

From: Dillon Plamann <dplamann@fehrgraham.com>
Sent: Monday, July 31, 2023 9:04 AM
To: Kerstenrealty@yahoo.com
Cc: Jenna Williams; Kendyl Hoss; Schultz, Josie M - DNR; John Butz; Don Gallo; Jeanne Tarvin (jtarvin@ramboll.com); Nancy Reid; Silje Roalsvik
Subject: RE: Vapor Sampling Results - 445 S. Adams Street, Green Bay (Clinic)
Attachments: 21-1121 - Bay Towel 2023-06-28 - Sampling Results May 2023, 445 S Adams Street.pdf

CAUTION: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning,

We have not yet received your approval as the property owner for coordinating the installation of a sub-slab vapor mitigation system at the property building as recommended in the attached vapor results letter. At your convenience, please let us know if this is acceptable.

Thank you,

DILLON PLAMANN, PG | Project Hydrogeologist
Fehr Graham | Engineering & Environmental

From: Dillon Plamann
Sent: Wednesday, June 28, 2023 12:58 PM
To: Kerstenrealty@yahoo.com
Cc: Jenna Williams <jwilliams@fehrgraham.com>; Kendyl Hoss <khoss@fehrgraham.com>; Schultz, Josie M - DNR <josie.schultz@wisconsin.gov>; John Butz <jbutz@baytowel.com>; Don Gallo <don.gallo@dgallolaw.com>; Jeanne Tarvin (jtarvin@ramboll.com) <jtarvin@ramboll.com>; Nancy Reid <nreid@resolutemgmt.com>; Silje Roalsvik <sroalsvik@resolutemgmt.com>
Subject: Vapor Sampling Results - 445 S. Adams Street, Green Bay (Clinic)

Good afternoon,

We have received the results of the vapor sampling conducted at your site, located at 445 S. Adams Street, Green Bay and sampled between May 16 and May 25, 2023. Please find attached the laboratory analytical results for your property, along with a letter which provides information on the results.

Based on the findings of the indoor air sampling, the current assessment suggests that there are no immediate health concerns in the property building regarding vapor intrusion from the Bay Towel site. However, it is important to address the potential risk of elevated concentrations in the sub-slab vapors that could pose future concerns. In order to ensure the ongoing safety and well-being of building

occupants, Fehr Graham strongly advises the installation of a sub-slab vapor mitigation system at the property building.

Once we receive your approval as the property owner, Fehr Graham, representing Bay Towel, will take responsibility for coordinating the installation of a sub-slab vapor mitigation system at the property building.

Please let us know if there are any questions.

Thank you,



DILLON PLAMANN, PG | Project Hydrogeologist
Fehr Graham | Engineering & Environmental

909 North 8th Street, Suite 101
Sheboygan, Wisconsin 53081
P: 920.453.0700
C: 920.946.2407
fehrgraham.com

June 28, 2023

Mr. Adam Kersten
301 N Broadway LLC
1600 Shawano Avenue, Suite 204
Green Bay, WI 54303

Submitted via email only to: kerstenrealty@yahoo.com

**RE: Vapor Sampling Results May 2023 for 445 S. Adams Street, Green Bay, WI
Former Bay Towel Site
501 S. Adams Street
Green Bay, WI
BRRTS # 02-05-237064**

Dear Mr. Kersten:

Fehr Graham, on behalf of Bay Towel, has completed additional site investigation activities for the former Bay Towel site located at 501 South Adams Street, Green Bay, WI 54301 (BRRTS #02-05-237064). The following site investigation activities have been completed on your property at 445 S. Adams Street:

- » Four (4) sub-slab vapor passive samplers were installed and sampled, with three (3) sampled over nine (9) days and one (1) sampled over seven (7) days to analyze the vapor chemistry below the property building. The second of two (2) sub-slab vapor sampling events was completed, with the second round completed using passive, longer duration sampling methods.
- » One (1) indoor air sample was collected to analyze the vapor chemistry within the property building. The second of two (2) indoor air sampling events was completed.
- » One (1) outdoor ambient air sample was collected for quality control purposes to analyze the upwind vapor chemistry outside the property building.
- » All vapor and air samples were submitted for laboratory analysis of Chlorinated Volatile Organic Compounds (CVOCs) that are associated with drycleaning solvents: tetrachloroethylene, trichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, and vinyl chloride.

CVOC compounds were detected in vapors at your property. Based on vapor laboratory analytical results, tetrachloroethylene exceeded the Commercial Sub-Slab in two (2) of the samples (Clinic SSVS-2 and Clinic SSVS-3). There were no exceedances of the Commercial Sub-Slab or Indoor Air standards established by the Wisconsin Department and Natural Resources (DNR) and the Wisconsin Department of Health Services in the other two (2) sub-slab vapor samples or the indoor air sample. The vapor results are summarized and compared to relevant standards in attached Table A.4.iv and Table A.4.v. The laboratory analytical reports for the vapor and air samples are also included as attachments.

June 28, 2023

Vapor Sampling Results May 2023 for 445 S. Adams Street, Green Bay, WI

Page 2

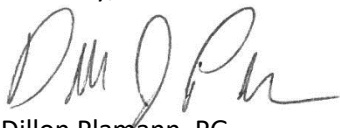
Based on the findings of the indoor air sampling, the current assessment suggests that there are no immediate health concerns in the property building regarding vapor intrusion from the Bay Towel site. However, it is important to address the potential risk of elevated concentrations in the sub-slab vapors that could pose future concerns. In order to ensure the ongoing safety and well-being of building occupants, Fehr Graham strongly advises the installation of a sub-slab vapor mitigation system at the property building. This proactive measure will effectively safeguard occupants from any potential hazards in the future.

Once we receive your approval as the property owner, Fehr Graham, representing Bay Towel, will take responsibility for coordinating the installation of a sub-slab vapor mitigation system at the property building. After the installation, testing will be conducted to verify that the system is functioning as intended. Furthermore, we will develop an Operations and Maintenance Plan specifically designed to ensure the continued effectiveness of the system, benefiting both current and future property owners and occupants. This comprehensive plan will outline the necessary steps and guidelines for proper system maintenance and operation.

A full summary of all site investigation results will be submitted to the DNR in the near future in a Site Investigation Report. Please refer to the attached DNR fact sheet RR-977 for additional explanation of the vapor results at your property.

Thank you for your cooperation during this investigation, and please share these results with all property building occupants. If you have any questions, please feel free to contact the WDNR Project Manager for the Bay Towel Site, Ms. Josie Schultz (josie.schultz@wisconsin.gov or 920.366.5685), or contact me at dplamann@fehrgraham.com or 920.946.2407.

