



October 31, 2018

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, sub-slab vapor, and soil samples were collected on October 11-12, 2018. Additionally, one (1) permanent monitoring well (MW-9) was installed. The sampling and monitoring well installation activities are part of an environmental investigation being performed for the Badger 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:

Former Packard Way Cleaners
3650-3652 E. Barnard Ave.
Cudahy, WI

Sampling Results

Two soil samples (6306-SB-107-(1-2) and 6306-SB-107-(2-4)) were also collected during the installation of monitoring well MW-9 and analyzed for volatile organic compounds (VOCs). The location of the existing MW-6 and newly installed MW-9 is shown on the attached **Figure 1**. The results of the soil samples are summarized and compared to WDNR standards on the attached **Table 1**. An excerpt of the laboratory report that relates to the soil samples is also attached.

As shown on **Table 1**, PCE was detected in both soil samples at concentrations that were above the Soil to Groundwater Residual Contaminant Level (RCL) but well below the Non-Industrial RCL, which are used for residential properties such as yours.

Two indoor air samples were collected from within your home; one (1) in the basement (6306-6351 E Squire IA-B) and one (1) on the first floor (6306-6351 E Squire IA-B). For quality control purposes, a sample of outdoor ambient air (6306-6351 E. Squire Ave.-OA-1) was collected. Additionally, one (1) sub-slab vapor sample (6306-6351 E. Squire Ave.-SSV-1) was collected from beneath the basement floor of your home. The sampling locations are depicted on the attached **Figure 2**. The results of the vapor samples are summarized and compared to WDNR standards on the attached **Table 2**. A copy of the laboratory report that relates to the vapor samples is also attached.

As shown on **Table 2**, PCE was detected in the indoor air sample 6306-6351 E. Squire Ave.-IA-B at a concentration of 11.9 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), which is *below* the Vapor Action Level established for residential buildings. PCE, trichloroethene, and benzene 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.

Groundwater samples will be collected from monitoring well MW-6 and MW-9 during 2018 and 2019. The results of any samples will be provided to you. 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, Trevor Nobile, can be reached at 414 263-8524. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC



