

February 27, 2024
File No. 25222269.06

Ms. Lucy B. Jones
2723 N. 29th Street
Milwaukee, WI 53210

Subject: Sample Results Notification
2723 N. 29th Street, Milwaukee
WDNR Findley Adhesives
BRRTS No. 03-41-005301

Dear Ms. Jones:

On behalf of the Wisconsin Department of Natural Resources (WDNR) through the Vapor Intrusion Zone Contract (VIZC), SCS Engineers (SCS) is providing sample results for sub-slab vapor and indoor air samples which were collected from your property by SCS in January 2024. The approximate sample locations are shown on the attached map (**Figure 1**).

The samples were submitted for analysis of five specific chlorinated volatile organic compounds (CVOCs), including tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride. The sample laboratory reports are included as **Attachment A**.

CVOCs were not detected in the sub-slab samples collected from your property. A minor concentration of PCE was detected in the first floor indoor air sample below the WDNR residential indoor air vapor action level (VAL). No other CVOCs were detected in the samples. The sample results indicate there is not an indoor air health risk related to vapor intrusion of CVOCs.

The WDNR Publication RR-977 Understanding Chemical Vapor Testing Results with additional information for you is included as **Attachment B**. Up to two additional sampling events are planned for your property to evaluate potential variability of sub-slab vapor and indoor air concentrations. SCS will contact you in advance of these additional events to schedule access.

Once the final sampling event is completed, a final report with these findings will be prepared and submitted to the WDNR and listed on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW).

Please contact Rob Hoverman of WDNR at (414) 497-0896 or robert.hoverman@wisconsin.gov or Nathan Kloczko of Wisconsin Department of Health (DHS) at (608) 867-4448 or Nathan.kloczko@dhs.wisconsin.gov if you have questions concerning the analytical results.

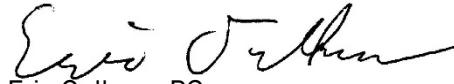


Lucy B. Jones
February 27, 2024
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Sincerely,



Robert Langdon
Senior Project Manager
SCS Engineers



Eric Oelkers, PG
Senior Project Hydrogeologist
SCS Engineers

REL/lmh/EO/TK

cc: Rob Hoverman, WDNR
Nathan Kloczko, DHS

Attachments: Table 1 – Sub-Slab Vapor Analytical Results Summary
Table 2 – Indoor Air Analytical Results Summary
Figure 1 - Vapor Investigation Map
Attachment A - Laboratory Reports
Attachment B - WDNR Publication RR-977

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Tables

- 1 Sub-Slab Vapor Analytical Result Summary
- 2 Indoor Air Analytical Results Summary

Table 1. Sub-Slab Vapor Analytical Results Summary
Findley Adhesives, Milwaukee, Wisconsin / SCS Engineers Project #25222269.06

(Results are in $\mu\text{g}/\text{m}^3$)

Sample	Location	Sample Start Date	Sample End Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
10A_SSV_07_20240130	2723 N. 29th St.	1/22/2024	1/30/2024	--	<2.13	<2.65	<1.65	<1.99	<1.08
10A_SSV_08_20240130	2723 N. 29th St.	1/22/2024	1/30/2024	--	<2.13	<2.65	<1.65	<1.99	<1.08
Vapor Risk Screening Level (Residential Building)					1,400	70	1,400	1,400	56
Vapor Risk Screening Level (Small Commercial Building)					5,800	290	5,800	5,800	930
Vapor Risk Screening Level (Large Commercial/Industrial Building)					18,000	880	18,000	18,000	2,800

Abbreviations:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
trans-1,2-DCE = trans-1,2-dichloroethene

cis-1,2-DCE = cis-1,2-dichloroethene
-- = Not Applicable

Notes:

1. Samples were collected using passive sorbent samplers and analyzed using the USEPA 8260C analytical method.
2. Vapor Risk Screening Levels are from Wisconsin Department of Natural Resources' WI Vapor Quick Look-Up Table, which is based on August 2023 U.S. EPA Regional Screening Level Tables.
3. **Bold+underlined** values meet or exceed Vapor Risk Screening Levels.

