

July 16, 2021

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

**Subject:** Environmental Investigation Sampling Results

BRRTS#: 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 (WNDR) 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 June 23 and 24, 2021. 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 are also attached.

As shown on the attached table, the chemicals of concern were not detected in the indoor air samples collected on June 23, 2021. The sub-slab vapor samples each contained PCE, and two (2) of the vapor sample also contained trichloroethene (TCE) and/or cis-1,2-dichloroethene, which are breakdown products of PCE. The concentrations of all detected compounds were well



<u>below</u> the small commercial vapor risk screening levels established by WDNR for use in evaluating chemical concentrations at sites such as this.

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** 

Brian Kappen, PG

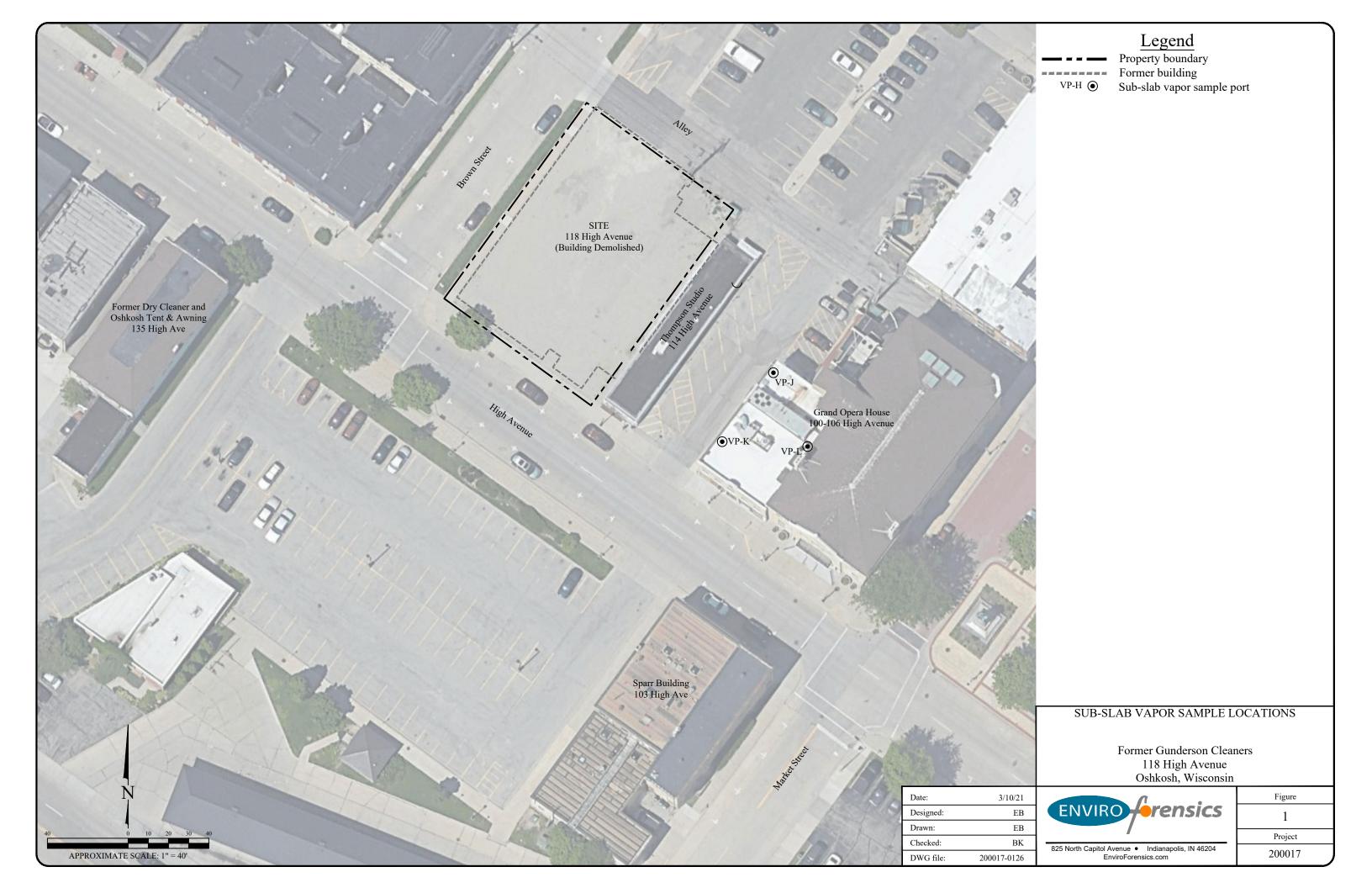
Project Manager

Copy: Kevin McKnight, Wisconsin Department of Natural Resources

Attachments: Sample Location Map

Results Summary Table

Laboratory Laboratory Report



## **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
			INDO	OR/OUTDOOF	RAIR				
	Small Comme	cial Vapor Ac	tion Level		180	8.8	NE	NE	28
100 High Ave	100-IA-1	Box Office	Small	6/23/2021	<3.19	<1.07	<19.8	<39.6	<1.28
100 High Ave	100-IA-B	Basement	Commercial	6/23/2021	<3.19	<1.07	<19.8	<39.6	<1.28
			SU	B-SLAB VAPO	R				
Sı	mall Commercial	Vapor Risk So	creening Level		6,000	290	NE	NE	930
	VP-J		Constl	6/24/2021	129	25.0	42.0	<39.6	<1.28
100 High Ave	VP-K	Basement	Small Commercial	6/24/2021	1,500	5.91	<19.8	<39.6	<1.28
	VP-L		Commercial	6/24/2021	437	<1.07	<19.8	<39.6	<1.28

## Notes:

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

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

July 7, 2021

EnvisionAir Project Number: 2021-316

Client Project Name: 200017 Oshkosh Gundersons

Dear Mr. Kappen,

Please find the attached analytical report for the samples received June 28, 2021. 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,

Stanley A Hunnicutt

Stanley O. Hunnicutt

Project Manager EnvisionAir, LLC



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Client Name: ENVIROFORENSICS

Project ID: 200017 OSHKOSH GUNDERSONS

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-316

# Sample Summary

#### Canister Pressure / Vacuum

			START	START							<u>Lab</u>
			Date	Time	<b>End Date</b>	End Time	Date	Time	Initial Field	Final Field	Received
