



Rec'd
3-18-2016
DSV

March 16, 2016

Mr. David G. Volkert, Hydrogeologist /
Wisconsin Department of Natural Resources
Bureau for Remediation & Redevelopment
Waukesha Service Center
141 NW Barstow Street
Waukesha, Wisconsin 53188

**Re: Results of Further Off-site Vapor Sampling
OHM - Oconomowoc
36929 Plank Road
Oconomowoc, Wisconsin
FID # 268087380; BRRTS # 02-68-551911**

Dear Mr. Volkert:

As consultant to Mr. Charles Cass of OHM Holdings, Inc., Environmental Forensic Investigations, Inc. (EnviroForensics) is providing the following results report of additional site investigation activities at the One Hour Martinizing (OHM) facility formerly located at 36929 Plank Road in Oconomowoc, Wisconsin (Site). This report is in response to the Wisconsin Department of Natural Resources (WDNR) request for one (1) additional round of vapor sampling from off-site wells on the Ewald Kia and NAPA Auto Parts Store properties.

Vapor Sampling in Monitoring Wells MW-15 and MW-17

On February 25, 2016, one (1) additional round of vapor samples were collected from monitoring well MW-15 located on the NAPA property and MW-17 located on the Ewald Kia property per WDNR request (see attached **Figure 1** for the locations of these wells). The vapor sampling procedures previously followed during the first round were again followed during this second round (refer to previous sampling protocol in letter report to WDNR dated January 12, 2016), except for the following WDNR suggested modifications:

1. Upon completing pressure and leak testing of the sample train, and upon purging three (3) well and pack volumes of air, the valve was closed on the sample train allowing vapors within the wells to equilibrate for at least 15 minutes prior to collecting vapor samples;
2. Vapor samples were collected in 6-liter Summa canisters instead of the 1-liter canisters previously used; and

Environmental Forensic Investigations, Inc.
N16 W23390 Stone Ridge Drive, Suite G, Waukesha, WI 53188
Phone: 262-290-4001 • Fax 262-510-0460

3. The analytical laboratory was instructed not to dilute the samples, which they sometimes do to prevent gross contamination of their equipment. This resulted in much lower detection limits.

Vapor Sampling Results

The vapor sampling results are recorded in attached **Table 1**, and attached **Laboratory Results Sheets**. As can be seen in **Table 1**, the chlorinated compounds of concern were not detected above laboratory detection limits in either of the two (2) samples collected during the February 25th sampling event.

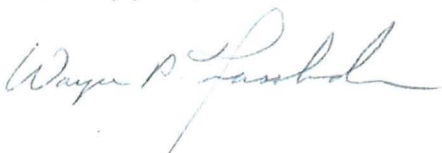
Conclusions

Concentrations of chlorinated compounds in vapor samples collected from groundwater monitoring wells located near the Ewald KIA and NAPA buildings have been well below the current vapor risk screening levels (VRSLs) for deep soil gas, or not detected above laboratory detection limits during both the non-heating and heating seasons.

The WDNR has indicated that the attenuation factor for soil gas is likely to be revised from 0.01 to 0.03 in the near future. This would result in lower VRSLs for soil gas as indicated in **Table 1**. For example: the VRSL in deep soil gas for PCE in a small commercial setting would be adjusted from 18,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 6,000 $\mu\text{g}/\text{m}^3$. The concentrations of chlorinated compounds detected in the vapor samples are well below the revised VRSLs that are proposed. Subsequently, there does not appear to be a risk of vapor intrusion to these buildings from existing groundwater impacts and we recommend that no further vapor intrusion assessments be performed.

If you have any questions or require additional information, please don't hesitate to contact me at 414-982-3988.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Wayne P. Fassbender".