Lab Notes:

None

I:\25222269.00\25222269.06 Findley\Deliverables\Results Notification\2723 N 29th\[Table 1_Sub-Slab Vapor Analytical Results Summary.xlsx]Sub-Slab Vapor

Created by: REL
Last revision by: REO
Checked by: AJR
Proj Mgr QA/QC: REL

Date: 2/13/2024
Date: 2/14/2024
Date: 2/14/2024
Date: 2/16/2024

Table 2. Indoor Air Analytical Results Summary
Findley Adhesives, Milwaukee, Wisconsin / SCS Engineers Project #25222269.06
 (Results are in $\mu\text{g}/\text{m}^3$)

Sample	Location	Sample Start Date	Sample End Date	Lab Notes	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
10A_IAB_07_20240130	2723 N. 29th St., Basement	1/22/2024	1/30/2024	(1)	<1.06	<1.32	<0.819	<0.986	<0.536
10A_IA1_08_20240130	2723 N. 29th St., First Floor	1/22/2024	1/30/2024	(1)	<u>1.48</u> J	<1.32	<0.819	<0.987	<0.536
Indoor Air Vapor Action Level (Residential Building)					42	2.1	42	42	1.7
Indoor Air Vapor Action Level (Commercial/Industrial Building)					180	8.8	180	180	28

Abbreviations:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
 trans-1,2-DCE = trans-1,2-dichloroethene

cis-1,2-DCE = cis-1,2-dichloroethene

-- = Not Applicable

Notes:

1. Samples were collected using passive sorbent samplers analyzed using EPA Method TO-17.
2. Indoor Air Vapor Action Levels are from Wisconsin Department of Natural Resources' WI Vapor Quick Look-Up Table, which is based on August 2023 U.S. EPA Regional Screening Level Tables.
3. **Bold+underlined** values meet or exceed Indoor Air Vapor Action Levels.

Lab Notes/Qualifiers:

J = Value reported below limit of quantitation (LOQ).

- (1) All non-detected analytes = Analyte was not detected and is reported as less than the limit of detection (LOD).
 The LOD has been adjusted for any dilution or concentration of the sample.

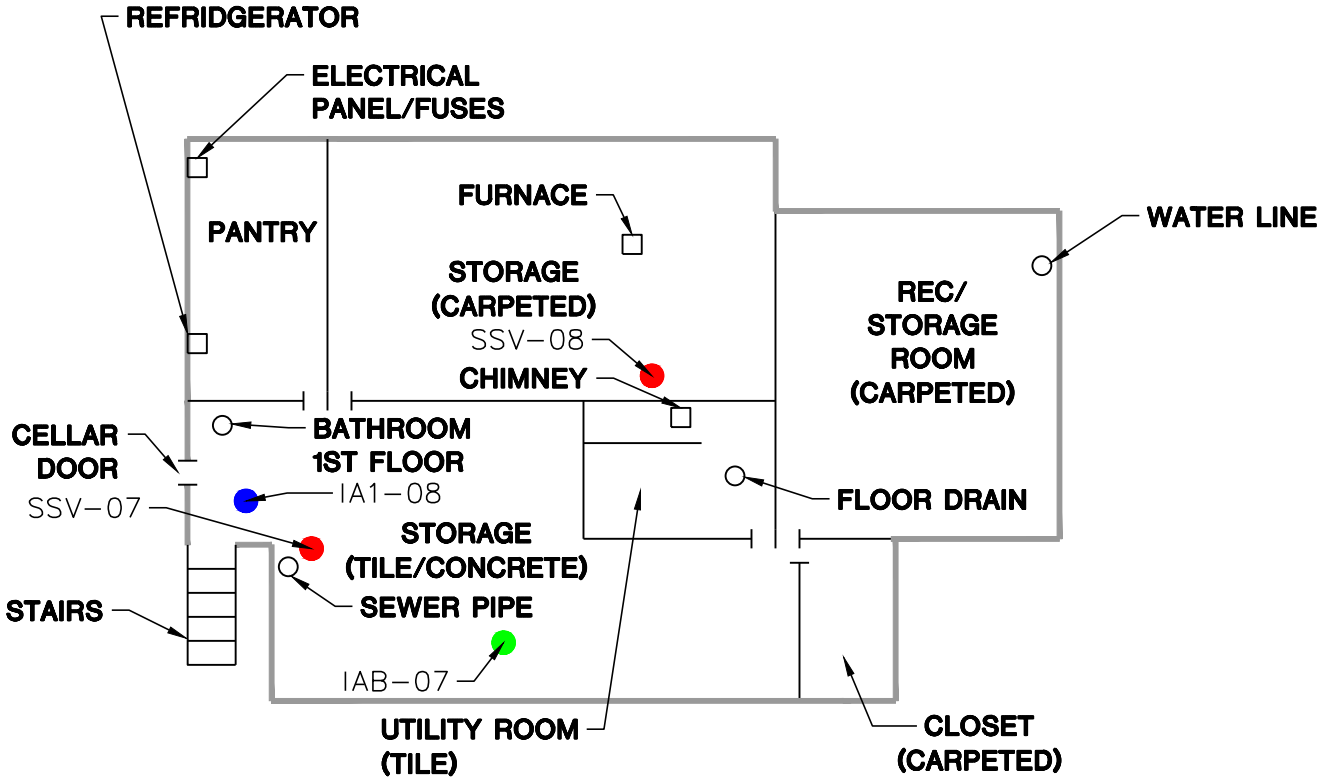
I:\25222269.00\25222269.06 Findley\Deliverables\Results Notification\2723 N 29th\[Table 2_Indoor Air Analytical Results Summary.xlsx]Indoor Air

