



July 7, 2020

Linda Caflisch Adamske
Box 503
Camarillo, CA 93010

**Subject: Vapor Intrusion Sampling Results – 614 Oak Street, Baraboo, Wisconsin
BRRTS: 02-57-548538**

Dear Ms. Caflisch Adamske:

In accordance with your request, EnviroForensics, LLC is providing the results of environmental samples collected from your property located at 614 Oak Street in Baraboo, Wisconsin. The samples were collected on December 5 - 6, 2017. The sampling activities are part of an environmental investigation being performed for the Badger Cleaners facility located at 616 Oak Street in Baraboo 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:

Badger Cleaners
616 Oak Street
Baraboo, WI

Sampling Results

Two indoor air samples designated 6492-614 Oak St.-IA-B and 6492-614 Oak St.-IA-1 were collected from within the basement and first floor, respectively. For quality control purposes, a sample of outdoor ambient air designated 6492-OA-1 was collected. One (1) sub-slab vapor sample designated 6492-614 Oak St.-SSV-1 was collected from beneath the basement floor of your building. The sampling locations are depicted on the attached **Figure 1**. The results of the vapor samples are summarized and compared to WDNR standards on the attached **Table 1**. A copy of the laboratory report that relates to the vapor samples is also attached.

Indoor air samples 6492-614 Oak St.-IA-B and 6492-614 Oak St.-IA-1 contained PCE at a concentration of 7,890 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 3,340 ($\mu\text{g}/\text{m}^3$), respectively, which exceed the Vapor Action Level (VAL) of 180 $\mu\text{g}/\text{m}^3$ for PCE detected within small commercial buildings.

Document: 6492-0494
EnviroForensics, LLC
N16 W23390 Stone Ridge Drive, Suite G
Waukesha, WI 53188
Phone: 262-290-4001 • Fax 317.972.7875

July 6, 2020

Sub-slab vapor sample 6492-614 Oak St.-SSV-1 contained PCE at a concentration of 32,000 $\mu\text{g}/\text{m}^3$, which exceeds the vapor risk screening level (VRSL) of 6,000 $\mu\text{g}/\text{m}^3$ for PCE detected below small commercial buildings. Trichloroethene (TCE) was also detected in the sub-slab sample but at a concentration below the VRSL for TCE.

Indoor air and sub-slab vapor samples have exceeded the screening levels set by the WDNR. We are currently evaluating options to resolve the indoor air and vapor issue. We will contact you to discuss the next steps. 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, Trevor Bannister, can be reached at 608-275-3490. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC

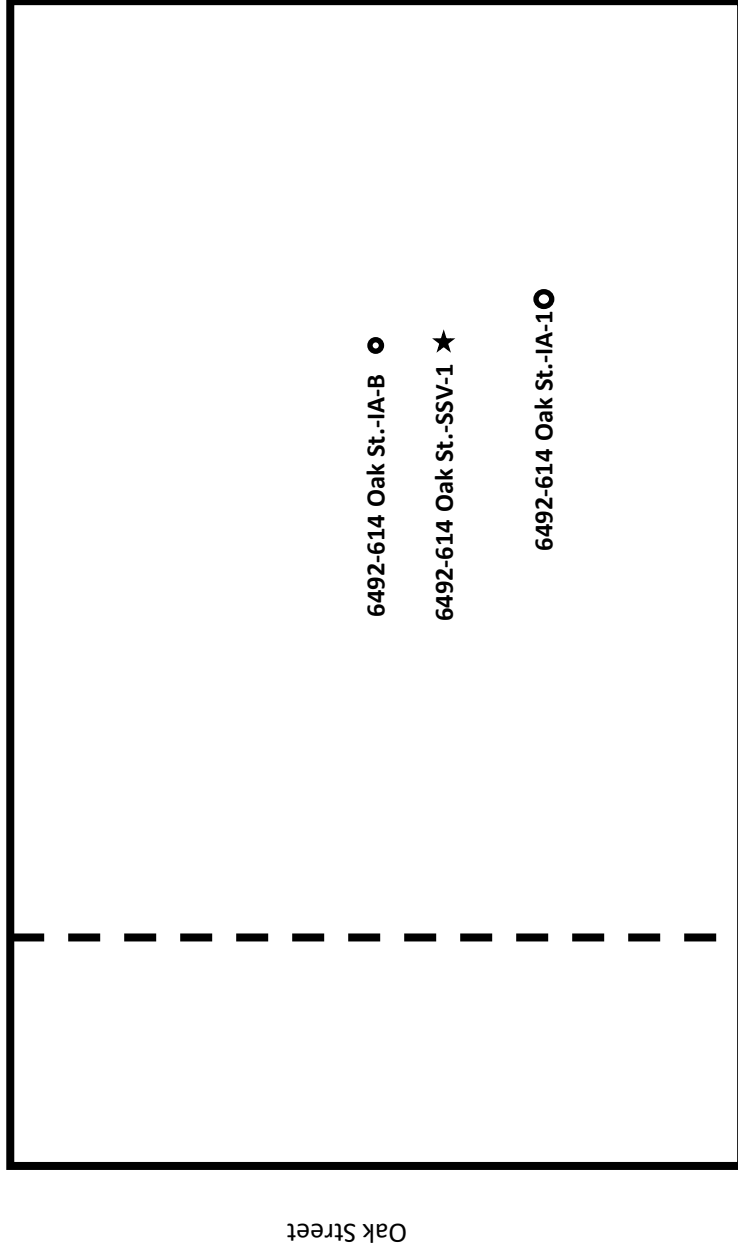
A handwritten signature in blue ink, appearing to read "Rob Hoverman", is written over a light blue circular watermark.