Sincerely,



Dillon Plamann, PG
Project Hydrogeologist

Attachments: Table A.4.iv: Vapor Analytical Table – 445 S. Adams Street
Table A.4.v: Vapor Analytical Table – Upwind-Outdoor Air
Laboratory Analytical Reports
RR-977: Understanding Chemical Vapor Intrusion Testing Results

Cc: Ms. Josie Schultz, WDNR, via email only to josie.schultz@wisconsin.gov
Mr. Don Gallo, Gallo Law, LLC, via email only to don.gallo@dgallolaw.com
Mr. John Butz, Bay Towel, via email only to jbutz@baytowel.com

TABLE A.4.IV

Vapor Analytical Table - 445 S. Adams Street
 Former Bay Towel
 501 S Adams Street, Green Bay, WI 54301
 BRRTS# 02-05-237064

Sample ID	Sample Location	Sample Date(s)	Type of Sample	Collection Method	Time Period of Collection	Analytical Method	Method/Result Leak Detection	Clinic Indoor Air		Clinic SSVS-1	
								Prevention Center Office		Room 108	
								2/28/23	5/16/23-5/25/23	2/28/23	5/16/23-5/25/23
								indoor air	indoor air	sub-slab	sub-slab
								Composite	Composite - Passive	Grab	Composite - Passive
								8-hour	9 Days	30-min	9 Days
								TO-15 chlorinated	TO-17	TO-15 chlorinated	EPA 8260C
								shut-in/pass	none applicable	water/pass	none applicable
Tetrachloroethene (PCE)	µg/m ³	N	<i>5,800</i>	180	11.9	7.76	168	97.8			
Trichloroethene (TCE)	µg/m ³	C	<i>290</i>	8.8	<1.07	<2.36	<5.36	<2.37			
cis-1,2 Dichloroethene	µg/m ³	N	<i>5,800</i>	180	<0.793	<1.47	<3.96	<1.47			
trans-1,2 Dichloroethene	µg/m ³	N	<i>5,800</i>	180	<0.793	<1.77	<3.96	<1.77			
Vinyl Chloride	µg/m ³	C	<i>930</i>	28	<0.511	<0.963	<2.56	<0.96			

Notes:

N = Noncarcinogen; C = Carcinogen
ITALICS : Exceeds **Subslab** Vapor Standard
BOLD : Exceeds **Indoor** Air Standard

NA = Not Analyzed
 NS = No Standards
 VAL = Vapor Action Level (compared for indoor air concentrations)
 VRSL = Vapor Risk Screening Levels (compared for sub-slab vapor concentrations)
 AF (Attenuation Factor) = 0.03 for Residential and Small Commercial

Standards for VAL and VRSL from January 2023 WDNR RR-0136 based on November 2022 U.S. EPA Regional Screening Level (RSL) Tables:
<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>

All values in ug/m³ obtained from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator from U.S. EPA Regional Screening Level (RSL) database of toxicity and chemical parameters.

Indoor air values from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator and Regional Screening Levels (RSL) and correspond to noncarcinogenic hazard index of 1 or a carcinogenic target risk level of 1x10E-6 .

Residential vs. Small Commercial vs. Large Commercial/Industrial determined based on WDNR Publication RR-800

RR-800 Table 6a - Default Attenuation Factors
 Sub-Slab Vapor = 0.03 (Small Commercial & Residential)

TABLE A.4.IV

Vapor Analytical Table - 445 S. Adams Street
 Former Bay Towel
 501 S Adams Street, Green Bay, WI 54301
 BRRTS# 02-05-237064

Sample ID	Sample Location	Sample Date(s)	Type of Sample	Collection Method	Time Period of Collection	Analytical Method	Method/Result Leak Detection	Clinic SSVS-2		Clinic SSVS-3		Clinic SSVS-4	
								Restroom		Room 106		Room 102 (Exam Room)	
								2/28/23	5/16/23-5/25/23	2/28/23	5/16/23-5/25/23	2/28/23	5/18/23-5/25/23
								sub-slab	sub-slab	sub-slab	sub-slab	sub-slab	sub-slab
								Grab	Composite - Passive	Grab	Composite - Passive	Grab	Composite - Passive
								30-min	9 Days	30-min	9 Days	30-min	7 Days
								TO-15 chlorinated	EPA 8260C	TO-15 chlorinated	EPA 8260C	TO-15 chlorinated	EPA 8260C
								water/pass	none applicable	water/pass	none applicable	water/pass	none applicable
Tetrachloroethene (PCE)	µg/m ³	N	5,800	180	3,910	6,310	2,610	8,510	30.6	52.5			
Trichloroethene (TCE)	µg/m ³	C	290	8.8	28.8	42	<21.4	30.2	<1.07	<2.97			
cis-1,2 Dichloroethene	µg/m ³	N	5,800	180	<0.793	<1.48	<0.793	<1.49	<0.793	<1.85			
trans-1,2 Dichloroethene	µg/m ³	N	5,800	180	<0.793	<1.78	2.96	<1.79	<0.793	<2.23			
Vinyl Chloride	µg/m ³	C	930	28	<0.511	<0.97	<0.511	<0.97	<0.511	<1.21			

Notes:

N = Noncarcinogen; C = Carcinogen
ITALICS : Exceeds **Subslab** Vapor Standard
BOLD : Exceeds **Indoor** Air Standard

NA = Not Analyzed
 NS = No Standards
 VAL = Vapor Action Level (compared for indoor air concentrations)
 VRSL = Vapor Risk Screening Levels (compared for sub-slab vapor concentrations)
 AF (Attenuation Factor) = 0.03 for Residential and Small Commercial

Standards for VAL and VRSL from January 2023 WDNR RR-0136 based on November 2022 U.S.
<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>

All values in ug/m³ obtained from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator for U.S. EPA Regional Screening Level (RSL) database of toxicity and chemical parameters.

Indoor air values from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator and Regional noncarcinogenic hazard index of 1 or a carcinogenic target risk level of 1x10E-6 .

Residential vs. Small Commercial vs. Large Commercial/Industrial determined based on WDNR

RR-800 Table 6a - Default Attenuation Factors
 Sub-Slab Vapor = 0.03 (Small Commercial & Residential)

TABLE A.4.V

Vapor Analytical Table - Upwind-Outdoor Air
 Former Bay Towel
 501 S Adams Street, Green Bay, WI 54301
 BRRTS# 02-05-237064

Sample ID		C-Carcinogen N-Non Carcinogen	WDNR / WDHFS SMALL COMMERCIAL Subslab Vapor VRSL	WDNR / WDHFS SMALL COMMERCIAL Indoor Air VAL	WDNR / WDHFS Residential Subslab Vapor VRSL	WDNR / WDHFS Residential Indoor Air VAL	Outdoor Air	
							Sample Location	
Sample Date(s)							2/28/23	5/16/23-5/25/23
Type of Sample							outdoor (ambient) air	outdoor (ambient) air
Collection Method							Composite	Composite - Passive
Time Period of Collection							24-hour	9 Days
Analytical Method							TO-15 chlorinated	TO-17
Method/Result Leak Detection							shut-in/pass	none applicable
Tetrachloroethene (PCE)	µg/m ³						N	5,800
Trichloroethene (TCE)	µg/m ³	C	290	8.8	70	2.1	<1.07	<2.36
cis-1,2 Dichloroethene	µg/m ³	N	5,800	180	1,400	42.0	<0.793	<1.47
trans-1,2 Dichloroethene	µg/m ³	N	5,800	180	1,400	42	<0.793	<1.77
Vinyl Chloride	µg/m ³	C	930	28	56	1.7	<0.511	<0.960

Notes:

N = Noncarcinogen; C = Carcinogen
ITALICS : Exceeds **Subslab** Vapor Standard
BOLD : Exceeds **Indoor** Air Standard

NA = Not Analyzed
 NS = No Standards
 VAL = Vapor Action Level (compared for indoor air concentrations)
 VRSL = Vapor Risk Screening Levels (compared for sub-slab vapor concentrations)
 AF (Attenuation Factor) = 0.03 for Residential and Small Commercial

Standards for VAL and VRSL from January 2023 WDNR RR-0136 based on November 2022 U.S. EPA Regional Screening Level (RSL) Tables:
<https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>

All values in ug/m³ obtained from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator from U.S. EPA Regional Screening Level (RSL) database of toxicity and chemical parameters.