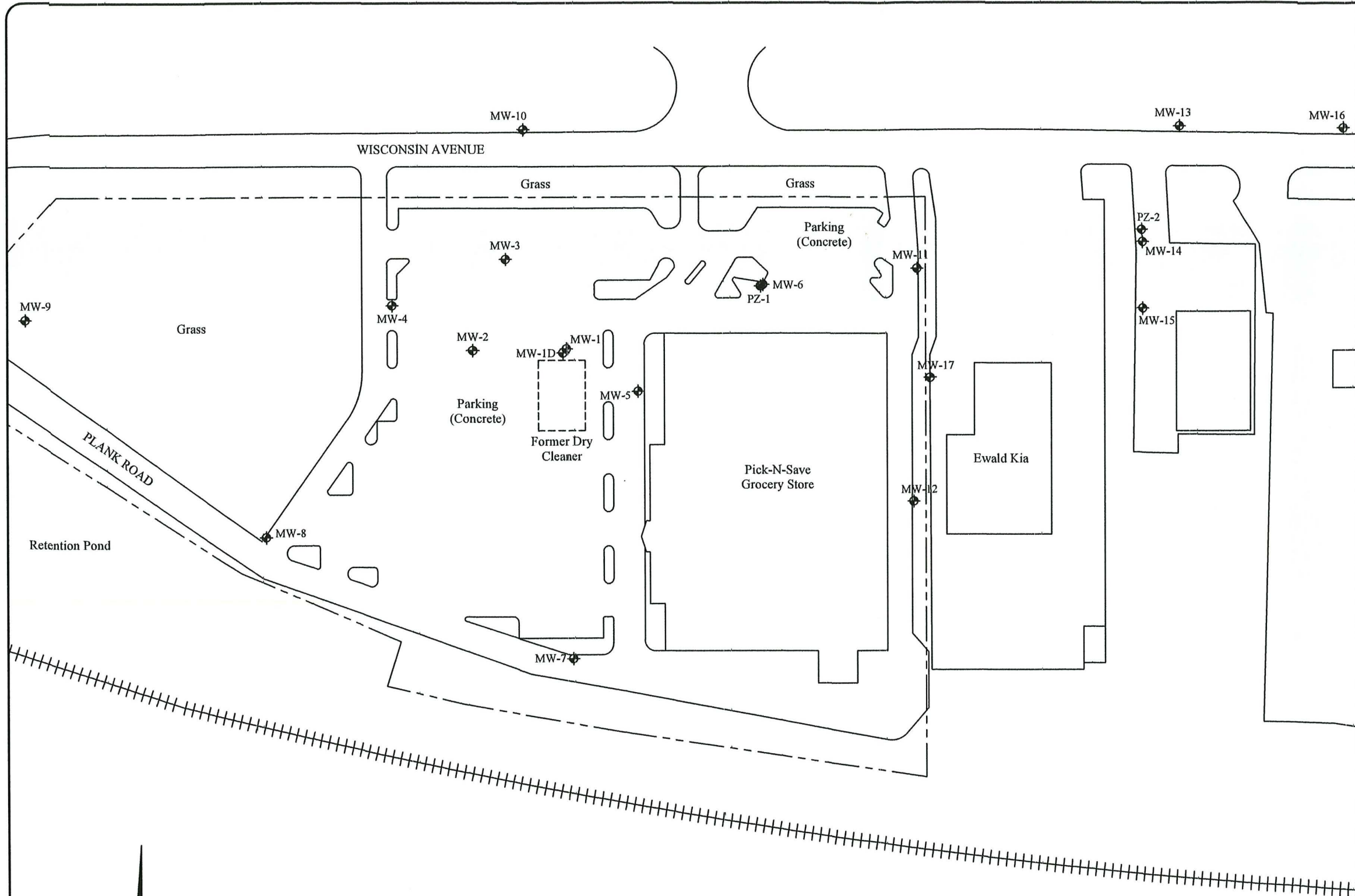
Wayne P. Fassbender, PG, PMP
Senior Project Manager

Attachments:

Figure 1

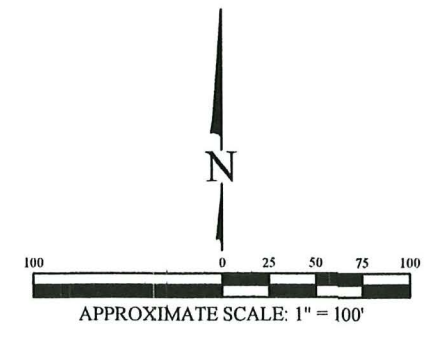
Table 1

Laboratory Analytical Results Sheets



Legend

- Property boundary
- MW-1 ◆ Monitoring well sample location



MONITORING WELL LOCATION MAP

Martinzing Dry Cleaning
36929 Plank Road
Oconomowoc, WI

Date: 5/1/15	Figure
Designed: EB	1
Drawn: EB	Project
Checked: KH	6143
DWG file: 6143-0135	

ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
602 N. Capitol Ave., Ste. 210 • Indianapolis, IN 46204
EnviroForensics.com

TABLE 1
SOIL GAS ANALYTICAL RESULTS SUMMARY
 Former One Hour Martinizing Cleaners
 Oconomowoc, Wisconsin

Sample Identification	Sample Date	Tetrachloroethylene	Trichloroethylene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
6143-SG-5 (MW-15)	9/15/2015	661	<10.7	<198	<396	<12.8
	2/25/2016	<3.19	<1.07	<3.96	<3.96	<0.64
6143-SG-4 (MW-17)	9/15/2015	54.9	<10.7	<198	<396	<12.8
	2/25/2016	<3.19	<1.07	<3.96	<3.96	<0.64
Deep Vapor Risk Screening Level ¹		18,000	880	NE	NE	2,800
Proposed Future Vapor Risk Screening Level		6,000	293	NE	NE	933

Notes:

¹ The Vapor Risk Screening Levels are based on U.S. E.P.A.'s Regional Screening Levels (RSL's) for non-residential indoor air with an attenuation factor of 0.01 for soil gas deeper than 5 feet below the foundation of small commercial buildings.

All concentrations reported in units of micrograms per cubic meter (µg/m3)

Bolded values are above detection limits

NE = Not Established



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Mr. W. Fassbender
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

March 8, 2016

EnvisionAir Project Number: 2016-154
Client Project Name: 6143 – OHM Oconomowoc

Dear Mr. Fassbender,

Please find the attached analytical report for the samples received March 1, 2016. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads "Stanley A. Hunnicutt".

Stanley A Hunnicutt

Project Manager
EnvisionAir, LLC



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6143 / OHM OCONOMOWOC
Client Project Manager: W. FASSBENDER
EnvisionAir Project Number: 2016-154

Sample Summary

Canister Pressure / Vacuum

<u>Laboratory Sample Number:</u>	<u>Sample Description:</u>	<u>Matrix:</u>	<u>START</u> <u>Date</u>	<u>START</u> <u>Time</u>	<u>End Date</u> <u>Collected:</u>	<u>End Time</u> <u>Collected:</u>	<u>Date</u> <u>Received:</u>	<u>Time</u> <u>Received</u>	<u>Initial Field</u> <u>(in. Hg)</u>	<u>Final Field</u> <u>(in. Hg)</u>	<u>Lab</u> <u>Received</u> <u>(in. Hg)</u>
16-539	6143-SG-5(MW-15)	A	2/25/16	12:56	2/25/16	13:19	3/1/16	10:35	-27	-3	-3



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1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6143 / OHM OCONOMOWOC
Client Project Manager: W. FASSBENDER
EnvisionAir Project Number: 2016-153

Analytical Method: TO-15
Analytical Batch: 030116AIR

Client Sample ID: 6143-SG-5(MW-15) **Sample Collection START Date/Time:** 2/25/16 12:56
Envision Sample Number: 16-539 **Sample Collection END Date/Time:** 2/25/16 13:19
Sample Matrix: AIR **Sample Received Date/Time:** 3/1/16 10:35

