Bay West
Customer-Focused Environmental & Industrial Solutions

January 15, 2024

Jamie Phephles
Starkweather Properties
335 E Main Street
Reedsburg, WI 53959

SUBJECT: 2nd Round Vapor Sampling Results - Contaminant Detection **Below** DNR Screening Level
PROPERTY: Reedsburg Cleaners, 335 E. Main Street (PSI C); BRRTS # 02-57-001682

Dear Jamie Phephles,

Included are the findings of our recent 2nd round investigation on your property conducted by Bay West, LLC (Bay West) an environmental consultant hired by the Wisconsin Department of Natural Resources (WDNR).

Background:
As you are aware, this investigation was conducted because of the potential for contaminant vapors from the nearby Reedsburg Cleaners property identified above to migrate through soil, accumulate beneath the foundation of your property, and possibly enter your indoor air. The contaminant of concern at the Reedsburg Cleaners property is tetrachloroethylene (PCE) and trichloroethylene (TCE). The history of this site and the potential concerns to neighboring residents were described in detail in the original letter sent to your home.

Sampling:
On December 5, 2023, Bay West deployed passive air sampling devices at the main floor, sump, and outside of your building and installed one passive sampler below the concrete floor of your building for the collection of a soil vapor sample. On December 19, 2023, the sampling devices were retrieved then submitted to Beacon Environmental, where they underwent laboratory analysis for five contaminants, including PCE, TCE, cis-1,2-dichloroethene (DCE), trans-1,2-dichloroethene (DCE) and vinyl chloride (VC).

Your Test Results:
Attached are copies of the laboratory report for your passive vapor sub-slab and sump/indoor/outdoor air samples. The results of this 2nd round of sampling show limited concentrations of PCE and TCE detected in the samples taken from the sump, the indoor air, and beneath your concrete floor. The sub-slab sample analysis detected PCE at 132 micrograms per cubic meter ($\mu g/m^3$) and TCE at 8.75 $\mu g/m^3$ beneath your concrete floor, which are below the DNR screening levels (PCE is 5,800 $\mu g/m^3$ and TCE is 290 $\mu g/m^3$). Additionally, the sump sample detected PCE at 1.69 $\mu g/m^3$ and the indoor air sample detected PCE at 1.47 $\mu g/m^3$, which are below the DNR screening level for PCE of 180 $\mu g/m^3$ for indoor air vapor action level.

Although PCE and TCE were detected in soil vapors at your property, the level at which they were detected is such that it does not pose a threat to you or your building occupants. This is called “a detection below screening level” and is explained in the enclosed fact sheet. While there were detections in the indoor air, there does not appear to be a risk from PCE or TCE vapor to your property or occupants.

In conclusion, sampling the air indoors and beneath your home on two different occasions revealed detections below applicable screening criteria (VRSLs and VALs). As a result, no further air sampling is planned at your building.

We appreciate the opportunity to assist you with this vapor investigation effort. Please feel free to contact us if you have any questions about these results.

Sincerely,

Tarek Aboueid
Environmental Scientist
651.724.9757
taboueid@baywest.com

Jason Kunze
Senior Project Manager
651.291.3438
Jkunze@baywest.com

Copy: Rob Hoverman, PG, WDNR, 414.497.0896, Robert.Hoverman@wisconsin.gov
Jeff Ackerman, WDNR PM, 608.275.3323, jeff.ackerman@wisconsin.gov
Jeramiah Yee, Wisconsin Dept of Health Services, 608-266-1865, dhsdphoperations@dhs.wisconsin.gov

Attachments:

TABLE
Table – Tabulated vapor analytical results with the sample dates, sample type (sub-slab or indoor air), and location.

FIGURES
Figure 1 – Property Location Map
Figure 2 and 2A – Building Map showing sampling locations.

APPENDIX
Appendix A – Access Agreement
Appendix B – Laboratory Analytical Results with Chain of Custody (2nd Round)
Appendix C – Vapor Sampling Field Checklist from (2nd Round)
Appendix D – Understanding Chemical Vapor Testing Results (DNR PUB-RR-977)

TABLE

Table 1C

Indoor Air, Outdoor Air, Sub-Slab Analytical Results

157001460 – Reedsburg Cleaners

335 E. Main Street, Reedsburg, WI

Property Sample Identifier (PSI) - C

Location		Indoor Air VAL Commercial	Sub-Slab Vapor VRSL Commercial	335 E Main Street (PSI C)							
Sample ID				08C_SSV_03_20230801	08C_SSV_03_20231219	08C_IA1_07_20230801	08C_IA1_07_20231219	08C_Sump_01_20230801	08C_Sump_01_20231219	08C_OA_01_20230801	08C_OA_01_20231219
Dates Sampled				7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023	7/18 to 8/1/2023	12/5 to 12/19/2023
Applicable Action Level				VRSL		VAL		VAL		VAL	
Volatile Organic Compounds (method EPA TO-17)											
cis-1,2-Dichloroethene	156-59-2	180	5,800	< 0.946	< 0.936	< 0.940	< 0.930	< 0.939	< 0.930	< 0.941	< 0.961
Tetrachloroethene (PCE)	127-18-4	180	5,800	**208**	**132**	**4.66**	**1.47**	**4.94**	**1.69**	< 1.22	< 1.24
trans-1,2-Dichloroethene	156-60-5	180	5,800	< 1.14	< 1.13	< 1.13	< 1.12	< 1.13	< 1.12	< 1.13	< 1.16
Trichloroethene (TCE)	79-01-6	8.8	290	**16.1**	**8.75**	< 1.51	< 1.49	< 1.51	< 1.49	< 1.51	< 1.54
Vinyl chloride	75-01-4	28	930	< 0.619	< 0.612	< 0.615	< 0.608	< 0.614	< 0.608	< 0.616	< 0.629

Notes:

All results are in micrograms per cubic meter ($\mu g/m^3$)

USEPA VISL – United States Environmental Protection Agency Vapor Intrusion Screening Level

WIDNR – Wisconsin Department of Natural Resources

VAL – WIDNR Vapor Action Level, calculated using USEPA VISLs published November 2023

VRSL – WIDNR Vapor Risk Screening Level, calculated using USEPA VISLs published November 2023

— – No USEPA VISL established

< – Less than the laboratory Reporting Limit (RL)

Bold – Analyte detected

* Tan – Result exceeds the Small Commercial VAL

* Light blue – Result exceeds the Small Commercial VRSL

* A detection is counted as an exceedance only if the concentration exceeds the applicable action level. For example, if a sub-slab result exceeds a VAL, but not a VRSL, no exceedance shading is applied.