Created by: REL
 Last revision by: REO
 Checked by: LMH
 Proj Mgr QA/QC: REL

Date: 2/13/2024
 Date: 2/15/2024
 Date: 2/16/2024
 Date: 2/16/2024

Figure 1
Vapor Investigation Map

2723 N. 29TH ST.
BASEMENT LEVEL



SCALE: 1" = 8'

NOTE:

- BUILDING DETAILS AND SAMPLE LOCATIONS ARE APPROXIMATE.

LEGEND

- SUB-SLAB SAMPLE LOCATION
- BASEMENT INDOOR AIR SAMPLE LOCATION
- 1ST FLOOR INDOOR AIR SAMPLE LOCATION

CLIENT	WISCONSIN DEPARTMENT OF NATURAL RESOURCES		SITE	FINDLEY ADHESIVES, SITE ID #10 2723 N. 29TH STREET, MILWAUKEE PROPERTY SAMPLE IDENTIFIER A		VAPOR INVESTIGATION MAP	
	PROJECT NO.	25222269.06		DRAWN BY:	SB	ENGINEER	SCS ENGINEERS 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830
DRAWN:	01/08/2024	CHECKED BY:	REL	1			
REVISED:	02/23/2024	APPROVED BY:	REL (02/23/2024)				

Attachment A
Laboratory Reports



Beacon Environmental

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 231222R02

Laboratory Work Order: 0007498

Project Description:

Findley Adhesives
Milwaukee, WI

Client PO No.: 25222269.06-002

Prepared for:

Jacob Krause

SCS Engineers

2830 Dairy Drive

Madison, WI 53718-6751

Ryan W. Schneider
Senior Project Manager

February 13, 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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SCS Engineers
 2830 Dairy Drive
 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007498-01 Sampler Type:	10A_SSV_07_20240130 Beacon Passive Sampler	01/31/2024	EPA 8260C	Soil Gas
0007498-02 Sampler Type:	10A_SSV_08_20240130 Beacon Passive Sampler	01/31/2024	EPA 8260C	Soil Gas

Project Completeness

Samples Received: 2
Samples Analyzed: 2

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

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. 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.

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.

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Analytical Results

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Detailed Analytical Results

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Detailed Analytical Results- Mass

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Lab Sample ID: 0007498-01	10A_SSV_07_20240130	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	02/13/2024 01:22	Kc24021206.D	
trans-1,2-Dichloroethene	156-60-5	<10	10	02/13/2024 01:22	Kc24021206.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	02/13/2024 01:22	Kc24021206.D	
Trichloroethene	79-01-6	<10	10	02/13/2024 01:22	Kc24021206.D	
Tetrachloroethene	127-18-4	<10	10	02/13/2024 01:22	Kc24021206.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		02/13/2024 01:22	Kc24021206.D
Surrogate: Toluene-d8	2037-26-5	93.9%	70-130		02/13/2024 01:22	Kc24021206.D
Surrogate: Bromofluorobenzene	460-00-4	89.7%	70-130		02/13/2024 01:22	Kc24021206.D

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Lab Sample ID: 0007498-02	10A_SSV_08_20240130	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (ng) Q	LOQ (ng)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<10	10	02/13/2024 01:50	Kc24021207.D	
trans-1,2-Dichloroethene	156-60-5	<10	10	02/13/2024 01:50	Kc24021207.D	
cis-1,2-Dichloroethene	156-59-2	<10	10	02/13/2024 01:50	Kc24021207.D	
Trichloroethene	79-01-6	<10	10	02/13/2024 01:50	Kc24021207.D	
Tetrachloroethene	127-18-4	<10	10	02/13/2024 01:50	Kc24021207.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.0%	70-130		02/13/2024 01:50	Kc24021207.D
Surrogate: Toluene-d8	2037-26-5	95.9%	70-130		02/13/2024 01:50	Kc24021207.D
Surrogate: Bromofluorobenzene	460-00-4	89.8%	70-130		02/13/2024 01:50	Kc24021207.D