Indoor air values from U.S. EPA Vapor Intrusion Screening Level (VISL) calculator and Regional Screening Levels (RSL) and correspond to noncarcinogenic hazard index of 1 or a carcinogenic target risk level of 1x10E-6 .

Residential vs. Small Commercial vs. Large Commercial/Industrial determined based on WDNR Publication RR-800

RR-800 Table 6a - Default Attenuation Factors

Sub-Slab Vapor = 0.03 (Small Commercial & Residential)



Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230330R04
Laboratory Work Order: 0007001

Project Description:

Bay Towel 21-1121
Green Bay, WI

Prepared for:

Jenna Williams

Fehr Graham

909 North 8th Street, Suite 101

Sheboygan, WI 53081

Ryan W. Schneider
Senior Project Manager

June 12, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

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Fehr Graham
 909 North 8th Street, Suite 101
 Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007001-01 Sampler Type:	Fire Dept #1 Boiler Room Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-02 Sampler Type:	Fire Dept #2 Store Room Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-03 Sampler Type:	Clinic Rm 108 Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-04 Sampler Type:	Clinic Bathroom Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-05 Sampler Type:	Clinic Rm 106 Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-06 Sampler Type:	Residence Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas
0007001-07 Sampler Type:	Clinic Exam Rm Beacon Passive Sampler	06/01/2023	EPA 8260C	Soil Gas

Project Completeness
Samples Received: 7
Samples Analyzed: 7

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Case Narrative

U.S. EPA Method 8260C

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method 8260C, with laboratory results provided in nanograms (ng) and micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method 8260C. Analyses and reporting were under BEACON's Quality Assurance Project Plan.

Passive Soil-Gas Survey Notes

If sample locations are covered with or near the edge of an impervious surface (*e.g.*, asphalt or concrete), the concentrations of compounds in soil gas are higher than if the surfacing was not present. Therefore, the sample location conditions should be considered when comparing results between locations.

Survey findings are exclusive to this project and when the spatial relationships are compared with results of other BEACON Surveys it is necessary to incorporate information from both investigations (*e.g.*, depth to sources, soil types, porosity, soil moisture, presence of impervious surfacing, sample collection times).

Reporting Limits

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. Beacon determined uptake rates for a suite of compounds with the Beacon sampler for sampling in air. Beacon calculated the uptake rates for the remaining compounds using Graham's Law of Diffusion. The reported data includes LOQ limits.

Project Details

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017, except samples were analyzed within a 24-hour tune window.

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Analytical Results

Fehr Graham
 909 North 8th Street, Suite 101
 Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Summary of Compound Detections- Mass

Lab Sample ID: 0007001-03	Clinic Rm 108 Soil Gas		Method: EPA 8260C
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Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Tetrachloroethene	127-18-4	513		5.939	10	C23060115.D

Lab Sample ID: 0007001-04	Clinic Bathroom Soil Gas		Method: EPA 8260C
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Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Trichloroethene	79-01-6	177		4.300	10	C23060116.D
Tetrachloroethene	127-18-4	33,100	D	5.940	233	C23060148.D

Lab Sample ID: 0007001-05	Clinic Rm 106 Soil Gas		Method: EPA 8260C
---------------------------	----------------------------------	--	-------------------

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Trichloroethene	79-01-6	127		4.300	10	C23060117.D
Tetrachloroethene	127-18-4	44,200	D	5.936	233	C23060149.D

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121 Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R04 Lab Work Order: 0007001 Reported: 06/12/2023
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Summary of Compound Detections- Mass

Lab Sample ID: 0007001-07	Clinic Exam Rm Soil Gas	Method: EPA 8260C
---------------------------	-----------------------------------	-------------------

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Tetrachloroethene	127-18-4	219		5.936	10	C23060119.D

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121 Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R04 Lab Work Order: 0007001 Reported: 06/12/2023
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Summary of Compound Detections- Concentration

Lab Sample ID: 0007001-03	Clinic Rm 108	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Tetrachloroethene	127-18-4	97.8		5.939	1.90	C23060115.D

Lab Sample ID: 0007001-04	Clinic Bathroom	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Trichloroethene	79-01-6	42.0		4.300	2.37	C23060116.D
Tetrachloroethene	127-18-4	6,310	D	5.940	44.4	C23060148.D

Lab Sample ID: 0007001-05	Clinic Rm 106	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Trichloroethene	79-01-6	30.2		4.300	2.39	C23060117.D
Tetrachloroethene	127-18-4	8,510	D	5.936	44.7	C23060149.D

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121 Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R04 Lab Work Order: 0007001 Reported: 06/12/2023
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Summary of Compound Detections- Concentration

Lab Sample ID: 0007001-07	Clinic Exam Rm Soil Gas	Method: EPA 8260C
---------------------------	-----------------------------------	-------------------

Analyte	CAS#	Result (µg/m ³)	Q	RT	LOQ (µg/m ³)	File ID
Tetrachloroethene	127-18-4	52.5		5.936	2.39	C23060119.D

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081**Site Name:** Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams**Beacon Proposal:** 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023*Data Summary Table- Mass*

Compound	Frequency	LOQ (ng)	Max Value (ng)
Trichloroethene	3	10	177
Tetrachloroethene	7	10	44,200

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081**Site Name:** Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams**Beacon Proposal:** 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023***Data Summary Table- Concentration***

Compound	Frequency	LOQ ($\mu\text{g}/\text{m}^3$)	Max Value ($\mu\text{g}/\text{m}^3$)
Trichloroethene	3	2.37	42.0
Tetrachloroethene	7	1.90	8,510

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Detailed Analytical Results

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Detailed Analytical Results- Mass

Fehr Graham
 909 North 8th Street, Suite 101
 Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-03

Clinic Rm 108
 Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	06/01/2023 20:49	C23060115.D	
trans-1,2-Dichloroethene	156-60-5	<10	10	06/01/2023 20:49	C23060115.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	06/01/2023 20:49	C23060115.D	
Trichloroethene	79-01-6	<10	10	06/01/2023 20:49	C23060115.D	
Tetrachloroethene	127-18-4	513	10	06/01/2023 20:49	C23060115.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	113%	70-130		06/01/2023 20:49	C23060115.D
Surrogate: Toluene-d8	2037-26-5	95.6%	70-130		06/01/2023 20:49	C23060115.D
Surrogate: Bromofluorobenzene	460-00-4	99.7%	70-130		06/01/2023 20:49	C23060115.D

Fehr Graham
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 Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-04

Clinic Bathroom

Method: EPA 8260C

Soil Gas

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	06/01/2023 21:20	C23060116.D
trans-1,2-Dichloroethene	156-60-5	<10		10	06/01/2023 21:20	C23060116.D
cis-1,2-Dichloroethene	156-59-2	<10		10	06/01/2023 21:20	C23060116.D
Trichloroethene	79-01-6	177		10	06/01/2023 21:20	C23060116.D
Tetrachloroethene	127-18-4	33,100	D	233	06/02/2023 11:04	C23060148.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	115%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: 1,2-DCA-d4	17060-07-0	119%	70-130		06/02/2023 11:04	C23060148.D
Surrogate: Toluene-d8	2037-26-5	93.3%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: Toluene-d8	2037-26-5	99.4%	70-130		06/02/2023 11:04	C23060148.D
Surrogate: Bromofluorobenzene	460-00-4	103%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: Bromofluorobenzene	460-00-4	95.0%	70-130		06/02/2023 11:04	C23060148.D

