



September 18, 2017

Tom Pinion
City of Baraboo
135 4th Street
Baraboo, WI 53913

**Subject: Vapor Intrusion Sampling Results – 120 5th Street, Baraboo, Wisconsin
BRRTS: 02-57-548538**

Dear Mr. Pinion:

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 the City of Baraboo property located at 120 5th Street in Baraboo, Wisconsin. The samples were collected on August 14-15, 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

Three indoor air samples designated 6492-120 5th St.-IA-1, 6492-120 5th St.-IA-2 and 6492-120 5th St.-IA-3 were collected from within the building. For quality control purposes a sample of outdoor ambient air designated 6492-OA-1-24 was also collected. Three (3) sub-slab vapor samples designated 6492-120 5th St.-SSV-1, 6492-120 5th St.-SSV-2 and 6492-120 5th St.-SSV-3 were collected through the slab at 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.

No chemicals of concern were detected in the indoor air samples, however, indoor air sample 6492-120 5th St.-SSV-1 contained benzene at a concentration of 2.75 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$),

Document: 6492-0125
EnviroForensics, LLC
N16 W23390 Stone Ridge Drive, Suite G
Waukesha, WI 53188
Phone: 262-290-4001 • Fax 317.972.7875

September 18, 2017

which is below the vapor action level (VAL) for benzene detected within small commercial buildings.

PCE and/or trichloroethene were detected in sub-slab vapor samples 6492-120 5th St.-SSV-1, 6492-120 5th St.-SSV-2 and 6492-120 5th St.-SSV-3, however, the concentrations detected were *below* their respective vapor risk screening Levels (VRSL). Additionally, multiple compounds unrelated to the COCs were detected in sub-slab samples 6492-120 5th St.-SSV-1 and 6492-120 5th St.-SSV-3. All of the unrelated compounds were detected at concentrations below their respective VRSLs.

Based on the analytical results, there does not appear to be a vapor intrusion risk to your building. A second sampling event during the winter is anticipated at this time and we will contact you to schedule the next event. 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, Jeff Ackerman, can be reached at 608-275-3323. We greatly appreciate your help and patience with this matter.

Sincerely,

EnviroForensics, LLC

A handwritten signature in blue ink, appearing to read "Rob Hoverman".

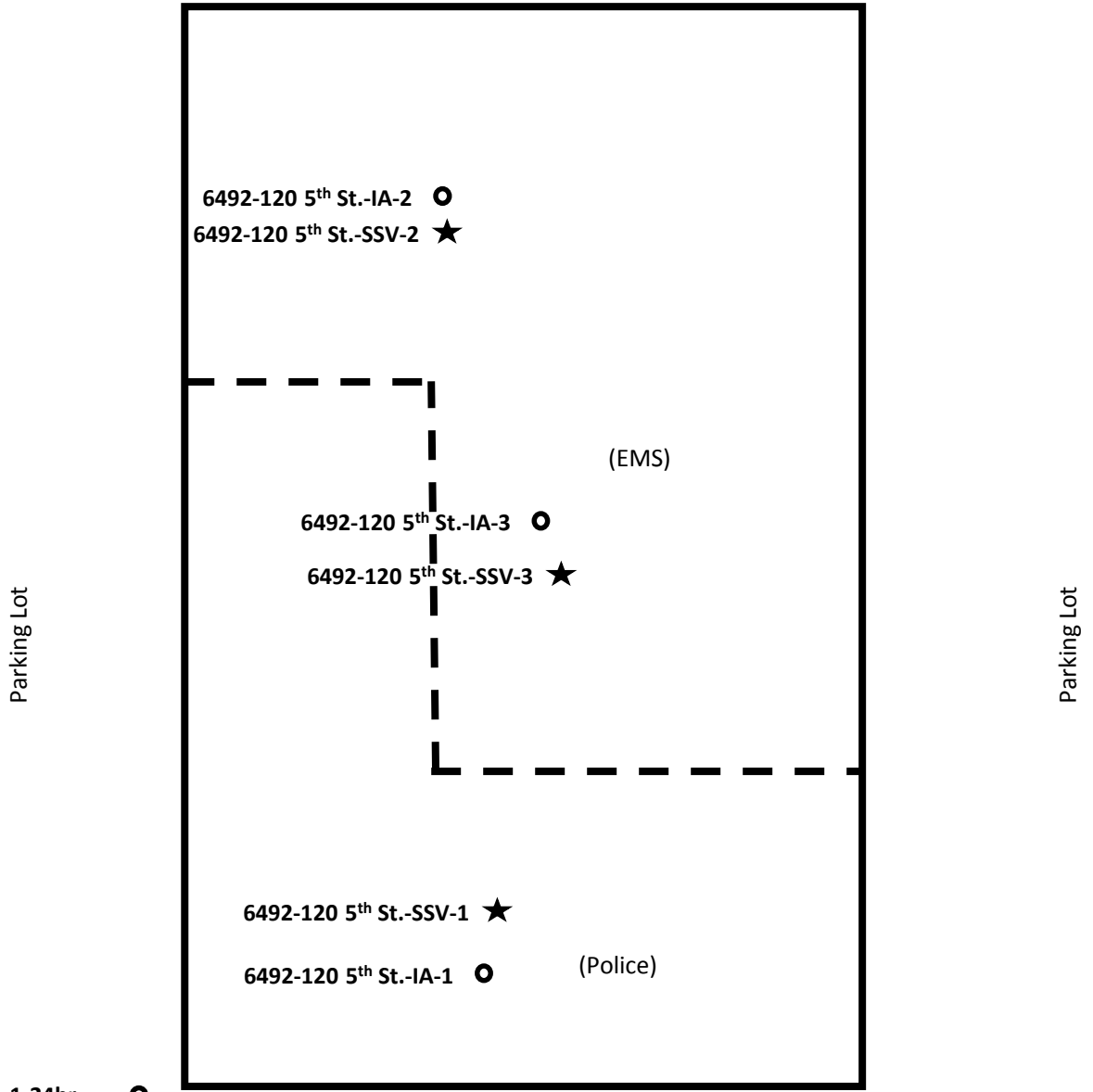
Rob Hoverman, LPG
Senior Project Manager

