

Mr. Mostafa Mehran  
 Chief Hazardous Waste Division  
 Arkansas Department of Environmental Quality  
 5301 Northshore Drive  
 North Little Rock, Arkansas 72118

**RE: Results of Outdoor, Crawl Space and Indoor Air Sampling  
 Whirlpool Corporation Facility – Fort Smith, Arkansas  
 EPA No. ARD042755389  
 AFIN No. 66-00048  
 CAO LIS 13-202**

Dear Mr. Mehran:

Date June 25, 2015

Ramboll Environ US Corporation (Ramboll Environ) on behalf of Whirlpool Corporation (Whirlpool), collected outdoor, crawl space, and indoor air samples from an offsite property, identified as Parcel #3 (see Figure 1), on April 22 and 23, 2015. These samples were collected at the request of the property owner as part of the ongoing assessment of the potential for vapor intrusion from groundwater conditions associated with the inactive Whirlpool property located at 6400 Jenny Lind Road in Fort Smith, Arkansas.

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As presented in the attached Table 1, only two chemicals, 1,2-dichloroethane (1,2-DCA) and tetrachloroethene (PCE), were detected in the outdoor, crawl space, and indoor air samples.

- 1,2 DCA and PCE have not been detected in the groundwater at Parcel #3 in concentrations exceeding drinking water criteria.
- 1,2-DCA or PCE are not degradation products of TCE; indicating that the TCE in groundwater from the former Whirlpool site is not the source of either of these two chemicals in air.
- 1,2-DCA and PCE are volatile organic compounds (VOCs) that can be part of household products used or stored around the home, which may contribute to detected concentrations in indoor air. For example, 1,2-DCA is used in certain imported plastics like Christmas ornaments and has historically been used in household products like degreaser and paint removal products. PCE is widely used in consumer products such as dry cleaned clothes, spot removers, fabric/leather cleaners, degreasers, brake cleaner and electronic cleaners.

Based on these facts, Whirlpool has concluded that 1,2-DCA and PCE are not associated with the groundwater conditions associated with the inactive Whirlpool property.

The concentration of 1,2-DCA in the indoor air appears to be related to an indoor source (or concentrations in the outdoor air and crawl space air).

The concentration of PCE in indoor air appears to be related to outdoor sources because it is nearly the same as the PCE concentrations in the outdoor air and crawl space air.

As indicated in Table 1, a comparison of PCE concentration in indoor air [0.081 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ )] to the USEPA Regional Screening Level ( $42 \mu\text{g}/\text{m}^3$ ) indicates that the PCE concentration is well below the screening level and does not pose a health risk.

In addition, the indoor air concentration of 1,2-DCA ( $1.2 \mu\text{g}/\text{m}^3$ ) is only slightly higher than the screening level ( $1.1 \mu\text{g}/\text{m}^3$ ). Because USEPA's screening levels incorporate a margin of safety, a slight exceedance is unlikely to cause any adverse health effects.

A complete laboratory report of the air sampling results for Parcel #3 included as Appendix A.

-o00o-

If you have any further questions or comments, please feel free to contact me.

Yours sincerely,



**Michael F. Ellis, PE**

Principal

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[mellis@environcorp.com](mailto:mellis@environcorp.com)

