Tony Evers
Governor

Andrea Palm
Secretary

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET
PO BOX 2659
MADISON WI 53701-2659

Telephone: 608-266-1251
Fax: 608-267-2832
TTY: 711 or 800-947-3529

State of Wisconsin
Department of Health Services

December 27, 2019

Binyoti F. Amungwafor
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Drive
Milwaukee, WI 53212-3128

Re: Former One Hour Martinizing (BRRTS# 02-41-552219) Indoor Air Quality Site Visit

Dear Mr. Amungwafor:

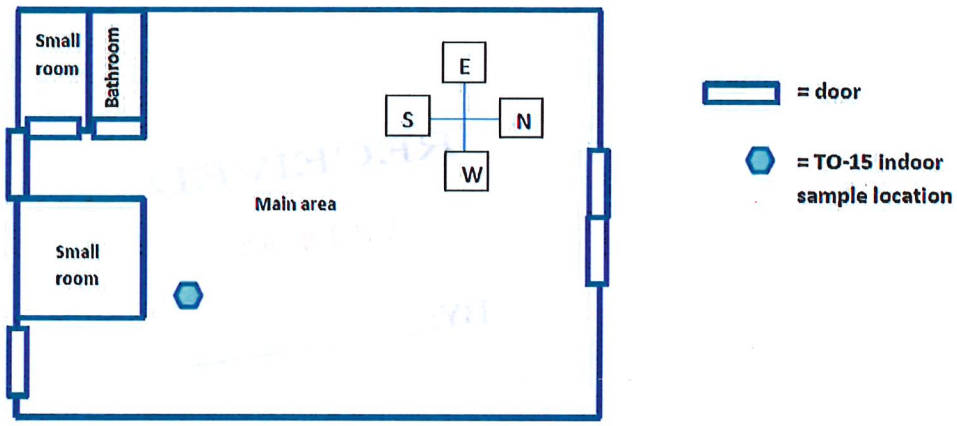
This letter summarizes our findings from the DNR request to assess indoor air at the Former One Hour Martinizing location at 8711A West Fond du Lac Avenue in Milwaukee, WI. **DHS recommends that follow up groundwater and soil gas sampling occur behind the former dry cleaning facility as DHS has concerns over the unknown potential for downgradient vapor intrusion exposures in neighboring dwellings.**

Background: On August 23, 2019, Wisconsin Department of Health Services (DHS) staff conducted a facility walk through and indoor air sampling event at the Former One Hour Martinizing location. We assessed potential volatile organic compounds (VOCs) inside the building at the facility because previous reports showed high levels of tetrachloroethylene (PCE) detected in groundwater monitoring wells located immediately behind the property. Previous records showed 82,400 µg/L and 218,000 µg/L (Note: DNR groundwater enforcement standard = 5µg/L[1]) for samples collected on January 26, 2009 by Moraine Environmental, Inc.

Investigation: We conducted the field investigation of the property, which consisted of an inspection of the building and grounds, real-time screening for total VOCs and ammonia, and laboratory VOCs analysis. City of Milwaukee Health Department staff were also present.

We used a GrayWolf Indoor Air Quality Monitor, and indoor and outdoor TO-15 air samples for later laboratory analysis. We placed a six liter Summa canister close to the ground inside the former dry cleaner building along with outdoor ambient air reference six liter Summa canisters in front and in back of the building for a six hour sampling time period (11 am to 5 pm). Air was field-screened on August 23, 2019 at the time the cans were deployed. Eastern Research Group, under subcontract by the Wisconsin State Laboratory of Hygiene (WSLH), analyzed the Summa canister air samples using US EPA Method TO-15 to evaluate for VOCs present. A drawing of the building floor plan can be found in **Figure 1**, and pictures taken during the sampling event can be found in **Attachment 1**.

Figure 1: Floor plan of the former One Hour Martinizing facility, 8711A West Fond du Lac Avenue in Milwaukee, WI. Note: floor plan is not to scale.



Results: Background total VOCs were observed at approximately 650 ppb prior to entering the building and indoor total VOCs concentrations ranged from 517 ppb (small room in center back area) to 1,414 ppb (floor drain in center back area), Ammonia was detected at ambient air background concentrations of between 4.0 and 4.9 ppm both outdoors and indoors during the inspection. Results from the GrayWolf real time air monitoring are included in **Attachment 2**.