Laboratory Sample Number:	Sample Description:	Matrix:	Collected:	Collected:	Collected:	Collected:	Received:	Received	(in. Hg)	(in. Hg)	(in. Hg)
21-1494	200017-100-IA-1	Α	6/23/21	9:36	6/23/21	17:26	6/28/21	16:30	-27	-3	-3
21-1495	200017-100-IA-B	Α	6/23/21	9:35	6/23/21	17:25	6/28/21	16:30	-30	-8	-8
21-1496	200017-VP-J	Α	6/24/21	9:35	6/24/21	9:40	6/28/21	16:30	-29	-4	-4
21-1497	200017-VP-K	Α	6/24/21	10:02	6/24/21	10:06	6/28/21	16:30	-30	-4	-4
21-1498	200017-VP-L	Α	6/24/21	9:50	6/24/21	9:54	6/28/21	16:30	-28	-3	-3



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Client Name: ENVIROFORENSICS

**Project ID:** 200017 OSHKOSH GUNDERSONS

Client Project Manager: BRIAN KAPPEN

**EnvisionAir Project Number:** 2021-316

Analytical Method: TO-15
Analytical Batch: 070321AIR

Client Sample ID: 200017-100-IA-1 Sample Collection START Date/Time: 6/23/21 9:36

Sample Collection END Date/Time: 6/23/21 17:26

EnvisionAir Sample Number: 21-1494 Sample Received Date/Time: 6/28/21 16:30

Compounds	Sample Results ug/m <sup>3</sup>	Reporting Limit ug/m <sup>3</sup>	<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 (surro	ogate) 101%		
Analysis Date/Time:	7-3-21/15:31		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

**Project ID:** 200017 OSHKOSH GUNDERSONS

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-316

Analytical Method: TO-15
Analytical Batch: 070321AIR

Client Sample ID: 200017-100-IA-B Sample Collection START Date/Time: 6/23/21 9:35

Sample Collection END Date/Time: 6/23/21 17:25

EnvisionAir Sample Number: 21-1495 Sample Received Date/Time: 6/28/21 16:30

Compounds	Sample Results ug/m <sup>3</sup>	Reporting Limit ug/m <sup>3</sup>	<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 (surrog	gate) 106%		
Analysis Date/Time:	7-3-21/16:07		
Analyst Initials	tjg		



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**Client Name: ENVIROFORENSICS** 

Project ID: 200017 OSHKOSH GUNDERSONS

**Client Project Manager: BRIAN KAPPEN** 

**EnvisionAir Project Number:** 2021-316

**Analytical Method:** TO-15 **Analytical Batch:** 070321AIR

Client Sample ID: 200017-VP-J Sample Collection START Date/Time: 6/24/21 9:35

Sample Collection END Date/Time: 6/24/21 9:40 Sample Received Date/Time: 6/28/21 16:30

**EnvisionAir Sample Number:** 21-1496 AIR

Sample Matrix:

Compounds	Sample	Results ug/m <sup>3</sup>	Reporting Limit ug/m <sup>3</sup>	<u>Flag</u>
cis-1,2-Dichloroethene	42.0		19.8	
Tetrachloroethene	129		3.19	
trans-1,2-Dichloroethene	< 39.6		39.6	
Trichloroethene	25.0		1.07	
Vinyl Chloride	< 1.28		1.28	
4-bromofluorobenzene (surro	gate)	94%		
Analysis Date/Time:		7-4-21/07:18		
Analyst Initials		tjg		