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

Copy: Jeff Ackerman, Wisconsin Department of Natural Resources

FIGURE 1
VAPOR INTRUSION SAMPLE LOCATIONS
120 5th Street, Baraboo Wisconsin

5th Street



Legend

- = Indoor/Outdoor Air Sample
- IA-1 = Indoor air sample
- SSV-1 = Sub-Slab Vapor
- ★ = Sub-Slab Vapor Sampling Port Location
- — = Interior Wall



TABLE 1
VAPOR INTRUSION ANALYTICAL RESULTS SUMMARY - 120 5TH STREET

Badger Cleaners
616 Oak Street, Baraboo, WI 53913

Sample Identification	Sample Location	Date Sampled	Mitigation	Tetrachloroethene	Trichloroethene	Benzene	Chloroform	Ethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Xylenes (Total)
INDOOR/ OUTDOOR AIR											
Non-Residential Vapor Action Level				180	8.8	16	5	49	31	NE	440
6492-OA-1-24hr	Exterior	Aug-17	No	<3.19	<1.07	<1.60	<0.83	<8.68	<4.92	<4.92	<86.8
6492-120 5th St.-IA-1	120 5th Street	Aug-17	No	<3.19	<1.07	2.75	<0.83	<8.68	<4.92	<4.92	<86.8
6492-120 5th St.-IA-2		Aug-17	No	<3.19	<1.07	<1.60	<0.83	<8.68	<4.92	<4.92	<86.8
6492-120 5th St.-IA-3		Aug-17	No	<3.19	<1.07	<1.60	<0.83	<8.68	<4.92	<4.92	<86.8
SUB-SLAB VAPOR											
Non-Residential Vapor Risk Screening Level				6,000	290	530	180	1,600	1,000	NE	15,000
6492-120 5th St.-SSV-1	120 5th Street	Aug-17	No	262	2.36	2.40	12.4	<8.68	5.95	<4.92	47.0
6492-120 5th St.-SSV-2		Aug-17	No	27.1	5.32	<1.60	<0.83	<8.68	<4.92	<4.92	<86.8
6492-120 5th St.-SSV-3		Aug-17	No	346	<1.07	<1.60	<0.83	77.2	23.7	7.96	886

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

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

September 1, 2017

EnvisionAir Project Number: 2017-478
Client Project Name: 6492 / Badger Cleaners

Dear Mr. Hoverman,

Please find the attached analytical report for the samples received August 18, 2017. 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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

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>
17-1874	6492-120 5TH ST-IA-1	A	8/14/17	9:27	8/15/17	9:20	8/18/17	11:00	-29	-6	-6
17-1875	6492-120 5TH ST-IA-2	A	8/14/17	9:35	8/15/17	9:25	8/18/17	11:00	-29	-5	-5
17-1876	6492-120 5TH ST-IA-3	A	8/14/17	9:40	8/15/17	9:30	8/18/17	11:00	-29	-7	-7
17-1877	6492-OA-1-24HR	A	8/14/17	9:50	8/15/17	9:35	8/18/17	11:00	-30	-6	-6
17-1878	6492-120 5TH ST-SSV-1	A	8/15/17	12:10	8/15/17	12:17	8/18/17	11:00	-30	-2	-2
17-1879	6492-120 5TH ST-SSV-2	A	8/15/17	10:20	8/15/17	10:27	8/18/17	11:00	-29	-2	-2
17-1880	6492-120 5TH ST-SSV-3	A	8/15/17	11:35	8/15/17	11:43	8/18/17	11:00	-29	-2	-2



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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082217AIR(1)

Client Sample ID: 6492-120 5TH ST-IA-1
Envision Sample Number: 17-1874
Sample Matrix: AIR