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Detailed Analytical Results- Concentration

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Lab Sample ID: 0007498-01	10A_SSV_07_20240130	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (µg/m³) Q	LOQ (µg/m³)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<1.08	1.08	02/13/2024 01:22	Kc24021206.D	
trans-1,2-Dichloroethene	156-60-5	<1.99	1.99	02/13/2024 01:22	Kc24021206.D	
cis-1,2-Dichloroethene	156-59-2	<1.65	1.65	02/13/2024 01:22	Kc24021206.D	
Trichloroethene	79-01-6	<2.65	2.65	02/13/2024 01:22	Kc24021206.D	
Tetrachloroethene	127-18-4	<2.13	2.13	02/13/2024 01:22	Kc24021206.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	102%	70-130		02/13/2024 01:22	Kc24021206.D
Surrogate: Toluene-d8	2037-26-5	93.9%	70-130		02/13/2024 01:22	Kc24021206.D
Surrogate: Bromofluorobenzene	460-00-4	89.7%	70-130		02/13/2024 01:22	Kc24021206.D

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Lab Sample ID: 0007498-02	10A_SSV_08_20240130	Method: EPA 8260C
Soil Gas		

Analyte	CAS#	Result (µg/m³) Q	LOQ (µg/m³)	Analyzed	File ID	
Vinyl Chloride	75-01-4	<1.08	1.08	02/13/2024 01:50	Kc24021207.D	
trans-1,2-Dichloroethene	156-60-5	<1.99	1.99	02/13/2024 01:50	Kc24021207.D	
cis-1,2-Dichloroethene	156-59-2	<1.65	1.65	02/13/2024 01:50	Kc24021207.D	
Trichloroethene	79-01-6	<2.65	2.65	02/13/2024 01:50	Kc24021207.D	
Tetrachloroethene	127-18-4	<2.13	2.13	02/13/2024 01:50	Kc24021207.D	
Analyte	CAS#	% Recovery	Recovery Limits	Q	Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	97.0%	70-130		02/13/2024 01:50	Kc24021207.D
Surrogate: Toluene-d8	2037-26-5	95.9%	70-130		02/13/2024 01:50	Kc24021207.D
Surrogate: Bromofluorobenzene	460-00-4	89.8%	70-130		02/13/2024 01:50	Kc24021207.D

SCS Engineers
2830 Dairy Drive
Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

QC Information/Summary

SCS Engineers
 2830 Dairy Drive
 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B24A120 - Instrument: K System - File ID: Kb24013016.D
B24A120-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.7	10	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	52.6	10	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	50.6	10	ng	50.0		101	70-130			
Trichloroethene	49.6	10	ng	50.0		99.2	70-130			
Tetrachloroethene	46.3	10	ng	50.0		92.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.5</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.1</i>		<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.9</i>		<i>ng</i>	<i>50.0</i>		<i>91.9</i>	<i>70-130</i>			

SCS Engineers
 2830 Dairy Drive
 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B24A120 - Instrument: K System - File ID: Kb24013020.D
B24A120-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>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.4</i>		<i>ng</i>	<i>100</i>		<i>91.4</i>	<i>70-130</i>			

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B025 - Batch: 24B0019 - Instrument: K System - File ID: Kc24021202.D

24B0019-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	55.1	10	ng	50.0		110	80-120			
trans-1,2-Dichloroethene	53.6	10	ng	50.0		107	80-120			
cis-1,2-Dichloroethene	49.2	10	ng	50.0		98.4	80-120			
Trichloroethene	47.1	10	ng	50.0		94.2	80-120			
Tetrachloroethene	43.8	10	ng	50.0		87.6	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	<i>55.2</i>		<i>ng</i>	<i>50.0</i>		<i>110</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.2</i>		<i>ng</i>	<i>50.0</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.4</i>		<i>ng</i>	<i>50.0</i>		<i>90.8</i>	<i>70-130</i>			

SCS Engineers
 2830 Dairy Drive
 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B24B025 - Batch: 24B0019 - Instrument: K System - File ID: Kc24021203.D
24B0019-BLK1 (Lab Blank)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<1.08	1.08	µg/m ³							U
trans-1,2-Dichloroethene	<1.99	1.99	µg/m ³							U
cis-1,2-Dichloroethene	<1.65	1.65	µg/m ³							U
Trichloroethene	<2.65	2.65	µg/m ³							U
Tetrachloroethene	<2.13	2.13	µg/m ³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>108</i>		<i>ng</i>	<i>100</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>102</i>		<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.5</i>		<i>ng</i>	<i>100</i>		<i>86.5</i>	<i>70-130</i>			