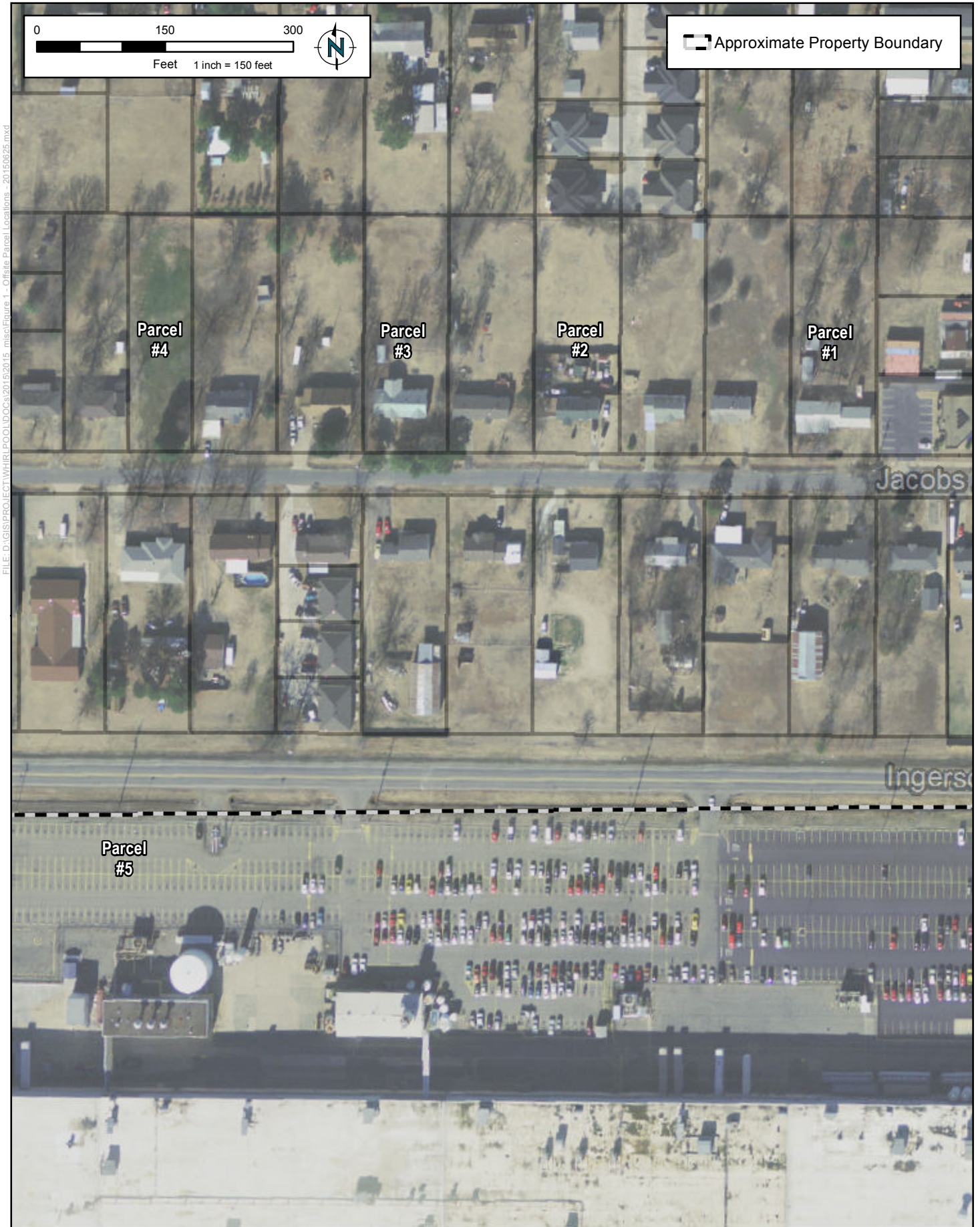
### **LIST OF ATTACHMENTS**

Figure 1: Offsite Parcel Locations

Table 1: Crawl Space, Indoor Air and Outdoor Air Sampling Results

Appendix A: Laboratory Report of Air Sampling Results

**FIGURE 1**  
**Offsite Parcel Locations**



FILE: D:\GIS\PROJECT\WHIRLPOOL\LOCATIONS\2015\misc\Figure\_1 - Offsite Parcel Locations - 20151025.mxd

**TABLE 1**  
**Crawl Space, Indoor Air and Outdoor Air Sampling Locations**

Table 1:  
Crawl Space, Indoor Air and Outdoor Air Sampling Results  
Parcel #3, Ft. Smith, Arkansas