FIGURES

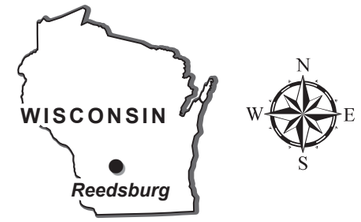
Site Location

Figure 1

Site Location Map

Reedsburg Cleaners
WDNR ERP Case #: 02-57-001682
WDNR PS Act. ID: VIZC_REEDSBURG

Reedsburg, WI 53959



Map Projection: NAD 1983 UTM Zone 15 N, Meters
Basemap: ESRI USA Topo Maps WMS

0 2,000 4,000 Feet
0 600 1,200 Meters

1:24,000

★ Site Location

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Drawn By: N.J. Date Drawn/Revised:8/28/2023 Project No.J230382

Y:\Clients\WISCONSIN_DEPT_OF_NATURAL_RESOURCES\Reedsburg_Cleaners\Projects\J230382\001_Vapor_Intrusion\001_Vapor_Intrusion.aprx

Y:\Clients\WISCONSIN_DEPT_OF_NATURAL_RESOURCES\Reedsburg_Cleaners\Projects\J230382\001_Vapor_Intrusion\001_Vapor_Intrusion.aprx

Figure 2

Site Map

Reedsburg Cleaners
WDNR ERP Case #: 02-57-001682
WDNR PS Act. ID: VIZC_REEDSBURG

Reedsburg, WI 53959

Map Projection: NAD 1983 UTM Zone 15N, Meters
Basemap: WI DNR Aerial Imagery WMS, 10/14/2022

0 100 200 Feet
0 20 40 60 Meters

- Manhole
- SS Sanitary Sewers
- 120 N Locust St (PSI A)
- 125 N Locust St (PSI B)
- 335 E Main St (PSI C)
- ROW (PSI R)
- 349 E Main St (Source)
- Parcel Boundaries

Bay West
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Drawn By: N.J. Date Drawn/Revised:8/28/2023 Project No.J230382

Y:\Clients\WISCONSIN_DEPT_OF_NATURAL_RESOURCES\Reedsburg_Cleaners\Projects\J230382\001_Vapor_Intrusion\001_Vapor_Intrusion.aprx

Figure 2C

Site Map

Reedsburg Cleaners
WDNR ERP Case #: 02-57-001682
WDNR PS Act. ID: VIZC_REEDSBURG

335 E Main Street
Reedsburg, WI 53959

Map Projection: NAD 1983 UTM Zone 15N, Meters
Basemap: WI DNR Aerial Imagery WMS, 10/14/2022

0 10 20 30 40 50 Feet
0 5 10 15 Meters

SS Sanitary Sewer
120 N Locust St (PSI B)
335 E Main St (PSI C)
ROW (PSI R)
349 E Main St (Source)
Parcel Boundaries

Features

Passive Vapor Sample Location

Notes:
All results are in micrograms per cubic meter (µg/m^3)
Bold – Analyte detected
* Tan – Result exceeds the Small Commercial VAL
* Light blue – Result exceeds the Small Commercial VRSL
* A detection is counted as an exceedance only if the exceeded action level applies to the sample. For example, if a sub-slab result exceeds a VAL, but not a VRSL, no exceedance shading is applied.

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Drawn By: N.J. Date Drawn/Revised:8/28/2023 Project No.J230382

APPENDIX A

Wisconsin Department of Natural Resources
ACCESS PERMISSION AGREEMENT

I, Nanci Caflisch (Print Name) hereby give permission to the Wisconsin Department of Natural Resources (DNR) and its employees, duly authorized representatives, agents and contractors, to enter upon and have access at reasonable times to the home/business located at

(ADDRESS) 335 E Main St., Reedsburg WI

and that is owned by Starkweather Properties (Print as Listed on Title / County GIS).

The property is located in the SE 1/4 of the NW 1/4 of Sec 10, T12N, R04E , Sauk County, Wisconsin. The access permission is for the following purposes: The DNR may perform an investigation of the home/business for vapor migration from trichloroethylene (TCE) and tetrachloroethylene (PCE) located in groundwater, associated with the Reedsburg Cleaners Site, BRRTS #02-57-001682 located near your property. This permission allows the DNR or its authorized representative to:

(1) *Install and maintain sub-slab vapor probe(s) into the foundation of the home or business.*
(2) *Collect at least three (3) separate vapor samples from the sub-slab probe(s) at different times of the year.*
(3) *Collect indoor air samples on each level of the home or business and within the sealed sump headspace, if applicable.*
(4) *Collect water sample(s) from the sump, if applicable.*
(5) *Abandon the vapor probe(s) when no longer needed.*

The permission that is granted shall remain in effect for one year from the signature date when the vapor investigation work is expected to be complete. If an extension is necessary to complete the work, DNR will inform you in writing.

The property owner agrees not to damage or interfere with the use of any sub-slab probe installed as permitted herein.