Kyle Heimstead
Project Manager

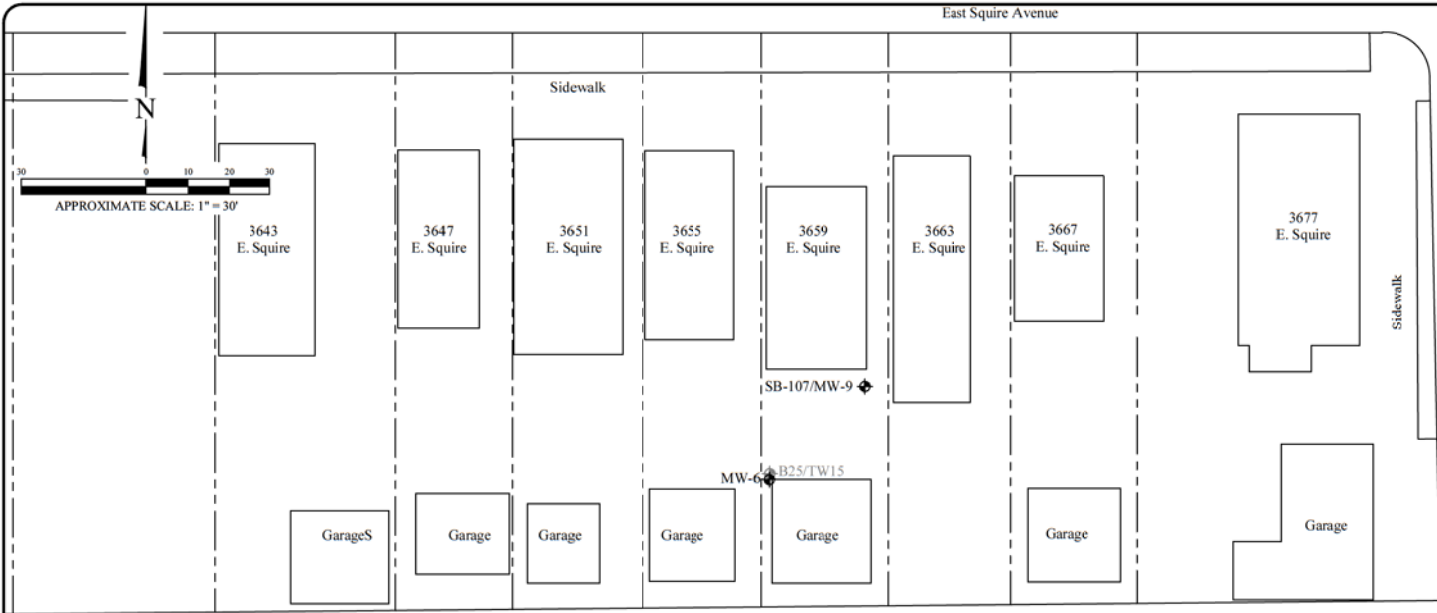


Rob Hoverman, PG
Senior Project Manager

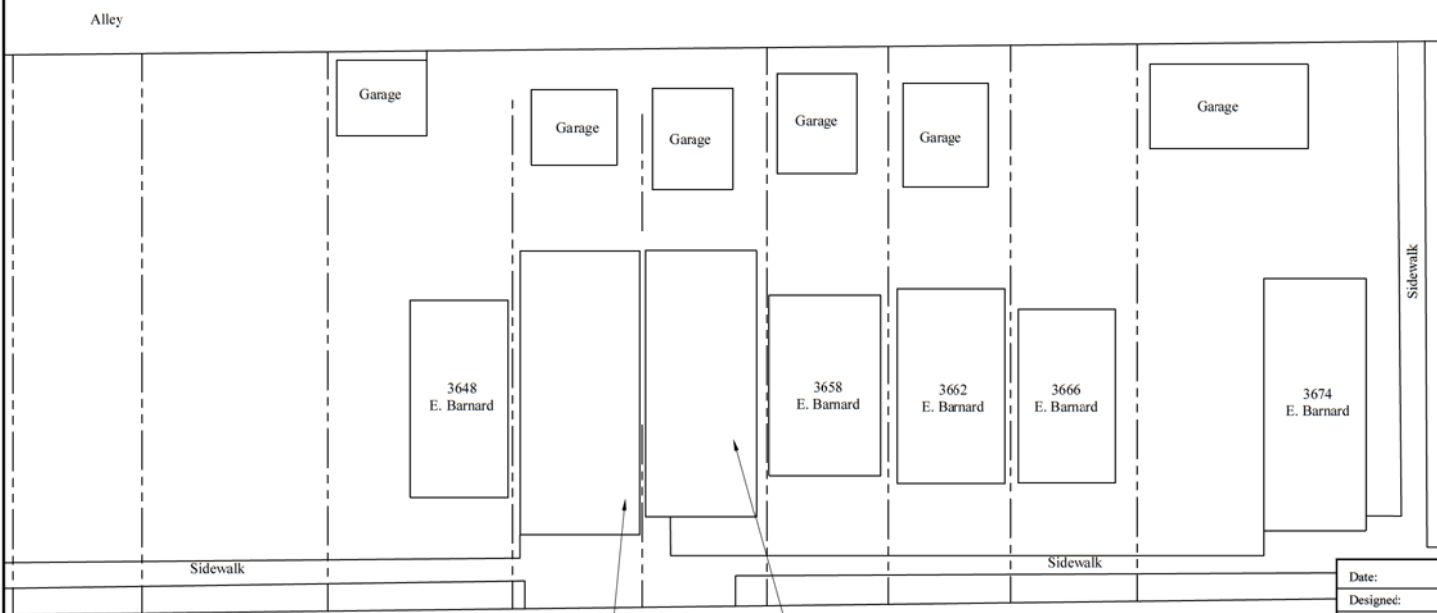
Copy: Trevor Nobile, Wisconsin Department of Natural Resources

Attachments:

Figure 1 – Site Plan
Figure 2 – Vapor Intrusion Sample Locations
Table 1 – Soil Analytical Results
Table 2 – Vapor Intrusion Analytical Results
Laboratory Analytical Report Excerpt



- Legend**
- MW-6 ◆ Monitoring well location
 - SB-107 ● Direct push soil boring location
 - B26/TW16 ◆ Former soil boring/Temporary well location (By Others)
 - Property boundary



SITE PLAN
 Former Packard Way Cleaners
 3650/3652 East Barnard Avenue
 Cudahy, Wisconsin

Date:	7/1/15
Designed:	EB
Drawn:	EB
Checked:	RH
DWG file:	6306-0105

ENVIROforensics
 ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
 802 N. Capitol Ave., Ste. 210 • Indianapolis, IN 46204
 EnviroForensics.com

Figure	1
Project	6306

East Barnard Avenue

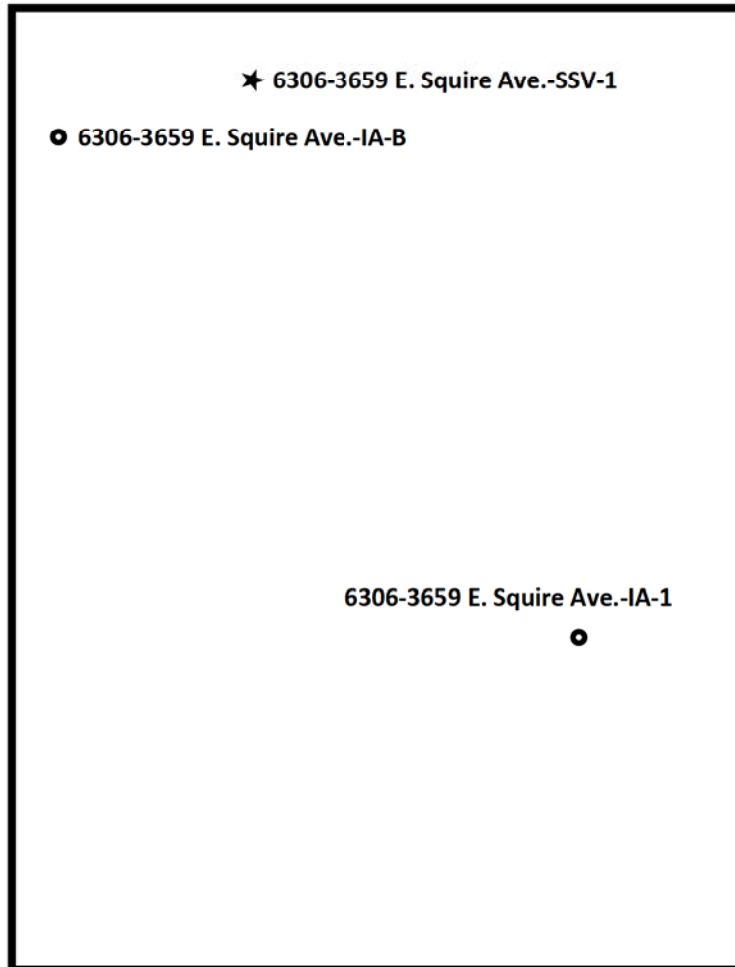
Former Packard Way Cleaners
 3650/3652 E. Barnard