Location	Crawl Space Parcel #3	Indoor Air Parcel #3	Outdoor Air Parcel #3
ENVIRON Sample ID	Crawl Space-AA-20150422	Indoor-AA-20150423	Outdoor-AA-20150422
Lab Sample ID	P1501720-001	P1501720-002	P1501720-003
Sample Date	4/22/2015	4/23/2015	4/22/2015
VOC			
Vinyl Chloride	U (0.033)	U (0.039)	U (0.037)
1,1-Dichloroethene	U (0.033)	U (0.039)	U (0.037)
trans-1,2-Dichloroethene	U (0.033)	U (0.039)	U (0.037)
1,1-Dichloroethane	U (0.033)	U (0.039)	U (0.037)
cis-1,2-Dichloroethene	U (0.033)	U (0.039)	U (0.037)
1,2-Dichloroethane	0.058 (0.033)	1.2 (0.039)	0.059 (0.037)
1,1,1-Trichloroethane	U (0.033)	U (0.039)	U (0.037)
Trichloroethene	U (0.033)	U (0.039)	U (0.037)
Tetrachloroethene	0.077 (0.033)	0.081 (0.039)	0.080 (0.037)

**Notes:**

All concentrations are presented in ug/m3.

**Abbreviations:**

U - Not Detected

( ) - Detection Limit

**APPENDIX A**  
**Laboratory Report of Air Sampling Results**



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## LABORATORY REPORT

May 11, 2015

Wendy Stonestreet  
Environ International Corporation  
7500 College Boulevard, Suite 925  
Overland Park, KS 66210

RE: **Parcel #3** AA Sampling / 3437470A

Dear Wendy:

Enclosed are the results of the samples submitted to our laboratory on April 28, 2015. For your reference, these analyses have been assigned our service request number P1501720.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at [www.alsglobal.com](http://www.alsglobal.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**ALS | Environmental**

By Kelly Horiuchi at 12:18 pm, May 11, 2015

Kelly Horiuchi  
Laboratory Director





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[www.alsglobal.com](http://www.alsglobal.com)

Client: Environ International Corporation  
Project: **Parcel #3** AA Sampling / 3437470A

Service Request No: P1501720

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### CASE NARRATIVE

The samples were received intact under chain of custody on April 28, 2015 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

#### Volatile Organic Compound Analysis

The samples were analyzed in SIM mode for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is not included on the laboratory's AIHA-LAP scope of accreditation.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

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*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.*

*Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.*



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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	<a href="http://www.aihaaccreditedlabs.org">http://www.aihaaccreditedlabs.org</a>	101661
Arizona DHS	<a href="http://www.azdhs.gov/lab/license/env.htm">http://www.azdhs.gov/lab/license/env.htm</a>	AZ0694
DoD ELAP	<a href="http://www.pjlabs.com/search-accredited-labs">http://www.pjlabs.com/search-accredited-labs</a>	L14-2
Florida DOH (NELAP)	<a href="http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm">http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm</a>	E871020
Maine DHHS	<a href="http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm">http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm</a>	2014025
Minnesota DOH (NELAP)	<a href="http://www.health.state.mn.us/accreditation">http://www.health.state.mn.us/accreditation</a>	876241
New Jersey DEP (NELAP)	<a href="http://www.nj.gov/dep/oqa/">http://www.nj.gov/dep/oqa/</a>	CA009
New York DOH (NELAP)	<a href="http://www.wadsworth.org/labcert/elap/elap.html">http://www.wadsworth.org/labcert/elap/elap.html</a>	11221
Oregon PHD (NELAP)	<a href="http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx">http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx</a>	4068-001
Pennsylvania DEP	<a href="http://www.depweb.state.pa.us/labs">http://www.depweb.state.pa.us/labs</a>	68-03307 (Registration)
Texas CEQ (NELAP)	<a href="http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html">http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html</a>	T104704413-14-5
Utah DOH (NELAP)	<a href="http://www.health.utah.gov/lab/labimp/certification/index.html">http://www.health.utah.gov/lab/labimp/certification/index.html</a>	CA01627201 4-4
Washington DOE	<a href="http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html">http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html</a>	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at [www.alsglobal.com](http://www.alsglobal.com), or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Environ International Corporation  
Project ID: Parcel #3 AA Sampling / 3437470A

