12/4/12 07:10 AM
<b>Lab ID:</b>	1211515CR1-09A	<b>Dilution Factor:</b>	2.15
<b>Date/Time Collecte</b>	11/15/12 10:20 AM	<b>Instrument/Filename:</b>	msdv.i / v120318cr1
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.071	0.44	0.87	Not Detected
Trichloroethene	79-01-6	0.18	0.58	1.2	0.25 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	107
Toluene-d8	2037-26-5	70-130	100



MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	12/3/12 01:04 PM
<b>Lab ID:</b>	1211515CR1-10A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120306cr1
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,2-Dichloroethane	107-06-2	0.033	0.20	0.40	Not Detected
Trichloroethene	79-01-6	0.082	0.27	0.54	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	101
4-Bromofluorobenzene	460-00-4	70-130	105
Toluene-d8	2037-26-5	70-130	102



## MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	12/3/12 09:45 AM
<b>Lab ID:</b>	1211515CR1-11A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120302
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	110
Trichloroethene	79-01-6	96

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	114
4-Bromofluorobenzene	460-00-4	70-130	107
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	12/3/12 10:49 AM
<b>Lab ID:</b>	1211515CR1-12A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120303
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	117
Trichloroethene	79-01-6	93

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	100

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	12/3/12 11:25 AM
<b>Lab ID:</b>	1211515CR1-12AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdv.i / v120304
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,2-Dichloroethane	107-06-2	106
Trichloroethene	79-01-6	93

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	96

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 457-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie / Meredith D'Andrea  
 Collected by: (Print and Sign) Thomas Ashton  
 Company Maul Foster & Alangi Email tashton@maul-foster.com  
 Address 2001 NW 19th Ave. City Portland State OR Zip 97209  
 Phone 503-944-9715 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____	Project # <u>8026 31.01-05</u>	Project Name <u>Park Laundry</u>
specify		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	13-561-111612	9483	11/16/12	09:44	TD-15 SIM	-29	-2.5		
02A	1-561-111512	36476	11/15/12	08:35		-30	-4.3		
03A	5-561-111512	33727	11/15/12	10:17		-28	-4.5		
04A	11-561-111612	12040	11/16/12	07:26		-29	-4.5		
05A	13-561-111512	30818	11/15/12	11:34		-27	-4		
06A	24-561-111512	97101	11/15/12	12:35		-28	-4		
07A	27-561-111512	36414	11/15/12	11:38		-30	-4		
08A	45-561-111512	37750	11/15/12	09:10		-30	-4.4		
09A	46-561-111512	37749	11/15/12	10:20		-30	-3.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>11/20/12 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>11/26/12 1000</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 TD-15 SIM for select compounds.  
 See attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1211515</u>
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1211575

Mr. Guy Barrett  
October 12, 2012  
Page 5

Project No. 8006.31.01

### SAMPLE ANALYSIS AND QUALITY ASSURANCE

Samples will be analyzed for PCE and associated breakdown products (TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; 1,1-DCA; Chloroethane; and vinyl chloride) by Modified U.S. Environmental Protection Agency (USEPA) Method TO-15 selected ion monitoring method to achieve low reporting limits. Eurofins/Air Toxics of Folsom, California, will provide a 6-liter or 1-liter, stainless steel canister (Summa canister) for each sample. Laboratory-specific method reporting limits (MRLs) for VOCs are listed in the following table. The MRLs assume a 6-liter sample size, with the canister dilution factor not incorporated. The dilution factor is determined by the canister size and residual vacuum. For example, a 1-liter sample with a vacuum of 5-inches of mercury would have a MRL approximately 2.4 times higher than the values provided in the following table. If there are high concentrations of nontarget analytes in the samples (e.g., methylene chloride, acetone, toluene), the laboratory may dilute the sample to avoid overloading and damaging its instruments. MFA will coordinate with the laboratory to obtain the lowest possible MRLs.

**Table  
Analytes, Reporting Limits, and Screening Levels ( $\mu\text{g}/\text{m}^3$ )**

Analyte	CAS Number	Reporting Limit	Screening Level—Air	Screening Level—Soil Gas
PCE	127-18-4	0.14	9.6	96
TCE	79-01-6	0.016	0.37	3.7
1,1-DCE	75-35-4	0.04	91	910
cis-1,2-DCE	156-59-2	0.08	16	160
trans-1,2-DCE	156-60-5	0.40	32	320
1,1-DCA	75-34-3	0.08	320	3200
Chloroethane	75-00-3	0.13	3	30
Vinyl chloride	75-01-4	0.03	0.28	2.8
Helium	7440-59-7	81799	NE	NE

NOTES:  
Screening levels are based on Table B-1 of Ecology Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Values for PCE and TCE are based on CLARC guidance dated September, 2012.  
CAS = Chemical Abstract Service  
NE = Not Established  
 $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter.

MFA will receive the data electronically from the laboratory and the data will be transferred to a GISKey® database. The data will be validated consistent with Ecology and USEPA protocols. To document data reliability, a memorandum will be prepared summarizing

8/20/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01  
Workorder #: 1308171

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 8/6/2013 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 #: 1308171**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01 Park Laundry
<b>DATE RECEIVED:</b>	08/06/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	08/20/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	28-SG1-073013	Modified TO-15	5.3 "Hg	14.7 psi
02A	13-SG1-073013	Modified TO-15	6.7 "Hg	15 psi
03A	44-SG1-073113	Modified TO-15	4.3 "Hg	15 psi
04A	45-SG1-073113	Modified TO-15	4.5 "Hg	14.8 psi
05A	46-SG1-073013	Modified TO-15	5.3 "Hg	15.1 psi
06A	27-SG1-072913	Modified TO-15	5.9 "Hg	15 psi
07A	5-SG1-073013	Modified TO-15	4.1 "Hg	14.9 psi
08A	11-SG1-073113	Modified TO-15	5.7 "Hg	14.7 psi
09A	24-SG1-073013	Modified TO-15	7.1 "Hg	14.8 psi
10A	5-SS1-073013	Modified TO-15	3.3 "Hg	14.7 psi
11A	5-SS2-073013	Modified TO-15	3.5 "Hg	15.2 psi
12A	1-SS3-072913	Modified TO-15	4.1 "Hg	14.7 psi
13A	1-SS2-072913	Modified TO-15	3.9 "Hg	15.1 psi
14A	1-SS1-072913	Modified TO-15	4.3 "Hg	14.7 psi
15A	7-SS3-072913	Modified TO-15	5.3 "Hg	15 psi
16A	7-SS2-072913	Modified TO-15	4.3 "Hg	14.9 psi
17A	7-SS1-072913	Modified TO-15	4.5 "Hg	14.8 psi
18A	13-SS1-073013	Modified TO-15	6.7 "Hg	14.6 psi
19A	11-SS4-073113	Modified TO-15	3.9 "Hg	14.8 psi
20A	11-SS3-073113	Modified TO-15	3.7 "Hg	14.8 psi
21A	11-SS2-073113	Modified TO-15	5.5 "Hg	14.8 psi
22A	11-SS1-073113	Modified TO-15	4.5 "Hg	14.7 psi
23A	Lab Blank	Modified TO-15	NA	NA

Continued on next page

**WORK ORDER #: 1308171**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01 Park Laundry
<b>DATE RECEIVED:</b>	08/06/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	08/20/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
23B	Lab Blank	Modified TO-15	NA	NA
23C	Lab Blank	Modified TO-15	NA	NA
24A	CCV	Modified TO-15	NA	NA
24B	CCV	Modified TO-15	NA	NA
24C	CCV	Modified TO-15	NA	NA
25A	LCS	Modified TO-15	NA	NA
25AA	LCSD	Modified TO-15	NA	NA
25B	LCS	Modified TO-15	NA	NA
25BB	LCSD	Modified TO-15	NA	NA
25C	LCS	Modified TO-15	NA	NA
25CC	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 08/20/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291,  
 TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935  
 Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95602  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020





**LABORATORY NARRATIVE**  
**EPA Method TO-15**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1308171**

twenty-two 1 Liter Summa Canister (100% Certified) samples were received on August 06, 2013. 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**

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.

As per client project requirements, the laboratory has reported estimated values for Vinyl Chloride, 1,2-Dichloroethane, Trichloroethene hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on samples 28-SG1-073013 and 44-SG1-073113 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, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

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

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	28-SG1-073013	<b>Date/Time Analyzed:</b>	8/18/13 10:31 PM
<b>Lab ID:</b>	1308171-01A	<b>Dilution Factor:</b>	16.2
<b>Date/Time Collected:</b>	7/30/13 03:17 PM	<b>Instrument/Filename:</b>	msdj.i / j081827
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	6.5	13	33	Not Detected
1,1-Dichloroethene	75-35-4	9.7	13	32	Not Detected
1,2-Dichloroethane	107-06-2	6.2	13	33	Not Detected
Chloroethane	75-00-3	29	34	85	Not Detected
cis-1,2-Dichloroethene	156-59-2	5.8	13	32	Not Detected
Tetrachloroethene	127-18-4	18	22	55	16000
trans-1,2-Dichloroethene	156-60-5	11	13	32	Not Detected
Trichloroethene	79-01-6	11	17	44	Not Detected
Vinyl Chloride	75-01-4	5.3	8.3	21	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	97



Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	13-SG1-073013	<b>Date/Time Analyzed:</b>	8/16/13 08:22 PM
<b>Lab ID:</b>	1308171-02A	<b>Dilution Factor:</b>	2.60
<b>Date/Time Collected:</b>	7/30/13 01:54 PM	<b>Instrument/Filename:</b>	msdj.i / j081612
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	1.0	2.1	5.3	Not Detected
1,1-Dichloroethene	75-35-4	1.6	2.1	5.2	Not Detected
1,2-Dichloroethane	107-06-2	0.99	2.1	5.3	Not Detected
Chloroethane	75-00-3	4.6	5.5	14	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.94	2.1	5.2	Not Detected
Tetrachloroethene	127-18-4	2.9	3.5	8.8	30
trans-1,2-Dichloroethene	156-60-5	1.8	2.1	5.2	Not Detected
Trichloroethene	79-01-6	1.8	2.8	7.0	2.4 J
Vinyl Chloride	75-01-4	0.86	1.3	3.3	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	83
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	97



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	44-SG1-073113	<b>Date/Time Analyzed:</b>	8/18/13 12:42 PM
<b>Lab ID:</b>	1308171-03A	<b>Dilution Factor:</b>	9.44
<b>Date/Time Collected:</b>	7/31/13 10:00 AM	<b>Instrument/Filename:</b>	msdj.i / j081808
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	3.8	7.6	19	Not Detected
1,1-Dichloroethene	75-35-4	5.7	7.5	19	Not Detected
1,2-Dichloroethane	107-06-2	3.6	7.6	19	Not Detected
Chloroethane	75-00-3	17	20	50	Not Detected
cis-1,2-Dichloroethene	156-59-2	3.4	7.5	19	Not Detected
Tetrachloroethene	127-18-4	10	13	32	9500
trans-1,2-Dichloroethene	156-60-5	6.7	7.5	19	Not Detected
Trichloroethene	79-01-6	6.5	10	25	Not Detected
Vinyl Chloride	75-01-4	3.1	4.8	12	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	97



Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	45-SG1-073113	<b>Date/Time Analyzed:</b>	8/16/13 09:58 PM
<b>Lab ID:</b>	1308171-04A	<b>Dilution Factor:</b>	2.36
<b>Date/Time Collected:</b>	7/31/13 09:32 AM	<b>Instrument/Filename:</b>	msdj.i / j081614
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.94	1.9	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.9	4.7	Not Detected
1,2-Dichloroethane	107-06-2	0.90	1.9	4.8	Not Detected
Chloroethane	75-00-3	4.2	5.0	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.85	1.9	4.7	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	8.0	1800
trans-1,2-Dichloroethene	156-60-5	1.7	1.9	4.7	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.78	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	46-SG1-073013	<b>Date/Time Analyzed:</b>	8/18/13 01:31 PM
<b>Lab ID:</b>	1308171-05A	<b>Dilution Factor:</b>	2.46
<b>Date/Time Collected:</b>	7/30/13 09:47 AM	<b>Instrument/Filename:</b>	msdj.i / j081809
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.98	2.0	5.0	Not Detected
1,1-Dichloroethene	75-35-4	1.5	2.0	4.9	Not Detected
1,2-Dichloroethane	107-06-2	0.94	2.0	5.0	1.2 J
Chloroethane	75-00-3	4.4	5.2	13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.89	2.0	4.9	Not Detected
Tetrachloroethene	127-18-4	2.7	3.3	8.3	100
trans-1,2-Dichloroethene	156-60-5	1.7	2.0	4.9	Not Detected
Trichloroethene	79-01-6	1.7	2.6	6.6	Not Detected
Vinyl Chloride	75-01-4	0.81	1.2	3.1	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	81
4-Bromofluorobenzene	460-00-4	70-130	102
Toluene-d8	2037-26-5	70-130	95

