
PREPARED BY

EnviroForensics, LLC
N16W23390 Stone Ridge Drive, Suite G
Waukesha, WI 53188



February 9, 2022

David Lange
The Grand Oshkosh
100 High Avenue
Oshkosh, Wisconsin 54901

Subject: Environmental Investigation Sampling Results
BRRS#: 02-71-467002

Dear Mr. Lange:

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 is providing the results of environmental samples collected from the property located at 100 High Avenue, Oshkosh, Wisconsin. The samples were collected on January 20 and 26, 2022. The sampling activities are part of an environmental investigation being performed for the Gunderson Cleaners facility formerly located at 118 High Avenue 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:

Gunderson Cleaners
41 Main Street
Menasha, WI 54952
920-727-4000

Sampling Results

Three (3) sub-slab vapor samples designated 200017-VP-J, 200017-VP-K and 200017-VP-L were collected from the basement of the Grand Oshkosh. The approximate sampling locations are depicted on the attached figure. Indoor air samples 200017-100-IA-B and 200017-100-IA-1 were collected from the basement and first floor, respectively. The results of the vapor and air samples are summarized and compared to the applicable WDNR standards on the attached table. The laboratory report that relates to the vapor and air samples is also attached.

Document: 200017-0247

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As shown on the attached table, the chemicals of concern were not detected in the indoor air samples. Two (2) of the sub-slab vapor samples each contained PCE. The concentrations of all detected compounds were well below the vapor risk screening levels established by WDNR for use in evaluating chemical concentrations at sites such as this.

At this time we do not anticipate further sampling, unless directed by WDNR. If you have any questions or concerns, please contact me at 262-745-5054 or by email at bkappen@enviroforensics.com. The WDNR project manager, Kevin McKnight, can be reached at 920-808-0170. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC

A handwritten signature in blue ink, appearing to read "Brian Kappen".

Brian Kappen, PG
Project Manager

Copy: Kevin McKnight, Wisconsin Department of Natural Resources

Attachments: Sample Location Map
Results Summary Table
Laboratory Laboratory Report




Legend

	Property boundary
	Former building
	Sub-slab vapor sample port

SUB-SLAB VAPOR SAMPLE LOCATIONS

Former Gunderson Cleaners
118 High Avenue
Oshkosh, Wisconsin

Date:	3/10/21
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	200017-0126



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Figure	1
Project	200017

APPROXIMATE SCALE: 1" = 40'

TABLE 1
VAPOR INTRUSION ASSESSMENT RESULTS SUMMARY

Former Gunderson Cleaners
118 High Ave, Oshkosh, Wisconsin

Address	Sample Identification	Sample Location	Exposure Criteria	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
INDOOR/OUTDOOR AIR									
Small Commercial Vapor Action Level					180	8.8	NE	180	28
100 High Ave	100-IA-1	Box Office	Small Commercial	6/23/2021	<3.19	<1.07	<19.8	<39.6	<1.28
				1/26/2022	<3.19	<1.07	<19.8	<39.6	<1.28
	100-IA-B	Basement		6/23/2021	<3.19	<1.07	<19.8	<39.6	<1.28
				1/26/2022	<3.19	<1.07	<19.8	<39.6	<1.28
SUB-SLAB VAPOR									
Small Commercial Vapor Risk Screening Level					5,800	290	NE	5,800	930
100 High Ave	VP-J	Basement	Small Commercial	6/24/2021	129	25.0	42.0	<39.6	<1.28
				1/20/2022	93.6	<10.7	<198	<396	<12.8
	VP-K			6/24/2021	1,500	5.91	<19.8	<39.6	<1.28
				1/20/2022	65.8	<10.7	<198	<396	<12.8
	VP-L			6/24/2021	437	<1.07	<19.8	<39.6	<1.28
				1/20/2022	<31.9	<10.7	<198	<396	<12.8

Notes:

Vapor Action and Risk Screening Levels are calculated according to WDNR Publication RR-800 and subsequent vapor intrusion guidance
Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Samples analyzed according to EPA Method TO-15

NE = Screening/action level not established

Bolded values are above detection limits

Bolded and shaded values exceed the applicable screening or action level



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

February 7, 2022

EnvisionAir Project Number: 2022-75
Client Project Name: 200017 – Oshkosh Gundersons

Dear Mr. Kappen,

Please find the attached analytical report for the samples received January 28, 2022. 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 "David Norris".

David Norris
Project Manager
EnvisionAir, LLC



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

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>							<u>Collected:</u>
22-401	20017-100-IA-1	A	1/26/22	9:06	1/26/22	16:50	1/28/22	14:00	-29	-10	-10
22-402	20017-100-IA-B	A	1/26/22	9:05	1/26/22	16:48	1/28/22	14:00	-30	-11	-11
22-403	200017-OA	A	1/19/22	8:45	1/19/22	16:40	1/28/22	14:00	-29	-9	-9
22-404	200017-VP-K	A	1/20/22	12:24	1/20/22	12:29	1/28/22	14:00	-29	-3	-3
22-405	200017-VP-L	A	1/20/22	12:45	1/20/22	12:51	1/28/22	14:00	-29	-3	-3
22-406	200017-VP-J	A	1/20/22	13:03	1/20/22	13:06	1/28/22	14:00	-27	-3	-3



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(1)

Client Sample ID: 200017-100-IA-1
EnvisionAir Sample Number: 22-401
Sample Matrix: AIR

Sample Collection START Date/Time: 1/26/22 9:06
Sample Collection END Date/Time: 1/26/22 16:50
Sample Received Date/Time: 1/28/22 14:00