Results from the TO-15 laboratory analysis are included in **Attachment 3** and summarized in **Table 1** below. Reported concentrations were compared to action or human health based screening levels published by the U.S. EPA[2] or WI DNR[3]. The chlorinated solvents, tetrachloroethylene (PCE) and trichloroethylene (TCE), were detected in the indoor air of the former dry cleaner facility at levels below the DNR indoor air vapor action levels for small commercial buildings. All other VOC detections reported were present in both the indoor and outdoor samples and are therefore considered to be part of ambient air background concentrations.

Table 1: Summary of chlorinated solvent sampling results

	ppbV Results						
	Outdoor Front/Back		Indoor				
VOC Detected	ppbV	flag	ppbV	flag	Action Level ppbV	Action Level Source[2,3]	Notes
Tetrachloroethylene (PCE)	0.01/0.07		2.0		27	DNR	
Trichloroethylene (TCE)	ND/0.004		0.05		1.6	DNR	

Abbreviations: VOC = volatile organic compound, ppbV = parts per billion on a volumetric basis, ND = not detected.

Key observations from the meteorological conditions during sampling follow: mostly sunny, wind NE at 14 mph, temperature 56 degrees F, humidity 57%, barometer 30.25 in., dew point 56 degrees F, visibility 10 mi., source – NOAA Website, Milwaukee General Mitchel Airport, accessed 8/23/2019.

Discussion: A review of the GrayWolf real time air monitoring data resulted in the following comments. The total VOCs levels observed were within expected concentration ranges for small commercial building indoor air[4] during the walk through. The slightly elevated total VOCs observed in the back area of the building is not surprising as there is a floor drain located in that area.

The following is noted after a review of the TO-15 laboratory analysis results. While the chlorinated solvents, PCE and TCE, were detected in the indoor air of the former dry cleaner facility, they were both at levels below the DNR indoor air vapor action levels for small commercial buildings.

Site Visit Limitations: The results from this site visit represent a snap shot in time, and can only be used to evaluate the environmental conditions of the dwelling at that point in time. Due to instrument down time, the laboratory was not able to analyze the samples within the 30 day hold time as recommended by the U.S. EPA Method TO-15.

Human Health Concerns: The primary target for PCE toxicity is the central nervous system[5]. Exposure to moderate amounts of PCE may cause dizziness or drowsiness, headache and loss of coordination. Exposure to low amounts of PCE over a long time period may cause changes in mood, memory, attention, reaction time, and vision. Animal studies also show PCE has toxic effects on the liver and kidney. Epidemiological studies suggest that PCE might lead to a higher risk of developing bladder cancer, multiple myeloma, or non-Hodgkin's lymphoma. The central nervous system is also a target for TCE toxicity, and exposure to moderate amounts may cause headaches, dizziness, and sleepiness[6]. Exposure to higher levels of TCE can also cause heart rhythm changes and damage to the liver and kidney. Human and animal studies show that TCE may cause developmental effects such as spontaneous abortion, congenital heart defects, central nervous system defects, and lowered birth weight. There is strong evidence that TCE exposure over long periods can cause kidney cancer and some evidence for TCE to increase risk for liver cancer and malignant lymphoma.

Conclusions: DHS detected chlorinated VOCs which may be attributed to their historical use during the time the dry cleaner was operational, but the concentrations detected were below DNR vapor action levels for small commercial dwellings.

Recommendations: DHS recommends that follow up groundwater and soil gas sampling occur behind the former dry cleaning facility, as the high levels of PCE detected in 2009 raises concerns over the unknown potential for downgradient vapor intrusion exposures in neighboring dwellings.

Please contact me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any questions about the health recommendations made in this letter.