IN WITNESS WHEREOF:

Nanci Caflisch
Signature of Property Owner Representative

6-26-23
Signature Date

Nanci Caflisch, Owner
Print Name, Title

nancicaflisch@gmail.com
Email address

335 E Main St., Reedsburg
Mailing Address of Owner

608 393 3330
Area Code and Telephone Number

TENANT(S) / LESSEE(S) by UNIT NUMBER, ETC.

RE/MAX Grand
Name of Tenant(s)/Lessee(s)

608 768 4100
Tenant(s) phone number

jamie@grandalliancewi.com
Tenant(s) email address

Mail or email correspondence regarding this site to:

Department of Natural Resources
ATTN: Rob Hoverman
1027 West St. Paul Avenue
Milwaukee, WI 53233-2641

Robert.Hoverman@wisconsin.gov
Phone: 414.497.0896

APPENDIX B

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

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007391

Project Description:
Reedsburg Cleaners (PSI C)
Reedsburg, WI

Prepared for:
Jason Kunze
Bay West LLC
5 Empire Drive
St. Paul, MN 55103

Ryan W. Schneider
Senior Project Manager

January 02, 2024

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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CERTIFICATE OF ANALYSIS

Bay West LLC		**Site Name:**	Reedsburg Cleaners (PSI C)	**Beacon Proposal:**	230427H01
5 Empire Drive		**Site Location:**	Reedsburg, WI	**Lab Work Order:**	0007391
St. Paul, MN 55103		**Project Manager:**	Jason Kunze	**Reported:**	01/02/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007391-01	08C_SSV_03_20231219	12/20/2023	TO-17 (Passive)	Soil Gas
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 1
Samples Analyzed: 1

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Case Narrative

U.S. EPA Method TO-17

All samples were analyzed using thermal desorption-gas chromatography/mass spectrometry (TD-GC/MS) instrumentation following U.S. EPA Method TO-17, with laboratory results provided in nanograms (ng) and micrograms per cubic meter (µg/m³). Laboratory QA/QC procedures included internal standards, surrogates, and blanks based on EPA Method TO-17. 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. All reported results are 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.

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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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Analytical Results

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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Summary of Compound Detections- Mass

Lab Sample ID: 0007391-01

08C_SSV_03_20231219
Soil Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (ng)	Q	RT	LOQ (ng)	File ID
Trichloroethene	79-01-6	**58.2**		4.277	10.0	C23122111.D
Tetrachloroethene	127-18-4	**1,090**		5.918	10.0	C23122111.D

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007391-01

08C_SSV_03_20231219
Soil Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Trichloroethene	79-01-6	**8.75**		4.277	1.50	C23122111.D
Tetrachloroethene	127-18-4	**132**		5.918	1.21	C23122111.D

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
Trichloroethene	1	1.50	8.75
Tetrachloroethene	1	1.21	132

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Detailed Analytical Results

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Detailed Analytical Results- Mass

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Lab Sample ID: 0007391-01

08C_SSV_03_20231219

Soil Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (ng)	Q	LOQ (ng)	Analyzed	File ID
Vinyl Chloride	75-01-4	<10.0		10.0	12/21/2023 19:05	C23122111.D
trans-1,2-Dichloroethene	156-60-5	<10.0		10.0	12/21/2023 19:05	C23122111.D
cis-1,2-Dichloroethene	156-59-2	<10.0		10.0	12/21/2023 19:05	C23122111.D
Trichloroethene	79-01-6	**58.2**		10.0	12/21/2023 19:05	C23122111.D
Tetrachloroethene	127-18-4	**1,090**		10.0	12/21/2023 19:05	C23122111.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*86.5%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*
Surrogate: Toluene-d8	2037-26-5	*98.8%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*
Surrogate: Bromofluorobenzene	460-00-4	*94.0%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*

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Detailed Analytical Results- Concentration

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Lab Sample ID: 0007391-01

08C_SSV_03_20231219

Soil Gas

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.612		0.612	12/21/2023 19:05	C23122111.D
trans-1,2-Dichloroethene	156-60-5	<1.13		1.13	12/21/2023 19:05	C23122111.D
cis-1,2-Dichloroethene	156-59-2	<0.936		0.936	12/21/2023 19:05	C23122111.D
Trichloroethene	79-01-6	**8.75**		1.50	12/21/2023 19:05	C23122111.D
Tetrachloroethene	127-18-4	**132**		1.21	12/21/2023 19:05	C23122111.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*86.5%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*
Surrogate: Toluene-d8	2037-26-5	*98.8%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*
Surrogate: Bromofluorobenzene	460-00-4	*94.0%*	*70-130*		*12/21/2023 19:05*	*C23122111.D*

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

QC Information/Summary

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122102.D

23L0060-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	50.3	10	ng	50.0		101	70-130			
trans-1,2-Dichloroethene	48.8	10	ng	50.0		97.6	70-130			
cis-1,2-Dichloroethene	48.0	10	ng	50.0		96.1	70-130			
Trichloroethene	50.4	10	ng	50.0		101	70-130			
Tetrachloroethene	44.6	10	ng	50.0		89.3	70-130			
Surrogate: 1,2-DCA-d4	*47.2*		*ng*	50.0		*94.4*	*70-130*			
Surrogate: Toluene-d8	*49.9*		*ng*	50.0		*99.9*	*70-130*			
Surrogate: Bromofluorobenzene	*47.9*		*ng*	50.0		*95.7*	*70-130*			

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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D