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Client Name: ENVIROFORENSICS

**Project ID:** 200017 OSHKOSH GUNDERSONS

Client Project Manager: BRIAN KAPPEN

**EnvisionAir Project Number:** 2021-316

Analytical Method: TO-15
Analytical Batch: 070321AIR

Client Sample ID: 200017-VP-K Sample Collection START Date/Time: 6/24/21 10:02

Sample Collection END Date/Time:6/24/2110:06Sample Received Date/Time:6/28/2116:30

EnvisionAir Sample Number: 21-1497 Sample Received Date/Time: 6/28

Compounds	Sample Results ug/m <sup>3</sup>	Reporting Limit ug/m <sup>3</sup>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	1,500	63.8	2
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	5.91	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surro	ogate) 90%		
Analysis Date/Time:	7-4-21/07:53		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

**Project ID:** 200017 OSHKOSH GUNDERSONS

Client Project Manager: BRIAN KAPPEN

**EnvisionAir Project Number:** 2021-316

Analytical Method: TO-15
Analytical Batch: 070321AIR

Client Sample ID: 200017-VP-L Sample Collection START Date/Time: 6/24/21 9:50

Sample Collection END Date/Time: 6/24/21 9:54

EnvisionAir Sample Number: 21-1498 Sample Received Date/Time: 6/28/21 16:30

Compounds	Sample Results ug/m <sup>3</sup>	Reporting Limit ug/m <sup>3</sup>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	437	31.9	1
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surro	ogate) 96%		
Analysis Date/Time:	7-4-21/08:29		
Analyst Initials	tjg		



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Analytical Report

# **TO-15 Quality Control Data**

EnvisionAir Batch Number: 070321AIR

Method Blank (MB):	MB Results (ppbv)	Reporting Limit (ppbv)	<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)	102%		
Analysis Date/Time:	7-3-21/12:43		
Analyst Initials	tjg		

			LCS/D	LCS	LCSD		
LCS/LCSD	LCS Results (ppbv)	LCSD Results (ppbv)	Conc(ppbv)	Rec.	Rec.	<u>RPD</u>	<u>Flag</u>
Vinyl Chloride	9.45	9.8	10	95%	98%	3.6%	
trans-1,2-Dichloroethene	9.98	10.9	10	100%	109%	8.8%	
cis-1,2-Dichloroethene	10	10	10	100%	100%	0.0%	
Trichloroethene	10.8	10.9	10	108%	109%	0.9%	
Tetrachloroethene	9.99	10.1	10	100%	101%	1.1%	
4-bromofluorobenzene (surrogate)	97%	92%					
Analysis Date/Time:	7-3-21/10:56	7-3-21/11:32					
Analyst Initials	tjg	tjg					



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Flag Number	Comme	<u>ents</u>
1	Reported value is from a 10x dilution.	ΓJG 7/7/21
2	Reported value is from a 20x dilution.	ΓJG 7/7/21

# **CHAIN OF CUSTODY RECORD**

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

Client:  Report b Kappen Branch  Address:	s.com	P.O. Nu Project	Name or N	021-0 Number: 20	F1000		REQUES	TED PARAME	TERS				
Report To: Brian Ka	-		<u>&lt;05h ()</u> d by: R	Brau	m			Social in Space of the second		FI	JVI	SIC	NAIR
Phone: 767-290-40			Required: Leve	(circle if appli	cable) el IV		/ /		Sampling Type:	<b>1</b> 8			
Invoice Address: Payable	200	Reporti	ng Units n	eeded: (circ	le) <b>PPMV</b>	/	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Soil-Gas: □ Sub-Slab: 🔏		www.en	vision-air.c	om
Desired FAT: (Please Circle One 1 day 2 days 3 days Std (5			: 1LC = 1 Liter   6LC = 6 Liter   TB = Tedlar   TD = Therma	Canister	a	18			Indoor-Air: 🔉	Canister	Pressure /	Vacuum	
Air Sample ID	Media Type (see code above)	Coll. Date (Grab/Comp	Coll. Time (Grab/Comp	Coll. Date (Comp. End)	Coll. Time		Maria and Maria	Canister Serial #	Flow Controller Serial #	Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)	EnvisionAir Sample Number
200017-100-IA-1		(6-23-21		6-23-21	1740		X	20670	760n	-27	-3	-3	21-1494
200017-100-IA-B	_			6.23.2	H25		X	20072	2232	-30	-8	-8	21-1495
100017-VP-J		6-24-21		(024-21	940	- 3	X	2535	0083	-29	-4	-4	21-1496
200017-VP-K				6-24-21	1006		X	1213	0108	-30	-4	-4	21-1497
200017-VP-L	ILC	6-24-21	950	6-24-7	954		Х	84057	0200	-28	-3	-3	21-1498
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