Sample Collection START Date/Time: 8/14/17 9:27
Sample Collection END Date/Time: 8/15/17 9:20
Sample Received Date/Time: 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	2.75	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	< 3.19	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	107%		
Analysis Date/Time:	8-23-17/00:15		
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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082217AIR(2)

Client Sample ID: 6492-120 5TH ST-IA-2
Envision Sample Number: 17-1875
Sample Matrix: AIR

Sample Collection START Date/Time: 8/14/17 9:35
Sample Collection END Date/Time: 8/15/17 9:25
Sample Received Date/Time: 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	< 3.19	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	110%		
Analysis Date/Time:	8-23-17/06:19		
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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082217AIR

Client Sample ID: 6492-120 5TH ST-IA-3
Envision Sample Number: 17-1876
Sample Matrix: AIR

Sample Collection START Date/Time: 8/14/17 9:40
Sample Collection END Date/Time: 8/15/17 9:30
Sample Received Date/Time: 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	< 3.19	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	116%		
Analysis Date/Time:	8-23-17/06:57		
Analyst Initials	tjg		



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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082217AIR

Client Sample ID: 6492-OA-1-24HR
Envision Sample Number: 17-1877
Sample Matrix: AIR

Sample Collection START Date/Time: 8/14/17 9:50
Sample Collection END Date/Time: 8/15/17 9:35
Sample Received Date/Time: 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	< 3.19	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	114%		
Analysis Date/Time:	8-23-17/07:33		
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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082917CAIR

Client Sample ID: 6492-120 5TH ST-SSV-1 **Sample Collection START Date/Time:** 8/15/17 12:10
Envision Sample Number: 17-1878 **Sample Collection END Date/Time:** 8/15/17 12:17
Sample Matrix: AIR **Sample Received Date/Time:** 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	5.95	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	2.40	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	12.4	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	47.0	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	262	31.9	2
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	2.36	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	111%		
Analysis Date/Time:	8-31-17/05:26		
Analyst Initials	tjg		



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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082917CAIR

Client Sample ID: 6492-120 5TH ST-SSV-2 **Sample Collection START Date/Time:** 8/15/17 10:20
Envision Sample Number: 17-1879 **Sample Collection END Date/Time:** 8/15/17 10:27
Sample Matrix: AIR **Sample Received Date/Time:** 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	27.1	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	5.32	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	116%		
Analysis Date/Time:	8-31-17/06:04		
Analyst Initials	tjg		



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 / BADGER CLEANERS
Client Project Manager: ROB HOVERMAN
EnvisionAir Project Number: 2017-478

Analytical Method: TO-15
Analytical Batch: 082917CAIR

Client Sample ID: 6492-120 5TH ST-SSV-3 **Sample Collection START Date/Time:** 8/15/17 11:35
Envision Sample Number: 17-1880 **Sample Collection END Date/Time:** 8/15/17 11:43
Sample Matrix: AIR **Sample Received Date/Time:** 8/18/17 11:00

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	23.7	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	7.96	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



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

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	77.2	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	744	868	3,4
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	142	868	3,4
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	346	63.8	3
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichloroethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	116%		
Analysis Date/Time:	8-31-17/07:18		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 082217AIR(1)

Method Blank (MB):	MB Results (ppbv)	Reporting Limit (ppbv)	Flags
4-Ethyltoluene	< 100	100	
4-Methyl-2-pentanone (MIBK)	< 500	500	
1,1,1-Trichloroethane	< 100	100	
1,1,1,2-Tetrachloroethane	< 0.049	0.049	1
1,1,2-Trichloroethane	< 0.038	0.038	1
1,1-Dichloroethane	< 1	1	
1,1-Dichloroethene	< 50	50	
1,2,4-Trichlorobenzene	< 0.1	0.1	
1,2,4-Trimethylbenzene	< 1	1	
1,2-dibromoethane (EDB)	< 0.0041	0.0041	1
1,2-Dichlorobenzene	< 10	10	
1,2-Dichloroethane	< 0.1	0.1	
1,2-Dichloropropane	< 0.1	0.1	
1,3,5-Trimethylbenzene	< 1	1	
1,3-Butadiene	< 0.1	0.1	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 0.1	0.1	
1,4-Dioxane	< 0.5	0.5	
2-Butanone (MEK)	< 1000	1000	
2-Hexanone	< 5	5	
Acetone	< 1000	1000	
Benzene	< 0.5	0.5	
Benzyl Chloride	< 0.08	0.08	1
Bromodichloromethane	< 0.08	0.08	1
Bromoform	< 1	1	
Bromomethane	< 1	1	
Carbon Disulfide	< 100	100	
Carbon Tetrachloride	< 0.1	0.1	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
Chloroform	< 0.17	0.17	
Chloromethane	< 10	10	
cis-1,2-Dichloroethene	< 5	5	
cis-1,3-Dichloropropene	< 1	1	
Cyclohexane	< 1600	1600	
Dibromochloromethane	< 0.1	0.1	
Dichlorodifluoromethane	< 10	10	
Ethyl Acetate	< 500	500	
Ethylbenzene	< 2	2	
Hexachloro-1,3-butadiene	< 0.1	0.1	
Isooctane	< 100	100	
m,p-Xylene	< 10	10	
Methylene Chloride	< 12	12	
Methyl-tert-butyl ether	< 10	10	
N-Heptane	< 100	100	
N-Hexane	< 50	50	
o-Xylene	< 10	10	
Propylene	< 100	100	
Styrene	< 100	100	
Tetrachloroethene	< 0.47	0.47	
Tetrahydrofuran	< 100	100	