23L0060-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.613	0.613	µg/m³							U
trans-1,2-Dichloroethene	<1.13	1.13	µg/m³							U
cis-1,2-Dichloroethene	<0.936	0.936	µg/m³							U
Trichloroethene	<1.50	1.50	µg/m³							U
Tetrachloroethene	<1.21	1.21	µg/m³							U
Surrogate: 1,2-DCA-d4	*91.7*		*ng*	100		*91.7*	*70-130*			
Surrogate: Toluene-d8	*101*		*ng*	100		*101*	*70-130*			
Surrogate: Bromofluorobenzene	*90.0*		*ng*	100		*90.0*	*70-130*			

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Batch: 23L0060 - Instrument: C System - File ID: C23122103.D

23L0060-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5.0	10	ng							U
trans-1,2-Dichloroethene	<5.0	10	ng							U
cis-1,2-Dichloroethene	<5.0	10	ng							U
Trichloroethene	<5.0	10	ng							U
Tetrachloroethene	<5.0	10	ng							U
Surrogate: 1,2-DCA-d4	*91.7*		*ng*	100		*91.7*	*70-130*			
Surrogate: Toluene-d8	*101*		*ng*	100		*101*	*70-130*			
Surrogate: Bromofluorobenzene	*90.0*		*ng*	100		*90.0*	*70-130*			

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Instrument: C System - File ID: C23122104.D

B23L064-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	54.4	10	ng	50.0		109	70-130			
trans-1,2-Dichloroethene	51.1	10	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	49.2	10	ng	50.0		98.3	70-130			
Trichloroethene	49.7	10	ng	50.0		99.5	70-130			
Tetrachloroethene	49.6	10	ng	50.0		99.1	70-130			
Surrogate: 1,2-DCA-d4	*46.2*		*ng*	50.0		*92.5*	*70-130*			
Surrogate: Toluene-d8	*54.7*		*ng*	50.0		*109*	*70-130*			
Surrogate: Bromofluorobenzene	*46.3*		*ng*	50.0		*92.6*	*70-130*			

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Instrument: C System - File ID: C23122124.D

B23L064-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	39.7	10	ng	50.0		79.5	70-130			
trans-1,2-Dichloroethene	49.3	10	ng	50.0		98.6	70-130			
cis-1,2-Dichloroethene	48.7	10	ng	50.0		97.4	70-130			
Trichloroethene	49.9	10	ng	50.0		99.8	70-130			
Tetrachloroethene	47.3	10	ng	50.0		94.7	70-130			
Surrogate: 1,2-DCA-d4	*45.0*		*ng*	50.0		*90.0*	*70-130*			
Surrogate: Toluene-d8	*51.3*		*ng*	50.0		*103*	*70-130*			
Surrogate: Bromofluorobenzene	*45.8*		*ng*	50.0		*91.7*	*70-130*			

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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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

Sequence: B23L064 - Instrument: C System - File ID: C23122125.D

B23L064-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
Surrogate: 1,2-DCA-d4	*89.6*		*ng*	100		*89.6*	*70-130*			
Surrogate: Toluene-d8	*99.0*		*ng*	100		*99.0*	*70-130*			
Surrogate: Bromofluorobenzene	*91.0*		*ng*	100		*91.0*	*70-130*			

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23L0060-BS1 File ID: C23122102.D Analyzed: 12/21/23 16:06

LCSD: B23L064-ICV1 File ID: C23122104.D Analyzed: 12/21/23 15:19

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	50.31	100.62		50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56		50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06		50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74		50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26		50	49.56	99.10	70-130	10.47	30	

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Additional QC Information

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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/m³	File ID
Lab ID: 0007391-01 **Sample Name:** 08C_SSV_03_20231219						
Vinyl Chloride	20,157	1.00	0.810	U	U	C23122111.D
trans-1,2-Dichloroethene	20,157	1.00	0.440	U	U	C23122111.D
cis-1,2-Dichloroethene	20,157	1.00	0.530	U	U	C23122111.D
Trichloroethene	20,157	1.00	0.330	58.18	8.75	C23122111.D
Tetrachloroethene	20,157	1.00	0.410	1093.77	132	C23122111.D

Calculations:

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

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where: C = concentration (µg/m^3)
M = mass (ng)
DF = dilution factor
Uc = uptake rate (ml/min), corrected
t = sampling time (minutes)
U = compound specific uptake rate
Tu = uptake rate study temperature
Ts = sample average temperature

Note: Tu is 16.65°C

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

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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Method Detection and Reporting Limit Calculations (Concentration)

TO-17 (Passive)

Lab ID: 0007391-01 **Sample Name:** 08C_SSV_03_20231219

Analyte	**t** Sampling Time minutes	**DF** Dilution Factor	**Uc** Uptake Rate	**M** Initial LOQ ng	**C** Calculated LOQ µg/m³
Vinyl Chloride	20,157	1.00	0.810	10.0	0.612
trans-1,2-Dichloroethene	20,157	1.00	0.440	10.0	1.13
cis-1,2-Dichloroethene	20,157	1.00	0.530	10.0	0.936
Trichloroethene	20,157	1.00	0.330	10.0	1.50
Tetrachloroethene	20,157	1.00	0.410	10.0	1.21

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St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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 $\pm$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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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007391
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Sample Management Records

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or email help@beacon-usa.com

PASSIVE SOIL GAS SAMPLES | CHAIN-OF-CUSTODY

Project Information		Client Information	
Site Name: Reedsburg Cleaners (ERP 0257001682)		Company Name: Bay West LLC	Project Manager: Jason Kunze (jkunze@baywest.com)
Site Location: 335 E Main St (PSI C)		Office Location: 5 Empire Drive, St. Paul, MN 55103	Client PO: J230382 / PO1309
		Submitted by: Anders Santelman	Turn around time (check one): ■ Normal ☐ Rush (specify) ____ days
		Email: asantelman@baywest.com	

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☐ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08C_SSV_03_20231219	12/5/23	1045	12/19/23	1042	5 inches	Concrete	C_SSV_03

Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride

Relinquished by (signature):	Date / Time: 12/19/23 1300	Received by (signature):	Date / Time: 12.20.23 1456
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7391	Beacon Proposal: 230427H01	Analytical Method:
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: ☑ Yes ☐ No ☐ n/a	Custody Seal No: 5722455

Beacon Environmental
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CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 230427H01

Laboratory Work Order: 0007394

Project Description:
Reedsburg Cleaners (PSI C)
Reedsburg, WI

Prepared for:
Jason Kunze
Bay West LLC
5 Empire Drive
St. Paul, MN 55103

Ryan W. Schneider
Senior Project Manager

January 02, 2024

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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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007394-01	08C_IA1_07_20231219	12/20/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Beacon Passive Sampler			
0007394-02	08C_Sump_01_20231219	12/20/2023	TO-17 (Passive)	Indoor Air
Sampler Type:	Beacon Passive Sampler			
0007394-03	08C_OA_01_20231219	12/20/2023	TO-17 (Passive)	Ambient Air
Sampler Type:	Beacon Passive Sampler			

Project Completeness

Samples Received: 3
Samples Analyzed: 3

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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 µg/m3. 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 ±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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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Analytical Results

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Summary of Compound Detections- Concentration

Lab Sample ID: 0007394-01 — **08C_IA1_07_20231219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Tetrachloroethene	127-18-4	**1.47**		5.918	1.20	C23122123.D

Lab Sample ID: 0007394-02 — **08C_Sump_01_20231219** — Indoor Air — Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	File ID
Tetrachloroethene	127-18-4	**1.69**		5.921	1.20	C23122205.D

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Data Summary Table- Concentration

Compound	Frequency	LOQ (µg/m³)	Max Value (µg/m³)
Tetrachloroethene	2	1.20	1.69

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Detailed Analytical Results

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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Lab Sample ID: 0007394-01

08C_IA1_07_20231219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 14:37	C23122123.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 14:37	C23122123.D
cis-1,2-Dichloroethene	156-59-2	<0.930		0.930	12/22/2023 14:37	C23122123.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 14:37	C23122123.D
Tetrachloroethene	127-18-4	**1.47**		1.20	12/22/2023 14:37	C23122123.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*91.4%*	*70-130*		*12/22/2023 14:37*	*C23122123.D*
Surrogate: Toluene-d8	2037-26-5	*96.6%*	*70-130*		*12/22/2023 14:37*	*C23122123.D*
Surrogate: Bromofluorobenzene	460-00-4	*97.6%*	*70-130*		*12/22/2023 14:37*	*C23122123.D*

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CERTIFICATE OF ANALYSIS

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5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Lab Sample ID: 0007394-02

08C_Sump_01_20231219

Indoor Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.608		0.608	12/22/2023 18:32	C23122205.D
trans-1,2-Dichloroethene	156-60-5	<1.12		1.12	12/22/2023 18:32	C23122205.D
cis-1,2-Dichloroethene	156-59-2	<0.930		0.930	12/22/2023 18:32	C23122205.D
Trichloroethene	79-01-6	<1.49		1.49	12/22/2023 18:32	C23122205.D
Tetrachloroethene	127-18-4	**1.69**		1.20	12/22/2023 18:32	C23122205.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*85.9%*	*70-130*		*12/22/2023 18:32*	*C23122205.D*
Surrogate: Toluene-d8	2037-26-5	*94.8%*	*70-130*		*12/22/2023 18:32*	*C23122205.D*
Surrogate: Bromofluorobenzene	460-00-4	*95.3%*	*70-130*		*12/22/2023 18:32*	*C23122205.D*

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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Lab Sample ID: 0007394-03

08C_OA_01_20231219

Ambient Air

Method: TO-17 (Passive)

Analyte	CAS#	Result (µg/m³)	Q	LOQ (µg/m³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.629		0.629	12/22/2023 19:00	C23122206.D
trans-1,2-Dichloroethene	156-60-5	<1.16		1.16	12/22/2023 19:00	C23122206.D
cis-1,2-Dichloroethene	156-59-2	<0.961		0.961	12/22/2023 19:00	C23122206.D
Trichloroethene	79-01-6	<1.54		1.54	12/22/2023 19:00	C23122206.D
Tetrachloroethene	127-18-4	<1.24		1.24	12/22/2023 19:00	C23122206.D

Analyte	*CAS#*	*% Recovery*	*Recovery Limits*	*Q*	*Analyzed*	*File ID*
Surrogate: 1,2-DCA-d4	17060-07-0	*77.8%*	*70-130*		*12/22/2023 19:00*	*C23122206.D*
Surrogate: Toluene-d8	2037-26-5	*93.8%*	*70-130*		*12/22/2023 19:00*	*C23122206.D*
Surrogate: Bromofluorobenzene	460-00-4	*87.9%*	*70-130*		*12/22/2023 19:00*	*C23122206.D*

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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23L0060-BS1 File ID: C23122102.D Analyzed: 12/21/23 16:06

LCSD: B23L064-ICV1 File ID: C23122104.D Analyzed: 12/21/23 15:19

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	50.31	100.62		50	54.41	109.00	70-130	7.83	30	
trans-1,2-Dichloroethene	156-60-5	48.78	97.56		50	51.1	102.00	70-130	4.65	30	
cis-1,2-Dichloroethene	156-59-2	48.03	96.06		50	49.15	98.30	70-130	2.31	30	
Trichloroethene	79-01-6	50.37	100.74		50	49.74	99.50	70-130	1.26	30	
Tetrachloroethene	127-18-4	44.63	89.26		50	49.56	99.10	70-130	10.47	30	

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CERTIFICATE OF ANALYSIS

Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 23L0069-BS1 File ID: C23122202.D Analyzed: 12/22/23 18:04
LCSD: B23L073-ICV1 File ID: C23122204.D Analyzed: 12/22/23 17:18