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichlorethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	110%		
Analysis Date/Time:	3-1-16/20:05		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

TO-15 Quality Control Data

EnvisionAir Batch Number: 030116AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichlorethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	114%		
Analysis Date/Time:	3-1-16/18:46		
Analyst Initials	tjg		

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D Conc(ppbv)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
cis-1,2-Dichloroethene	9.78	9.89	10	98%	99%	1.1%	
Tetrachloroethene	10.7	11.1	10	107%	111%	3.7%	
trans-1,2-Dichloroethene	10.6	10.8	10	106%	108%	1.9%	
Trichlorethene	10.2	10.5	10	102%	105%	2.9%	
Vinyl Chloride	9.26	9.57	10	93%	96%	3.3%	
4-bromofluorobenzene (surrogate)	108%	109%					
Analysis Date/Time:	3-1-16/17:26	3-1-16/18:07					
Analyst Initials	tjg	tjg					



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

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Comments



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
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Fax: 317-351-0882
www.envision-air.com

Mr. W. Fassbender
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

March 8, 2016

EnvisionAir Project Number: 2016-153
Client Project Name: 6143 – OHM Oconomowoc

Dear Mr. Fassbender,

Please find the attached analytical report for the samples received March 1, 2016. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in cursive script that reads 'Stanley A. Hunnicutt'.

Stanley A Hunnicutt

Project Manager
EnvisionAir, LLC

154 MH 3h
1 of 1 MH 3/1

CHAIN OF CUSTODY RECORD

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EnvisionAir | 1441 Sadler Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-0885 | Fax: (317) 351-0882

Client: <i>EnviroForensics</i>	P.O. Number: <i>2016135</i>
Report <i>N16 W23390</i> Address: <i>suite 200 Stone Ridge Dr Waukesha, WI 53188</i>	Project Name or Number: <i>6143 / OHM OHM Oceanmouct</i>
Report To: <i>W. Fassbender</i>	Sampled by: <i>K. Vander Heide</i>
Phone: <i>317 972 7820</i>	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: <i>same</i>	Reporting Units needed: (circle) <u>ug/m³</u> mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days Std (5 bus. days)	Media type: 1LC = 1 Liter Canister 6LC = 6 Liter Canister TB = Tedlar Bag TD = Thermal Desorption Tube

REQUESTED PARAMETERS

TO-15 Full List

TO-15 Short List



Sampling Type:
Soil-Gas:
Sub-Slab:
Indoor-Air:

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Canister Pressure / Vacuum

Air Sample ID	Media Type (see code above)	Coll. Date (Grab/Comp Start)	Coll. Time (Grab/Comp Start)	Coll. Date (Comp. End)	Coll. Time (Comp. End)					Canister Serial #	Flow Controller Serial #	Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)	EnvisionAir Sample Number
<i>6143-56-5(MW-15)</i>	<i>6LC</i>	<i>2/25</i>	<i>1256</i>	<i>2/25</i>	<i>1319</i>	<i>X</i>				<i>NA</i>	<i>4663</i>	<i>-27</i>	<i>-3</i>	<i>-3</i>	<i>16-539</i>

Comments: *Do Not Dilute. Past concentration of PCE below 700ug/m³.*

Relinquished by:	Date	Time	Received by:	Date	Time
<i>[Signature]</i>	<i>2/25/15</i>	<i>1500</i>	<i>Stanley A. Munnecco</i>	<i>3/1/16</i>	<i>1035</i>



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 Fax: 317-351-0882
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Client Name: ENVIROFORENSICS
 Project ID: 6404
 Client Project Manager: W. FASSBENDER
 EnvisionAir Project Number: 2016-153