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B025 - Batch: 24B0019 - Instrument: K System - File ID: Kc24021203.D

24B0019-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>108</i>		<i>ng</i>	<i>100</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>102</i>		<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.5</i>		<i>ng</i>	<i>100</i>		<i>86.5</i>	<i>70-130</i>			

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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary
Sequence: B24B025 - Instrument: K System - File ID: Kc24021204.D
B24B025-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	55.6	10	ng	50.0		111	70-130			
trans-1,2-Dichloroethene	53.3	10	ng	50.0		107	70-130			
cis-1,2-Dichloroethene	50.7	10	ng	50.0		101	70-130			
Trichloroethene	49.1	10	ng	50.0		98.1	70-130			
Tetrachloroethene	45.2	10	ng	50.0		90.4	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>54.1</i>		<i>ng</i>	<i>50.0</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.8</i>		<i>ng</i>	<i>50.0</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.3</i>		<i>ng</i>	<i>50.0</i>		<i>86.6</i>	<i>70-130</i>			

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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Soil-Gas Sample Analysis by EPA Method 8260C - Quality Control Summary

Sequence: B24B025 - Instrument: K System - File ID: Kc24021212.D

B24B025-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.8	10	ng	50.0		108	50-150			
trans-1,2-Dichloroethene	51.4	10	ng	50.0		103	50-150			
cis-1,2-Dichloroethene	49.5	10	ng	50.0		99.0	50-150			
Trichloroethene	47.1	10	ng	50.0		94.2	50-150			
Tetrachloroethene	42.5	10	ng	50.0		85.0	50-150			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.4</i>		<i>ng</i>	<i>50.0</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>51.3</i>		<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>50-150</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>43.5</i>		<i>ng</i>	<i>50.0</i>		<i>87.1</i>	<i>50-150</i>			

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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B24B025 - Instrument: K System - File ID: Kc24021213.D
B24B025-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>107</i>		<i>ng</i>	<i>100</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>101</i>		<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>87.4</i>		<i>ng</i>	<i>100</i>		<i>87.4</i>	<i>70-130</i>			

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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Soil-Gas Analysis by EPA 8260 - Data in Concentration - Quality Control Summary

Sequence: B24B025 - Instrument: K System - File ID: Kc24021220.D
B24B025-CCB2 (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>108</i>		<i>ng</i>	<i>100</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>103</i>		<i>ng</i>	<i>100</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>86.7</i>		<i>ng</i>	<i>100</i>		<i>86.7</i>	<i>70-130</i>			

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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Additional QC Information

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R02 Lab Work Order: 0007498 Reported: 02/13/2024
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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: 0007498-01 **Sample Name:** 10A_SSV_07_20240130

Vinyl Chloride	11,434	1.00	0.810	U	U	Kc24021206.D
trans-1,2-Dichloroethene	11,434	1.00	0.440	U	U	Kc24021206.D
cis-1,2-Dichloroethene	11,434	1.00	0.530	U	U	Kc24021206.D
Trichloroethene	11,434	1.00	0.330	U	U	Kc24021206.D
Tetrachloroethene	11,434	1.00	0.410	U	U	Kc24021206.D

Lab ID: 0007498-02 **Sample Name:** 10A_SSV_08_20240130

Vinyl Chloride	11,435	1.00	0.810	U	U	Kc24021207.D
trans-1,2-Dichloroethene	11,435	1.00	0.440	U	U	Kc24021207.D
cis-1,2-Dichloroethene	11,435	1.00	0.530	U	U	Kc24021207.D
Trichloroethene	11,435	1.00	0.330	U	U	Kc24021207.D
Tetrachloroethene	11,435	1.00	0.410	U	U	Kc24021207.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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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

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: 0007498-01 **Sample Name:** 10A_SSV_07_20240130

Vinyl Chloride	11,434	1.00	0.810	10.0	1.08
trans-1,2-Dichloroethene	11,434	1.00	0.440	10.0	1.99
cis-1,2-Dichloroethene	11,434	1.00	0.530	10.0	1.65
Trichloroethene	11,434	1.00	0.330	10.0	2.65
Tetrachloroethene	11,434	1.00	0.410	10.0	2.13

Lab ID: 0007498-02 **Sample Name:** 10A_SSV_08_20240130

Vinyl Chloride	11,435	1.00	0.810	10.0	1.08
trans-1,2-Dichloroethene	11,435	1.00	0.440	10.0	1.99
cis-1,2-Dichloroethene	11,435	1.00	0.530	10.0	1.65
Trichloroethene	11,435	1.00	0.330	10.0	2.65
Tetrachloroethene	11,435	1.00	0.410	10.0	2.13