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	58.49	116.98		50	46.44	92.90	70-130	22.97	30	
trans-1,2-Dichloroethene	156-60-5	53.76	107.52		50	48.54	97.10	70-130	10.21	30	
cis-1,2-Dichloroethene	156-59-2	46.88	93.76		50	45.98	92.00	70-130	1.94	30	
Trichloroethene	79-01-6	51.04	102.08		50	50.85	102.00	70-130	0.37	30	
Tetrachloroethene	127-18-4	42.65	85.3		50	47.51	95.00	70-130	10.78	30	

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Additional QC Information

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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/m³	File ID
Lab ID: 0007394-01 **Sample Name:** 08C_IA1_07_20231219					**x̄ Temp (°C):** 21.10	
Vinyl Chloride	20,142	1.00	0.816	U	U	C23122123.D
trans-1,2-Dichloroethene	20,142	1.00	0.443	U	U	C23122123.D
cis-1,2-Dichloroethene	20,142	1.00	0.534	U	U	C23122123.D
Trichloroethene	20,142	1.00	0.333	U	U	C23122123.D
Tetrachloroethene	20,142	1.00	0.413	12.20	1.47	C23122123.D
Lab ID: 0007394-02 **Sample Name:** 08C_Sump_01_20231219					**x̄ Temp (°C):** 21.10	
Vinyl Chloride	20,137	1.00	0.816	U	U	C23122205.D
trans-1,2-Dichloroethene	20,137	1.00	0.443	U	U	C23122205.D
cis-1,2-Dichloroethene	20,137	1.00	0.534	U	U	C23122205.D
Trichloroethene	20,137	1.00	0.333	U	U	C23122205.D
Tetrachloroethene	20,137	1.00	0.413	14.10	1.69	C23122205.D
Lab ID: 0007394-03 **Sample Name:** 08C_OA_01_20231219					**x̄ Temp (°C):** 2.00	
Vinyl Chloride	20,143	1.00	0.789	U	U	C23122206.D
trans-1,2-Dichloroethene	20,143	1.00	0.429	U	U	C23122206.D
cis-1,2-Dichloroethene	20,143	1.00	0.516	U	U	C23122206.D
Trichloroethene	20,143	1.00	0.322	U	U	C23122206.D
Tetrachloroethene	20,143	1.00	0.400	U	U	C23122206.D

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Calculations:

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

$$Uc = U * \left(\left(\frac{Ts + 273.15}{Tu + 273.15}\right)^{1/2}\right)$$

where:
- C = concentration (µg/m^3)
- M = mass (ng)
- DF = dilution factor
- Uc = uptake rate (ml/min), corrected
- t = sampling time (minutes)
- U = compound specific uptake rate
- Tu = uptake rate study temperature
- Ts = sample average temperature

Note: Tu is 16.65°C

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

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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/m³
Lab ID: 0007394-01 **Sample Name:** 08C_IA1_07_20231219					**x̄ Temp (°C):** 21.10
Vinyl Chloride	20,142	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,142	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,142	1.00	0.534	10.0	0.930
Trichloroethene	20,142	1.00	0.333	10.0	1.49
Tetrachloroethene	20,142	1.00	0.413	10.0	1.20
Lab ID: 0007394-02 **Sample Name:** 08C_Sump_01_20231219					**x̄ Temp (°C):** 21.10
Vinyl Chloride	20,137	1.00	0.816	10.0	0.608
trans-1,2-Dichloroethene	20,137	1.00	0.443	10.0	1.12
cis-1,2-Dichloroethene	20,137	1.00	0.534	10.0	0.930
Trichloroethene	20,137	1.00	0.333	10.0	1.49
Tetrachloroethene	20,137	1.00	0.413	10.0	1.20
Lab ID: 0007394-03 **Sample Name:** 08C OA 01 20231219					**x̄ Temp (°C):** 2.00
Vinyl Chloride	20,143	1.00	0.789	10.0	0.629
trans-1,2-Dichloroethene	20,143	1.00	0.429	10.0	1.16
cis-1,2-Dichloroethene	20,143	1.00	0.516	10.0	0.961
Trichloroethene	20,143	1.00	0.322	10.0	1.54
Tetrachloroethene	20,143	1.00	0.400	10.0	1.24

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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

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 $\pm$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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Bay West LLC	**Site Name:** Reedsburg Cleaners (PSI C)	**Beacon Proposal:** 230427H01
5 Empire Drive	**Site Location:** Reedsburg, WI	**Lab Work Order:** 0007394
St. Paul, MN 55103	**Project Manager:** Jason Kunze	**Reported:** 01/02/2024

Sample Management Records

BEACON ENVIRONMENTAL
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Forest Hill, MD 21050, USA
1-410-838-8780
800-878-5510 Toll Free

PASSIVE AIR SAMPLING - BEACON SAMPLER | CHAIN-OF-CUSTODY

Client Information		Project Manager: Jason Kunze (jkunze@baywest.com)	Client PO: J230382 / PO1309
Company:	Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)	Turn around time (check one): ■ Normal ☐ Rush (specify) ____ days
Address:	5 Empire Dr.	Location: 335 E Main St (PSI C)	
City / State / Zip:	St. Paul, MN 55103	Submitted by: Anders Santelman	Analysis: ■ Method TO-17 ☐ Method 8260C
Phone:	651-724-9757	Email: asantelman@baywest.com	

Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
08C_IA1_07_20231219	12/5/23	1123	12/19/23	1105	21.1	C_IA1_07	X			
08C_Sump_01_20231219	12/5/23	1113	12/19/23	1050	21.1	C_Sump_01	X			
08C_OA_01_20231219	12/5/23	1019	12/19/23	1002	2.0	C_OA_01		X		