Donna's Hair Styling
 3654 E. Barnard

**FIGURE 2
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
SOIL ANALYTICAL RESULTS
Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Boring Identification	Date Sampled	Depth	Tetrachloroethene
Industrial RCL ¹			145,000
Non-Industrial RCL ¹			33,000
Soil to Goundwater RCL ¹			4.5
SB-107	10/11/18	1-2	126
		3-4	74 J

Notes:

Residual contaminant level are based on US EPA Soil Screening Levels (September 2018)

Samples analyzed using EPA SW-846 Method 8260 with Prep Method 5030B

All concentrations reported in units of micrograms per kilogram (µg/kg)

Bolded and Shaded blue values exceed the WDNR generic Soil to Groundwater Residual Contaminant Levels

Bolded values are above detection limits

J = Concentration is less than the reporting limit but greater than the method detection limit.

TABLE 2
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	Benzene
INDOOR/OUTDOOR AIR SAMPLES							
Residential Vapor Action Level					42	2.1	3.6
3651 East Squire Avenue	6306-3659 E. Squire Ave-IA-B	Basement	Residential	10/12/2018	11.9	<1.07	<1.60
	6306-3659 E. Squire Ave-IA-1	1st Floor		10/12/2018	<3.19	<1.07	<1.60
	6306-3659 E. Squire Ave-OA-1	Outdoors		10/12/2018	<3.19	<1.07	<1.60
SUB-SLAB VAPOR SAMPLES							
Residential Vapor Risk Screening Level					1,400	70	120
3651 East Squire Avenue	6306-3659 E. Squire Ave-OA-1	Basement	Residential	10/12/2018	187	14.5	19.8

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



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Mr. Kyle Vander Heiden
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

October 25, 2018

EnvisionAir Project Number: 2018-635
Client Project Name: Packard Way Cleaners

Dear Mr. Vander Heiden,

Please find the attached analytical report for the samples received October 18, 2018. 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: PACKARD WAY CLEANERS
Client Project Manager: KYLE HEIMSTEAD
EnvisionAir Project Number: 2018-635

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>Collected:</u>	<u>Collected:</u>							<u>Collected:</u>
18-2599	6306-3659 E SQUIRE AVE-IA-1	A	10/11/18	9:43	10/12/18	9:49	10/18/18	9:35	-29	-2	-2
18-2600	6306-3659 E SQUIRE AVE-IA-B	A	10/11/18	9:46	10/12/18	9:48	10/18/18	9:35	-29	-2	-2
18-2601	6306-3659 E SQUIRE AVE-OA	A	10/11/18	9:34	10/12/18	9:47	10/18/18	9:35	-29	-4	-4
18-2602	6306-3659 E SQUIRE AVE-SSV-1	A	10/12/18	10:16	10/12/18	10:21	10/18/18	9:35	-29	-3	-3



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Client Name: ENVIROFORENSICS
Project ID: PACKARD WAY CLEANERS
Client Project Manager: KYLE HEIMSTEAD
EnvisionAir Project Number: 2018-635

Analytical Method: TO-15
Analytical Batch: 102018CAIR(1)

Client Sample ID: 6306-3659 E SQUIRE AVE-IA-1
EnvisionAir Sample Number: 18-2599
Sample Matrix: AIR

Sample Collection START Date/Time: 10/11/18 9:43
Sample Collection END Date/Time: 10/12/18 9:49
Sample Received Date/Time: 10/18/18 9:35

<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	



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<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	< 54.1	54.1	
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)	93%		
Analysis Date/Time:	10-21-18/07:55		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: PACKARD WAY CLEANERS
Client Project Manager: KYLE HEIMSTEAD
EnvisionAir Project Number: 2018-635

Analytical Method: TO-15
Analytical Batch: 102018CAIR(1)

Client Sample ID: 6306-3659 E SQUIRE AVE-IA-B
EnvisionAir Sample Number: 18-2600
Sample Matrix: AIR

Sample Collection START Date/Time: 10/11/18 9:46
Sample Collection END Date/Time: 10/12/18 9:48
Sample Received Date/Time: 10/18/18 9:35

<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	



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<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	< 54.1	54.1	
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	11.9	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)	95%		
Analysis Date/Time:	10-21-18/08:33		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: PACKARD WAY CLEANERS
Client Project Manager: KYLE HEIMSTEAD
EnvisionAir Project Number: 2018-635

Analytical Method: TO-15
Analytical Batch: 102018CAIR(1)

Client Sample ID: 6306-3659 E SQUIRE AVE-OA
EnvisionAir Sample Number: 18-2601
Sample Matrix: AIR

Sample Collection START Date/Time: 10/11/18 9:34
Sample Collection END Date/Time: 10/12/18 9:47
Sample Received Date/Time: 10/18/18 9:35

<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	

<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	< 54.1	54.1	
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)	90%		
Analysis Date/Time:	10-21-18/00:09		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS
Project ID: PACKARD WAY CLEANERS
Client Project Manager: KYLE HEIMSTEAD
EnvisionAir Project Number: 2018-635

Analytical Method: TO-15
Analytical Batch: 102018CAIR(2)

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

Sample Collection START Date/Time: 10/12/18 10:16
Sample Collection END Date/Time: 10/12/18 10:21
Sample Received Date/Time: 10/18/18 9:35