Service Request: P1501720

Date Received: 4/28/2015  
Time Received: 09:45

TO-15 - VOC SIM

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)	
Crawl Space-AA-20150422	P1501720-001	Air	4/22/2015	17:14	AC01300	-0.56	3.74	X
Indoor-AA-20150423	P1501720-002	Air	4/23/2015	10:24	AS00877	-2.60	3.88	X
Outdoor-AA-20150422	P1501720-003	Air	4/22/2015	17:27	SC01703	-1.95	3.88	X



# Air - Chain of Custody Record & Analytical Service Request

2655 Park Center Drive, Suite A  
 Simi Valley, California 93065  
 Phone (805) 526-7161  
 Fax (805) 526-7270

Company Name & Address (Reporting Information) <b>ENVIRON</b> 7500 College Blvd Ste 925 Overland Park, KS 66210		Project Name <b>Parcel #3</b> AA sampling		Project Number <b>3437470A</b>		P.O. # / Billing Information		Project Requirements (MRLs, QAPP)	
Project Manager <b>Tammy Gleason</b>		Project Number <b>3437470A</b>		Project Name <b>Parcel #3</b> AA sampling		Project Number <b>3437470A</b>		Project Requirements (MRLs, QAPP)	
Email Address for Result Reporting <b>ws@stonesreetenvironment.com; tgleason@environcorp.com; Wendy.Stonestreet@WendyStonestreet.com</b>		Project Name <b>Parcel #3</b> AA sampling		Project Number <b>3437470A</b>		P.O. # / Billing Information		Project Requirements (MRLs, QAPP)	
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID (Bar code # - AC, SC, etc.)	Flow Controller ID (Bar code # - FC #)	Canister Start Pressure <sup>+</sup> Hg	Canister End Pressure <sup>+</sup> Hg/psig	Sample Volume	Comments e.g. Actual Preservative or specific instructions
Crawl Space - AA - 20150422	①	4/22/2015	1714	AC01300	DA00613	-29" Hg	-2.5" Hg	6L	X TO-15
Indoor - AA - 20150423	②	4/23/2015	1024	AS00877	FA00854	-28" Hg	-5.0" Hg	6L	X
Outdoor - AA - 20150422	③	4/22/2015	1727	AS001703	DA01856	-29" Hg	-5.0" Hg	6L	X
Report Tier Levels - please select Tier I - Results (Default in not specified) _____ Tier II (Results + QC Summaries) <input checked="" type="checkbox"/> _____ Tier III (Results + QC & Calibration Summaries) _____ Tier IV (Date Validation Package) 10% Surcharge _____ Relinquished by: (Signature) <u>Wendy Stonestreet</u> Date: <u>4/21/15</u> Time: <u>12:00</u> Relinquished by: (Signature) <u>Pat</u> Date: _____ Time: _____ Received by: (Signature) _____ Date: _____ Time: _____ Received by: (Signature) <u>Pat</u> Date: <u>4/21/15</u> Time: <u>09:15</u> Chain of Custody Seal: (Circle) <u>INTACT</u> Broken ABSENT Units: _____ EDD required YES/ No _____ Type: <u>Eq 15</u>									

**ALS Environmental  
Sample Acceptance Check Form**

Client: Environ International Corporation

Work order: P1501720

Project: Parcel #3 AA Sampling / 3437470A

Sample(s) received on: 4/28/15

Date opened: 4/28/15

by: ADAVID

**Note:** This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |  | <b>Yes</b>                          | <b>No</b>                           | <b>N/A</b>                          |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Container(s) <b>supplied by ALS</b> ?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Did <b>sample containers</b> arrive in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Were <b>chain-of-custody</b> papers used and filled out?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Did <b>sample container labels</b> and/or tags agree with custody papers?                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Was <b>sample volume</b> received adequate for analysis?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Are samples within specified holding times?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 9 Was a <b>trip blank</b> received?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 10 Were <b>custody seals</b> on outside of cooler/Box?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Were signature and date included?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Were seals intact?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Were custody seals on outside of sample container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12 <b>Tubes:</b> Are the tubes capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Do they contain moisture?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 13 <b>Badges:</b> Are the badges properly capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1501720-001.01	6.0 L Ambient Can					
P1501720-002.01	6.0 L Silonite Can					
P1501720-003.01	6.0 L Source Can					
P1501720-004.02	6.0 L Source Can					
P1501720-005.02	6.0 L Source Can					
P1501720-006.02	6.0 L Source Can					
P1501720-007.02	6.0 L Source Can					
P1501720-008.02	6.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Environ International Corporation