Analytical Report

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
Toluene	< 1000	1000	
trans-1,2-Dichloroethene	< 10	10	
trans-1,3-Dichloropropene	< 1	1	
Trichloroethene	< 0.2	0.2	
Trichlorofluoromethane	< 100	100	
Vinyl Acetate	< 50	50	
Vinyl Bromide	< 0.1	0.1	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	105%		
Analysis Date/Time:	8-22-17/14:38		
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>		
Propylene	8.62	8.1	10	86%	81%	6.2%	
Dichlorodifluoromethane	10.69	9.78	10	107%	98%	8.9%	
Chloromethane	8.59	10.1	10	86%	101%	16.2%	
Vinyl Chloride	9.15	8.53	10	92%	85%	7.0%	
1,3-Butadiene	9.07	8.42	10	91%	84%	7.4%	
Bromomethane	9.66	8.94	10	97%	89%	7.7%	
Chloroethane	10.4	9.27	10	104%	93%	11.5%	
Vinyl Bromide	11.4	10.6	10	114%	106%	7.3%	
Trichlorofluoromethane	10.8	11.3	10	108%	113%	4.5%	
Acetone	9.65	9.27	10	97%	93%	4.0%	
1,1-Dichloroethene	9.42	8.99	10	94%	90%	4.7%	
Methylene Chloride	8.41	8.2	10	84%	82%	2.5%	
Carbon Disulfide	8.7	8.42	10	87%	84%	3.3%	
trans-1,2-Dichloroethene	10.4	10.2	10	104%	102%	1.9%	
Methyl-tert-butyl ether	10.7	10.2	10	107%	102%	4.8%	
1,1-Dichloroethane	10	9.87	10	100%	99%	1.3%	
Vinyl Acetate	8.97	9.64	10	90%	96%	7.2%	
N-Hexane	8.85	8.69	10	89%	87%	1.8%	
2-Butanone (MEK)	10.1	9.88	10	101%	99%	2.2%	
cis-1,2-Dichloroethene	10.3	10.1	10	103%	101%	2.0%	
Ethyl Acetate	8.81	8.78	10	88%	88%	0.3%	
Chloroform	10.7	10.7	10	107%	107%	0.0%	
Tetrahydrofuran	8.25	8.01	10	83%	80%	3.0%	
1,2-Dichloroethane	10.8	10.6	10	108%	106%	1.9%	
1,1,1-Trichloroethane	10.3	10.1	10	103%	101%	2.0%	
Carbon Tetrachloride	10	9.95	10	100%	100%	0.5%	
Benzene	9.7	9.81	10	97%	98%	1.1%	
Cyclohexane	8.48	8.38	10	85%	84%	1.2%	
1,2-Dichloropropane	9.09	9.31	10	91%	93%	2.4%	
Trichloroethene	10.3	10.3	10	103%	103%	0.0%	
Bromodichloromethane	10.2	10.3	10	102%	103%	1.0%	
1,4-Dioxane	11.5	10.3	10	115%	103%	11.0%	
Isooctane	8.99	8.75	10	90%	88%	2.7%	
N-Heptane	8.34	8.32	10	83%	83%	0.2%	
cis-1,3-Dichloropropene	10.7	10.8	10	107%	108%	0.9%	
4-Methyl-2-pentanone (MIBK)	9.66	9.35	10	97%	94%	3.3%	
trans-1,3-Dichloropropene	10.5	10.6	10	105%	106%	0.9%	
1,1,2-Trichloroethane	10.5	10.5	10	105%	105%	0.0%	
Toluene	11.2	11.3	10	112%	113%	0.9%	
2-Hexanone	11.8	11.7	10	118%	117%	0.9%	
Dibromochloromethane	9.04	8.92	10	90%	89%	1.3%	
1,2-dibromoethane (EDB)	9.66	9.49	10	97%	95%	1.8%	
Tetrachloroethene	8.79	8.73	10	88%	87%	0.7%	
Chlorobenzene	10.1	10.1	10	101%	101%	0.0%	
Ethylbenzene	10.6	10.7	10	106%	107%	0.9%	
m,p-Xylene	20.5	20.4	20	103%	102%	0.5%	
Bromoform	8.16	8.3	10	82%	83%	1.7%	