EnvisionAir Sample Number: 18-2602
Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 4920	4920	
4-Methyl-2-pentanone (MIBK)	< 20500	20500	
1,1,1-Trichloroethane	< 5460	5460	
1,1,2,2-Tetrachloroethane	< 3.36	3.36	1
1,1,2-Trichloroethane	< 2.10	2.10	1
1,1-Dichloroethane	< 40.5	40.5	
1,1-Dichloroethene	< 1980	1980	
1,2,4-Trichlorobenzene	< 7.42	7.42	
1,2,4-Trimethylbenzene	< 49.2	49.2	
1,2-dibromoethane (EDB)	< 0.32	0.32	1
1,2-Dichlorobenzene	< 601	601	
1,2-Dichloroethane	< 4.05	4.05	
1,2-Dichloropropane	< 4.62	4.62	
1,3,5-Trimethylbenzene	< 49.2	49.2	
1,3-Butadiene	< 2.21	2.21	
1,3-Dichlorobenzene	< 601	601	
1,4-Dichlorobenzene	< 6.01	6.01	
1,4-Dioxane	< 18.0	18.0	
2-Butanone (MEK)	< 29500	29500	
2-Hexanone	< 205	205	
Acetone	< 23800	23800	
Benzene	19.8	16.0	
Benzyl Chloride	< 4.14	4.14	1
Bromodichloromethane	< 5.36	5.36	1
Bromoform	< 103	103	
Bromomethane	< 38.8	38.8	
Carbon Disulfide	< 3110	3110	
Carbon Tetrachloride	< 6.29	6.29	
Chlorobenzene	< 230	230	
Chloroethane	< 132	132	

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 8.30	8.30	
Chloromethane	< 206	206	
cis-1,2-Dichloroethene	< 198	198	
cis-1,3-Dichloropropene	< 45.4	45.4	
Cyclohexane	< 55100	55100	
Dibromochloromethane	< 8.52	8.52	
Dichlorodifluoromethane	< 495	495	
Ethyl Acetate	< 541	541	
Ethylbenzene	< 86.8	86.8	
Hexachloro-1,3-butadiene	< 10.7	10.7	
Isooctane	< 4670	4670	
m,p-Xylene	< 434	434	
Methylene Chloride	< 417	417	
Methyl-tert-butyl ether	< 361	361	
N-Heptane	< 4100	4100	
N-Hexane	< 1760	1760	
o-Xylene	< 434	434	
Propylene	< 1720	1720	
Styrene	< 4260	4260	
Tetrachloroethene	187	31.9	
Tetrahydrofuran	< 2950	2950	
Toluene	< 37700	37700	
trans-1,2-Dichloroethene	< 396	396	
trans-1,3-Dichloropropene	< 45.4	45.4	
Trichloroethene	14.5	10.7	
Trichlorofluoromethane	< 5620	5620	
Vinyl Acetate	< 1760	1760	
Vinyl Bromide	< 4.37	4.37	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	10-21-18/03:28		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 102018CAIR(1)

<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	
1,1,2,2-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	< 15	15	
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)	103%		
Analysis Date/Time:	10-20-18/20:51		
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>
Propylene	9.75	9.83	10	98%	98%	0.8%	
Dichlorodifluoromethane	9.16	10.3	10	92%	103%	11.7%	
Chloromethane	10.1	10.4	10	101%	104%	2.9%	
Vinyl Chloride	9.75	11.1	10	98%	111%	12.9%	
1,3-Butadiene	9.08	9.62	10	91%	96%	5.6%	
Bromomethane	9.42	10.6	10	94%	106%	11.8%	
Chloroethane	9.42	10.4	10	94%	104%	9.9%	
Vinyl Bromide	9.51	10.6	10	95%	106%	10.8%	
Trichlorofluoromethane	8.75	11.2	10	88%	112%	24.6%	2
Acetone	8.88	9.74	10	89%	97%	9.2%	
1,1-Dichloroethene	10.2	10.3	10	102%	103%	1.0%	
Methylene Chloride	9.92	9.65	10	99%	97%	2.8%	
Carbon Disulfide	10.2	10.2	10	102%	102%	0.0%	
trans-1,2-Dichloroethene	10.8	10.3	10	108%	103%	4.7%	
Methyl-tert-butyl ether	11.1	10.7	10	111%	107%	3.7%	
1,1-Dichloroethane	10.3	10.1	10	103%	101%	2.0%	
Vinyl Acetate	10.8	11.1	10	108%	111%	2.7%	
N-Hexane	8.13	9.37	10	81%	94%	14.2%	
2-Butanone (MEK)	8.38	10.6	10	84%	106%	23.4%	2
cis-1,2-Dichloroethene	9	9.87	10	90%	99%	9.2%	
Ethyl Acetate	9.17	9.88	10	92%	99%	7.5%	
Chloroform	8.84	10.5	10	88%	105%	17.2%	
Tetrahydrofuran	9.1	9.25	10	91%	93%	1.6%	
1,2-Dichloroethane	8.46	9.23	10	85%	92%	8.7%	
1,1,1-Trichloroethane	10.3	10.2	10	103%	102%	1.0%	
Carbon Tetrachloride	10.8	10.5	10	108%	105%	2.8%	
Benzene	9.44	9.94	10	94%	99%	5.2%	
Cyclohexane	9.29	9.49	10	93%	95%	2.1%	
1,2-Dichloropropane	8.29	9.16	10	83%	92%	10.0%	
Trichloroethene	9.09	9.62	10	91%	96%	5.7%	
Bromodichloromethane	8.99	9.84	10	90%	98%	9.0%	
1,4-Dioxane	9.07	9.77	10	91%	98%	7.4%	
Isooctane	8.94	10	10	89%	100%	11.2%	
N-Heptane	8.73	9.4	10	87%	94%	7.4%	
cis-1,3-Dichloropropene	9.78	9.9	10	98%	99%	1.2%	
4-Methyl-2-pentanone (MIBK)	9.22	10.1	10	92%	101%	9.1%	
trans-1,3-Dichloropropene	9.83	9.59	10	98%	96%	2.5%	
1,1,2-Trichloroethane	8.94	9.25	10	89%	93%	3.4%	
Toluene	9.78	10.2	10	98%	102%	4.2%	
2-Hexanone	9.19	10.4	10	92%	104%	12.4%	
Dibromochloromethane	11	10.6	10	110%	106%	3.7%	
1,2-dibromoethane (EDB)	10.1	10.2	10	101%	102%	1.0%	
Tetrachloroethene	9.95	10.7	10	100%	107%	7.3%	
Chlorobenzene	9.67	10.5	10	97%	105%	8.2%	
Ethylbenzene	9.53	10.9	10	95%	109%	13.4%	
m,p-Xylene	19.9	19.6	20	100%	98%	1.5%	
Bromoform	11.1	10.6	10	111%	106%	4.6%	