Sincerely,

Curtis G. Hedman

Curtis Hedman, Ph.D.
Toxicologist

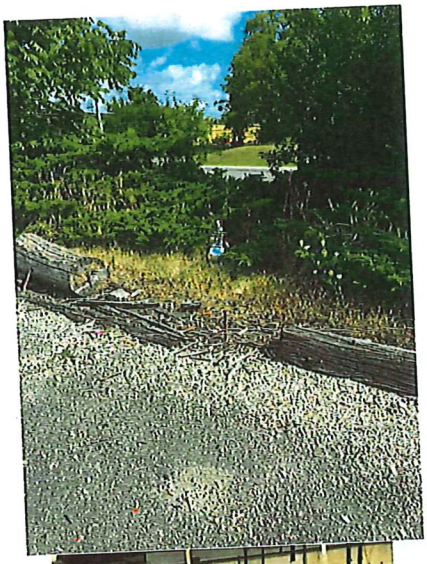
Cc: Lindor Schmidt, Milwaukee Health Department
Gerald and Betty Mutza

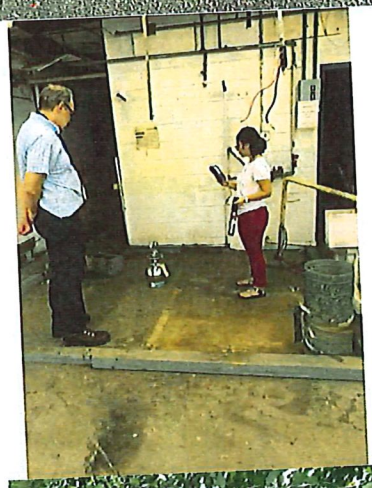
References:

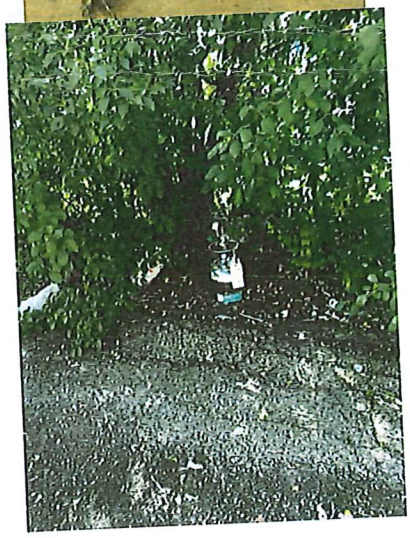
[1] Wisconsin Department of Natural Resources (DNR) Drinking Water and Groundwater Quality Standards/Advisory Levels, May 2017. Accessed online at: https://dnr.wi.gov/topic/DrinkingWater/documents/HALtable.pdf .
[2] U.S. Environmental Protection Agency (US EPA) Regional Screening Level (RSL) Resident Ambient Air Table, April 2019. Accessed online at: https://19january2017snapshot.epa.gov/sites/production/files/2016-06/documents/resair_sl_table_run_may2016.pdf .
[3] Wisconsin DNR Indoor Air Vapor Action Levels and Vapor Risk Screening Levels Based on November 2017 U.S. EPA Regional Screening Levels. Accessed online at: https://dnr.wi.gov/topic/Brownfields/documents/vapor/vapor-quick.pdf .
[4] American Industrial Hygiene Assosiation (AIHA). 2017. Volatile Organic Compounds (VOC) Criteria for New Construction. Accessed online at: https://www.aiha.org/government-affairs/PositionStatements/VOC%20White%20Paper.pdf .
[5] Agency for Toxic Substances and Disease Registry (ATSDR). 2019. Toxicological Profile for Tetrachloroethylene. Accessed online at: https://www.atsdr.cdc.gov/toxprofiles/tp18.pdf .
[6] Agency for Toxic Substances and Disease Registry (ATSDR). 2019. Toxicological Profile for Trichloroethylene. Accessed online at: https://www.atsdr.cdc.gov/toxprofiles/tp19.pdf .

Attachment 1

Photos from Sampling Event







Attachment 2

GrayWolf IAQ Monitor Data

GrayWolf Results from 8/23/2019 visit to 8711A West Fond du Lac Avenue, Milwaukee, WI

Sampling Location	Sample Description	Total VOCs (ppb)	Ammonia (ppm)
By DHS Vehicle	Background readings prior to entering building	650	4.1
Measurements inside former dry cleaner	Just inside front door at approximately 3 feet height	670	4.1
	Just inside front door at door threshold, near floor	690	4.1
	Back, center of main area	679	4.2
	Back, center of main area – over floor drain	637	4.2
	Back, center of main area – over floor drain	121	4.9
	Back, center of main area – over floor drain	1414	N/A
	Back, center of main area – over floor drain	620	4.2
	Back room, to right of center area	605	4.1
	Back room, to right of center area	625	4.1
	Small bathroom, to right of center area	559	4.4
	Back, center small room	560	4.0
	Back, center small room, over floor drain #1	525	4.0
	Back, center small room, over floor drain #2	517	4.4
	Back corner, to left of center area	544	4.5
	Back corner, to left of center area	526	4.5

Key: ppb = parts per billion; ppm=parts per million. N/A – not applicable, result not recorded.