Analytical Report

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D</u> <u>Conc(ppbv)</u>	<u>LCS</u> <u>Rec.</u>	<u>LCSD</u> <u>Rec.</u>	<u>RPD</u>	<u>Flag</u>
Styrene	11.2	11.9	10	112%	119%	6.1%	
1,1,2,2-Tetrachloroethane	9.55	9.6	10	96%	96%	0.5%	
o-Xylene	10.8	10.6	10	108%	106%	1.9%	
4-Ethyltoluene	10.8	11.1	10	108%	111%	2.7%	
1,3,5-Trimethylbenzene	11.4	11.5	10	114%	115%	0.9%	
1,2,4-Trimethylbenzene	11.5	11.7	10	115%	117%	1.7%	
1,3-Dichlorobenzene	9.92	9.63	10	99%	96%	3.0%	
Benzyl Chloride	10.6	10.8	10	106%	108%	1.9%	
1,4-Dichlorobenzene	11	10.8	10	110%	108%	1.8%	
1,2-Dichlorobenzene	11.6	11.3	10	116%	113%	2.6%	
1,2,4-Trichlorobenzene	11.1	9.64	10	111%	96%	14.1%	
Hexachloro-1,3-butadiene	9.93	10.4	10	99%	104%	4.6%	
4-bromofluorobenzene (surrogate)	102%	99%					
Analysis Date/Time:	8-22-17/14:02	8-22-17/17:50					
Analyst Initials	tjg	tjg					

TO-15 Quality Control Data

EnvisionAir Batch Number: 082217AIR(2)

Method Blank (MB):	MB Results (ppbv)	Reporting Limit (ppbv)	Flags
4-Ethyltoluene	< 100	100	
4-Methyl-2-pentanone (MIBK)	< 500	500	
1,1,1-Trichloroethane	< 100	100	
1,1,1,2-Tetrachloroethane	< 0.049	0.049	1
1,1,2-Trichloroethane	< 0.038	0.038	1
1,1-Dichloroethane	< 1	1	
1,1-Dichloroethene	< 50	50	
1,2,4-Trichlorobenzene	< 0.1	0.1	
1,2,4-Trimethylbenzene	< 1	1	
1,2-dibromoethane (EDB)	< 0.0041	0.0041	1
1,2-Dichlorobenzene	< 10	10	
1,2-Dichloroethane	< 0.1	0.1	
1,2-Dichloropropane	< 0.1	0.1	
1,3,5-Trimethylbenzene	< 1	1	
1,3-Butadiene	< 0.1	0.1	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 0.1	0.1	
1,4-Dioxane	< 0.5	0.5	
2-Butanone (MEK)	< 1000	1000	
2-Hexanone	< 5	5	
Acetone	< 1000	1000	
Benzene	< 0.5	0.5	
Benzyl Chloride	< 0.08	0.08	1
Bromodichloromethane	< 0.08	0.08	1
Bromoform	< 1	1	
Bromomethane	< 1	1	
Carbon Disulfide	< 100	100	
Carbon Tetrachloride	< 0.1	0.1	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
Chloroform	< 0.17	0.17	
Chloromethane	< 10	10	
cis-1,2-Dichloroethene	< 5	5	
cis-1,3-Dichloropropene	< 1	1	
Cyclohexane	< 1600	1600	
Dibromochloromethane	< 0.1	0.1	
Dichlorodifluoromethane	< 10	10	
Ethyl Acetate	< 500	500	
Ethylbenzene	< 2	2	
Hexachloro-1,3-butadiene	< 0.1	0.1	
Isooctane	< 100	100	
m,p-Xylene	< 10	10	
Methylene Chloride	< 12	12	
Methyl-tert-butyl ether	< 10	10	
N-Heptane	< 100	100	
N-Hexane	< 50	50	
o-Xylene	< 10	10	
Propylene	< 100	100	
Styrene	< 100	100	
Tetrachloroethene	< 0.47	0.47	
Tetrahydrofuran	< 100	100	