Analytical Report

	<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>		
Styrene		10.8	10.3	10	108%	103%	4.7%	
1,1,2,2-Tetrachloroethane		10.4	10.5	10	104%	105%	1.0%	
o-Xylene		11.9	11.4	10	119%	114%	4.3%	
4-Ethyltoluene		11.8	11.4	10	118%	114%	3.4%	
1,3,5-Trimethylbenzene		11	11	10	110%	110%	0.0%	
1,2,4-Trimethylbenzene		11.1	10.7	10	111%	107%	3.7%	
1,3-Dichlorobenzene		11.9	11	10	119%	110%	7.9%	
Benzyl Chloride		10.5	10.5	10	105%	105%	0.0%	
1,4-Dichlorobenzene		11.7	10.8	10	117%	108%	8.0%	
1,2-Dichlorobenzene		10.5	9.86	10	105%	99%	6.3%	
1,2,4-Trichlorobenzene		10.5	9.42	10	105%	94%	10.8%	
Hexachloro-1,3-butadiene		10.5	9.77	10	105%	98%	7.2%	
4-bromofluorobenzene (surrogate)		115%	110%					
Analysis Date/Time:		10-20-18/20:17	10-21-18/05:56					
Analyst Initials		tjg	tjg					

TO-15 Quality Control Data

EnvisionAir Batch Number: 102018CAIR(2)

<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	
1,1,2,2-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	< 15	15	
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)	97%						
Analysis Date/Time:	10-21-18/11:48						
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>
Propylene	10.7	9.51	10	107%	95%	11.8%	
Dichlorodifluoromethane	10.1	8.24	10	101%	82%	20.3%	2
Chloromethane	11.2	9.84	10	112%	98%	12.9%	
Vinyl Chloride	11.4	9.45	10	114%	95%	18.7%	
1,3-Butadiene	10.3	9.05	10	103%	91%	12.9%	
Bromomethane	10.6	8.99	10	106%	90%	16.4%	
Chloroethane	10.8	9.03	10	108%	90%	17.9%	
Vinyl Bromide	10.8	9	10	108%	90%	18.2%	
Trichlorofluoromethane	11.9	8.72	10	119%	87%	30.8%	2
Acetone	10.1	8.85	10	101%	89%	13.2%	
1,1-Dichloroethene	10.9	9.47	10	109%	95%	14.0%	
Methylene Chloride	9.99	9.04	10	100%	90%	10.0%	
Carbon Disulfide	10.7	9.44	10	107%	94%	12.5%	
trans-1,2-Dichloroethene	10.8	9.5	10	108%	95%	12.8%	
Methyl-tert-butyl ether	11.2	10.1	10	112%	101%	10.3%	
1,1-Dichloroethane	10.5	9.29	10	105%	93%	12.2%	
Vinyl Acetate	11.6	10.3	10	116%	103%	11.9%	
N-Hexane	10.5	9.3	10	105%	93%	12.1%	
2-Butanone (MEK)	11	9.95	10	110%	100%	10.0%	
cis-1,2-Dichloroethene	10.8	9.36	10	108%	94%	14.3%	
Ethyl Acetate	10.9	9.78	10	109%	98%	10.8%	
Chloroform	11.3	9.86	10	113%	99%	13.6%	
Tetrahydrofuran	11	9.73	10	110%	97%	12.3%	
1,2-Dichloroethane	10.8	9.06	10	108%	91%	17.5%	
1,1,1-Trichloroethane	11.4	9.58	10	114%	96%	17.3%	
Carbon Tetrachloride	11.5	9.72	10	115%	97%	16.8%	
Benzene	11.3	9.64	10	113%	96%	15.9%	
Cyclohexane	11.4	9.22	10	114%	92%	21.1%	2
1,2-Dichloropropane	10.8	9.16	10	108%	92%	16.4%	
Trichloroethene	10.8	9.16	10	108%	92%	16.4%	
Bromodichloromethane	11.1	9.57	10	111%	96%	14.8%	
1,4-Dioxane	10.9	10.5	10	109%	105%	3.7%	
Isooctane	10.8	9.84	10	108%	98%	9.3%	
N-Heptane	11	9.54	10	110%	95%	14.2%	
cis-1,3-Dichloropropene	11.4	9.81	10	114%	98%	15.0%	
4-Methyl-2-pentanone (MIBK)	12.2	10.3	10	122%	103%	16.9%	
trans-1,3-Dichloropropene	11.1	9.6	10	111%	96%	14.5%	
1,1,2-Trichloroethane	10.6	9.19	10	106%	92%	14.2%	
Toluene	11.5	9.95	10	115%	100%	14.5%	
2-Hexanone	12.7	10.6	10	127%	106%	18.0%	
Dibromochloromethane	12.3	10.5	10	123%	105%	15.8%	
1,2-dibromoethane (EDB)	11.9	10.1	10	119%	101%	16.4%	
Tetrachloroethene	12.2	10.5	10	122%	105%	15.0%	
Chlorobenzene	11.8	10.3	10	118%	103%	13.6%	
Ethylbenzene	12	10.7	10	120%	107%	11.5%	
m,p-Xylene	22	19.2	20	110%	96%	13.6%	
Bromoform	12.1	10.7	10	121%	107%	12.3%	