**Client Sample ID:** Crawl Space-AA-20150422

**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

ALS Sample ID: P1501720-001

Test Code: EPA TO-15 SIM

Date Collected: 4/22/15

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Date Received: 4/28/15

Analyst: Wida Ang

Date Analyzed: 5/6/15

Sample Type: 6.0 L Summa Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AC01300

Initial Pressure (psig): -0.56      Final Pressure (psig): 3.74

Canister Dilution Factor: 1.30

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.033	ND	0.013	
75-35-4	1,1-Dichloroethene	ND	0.033	ND	0.0082	
156-60-5	trans-1,2-Dichloroethene	ND	0.033	ND	0.0082	
75-34-3	1,1-Dichloroethane	ND	0.033	ND	0.0080	
156-59-2	cis-1,2-Dichloroethene	ND	0.033	ND	0.0082	
107-06-2	1,2-Dichloroethane	<b>0.058</b>	0.033	<b>0.014</b>	0.0080	
71-55-6	1,1,1-Trichloroethane	ND	0.033	ND	0.0060	
79-01-6	Trichloroethene	ND	0.033	ND	0.0060	
127-18-4	Tetrachloroethene	<b>0.077</b>	0.033	<b>0.011</b>	0.0048	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Environ International Corporation

**Client Sample ID:** Indoor-AA-20150423

**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

ALS Sample ID: P1501720-002

Test Code: EPA TO-15 SIM

Date Collected: 4/23/15

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Date Received: 4/28/15

Analyst: Wida Ang

Date Analyzed: 5/6/15

Sample Type: 6.0 L Silonite Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: AS00877

Initial Pressure (psig): -2.60      Final Pressure (psig): 3.88

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.039	ND	0.015	
75-35-4	1,1-Dichloroethene	ND	0.039	ND	0.0097	
156-60-5	trans-1,2-Dichloroethene	ND	0.039	ND	0.0097	
75-34-3	1,1-Dichloroethane	ND	0.039	ND	0.0095	
156-59-2	cis-1,2-Dichloroethene	ND	0.039	ND	0.0097	
107-06-2	1,2-Dichloroethane	<b>1.2</b>	0.039	<b>0.29</b>	0.0095	
71-55-6	1,1,1-Trichloroethane	ND	0.039	ND	0.0071	
79-01-6	Trichloroethene	ND	0.039	ND	0.0072	
127-18-4	Tetrachloroethene	<b>0.081</b>	0.039	<b>0.012</b>	0.0057	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Environ International Corporation

**Client Sample ID:** Outdoor-AA-20150422

**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

ALS Sample ID: P1501720-003

Test Code: EPA TO-15 SIM

Date Collected: 4/22/15

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Date Received: 4/28/15

Analyst: Wida Ang

Date Analyzed: 5/6/15

Sample Type: 6.0 L Summa Canister

Volume(s) Analyzed: 1.00 Liter(s)

Test Notes:

Container ID: SC01703

Initial Pressure (psig): -1.95      Final Pressure (psig): 3.88

Canister Dilution Factor: 1.46

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	0.037	ND	0.014	
75-35-4	1,1-Dichloroethene	ND	0.037	ND	0.0092	
156-60-5	trans-1,2-Dichloroethene	ND	0.037	ND	0.0092	
75-34-3	1,1-Dichloroethane	ND	0.037	ND	0.0090	
156-59-2	cis-1,2-Dichloroethene	ND	0.037	ND	0.0092	
107-06-2	1,2-Dichloroethane	<b>0.059</b>	0.037	<b>0.015</b>	0.0090	
71-55-6	1,1,1-Trichloroethane	ND	0.037	ND	0.0067	
79-01-6	Trichloroethene	ND	0.037	ND	0.0068	
127-18-4	Tetrachloroethene	<b>0.080</b>	0.037	<b>0.012</b>	0.0054	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