Attachment 3

TO-15 Laboratory Reports

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058001

Report To:
CURTIS HEDMAN
1 W. WILSON ST
RM 150
MADISON, WI 53701

Invoice To:
DEPARTMENT OF HEALTH

Customer ID: DH060

Field #: OUTDOOR-FRONT
Project No: 1 HRM - FDL AVE
Collection End: 8/23/2019 4:26:00 PM
Collection Start: 08/23/19 1033
Collected By: C. HEDMAN
Date Received: 8/27/2019
Date Reported: 11/15/2019
Sample Reason:

ID#:
Sample Location:
Sample Description:
Sample Type: AR-AIR
Waterbody:
Point or Outfall:
Sample Depth:
Program Code:
Region Code:
County:

Nonstandard Analysis

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 10/11/19 09:04	Analysis Date: 10/11/19 09:04				
Nonstandard Analysis	Nonstandard Analysis	Complete			

Due to analytical instrumentation issues the sample you submitted for analysis under EPA method TO-15 was analyzed by ERG; ERG Sample ID is 9100936-03, and your field number is OUTDOOR - BACK. The ERG results for your sample will be sent separately.

List of Abbreviations:

LOD = Level of detection
LOQ = Level of quantification
ND = None detected. Results are less than the LOD
F next to result = Result is between LOD and LOQ
Z next to result = Result is between 0 (zero) and LOD
if LOD=LOQ, Limits were not statistically derived

Test results for NELAP accredited tests are certified to meet the requirements of the NELAC standards. For a list of accredited analytes see http://www.slh.wisc.edu/about/compliance/nelac-laboratory-accreditation
Results, LOD and LOQ values have been adjusted for analytical dilutions and percent moisture where applicable.
Results relate only to the items tested.

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058001

Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281
Metals: Graham Anderson, Supervisor 608-224-6281
Organics: Erin Mani, Supervisor 608-224-6269
Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230
Water Microbiology: Martin Collins, Supervisor 608-224-6239
Radiochemistry: David Webb, Division Director 608-224-6227

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058002

Report To:
CURTIS HEDMAN
1 W. WILSON ST
RM 150
MADISON, WI 53701

Invoice To:
DEPARTMENT OF HEALTH

Customer ID: DH060

Field #: INDOOR
Project No: 1 HRM - FDL AVE
Collection End: 8/23/2019 4:46:00 PM
Collection Start: 08/23/19 1055
Collected By: C. HEDMAN
Date Received: 8/27/2019
Date Reported: 11/15/2019
Sample Reason:

ID#:
Sample Location:
Sample Description:
Sample Type: AI-INDOOR AIR
Waterbody:
Point or Outfall:
Sample Depth:
Program Code:
Region Code:
County:

Nonstandard Analysis

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 10/11/19 06:44	Analysis Date: 10/11/19 06:44				
Nonstandard Analysis	Nonstandard Analysis	Complete			

Due to analytical instrumentation issues the sample you submitted for analysis under EPA method TO-15 was analyzed by ERG; ERG Sample ID is 9100936-01, and your field number is OUTDOOR - FRONT. The ERG results for your sample will be sent separately.

List of Abbreviations:

LOD = Level of detection
LOQ = Level of quantification
ND = None detected. Results are less than the LOD
F next to result = Result is between LOD and LOQ
Z next to result = Result is between 0 (zero) and LOD
if LOD=LOQ, Limits were not statistically derived

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Results, LOD and LOQ values have been adjusted for analytical dilutions and percent moisture where applicable.
Results relate only to the items tested.

The water microbiology unit analyzes samples as received and not all samples are tested for preservation before analysis is performed.