Analytical Report

	<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>		
Styrene		11.5	9.9	10	115%	99%	15.0%	
1,1,2,2-Tetrachloroethane		11.7	10.1	10	117%	101%	14.7%	
o-Xylene		13	10.9	10	130%	109%	17.6%	
4-Ethyltoluene		13	11.3	10	130%	113%	14.0%	
1,3,5-Trimethylbenzene		12.2	10.7	10	122%	107%	13.1%	
1,2,4-Trimethylbenzene		12.1	10.5	10	121%	105%	14.2%	
1,3-Dichlorobenzene		12.6	10.9	10	126%	109%	14.5%	
Benzyl Chloride		12.4	10.5	10	124%	105%	16.6%	
1,4-Dichlorobenzene		13.2	10	10	132%	100%	27.6%	2
1,2-Dichlorobenzene		11.4	9.81	10	114%	98%	15.0%	
1,2,4-Trichlorobenzene		11.9	9.35	10	119%	94%	24.0%	2
Hexachloro-1,3-butadiene		11.8	10.2	10	118%	102%	14.5%	
4-bromofluorobenzene (surrogate)		114%	113%					
Analysis Date/Time:		10-21-18/11:14	10-21-18/12:39					
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 | Reporting limit is supported by MDL. TJG |
| 2 | RPD is biased high, but recoveries are within control. TJG 10/24/18 |

CHAIN OF CUSTODY RECORD

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

Client: <u>Enviroforensics</u>	P.O. Number: <u>2018-1296</u>
Report Address: <u>N16 W 23790 Stoner Ave Dr. Waukegan, WI 53188</u>	Project Name or Number: <u>Packard Way Cleaners</u>
Report To: <u>K. Heimstead / R. Hoverman</u>	Sampled by: <u>Nate Duda</u>
Phone: <u>262-510-0612</u>	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: <u>5 am</u>	Reporting Units needed: (circle) <u>ug/m³</u> mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) <u>1 day</u> 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:

www.envision-air.com

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
<u>6306-3659 Esquire Ave - IA-1</u>	<u>6LC</u>	<u>10/11/18</u>	<u>943</u>	<u>10/12/18</u>	<u>949</u>	<u>X</u>				<u>48052</u>	<u>02225</u>	<u>-29</u>	<u>-2</u>	<u>-2</u>	<u>18-2599</u>
<u>6306-3659 Esquire Ave - IA-B</u>	<u>6LC</u>	<u>10/11/18</u>	<u>946</u>	<u>10/12/18</u>	<u>948</u>	<u>X</u>				<u>4667</u>	<u>07445</u>	<u>-29</u>	<u>-2</u>	<u>-2</u>	<u>18-2600</u>
<u>6306-3659 Esquire Ave - OA</u>	<u>6LC</u>	<u>10/11/18</u>	<u>934</u>	<u>10/12/18</u>	<u>947</u>	<u>X</u>				<u>16024</u>	<u>08007</u>	<u>-29</u>	<u>-4</u>	<u>-4</u>	<u>18-2601</u>
<u>6306-3659 Esquire Ave - SSV-1</u>	<u>1LC</u>	<u>10/12/18</u>	<u>1016</u>	<u>10/12/18</u>	<u>1021</u>	<u>X</u>				<u>2219</u>	<u>0015</u>	<u>-29</u>	<u>-3</u>	<u>-3</u>	<u>18-2602</u>

Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
<u>[Signature]</u>	<u>10/15/18</u>		<u>Fedex</u>	<u>10/15/18</u>	
<u>Fedex</u>	<u>10/15/18</u>		<u>[Signature]</u>	<u>10/18/18</u>	<u>0935</u>

Synergy Environmental Lab, INC

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

ROB HOVERMAN
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WAUKESHA WI 53188