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121 Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R04 Lab Work Order: 0007001 Reported: 06/12/2023
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Lab Sample ID: 0007001-05	Clinic Rm 106 Soil Gas	Method: EPA 8260C
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Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	06/01/2023 21:50	C23060117.D
trans-1,2-Dichloroethene	156-60-5	<10		10	06/01/2023 21:50	C23060117.D
cis-1,2-Dichloroethene	156-59-2	<10		10	06/01/2023 21:50	C23060117.D
Trichloroethene	79-01-6	127		10	06/01/2023 21:50	C23060117.D
Tetrachloroethene	127-18-4	44,200	D	233	06/02/2023 12:04	C23060149.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	112%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: 1,2-DCA-d4	17060-07-0	118%	70-130		06/02/2023 12:04	C23060149.D
Surrogate: Toluene-d8	2037-26-5	93.9%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: Toluene-d8	2037-26-5	99.2%	70-130		06/02/2023 12:04	C23060149.D
Surrogate: Bromofluorobenzene	460-00-4	101%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: Bromofluorobenzene	460-00-4	93.8%	70-130		06/02/2023 12:04	C23060149.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-07

Clinic Exam Rm
 Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10		10	06/01/2023 22:52	C23060119.D
trans-1,2-Dichloroethene	156-60-5	<10		10	06/01/2023 22:52	C23060119.D
cis-1,2-Dichloroethene	156-59-2	<10		10	06/01/2023 22:52	C23060119.D
Trichloroethene	79-01-6	<10		10	06/01/2023 22:52	C23060119.D
Tetrachloroethene	127-18-4	219		10	06/01/2023 22:52	C23060119.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	110%	70-130		06/01/2023 22:52	C23060119.D
Surrogate: Toluene-d8	2037-26-5	94.4%	70-130		06/01/2023 22:52	C23060119.D
Surrogate: Bromofluorobenzene	460-00-4	99.3%	70-130		06/01/2023 22:52	C23060119.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Detailed Analytical Results- Concentration

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-03

Clinic Rm 108
 Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	LOQ ($\mu\text{g}/\text{m}^3$)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.96		0.96	06/01/2023 20:49	C23060115.D
trans-1,2-Dichloroethene	156-60-5	<1.77		1.77	06/01/2023 20:49	C23060115.D
cis-1,2-Dichloroethene	156-59-2	<1.47		1.47	06/01/2023 20:49	C23060115.D
Trichloroethene	79-01-6	<2.37		2.37	06/01/2023 20:49	C23060115.D
Tetrachloroethene	127-18-4	97.8		1.90	06/01/2023 20:49	C23060115.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	113%	70-130		06/01/2023 20:49	C23060115.D
Surrogate: Toluene-d8	2037-26-5	95.6%	70-130		06/01/2023 20:49	C23060115.D
Surrogate: Bromofluorobenzene	460-00-4	99.7%	70-130		06/01/2023 20:49	C23060115.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-04

Clinic Bathroom
 Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result (µg/m ³)	Q	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.97		0.97	06/01/2023 21:20	C23060116.D
trans-1,2-Dichloroethene	156-60-5	<1.78		1.78	06/01/2023 21:20	C23060116.D
cis-1,2-Dichloroethene	156-59-2	<1.48		1.48	06/01/2023 21:20	C23060116.D
Trichloroethene	79-01-6	42.0		2.37	06/01/2023 21:20	C23060116.D
Tetrachloroethene	127-18-4	6,310	D	44.4	06/02/2023 11:04	C23060148.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	115%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: 1,2-DCA-d4	17060-07-0	119%	70-130		06/02/2023 11:04	C23060148.D
Surrogate: Toluene-d8	2037-26-5	93.3%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: Toluene-d8	2037-26-5	99.4%	70-130		06/02/2023 11:04	C23060148.D
Surrogate: Bromofluorobenzene	460-00-4	103%	70-130		06/01/2023 21:20	C23060116.D
Surrogate: Bromofluorobenzene	460-00-4	95.0%	70-130		06/02/2023 11:04	C23060148.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-05

Clinic Rm 106

Method: EPA 8260C

Soil Gas

Analyte	CAS#	Result (µg/m ³)	Q	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.97		0.97	06/01/2023 21:50	C23060117.D
trans-1,2-Dichloroethene	156-60-5	<1.79		1.79	06/01/2023 21:50	C23060117.D
cis-1,2-Dichloroethene	156-59-2	<1.49		1.49	06/01/2023 21:50	C23060117.D
Trichloroethene	79-01-6	30.2		2.39	06/01/2023 21:50	C23060117.D
Tetrachloroethene	127-18-4	8,510	D	44.7	06/02/2023 12:04	C23060149.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	118%	70-130		06/02/2023 12:04	C23060149.D
Surrogate: 1,2-DCA-d4	17060-07-0	112%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: Toluene-d8	2037-26-5	99.2%	70-130		06/02/2023 12:04	C23060149.D
Surrogate: Toluene-d8	2037-26-5	93.9%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: Bromofluorobenzene	460-00-4	101%	70-130		06/01/2023 21:50	C23060117.D
Surrogate: Bromofluorobenzene	460-00-4	93.8%	70-130		06/02/2023 12:04	C23060149.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Lab Sample ID: 0007001-07

Clinic Exam Rm
 Soil Gas

Method: EPA 8260C

Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	LOQ ($\mu\text{g}/\text{m}^3$)	Analyzed	File ID
Vinyl Chloride	75-01-4	<1.21		1.21	06/01/2023 22:52	C23060119.D
trans-1,2-Dichloroethene	156-60-5	<2.23		2.23	06/01/2023 22:52	C23060119.D
cis-1,2-Dichloroethene	156-59-2	<1.85		1.85	06/01/2023 22:52	C23060119.D
Trichloroethene	79-01-6	<2.97		2.97	06/01/2023 22:52	C23060119.D
Tetrachloroethene	127-18-4	52.5		2.39	06/01/2023 22:52	C23060119.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	110%	70-130		06/01/2023 22:52	C23060119.D
Surrogate: Toluene-d8	2037-26-5	94.4%	70-130		06/01/2023 22:52	C23060119.D
Surrogate: Bromofluorobenzene	460-00-4	99.3%	70-130		06/01/2023 22:52	C23060119.D