Special Notes / Instructions:
Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride

Relinquished by (signature):	Date / Time: 12/19/23 : 1300	Received by (signature):	Date / Time: 12-20-23 1451
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7394	Beacon Proposal: 230427H01	
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: ☑ Yes ☐ No ☐ n/a	Custody Seal No: 5722455

Pg 1 of 1

APPENDIX C

Bay West LLC
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456

PASSIVE VAPOR SAMPLING INFORMATION

Project Information

Project Name: _____Reedsburg Cleaners_____
Bay West Job #: _____J230382_____
Bay West Sampler Name(s) _____Anders Santelman_____
Weather Conditions _____ _____

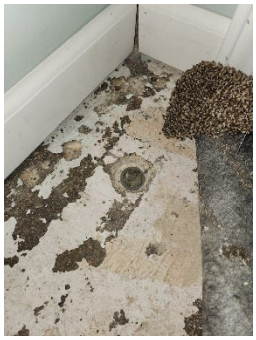
Project Information

Property Address: _____335 E Main St_____
Property Owner Name: _____Jaime Phephles_____
Property Type: _____Commercial Office_____

Sub-Slab Installation information

Concrete Slab Thickness: 5 inches
Type of Sub-slab installed: Poured
Time of Sub-Slab Installation: 07/18/2023
Time for Sub-Slab Vapor Equilibration:
Ambient PID (ppm): 0.0

#1

Sample ID: 08C_SSV_03_20231219 Passive Sampler Type: Passive Soil-Gas Sampler Sample Location: __Sub-Slab Duration of Test: 2 weeks Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride Laboratory: ____Beacon____ **Start (or Grab) Sample** Date: 12/05/2023 Time: 1045 PID (ppm): 2.0 Pressure Reading (Pa): 1.9 **End (or Grab) Sample** Date: 12/19/2023 Time: 1042 PID (ppm): 2.5 Pressure Reading (Pa): 0	 Photo 1: Sub-slab sample as left	Photo 2:
	Photo 3:	Photo 4:

#2

Bay West LLC
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(651) 291-0456

Sample ID: 08C_Sump_01_20231219
Passive Sampler Type: Passive Air Sampler
Sample Location: Sump Pump
Duration of Test: 2 weeks
Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride
Laboratory: Beacon

Start (or Grab) Sample
Date: 12/05/2023
Time: 1113
PID (ppm): 0.0
End (or Grab) Sample
Date: 12/19/2023
Time: 1050
PID (ppm): 0

Photo 1: Sump sample

Photo 2: Sealed sump

Photo 3: _____

Photo 4: _____

#3

Sample ID: 08C_IA1_07_20231219
Passive Sampler Type: Passive Air Sampler
Sample Location: 1st Floor, Main room
Duration of Test: 2 Weeks
Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride
Laboratory: Beacon

Start (or Grab) Sample
Date: 12/05/2023
Time: 1123
PID (ppm): 0.0
End (or Grab) Sample
Date: 12/19/2023
Time: 1105
PID (ppm): 0

Photo 1:

Photo 2: _____

Photo 3: _____

Photo 4: _____

Bay West LLC
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456

#4

Sample ID: 08C_OA1_01_20231219 Passive Sampler Type: Passive Air Sampler Sample Location: North of building, outside Duration of Test: 2 Weeks Analysis: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride Laboratory: Beacon **Start (or Grab) Sample** Date: 12/05/2023 Time: 1019 PID (ppm): 0.0 **End (or Grab) Sample** Date: 12/19/2023 Time: 1002 PID (ppm): 0	 Photo 1: Outdoor air sample	Photo 2: _____
	Photo 3: _____	Photo 4: _____

BEACON ENVIRONMENTAL

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Need help? Call 1-410-838-8780
or email help@beacon-usa.com

PASSIVE SOIL GAS SAMPLES | CHAIN-OF-CUSTODY

Project Information		Client Information	
Site Name: Reedsburg Cleaners (ERP 0257001682)		Company Name: Bay West LLC	Project Manager: Jason Kunze (jkunze@baywest.com)
Site Location: 335 E Main St (PSI C)		Office Location: 5 Empire Drive, St. Paul, MN 55103	Client PO: J230382 / PO1309
		Submitted by: Anders Santelman	Turn around time (check one): ■ Normal ☐ Rush (specify) ____ days
		Email: asantelman@baywest.com	

Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth ☐ cm ☐ inches	Surface Type (Soil, Asphalt, Concrete, Gravel)	Optional Information (Location Description, Sample Condition, PID / FID Readings, etc)
08C_SSV_03_20231219	12/5/23	1045	12/19/23	1042	5 inches	Concrete	C_SSV_03

Special Instructions: Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride

Relinquished by (signature):	Date / Time: 12/19/23 1300	Received by (signature):	Date / Time: 12.20.23 1456
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7391	Beacon Proposal: 230427H01	Analytical Method:
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: ☑ Yes ☐ No ☐ n/a	Custody Seal No: 5722455

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2203A Commerce Rd, Suite 1
Forest Hill, MD 21050, USA
1-410-838-8780
800-878-5510 Toll Free

PASSIVE AIR SAMPLING - BEACON SAMPLER | CHAIN-OF-CUSTODY

Client Information		Project Manager: Jason Kunze (jkunze@baywest.com)	Client PO: J230382 / PO1309
Company:	Bay West LLC	Project Name: Reedsburg Cleaners (ERP 0257001682)	Turn around time (check one): ■ Normal ☐ Rush (specify) _____ days
Address:	5 Empire Dr.	Location: 335 E Main St (PSI C)	
City / State / Zip:	St. Paul, MN 55103	Submitted by: Anders Santelman	Analysis: ■ Method TO-17 ☐ Method 8260C
Phone:	651-724-9757	Email: asantelman@baywest.com	