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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

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	MD010912023-14	Utah Department of Health	12/31/2024	

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Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
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Reported: 02/13/2024

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 ± 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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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R02
Lab Work Order: 0007498
Reported: 02/13/2024

Sample Management Records



Beacon Environmental

526 Underwood Lane
Bel Air, MD 21014 USA
1.410.838.8780

CERTIFICATE OF ANALYSIS

Beacon Proposal No.: 231222R04

Laboratory Work Order: 0007502

Project Description:

Findley Adhesives
Milwaukee, WI

Client PO No.: 2522269.06-004

Prepared for:

Jacob Krause

SCS Engineers

2830 Dairy Drive

Madison, WI 53718-6751

Ryan W. Schneider
Senior Project Manager

February 14, 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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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

Sample Summary

Lab Sample ID	Client Sample ID	Received	Analysis	Matrix
0007502-01 Sampler Type:	10A_IAB_07_20240130 Beacon Passive Sampler	01/31/2024	TO-17 (Passive)	Indoor Air
0007502-02 Sampler Type:	10A_IA1_08_20240130 Beacon Passive Sampler	01/31/2024	TO-17 (Passive)	Indoor Air

Project Completeness

Samples Received: 2
Samples Analyzed: 2

SCS Engineers
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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

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 $\mu\text{g}/\text{m}^3$. 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) for EPA Method TO-17

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 detection (LOD) as noted in the data tables.

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 limit of detection (LOD) 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

SCS Engineers
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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

Analytical Results

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R04 Lab Work Order: 0007502 Reported: 02/14/2024
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Summary of Compound Detections- Concentration

Lab Sample ID: 0007502-02	10A_IA1_08_20240130	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m³)	Q	RT	LOQ (µg/m³)	LOD (µg/m³)	File ID
Tetrachloroethene	127-18-4	1.48	J	8.075	2.12	1.06	Kb24021207.D

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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

Data Summary Table- Concentration

Compound	Frequency	LOD ($\mu\text{g}/\text{m}^3$)	Max Value ($\mu\text{g}/\text{m}^3$)
Tetrachloroethene	1	1.06	1.48

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Site Name: Findley Adhesives
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Beacon Proposal: 231222R04
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Reported: 02/14/2024

Detailed Analytical Results

SCS Engineers
 2830 Dairy Drive
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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

Lab Sample ID: 0007502-01

10A_IAB_07_20240130

Method: TO-17 (Passive)

Indoor Air

Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.536	U	0.536	1.07	02/12/2024 17:39	Kb24021206.D
trans-1,2-Dichloroethene	156-60-5	<0.986	U	0.986	1.97	02/12/2024 17:39	Kb24021206.D
cis-1,2-Dichloroethene	156-59-2	<0.819	U	0.819	1.64	02/12/2024 17:39	Kb24021206.D
Trichloroethene	79-01-6	<1.32	U	1.32	2.63	02/12/2024 17:39	Kb24021206.D
Tetrachloroethene	127-18-4	<1.06	U	1.06	2.12	02/12/2024 17:39	Kb24021206.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	106%	70-130			02/12/2024 17:39	Kb24021206.D
Surrogate: Toluene-d8	2037-26-5	97.4%	70-130			02/12/2024 17:39	Kb24021206.D
Surrogate: Bromofluorobenzene	460-00-4	89.9%	70-130			02/12/2024 17:39	Kb24021206.D

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R04 Lab Work Order: 0007502 Reported: 02/14/2024
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Lab Sample ID: 0007502-02	10A_IA1_08_20240130	Method: TO-17 (Passive)
Indoor Air		

Analyte	CAS#	Result (µg/m ³)	Q	LOD (µg/m ³)	LOQ (µg/m ³)	Analyzed	File ID
Vinyl Chloride	75-01-4	<0.536	U	0.536	1.07	02/12/2024 18:07	Kb24021207.D
trans-1,2-Dichloroethene	156-60-5	<0.987	U	0.987	1.97	02/12/2024 18:07	Kb24021207.D
cis-1,2-Dichloroethene	156-59-2	<0.819	U	0.819	1.64	02/12/2024 18:07	Kb24021207.D
Trichloroethene	79-01-6	<1.32	U	1.32	2.63	02/12/2024 18:07	Kb24021207.D
Tetrachloroethene	127-18-4	1.48	J	1.06	2.12	02/12/2024 18:07	Kb24021207.D
Analyte	CAS#	% Recovery	Recovery Limits	Q		Analyzed	File ID
Surrogate: 1,2-DCA-d4	17060-07-0	106%	70-130			02/12/2024 18:07	Kb24021207.D
Surrogate: Toluene-d8	2037-26-5	96.5%	70-130			02/12/2024 18:07	Kb24021207.D
Surrogate: Bromofluorobenzene	460-00-4	90.2%	70-130			02/12/2024 18:07	Kb24021207.D