<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)	107%		
Analysis Date/Time:	2-1-22/19:21		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(1)

Client Sample ID: 200017-100-IA-B
EnvisionAir Sample Number: 22-402
Sample Matrix: AIR

Sample Collection START Date/Time: 1/26/22 9:05
Sample Collection END Date/Time: 1/26/22 16:48
Sample Received Date/Time: 1/28/22 14:00

<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)	107%		
Analysis Date/Time:	2-1-22/20:04		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(1)

Client Sample ID: 200017-OA
EnvisionAir Sample Number: 22-403
Sample Matrix: AIR

Sample Collection START Date/Time: 1/19/22 8:45
Sample Collection END Date/Time: 1/19/22 16:40
Sample Received Date/Time: 1/28/22 14:00

<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)	97%		
Analysis Date/Time:	2-1-22/18:37		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(2)

Client Sample ID: 200017-VP-K
EnvisionAir Sample Number: 22-404
Sample Matrix: AIR

Sample Collection START Date/Time: 1/20/22 12:24
Sample Collection END Date/Time: 1/20/22 12:29
Sample Received Date/Time: 1/28/22 14:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 198	198	
Tetrachloroethene	65.8	31.9	
trans-1,2-Dichloroethene	< 396	396	
Trichloroethene	< 10.7	10.7	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	100%		
Analysis Date/Time:	2-2-22/19:18		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(2)

Client Sample ID: 200017-VP-L

Sample Collection START Date/Time: 1/20/22 12:45
Sample Collection END Date/Time: 1/20/22 12:51
Sample Received Date/Time: 1/28/22 14:00

EnvisionAir Sample Number: 22-405
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	< 198	198	
Tetrachloroethene	< 31.9	31.9	
trans-1,2-Dichloroethene	< 396	396	
Trichloroethene	< 10.7	10.7	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	100%		
Analysis Date/Time:	2-2-22/20:01		
Analyst Initials	tjg		



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Project ID: 200017 OSHKOSH GRUNDERSONS
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2022-75

Analytical Method: TO-15
Analytical Batch: 020122AIR(2)

Client Sample ID: 200017-VP-J

Sample Collection START Date/Time: 1/20/22 13:03
Sample Collection END Date/Time: 1/20/22 13:06
Sample Received Date/Time: 1/28/22 14:00

EnvisionAir Sample Number: 22-406
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	< 198	198	
Tetrachloroethene	93.6	31.9	
trans-1,2-Dichloroethene	< 396	396	
Trichloroethene	< 10.7	10.7	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	102%		
Analysis Date/Time:	2-2-22/20:44		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 020122AIR(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)	96%		
Analysis Date/Time:	2-1-22/13:45		
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	9.9	9.69	10	99%	97%	2.1%	
trans-1,2-Dichloroethene	8.59	9.94	10	86%	99%	14.6%	
cis-1,2-Dichloroethene	11.5	10.4	10	115%	104%	10.0%	
Trichloroethene	10.3	10.5	10	103%	105%	1.9%	
Tetrachloroethene	9.7	8.62	10	97%	86%	11.8%	
4-bromofluorobenzene (surrogate)	103%	93%					
Analysis Date/Time:	2-1-22/12:17	2-1-22/13:07					
Analyst Initials	tjg	tjg					

TO-15 Quality Control Data

EnvisionAir Batch Number: 020122AIR(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)	100%		
Analysis Date/Time:	2-2-22/13:40		
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	9.61	9.48	10	96%	95%	1.4%	
trans-1,2-Dichloroethene	9.87	10.2	10	99%	102%	3.3%	
cis-1,2-Dichloroethene	10.6	10.4	10	106%	104%	1.9%	
Trichloroethene	9.83	10.8	10	98%	108%	9.4%	
Tetrachloroethene	9.25	9.44	10	93%	94%	2.0%	
4-bromofluorobenzene (surrogate)	94%	103%					
Analysis Date/Time:	2-2-22/12:20	2-2-22/13:02					
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: <u>Enviro Forensics</u>	P.O. Number: <u>2021-0808</u>
Report Address: <u>bkappen@enviroforensics.com</u>	Project Name or Number: <u>200017 oshkosh Gundersons</u>
Report To: <u>Brian Kappen</u>	Sampled by: <u>R Brown</u>
Phone: <u>262-290-4001</u>	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: <u>accounts payable@enviroforensics.com</u>	Reporting Units needed: (circle) <u>ug/m³</u> mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days <u>Std (5 bus. days)</u>	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 (Specify in notes)



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
200017-100-1A-1	6LC	1-26-22	906	1-26-22	1650		X		91573	0771	-29	-10	-10	22-401
200017-100-1A-B	↓	1-26-22	905	1-26-22	1648		↓		4653	08007	-30	-11	-11	22-402
200017-0A	↓	1-19-22	845	1-19-22	1640		↓		10346	05218	-29	-9	-9	22-403
200017-VP-K	1LC	1-20-22	1224	1-20-22	1229		↓		88729	0046	-29	-3	-3	22-404
200017-VP-L	↓	↓	1245	↓	1251		↓		2230	0080	-29	-3	-3	22-405
200017-VP-J	↓	↓	1303	↓	1306		↓		83836	00916	-27	-3	-3	22-406

Comments: SHORT LIST: PCE, TCE, CDCE, TDCE, VC

Relinquished by:	Date	Time	Received by:	Date	Time
<u>TRZ</u>	1-27-22	1630	<u>FedEx</u>	1-27-22	1630
			<u>Y. Ouelton</u>	1-28-22	1400