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

QC Information/Summary

Fehr Graham
 909 North 8th Street, Suite 101
 Sheboygan, WI 53081

Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B23E015 - Instrument: C System - File ID: FC23050329.D
B23E015-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	52.4	10	ng	50.0		105	70-130			
trans-1,2-Dichloroethene	57.3	10	ng	50.0		115	70-130			
cis-1,2-Dichloroethene	50.8	10	ng	50.0		102	70-130			
Trichloroethene	53.2	10	ng	50.0		106	70-130			
Tetrachloroethene	54.8	10	ng	50.0		110	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.0</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>54.3</i>		<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>52.9</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B23E015 - Instrument: C System - File ID: FC23050330.D
B23E015-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>105</i>		<i>ng</i>	<i>100</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B23F002 - Batch: 23F0001 - Instrument: C System - File ID: C23060102.D
23F0001-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	42.9	10	ng	50.0		85.8	80-120			
trans-1,2-Dichloroethene	53.9	10	ng	50.0		108	80-120			
cis-1,2-Dichloroethene	50.2	10	ng	50.0		100	80-120			
Trichloroethene	54.5	10	ng	50.0		109	80-120			
Tetrachloroethene	56.0	10	ng	50.0		112	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	<i>57.6</i>		<i>ng</i>	<i>50.0</i>		<i>115</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.8</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>51.0</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary
Sequence: B23F002 - Batch: 23F0001 - Instrument: C System - File ID: C23060103.D
23F0001-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.964	0.964	µg/m ³							U
trans-1,2-Dichloroethene	<1.77	1.77	µg/m ³							U
cis-1,2-Dichloroethene	<1.47	1.47	µg/m ³							U
Trichloroethene	<2.37	2.37	µg/m ³							U
Tetrachloroethene	<1.90	1.90	µg/m ³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>117</i>		<i>ng</i>	<i>100</i>		<i>117</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>95.4</i>		<i>ng</i>	<i>100</i>		<i>95.4</i>	<i>70-130</i>			

Fehr Graham
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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B23F002 - Batch: 23F0001 - Instrument: C System - File ID: C23060103.D
23F0001-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>117</i>		<i>ng</i>	<i>100</i>		<i>117</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>95.4</i>		<i>ng</i>	<i>100</i>		<i>95.4</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B23F002 - Instrument: C System - File ID: C23060104.D
B23F002-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	47.7	10	ng	50.0		95.3	70-130			
trans-1,2-Dichloroethene	54.7	10	ng	50.0		109	70-130			
cis-1,2-Dichloroethene	50.6	10	ng	50.0		101	70-130			
Trichloroethene	56.2	10	ng	50.0		112	70-130			
Tetrachloroethene	56.0	10	ng	50.0		112	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>56.9</i>		<i>ng</i>	<i>50.0</i>		<i>114</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>50.0</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Additional QC Information

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121 Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R04 Lab Work Order: 0007001 Reported: 06/12/2023
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Sample Result Calculation Summary (Concentration)

EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0007001-03		Sample Name: Clinic Rm 108					
Vinyl Chloride	12,805	1.00	0.810	U	U	C23060115.D	
trans-1,2-Dichloroethene	12,805	1.00	0.440	U	U	C23060115.D	
cis-1,2-Dichloroethene	12,805	1.00	0.530	U	U	C23060115.D	
Trichloroethene	12,805	1.00	0.330	U	U	C23060115.D	
Tetrachloroethene	12,805	1.00	0.410	513.37	97.8	C23060115.D	

Lab ID: 0007001-04		Sample Name: Clinic Bathroom					
Vinyl Chloride	12,785	1.00	0.810	U	U	C23060116.D	
trans-1,2-Dichloroethene	12,785	1.00	0.440	U	U	C23060116.D	
cis-1,2-Dichloroethene	12,785	1.00	0.530	U	U	C23060116.D	
Trichloroethene	12,785	1.00	0.330	177.17	42.0	C23060116.D	
Tetrachloroethene	12,785	23.25	0.410	1423.48	6,310	C23060148.D	

Lab ID: 0007001-05		Sample Name: Clinic Rm 106					
Vinyl Chloride	12,680	1.00	0.810	U	U	C23060117.D	
trans-1,2-Dichloroethene	12,680	1.00	0.440	U	U	C23060117.D	
cis-1,2-Dichloroethene	12,680	1.00	0.530	U	U	C23060117.D	
Trichloroethene	12,680	1.00	0.330	126.54	30.2	C23060117.D	
Tetrachloroethene	12,680	23.25	0.410	1903.13	8,510	C23060149.D	

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Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Sample Result Calculation Summary (Concentration)
EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0007001-07 **Sample Name:** Clinic Exam Rm

Vinyl Chloride	10,190	1.00	0.810	U	U	C23060119.D
trans-1,2-Dichloroethene	10,190	1.00	0.440	U	U	C23060119.D
cis-1,2-Dichloroethene	10,190	1.00	0.530	U	U	C23060119.D
Trichloroethene	10,190	1.00	0.330	U	U	C23060119.D
Tetrachloroethene	10,190	1.00	0.410	219.28	52.5	C23060119.D

Calculations:

$$C = \frac{1000 \times M \times DF}{U \times t}$$

where: C = concentration (µg/m³)
 M = mass (ng)
 DF = dilution factor
 t = sampling time (minutes)
 U = compound specific uptake rate

Reference: Federal Register/Vol. 79, No. 125/June 30, 2014

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Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Method Detection and Reporting Limit Calculations (Concentration)
EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m ³
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Lab ID: 0007001-03 Sample Name: Clinic Rm 108

Vinyl Chloride	12,805	1.00	0.810	10.0	0.96
trans-1,2-Dichloroethene	12,805	1.00	0.440	10.0	1.77
cis-1,2-Dichloroethene	12,805	1.00	0.530	10.0	1.47
Trichloroethene	12,805	1.00	0.330	10.0	2.37
Tetrachloroethene	12,805	1.00	0.410	10.0	1.90

Lab ID: 0007001-04 Sample Name: Clinic Bathroom

Vinyl Chloride	12,785	1.00	0.810	10.0	0.97
trans-1,2-Dichloroethene	12,785	1.00	0.440	10.0	1.78
cis-1,2-Dichloroethene	12,785	1.00	0.530	10.0	1.48
Trichloroethene	12,785	1.00	0.330	10.0	2.37
Tetrachloroethene	12,785	23.25	0.410	10.0	44.4

Lab ID: 0007001-05 Sample Name: Clinic Rm 106

Vinyl Chloride	12,680	1.00	0.810	10.0	0.97
trans-1,2-Dichloroethene	12,680	1.00	0.440	10.0	1.79
cis-1,2-Dichloroethene	12,680	1.00	0.530	10.0	1.49
Trichloroethene	12,680	1.00	0.330	10.0	2.39
Tetrachloroethene	12,680	23.25	0.410	10.0	44.7

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Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Method Detection and Reporting Limit Calculations (Concentration)
EPA 8260C

Analyte	t Sampling Time minutes	DF Dilution Factor	U Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m ³
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Lab ID: 0007001-07

Sample Name: Clinic Exam Rm

Vinyl Chloride	10,190	1.00	0.810	10.0	1.21
trans-1,2-Dichloroethene	10,190	1.00	0.440	10.0	2.23
cis-1,2-Dichloroethene	10,190	1.00	0.530	10.0	1.85
Trichloroethene	10,190	1.00	0.330	10.0	2.97
Tetrachloroethene	10,190	1.00	0.410	10.0	2.39

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Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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Lab Work Order: 0007001
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Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside ± 0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

Sample/Sample Receipt Qualifiers and Notes:

D Dilution required to report within calibration Limits.