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058002

Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281
Metals: Graham Anderson, Supervisor 608-224-6281
Organics: Erin Mani, Supervisor 608-224-6269
Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230
Water Microbiology: Martin Collins, Supervisor 608-224-6239
Radiochemistry: David Webb, Division Director 608-224-6227

Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058003

Report To:
CURTIS HEDMAN
1 W. WILSON ST
RM 150
MADISON, WI 53701

Invoice To:
DEPARTMENT OF HEALTH

Customer ID: DH060

Field #: OUTDOOR-BACK
Project No: 1 HRM - FDL AVE
Collection End: 8/23/2019 5:10:00 PM
Collection Start: 08/23/19 1113
Collected By: C. HEDMAN
Date Received: 8/27/2019
Date Reported: 11/15/2019
Sample Reason:

ID#:
Sample Location:
Sample Description:
Sample Type: AR-AIR
Waterbody:
Point or Outfall:
Sample Depth:
Program Code:
Region Code:
County:

Nonstandard Analysis

Analyte	Analysis Method	Result	Units	LOD	LOQ
Prep Date: 10/11/19 07:53	Analysis Date: 10/11/19 07:53				
Nonstandard Analysis	Nonstandard Analysis	Complete			

Due to analytical instrumentation issues the sample you submitted for analysis under EPA method TO-15 was analyzed by ERG; ERG Sample ID is 9100936-02, and your field number is INDOOR. The ERG results for your sample will be sent separately.

List of Abbreviations:

LOD = Level of detection
LOQ = Level of quantification
ND = None detected. Results are less than the LOD
F next to result = Result is between LOD and LOQ
Z next to result = Result is between 0 (zero) and LOD
if LOD=LOQ, Limits were not statistically derived

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Results, LOD and LOQ values have been adjusted for analytical dilutions and percent moisture where applicable.
Results relate only to the items tested.

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Wisconsin State Laboratory of Hygiene
UNIVERSITY OF WISCONSIN-MADISON

Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive, PO Box 7996
Madison, WI 53707-7996
(800)442-4618 - FAX (608)224-6213
http://www.slh.wisc.edu

Laboratory Report

D.F. Kurtycz, M.D., Medical Director - Prof. James J. Schauer, Ph.D., Director

Environmental Health Division

WDNR LAB ID: 113133790 NELAP LAB ID: 2091 EPA LAB ID: WI00007, WI00008 WI DATCP ID: 105-415

WSLH Sample: 466058003

Responsible Party

Inorganic Chemistry: Graham Anderson, Supervisor 608-224-6281
Metals: Graham Anderson, Supervisor 608-224-6281
Organics: Erin Mani, Supervisor 608-224-6269
Environmental Toxicology: Dawn Perkins, Supervisor 608-224-6230
Water Microbiology: Martin Collins, Supervisor 608-224-6239
Radiochemistry: David Webb, Division Director 608-224-6227

CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 5
2601 Agriculture Dr.
Madison, WI 53718
ATTN: Ms. Jenna Smith
PHONE: (608) 263-6258 FAX: (312) 886-5824

FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Outdoor - Front
Pressure @ Receipt: 16.50" Hg
Comments:

Lab ID: 9100936-01
Canister #: ESS-6011

Sampled: 08/23/19 16:26
Received: 10/09/19 12:26
Analyzed: 10/11/19 06:44

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	0.0825	0.09	U	0.110
Propylene	0.0843	0.15	U	0.141
Dichlorodifluoromethane	**0.433**	**2.15**		**0.0371**
Chloromethane	**0.422**	**0.87**		**0.0344**
Dichlorotetrafluoroethane	**0.0159**	**0.11**		**0.0103**
Vinyl chloride	ND	ND	U	0.0102
1,3-Butadiene	0.00700	0.02	U	0.0110
Ethylene oxide	ND	ND	U	0.0614
Bromomethane	0.00670	0.03	U	0.00990
Chloroethane	ND	ND	U	0.0161
Acetonitrile	**0.320**	**0.54**		**0.0746**
Acrolein	0.132	0.30	U	0.144
Trichlorofluoromethane	**0.199**	**1.12**		**0.0166**
Acrylonitrile	ND	ND	U	0.0219
1,1-Dichloroethene	ND	ND	U	0.0124
Dichloromethane	**0.0847**	**0.30**		**0.0512**
Carbon Disulfide	0.00820	0.03	U	0.0415
Trichlorotrifluoroethane	**0.0701**	**0.54**		**0.00980**
trans-1,2-Dichloroethylene	ND	ND	U	0.0116
1,1-Dichloroethane	ND	ND	U	0.00730
Methyl tert-Butyl Ether	ND	ND	U	0.0198
Chloroprene	ND	ND	U	0.0222
cis-1,2-Dichloroethylene	ND	ND	U	0.0336
Bromochloromethane	ND	ND	U	0.0102
Chloroform	**0.0195**	**0.10**		**0.00830**
Ethyl tert-Butyl Ether	ND	ND	U	0.00740
1,2-Dichloroethane	**0.0173**	**0.07**		**0.00860**
1,1,1-Trichloroethane	0.00240	0.01	U	0.0149
Benzene	**0.117**	**0.38**		**0.00990**
Carbon Tetrachloride	**0.0956**	**0.60**		**0.0109**
tert-Amyl Methyl Ether	ND	ND	U	0.0101
1,2-Dichloropropane	ND	ND	U	0.0111
Ethyl Acrylate	ND	ND	U	0.0145
Bromodichloromethane	ND	ND	U	0.0111
Trichloroethylene	ND	ND	U	0.0123
Methyl Methacrylate	ND	ND	U	0.0750
cis-1,3-Dichloropropene	ND	ND	U	0.00990
Methyl Isobutyl Ketone	**0.0251**	**0.10**		**0.0102**
trans-1,3-Dichloropropene	ND	ND	U	0.0138
1,1,2-Trichloroethane	ND	ND	U	0.0114
Toluene	**0.188**	**0.71**		**0.0182**