Report Date 26-Oct-18

Project Name FMR PACKARD WAY CLEANERS
Project # 6306 PO#2018-1307

Invoice # E35336

Lab Code 5035336A
Sample ID 6306-SB-107 1-2
Sample Matrix Soil
Sample Date 10/11/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	79.7	%			1	5021		10/12/2018	NJC	1
Organic										
VOC's										
Benzene	< 0.03	mg/kg	0.03	0.096	1	8260B		10/17/2018	CJR	1
Bromobenzene	< 0.025	mg/kg	0.025	0.081	1	8260B		10/17/2018	CJR	1
Bromodichloromethane	< 0.074	mg/kg	0.074	0.24	1	8260B		10/17/2018	CJR	1
Bromoform	< 0.029	mg/kg	0.029	0.092	1	8260B		10/17/2018	CJR	1
tert-Butylbenzene	< 0.026	mg/kg	0.026	0.084	1	8260B		10/17/2018	CJR	1
sec-Butylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		10/17/2018	CJR	1
n-Butylbenzene	< 0.04	mg/kg	0.04	0.13	1	8260B		10/17/2018	CJR	1
Carbon Tetrachloride	< 0.016	mg/kg	0.016	0.053	1	8260B		10/17/2018	CJR	1
Chlorobenzene	< 0.013	mg/kg	0.013	0.04	1	8260B		10/17/2018	CJR	1
Chloroethane	< 0.091	mg/kg	0.091	0.29	1	8260B		10/17/2018	CJR	1
Chloroform	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
Chloromethane	< 0.076	mg/kg	0.076	0.24	1	8260B		10/17/2018	CJR	1
2-Chlorotoluene	< 0.015	mg/kg	0.015	0.047	1	8260B		10/17/2018	CJR	1
4-Chlorotoluene	< 0.018	mg/kg	0.018	0.057	1	8260B		10/17/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 0.058	mg/kg	0.058	0.18	1	8260B		10/17/2018	CJR	1
Dibromochloromethane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/17/2018	CJR	1
1,4-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/17/2018	CJR	1
1,3-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/17/2018	CJR	1
1,2-Dichlorobenzene	< 0.028	mg/kg	0.028	0.088	1	8260B		10/17/2018	CJR	1
Dichlorodifluoromethane	< 0.048	mg/kg	0.048	0.15	1	8260B		10/17/2018	CJR	1
1,2-Dichloroethane	< 0.038	mg/kg	0.038	0.12	1	8260B		10/17/2018	CJR	1
1,1-Dichloroethane	< 0.034	mg/kg	0.034	0.11	1	8260B		10/17/2018	CJR	1

Project Name FMR PACKARD WAY CLEANERS
 Project # 6306 PO#2018-1307

Invoice # E35336

Lab Code 5035336A
 Sample ID 6306-SB-107 1-2
 Sample Matrix Soil
 Sample Date 10/11/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1-Dichloroethene	< 0.022	mg/kg	0.022	0.069	1	8260B		10/17/2018	CJR	1
cis-1,2-Dichloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
trans-1,2-Dichloroethene	< 0.028	mg/kg	0.028	0.09	1	8260B		10/17/2018	CJR	1
1,2-Dichloropropane	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
1,3-Dichloropropane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/17/2018	CJR	1
trans-1,3-Dichloropropene	< 0.022	mg/kg	0.022	0.068	1	8260B		10/17/2018	CJR	1
cis-1,3-Dichloropropene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/17/2018	CJR	1
Di-isopropyl ether	< 0.01	mg/kg	0.01	0.032	1	8260B		10/17/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.023	mg/kg	0.023	0.072	1	8260B		10/17/2018	CJR	1
Ethylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
Hexachlorobutadiene	< 0.085	mg/kg	0.085	0.27	1	8260B		10/17/2018	CJR	1
Isopropylbenzene	< 0.034	mg/kg	0.034	0.11	1	8260B		10/17/2018	CJR	1
p-Isopropyltoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/17/2018	CJR	1
Methylene chloride	< 0.15	mg/kg	0.15	0.46	1	8260B		10/17/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.05	mg/kg	0.05	0.16	1	8260B		10/17/2018	CJR	1
Naphthalene	< 0.094	mg/kg	0.094	0.3	1	8260B		10/17/2018	CJR	1
n-Propylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		10/17/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.88	1	8260B		10/17/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.09	1	8260B		10/17/2018	CJR	1
Tetrachloroethene	0.126	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
Toluene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
1,2,4-Trichlorobenzene	< 0.064	mg/kg	0.064	0.2	1	8260B		10/17/2018	CJR	1
1,2,3-Trichlorobenzene	< 0.066	mg/kg	0.066	0.21	1	8260B		10/17/2018	CJR	1
1,1,1-Trichloroethane	< 0.03	mg/kg	0.03	0.96	1	8260B		10/17/2018	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		10/17/2018	CJR	1
Trichloroethene (TCE)	< 0.041	mg/kg	0.041	0.13	1	8260B		10/17/2018	CJR	1
Trichlorofluoromethane	< 0.041	mg/kg	0.041	0.13	1	8260B		10/17/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.025	mg/kg	0.025	0.08	1	8260B		10/17/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
Vinyl Chloride	< 0.019	mg/kg	0.019	0.062	1	8260B		10/17/2018	CJR	1
m&p-Xylene	< 0.072	mg/kg	0.072	0.23	1	8260B		10/17/2018	CJR	1
o-Xylene	< 0.044	mg/kg	0.044	0.14	1	8260B		10/17/2018	CJR	1
SUR - Toluene-d8	99	Rec %			1	8260B		10/17/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	100	Rec %			1	8260B		10/17/2018	CJR	1
SUR - 4-Bromofluorobenzene	93	Rec %			1	8260B		10/17/2018	CJR	1
SUR - Dibromofluoromethane	93	Rec %			1	8260B		10/17/2018	CJR	1