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	27-SG1-072913	<b>Date/Time Analyzed:</b>	8/18/13 02:37 PM
<b>Lab ID:</b>	1308171-06A	<b>Dilution Factor:</b>	2.52
<b>Date/Time Collected:</b>	7/29/13 03:08 PM	<b>Instrument/Filename:</b>	msdj.i / j081810
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	1.0	2.0	5.1	Not Detected
1,1-Dichloroethene	75-35-4	1.5	2.0	5.0	Not Detected
1,2-Dichloroethane	107-06-2	0.96	2.0	5.1	Not Detected
Chloroethane	75-00-3	4.5	5.3	13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.91	2.0	5.0	Not Detected
Tetrachloroethene	127-18-4	2.8	3.4	8.5	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.8	2.0	5.0	Not Detected
Trichloroethene	79-01-6	1.7	2.7	6.8	Not Detected
Vinyl Chloride	75-01-4	0.83	1.3	3.2	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	96



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	5-SG1-073013	<b>Date/Time Analyzed:</b>	8/18/13 03:04 PM
<b>Lab ID:</b>	1308171-07A	<b>Dilution Factor:</b>	2.33
<b>Date/Time Collected:</b>	7/30/13 10:00 AM	<b>Instrument/Filename:</b>	msdj.i / j081811
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.93	1.9	4.7	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.89	1.9	4.7	Not Detected
Chloroethane	75-00-3	4.2	4.9	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.84	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	7.9	250
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.77	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	81
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	11-SG1-073113	<b>Date/Time Analyzed:</b>	8/18/13 03:32 PM
<b>Lab ID:</b>	1308171-08A	<b>Dilution Factor:</b>	2.47
<b>Date/Time Collected:</b>	7/31/13 11:03 AM	<b>Instrument/Filename:</b>	msdj.i / j081812
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.99	2.0	5.0	Not Detected
1,1-Dichloroethene	75-35-4	1.5	2.0	4.9	Not Detected
1,2-Dichloroethane	107-06-2	0.94	2.0	5.0	Not Detected
Chloroethane	75-00-3	4.4	5.2	13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.89	2.0	4.9	13
Tetrachloroethene	127-18-4	2.8	3.4	8.4	34
trans-1,2-Dichloroethene	156-60-5	1.8	2.0	4.9	Not Detected
Trichloroethene	79-01-6	1.7	2.6	6.6	5.2 J
Vinyl Chloride	75-01-4	0.81	1.3	3.2	2.7 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	81
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	94



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	24-SG1-073013	<b>Date/Time Analyzed:</b>	8/18/13 03:59 PM
<b>Lab ID:</b>	1308171-09A	<b>Dilution Factor:</b>	2.63
<b>Date/Time Collected:</b>	7/30/13 03:37 PM	<b>Instrument/Filename:</b>	msdj.i / j081813
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	1.0	2.1	5.3	Not Detected
1,1-Dichloroethene	75-35-4	1.6	2.1	5.2	Not Detected
1,2-Dichloroethane	107-06-2	1.0	2.1	5.3	Not Detected
Chloroethane	75-00-3	4.7	5.6	14	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.95	2.1	5.2	Not Detected
Tetrachloroethene	127-18-4	2.9	3.6	8.9	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.9	2.1	5.2	Not Detected
Trichloroethene	79-01-6	1.8	2.8	7.1	Not Detected
Vinyl Chloride	75-01-4	0.87	1.3	3.4	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	94

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	5-SS1-073013	<b>Date/Time Analyzed:</b>	8/18/13 05:21 PM
<b>Lab ID:</b>	1308171-10A	<b>Dilution Factor:</b>	2.24
<b>Date/Time Collected:</b>	7/30/13 11:00 AM	<b>Instrument/Filename:</b>	msdj.i / j081816
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.90	1.8	4.5	Not Detected
1,1-Dichloroethene	75-35-4	1.3	1.8	4.4	Not Detected
1,2-Dichloroethane	107-06-2	0.86	1.8	4.5	Not Detected
Chloroethane	75-00-3	4.0	4.7	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.81	1.8	4.4	Not Detected
Tetrachloroethene	127-18-4	2.5	3.0	7.6	750
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.4	Not Detected
Trichloroethene	79-01-6	1.6	2.4	6.0	Not Detected
Vinyl Chloride	75-01-4	0.74	1.1	2.9	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	102

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	5-SS2-073013	<b>Date/Time Analyzed:</b>	8/18/13 04:54 PM
<b>Lab ID:</b>	1308171-11A	<b>Dilution Factor:</b>	2.30
<b>Date/Time Collected:</b>	7/30/13 10:57 AM	<b>Instrument/Filename:</b>	msdj.i / j081815
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.92	1.9	4.6	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.88	1.9	4.6	Not Detected
Chloroethane	75-00-3	4.1	4.8	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.83	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.1	7.8	320
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.2	Not Detected
Vinyl Chloride	75-01-4	0.76	1.2	2.9	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	79
4-Bromofluorobenzene	460-00-4	70-130	101
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	1-SS3-072913	<b>Date/Time Analyzed:</b>	8/18/13 06:43 PM
<b>Lab ID:</b>	1308171-12A	<b>Dilution Factor:</b>	2.32
<b>Date/Time Collected:</b>	7/29/13 01:50 PM	<b>Instrument/Filename:</b>	msdj.i / j081819
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.93	1.9	4.7	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.88	1.9	4.7	Not Detected
Chloroethane	75-00-3	4.1	4.9	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.84	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.1	7.9	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.2	Not Detected
Vinyl Chloride	75-01-4	0.76	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	86
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	95

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	1-SS2-072913	<b>Date/Time Analyzed:</b>	8/18/13 07:05 PM
<b>Lab ID:</b>	1308171-13A	<b>Dilution Factor:</b>	2.33
<b>Date/Time Collected:</b>	7/29/13 12:47 PM	<b>Instrument/Filename:</b>	msdj.i / j081820
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.93	1.9	4.7	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.89	1.9	4.7	Not Detected
Chloroethane	75-00-3	4.2	4.9	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.84	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	7.9	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.77	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	84
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	97



Air Toxics

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	1-SS1-072913	<b>Date/Time Analyzed:</b>	8/18/13 08:48 PM
<b>Lab ID:</b>	1308171-14A	<b>Dilution Factor:</b>	2.33
<b>Date/Time Collected:</b>	7/29/13 12:52 PM	<b>Instrument/Filename:</b>	msdj.i / j081823
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.93	1.9	4.7	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.89	1.9	4.7	Not Detected
Chloroethane	75-00-3	4.2	4.9	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.84	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	7.9	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.6	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.77	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	95



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	7-SS3-072913	<b>Date/Time Analyzed:</b>	8/18/13 09:14 PM
<b>Lab ID:</b>	1308171-15A	<b>Dilution Factor:</b>	2.45
<b>Date/Time Collected:</b>	7/29/13 11:01 AM	<b>Instrument/Filename:</b>	msdj.i / j081824
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.98	2.0	5.0	Not Detected
1,1-Dichloroethene	75-35-4	1.5	1.9	4.8	Not Detected
1,2-Dichloroethane	107-06-2	0.94	2.0	5.0	Not Detected
Chloroethane	75-00-3	4.4	5.2	13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.88	1.9	4.8	Not Detected
Tetrachloroethene	127-18-4	2.7	3.3	8.3	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.7	1.9	4.8	Not Detected
Trichloroethene	79-01-6	1.7	2.6	6.6	Not Detected
Vinyl Chloride	75-01-4	0.81	1.2	3.1	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	93
4-Bromofluorobenzene	460-00-4	70-130	105
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	7-SS2-072913	<b>Date/Time Analyzed:</b>	8/18/13 09:38 PM
<b>Lab ID:</b>	1308171-16A	<b>Dilution Factor:</b>	2.35
<b>Date/Time Collected:</b>	7/29/13 11:40 AM	<b>Instrument/Filename:</b>	msdj.i / j081825
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.94	1.9	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.9	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.90	1.9	4.8	Not Detected
Chloroethane	75-00-3	4.2	5.0	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.85	1.9	4.6	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	8.0	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.7	1.9	4.6	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.78	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	91
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	7-SS1-072913	<b>Date/Time Analyzed:</b>	8/18/13 10:01 PM
<b>Lab ID:</b>	1308171-17A	<b>Dilution Factor:</b>	2.36
<b>Date/Time Collected:</b>	7/29/13 10:51 AM	<b>Instrument/Filename:</b>	msdj.i / j081826
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.94	1.9	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.4	1.9	4.7	Not Detected
1,2-Dichloroethane	107-06-2	0.90	1.9	4.8	Not Detected
Chloroethane	75-00-3	4.2	5.0	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.85	1.9	4.7	Not Detected
Tetrachloroethene	127-18-4	2.6	3.2	8.0	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.7	1.9	4.7	Not Detected
Trichloroethene	79-01-6	1.6	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.78	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	89
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	13-SS1-073013	<b>Date/Time Analyzed:</b>	8/18/13 10:41 PM
<b>Lab ID:</b>	1308171-18A	<b>Dilution Factor:</b>	2.57
<b>Date/Time Collected:</b>	7/30/13 02:11 PM	<b>Instrument/Filename:</b>	msd3.i / 3081824
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	1.0	2.1	5.2	Not Detected
1,1-Dichloroethene	75-35-4	1.1	2.0	5.1	Not Detected
1,2-Dichloroethane	107-06-2	0.85	2.1	5.2	Not Detected
Chloroethane	75-00-3	2.4	6.1	14	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.3	2.0	5.1	Not Detected
Tetrachloroethene	127-18-4	1.6	3.5	8.7	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.3	2.0	5.1	Not Detected
Trichloroethene	79-01-6	1.2	2.8	6.9	Not Detected
Vinyl Chloride	75-01-4	0.96	1.3	3.3	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	94

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	11-SS4-073113	<b>Date/Time Analyzed:</b>	8/18/13 10:09 PM
<b>Lab ID:</b>	1308171-19A	<b>Dilution Factor:</b>	2.30
<b>Date/Time Collected:</b>	7/31/13 01:56 PM	<b>Instrument/Filename:</b>	msd3.i / 3081823
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.92	1.9	4.6	Not Detected
1,1-Dichloroethene	75-35-4	1.0	1.8	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.76	1.9	4.6	Not Detected
Chloroethane	75-00-3	2.1	5.5	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.2	1.8	4.6	Not Detected
Tetrachloroethene	127-18-4	1.4	3.1	7.8	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.2	1.8	4.6	Not Detected
Trichloroethene	79-01-6	1.1	2.5	6.2	Not Detected
Vinyl Chloride	75-01-4	0.86	1.2	2.9	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	89
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	93

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	11-SS3-073113	<b>Date/Time Analyzed:</b>	8/18/13 09:43 PM
<b>Lab ID:</b>	1308171-20A	<b>Dilution Factor:</b>	2.29
<b>Date/Time Collected:</b>	7/31/13 01:03 PM	<b>Instrument/Filename:</b>	msd3.i / 3081822
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.92	1.8	4.6	Not Detected
1,1-Dichloroethene	75-35-4	0.99	1.8	4.5	Not Detected
1,2-Dichloroethane	107-06-2	0.76	1.8	4.6	Not Detected
Chloroethane	75-00-3	2.1	5.4	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.2	1.8	4.5	Not Detected
Tetrachloroethene	127-18-4	1.4	3.1	7.8	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.2	1.8	4.5	Not Detected
Trichloroethene	79-01-6	1.1	2.5	6.2	Not Detected
Vinyl Chloride	75-01-4	0.85	1.2	2.9	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	92