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Project Manager: Jacob Krause

Beacon Proposal: 231222R04
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Reported: 02/14/2024

QC Information/Summary

SCS Engineers
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 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

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

Sequence: B24A120 - Instrument: K System - File ID: Kb24013016.D
B24A120-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	53.7	10	5	ng	50.0		107	70-130			
trans-1,2-Dichloroethene	52.6	10	5	ng	50.0		105	70-130			
cis-1,2-Dichloroethene	50.6	10	5	ng	50.0		101	70-130			
Trichloroethene	49.6	10	5	ng	50.0		99.2	70-130			
Tetrachloroethene	46.3	10	5	ng	50.0		92.5	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.5</i>			<i>ng</i>	<i>50.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>50.1</i>			<i>ng</i>	<i>50.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>45.9</i>			<i>ng</i>	<i>50.0</i>		<i>91.9</i>	<i>70-130</i>			

SCS Engineers
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Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

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

Sequence: B24A120 - Instrument: K System - File ID: Kb24013020.D
B24A120-ICB1 (Lab Blank/Initial Calibration Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	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>101</i>			<i>ng</i>	<i>100</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>91.4</i>			<i>ng</i>	<i>100</i>		<i>91.4</i>	<i>70-130</i>			

SCS Engineers
 2830 Dairy Drive
 Madison, WI 53718-6751

Site Name: Findley Adhesives
Site Location: Milwaukee, WI
Project Manager: Jacob Krause

Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

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

Sequence: B24B024 - Batch: 24B0018 - Instrument: K System - File ID: Kb24021203.D
24B0018-BLK1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<0.536	1.07	0.536	µg/m³							U
trans-1,2-Dichloroethene	<0.986	1.97	0.986	µg/m³							U
cis-1,2-Dichloroethene	<0.819	1.64	0.819	µg/m³							U
Trichloroethene	<1.32	2.63	1.32	µg/m³							U
Tetrachloroethene	<1.06	2.12	1.06	µg/m³							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>105</i>			<i>ng</i>	<i>100</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>89.9</i>			<i>ng</i>	<i>100</i>		<i>89.9</i>	<i>70-130</i>			

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Beacon Proposal: 231222R04
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Reported: 02/14/2024

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

Sequence: B24B024 - Instrument: K System - File ID: Kb24021204.D
B24B024-ICV1 (LCSD/Second Source Verification/CALV)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	45.6	10	5	ng	50.0		91.2	70-130			
trans-1,2-Dichloroethene	53.8	10	5	ng	50.0		108	70-130			
cis-1,2-Dichloroethene	50.3	10	5	ng	50.0		101	70-130			
Trichloroethene	48.7	10	5	ng	50.0		97.4	70-130			
Tetrachloroethene	46.4	10	5	ng	50.0		92.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.2</i>			<i>ng</i>	<i>50.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>52.4</i>			<i>ng</i>	<i>50.0</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.0</i>			<i>ng</i>	<i>50.0</i>		<i>87.9</i>	<i>70-130</i>			

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Reported: 02/14/2024

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

Sequence: B24B024 - Batch: 24B0018 - Instrument: K System - File ID: Kb24021205.D
24B0018-BS1 (LCS, Calibration Source Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	51.7	10	5	ng	50.0		103	70-130			
trans-1,2-Dichloroethene	50.8	10	5	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	48.6	10	5	ng	50.0		97.1	70-130			
Trichloroethene	47.1	10	5	ng	50.0		94.2	70-130			
Tetrachloroethene	43.8	10	5	ng	50.0		87.7	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>51.9</i>			<i>ng</i>	<i>50.0</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>52.5</i>			<i>ng</i>	<i>50.0</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.0</i>			<i>ng</i>	<i>50.0</i>		<i>88.0</i>	<i>70-130</i>			

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Beacon Proposal: 231222R04
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Reported: 02/14/2024