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Beacon Proposal: 230330R04
Lab Work Order: 0007001
Reported: 06/12/2023

Sample Management Records



Beacon Environmental
2203A Commerce Road, Suite 1
Forest Hill, MD 21050 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230330R05
Laboratory Work Order: 0007002

Project Description:

Bay Towel 21-1121(A)
Green Bay, WI

Prepared for:

Jenna Williams

Fehr Graham

909 North 8th Street, Suite 101

Sheboygan, WI 53081

Ryan W. Schneider
Senior Project Manager

June 12, 2023

All data meet requirements as specified in the Beacon Environmental Quality Assurance Project Plan and the results relate only to the samples reported. The work performed was in accordance with ISO/IEC 17025:2017. This report shall not be reproduced, except in full, without written approval of the laboratory. Release of the data contained in this data package has been authorized by the Laboratory Director or his signee, as verified by the following signatures:

Steven C. Thornley
Laboratory Director

Peter B. Kelly
Quality Manager

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007002-01 Sampler Type:	Outdoor Air Beacon Passive Sampler	06/01/2023	TO-17 (Passive)	Ambient Air
0007002-02 Sampler Type:	Fire Dept. Indoor Air Beacon Passive Sampler	06/01/2023	TO-17 (Passive)	Indoor Air
0007002-03 Sampler Type:	Clinic Indoor Air Beacon Passive Sampler	06/01/2023	TO-17 (Passive)	Indoor Air
0007002-04 Sampler Type:	Residence Indoor Air Beacon Passive Sampler	06/01/2023	TO-17 (Passive)	Indoor Air

Project Completeness

Samples Received: 4
Samples Analyzed: 4

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Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Case Narrative

Beacon Environmental provided thermally conditioned Beacon Samplers for sampling, with analyses following U.S. EPA Method TO-17, with analytical results reported in $\mu\text{g}/\text{m}^3$. Beacon calculated concentration results using the exposure period, target analyte mass, and the following procedures detailed in ISO 16017-2, *Indoor, ambient and workplace air-Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography-Part 2: Diffusive sampling*.

Beacon reports results and reporting limits to three significant digits.

Reporting Limits (RLs)

The RLs represent a baseline above which results meet laboratory-determined limits of precision and accuracy. Beacon performed dilution analysis when results exceeded the upper calibration limit, bringing all reported results within the calibration range. The project method quantitation limit (MQL) is the limit of quantitation (LOQ) as noted in the data tables. The reported data includes LOQ limits.

Calibration Verification

All continuing calibration verification (CCV) values are within $\pm 30\%$ of the true values as defined by the initial calibration and met the requirements specified in BEACON's Quality Manual.

Internal Standards and Surrogates

Internal standards and surrogates are spiked on all blanks (ICB, BLK), field samples and laboratory control samples (ICV/CALV, BS, ICV and CCV). Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates are within the acceptance criteria unless noted in the **Case Narrative**.

Blank Contamination

No targeted compounds above the project method quantitation limit (MQL) for each compound were observed in the Laboratory Method Blanks unless noted in the **Case Narrative**.

Laboratory Control Samples

Acceptance criteria for surrogate and analytes recoveries are 70 to 130 percent; all recoveries are within the acceptance criteria unless noted in the **Case Narrative**.

Discussion

Samples were received in proper condition and laboratory control parameters were met unless otherwise noted below. The work performed was in accordance with ISO/IEC 17025:2017.

End of Case Narrative

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

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Lab Work Order: 0007002
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Analytical Results

Fehr Graham 909 North 8th Street, Suite 101 Sheboygan, WI 53081	Site Name: Bay Towel 21-1121(A) Site Location: Green Bay, WI Project Manager: Jenna Williams	Beacon Proposal: 230330R05 Lab Work Order: 0007002 Reported: 06/12/2023
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Summary of Compound Detections- Concentration

Lab Sample ID: 0007002-03	Clinic Indoor Air Indoor Air	Method: TO-17 (Passive)
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Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Tetrachloroethene	127-18-4	7.76		5.939	1.90	C23060107.D

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081**Site Name:** Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams**Beacon Proposal:** 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023***Data Summary Table- Concentration***

Compound	Frequency	LOQ ($\mu\text{g}/\text{m}^3$)	Max Value ($\mu\text{g}/\text{m}^3$)
Tetrachloroethene	1	1.90	7.76

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Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Detailed Analytical Results

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Lab Sample ID: 0007002-01

Outdoor Air
 Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	LOQ ($\mu\text{g}/\text{m}^3$)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.960		0.960	06/01/2023 16:05	C23060105.D
trans-1,2-Dichloroethene	156-60-5	<1.77		1.77	06/01/2023 16:05	C23060105.D
cis-1,2-Dichloroethene	156-59-2	<1.47		1.47	06/01/2023 16:05	C23060105.D
Trichloroethene	79-01-6	<2.36		2.36	06/01/2023 16:05	C23060105.D
Tetrachloroethene	127-18-4	<1.90		1.90	06/01/2023 16:05	C23060105.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	115%	70-130		06/01/2023 16:05	C23060105.D
Surrogate: Toluene-d8	2037-26-5	97.7%	70-130		06/01/2023 16:05	C23060105.D
Surrogate: Bromofluorobenzene	460-00-4	96.5%	70-130		06/01/2023 16:05	C23060105.D

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Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Lab Sample ID: 0007002-03

Clinic Indoor Air
 Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result ($\mu\text{g}/\text{m}^3$)	Q	LOQ ($\mu\text{g}/\text{m}^3$)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.963		0.963	06/01/2023 17:07	C23060107.D
trans-1,2-Dichloroethene	156-60-5	<1.77		1.77	06/01/2023 17:07	C23060107.D
cis-1,2-Dichloroethene	156-59-2	<1.47		1.47	06/01/2023 17:07	C23060107.D
Trichloroethene	79-01-6	<2.36		2.36	06/01/2023 17:07	C23060107.D
Tetrachloroethene	127-18-4	7.76		1.90	06/01/2023 17:07	C23060107.D
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	115%	70-130		06/01/2023 17:07	C23060107.D
Surrogate: Toluene-d8	2037-26-5	96.7%	70-130		06/01/2023 17:07	C23060107.D
Surrogate: Bromofluorobenzene	460-00-4	104%	70-130		06/01/2023 17:07	C23060107.D

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Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

QC Information/Summary

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23E015 - Instrument: C System - File ID: FC23050329.D
B23E015-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	52.4	10	ng	50.0		105	70-130			
trans-1,2-Dichloroethene	57.3	10	ng	50.0		115	70-130			
cis-1,2-Dichloroethene	50.8	10	ng	50.0		102	70-130			
Trichloroethene	53.2	10	ng	50.0		106	70-130			
Tetrachloroethene	54.8	10	ng	50.0		110	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.0</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>54.3</i>		<i>ng</i>	<i>50.0</i>		<i>109</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>52.9</i>		<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			

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Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23E015 - Instrument: C System - File ID: FC23050330.D
B23E015-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>105</i>		<i>ng</i>	<i>100</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>100</i>		<i>ng</i>	<i>100</i>		<i>100</i>	<i>70-130</i>			

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Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23F002 - Batch: 23F0001 - Instrument: C System - File ID: C23060102.D