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	11-SS2-073113	<b>Date/Time Analyzed:</b>	8/18/13 09:18 PM
<b>Lab ID:</b>	1308171-21A	<b>Dilution Factor:</b>	2.46
<b>Date/Time Collected:</b>	7/31/13 12:52 PM	<b>Instrument/Filename:</b>	msd3.i / 3081821
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.99	2.0	5.0	Not Detected
1,1-Dichloroethene	75-35-4	1.1	2.0	4.9	Not Detected
1,2-Dichloroethane	107-06-2	0.81	2.0	5.0	Not Detected
Chloroethane	75-00-3	2.3	5.8	13	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.2	2.0	4.9	Not Detected
Tetrachloroethene	127-18-4	1.5	3.3	8.3	Not Detected
trans-1,2-Dichloroethene	156-60-5	1.2	2.0	4.9	Not Detected
Trichloroethene	79-01-6	1.2	2.6	6.6	Not Detected
Vinyl Chloride	75-01-4	0.92	1.2	3.1	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	86
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	93

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	11-SS1-073113	<b>Date/Time Analyzed:</b>	8/18/13 08:48 PM
<b>Lab ID:</b>	1308171-22A	<b>Dilution Factor:</b>	2.35
<b>Date/Time Collected:</b>	7/31/13 01:39 PM	<b>Instrument/Filename:</b>	msd3.i / 3081820
<b>Media:</b>	1 Liter Summa Canister (100% Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.94	1.9	4.8	Not Detected
1,1-Dichloroethene	75-35-4	1.0	1.9	4.6	Not Detected
1,2-Dichloroethane	107-06-2	0.78	1.9	4.8	Not Detected
Chloroethane	75-00-3	2.2	5.6	12	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.2	1.9	4.6	Not Detected
Tetrachloroethene	127-18-4	1.4	3.2	8.0	10
trans-1,2-Dichloroethene	156-60-5	1.2	1.9	4.6	Not Detected
Trichloroethene	79-01-6	1.1	2.5	6.3	Not Detected
Vinyl Chloride	75-01-4	0.88	1.2	3.0	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	92



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/16/13 03:16 PM
<b>Lab ID:</b>	1308171-23A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081606a
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.40	0.81	2.0	Not Detected
1,1-Dichloroethene	75-35-4	0.60	0.79	2.0	Not Detected
1,2-Dichloroethane	107-06-2	0.38	0.81	2.0	Not Detected
Chloroethane	75-00-3	1.8	2.1	5.3	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.36	0.79	2.0	Not Detected
Tetrachloroethene	127-18-4	1.1	1.4	3.4	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.71	0.79	2.0	Not Detected
Trichloroethene	79-01-6	0.69	1.1	2.7	Not Detected
Vinyl Chloride	75-01-4	0.33	0.51	1.3	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	86
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/18/13 11:22 AM
<b>Lab ID:</b>	1308171-23B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081806a
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.40	0.81	2.0	Not Detected
1,1-Dichloroethene	75-35-4	0.60	0.79	2.0	Not Detected
1,2-Dichloroethane	107-06-2	0.38	0.81	2.0	0.40 J
Chloroethane	75-00-3	1.8	2.1	5.3	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.36	0.79	2.0	Not Detected
Tetrachloroethene	127-18-4	1.1	1.4	3.4	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.71	0.79	2.0	Not Detected
Trichloroethene	79-01-6	0.69	1.1	2.7	Not Detected
Vinyl Chloride	75-01-4	0.33	0.51	1.3	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	96

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/18/13 10:48 AM
<b>Lab ID:</b>	1308171-23C	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msd3.i / 3081805a
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.40	0.81	2.0	Not Detected
1,1-Dichloroethene	75-35-4	0.43	0.79	2.0	Not Detected
1,2-Dichloroethane	107-06-2	0.33	0.81	2.0	0.43 J
Chloroethane	75-00-3	0.93	2.4	5.3	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.51	0.79	2.0	Not Detected
Tetrachloroethene	127-18-4	0.61	1.4	3.4	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.51	0.79	2.0	Not Detected
Trichloroethene	79-01-6	0.47	1.1	2.7	0.55 J
Vinyl Chloride	75-01-4	0.37	0.51	1.3	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	77
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	91

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/16/13 12:41 PM
<b>Lab ID:</b>	1308171-24A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081602
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	89
1,1-Dichloroethene	75-35-4	99
1,2-Dichloroethane	107-06-2	87
Chloroethane	75-00-3	90
cis-1,2-Dichloroethene	156-59-2	97
Tetrachloroethene	127-18-4	97
trans-1,2-Dichloroethene	156-60-5	96
Trichloroethene	79-01-6	94
Vinyl Chloride	75-01-4	98

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	93
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	99

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/18/13 08:52 AM
<b>Lab ID:</b>	1308171-24B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081802
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#		%Recovery
1,1-Dichloroethane	75-34-3		87
1,1-Dichloroethene	75-35-4		99
1,2-Dichloroethane	107-06-2		78
Chloroethane	75-00-3		97
cis-1,2-Dichloroethene	156-59-2		105
Tetrachloroethene	127-18-4		98
trans-1,2-Dichloroethene	156-60-5		97
Trichloroethene	79-01-6		92
Vinyl Chloride	75-01-4		100

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	78
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	98

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/18/13 09:04 AM
<b>Lab ID:</b>	1308171-24C	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msd3.i / 3081802
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	86
1,1-Dichloroethene	75-35-4	111
1,2-Dichloroethane	107-06-2	76
Chloroethane	75-00-3	87
cis-1,2-Dichloroethene	156-59-2	107
Tetrachloroethene	127-18-4	111
trans-1,2-Dichloroethene	156-60-5	102
Trichloroethene	79-01-6	92
Vinyl Chloride	75-01-4	86

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	77
4-Bromofluorobenzene	460-00-4	70-130	107
Toluene-d8	2037-26-5	70-130	92

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/16/13 01:15 PM
<b>Lab ID:</b>	1308171-25A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081603
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	88
1,1-Dichloroethene	75-35-4	110
1,2-Dichloroethane	107-06-2	89
Chloroethane	75-00-3	96
cis-1,2-Dichloroethene	156-59-2	99
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	112
Trichloroethene	79-01-6	102
Vinyl Chloride	75-01-4	104

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	101

\* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/16/13 01:51 PM
<b>Lab ID:</b>	1308171-25AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081604
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	90
1,1-Dichloroethene	75-35-4	110
1,2-Dichloroethane	107-06-2	88
Chloroethane	75-00-3	99
cis-1,2-Dichloroethene	156-59-2	100
Tetrachloroethene	127-18-4	98
trans-1,2-Dichloroethene	156-60-5	112
Trichloroethene	79-01-6	102
Vinyl Chloride	75-01-4	104

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	88
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	101

\* % Recovery is calculated using unrounded analytical results.



EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/18/13 09:25 AM
<b>Lab ID:</b>	1308171-25B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081803
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	90
1,1-Dichloroethene	75-35-4	113
1,2-Dichloroethane	107-06-2	77
Chloroethane	75-00-3	102
cis-1,2-Dichloroethene	156-59-2	102
Tetrachloroethene	127-18-4	101
trans-1,2-Dichloroethene	156-60-5	116
Trichloroethene	79-01-6	100
Vinyl Chloride	75-01-4	108

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	97

\* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/18/13 09:49 AM
<b>Lab ID:</b>	1308171-25BB	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdj.i / j081804
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	86
1,1-Dichloroethene	75-35-4	106
1,2-Dichloroethane	107-06-2	77
Chloroethane	75-00-3	94
cis-1,2-Dichloroethene	156-59-2	99
Tetrachloroethene	127-18-4	98
trans-1,2-Dichloroethene	156-60-5	113
Trichloroethene	79-01-6	98
Vinyl Chloride	75-01-4	106

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	104
Toluene-d8	2037-26-5	70-130	100

\* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/18/13 09:34 AM
<b>Lab ID:</b>	1308171-25C	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msd3.i / 3081803
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#		%Recovery
1,1-Dichloroethane	75-34-3		90
1,1-Dichloroethene	75-35-4		124
1,2-Dichloroethane	107-06-2		78
Chloroethane	75-00-3		90
cis-1,2-Dichloroethene	156-59-2		112
Tetrachloroethene	127-18-4		111
trans-1,2-Dichloroethene	156-60-5		123
Trichloroethene	79-01-6		95
Vinyl Chloride	75-01-4		93

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	93

\* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/18/13 10:18 AM
<b>Lab ID:</b>	1308171-25CC	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collected:</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msd3.i / 3081804
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	77
1,1-Dichloroethene	75-35-4	106
1,2-Dichloroethane	107-06-2	67 Q
Chloroethane	75-00-3	79
cis-1,2-Dichloroethene	156-59-2	94
Tetrachloroethene	127-18-4	94
trans-1,2-Dichloroethene	156-60-5	104
Trichloroethene	79-01-6	82
Vinyl Chloride	75-01-4	81

Q = Exceeds Quality Control limits.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	76
4-Bromofluorobenzene	460-00-4	70-130	106
Toluene-d8	2037-26-5	70-130	92

\* % Recovery is calculated using unrounded analytical results.





**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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180 BLUE RAVINE ROAD, SUITE 8  
 FOLSOM, CA 95630-4719  
 (916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie  
 Collected by: Print and Sign Thomas Adams  
 Company MEA Email tom@mea.com  
 Address 2001 NW 15th Ave City Portland State OR Zip 97209  
 Phone 503-301-5200 Fax 503-301-5200

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	Pressurized by: Date: Pressurization Gas:
R.O. #		
Project # <u>5006 31.03</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analysis Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
WA	5-552-073013	12031	7/20/13	10:57	SO4S SW: 2005	-30	-5		
WA	1-553-072913	15770	7/29/13	13:50		-28	-5		
WA	1-552-072913	31795	7/29/13	12:47		-29.5	-5		
WA	1-551-072913	37419	7/29/13	12:52		-29.5	-5		
WA	7-553-072913	37795	7/29/13	11:01		-28	-5		
WA	7-552-072913	54169	7/29/13	11:40		-29.5	-5		
WA	7-551-072913	31796	7/29/13	10:51		-29.5	-5		
WA	13-551-073013	30627	7/30/13	14:11		-28	-5		
WA	11-554-073113	39058	7/31/13	13:56		-30	-5		
WA	11-553-073113	3249	7/31/13	13:03		-30	-5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>09/06/13 11:00</u>	Notes: <u>See attachment for list of compounds and reporting limits</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>MEA</u>	Alt. Bill # _____	Temp (°C) <u>NA</u>	Condition <u>GOOD</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>308171</u>
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**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Requiring signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Requiring signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.I. Hotline (800) 457-4929

180 BLUE HAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-7000 FAX (916) 985-1420

Project Manager B. H. Beaudin  
 Collected by: (Print and sign) Thomas Ashton  
 Company A/EA Email thomas@newfast.com  
 Address 2001 New 19th Ave City Porterville State CA Zip 93257  
 Phone 558-501-5204 Fax \_\_\_\_\_

<b>Project Info:</b>	<b>Turn Around Time:</b>	<b>Lab Use Only</b>
P.O. # _____	<input checked="" type="checkbox"/> Normal	Pressurized by: _____
Project # <u>8006 71.02</u>	<input type="checkbox"/> Rush	Date: _____
Project Name <u>Park Community</u>	specify _____	Pressurization Gas: _____
		N. He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Prep.	Final
<u>11A</u>	<u>11-552-073113</u>	<u>35640</u>	<u>7/31/13</u>	<u>12:52</u>	<u>TO-15 SIM</u>	<u>-29</u>	<u>-5</u>		
<u>12A</u>	<u>11-551-073113</u>	<u>37713</u>	<u>7/31/13</u>	<u>13:39</u>		<u>-30</u>	<u>-5</u>		
	<u>13-1A2-073013</u>	<u>33576</u>	<u>7/30/13</u>	<u>13:59</u>		<u>-30</u>	<u>-7.5</u>		
	<u>13-1A1-073013</u>	<u>1588</u>	<u>7/30/13</u>	<u>13:36</u>		<u>-30</u>	<u>-2.5</u>		
	<u>5-1A3-073013</u>	<u>4251</u>	<u>7/30/13</u>	<u>12:14</u>		<u>-24</u>	<u>-5</u>		
	<u>0A3-073013</u>	<u>12957</u>	<u>7/30/13</u>	<u>13:22</u>	<u>Hold</u>	<u>-30</u>	<u>-5</u>		
	<u>11-1A7-072913</u>	<u>33909</u>	<u>7/29/13</u>	<u>12:36</u>	<u>TO-15 SIM</u>	<u>-20</u>	<u>-3</u>		
	<u>11-1A5-072913</u>	<u>11026</u>	<u>7/29/13</u>	<u>12:38</u>		<u>-29</u>	<u>-3.5</u>		
	<u>0A1-072913</u>	<u>5361</u>	<u>7/29/13</u>	<u>11:32</u>	<u>Hold</u>	<u>-30</u>	<u>-5</u>		
	<u>11-1A1-072913</u>	<u>5365</u>	<u>7/29/13</u>	<u>12:34</u>	<u>TO-15 SIM</u>	<u>-29</u>	<u>-4</u>		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/1/13 13:00</u>	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
 See attachment for list of compounds and reporting limits

Lab Use Only	Shipper Name _____	Air Bill # _____	Temp. (°C) _____	Condition _____	Dist. Dry Beads-Initial? _____	Work Order # <u>130871</u>
					Yes No None	

Attachment

1308171

MFA Project #8006.31.01

Here is the list of analytes with our screening values.

