



March 26, 2019

Kenneth & Margaret Kuester
3659 East Squire Avenue
Cudahy, WI 53110

Subject: Environmental Investigation Sampling Results
BRRTS#: 02-41-515150

Dear Mr. and Mrs. Kuester:

In accordance with the executed Agreement to Provide Access for Sampling Activities, and in accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, EnviroForensics, LLC. (EnviroForensics) is providing the results of environmental samples collected from your property located at 3659 East Squire Avenue in Cudahy, Wisconsin. Indoor air and sub-slab vapor samples were collected on March 4-5, 2019. The sampling activities are part of an environmental investigation being performed for the former Packard Way Cleaners facility located at 3650-3652 East Barnard Avenue in Cudahy at the direction of the WDNR pursuant to the authority granted to it under State and Federal law. The chemicals of concern for the investigation are the dry cleaning solvent tetrachloroethene (PCE) and its associated breakdown products.

The Responsible Party is:

Packard Way Cleaners (former)
3650-3652 E. Barnard Ave.
Cudahy, WI

Sampling Results

Two indoor air samples were collected from within your home; one (1) in the basement (6306-3659 E Squire IA-B) and one (1) on the first floor (6306-3659 E Squire IA-B). Additionally, one (1) sub-slab vapor sample (6306-3659 E. Squire Ave.-SSV-1) was collected from beneath the basement floor of your home. The sampling locations are depicted on the attached **Figure 1**. The results of the indoor air and vapor samples are summarized and compared to WDNR standards on the attached **Table 1**. A copy of the laboratory report that relates to the indoor air and vapor samples is also attached.

PCE and trichloroethene were detected in the sub-slab vapor sample; however the concentrations were below their respective Vapor Risk Screening Levels established for residential buildings. No other chemicals of concern were detected in the indoor air or vapor samples.

We will contact you to discuss additional investigation work if any. If you have any questions or concerns, please contact us at 262-510-0612 or by email at rhoverman@enviroforensics.com. The WDNR project manager, Issac Ross, can be reached at 414 263-8519. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC

A handwritten signature in black ink, appearing to read "Kyle Heimstead".

Kyle Heimstead
Project Manager

Copy: Issac Ross, Wisconsin Department of Natural Resources

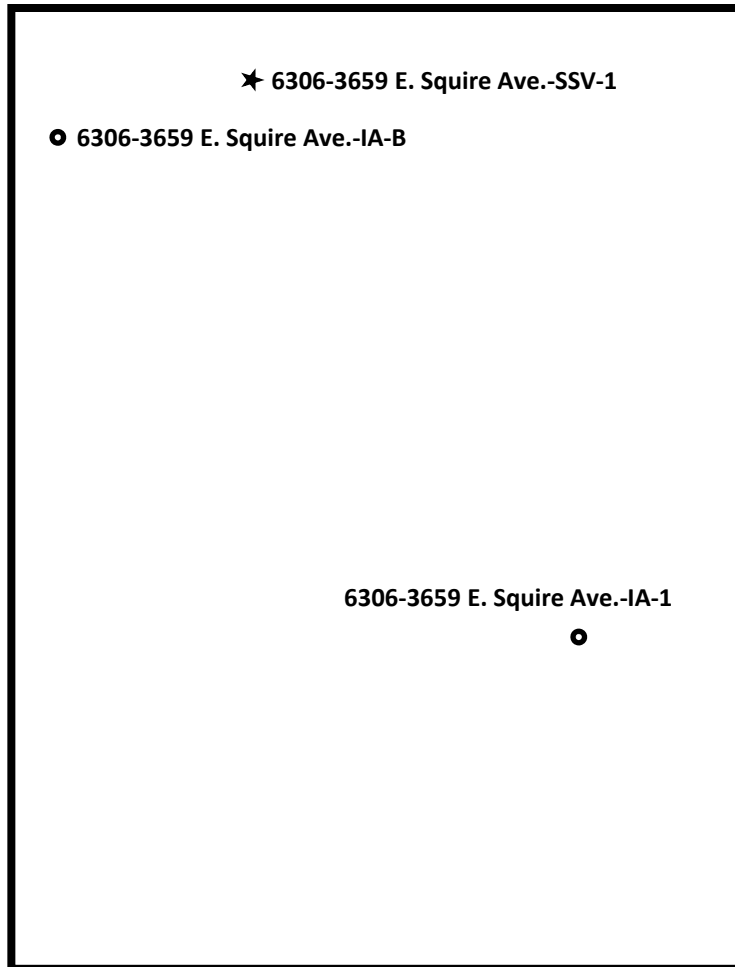
Attachments:

Figure 1 – Vapor Intrusion Sample Locations
Table 1 – Vapor Intrusion Analytical Results
Laboratory Analytical Report Excerpt

FIGURE 1
VAPOR INTRUSION SAMPLE LOCATIONS
3659 East Squire Avenue

East Squire Avenue

● 6306-3659 E. Squire Ave.-OA-1



Legend

- = Indoor/Outdoor Air Sample
- IA-B = Basement
- IA-1 = 1st Floor
- SSV-1 = Sub-Slab Vapor
- ★ = Sub-Slab Vapor Sampling Port Location



TABLE 1
VAPOR INTRUSION ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Sample Address	Sample Identification	Sample Location	Applicable Criteria	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	Benzene
INDOOR/OUTDOOR AIR SAMPLES								
Residential Vapor Action Level					42	2.1	NE	3.6
3659 East Squire Avenue	6306-3659 E. Squire Ave-IA-B	Basement	Residential	10/12/2018	11.9	<1.07	<19.8	<1.60
				3/5/2019	<3.19	<1.07	<19.8	NA
	6306-3659 E. Squire Ave-IA-1	1st Floor		10/12/2018	<3.19	<1.07	<19.8	<1.60
				3/5/2019	<3.19	<1.07	<19.8	NA
	6306-3659 E. Squire Ave-OA	Outdoors		10/12/2018	<3.19	<1.07	<19.8	<1.60
SUB-SLAB VAPOR SAMPLES								
Residential Vapor Risk Screening Level					1,400	70	NE	120
3659 East Squire Avenue	6306-3659 E. Squire Ave-SSV-1	Basement	Residential	10/12/2018	187	14.5	<19.8	19.8
				3/5/2019	18.2	5.16	<19.8	NA

Notes:

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Samples analyzed according to EPA Method TO-15

Vapor Risk Screening/Action Levels are calculated in accordance with WDNR Publication RR-800 and associated guidance documents

IA = Indoor Air

OA = Outdoor Air

SSV = Sub-slab vapor

Bolded values are above detection limits

NE = Screening/action level not established



EnvisionAir
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Mr. Rob Hoverman
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

March 14, 2019

EnvisionAir Project Number: 2019-183
Client Project Name: 6306

Dear Mr. Hoverman,

Please find the attached analytical report for the samples received March 7, 2019. 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



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Client Name: ENVIROFORENSICS
Project ID: 6306
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2019-183

Sample Summary

Canister Pressure / Vacuum

<u>Laboratory Sample Number:</u>	<u>Sample Description:</u>	<u>Matrix:</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>							
19-824	6306-3659 E SQUIRE AVE-IA-1	A	3/4/19	10:03	3/5/19	10:07	3/7/19	11:00	-29	-3	-3
19-825	6306-3659 E SQUIRE AVE-IA-B	A	3/4/19	10:05	3/5/19	10:09	3/7/19	11:00	-29	-3	-3
19-826	6306-3659 E SQUIRE AVE-SSV-1	A	3/5/19	10:27	3/5/19	10:33	3/7/19	11:00	-27	-7	-7



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Client Name: ENVIROFORENSICS