Analytical Report

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
Toluene	< 1000	1000	
trans-1,2-Dichloroethene	< 10	10	
trans-1,3-Dichloropropene	< 1	1	
Trichloroethene	< 0.2	0.2	
Trichlorofluoromethane	< 100	100	
Vinyl Acetate	< 50	50	
Vinyl Bromide	< 0.1	0.1	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	8-23-17/02:56		
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>		
Propylene	8.09	9.35	10	81%	94%	14.4%	
Dichlorodifluoromethane	9.45	10.5	10	95%	105%	10.5%	
Chloromethane	10.1	11	10	101%	110%	8.5%	
Vinyl Chloride	8.71	9.5	10	87%	95%	8.7%	
1,3-Butadiene	8.97	10.5	10	90%	105%	15.7%	
Bromomethane	9.05	10.6	10	91%	106%	15.8%	
Chloroethane	9.05	10.6	10	91%	106%	15.8%	
Vinyl Bromide	10.9	10.3	10	109%	103%	5.7%	
Trichlorofluoromethane	10.4	11.5	10	104%	115%	10.0%	
Acetone	9.56	10.9	10	96%	109%	13.1%	
1,1-Dichloroethene	9.4	10.2	10	94%	102%	8.2%	
Methylene Chloride	8.33	8.84	10	83%	88%	5.9%	
Carbon Disulfide	8.43	9.33	10	84%	93%	10.1%	
trans-1,2-Dichloroethene	10.5	11	10	105%	110%	4.7%	
Methyl-tert-butyl ether	10.6	11.5	10	106%	115%	8.1%	
1,1-Dichloroethane	9.71	10.6	10	97%	106%	8.8%	
Vinyl Acetate	9.4	10.4	10	94%	104%	10.1%	
N-Hexane	8.58	9.36	10	86%	94%	8.7%	
2-Butanone (MEK)	9.3	10.8	10	93%	108%	14.9%	
cis-1,2-Dichloroethene	10.1	11.1	10	101%	111%	9.4%	
Ethyl Acetate	8.08	9.48	10	81%	95%	15.9%	
Chloroform	10.4	11.5	10	104%	115%	10.0%	
Tetrahydrofuran	9.12	8.46	10	91%	85%	7.5%	
1,2-Dichloroethane	11	12	10	110%	120%	8.7%	
1,1,1-Trichloroethane	10.1	10.8	10	101%	108%	6.7%	
Carbon Tetrachloride	9.66	10.6	10	97%	106%	9.3%	
Benzene	9.46	10.4	10	95%	104%	9.5%	
Cyclohexane	8.27	9.02	10	83%	90%	8.7%	
1,2-Dichloropropane	8.99	9.99	10	90%	100%	10.5%	
Trichloroethene	10	11.2	10	100%	112%	11.3%	
Bromodichloromethane	9.83	11	10	98%	110%	11.2%	
1,4-Dioxane	11.4	10.6	10	114%	106%	7.3%	
Isooctane	8.26	9.32	10	83%	93%	12.1%	
N-Heptane	10.2	8.82	10	102%	88%	14.5%	
cis-1,3-Dichloropropene	10.3	11.5	10	103%	115%	11.0%	
4-Methyl-2-pentanone (MIBK)	8.72	9.69	10	87%	97%	10.5%	
trans-1,3-Dichloropropene	10.3	11.4	10	103%	114%	10.1%	
1,1,2-Trichloroethane	10.4	11.2	10	104%	112%	7.4%	
Toluene	10.7	10.1	10	107%	101%	5.8%	
2-Hexanone	11.1	10.5	10	111%	105%	5.6%	
Dibromochloromethane	8.73	8.59	10	87%	86%	1.6%	
1,2-dibromoethane (EDB)	9.26	9.08	10	93%	91%	2.0%	
Tetrachloroethene	8.6	8.62	10	86%	86%	0.2%	
Chlorobenzene	9.75	9.64	10	98%	96%	1.1%	
Ethylbenzene	9.89	9.91	10	99%	99%	0.2%	
m,p-Xylene	19.5	19.4	20	98%	97%	0.5%	
Bromoform	8.08	8.06	10	81%	81%	0.2%	



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

Analytical Report

<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>
Styrene	11.9	11.5	10	119%	115%	3.4%	
1,1,2,2-Tetrachloroethane	9.12	9.01	10	91%	90%	1.2%	
o-Xylene	10.8	10.4	10	108%	104%	3.8%	
4-Ethyltoluene	9.91	10	10	99%	100%	0.9%	
1,3,5-Trimethylbenzene	10.9	10.8	10	109%	108%	0.9%	
1,2,4-Trimethylbenzene	10.9	10.8	10	109%	108%	0.9%	
1,3-Dichlorobenzene	9.35	9.18	10	94%	92%	1.8%	
Benzyl Chloride	10.6	11.8	10	106%	118%	10.7%	
1,4-Dichlorobenzene	10.7	10.4	10	107%	104%	2.8%	
1,2-Dichlorobenzene	11.4	11	10	114%	110%	3.6%	
1,2,4-Trichlorobenzene	10.7	9.84	10	107%	98%	8.4%	
Hexachloro-1,3-butadiene	10.4	10.2	10	104%	102%	1.9%	
4-bromofluorobenzene (surrogate)	103%	91%					
Analysis Date/Time:	8-23-17/01:39	8-23-17/13:24					
Analyst Initials	tjg	tjg					