For all of the listed analytes, please ensure that the reported concentrations on the issued report(s) are below the screening values listed below. In most cases, the MRL will be below the screening value so the MRL should be reported. However, some samples may need the MDL reported instead, in order to attain a reported value below the screening value. Please use the MRL as the default reported value, unless the MDL is necessary.

Please assess the need to use the MRL or MDL on a sample by sample (and analyte by analyte) basis.

Analyte	Air Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 6-liter canisters	Soil Gas Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 1-liter canisters
1,1-dichloroethane	320	3200
1,1-dichloroethene	91	910
1,2-dichloroethane	0.096	0.96
Chloroethane	3	30
Cis-1,2-dichloroethene	16	160
Tetrachloroethene	9.6	96
Trans-1,2-dichloroethene	32	320
Trichloroethene	0.37	3.7
Vinyl chloride	0.28	2.8
Helium	Please Report to the MRL	Please Report to the MRL

Please give me a call if you have any questions regarding this request.

Regards,

Thomas Ashton

503-501-5201



8/19/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01  
Workorder #: 1308172A

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 8/6/2013 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 #: 1308172A**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01 Park Laundry
<b>DATE RECEIVED:</b>	08/06/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	08/19/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	13-IA2-073013	Modified TO-15 SIM	1.0 "Hg	5 psi
02A	13-IA1-073013	Modified TO-15 SIM	5.4 "Hg	5 psi
03A	5-IA3-073013	Modified TO-15 SIM	4.4 "Hg	5 psi
05A	11-IA2-072913	Modified TO-15 SIM	3.2 "Hg	5 psi
06A	11-IA3-072913	Modified TO-15 SIM	3.2 "Hg	5 psi
08A	11-IA1-072913	Modified TO-15 SIM	3.2 "Hg	5 psi
10A	9-IA1-072913	Modified TO-15 SIM	3.2 "Hg	5 psi
11A	7-IA2-072913	Modified TO-15 SIM	2.0 "Hg	5 psi
12A	7-IA1-072913	Modified TO-15 SIM	4.2 "Hg	5 psi
13A	9-IA2-072913	Modified TO-15 SIM	2.8 "Hg	5 psi
14A	10-IA2-072913	Modified TO-15 SIM	3.4 "Hg	5 psi
15A	10-CS1-072913	Modified TO-15 SIM	3.4 "Hg	5 psi
17A	1-IA2-072913	Modified TO-15 SIM	4.0 "Hg	5 psi
18A	1-IA1-072913	Modified TO-15 SIM	4.5 "Hg	5 psi
19A	Lab Blank	Modified TO-15 SIM	NA	NA
19B	Lab Blank	Modified TO-15 SIM	NA	NA
20A	CCV	Modified TO-15 SIM	NA	NA
20B	CCV	Modified TO-15 SIM	NA	NA
21A	LCS	Modified TO-15 SIM	NA	NA
21AA	LCS	Modified TO-15 SIM	NA	NA
21B	LCS	Modified TO-15 SIM	NA	NA
21BB	LCS	Modified TO-15 SIM	NA	NA

CERTIFIED BY: 

DATE: 08/19/13

Technical Director

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291, TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1308172A**

Fourteen 6 Liter Summa Canister (SIM Certified) samples were received on August 06, 2013. 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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

There were no receiving discrepancies.

### Analytical Notes

As per project specific client request, the laboratory has reported estimated values for target compound 1,2-Dichloroethane that are below the Reporting Limit but greater than the Method Detection Limit. All the canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

Dilution was performed on sample 9-IA1-072913 due to the presence of high level non-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, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

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



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	13-IA2-073013	<b>Date/Time Analyzed:</b>	8/13/13 09:23 PM
<b>Lab ID:</b>	1308172A-01A	<b>Dilution Factor:</b>	1.39
<b>Date/Time Collecte</b>	7/30/13 01:39 PM	<b>Instrument/File name:</b>	msdc.i / c081315sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0024	0.022	0.11	Not Detected
1,1-Dichloroethene	75-35-4	0.0022	0.022	0.055	Not Detected
1,2-Dichloroethane	107-06-2	0.024	0.024	0.11	2.2
Chloroethane	75-00-3	0.010	NA	0.18	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0098	0.022	0.11	Not Detected
Tetrachloroethene	127-18-4	0.011	0.038	0.19	0.36
trans-1,2-Dichloroethene	156-60-5	0.013	0.022	0.55	Not Detected
Trichloroethene	79-01-6	0.0060	0.030	0.15	Not Detected
Vinyl Chloride	75-01-4	0.0048	0.014	0.036	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	13-IA1-073013	<b>Date/Time Analyzed:</b>	8/13/13 09:59 PM
<b>Lab ID:</b>	1308172A-02A	<b>Dilution Factor:</b>	1.63
<b>Date/Time Collecte</b>	7/30/13 01:36 PM	<b>Instrument/Filename:</b>	msdc.i / c081316sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0028	0.026	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0026	0.026	0.065	Not Detected
1,2-Dichloroethane	107-06-2	0.028	0.028	0.13	0.57
Chloroethane	75-00-3	0.012	NA	0.22	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.012	0.026	0.13	Not Detected
Tetrachloroethene	127-18-4	0.013	0.044	0.22	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.016	0.026	0.65	Not Detected
Trichloroethene	79-01-6	0.0071	0.035	0.18	Not Detected
Vinyl Chloride	75-01-4	0.0056	0.017	0.042	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	5-IA3-073013	<b>Date/Time Analyzed:</b>	8/13/13 10:47 PM
<b>Lab ID:</b>	1308172A-03A	<b>Dilution Factor:</b>	1.57
<b>Date/Time Collecte</b>	7/30/13 10:14 AM	<b>Instrument/File name:</b>	msdc.i / c081317sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0025	0.025	0.062	Not Detected
1,2-Dichloroethane	107-06-2	0.027	0.027	0.13	0.15
Chloroethane	75-00-3	0.011	NA	0.21	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.025	0.12	Not Detected
Tetrachloroethene	127-18-4	0.013	0.042	0.21	0.81
trans-1,2-Dichloroethene	156-60-5	0.015	0.025	0.62	Not Detected
Trichloroethene	79-01-6	0.0068	0.034	0.17	0.68
Vinyl Chloride	75-01-4	0.0054	0.016	0.040	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	105



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	11-IA2-072913	<b>Date/Time Analyzed:</b>	8/14/13 06:00 AM
<b>Lab ID:</b>	1308172A-05A	<b>Dilution Factor:</b>	1.50
<b>Date/Time Collecte</b>	7/29/13 12:36 PM	<b>Instrument/Filename:</b>	msdc.i / c081318sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.026	0.12	0.54
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.59	Not Detected
Trichloroethene	79-01-6	0.0065	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	105





MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	11-IA3-072913	<b>Date/Time Analyzed:</b>	8/14/13 06:36 AM
<b>Lab ID:</b>	1308172A-06A	<b>Dilution Factor:</b>	1.50
<b>Date/Time Collecte</b>	7/29/13 12:38 PM	<b>Instrument/Filename:</b>	msdc.i / c081319sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.026	0.12	0.39
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	0.29
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.59	Not Detected
Trichloroethene	79-01-6	0.0065	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	11-IA1-072913	<b>Date/Time Analyzed:</b>	8/14/13 07:11 AM
<b>Lab ID:</b>	1308172A-08A	<b>Dilution Factor:</b>	1.50
<b>Date/Time Collecte</b>	7/29/13 12:34 PM	<b>Instrument/Filename:</b>	msdc.i / c081320sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.026	0.12	0.54
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	0.46
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.59	Not Detected
Trichloroethene	79-01-6	0.0065	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	0.074

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	104



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	9-IA1-072913	<b>Date/Time Analyzed:</b>	8/14/13 07:59 AM
<b>Lab ID:</b>	1308172A-10A	<b>Dilution Factor:</b>	3.12
<b>Date/Time Collecte</b>	7/29/13 10:51 AM	<b>Instrument/Filename:</b>	msdc.i / c081321sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0054	0.050	0.25	Not Detected
1,1-Dichloroethene	75-35-4	0.0049	0.049	0.12	Not Detected
1,2-Dichloroethane	107-06-2	0.053	0.053	0.25	0.47
Chloroethane	75-00-3	0.023	NA	0.41	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.022	0.049	0.25	Not Detected
Tetrachloroethene	127-18-4	0.026	0.085	0.42	1.1
trans-1,2-Dichloroethene	156-60-5	0.030	0.049	1.2	Not Detected
Trichloroethene	79-01-6	0.014	0.067	0.34	1.3
Vinyl Chloride	75-01-4	0.011	0.032	0.080	0.083

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	93
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	7-IA2-072913	<b>Date/Time Analyzed:</b>	8/14/13 12:53 PM
<b>Lab ID:</b>	1308172A-11A	<b>Dilution Factor:</b>	1.44
<b>Date/Time Collecte</b>	7/29/13 10:05 AM	<b>Instrument/Filename:</b>	msdc.i / c081407sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0025	0.023	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0023	0.023	0.057	Not Detected
1,2-Dichloroethane	107-06-2	0.024	0.024	0.12	0.10 J
Chloroethane	75-00-3	0.010	NA	0.19	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.023	0.11	Not Detected
Tetrachloroethene	127-18-4	0.012	0.039	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.023	0.57	Not Detected
Trichloroethene	79-01-6	0.0063	0.031	0.15	Not Detected
Vinyl Chloride	75-01-4	0.0050	0.015	0.037	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	7-IA1-072913	<b>Date/Time Analyzed:</b>	8/14/13 01:46 PM
<b>Lab ID:</b>	1308172A-12A	<b>Dilution Factor:</b>	1.56
<b>Date/Time Collecte</b>	7/29/13 10:04 AM	<b>Instrument/Filename:</b>	msdc.i / c081408sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0025	0.025	0.062	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.13	0.076 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.025	0.12	Not Detected
Tetrachloroethene	127-18-4	0.013	0.042	0.21	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.015	0.025	0.62	Not Detected
Trichloroethene	79-01-6	0.0068	0.034	0.17	Not Detected
Vinyl Chloride	75-01-4	0.0054	0.016	0.040	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	9-IA2-072913	<b>Date/Time Analyzed:</b>	8/14/13 02:33 PM
<b>Lab ID:</b>	1308172A-13A	<b>Dilution Factor:</b>	1.48
<b>Date/Time Collecte</b>	7/29/13 10:43 AM	<b>Instrument/File name:</b>	msdc.i / c081409sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0023	0.023	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.025	0.12	0.14
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.023	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.040	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.023	0.59	Not Detected
Trichloroethene	79-01-6	0.0064	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0051	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	103



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	10-IA2-072913	<b>Date/Time Analyzed:</b>	8/14/13 03:25 PM
<b>Lab ID:</b>	1308172A-14A	<b>Dilution Factor:</b>	1.51
<b>Date/Time Collecte</b>	7/29/13 11:46 AM	<b>Instrument/Filename:</b>	msdc.i / c081410sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.060	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.33
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.60	Not Detected
Trichloroethene	79-01-6	0.0066	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	10-CS1-072913	<b>Date/Time Analyzed:</b>	8/14/13 04:12 PM
<b>Lab ID:</b>	1308172A-15A	<b>Dilution Factor:</b>	1.51
<b>Date/Time Collecte</b>	7/29/13 11:48 AM	<b>Instrument/Filename:</b>	msdc.i / c081411sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.060	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.055 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.60	Not Detected
Trichloroethene	79-01-6	0.0066	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	104





Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	1-IA2-072913	<b>Date/Time Analyzed:</b>	8/14/13 05:36 PM
<b>Lab ID:</b>	1308172A-17A	<b>Dilution Factor:</b>	1.55
<b>Date/Time Collecte</b>	7/29/13 12:03 PM	<b>Instrument/Filename:</b>	msdc.i / c081413sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.061	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.074 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.013	0.042	0.21	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.015	0.024	0.61	Not Detected
Trichloroethene	79-01-6	0.0067	0.033	0.17	0.47
Vinyl Chloride	75-01-4	0.0053	0.016	0.040	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	1-IA1-072913	<b>Date/Time Analyzed:</b>	8/14/13 06:18 PM
<b>Lab ID:</b>	1308172A-18A	<b>Dilution Factor:</b>	1.58
<b>Date/Time Collecte</b>	7/29/13 12:00 PM	<b>Instrument/File name:</b>	msdc.i / c081414sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0028	0.026	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0025	0.025	0.063	Not Detected
1,2-Dichloroethane	107-06-2	0.027	0.027	0.13	0.17
Chloroethane	75-00-3	0.012	NA	0.21	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.025	0.12	Not Detected
Tetrachloroethene	127-18-4	0.013	0.043	0.21	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.015	0.025	0.63	Not Detected
Trichloroethene	79-01-6	0.0069	0.034	0.17	2.2
Vinyl Chloride	75-01-4	0.0054	0.016	0.040	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	111
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	102



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/13/13 01:05 PM
<b>Lab ID:</b>	1308172A-19A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081306simc
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0017	0.016	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0016	0.016	0.040	Not Detected
1,2-Dichloroethane	107-06-2	0.017	0.017	0.081	Not Detected
Chloroethane	75-00-3	0.0073	NA	0.13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0070	0.016	0.079	Not Detected
Tetrachloroethene	127-18-4	0.0082	0.027	0.14	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0095	0.016	0.40	Not Detected
Trichloroethene	79-01-6	0.0044	0.022	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0034	0.010	0.026	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/14/13 12:03 PM
<b>Lab ID:</b>	1308172A-19B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081406sima
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0017	0.016	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0016	0.016	0.040	Not Detected
1,2-Dichloroethane	107-06-2	0.017	0.017	0.081	Not Detected
Chloroethane	75-00-3	0.0073	NA	0.13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0070	0.016	0.079	Not Detected
Tetrachloroethene	127-18-4	0.0082	0.027	0.14	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0095	0.016	0.40	Not Detected
Trichloroethene	79-01-6	0.0044	0.022	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0034	0.010	0.026	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/13/13 09:17 AM
<b>Lab ID:</b>	1308172A-20A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081302sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	96
1,2-Dichloroethane	107-06-2	102
Chloroethane	75-00-3	97
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	101
trans-1,2-Dichloroethene	156-60-5	95
Trichloroethene	79-01-6	95
Vinyl Chloride	75-01-4	90

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	105
Toluene-d8	2037-26-5	70-130	92

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/14/13 08:59 AM
<b>Lab ID:</b>	1308172A-20B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081402sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	100
1,2-Dichloroethane	107-06-2	103
Chloroethane	75-00-3	97
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	99
trans-1,2-Dichloroethene	156-60-5	97
Trichloroethene	79-01-6	94
Vinyl Chloride	75-01-4	86

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	93

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/13/13 10:07 AM
<b>Lab ID:</b>	1308172A-21A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081303sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	107
1,2-Dichloroethane	107-06-2	104
Chloroethane	75-00-3	100
cis-1,2-Dichloroethene	156-59-2	95
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	110
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	92

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	93

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/13/13 10:57 AM
<b>Lab ID:</b>	1308172A-21AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081304sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	107
1,2-Dichloroethane	107-06-2	104
Chloroethane	75-00-3	98
cis-1,2-Dichloroethene	156-59-2	94
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	109
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	91

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	92

\* % Recovery is calculated using unrounded analytical results.



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/14/13 09:41 AM
<b>Lab ID:</b>	1308172A-21B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081403sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	109
1,2-Dichloroethane	107-06-2	106
Chloroethane	75-00-3	102
cis-1,2-Dichloroethene	156-59-2	95
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	112
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	90

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	93

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/14/13 10:23 AM
<b>Lab ID:</b>	1308172A-21BB	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081404sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	110
1,2-Dichloroethane	107-06-2	106
Chloroethane	75-00-3	103
cis-1,2-Dichloroethene	156-59-2	95
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	112
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	91

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	111
Toluene-d8	2037-26-5	70-130	95

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager B. H. Beadie  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@mafi.foster.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-541-5204 Fax 503-541-5204

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. #		
Project # <u>8006.31.01</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	11-552-073113	35649	7/31/13	12:52	TO-15 SIM <small>See notes</small>	-29	-5		
	11-551-073113	37713	7/31/13	13:39		-30	-5		
01A	13-IA2-073013	33376	7/30/13	13:39		-30	-2.5		
02A	13-IA1-073013	1588	7/30/13	13:36		-30	-5.5		
03A	5-IA3-073013	4214	7/30/13	10:14		-29	-5		
	0A3-073013	12957	7/30/13	13:22	Hold	-30	-5		
05A	11-IA2-072913	33909	7/29/13	12:36	TO-15 SIM <small>See notes</small>	-30	-3		
06A	11-IA3-072913	11026	7/29/13	12:38		-29	-3.5		
	0A1-072913	5361	7/29/13	11:32	Hold	-30	-5		
08A	11-IA1-072913	5365	7/29/13	12:34	TO-15 SIM <small>See notes</small>	-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>08/06/13 15:50</u>	Notes: <u>See attachment for list of compounds and reporting limits.</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name <u>UPS</u>	Air Bill #	Temp (°C) <u>NA</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1305122</u>
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WEST PRINTING & GRAPHICS (818) 704-6000



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@mfa.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503 501-5204 Fax \_\_\_\_\_

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____		
Project # <u>8006.31.01</u>		
Project Name <u>Park Laundry</u>		

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	0A2-072913	32109	7/29/13	11:25	Hold	-29.5	-5		
10A	9-IA1-072913	12938	7/29/13	10:51	TO-15 SIM <small>See Notes</small>	-28	-5		
11A	7-IA2-072913	5086	7/29/13	10:05		-29	-1		
12A	7-IA1-072913	14113	7/29/13	10:04		-30	-5		
13A	9-IA2-072913	13439	7/29/13	10:43		-30	-4		
14A	10-IA2-072913	1565	7/29/13	11:46		-30	-4.5		
15A	10-CS1-072913	12958	7/29/13	11:48		-30	-4		
	0A3-072913	10988	7/29/13	11:17	Hold	-29	-5		
17A	1-IA2-072913	10741	7/29/13	12:03	TO-15 SIM <small>See Notes</small>	-30	-5		
18A	1-IA1-072913	10978	7/29/13	12:00		-30	-5.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 11:00</u>	Notes: <u>See attachment for list of compounds and reporting limits.</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>[Signature]</u>		<u>NA</u>	<u>Good</u>	Yes No <u>None</u>	<u>1308172</u>

WEST PRINTING & GRAPHICS (916) 704-6000

1308172

Attachment

MFA Project #8006.31.01

Here is the list of analytes with our screening values.

For all of the listed analytes, please ensure that the reported concentrations on the issued report(s) are below the screening values listed below. In most cases, the MRL will be below the screening value so the MRL should be reported. However, some samples may need the MDL reported instead, in order to attain a reported value below the screening value. Please use the MRL as the default reported value, unless the MDL is necessary.

Please assess the need to use the MRL or MDL on a sample by sample (and analyte by analyte) basis.

Analyte	Air Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 6-liter canisters	Soil Gas Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 1-liter canisters
1,1-dichloroethane	320	3200
1,1-dichloroethene	91	910
1,2-dichloroethane	0.096	0.96
Chloroethane	3	30
Cis-1,2-dichloroethene	16	160
Tetrachloroethene	9.6	96
Trans-1,2-dichloroethene	32	320
Trichloroethene	0.37	3.7
Vinyl chloride	0.28	2.8
Helium	Please Report to the MRL	Please Report to the MRL

Please give me a call if you have any questions regarding this request.

Regards,

  
Thomas Ashton  
503-501-5204

8/22/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry

Project #: 8006.31.01

Workorder #: 1308172B

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 8/6/2013 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 #: 1308172B**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01 Park Laundry
<b>DATE RECEIVED:</b>	08/06/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	08/22/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
04A	OA3-073013	Modified TO-15 SIM	4.8 "Hg	5 psi
16A	OA3-072913	Modified TO-15 SIM	3.0 "Hg	5 psi
17A	Lab Blank	Modified TO-15 SIM	NA	NA
18A	CCV	Modified TO-15 SIM	NA	NA
19A	LCS	Modified TO-15 SIM	NA	NA
19AA	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 08/22/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-12-5, UT NELAP CA009332012-3, VA NELAP - 460197, WA NELAP - C935  
 Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

Eurofins Air Toxics Inc. 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 Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1308172B**

Two 6 Liter Summa Canister (SIM Certified) samples were received on August 06, 2013. 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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

Samples OA3-073013 and OA3-072913 were removed from "Hold" and placed on "Active" status per client request on 8/14/2013 .

### Analytical Notes

As per project specific client request the laboratory has reported estimated values for 1,2-Dichloroethane hits that are below the Reporting Limit but greater than the Method Detection Limit. All The canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

### 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, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

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

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	OA3-073013	<b>Date/Time Analyzed:</b>	8/15/13 02:43 PM
<b>Lab ID:</b>	1308172B-04A	<b>Dilution Factor:</b>	1.60
<b>Date/Time Collecte</b>	7/30/13 01:22 PM	<b>Instrument/Filename:</b>	msdc.i / c081509sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0028	0.026	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0025	0.025	0.063	Not Detected
1,2-Dichloroethane	107-06-2	0.027	0.027	0.13	0.061 J
Chloroethane	75-00-3	0.012	NA	0.21	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.025	0.13	Not Detected
Tetrachloroethene	127-18-4	0.013	0.043	0.22	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.015	0.025	0.63	Not Detected
Trichloroethene	79-01-6	0.0070	0.034	0.17	Not Detected
Vinyl Chloride	75-01-4	0.0055	0.016	0.041	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	OA3-072913	<b>Date/Time Analyzed:</b>	8/15/13 04:08 PM
<b>Lab ID:</b>	1308172B-16A	<b>Dilution Factor:</b>	1.49
<b>Date/Time Collecte</b>	7/29/13 11:17 AM	<b>Instrument/Filename:</b>	msdc.i / c081511sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.025	0.12	0.16
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.040	0.20	0.63
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.59	Not Detected
Trichloroethene	79-01-6	0.0065	0.032	0.16	0.26
Vinyl Chloride	75-01-4	0.0051	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/15/13 12:04 PM
<b>Lab ID:</b>	1308172B-17A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081506csim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0017	0.016	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0016	0.016	0.040	Not Detected
1,2-Dichloroethane	107-06-2	0.017	0.017	0.081	Not Detected
Chloroethane	75-00-3	0.0073	NA	0.13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0070	0.016	0.079	Not Detected
Tetrachloroethene	127-18-4	0.0082	0.027	0.14	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0095	0.016	0.40	Not Detected
Trichloroethene	79-01-6	0.0044	0.022	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0034	0.010	0.026	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	102

MODIFIED EPA METHOD TO-15 GC/MS SIM

Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/15/13 09:12 AM
<b>Lab ID:</b>	1308172B-18A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081502sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	97
1,2-Dichloroethane	107-06-2	102
Chloroethane	75-00-3	96
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	98
trans-1,2-Dichloroethene	156-60-5	97
Trichloroethene	79-01-6	94
Vinyl Chloride	75-01-4	88

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	94

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/15/13 09:53 AM
<b>Lab ID:</b>	1308172B-19A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081503sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	98
1,1-Dichloroethene	75-35-4	108
1,2-Dichloroethane	107-06-2	104
Chloroethane	75-00-3	102
cis-1,2-Dichloroethene	156-59-2	94
Tetrachloroethene	127-18-4	98
trans-1,2-Dichloroethene	156-60-5	110
Trichloroethene	79-01-6	95
Vinyl Chloride	75-01-4	89

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	96

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/15/13 10:36 AM
<b>Lab ID:</b>	1308172B-19AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081504sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	98
1,1-Dichloroethene	75-35-4	108
1,2-Dichloroethane	107-06-2	105
Chloroethane	75-00-3	100
cis-1,2-Dichloroethene	156-59-2	93
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	110
Trichloroethene	79-01-6	95
Vinyl Chloride	75-01-4	88

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	109
Toluene-d8	2037-26-5	70-130	93

\* % Recovery is calculated using unrounded analytical results.