Rob Hoverman, LPG
Senior Project Manager

Attachments: Figure 1 – Vapor Intrusion Sampling Locations
Table 1 – Vapor Intrusion Assessment Results Summary
Laboratory Analytical Report

Copy: Trevor Bannister, Wisconsin Department of Natural Resources

FIGURE 1
VAPOR INTRUSION SAMPLE LOCATIONS
614 Oak Street, Baraboo Wisconsin



Legend

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



Alley

6492-OA-1



TABLE 1
VAPOR INTRUSION ANALYTICAL RESULTS SUMMARY - 614 OAK STREET

Badger Cleaners
 616 Oak Street, Baraboo, WI 53913

Sample Identification	Sample Location	Date Sampled	Tetrachloroethene	Trichloroethene
INDOOR/ OUTDOOR AIR				
Small Commercial Vapor Action Level			180	8.8
6492-614 Oak ST-IA-B	614 Oak Street	9/7/2017	383	<1.07
		12/6/2017	543	<1.07
		6/22/2020	7,890	<1.07
6492-614 Oak ST-IA-1		9/7/2017	80.9	<1.07
		12/6/2017	331	<1.07
		6/22/2020	3,340	<1.07
6492-OA-1		9/7/2017	46.3	<1.07
		12/6/2017	28.8	<1.07
		6/22/2020	<3.19	<1.07
SUB-SLAB VAPOR				
Small Commercial Vapor Risk Screening Level			6,000	290
6492-614 Oak ST-SSV-1	614 Oak Street	9/7/2017	56,300	54.8
		12/6/2017	197,000	29.0
		6/22/2020	32,000	4.5

Notes:

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

Samples analyzed according to EPA Method TO-15

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

IA = Indoor Air

OA = Outdoor Air

SSV= Sub-slab vapor

Bolded values are above detection limits

Bolded and Orange shaded concentration exceed the applicable non-residential screening level



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

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

July 1, 2020

EnvisionAir Project Number: 2020-334
Client Project Name: 6492

Dear Mr. Hoverman,

Please find the attached analytical report for the samples received June 25, 2020. 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: 6492
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2020-334

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>							
20-1523	6492-614 OAK-IA-B	A	6/22/20	17:15	6/22/20	17:15	6/25/20	8:45	-29	-6.5	-6.5
20-1524	6492-614 OAK-IA-1	A	6/22/20	17:27	6/22/20	17:27	6/25/20	8:45	-28	-5	-5
20-1525	6492-614 OAK-OA-1	A	6/22/20	17:40	6/22/20	17:40	6/25/20	8:45	-29	-7	-7
20-1526	6492-614 OAK-SSV-1	A	6/22/20	17:30	6/22/20	17:30	6/25/20	8:45	-29	-3	-3



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

Client Name: ENVIROFORENSICS

Project ID: 6492

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2020-334

Analytical Method: TO-15
Analytical Batch: 062720AIR(1)

Client Sample ID: 6492-614 OAK-IA-B
EnvisionAir Sample Number: 20-1523
Sample Matrix: AIR

Sample Collection START Date/Time: 6/22/20 17:15
Sample Collection END Date/Time: 6/22/20 17:15
Sample Received Date/Time: 6/25/20 8:45

<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	7,890	1280	1
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	99%		
Analysis Date/Time:	6-27-20/22:50		
Analyst Initials	tjg		



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

Client Name: ENVIROFORENSICS

Project ID: 6492

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2020-334

Analytical Method: TO-15
Analytical Batch: 062720AIR(1)