Sample Summary

Canister Pressure / Vacuum

<u>Laboratory Sample Number:</u>	<u>Sample Description:</u>	<u>START</u>	<u>START</u>	<u>End Date</u>	<u>End Time</u>	<u>Date</u>	<u>Time</u>	<u>Initial Field</u>	<u>Final Field</u>	<u>Lab</u>	
		<u>Date</u>	<u>Time</u>							<u>Collected</u>	<u>Collected</u>
16-540	6143-SG-4(MW-17)	A	2/25/16	11:53	2/25/16	12:23	3/1/16	10:35	-27	-3	-3



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1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6143 / OHM OCONOMOWOC
Client Project Manager: W. FASSBENDER
EnvisionAir Project Number: 2016-153

Analytical Method: TO-15
Analytical Batch: 030116AIR

Client Sample ID: 6143-SG-4(MW-17) **Sample Collection START Date/Time:** 2/25/16 11:53
Envision Sample Number: 16-540 **Sample Collection END Date/Time:** 2/25/16 12:23
Sample Matrix: AIR **Sample Received Date/Time:** 3/1/16 10:35

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	104%		
Analysis Date/Time:	3-1-16/20:45		
Analyst Initials	tjg		



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 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
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 Fax: 317-351-0882
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Analytical Report

TO-15 Quality Control Data

EnvisionAir Batch Number: 030116AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichlorethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	114%		
Analysis Date/Time:	3-1-16/18:46		
Analyst Initials	tjg		

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D</u>	<u>LCS</u>	<u>LCSD</u>	<u>RPD</u>	<u>Flag</u>
			<u>Conc(ppbv)</u>	<u>Rec.</u>	<u>Rec.</u>		
cis-1,2-Dichloroethene	9.78	9.89	10	98%	99%	1.1%	
Tetrachloroethene	10.7	11.1	10	107%	111%	3.7%	
trans-1,2-Dichloroethene	10.6	10.8	10	106%	108%	1.9%	
Trichlorethene	10.2	10.5	10	102%	105%	2.9%	
Vinyl Chloride	9.26	9.57	10	93%	96%	3.3%	
4-bromofluorobenzene (surrogate)	108%	109%					
Analysis Date/Time:	3-1-16/17:26	3-1-16/18:07					
Analyst Initials	tjg	tjg					



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Flag Number

Comments

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3/1
AH

CHAIN OF CUSTODY RECORD

WDF

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Client: <u>EnviroForensics</u>	P.O. Number: <u>2016135</u>
Report <u>N16 W23380 Stone Ridge</u> Address: <u>Suite G Waukegan, WI 53188</u>	Project Name or Number: <u>6143 / OHM Ozone monitor</u>
Report To: <u>W. Fassbender</u>	Sampled by: <u>K. VanderHeide</u>
Phone: <u>317 972 2870</u>	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: <u>same</u>	Reporting Units needed: (circle) <u>ug/m³</u> mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) <u>1 day</u> 2 days 3 days Std (5 bus. days)	Media type: 1LC = 1 Liter Canister 6LC = 6 Liter Canister TB = Tedlar Bag TD = Thermal Desorption Tube

REQUESTED PARAMETERS

TO-15 Full List

TO-15 Short List



Sampling Type:
Soil-Gas:
Sub-Slab:
Indoor-Air:

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Canister Pressure / Vacuum

Air Sample ID	Media Type <small>(see code above)</small>	Coll. Date <small>(Grab/Comp Start)</small>	Coll. Time <small>(Grab/Comp Start)</small>	Coll. Date <small>(Comp. End)</small>	Coll. Time <small>(Comp. End)</small>					Canister Serial #	Flow Controller Serial #	Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)	EnvisionAir Sample Number
6143-SG-4 (MWH)	6LC	2/25	1153	2/25	1223	X				19625	NA	-27	-3	-3	16-540

Comments: Do Not Dilute - No need to dilute. Past concentrations below 360 ug/m³ (ACE detected, only)

Relinquished by:	Date	Time	Received by:	Date	Time
<u>[Signature]</u>	2/25/16	1500	<u>Stanley A. Hunsicker</u>	3/1/16	1035