**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager B.H. Beadle  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@mwfoster.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-501-5204 Fax \_\_\_\_\_

<b>Project Info:</b>		<b>Turn Around Time:</b>	<i>Lab Use Only</i> Pressurized by: Date: Pressurization Gas: N <sub>2</sub> He
P.O. # _____	Project # <u>8006.31.01</u>		
Project Name <u>Park Laundry</u>		<input checked="" type="checkbox"/> Normal	
		<input type="checkbox"/> Rush	
		<small>specify</small>	

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
	11-552-073113	35644	7/31/13	12:52	TO-15 SIM <i>See notes</i>	-29	-5		
	11-551-073113	37713	7/31/13	13:39		-30	-5		
	13-IA2-073013	33376	7/30/13	13:59		-30	-2.5		
	13-IA1-073013	1588	7/30/13	13:36		-30	-5.5		
	5-IA3-073013	4214	7/30/13	10:14		-29	-5		
<u>04A</u>	0A3-073013	12957	7/30/13	13:22	Hold	-30	-5		
	11-IA2-072913	33909	7/29/13	12:36	TO-15 SIM <i>See notes</i>	-30	-3		
	11-IA3-072913	11026	7/29/13	12:38		-29	-3.5		
<u>04A</u>	0A1-072913	5361	7/29/13	11:32	Hold	-30	-5		
<u>04A</u>	11-IA1-072913	5365	7/29/13	12:34	TO-15 SIM <i>See notes</i>	-28	-4		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 11:00</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

**Notes:**  
See attachment for list of compounds and reporting limits.

<b>Lab Use Only</b>	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>VPS</u>		<u>NA</u>	<u>good</u>	Yes No None	<u>1308172</u>

WEST PRINTING & GRAPHICS (916) 706-6020





**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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180 BLUE RAVINE ROAD, SUITE B  
FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Project Manager Bill Beadie  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MEA Email tash@mea.com  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-501-5204 Fax \_\_\_\_\_

Project Info:  
 P.O. # \_\_\_\_\_  
 Project # 8006.31.01  
 Project Name Park Laundry

Turn Around Time:  
 Normal  
 Rush  
specify  
 Lab Use Only  
 Pressurized by:  
 Date:  
 Pressurization Gas:  
 N<sub>2</sub> He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psl)
<del>8TA</del>	0A2-072913	32109	7/29/13	11:25	Hold	-29.5	-5		
	9-IA1-072913	12938	7/29/13	10:57	TO-15 SIM <small>See notes</small>	-28	-5		
	7-IA2-072913	5086	7/29/13	10:05		-29	-1		
	7-IA1-072913	14113	7/29/13	10:04		-30	-5		
	9-IA2-072913	13439	7/29/13	10:43		-30	-4		
	10-IA2-072913	1565	7/29/13	11:46		-30	-4.5		
	10-C51-072913	12958	7/29/13	11:48		-30	-4		
16A	0A3-072913	10988	7/29/13	11:17	Hold	-29	-5		
	1-IA2-072913	10791	7/29/13	12:03	TO-15 SIM <small>See notes</small>	-30	-5		
	1-IA1-072913	10978	7/29/13	12:00		-30	-5.5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>ATL 08/06/13 1100</u>
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____

Notes:  
 See attachment for list of compounds and reporting limits.

Lab Use Only	Shipper Name <u>CPS</u>	Air Bill # _____	Temp (°C) <u>N/A</u>	Condition <u>Good</u>	Custody Seals Intact? Yes No <u>None</u>	Work Order # <u>1308172</u>
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WEST PRINTING & GRAPHICS (916) 734-6000

1308172

Attachment

MFA Project #8006.31.01

Here is the list of analytes with our screening values.


For all of the listed analytes, please ensure that the reported concentrations on the issued report(s) are below the screening values listed below. In most cases, the MRL will be below the screening value so the MRL should be reported. However, some samples may need the MDL reported instead, in order to attain a reported value below the screening value. Please use the MRL as the default reported value, unless the MDL is necessary.

Please assess the need to use the MRL or MDL on a sample by sample (and analyte by analyte) basis.

Analyte	Air Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 6-liter canisters	Soil Gas Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 1-liter canisters
1,1-dichloroethane	320	3200
1,1-dichloroethene	91	910
1,2-dichloroethane	0.096	0.96
Chloroethane	3	30
Cis-1,2-dichloroethene	16	160
Tetrachloroethene	9.6	96
Trans-1,2-dichloroethene	32	320
Trichloroethene	0.37	3.7
Vinyl chloride	0.28	2.8
Helium	Please Report to the MRL	Please Report to the MRL

Please give me a call if you have any questions regarding this request.

Regards,

  
Thomas Ashton  
503-501-5204

8/19/2013

Mr. Thomas Ashton  
Maul Foster and Alongi Inc.  
2001 NW 19th Ave  
Suite 200  
Portland OR 97209

Project Name: Park Laundry  
Project #: 8006.31.01  
Workorder #: 1308173A

Dear Mr. Thomas Ashton

The following report includes the data for the above referenced project for sample(s) received on 8/6/2013 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 #: 1308173A**

Work Order Summary

<b>CLIENT:</b>	Mr. Thomas Ashton Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	<b>BILL TO:</b>	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
<b>PHONE:</b>	971-544-2139	<b>P.O. #</b>	
<b>FAX:</b>	971-544-2140	<b>PROJECT #</b>	8006.31.01 Park Laundry
<b>DATE RECEIVED:</b>	08/06/2013	<b>CONTACT:</b>	Kelly Buettner
<b>DATE COMPLETED:</b>	08/19/2013		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	10-IA1-072913	Modified TO-15 SIM	2.8 "Hg	4.9 psi
02A	1-IA3-072913	Modified TO-15 SIM	3.1 "Hg	4.9 psi
03A	27-IA1-073013	Modified TO-15 SIM	3.7 "Hg	5 psi
04A	27-IA2-073013	Modified TO-15 SIM	4.9 "Hg	5 psi
05A	28-IA1-073013	Modified TO-15 SIM	6.5 "Hg	5 psi
07A	27-CS1-073013	Modified TO-15 SIM	3.3 "Hg	4.9 psi
08A	28-IA2-073013	Modified TO-15 SIM	4.9 "Hg	5.1 psi
09A	28-IA3-073013	Modified TO-15 SIM	3.5 "Hg	4.9 psi
12A	5-IA2-073013	Modified TO-15 SIM	4.1 "Hg	4.8 psi
13A	5-IA1-073013	Modified TO-15 SIM	3.7 "Hg	5 psi
14A	Lab Blank	Modified TO-15 SIM	NA	NA
14B	Lab Blank	Modified TO-15 SIM	NA	NA
15A	CCV	Modified TO-15 SIM	NA	NA
15B	CCV	Modified TO-15 SIM	NA	NA
16A	LCS	Modified TO-15 SIM	NA	NA
16AA	LCSD	Modified TO-15 SIM	NA	NA
16B	LCS	Modified TO-15 SIM	NA	NA
16BB	LCSD	Modified TO-15 SIM	NA	NA

CERTIFIED BY:   
 Technical Director

DATE: 08/19/13

Certification numbers: AZ Licensure AZ0775, CA NELAP - 12282CA, NY NELAP - 11291,  
 TX NELAP - T104704434-12-4, UT NELAP CA009332012-3, WA NELAP - C935

Name of Accrediting Agency: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)  
 Accreditation number: CA300005, Effective date: 10/18/2012, Expiration date: 10/17/2013.

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

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563  
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**LABORATORY NARRATIVE**  
**Modified TO-15 SIM**  
**Maul Foster and Alongi Inc.**  
**Workorder# 1308173A**

Ten 6 Liter Summa Canister (SIM Certified) samples were received on August 06, 2013. 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	<math>\leq 30\%</math> RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	Project specific; default criteria is <math>\leq 30\%</math> RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <math>\leq 30\%</math> Difference with 10% of compounds allowed out up to <math>\leq 40\%</math>; 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**

There were no receiving discrepancies.

**Analytical Notes**

As per project specific client request, the laboratory has reported estimated values for target compound 1,2-Dichloroethane that are below the Reporting Limit but greater than the Method Detection Limit. All the canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

**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, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

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



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	10-IA1-072913	<b>Date/Time Analyzed:</b>	8/12/13 10:08 PM
<b>Lab ID:</b>	1308173A-01A	<b>Dilution Factor:</b>	1.47
<b>Date/Time Collecte</b>	7/29/13 11:46 AM	<b>Instrument/Filename:</b>	msdc.i / c081216sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0023	0.023	0.058	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.025	0.12	0.37
Chloroethane	75-00-3	0.011	NA	0.19	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.023	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.040	0.20	0.25
trans-1,2-Dichloroethene	156-60-5	0.014	0.023	0.58	Not Detected
Trichloroethene	79-01-6	0.0064	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0051	0.015	0.038	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	1-IA3-072913	<b>Date/Time Analyzed:</b>	8/12/13 10:50 PM
<b>Lab ID:</b>	1308173A-02A	<b>Dilution Factor:</b>	1.48
<b>Date/Time Collecte</b>	7/29/13 12:04 PM	<b>Instrument/Filename:</b>	msdc.i / c081217sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0023	0.023	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.025	0.12	0.069 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.023	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.040	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.023	0.59	Not Detected
Trichloroethene	79-01-6	0.0064	0.032	0.16	0.29
Vinyl Chloride	75-01-4	0.0051	0.015	0.038	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	105





MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	27-IA1-073013	<b>Date/Time Analyzed:</b>	8/13/13 05:57 AM
<b>Lab ID:</b>	1308173A-03A	<b>Dilution Factor:</b>	1.53
<b>Date/Time Collecte</b>	7/30/13 10:52 AM	<b>Instrument/File name:</b>	msdc.i / c081218sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.061	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	2.1
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.042	0.21	1.1
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.61	Not Detected
Trichloroethene	79-01-6	0.0067	0.033	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0053	0.016	0.039	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	27-IA2-073013	<b>Date/Time Analyzed:</b>	8/13/13 07:03 AM
<b>Lab ID:</b>	1308173A-04A	<b>Dilution Factor:</b>	1.60
<b>Date/Time Collecte</b>	7/30/13 10:51 AM	<b>Instrument/File name:</b>	msdc.i / c081219sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0028	0.026	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0025	0.025	0.063	Not Detected
1,2-Dichloroethane	107-06-2	0.027	0.027	0.13	2.6
Chloroethane	75-00-3	0.012	NA	0.21	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.025	0.13	Not Detected
Tetrachloroethene	127-18-4	0.013	0.043	0.22	1.2
trans-1,2-Dichloroethene	156-60-5	0.015	0.025	0.63	Not Detected
Trichloroethene	79-01-6	0.0070	0.034	0.17	Not Detected
Vinyl Chloride	75-01-4	0.0055	0.016	0.041	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	28-IA1-073013	<b>Date/Time Analyzed:</b>	8/13/13 07:57 AM
<b>Lab ID:</b>	1308173A-05A	<b>Dilution Factor:</b>	1.71
<b>Date/Time Collecte</b>	7/30/13 12:01 PM	<b>Instrument/File name:</b>	msdc.i / c081220sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0030	0.028	0.14	Not Detected
1,1-Dichloroethene	75-35-4	0.0027	0.027	0.068	Not Detected
1,2-Dichloroethane	107-06-2	0.029	0.029	0.14	0.32
Chloroethane	75-00-3	0.012	NA	0.22	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.012	0.027	0.14	Not Detected
Tetrachloroethene	127-18-4	0.014	0.046	0.23	0.85
trans-1,2-Dichloroethene	156-60-5	0.016	0.027	0.68	Not Detected
Trichloroethene	79-01-6	0.0074	0.037	0.18	Not Detected
Vinyl Chloride	75-01-4	0.0059	0.017	0.044	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	27-CS1-073013	<b>Date/Time Analyzed:</b>	8/13/13 05:18 PM
<b>Lab ID:</b>	1308173A-07A	<b>Dilution Factor:</b>	1.50
<b>Date/Time Collecte</b>	7/30/13 10:52 AM	<b>Instrument/Filename:</b>	msdc.i / c081310sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.059	Not Detected
1,2-Dichloroethane	107-06-2	0.025	0.026	0.12	0.093 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.010	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.59	Not Detected
Trichloroethene	79-01-6	0.0065	0.032	0.16	0.17
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	28-IA2-073013	<b>Date/Time Analyzed:</b>	8/13/13 06:00 PM
<b>Lab ID:</b>	1308173A-08A	<b>Dilution Factor:</b>	1.61
<b>Date/Time Collecte</b>	7/30/13 12:03 PM	<b>Instrument/File name:</b>	msdc.i / c081311sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0028	0.026	0.13	Not Detected
1,1-Dichloroethene	75-35-4	0.0026	0.026	0.064	Not Detected
1,2-Dichloroethane	107-06-2	0.027	0.027	0.13	0.82
Chloroethane	75-00-3	0.012	NA	0.21	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.026	0.13	Not Detected
Tetrachloroethene	127-18-4	0.013	0.044	0.22	0.30
trans-1,2-Dichloroethene	156-60-5	0.015	0.026	0.64	Not Detected
Trichloroethene	79-01-6	0.0070	0.035	0.17	Not Detected
Vinyl Chloride	75-01-4	0.0056	0.016	0.041	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	28-IA3-073013	<b>Date/Time Analyzed:</b>	8/13/13 06:46 PM
<b>Lab ID:</b>	1308173A-09A	<b>Dilution Factor:</b>	1.51
<b>Date/Time Collecte</b>	7/30/13 12:06 PM	<b>Instrument/Filename:</b>	msdc.i / c081312sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0026	0.024	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.060	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.51
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.041	0.20	0.27
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.60	Not Detected
Trichloroethene	79-01-6	0.0066	0.032	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0052	0.015	0.038	0.043