Client Sample ID: 6492-614 OAK-IA-1

Sample Collection START Date/Time: 6/22/20 17:27

Sample Collection END Date/Time: 6/22/20 17:27

EnvisionAir Sample Number: 20-1524

Sample Received Date/Time: 6/25/20 8:45

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	3,340	1280	1
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	97%		
Analysis Date/Time:	6-27-20/23:30		
Analyst Initials	tjg		



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

Client Name: ENVIROFORENSICS

Project ID: 6492

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2020-334

Analytical Method: TO-15
Analytical Batch: 062720AIR(1)

Client Sample ID: 6492-614 OAK-OA-1
EnvisionAir Sample Number: 20-1525
Sample Matrix: AIR

Sample Collection START Date/Time: 6/22/20 17:40
Sample Collection END Date/Time: 6/22/20 17:40
Sample Received Date/Time: 6/25/20 8:45

<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)	95%		
Analysis Date/Time:	6-27-20/22:08		
Analyst Initials	tjg		



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

Client Name: ENVIROFORENSICS

Project ID: 6492

Client Project Manager: ROB HOVERMAN

EnvisionAir Project Number: 2020-334

Analytical Method: TO-15
Analytical Batch: 062720AIR(2)

Client Sample ID: 6492-614 OAK-SSV-1
EnvisionAir Sample Number: 20-1526
Sample Matrix: AIR

Sample Collection START Date/Time: 6/22/20 17:30
Sample Collection END Date/Time: 6/22/20 17:30
Sample Received Date/Time: 6/25/20 8:45

<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	32,000	1280	1
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	4.51	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	110%		
Analysis Date/Time:	6-28-20/16:59		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 062720AIR(1)

<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)	106%		
Analysis Date/Time:	6-27-20/14:36		
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	9.62	9.8	10	96%	98%	1.9%	
trans-1,2-Dichloroethene	11	9.69	10	110%	97%	12.7%	
cis-1,2-Dichloroethene	10.6	9.44	10	106%	94%	11.6%	
Trichloroethene	9.66	10.1	10	97%	101%	4.5%	
Tetrachloroethene	10.4	10.4	10	104%	104%	0.0%	
4-bromofluorobenzene (surrogate)	96%	93%					
Analysis Date/Time:	6-27-20/13:14	6-27-20/13:59					
Analyst Initials	tjg	tjg					

TO-15 Quality Control Data

EnvisionAir Batch Number: 062720AIR(2)

<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)	106%		
Analysis Date/Time:	6-28-20/14:57		
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	9.71	8.68	10	97%	87%	11.2%	
trans-1,2-Dichloroethene	10.4	10.9	10	104%	109%	4.7%	
cis-1,2-Dichloroethene	11.6	9.37	10	116%	94%	21.3%	2
Trichloroethene	9.62	11.3	10	96%	113%	16.1%	
Tetrachloroethene	11.4	11.5	10	114%	115%	0.9%	
4-bromofluorobenzene (surrogate)	97%	96%					
Analysis Date/Time:	6-28-20/12:54	6-28-20/13:38					
Analyst Initials	tjg	tjg					



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

Flag Number

Comments

- | | |
|---|--|
| 1 | Reported value is from a 400x dilution. TJJ 6/30/20 |
| 2 | RPD is biased high, but recoveries are within control. TJJ 6/30/20 |

CHAIN OF CUSTODY RECORD

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

Client: EnviroForensics
 Report: 1016023390 Stone Ridge
 Address: 10ADKESHA, WI 6492
 Report To: R. Hoyerman
 Phone: 514 630 0060
 Invoice Address:
 Desired TAT: (Please Circle One)
 1 day 2 days 3 days 5 days (5 bus. days)

REQUESTED PARAMETERS
 TO-15 Full List
 TO-15 Short List (Specify in notes)



Sampling Type:
 Soil-Gas:
 Sub-Slab:
 Indoor-Air:
 www.envision-air.com

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
6492-614 OAK-1A-B	6LC	6/22/20	1715	6/22/20	1715	16025	7439	-29	-6.5	-6.5	20-1523
6492-614 OAK-1A-1	6LC	6/22/20	1727	6/22/20	1727	19627	5248	-28	-5	-5	20-1524
6492-614 OAK-0A-1	6LC	6/22/20	1740	6/22/20	1740	11075	7152	-29	-7	-7	20-1525
6492-614 OAK-55V-1	1LC	6/22/20	1730	6/22/20	1730	2208	0115	-29	-3	-3	20-1526

Comments: PCE, TCE, cDCE, tDCE, VC

Relinquished by:	Date	Time	Received by:	Date
<i>[Signature]</i>	6/24/20	7:00	FEDEX <i>[Signature]</i>	6/25/20