Eastern Research Group

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in

08/27/19 12:27
DH060
466058

CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 5
2601 Agriculture Dr.
Madison, WI 53718
ATTN: Ms. Jenna Smith
PHONE: (608) 263-6258 **FAX:** (312) 886-5824

FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Outdoor - Front
Pressure @ Receipt: 16.50" Hg
Comments:

Lab ID: 9100936-01
Canister #: ESS-6011

Sampled: 08/23/19 16:26
Received: 10/09/19 12:26
Analyzed: 10/11/19 06:44

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Dibromochloromethane	ND	ND	U	0.0124
1,2-Dibromoethane	ND	ND	U	0.0132
n-Octane	0.0125	0.06	U	0.0233
Tetrachloroethylene	0.0106	0.07	U	0.0144
Chlorobenzene	ND	ND	U	0.0102
Ethylbenzene	**0.0280**	**0.12**		**0.0178**
m,p-Xylene	**0.0755**	**0.33**		**0.0325**
Bromoform	0.00290	0.03	U	0.0140
Styrene	0.00460	0.02	U	0.0151
1,1,2,2-Tetrachloroethane	ND	ND	U	0.0165
o-Xylene	**0.0360**	**0.16**		**0.0225**
1,3,5-Trimethylbenzene	0.00740	0.04	U	0.0114
1,2,4-Trimethylbenzene	0.0320	0.16	U	0.0330
m-Dichlorobenzene	ND	ND	U	0.0236
p-Dichlorobenzene	ND	ND	U	0.0242
o-Dichlorobenzene	ND	ND	U	0.0278
1,2,4-Trichlorobenzene	0.00430	0.03	U	0.141
Hexachloro-1,3-butadiene	0.00290	0.03	U	0.0727

CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 5
2601 Agriculture Dr.
Madison, WI 53718
ATTN: Ms. Jenna Smith
PHONE: (608) 263-6258 FAX: (312) 886-5824

FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Indoor
Pressure @ Receipt: 15.50" Hg
Comments:

Lab ID: 9100936-02
Canister #: ESS-6030

Sampled: 08/23/19 16:46
Received: 10/09/19 12:26
Analyzed: 10/11/19 07:53

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	**0.115**	**0.12**		**0.110**
Propylene	0.0870	0.15	U	0.141
Dichlorodifluoromethane	**0.509**	**2.52**		**0.0371**
Chloromethane	**0.460**	**0.95**		**0.0344**
Dichlorotetrafluoroethane	**0.0165**	**0.12**		**0.0103**
Vinyl chloride	ND	ND	U	0.0102
1,3-Butadiene	0.00650	0.01	U	0.0110
Ethylene oxide	ND	ND	U	0.0614
Bromomethane	0.00740	0.03	U	0.00990
Chloroethane	ND	ND	U	0.0161
Acetonitrile	**0.262**	**0.44**		**0.0746**
Acrolein	**0.187**	**0.43**		**0.144**
Trichlorofluoromethane	**0.245**	**1.38**		**0.0166**
Acrylonitrile	ND	ND	U	0.0219
1,1-Dichloroethene	ND	ND	U	0.0124
Dichloromethane	**0.108**	**0.38**		**0.0512**
Carbon Disulfide	0.0133	0.04	U	0.0415
Trichlorotrifluoroethane	**0.0710**	**0.55**		**0.00980**
trans-1,2-Dichloroethylene	ND	ND	U	0.0116
1,1-Dichloroethane	ND	ND	U	0.00730
Methyl tert-Butyl Ether	ND	ND	U	0.0198
Chloroprene	ND	ND	U	0.0222
cis-1,2-Dichloroethylene	0.0217	0.09	U	0.0336
Bromochloromethane	ND	ND	U	0.0102
Chloroform	**0.0585**	**0.29**		**0.00830**
Ethyl tert-Butyl Ether	ND	ND	U	0.00740
1,2-Dichloroethane	**0.0198**	**0.08**		**0.00860**
1,1,1-Trichloroethane	0.00210	0.01	U	0.0149
Benzene	**0.131**	**0.42**		**0.00990**
Carbon Tetrachloride	**0.0972**	**0.61**		**0.0109**
tert-Amyl Methyl Ether	ND	ND	U	0.0101
1,2-Dichloropropane	ND	ND	U	0.0111
Ethyl Acrylate	ND	ND	U	0.0145
Bromodichloromethane	ND	ND	U	0.0111
Trichloroethylene	**0.0465**	**0.25**		**0.0123**
Methyl Methacrylate	ND	ND	U	0.0750
cis-1,3-Dichloropropene	ND	ND	U	0.00990
Methyl Isobutyl Ketone	**0.0302**	**0.12**		**0.0102**
trans-1,3-Dichloropropene	ND	ND	U	0.0138
1,1,2-Trichloroethane	ND	ND	U	0.0114
Toluene	**0.250**	**0.94**		**0.0182**

CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 5
2601 Agriculture Dr.
Madison, WI 53718
ATTN: Ms. Jenna Smith
PHONE: (608) 263-6258 **FAX:** (312) 886-5824

FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Indoor
Pressure @ Receipt: 15.50" Hg
Comments:

Lab ID: 9100936-02
Canister #: ESS-6030

Sampled: 08/23/19 16:46
Received: 10/09/19 12:26
Analyzed: 10/11/19 07:53

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Dibromochloromethane	ND	ND	U	0.0124
1,2-Dibromoethane	ND	ND	U	0.0132
n-Octane	0.0179	0.08	U	0.0233
Tetrachloroethylene	**2.02**	**13.70**		**0.0144**
Chlorobenzene	ND	ND	U	0.0102
Ethylbenzene	**0.0407**	**0.18**		**0.0178**
m,p-Xylene	**0.101**	**0.44**		**0.0325**
Bromoform	0.00330	0.03	U	0.0140
Styrene	0.0119	0.05	U	0.0151
1,1,2,2-Tetrachloroethane	ND	ND	U	0.0165
o-Xylene	**0.0445**	**0.19**		**0.0225**
1,3,5-Trimethylbenzene	0.00850	0.04	U	0.0114
1,2,4-Trimethylbenzene	**0.0339**	**0.17**		**0.0330**
m-Dichlorobenzene	0.00210	0.01	U	0.0236
p-Dichlorobenzene	0.00740	0.04	U	0.0242
o-Dichlorobenzene	ND	ND	U	0.0278
1,2,4-Trichlorobenzene	0.00910	0.07	U	0.141
Hexachloro-1,3-butadiene	0.00290	0.03	U	0.0727

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ATTN: Ms. Jenna Smith
PHONE: (608) 263-6258 **FAX:** (312) 886-5824

FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Outdoor - Back
Pressure @ Receipt: 5.50" Hg
Comments:

Lab ID: 9100936-03
Canister #: ESS-6054

Sampled: 08/23/19 17:10
Received: 10/09/19 12:26
Analyzed: 10/11/19 09:04

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Acetylene	0.0654	0.07	U	0.110
Propylene	0.0557	0.10	U	0.141
Dichlorodifluoromethane	**0.447**	**2.22**		**0.0371**
Chloromethane	**0.443**	**0.92**		**0.0344**
Dichlorotetrafluoroethane	**0.0162**	**0.11**		**0.0103**
Vinyl chloride	ND	ND	U	0.0102
1,3-Butadiene	0.00500	0.01	U	0.0110
Ethylene oxide	ND	ND	U	0.0614
Bromomethane	0.00730	0.03	U	0.00990
Chloroethane	ND	ND	U	0.0161
Acetonitrile	**0.225**	**0.38**		**0.0746**
Acrolein	0.0599	0.14	U	0.144
Trichlorofluoromethane	**0.205**	**1.15**		**0.0166**
Acrylonitrile	ND	ND	U	0.0219
1,1-Dichloroethene	ND	ND	U	0.0124
Dichloromethane	**0.0967**	**0.34**		**0.0512**
Carbon Disulfide	0.00670	0.02	U	0.0415
Trichlorotrifluoroethane	**0.0687**	**0.53**		**0.00980**
trans-1,2-Dichloroethylene	ND	ND	U	0.0116
1,1-Dichloroethane	ND	ND	U	0.00730
Methyl tert-Butyl Ether	ND	ND	U	0.0198
Chloroprene	ND	ND	U	0.0222
cis-1,2-Dichloroethylene	0.00320	0.01	U	0.0336
Bromochloromethane	ND	ND	U	0.0102
Chloroform	**0.0219**	**0.11**		**0.00830**
Ethyl tert-Butyl Ether	ND	ND	U	0.00740
1,2-Dichloroethane	**0.0159**	**0.06**		**0.00860**
1,1,1-Trichloroethane	0.00210	0.01	U	0.0149
Benzene	**0.0715**	**0.23**		**0.00990**
Carbon Tetrachloride	**0.0937**	**0.59**		**0.0109**
tert-Amyl Methyl Ether	ND	ND	U	0.0101
1,2-Dichloropropane	ND	ND	U	0.0111
Ethyl Acrylate	ND	ND	U	0.0145
Bromodichloromethane	ND	ND	U	0.0111
Trichloroethylene	0.00360	0.02	U	0.0123
Methyl Methacrylate	ND	ND	U	0.0750
cis-1,3-Dichloropropene	ND	ND	U	0.00990
Methyl Isobutyl Ketone	0.00990	0.04	U	0.0102
trans-1,3-Dichloropropene	ND	ND	U	0.0138
1,1,2-Trichloroethane	ND	ND	U	0.0114
Toluene	**0.0850**	**0.32**		**0.0182**

CERTIFICATE OF ANALYSIS

U.S. Environmental Protection Agency, Region 5
2601 Agriculture Dr.
Madison, WI 53718
ATTN: Ms. Jenna Smith
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FILE #: [none]
REPORTED: 11/12/19 15:30
SUBMITTED: 10/09/19 to 10/10/19
AQS SITE CODE:
SITE CODE: WI Dept of Health

Description: Outdoor - Back
Pressure @ Receipt: 5.50" Hg
Comments:

Lab ID: 9100936-03
Canister #: ESS-6054

Sampled: 08/23/19 17:10
Received: 10/09/19 12:26
Analyzed: 10/11/19 09:04

Air Toxics by EPA Compendium Method TO-15

Analyte	Results ppbv	Results ug/m³	Flag	MDL ppbv
Dibromochloromethane	ND	ND	U	0.0124
1,2-Dibromoethane	ND	ND	U	0.0132
n-Octane	0.00750	0.04	U	0.0233
Tetrachloroethylene	**0.0672**	**0.46**		**0.0144**
Chlorobenzene	ND	ND	U	0.0102
Ethylbenzene	0.0146	0.06	U	0.0178
m,p-Xylene	**0.0341**	**0.15**		**0.0325**
Bromoform	0.00270	0.03	U	0.0140
Styrene	0.00430	0.02	U	0.0151
1,1,2,2-Tetrachloroethane	ND	ND	U	0.0165
o-Xylene	0.0174	0.08	U	0.0225
1,3,5-Trimethylbenzene	0.00390	0.02	U	0.0114
1,2,4-Trimethylbenzene	0.0141	0.07	U	0.0330
m-Dichlorobenzene	ND	ND	U	0.0236
p-Dichlorobenzene	0.00400	0.02	U	0.0242
o-Dichlorobenzene	ND	ND	U	0.0278
1,2,4-Trichlorobenzene	0.00580	0.04	U	0.141
Hexachloro-1,3-butadiene	0.00290	0.03	U	0.0727