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	5-IA2-073013	<b>Date/Time Analyzed:</b>	8/13/13 07:22 PM
<b>Lab ID:</b>	1308173A-12A	<b>Dilution Factor:</b>	1.54
<b>Date/Time Collecte</b>	7/30/13 10:07 AM	<b>Instrument/Filename:</b>	msdc.i / c081313sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.061	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.081 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.013	0.042	0.21	0.52
trans-1,2-Dichloroethene	156-60-5	0.015	0.024	0.61	Not Detected
Trichloroethene	79-01-6	0.0067	0.033	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0053	0.016	0.039	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	104

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	5-IA1-073013	<b>Date/Time Analyzed:</b>	8/13/13 08:39 PM
<b>Lab ID:</b>	1308173A-13A	<b>Dilution Factor:</b>	1.53
<b>Date/Time Collecte</b>	7/30/13 10:18 AM	<b>Instrument/Filename:</b>	msdc.i / c081314sim
<b>Media:</b>	6 Liter Summa Canister (SIM Certified)		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0027	0.025	0.12	Not Detected
1,1-Dichloroethene	75-35-4	0.0024	0.024	0.061	Not Detected
1,2-Dichloroethane	107-06-2	0.026	0.026	0.12	0.064 J
Chloroethane	75-00-3	0.011	NA	0.20	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.011	0.024	0.12	Not Detected
Tetrachloroethene	127-18-4	0.012	0.042	0.21	0.44
trans-1,2-Dichloroethene	156-60-5	0.014	0.024	0.61	Not Detected
Trichloroethene	79-01-6	0.0067	0.033	0.16	Not Detected
Vinyl Chloride	75-01-4	0.0053	0.016	0.039	Not Detected

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	103





Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/12/13 12:32 PM
<b>Lab ID:</b>	1308173A-14A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081206sima
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0017	0.016	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0016	0.016	0.040	Not Detected
1,2-Dichloroethane	107-06-2	0.017	0.017	0.081	Not Detected
Chloroethane	75-00-3	0.0073	NA	0.13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0070	0.016	0.079	Not Detected
Tetrachloroethene	127-18-4	0.0082	0.027	0.14	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0095	0.016	0.40	Not Detected
Trichloroethene	79-01-6	0.0044	0.022	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0034	0.010	0.026	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	102



MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	Lab Blank	<b>Date/Time Analyzed:</b>	8/13/13 01:05 PM
<b>Lab ID:</b>	1308173A-14B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081306simc
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethane	75-34-3	0.0017	0.016	0.081	Not Detected
1,1-Dichloroethene	75-35-4	0.0016	0.016	0.040	Not Detected
1,2-Dichloroethane	107-06-2	0.017	0.017	0.081	Not Detected
Chloroethane	75-00-3	0.0073	NA	0.13	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.0070	0.016	0.079	Not Detected
Tetrachloroethene	127-18-4	0.0082	0.027	0.14	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.0095	0.016	0.40	Not Detected
Trichloroethene	79-01-6	0.0044	0.022	0.11	Not Detected
Vinyl Chloride	75-01-4	0.0034	0.010	0.026	Not Detected

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	105
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/12/13 09:09 AM
<b>Lab ID:</b>	1308173A-15A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081202sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	97
1,1-Dichloroethene	75-35-4	95
1,2-Dichloroethane	107-06-2	100
Chloroethane	75-00-3	97
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	106
trans-1,2-Dichloroethene	156-60-5	95
Trichloroethene	79-01-6	98
Vinyl Chloride	75-01-4	89

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	99
4-Bromofluorobenzene	460-00-4	70-130	103
Toluene-d8	2037-26-5	70-130	91



Air Toxics

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	CCV	<b>Date/Time Analyzed:</b>	8/13/13 09:17 AM
<b>Lab ID:</b>	1308173A-15B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081302sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	96
1,2-Dichloroethane	107-06-2	102
Chloroethane	75-00-3	97
cis-1,2-Dichloroethene	156-59-2	92
Tetrachloroethene	127-18-4	101
trans-1,2-Dichloroethene	156-60-5	95
Trichloroethene	79-01-6	95
Vinyl Chloride	75-01-4	90

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	105
Toluene-d8	2037-26-5	70-130	92

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/12/13 09:57 AM
<b>Lab ID:</b>	1308173A-16A	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081203sima
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	105
1,2-Dichloroethane	107-06-2	101
Chloroethane	75-00-3	100
cis-1,2-Dichloroethene	156-59-2	94
Tetrachloroethene	127-18-4	104
trans-1,2-Dichloroethene	156-60-5	110
Trichloroethene	79-01-6	97
Vinyl Chloride	75-01-4	92

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	92

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/12/13 10:46 AM
<b>Lab ID:</b>	1308173A-16AA	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081204sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	99
1,1-Dichloroethene	75-35-4	107
1,2-Dichloroethane	107-06-2	103
Chloroethane	75-00-3	104
cis-1,2-Dichloroethene	156-59-2	95
Tetrachloroethene	127-18-4	102
trans-1,2-Dichloroethene	156-60-5	112
Trichloroethene	79-01-6	98
Vinyl Chloride	75-01-4	93

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	95

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCS	<b>Date/Time Analyzed:</b>	8/13/13 10:07 AM
<b>Lab ID:</b>	1308173A-16B	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081303sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	107
1,2-Dichloroethane	107-06-2	104
Chloroethane	75-00-3	100
cis-1,2-Dichloroethene	156-59-2	95
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	110
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	92

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	110
Toluene-d8	2037-26-5	70-130	93

\* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM  
Park Laundry

<b>Client ID:</b>	LCSD	<b>Date/Time Analyzed:</b>	8/13/13 10:57 AM
<b>Lab ID:</b>	1308173A-16BB	<b>Dilution Factor:</b>	1.00
<b>Date/Time Collecte</b>	NA - Not Applicable	<b>Instrument/Filename:</b>	msdc.i / c081304sim
<b>Media:</b>	NA - Not Applicable		

Compound	CAS#	%Recovery
1,1-Dichloroethane	75-34-3	100
1,1-Dichloroethene	75-35-4	107
1,2-Dichloroethane	107-06-2	104
Chloroethane	75-00-3	98
cis-1,2-Dichloroethene	156-59-2	94
Tetrachloroethene	127-18-4	100
trans-1,2-Dichloroethene	156-60-5	109
Trichloroethene	79-01-6	96
Vinyl Chloride	75-01-4	91

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	108
Toluene-d8	2037-26-5	70-130	92

\* % Recovery is calculated using unrounded analytical results.





**CHAIN-OF-CUSTODY RECORD**

**Sample Transportation Notice**

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FOLSOM, CA 95630-4719  
(916) 985-1000 FAX (916) 985-1020

Page 5 of 6

Project Manager Bill Beadie  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email \_\_\_\_\_  
 Address 2001 NW 19th Ave City Portland State OR Zip 97209  
 Phone 503-501-5204 Fax \_\_\_\_\_

<b>Project Info:</b>	P.O. # _____ Project # <u>8006.31.01</u> Project Name <u>Park Laundry</u>	<b>Turn Around Time:</b>	<i>Lab Use Only</i>
		<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: _____ Date: _____ Pressurization Gas: <u>N<sub>2</sub></u> <u>He</u>

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	10-IA1-072913	34749	7/29/13	11:46	TD-15 SIM see notes	-30	-5		
02A	1-IA3-072913	5664	7/29/13	12:04		-29.5	-4		
03A	27-IA1-073013	9421	7/30/13	10:52		-30	-5		
04A	27-IA2-073013	1568	7/30/13	10:51		-28	-4		
05A	28-IA1-073013	21009	7/30/13	12:01		-30	-4		
06A	0A1-073013	34496	7/30/13	13:05		HOLD	-30	-5	
07A	27-CS1-073013	14869	7/30/13	10:52	TD-15 SIM see notes	-29.5	-3.5		
08A	28-IA2-073013	5667	7/30/13	12:03		-30	-4.5		
09A	28-IA3-073013	9418	7/30/13	12:06		-30	-4		
10A	7-IA2-073013	5578	7/30/13	13:52	HOLD	-29	-5		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>[Signature]</u> Date/Time <u>08/06/13 11:00</u>	<b>Notes:</b> See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

<b>Lab Use Only</b>	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>URS</u>		<u>NA</u>	<u>good</u>	Yes No <u>None</u>	<u>1308173</u>



**CHAIN-OF-CUSTODY RECORD**

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Project Manager Bill Beadie  
 Collected by: (Print and Sign) Thomas Ashton  
 Company MFA Email tashton@maulfactory.com  
 Address 2001 New Fifth Ave. suite 200 City Portland State OR Zip 97209  
 Phone 503-501-5204 Fax \_\_\_\_\_

<b>Project Info:</b> P.O. # _____ Project # <u>8006.31.01</u> Project Name <u>Park Laundry</u>	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	<small>Lab Use Only</small> Pressurized by: _____ Date: _____ Pressurization Gas: <u>N<sub>2</sub></u> <u>He</u>
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Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
<u>11A</u>	<u>0A2-073013</u>	<u>34198</u>	<u>7/30/13</u>	<u>13:15</u>	<u>HOLD</u>	<u>-29.5</u>	<u>-4</u>		
<u>12A</u>	<u>5-IA2-073013</u>	<u>5763</u>	<u>7/30/13</u>	<u>10:07</u>	<u>TO-15 sum sec notes</u>	<u>-30</u>	<u>-5</u>		
<u>13R</u>	<u>5-IA1-073013</u>	<u>94301</u>	<u>7/30/13</u>	<u>10:18</u>	<u>1</u>	<u>-30</u>	<u>-4.5</u>		

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>8/2/13 13:00</u>	Received by: (signature) <u>Kate Decky</u> Date/Time <u>ATL 08/06/13 1100</u>	<b>Notes:</b> See attachment for list of compounds and reporting limits.
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>UPS</u>		<u>NA</u>	<u>good</u>	Yes No <u>(None)</u>	<u>1308173</u>

1308173

Attachment

MFA Project #8006.31.01

Here is the list of analytes with our screening values.

For all of the listed analytes, please ensure that the reported concentrations on the issued report(s) are below the screening values listed below. In most cases, the MRL will be below the screening value so the MRL should be reported. However, some samples may need the MDL reported instead, in order to attain a reported value below the screening value. Please use the MRL as the default reported value, unless the MDL is necessary.

Please assess the need to use the MRL or MDL on a sample by sample (and analyte by analyte) basis.

Analyte	Air Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 6-liter canisters	Soil Gas Screening Values ( $\mu\text{g}/\text{m}^3$ ) for 1-liter canisters
1,1-dichloroethane	320	3200
1,1-dichloroethene	91	910
1,2-dichloroethane	0.096	0.96
Chloroethane	3	30
Cis-1,2-dichloroethene	16	160
Tetrachloroethene	9.6	96
Trans-1,2-dichloroethene	32	320
Trichloroethene	0.37	3.7
Vinyl chloride	0.28	2.8
Helium	Please Report to the MRL	Please Report to the MRL

Please give me a call if you have any questions regarding this request.