Location ID	Start Date	Start Time	Stop Date	Stop Time	Aver Temp (C)	Notes	INDOOR AIR	AMBIENT AIR	CRAWL SPACE	SEWER GAS
08C_IA1_07_20231219	12/5/23	1123	12/19/23	1105	21.1	C_IA1_07	X			
08C_Sump_01_20231219	12/5/23	1113	12/19/23	1050	21.1	C_Sump_01	X			
08C_OA_01_20231219	12/5/23	1019	12/19/23	1002	2.0	C_OA_01		X		

Special Notes / Instructions:
Analytes: PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride

Relinquished by (signature):	Date / Time: 12/19/23 : 1300	Received by (signature):	Date / Time: 12-20-23 1455
Relinquished by (signature):	Date / Time:	Received by (signature):	Date / Time:
For Lab Use Only	Beacon Job No: 7394	Beacon Proposal: 230427H01	
Courier Name: Fedex	Shipment Condition: good	Custody Seal Intact: ☑ Yes ☐ No ☐ n/a	Custody Seal No: 5722455

APPENDIX D

Understanding Chemical Vapor Intrusion Testing Results

RR-977 October 2014

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.

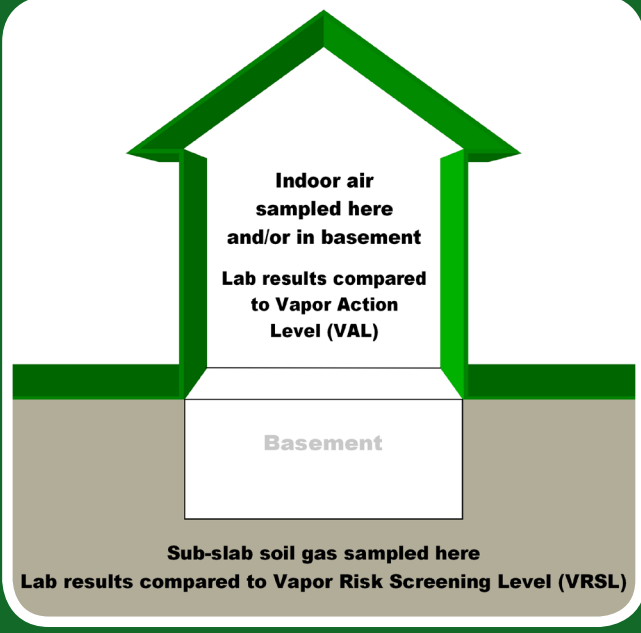
Indoor Air Testing Results

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.



The air and soil gas samples from your property are tested at a laboratory. Chemical concentrations are measured and the results are compared to state health-risk numbers.

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.

Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"

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.

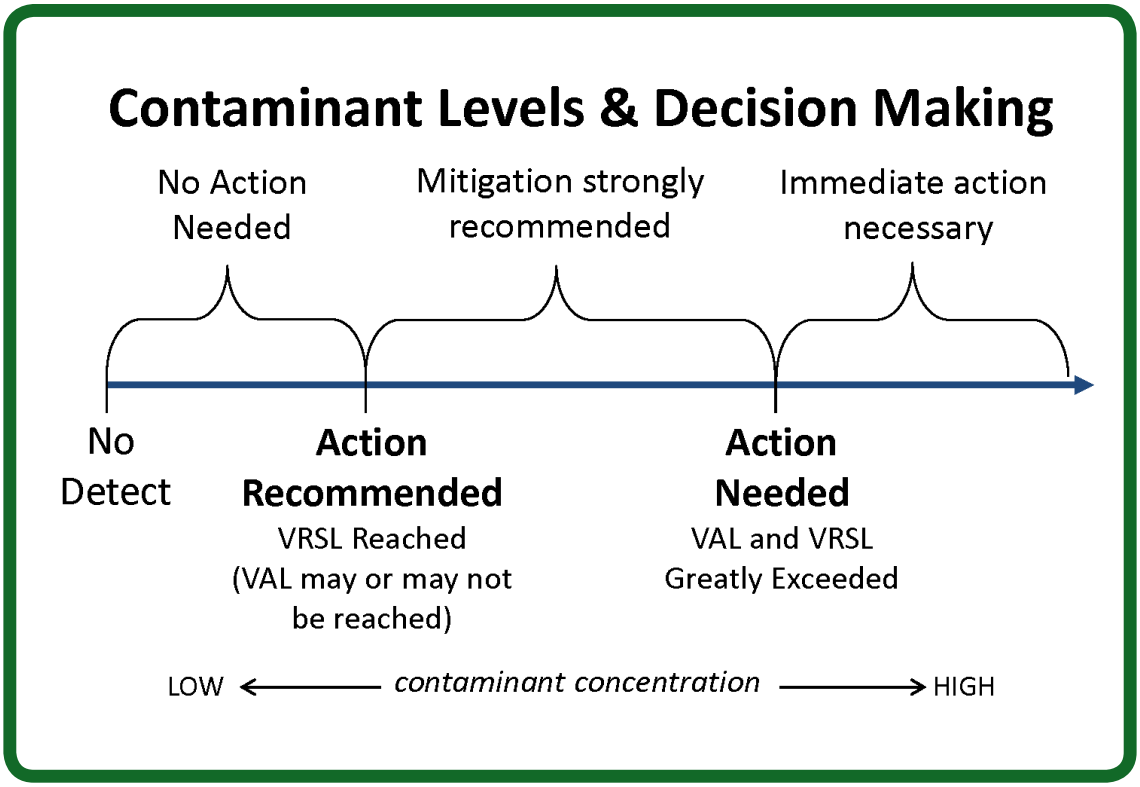
Follow-Up Actions

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 µg/m3 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**