23F0001-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	44.6	10	ng	50.0		89.2	70-130			
trans-1,2-Dichloroethene	53.7	10	ng	50.0		107	70-130			
cis-1,2-Dichloroethene	50.0	10	ng	50.0		100	70-130			
Trichloroethene	54.7	10	ng	50.0		109	70-130			
Tetrachloroethene	55.8	10	ng	50.0		112	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>57.5</i>		<i>ng</i>	<i>50.0</i>		<i>115</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.8</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>51.0</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary
Sequence: B23F002 - Batch: 23F0001 - Instrument: C System - File ID: C23060103.D
23F0001-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.938	0.938	µg/m ³							U
trans-1,2-Dichloroethene	<1.73	1.73	µg/m ³							U
cis-1,2-Dichloroethene	<1.43	1.43	µg/m ³							U
Trichloroethene	<2.30	2.30	µg/m ³							U
Tetrachloroethene	<1.85	1.85	µg/m ³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>117</i>		<i>ng</i>	<i>100</i>		<i>117</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>104</i>		<i>ng</i>	<i>100</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>95.8</i>		<i>ng</i>	<i>100</i>		<i>95.8</i>	<i>70-130</i>			

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Site Name: Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23F002 - Instrument: C System - File ID: C23060104.D
B23F002-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	48.3	10	ng	50.0		96.6	70-130			
trans-1,2-Dichloroethene	56.4	10	ng	50.0		113	70-130			
cis-1,2-Dichloroethene	51.6	10	ng	50.0		103	70-130			
Trichloroethene	57.5	10	ng	50.0		115	70-130			
Tetrachloroethene	57.1	10	ng	50.0		114	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>56.8</i>		<i>ng</i>	<i>50.0</i>		<i>114</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.7</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>50.5</i>		<i>ng</i>	<i>50.0</i>		<i>101</i>	<i>70-130</i>			

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Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23F002 - Instrument: C System - File ID: C23060111.D
B23F002-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.1	10	ng	50.0		102	70-130			
trans-1,2-Dichloroethene	55.3	10	ng	50.0		111	70-130			
cis-1,2-Dichloroethene	51.4	10	ng	50.0		103	70-130			
Trichloroethene	56.3	10	ng	50.0		113	70-130			
Tetrachloroethene	58.3	10	ng	50.0		117	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>55.7</i>		<i>ng</i>	<i>50.0</i>		<i>111</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>48.5</i>		<i>ng</i>	<i>50.0</i>		<i>97.0</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>48.9</i>		<i>ng</i>	<i>50.0</i>		<i>97.9</i>	<i>70-130</i>			

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 Sheboygan, WI 53081

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Site Location: Green Bay, WI
Project Manager: Jenna Williams

Beacon Proposal: 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Organics in Air by EPA TO-17 Using Beacon Sampler - Quality Control Summary

Sequence: B23F002 - Instrument: C System - File ID: C23060112.D
B23F002-CCB1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	ng							U
trans-1,2-Dichloroethene	<5	10	ng							U
cis-1,2-Dichloroethene	<5	10	ng							U
Trichloroethene	<5	10	ng							U
Tetrachloroethene	<5	10	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>115</i>		<i>ng</i>	<i>100</i>		<i>115</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>99.7</i>		<i>ng</i>	<i>100</i>		<i>99.7</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>95.8</i>		<i>ng</i>	<i>100</i>		<i>95.8</i>	<i>70-130</i>			

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TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary
LCS: 23F0001-BS1 File ID: C23060102.D

Analyzed: 6/1/23 15:35

LCSD: B23F002-ICV1 File ID: C23060104.D

Analyzed: 6/1/23 14:46

Analyte	CAS#	LCS Result (ng)	%REC Q	Spike Level (ng)	LCSD Result (ng)	%REC	%REC Limits	RPD	RPD Limit	Q
Vinyl Chloride	75-01-4	44.61	89.22	50	48.3	96.60	70-130	7.94	30	
trans-1,2-Dichloroethene	156-60-5	53.72	107.44	50	56.42	113.00	70-130	4.90	30	
cis-1,2-Dichloroethene	156-59-2	50.04	100.08	50	51.62	103.00	70-130	3.11	30	
Trichloroethene	79-01-6	54.69	109.38	50	57.45	115.00	70-130	4.92	30	
Tetrachloroethene	127-18-4	55.83	111.66	50	57.09	114.00	70-130	2.23	30	

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Reported: 06/12/2023

Additional QC Information

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Site Name: Bay Towel 21-1121(A)
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Sample Result Calculation Summary (Concentration)

TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial Result ng	C Calculated Result µg/m ³	File ID
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Lab ID: 0007002-01	Sample Name: Outdoor Air	Temp (°C): 7.20
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Vinyl Chloride	13,070	1.00	0.797	U	U	C23060105.D
trans-1,2-Dichloroethene	13,070	1.00	0.433	U	U	C23060105.D
cis-1,2-Dichloroethene	13,070	1.00	0.521	U	U	C23060105.D
Trichloroethene	13,070	1.00	0.325	U	U	C23060105.D
Tetrachloroethene	13,070	1.00	0.403	U	U	C23060105.D

Lab ID: 0007002-03	Sample Name: Clinic Indoor Air	Temp (°C): 21.00
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Vinyl Chloride	12,720	1.00	0.816	U	U	C23060107.D
trans-1,2-Dichloroethene	12,720	1.00	0.443	U	U	C23060107.D
cis-1,2-Dichloroethene	12,720	1.00	0.534	U	U	C23060107.D
Trichloroethene	12,720	1.00	0.332	U	U	C23060107.D
Tetrachloroethene	12,720	1.00	0.413	40.79	7.76	C23060107.D

Fehr Graham
909 North 8th Street, Suite 101
Sheboygan, WI 53081**Site Name:** Bay Towel 21-1121(A)
Site Location: Green Bay, WI
Project Manager: Jenna Williams**Beacon Proposal:** 230330R05
Lab Work Order: 0007002
Reported: 06/12/2023

Calculations:

$$C = \frac{1000 \times M \times DF}{U_c \times t}$$

$$U_c = U * \left(\frac{T_s + 273.15}{T_u + 273.15} \right)^{1/2}$$

where: C = concentration ($\mu\text{g}/\text{m}^3$)
M = mass (ng)
DF = dilution factor
U_c = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
T_u = uptake rate study temperature
T_s = sample average temperature

Note: T_u is 16.65°C*Reference: Federal Register/Vol. 79, No. 125/June 30, 2014*

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Method Detection and Reporting Limit Calculations (Concentration)
TO-17 (Passive)

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial LOQ ng	C Calculated LOQ µg/m ³
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Lab ID: 0007002-01 **Sample Name:** Outdoor Air **Temp (°C):** 7.20

Vinyl Chloride	13,070	1.00	0.797	10.0	0.960
trans-1,2-Dichloroethene	13,070	1.00	0.433	10.0	1.77
cis-1,2-Dichloroethene	13,070	1.00	0.521	10.0	1.47
Trichloroethene	13,070	1.00	0.325	10.0	2.36
Tetrachloroethene	13,070	1.00	0.403	10.0	1.90

Lab ID: 0007002-03 **Sample Name:** Clinic Indoor Air **Temp (°C):** 21.00

Vinyl Chloride	12,720	1.00	0.816	10.0	0.963
trans-1,2-Dichloroethene	12,720	1.00	0.443	10.0	1.77
cis-1,2-Dichloroethene	12,720	1.00	0.534	10.0	1.47
Trichloroethene	12,720	1.00	0.332	10.0	2.36
Tetrachloroethene	12,720	1.00	0.413	10.0	1.90

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Laboratory Certification List