Regards,

  
Thomas Ashton

503-501-5204

# APPENDIX E

## DATA VALIDATION



# DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 8006.31.01 | DECEMBER 13, 2012 | UNION RIDGE INVESTMENT COMPANY

This report reviews the analytical results for air samples collected by the Maul Foster & Alongi, Inc. project team on the Union Ridge Investment Company site located at 122 N. Main Avenue in Ridgefield, Washington. The samples were collected in November 2012.

Eurofins Air Toxics, Inc. (AT) performed the analyses. AT report numbers 1211513A, 1211513B, 1211513C, 1211513D, 1211513E, 1211513FR1, 1211514A, 1211514B, 1211514C, 1211514DR1, 1211514ER2, 1211515A, 1211515B, and 1211515CR1 were reviewed. The analyses performed are listed below.

Analysis	Reference
Volatile organic compounds in ambient air (chlorinated hydrocarbons)	Modified USEPA TO-15/TO-15 SIM
Permanent gases	Modified ASTM D-1946

ASTM = American Society for Testing and Materials.

SIM = selective ion monitoring.

USEPA = U.S. Environmental Protection Agency.

## DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2008, 2010) and appropriate laboratory and method-specific guidelines (AT, 2012; USEPA, 1986).

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the functional guidelines.

Soil gas samples were collected under a helium shroud to detect leaks in the collection system. Report 1211514C, indicated helium detections for some samples. All helium detections were below the recommended concentration for resampling (NJDEP, 2012). The samples were also analyzed for USEPA TO-15 (see report 1211514B). USEPA TO-15 results may be biased low when helium is also indicated in the same sample. USEPA TO-15 detections in samples with detectable helium were qualified with a “J,” as estimated.

Sample	Helium (%)	USEPA TO-15 Report	Analyte	Original Result (µg/m <sup>3</sup> )	Qualified Result (µg/m <sup>3</sup> )
7-SS2	0.59	1211514B	PCE	7.8	7.8 J
7-SS3	0.24	1211514B	PCE	14	14 J
NOTES: µg/ m <sup>3</sup> = microgram per cubic meter. PCE = tetrachloroethene.					

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

## HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

### Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

### Preservation and Sample Storage

The samples were preserved and stored appropriately, with the following exceptions: in sample delivery groups 1211513A and 1211513C, canisters for samples 1-IA2-111512, 27-CS1-111512, and OA2-111512 were measured at ambient pressure in the field and upon receipt at the laboratory.

## BLANKS

### Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. If an analyte was detected in a sample and in the associated method blank, the sample result was qualified if the concentration was less than five times the method blank concentration. All method blank results are either below the reporting limit (RL) and/or associated with non-detect sample results.

If an analyte was detected in a sample and in the associated method blank below the RL but above the method detection limit (MDL), sample detections below the level found in the method blank were qualified as "UJ" and reported as not detected (at or below the levels found in the method blank). Sample detections above the level found in the method blank were not qualified.

In report 1211513D, some analytes were detected in the laboratory method blank and between the RL and MDL. Associated sample detections above the level found in the method blank were not qualified. Associated sample detections below the level found in the method blank were qualified as "UJ" and reported as not detected (at or below the levels found in the method blank).

Report	Sample	Component	Original Result ( $\mu\text{g}/\text{m}^3$ )	Qualified Result ( $\mu\text{g}/\text{m}^3$ )
1211513D_d	24-CS1-111512	TCE	0.051 J	0.052 UJ
1211513D_d	27-IA2-111512	TCE	0.050 J	0.052 UJ
NOTE: TCE = trichloroethene.				

All remaining laboratory method blanks were non-detect.

## Trip Blanks

Trip blanks were not required for this sampling event.

## Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

## SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples. All surrogate recoveries were within acceptance limits.

## MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. MS/MSD samples were not required for these sampling events.

## LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. Laboratory duplicate samples were reported for 1211514C and 1211515B. All relative percent differences were within acceptance limits.

## LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

An LCS/LCSD is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. All LCS/LCSD analytes were within acceptance limits for percent recovery.

## FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. Field duplicates were not submitted for analysis.

## CONTINUING CALIBRATION VERIFICATION RESULTS

CCV results are used to demonstrate instrument precision and accuracy through the end of the sample batch. All CCVs were within acceptance limits for percent recovery.

## REPORTING LIMITS

The chain of custody was submitted to the laboratory with an attachment indicating target RLs for all analytes. The target RL for TCE was later adjusted from 0.016  $\mu\text{g}/\text{m}^3$  to 0.11  $\mu\text{g}/\text{m}^3$  because of the type of sample canisters used for this project. AT used the target RLs for non-detect results, except for samples requiring dilutions because of high analyte

concentrations and/or matrix interferences. Most RLs were elevated because of canister dilution caused by residual canister vacuum.

AT reported 1,2-dichloroethane and TCE to the MDL in addendum reports 1211513D, 1211513E, 1211513FR1, 1211514DR1, 1211514ER2, and 1211515CR1. Results reported between the MDL and RL were qualified with a “J” by the laboratory.

## DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

The chain of custody for all reports includes instructions to see an attachment for the list of requested analytical compounds. The attachment submitted with the chains of custody is not the final version submitted to the laboratory; it does not include 1,2-dichloroethane. A final version of the attachment that includes 1,2-dichloroethane was submitted to the laboratory.

In report 1211513A, the result for PCE from USEPA Method TO-15 SIM for sample 7-IA2-111512 was reported as estimated, with a “J” qualifier, because of a rounding protocol used by the laboratory. The rounding protocol and data qualification were verified by the reviewer.

Report 1211514D surrogate acceptance limits are incorrectly reported as 0-130 for all samples. The correct limits are 70-130.

No additional issues were found.



## REFERENCES

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- AT. 2012. Quality assurance manual. Eurofins Air Toxics, Inc., Folsom, California.
- NJDEP. 2012. Vapor intrusion technical guidance. Vers 2.0. New Jersey Department of Environmental Protection Site Remediation Program. January.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).
- USEPA. 2008. USEPA contract laboratory program, national functional guidelines for organics data review. EPA 540/R-08/01. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. June.
- USEPA. 2010. USEPA contract laboratory program national functional guidelines for inorganic superfund data review. EPA 540/R-10/011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

# DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 8006.31.01 | AUGUST 23, 2013 | UNION RIDGE INVESTMENT COMPANY

This report reviews the analytical results for air samples collected by the Maul Foster & Alongi, Inc. (MFA) project team on the former Park Laundry site located at 122 N. Main Avenue in Ridgefield, Washington. The samples were collected in July 2013.

Eurofins Air Toxics, Inc. (AT) performed the analyses. AT report numbers 1308171, 1308172A, 1308172B, and 1308173A were reviewed. The analyses performed and samples analyzed are listed below.

Analysis	Reference
Volatile organic compounds in ambient air (chlorinated hydrocarbons)	Modified USEPA TO-15/Modified USEPA TO-15 SIM

SIM = selective ion monitoring.  
USEPA = U.S. Environmental Protection Agency.

Samples Analyzed			
SDG No. 1308171	SDG No. 1308172A	SDG No. 1308172B	SDG No. 1308173A
28-SG1-073013	13-IA2-073013	OA3-073013	10-IA1-072913
13-SG1-073013	13-IA1-073013	OA3-072913	1-IA3-072913
44-SG1-073113	5-IA3-073013	-	27-IA1-073013
45-SG1-073113	11-IA2-072913	-	27-IA2-073013
46-SG1-073013	11-IA3-072913	-	28-IA1-073013
27-SG1-072913	11-IA1-072913	-	27-CS1-073013
5-SG1-073013	9-IA1-072913	-	28-IA2-073013
11-SG1-073113	7-IA2-072913	-	28-IA3-073013
24-SG1-073013	7-IA1-072913	-	5-IA2-073013
5-SS1-073013	9-IA2-072913	-	5-IA1-073013
5-SS2-073013	10-IA2-072913	-	-
1-SS3-072913	10-CS1-072913	-	-
1-SS2-072913	1-IA2-072913	-	-
1-SS1-072913	1-IA1-072913	-	-
7-SS3-072913	-	-	-
7-SS2-072913	-	-	-
7-SS1-072913	-	-	-
13-SS1-073013	-	-	-
11-SS4-073113	-	-	-
11-SS3-073113	-	-	-

Samples Analyzed			
SDG No. 1308171	SDG No. 1308172A	SDG No. 1308172B	SDG No. 1308173A
11-SS2-073113	-	-	-
11-SS1-073113	-	-	-

SDG = Sample delivery group

## DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2008) and appropriate laboratory and method-specific guidelines (AT, 2013; USEPA, 1986).

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not addressed by the functional guidelines (i.e., Modified USEPA TO-15).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

## HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

### Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

### Preservation and Sample Storage

The samples were preserved and stored appropriately.

## BLANKS

### Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. If an analyte was detected in a sample and in the associated method blank, the sample result was qualified if the concentration was less than ten times the method blank concentration. Method reporting limits (MRLs) were elevated to the concentration detected in the samples, and results were qualified as not detected "U" at the elevated MRL.

If an analyte was detected in a sample and in the associated method blank was below the reporting limit but above the method detection limit (MDL), sample detections below the level found in the method blank were qualified as "U" at the reporting limit.

In report 1308171, the USEPA Method TO-15 method blank analyzed on August 18, 2013, on instrument msd3.i showed detections below the MRL for 1,2-dichloroethane and trichloroethene. The samples associated with this method blank were all non-detect, so no qualifications were made. The USEPA Method TO-15 method blank analyzed on

August 18, 2013, on instrument msdj.i showed a detection below the MRL for 1,2-dichloroethane (at 0.40 microgram per cubic meter [ $\mu\text{g}/\text{m}^3$ ]). The samples associated with this method blank were qualified as follows:

Sample	Component	Original Result ( $\mu\text{g}/\text{m}^3$ )	Qualified Result ( $\mu\text{g}/\text{m}^3$ )
46-SG1-073013	1,2-dichloroethane	1.2 J	5.0 U

J = estimated.

All remaining laboratory method blanks were non-detect.

### Trip Blanks

Trip blanks were not required for this sampling event.

### Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

### SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples. All surrogate recoveries were within acceptance limits.

### MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. MS/MSD samples were not reported.

### LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. Laboratory duplicate samples were not reported.

### LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency.

In report 1308171, the LCSD analyzed on August 18, 2013, on instrument msd3.i exceeded the lower acceptance limit for 1,2-dichloroethane. The LCS had acceptable recovery and the exceedance was minor; thus, no results were qualified.

All remaining LCS/LCSD analytes were within acceptance limits for percent recovery and relative percent differences.

## FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. Field duplicates were not submitted for analysis.

## CONTINUING CALIBRATION VERIFICATION RESULTS

Continuing calibration verification (CCV) results are used to demonstrate instrument precision and accuracy through the end of the sample batch.

All CCVs were within acceptance limits for percent recovery.

## REPORTING LIMITS

AT used routine reporting limits for non-detect results, except for 1,2-dichloroethane, trichloroethane, and vinyl chloride, analyzed by Modified USEPA TO-15; and 1,2-dichloroethane, analyzed by Modified USEPA Method TO-15 SIM, which were evaluated to the MDL at the request of the MFA project manager. AT reported MDLs for all results, but only the analytes listed above were evaluated below the MRL. All reporting limits were elevated because of canister dilution caused by residual canister vacuum. Reporting limits were additionally raised for samples that required dilutions because of high analyte concentrations and/or matrix interferences.

## DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

The soil gas and soil gas subslab samples submitted for report 1308171 were collected under a helium shroud to detect leaks in the collection system. Helium was included on the requested compounds list, which was submitted to the laboratory as an attachment for each chain of custody. However, the laboratory did not conduct helium analysis for these samples. The samples were collected in a manner consistent with the project standard operating procedures for soil gas and subslab soil gas sampling. Before collection of each sample, a shut-in test was successfully performed to verify the absence of leakage into the sampling train. Additionally, air purged through the sampling apparatus was analyzed with field detectors to verify the absence of helium. These procedures indicated acceptable sampling system integrity.

Two of the subslab soil gas samples (11-SS2-073113 and 11-SS1-073113) were originally submitted on the chain of custody with samples reported in 1308172A and 1308172B. These two samples were reported with other soil gas samples in report 1308171.

No additional issues were found.

## REFERENCES

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- AT. 2013. Quality assurance manual. Eurofins Air Toxics, Inc., Folsom, California.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).
- USEPA. 2008. USEPA contract laboratory program, national functional guidelines for organics data review. EPA 540/R-08/01. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. June.