TO-15 Quality Control Data

EnvisionAir Batch Number: 082917CAIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
4-Ethyltoluene	< 100	100	
4-Methyl-2-pentanone (MIBK)	< 500	500	
1,1,1-Trichloroethane	< 100	100	
1,1,1,2-Tetrachloroethane	< 0.049	0.049	1
1,1,2-Trichloroethane	< 0.038	0.038	1
1,1-Dichloroethane	< 1	1	
1,1-Dichloroethene	< 50	50	
1,2,4-Trichlorobenzene	< 0.1	0.1	
1,2,4-Trimethylbenzene	< 1	1	
1,2-dibromoethane (EDB)	< 0.0041	0.0041	1
1,2-Dichlorobenzene	< 10	10	
1,2-Dichloroethane	< 0.1	0.1	
1,2-Dichloropropane	< 0.1	0.1	
1,3,5-Trimethylbenzene	< 1	1	
1,3-Butadiene	< 0.1	0.1	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 0.1	0.1	
1,4-Dioxane	< 0.5	0.5	
2-Butanone (MEK)	< 1000	1000	
2-Hexanone	< 5	5	
Acetone	< 1000	1000	
Benzene	< 0.5	0.5	
Benzyl Chloride	< 0.08	0.08	1
Bromodichloromethane	< 0.08	0.08	1
Bromoform	< 1	1	
Bromomethane	< 1	1	
Carbon Disulfide	< 100	100	
Carbon Tetrachloride	< 0.1	0.1	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
Chloroform	< 0.17	0.17	
Chloromethane	< 10	10	
cis-1,2-Dichloroethene	< 5	5	
cis-1,3-Dichloropropene	< 1	1	
Cyclohexane	< 1600	1600	
Dibromochloromethane	< 0.1	0.1	
Dichlorodifluoromethane	< 10	10	
Ethyl Acetate	< 500	500	
Ethylbenzene	< 2	2	
Hexachloro-1,3-butadiene	< 0.1	0.1	
Isooctane	< 100	100	
m,p-Xylene	< 10	10	
Methylene Chloride	< 12	12	
Methyl-tert-butyl ether	< 10	10	
N-Heptane	< 100	100	
N-Hexane	< 50	50	
o-Xylene	< 10	10	
Propylene	< 100	100	
Styrene	< 100	100	
Tetrachloroethene	< 0.47	0.47	
Tetrahydrofuran	< 100	100	

Analytical Report

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
Toluene	< 1000	1000	
trans-1,2-Dichloroethene	< 10	10	
trans-1,3-Dichloropropene	< 1	1	
Trichloroethene	< 0.2	0.2	
Trichlorofluoromethane	< 100	100	
Vinyl Acetate	< 50	50	
Vinyl Bromide	< 0.1	0.1	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	102%		
Analysis Date/Time:	8-30-17/14:46		
Analyst Initials	tij		

<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>		
Propylene	8.15	9.23	10	82%	92%	12.4%	
Dichlorodifluoromethane	8.59	9.44	10	86%	94%	9.4%	
Chloromethane	8.89	10.3	10	89%	103%	14.7%	
Vinyl Chloride	8.61	10.6	10	86%	106%	20.7%	5
1,3-Butadiene	8.65	10.3	10	87%	103%	17.4%	
Bromomethane	8.45	9.68	10	85%	97%	13.6%	
Chloroethane	8.4	10.1	10	84%	101%	18.4%	
Vinyl Bromide	8.79	10.2	10	88%	102%	14.8%	
Trichlorofluoromethane	9.09	11.1	10	91%	111%	19.9%	
Acetone	10.2	8.97	10	102%	90%	12.8%	
1,1-Dichloroethene	8.91	10.4	10	89%	104%	15.4%	
Methylene Chloride	8.2	9.3	10	82%	93%	12.6%	
Carbon Disulfide	8.87	10.2	10	89%	102%	13.9%	
trans-1,2-Dichloroethene	9.04	9.89	10	90%	99%	9.0%	
Methyl-tert-butyl ether	9.35	10.8	10	94%	108%	14.4%	
1,1-Dichloroethane	9	10.2	10	90%	102%	12.5%	
Vinyl Acetate	9.47	10.8	10	95%	108%	13.1%	
N-Hexane	8.97	10.2	10	90%	102%	12.8%	
2-Butanone (MEK)	9.87	11	10	99%	110%	10.8%	
cis-1,2-Dichloroethene	9.14	10.6	10	91%	106%	14.8%	
Ethyl Acetate	8.92	10	10	89%	100%	11.4%	
Chloroform	8.85	10	10	89%	100%	12.2%	
Tetrahydrofuran	9.68	10.4	10	97%	104%	7.2%	
1,2-Dichloroethane	9.55	10.1	10	96%	101%	5.6%	
1,1,1-Trichloroethane	9.21	10.1	10	92%	101%	9.2%	
Carbon Tetrachloride	9.12	9.67	10	91%	97%	5.9%	
Benzene	9.42	10.1	10	94%	101%	7.0%	
Cyclohexane	9.7	10.3	10	97%	103%	6.0%	
1,2-Dichloropropane	8.68	9.67	10	87%	97%	10.8%	
Trichloroethene	9.14	9.67	10	91%	97%	5.6%	
Bromodichloromethane	9.02	9.65	10	90%	97%	6.7%	
1,4-Dioxane	11.3	11.6	10	113%	116%	2.6%	
Isooctane	8.6	9.17	10	86%	92%	6.4%	
N-Heptane	8.98	9.8	10	90%	98%	8.7%	
cis-1,3-Dichloropropene	9.7	10.4	10	97%	104%	7.0%	
4-Methyl-2-pentanone (MIBK)	10.6	11.3	10	106%	113%	6.4%	
trans-1,3-Dichloropropene	9.88	10.7	10	99%	107%	8.0%	
1,1,2-Trichloroethane	9.08	9.57	10	91%	96%	5.3%	
Toluene	8.6	9.16	10	86%	92%	6.3%	
2-Hexanone	11.2	11.8	10	112%	118%	5.2%	
Dibromochloromethane	9.47	8.97	10	95%	90%	5.4%	
1,2-dibromoethane (EDB)	9.63	9.24	10	96%	92%	4.1%	
Tetrachloroethene	9.7	9.06	10	97%	91%	6.8%	
Chlorobenzene	9.42	8.91	10	94%	89%	5.6%	
Ethylbenzene	9.4	8.88	10	94%	89%	5.7%	
m,p-Xylene	20.2	19.4	20	101%	97%	4.0%	
Bromoform	9.3	8.73	10	93%	87%	6.3%	