Certification ID	Certification No.	Description	Expires	Project Required
Alaska CS-LAP	19-002	Alaska Department of Environmental Conservation	12/30/2024	
DoD-ELAP	72690/L22-563	United States Department of Defense Environmental Laboratory Accreditation	11/30/2024	
ISO/IEC 17025:2017	72690/L22-563	General Requirements for the Competence of Testing and Calibration Laboratories	11/30/2024	
NEFAP	72690/L22-564	TNI National Environmental Field Activities Program (NEFAP)	11/30/2024	
NY-NELAC	12097	New York Department of Health	04/01/2024	
Utah-NELAC	MD010912022-12	Utah Department of Health	12/31/2023	

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Qualifiers/Notes and Definitions

General Definitions:

DF	Dilution Factor
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
NA	Not Applicable
Q	Qualifier
RPD	Relative Percent Difference
RT	Retention Times in Minutes
RRT	Evaluation of Relative Retention Times in RRT Units (qualified if outside ± 0.06 control limits)
3σ	Uncertainty
∉	Compound not on scope of accreditation
+	values are outside method/contract required QC limits
∅	Compound not on scope of accreditation and analyzed with a one-point calibration

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Sample Management Records

(AM)

Client Information		Project Manager: <u>Dylan Mamann</u>		Client PO:						
Company: <u>Fehr Graham</u>		Project Name: <u>Baytownel 21-1021</u>		Turn around time (check one): <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush (specify) _____ days						
Address: <u>901 North Street, Suite 101</u>		Location: <u>Green Bay, WI</u>		Analysis: <input type="checkbox"/> Method TO-17 <input type="checkbox"/> Method 8260C						
City / State / Zip: <u>Sheboygan, WI 53081</u>		Submitted by: <u>J. Williams</u>								
Phone: <u>920-453-0700</u>		Email: <u>jwilliams@fehrgraham.com</u>								
Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
Outdoor Air	5/16/23	1030a	5/25/23	1220pm	27.2	SW of FD	X	X		
Fire Dept. Indoor Air	↓	1100a	5/23/23	1123a	21.8°C	moved before Tues. 5/23	X			
Clinic Indoor Air		400pm	5/25/23	1200p	21.25°C		X			
Residence Indoor Air		530pm	5/23/23	1:15pm	21.25°C		X			
					NAK 6/21/23					
Special Notes / Instructions: <u>CVOCs</u>										
For Lab Use Only		Beacon Job No: <u>7002</u>		Beacon Proposal: <u>230330R05</u>						

FedEx Good custody seal not in tact : 4769935

Nicole Reife 6/1/23 10:32



Understanding Chemical Vapor Intrusion Testing Results

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

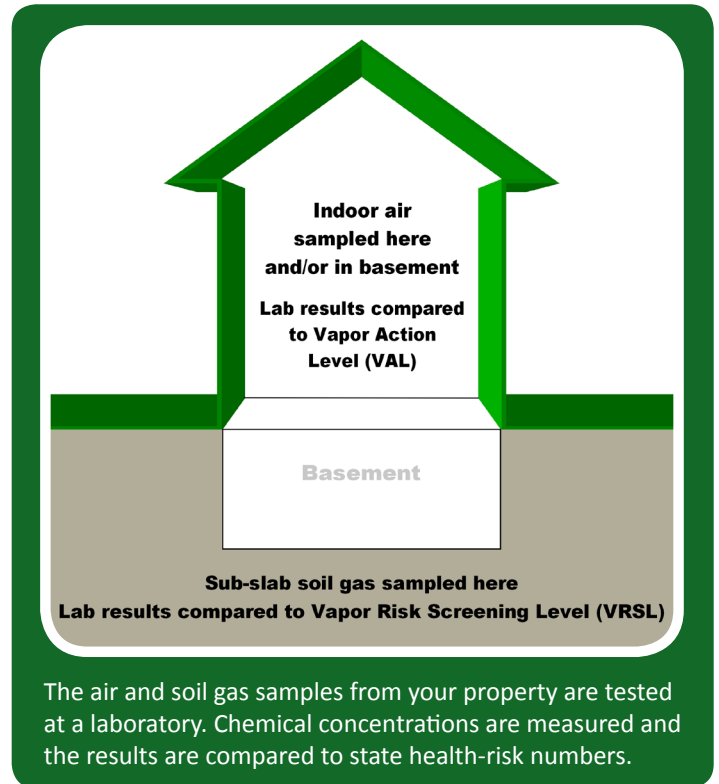
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor greatly exceeds the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

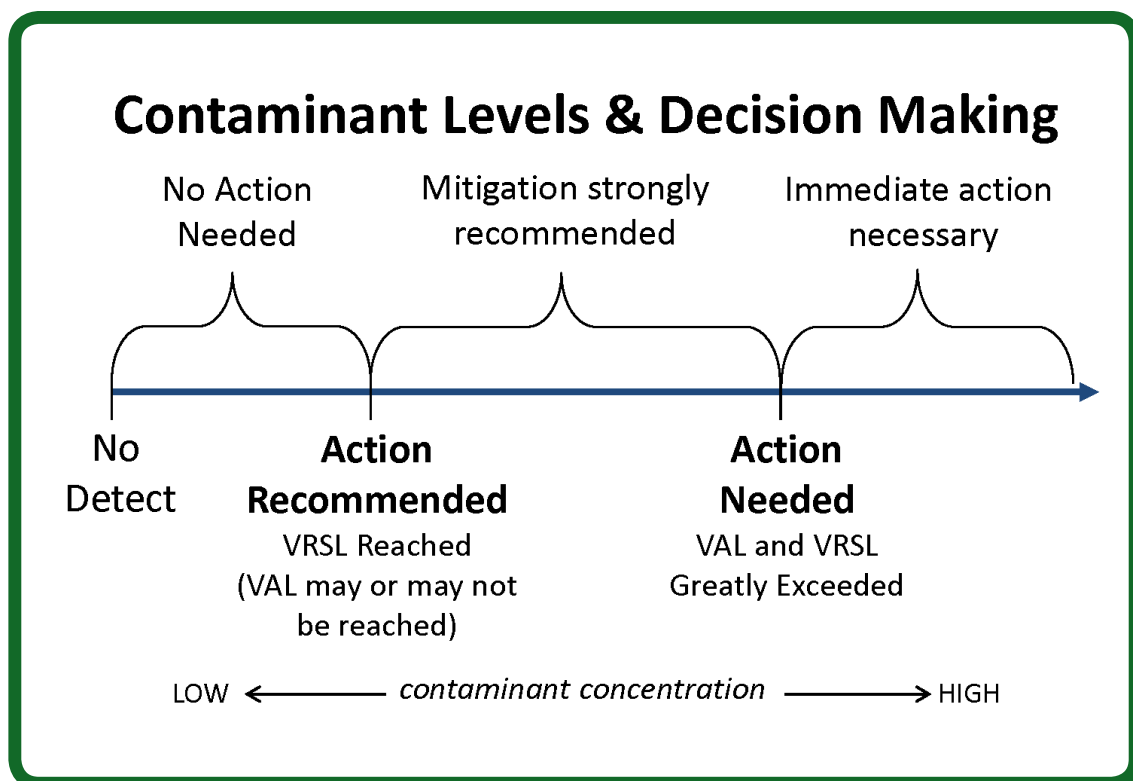
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html