Project Name FMR PACKARD WAY CLEANERS
 Project # 6306 PO#2018-1307

Invoice # E35336

Lab Code 5035336B
 Sample ID 6306-SB-107 3-4
 Sample Matrix Soil
 Sample Date 10/11/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	79.3	%			1	5021		10/12/2018	NJC	1
Organic										
VOC's										
Benzene	< 0.03	mg/kg	0.03	0.096	1	8260B		10/17/2018	CJR	1
Bromobenzene	< 0.025	mg/kg	0.025	0.081	1	8260B		10/17/2018	CJR	1
Bromodichloromethane	< 0.074	mg/kg	0.074	0.24	1	8260B		10/17/2018	CJR	1
Bromoform	< 0.029	mg/kg	0.029	0.092	1	8260B		10/17/2018	CJR	1
tert-Butylbenzene	< 0.026	mg/kg	0.026	0.084	1	8260B		10/17/2018	CJR	1
sec-Butylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		10/17/2018	CJR	1
n-Butylbenzene	< 0.04	mg/kg	0.04	0.13	1	8260B		10/17/2018	CJR	1
Carbon Tetrachloride	< 0.016	mg/kg	0.016	0.053	1	8260B		10/17/2018	CJR	1
Chlorobenzene	< 0.013	mg/kg	0.013	0.04	1	8260B		10/17/2018	CJR	1
Chloroethane	< 0.091	mg/kg	0.091	0.29	1	8260B		10/17/2018	CJR	1
Chloroform	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
Chloromethane	< 0.076	mg/kg	0.076	0.24	1	8260B		10/17/2018	CJR	1
2-Chlorotoluene	< 0.015	mg/kg	0.015	0.047	1	8260B		10/17/2018	CJR	1
4-Chlorotoluene	< 0.018	mg/kg	0.018	0.057	1	8260B		10/17/2018	CJR	1
1,2-Dibromo-3-chloropropane	< 0.058	mg/kg	0.058	0.18	1	8260B		10/17/2018	CJR	1
Dibromochloromethane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/17/2018	CJR	1
1,4-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/17/2018	CJR	1
1,3-Dichlorobenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/17/2018	CJR	1
1,2-Dichlorobenzene	< 0.028	mg/kg	0.028	0.088	1	8260B		10/17/2018	CJR	1
Dichlorodifluoromethane	< 0.048	mg/kg	0.048	0.15	1	8260B		10/17/2018	CJR	1
1,2-Dichloroethane	< 0.038	mg/kg	0.038	0.12	1	8260B		10/17/2018	CJR	1
1,1-Dichloroethane	< 0.034	mg/kg	0.034	0.11	1	8260B		10/17/2018	CJR	1
1,1-Dichloroethene	< 0.022	mg/kg	0.022	0.069	1	8260B		10/17/2018	CJR	1
cis-1,2-Dichloroethene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
trans-1,2-Dichloroethene	< 0.028	mg/kg	0.028	0.09	1	8260B		10/17/2018	CJR	1
1,2-Dichloropropane	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
1,3-Dichloropropane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/17/2018	CJR	1
trans-1,3-Dichloropropene	< 0.022	mg/kg	0.022	0.068	1	8260B		10/17/2018	CJR	1
cis-1,3-Dichloropropene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/17/2018	CJR	1
Di-isopropyl ether	< 0.01	mg/kg	0.01	0.032	1	8260B		10/17/2018	CJR	1
EDB (1,2-Dibromoethane)	< 0.023	mg/kg	0.023	0.072	1	8260B		10/17/2018	CJR	1
Ethylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/17/2018	CJR	1
Hexachlorobutadiene	< 0.085	mg/kg	0.085	0.27	1	8260B		10/17/2018	CJR	1
Isopropylbenzene	< 0.034	mg/kg	0.034	0.11	1	8260B		10/17/2018	CJR	1
p-Isopropyltoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/17/2018	CJR	1
Methylene chloride	< 0.15	mg/kg	0.15	0.46	1	8260B		10/17/2018	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.05	mg/kg	0.05	0.16	1	8260B		10/17/2018	CJR	1
Naphthalene	< 0.094	mg/kg	0.094	0.3	1	8260B		10/17/2018	CJR	1
n-Propylbenzene	< 0.033	mg/kg	0.033	0.1	1	8260B		10/17/2018	CJR	1
1,1,2,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.88	1	8260B		10/17/2018	CJR	1
1,1,1,2-Tetrachloroethane	< 0.028	mg/kg	0.028	0.09	1	8260B		10/17/2018	CJR	1

Project Name FMR PACKARD WAY CLEANERS
Project # 6306 PO#2018-1307

Invoice # E35336

Lab Code 5035336B
Sample ID 6306-SB-107 3-4
Sample Matrix Soil
Sample Date 10/11/2018

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Tetrachloroethene	0.074 "J"	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
Toluene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
1,2,4-Trichlorobenzene	< 0.064	mg/kg	0.064	0.2	1	8260B		10/17/2018	CJR	1
1,2,3-Trichlorobenzene	< 0.066	mg/kg	0.066	0.21	1	8260B		10/17/2018	CJR	1
1,1,1-Trichloroethane	< 0.03	mg/kg	0.03	0.96	1	8260B		10/17/2018	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		10/17/2018	CJR	1
Trichloroethene (TCE)	< 0.041	mg/kg	0.041	0.13	1	8260B		10/17/2018	CJR	1
Trichlorofluoromethane	< 0.041	mg/kg	0.041	0.13	1	8260B		10/17/2018	CJR	1
1,2,4-Trimethylbenzene	< 0.025	mg/kg	0.025	0.08	1	8260B		10/17/2018	CJR	1
1,3,5-Trimethylbenzene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/17/2018	CJR	1
Vinyl Chloride	< 0.019	mg/kg	0.019	0.062	1	8260B		10/17/2018	CJR	1
m&p-Xylene	< 0.072	mg/kg	0.072	0.23	1	8260B		10/17/2018	CJR	1
o-Xylene	< 0.044	mg/kg	0.044	0.14	1	8260B		10/17/2018	CJR	1
SUR - Toluene-d8	100	Rec %			1	8260B		10/17/2018	CJR	1
SUR - 1,2-Dichloroethane-d4	97	Rec %			1	8260B		10/17/2018	CJR	1
SUR - 4-Bromofluorobenzene	94	Rec %			1	8260B		10/17/2018	CJR	1
SUR - Dibromofluoromethane	88	Rec %			1	8260B		10/17/2018	CJR	1