Analytical Report

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D</u> <u>Conc(ppbv)</u>	<u>LCS</u> <u>Rec.</u>	<u>LCSD</u> <u>Rec.</u>	<u>RPD</u>	<u>Flag</u>
Styrene	10.8	10.3	10	108%	103%	4.7%	
1,1,2,2-Tetrachloroethane	9.17	8.64	10	92%	86%	6.0%	
o-Xylene	9.87	9.34	10	99%	93%	5.5%	
4-Ethyltoluene	9.57	9.12	10	96%	91%	4.8%	
1,3,5-Trimethylbenzene	9.04	8.35	10	90%	84%	7.9%	
1,2,4-Trimethylbenzene	9.46	9.04	10	95%	90%	4.5%	
1,3-Dichlorobenzene	9.18	8.55	10	92%	86%	7.1%	
Benzyl Chloride	11.4	10.7	10	114%	107%	6.3%	
1,4-Dichlorobenzene	9.82	9.2	10	98%	92%	6.5%	
1,2-Dichlorobenzene	9.31	8.81	10	93%	88%	5.5%	
1,2,4-Trichlorobenzene	8.81	8.51	10	88%	85%	3.5%	
Hexachloro-1,3-butadiene	8.17	8.2	10	82%	82%	0.4%	
4-bromofluorobenzene (surrogate)	115%	102%					
Analysis Date/Time:	8-30-17/12:47	8-30-17/14:11					
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

<u>Flag Number</u>	<u>Comments</u>
1	Reporting limit is supported by MDL. TJJ
2	Reported value is from a 10x dilution. TJJ 8-31-17
3	Reported value is from a 20x dilution. TJJ 8-31-17
4	Reported value is below the reporting limit but above the MDL. TJJ 8-31-17
5	RPD is biased high, but recoveries are within control. TJJ 8-31-17

CHAIN OF CUSTODY RECORD

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

Client: Enviro Forensics	P.O. Number: 2017-1019
Report # 6492-120-5th St. - IA-1 Address: Site 6, Winklesha WI 53088	Project Name or Number: 6492 <i>Budget Cleaners</i>
Report To: R. Heimerman, K. Heimestead	Sampled by: K. Heimestead
Phone: 317-972-7870	QA/QC Required: (circle if applicable) Level III <input checked="" type="checkbox"/> Level IV <input checked="" type="checkbox"/>
Invoice Address:	Reporting Units needed: (circle) ug/m³ mg/m³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days 5 bus. days	Media type: 1LC = 1 Liter Canister 6LC = 6 Liter Canister TB = Tedlar Bag TD = Thermal Desorption Tube



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

www.envision-air.com

REQUESTED PARAMETERS

TO-15 Full List

TO-15 Short List

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
6492-120-5th St. - IA-1	6LC	8/14/17	9:27	8/15/17	9:20	17A00	02096	-29	-6	-6	17-1874
6492-120-5th St. - IA-2	6LC		9:35		9:25	91567	07711	-29	-5	-5	17-1875
6492-120-5th St. - IA-3	6LC		9:40		9:30	41684	04144	-29	-7	-7	17-1876
6492-0A-1-24hr	6LC		9:50		9:35	91578	07617	-30	-6	-6	17-1877
6492-120-5th St. - SSV-1	1LC	8/15/17	12:10	8/15/17	12:17	83728	-	-30	.2	-2	17-1878
6492-120-5th St. - SSV-2	1LC		10:20		10:27	84050	-	-29	.2	-2	17-1879
6492-120-5th St. - SSV-3	1LC		11:55		11:43	83984	-	-29	-2	-2	17-1880

Comments: *level III only for 6LC only!*

Relinquished by: <i>[Signature]</i>	Date: 8/17/17	Time: -	Received by: <i>[Signature]</i>	Date: 8/18/17	Time: 1100
-------------------------------------	----------------------	----------------	---------------------------------	----------------------	-------------------