Project ID: 6306

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2019-183

Analytical Method: TO-15
Analytical Batch: 031119CAIR

Client Sample ID: 6306-3659 E SQUIRE
AVE-IA-1

Envision Sample Number: 19-824
Sample Matrix: AIR

Sample Collection START Date/Time: 3/4/19 10:03
Sample Collection END Date/Time: 3/5/19 10:07
Sample Received Date/Time: 3/7/19 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	111%		
Analysis Date/Time:	3-12-19/00:55		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

Project ID: 6306

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2019-183

Analytical Method: TO-15
Analytical Batch: 031119CAIR

Client Sample ID: 6306-3659 E SQUIRE
 AVE-IA-B

Sample Collection START Date/Time: 3/4/19 10:05
Sample Collection END Date/Time: 3/5/19 10:09
Sample Received Date/Time: 3/7/19 11:00

Envision Sample Number: 19-825
Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	106%		
Analysis Date/Time:	3-12-19/01:29		
Analyst Initials	tjg		



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Project ID: 6306

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2019-183

Analytical Method: TO-15
Analytical Batch: 031119CAIR

Client Sample ID: 6306-3659 E SQUIRE
 AVE-SSV-1

Sample Collection START Date/Time: 3/5/19 10:27
Sample Collection END Date/Time: 3/5/19 10:33
Sample Received Date/Time: 3/7/19 11:00

Envision Sample Number: 19-826
Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	18.2	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	5.16	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	114%		
Analysis Date/Time:	3-12-19/05:54		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 031119CAIR

<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	
Trichloroethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	90%		
Analysis Date/Time:	3-11-19/22:05		
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>
Vinyl Chloride	8.93	9.93	10	89%	99%	10.6%	
trans-1,2-Dichloroethene	10.7	11	10	107%	110%	2.8%	
cis-1,2-Dichloroethene	10.3	11.3	10	103%	113%	9.3%	
Trichloroethene	9.93	10.6	10	99%	106%	6.5%	
Tetrachloroethene	10.8	11.7	10	108%	117%	8.0%	
4-bromofluorobenzene (surrogate)	112%	113%					
Analysis Date/Time:	3-11-19/20:54	3-11-19/21:31					
Analyst Initials	tjg	tjg					



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Flag Number

Comments

CHAIN OF CUSTODY RECORD

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

Client: <i>Enviroforensic</i>	P.O. Number: <i>2019-0189</i>
Report <i>N16 W 23390 Stone R. dr</i> Address: <i>Waukegan, WI 53188</i>	Project Name or Number: <i>6306</i>
Report To: <i>R. Hoverman/K. Henstead</i>	Sampled by: <i>ND</i>
Phone: <i>414-630-0060</i>	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address:	Reporting Units needed: (circle) ug/m³ 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 <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
<i>6306-3659 E. Squire Ave-IA-1</i>	<i>6LC</i>	<i>3/4/19</i>	<i>1003</i>	<i>3/5/19</i>	<i>1007</i>					<i>10331</i>	<i>05720</i>	<i>-29</i>	<i>-3</i>	<i>-3</i>	<i>19-824</i>
<i>6306-3659 E. Squire Ave-IA-3</i>	<i>6LC</i>	<i>3/4/19</i>	<i>1005</i>	<i>3/5/19</i>	<i>1009</i>					<i>4666</i>	<i>07459</i>	<i>-29</i>	<i>-3</i>	<i>-3</i>	<i>19-825</i>
<i>6306-3659 E. Squire Ave-SSV-1</i>	<i>1LC</i>	<i>3/5/19</i>	<i>1027</i>	<i>3/5/19</i>	<i>1033</i>					<i>83841</i>	<i>0096</i>	<i>-27</i>	<i>-7</i>	<i>-7</i>	<i>19-826</i>

Comments: *Report PCE, TCE, Cis-1,2-DCE, Trans 1,2-DCE, Vinyl Chloride*

Relinquished by:	Date	Time	Received by:	Date	Time
<i>2 [Signature]</i>	<i>3-6-19</i>	<i>945</i>	<i>FedEx [Signature]</i>	<i>3-6-19</i>	<i>945</i>
				<i>3/7/19</i>	<i>1100</i>