# ALS ENVIRONMENTAL

## RESULTS OF ANALYSIS

Page 1 of 1

**Client:** Environ International Corporation

**Client Sample ID:** Method Blank

**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

ALS Sample ID: P150505-MB

Test Code: EPA TO-15 SIM

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Analyst: Wida Ang

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 5/5/15

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result		MRL		Data Qualifier
		$\mu\text{g}/\text{m}^3$	$\mu\text{g}/\text{m}^3$	ppbV	ppbV	
75-01-4	Vinyl Chloride	ND	0.025	ND	0.0098	
75-35-4	1,1-Dichloroethene	ND	0.025	ND	0.0063	
156-60-5	trans-1,2-Dichloroethene	ND	0.025	ND	0.0063	
75-34-3	1,1-Dichloroethane	ND	0.025	ND	0.0062	
156-59-2	cis-1,2-Dichloroethene	ND	0.025	ND	0.0063	
107-06-2	1,2-Dichloroethane	ND	0.025	ND	0.0062	
71-55-6	1,1,1-Trichloroethane	ND	0.025	ND	0.0046	
79-01-6	Trichloroethene	ND	0.025	ND	0.0047	
127-18-4	Tetrachloroethene	ND	0.025	ND	0.0037	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

**ALS ENVIRONMENTAL**

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** Environ International Corporation  
**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

Test Code: EPA TO-15 SIM  
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19  
 Analyst: Wida Ang  
 Sample Type: 6.0 L Summa Canister(s)  
 Test Notes:

Date(s) Collected: 4/22 - 4/23/15  
 Date(s) Received: 4/28/15  
 Date(s) Analyzed: 5/5 - 5/6/15

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		% Recovered	% Recovered	% Recovered		
Method Blank	P150505-MB	<b>88</b>	<b>98</b>	<b>115</b>	70-130	
Lab Control Sample	P150505-LCS	<b>89</b>	<b>97</b>	<b>116</b>	70-130	
Crawl Space-AA-20150422	P1501720-001	<b>89</b>	<b>101</b>	<b>104</b>	70-130	
Indoor-AA-20150423	P1501720-002	<b>90</b>	<b>100</b>	<b>102</b>	70-130	
Outdoor-AA-20150422	P1501720-003	<b>90</b>	<b>101</b>	<b>110</b>	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

# ALS ENVIRONMENTAL

## LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

**Client:** Environ International Corporation

**Client Sample ID:** Lab Control Sample

**Client Project ID:** Parcel #3 AA Sampling / 3437470A

ALS Project ID: P1501720

ALS Sample ID: P150505-LCS

Test Code: EPA TO-15 SIM

Date Collected: NA

Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19

Date Received: NA

Analyst: Wida Ang

Date Analyzed: 5/5/15

Sample Type: 6.0 L Summa Canister

Volume(s) Analyzed: 0.125 Liter(s)

Test Notes:

CAS #	Compound	Spike Amount µg/m <sup>3</sup>	Result µg/m <sup>3</sup>	% Recovery	ALS	Data Qualifier
					Acceptance Limits	
75-01-4	Vinyl Chloride	4.04	3.60	89	64-118	
75-35-4	1,1-Dichloroethene	4.28	3.64	85	72-113	
156-60-5	trans-1,2-Dichloroethene	4.24	3.71	88	70-115	
75-34-3	1,1-Dichloroethane	4.16	3.54	85	66-117	
156-59-2	cis-1,2-Dichloroethene	4.28	3.59	84	72-115	
107-06-2	1,2-Dichloroethane	4.20	3.27	78	64-116	
71-55-6	1,1,1-Trichloroethane	4.16	3.34	80	69-113	
79-01-6	Trichloroethene	4.16	3.65	88	70-112	
127-18-4	Tetrachloroethene	3.96	3.47	88	67-114	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.  
Reported results are shown in concentration units and as a result of the calculation, may vary slightly.