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

Sequence: B24B024 - Instrument: K System - File ID: Kb24021216.D
B24B024-CCV1 (LCS, Closing Calibration Verification)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	52.4	10	5	ng	50.0		105	70-130			
trans-1,2-Dichloroethene	51.2	10	5	ng	50.0		102	70-130			
cis-1,2-Dichloroethene	48.4	10	5	ng	50.0		96.8	70-130			
Trichloroethene	47.2	10	5	ng	50.0		94.4	70-130			
Tetrachloroethene	43.0	10	5	ng	50.0		86.0	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>53.5</i>			<i>ng</i>	<i>50.0</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>52.2</i>			<i>ng</i>	<i>50.0</i>		<i>104</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>44.2</i>			<i>ng</i>	<i>50.0</i>		<i>88.3</i>	<i>70-130</i>			

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Beacon Proposal: 231222R04
Lab Work Order: 0007502
Reported: 02/14/2024

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

Sequence: B24B024 - Instrument: K System - File ID: Kb24021217.D
B24B024-CCB1 (Lab Blank)

Analyte	Result	LOQ	LOD	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Vinyl Chloride	<5	10	5	ng							U
trans-1,2-Dichloroethene	<5	10	5	ng							U
cis-1,2-Dichloroethene	<5	10	5	ng							U
Trichloroethene	<5	10	5	ng							U
Tetrachloroethene	<5	10	5	ng							U
<i>Surrogate: 1,2-DCA-d4</i>	<i>108</i>			<i>ng</i>	<i>100</i>		<i>108</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>102</i>			<i>ng</i>	<i>100</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Bromofluorobenzene</i>	<i>87.9</i>			<i>ng</i>	<i>100</i>		<i>87.9</i>	<i>70-130</i>			

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R04 Lab Work Order: 0007502 Reported: 02/14/2024
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TO-17 (Passive) - LCS/LCSD RPD Quality Control Summary

LCS: 24B0018-BS1 File ID: Kb24021205.D

Analyzed: 2/12/24 11:08

LCSD: B24B024-ICV1 File ID: Kb24021204.D

Analyzed: 2/12/24 16:53

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	51.68	103.36	50	45.62	91.20	70-130	12.46	30	
trans-1,2-Dichloroethene	156-60-5	50.78	101.56	50	53.79	108.00	70-130	5.76	30	
cis-1,2-Dichloroethene	156-59-2	48.56	97.12	50	50.32	101.00	70-130	3.56	30	
Trichloroethene	79-01-6	47.08	94.16	50	48.71	97.40	70-130	3.40	30	
Tetrachloroethene	127-18-4	43.84	87.68	50	46.35	92.70	70-130	5.57	30	

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Beacon Proposal: 231222R04
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Reported: 02/14/2024

Additional QC Information

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R04 Lab Work Order: 0007502 Reported: 02/14/2024
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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: 0007502-01	Sample Name: 10A_IAB_07_20240130	̄ Temp (°C): 21.11				
Vinyl Chloride	11,434	1.00	0.816	U	U	Kb24021206.D
trans-1,2-Dichloroethene	11,434	1.00	0.443	U	U	Kb24021206.D
cis-1,2-Dichloroethene	11,434	1.00	0.534	U	U	Kb24021206.D
Trichloroethene	11,434	1.00	0.333	U	U	Kb24021206.D
Tetrachloroethene	11,434	1.00	0.413	U	U	Kb24021206.D

Lab ID: 0007502-02	Sample Name: 10A_IA1_08_20240130	̄ Temp (°C): 21.11				
Vinyl Chloride	11,428	1.00	0.816	U	U	Kb24021207.D
trans-1,2-Dichloroethene	11,428	1.00	0.443	U	U	Kb24021207.D
cis-1,2-Dichloroethene	11,428	1.00	0.534	U	U	Kb24021207.D
Trichloroethene	11,428	1.00	0.333	U	U	Kb24021207.D
Tetrachloroethene	11,428	1.00	0.413	7.01	1.48	Kb24021207.D

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 (µg/m³)
 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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Reported: 02/14/2024

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

Analyte	t Sampling Time minutes	DF Dilution Factor	Uc Uptake Rate	M Initial (ng)		C Calculated (µg/m³)	
				LOQ	LOD	LOQ	LOD

Lab ID: 0007502-01	Sample Name: 10A_IAB_07_20240130	X̄ Temp (°C): 21.11					
Vinyl Chloride	11,434	1.00	0.816	10.00	5.00	1.07	0.536
trans-1,2-Dichloroethene	11,434	1.00	0.443	10.00	5.00	1.97	0.986
cis-1,2-Dichloroethene	11,434	1.00	0.534	10.00	5.00	1.64	0.819
Trichloroethene	11,434	1.00	0.333	10.00	5.00	2.63	1.32
Tetrachloroethene	11,434	1.00	0.413	10.00	5.00	2.12	1.06

Lab ID: 0007502-02	Sample Name: 10A_IA1_08_20240130	X̄ Temp (°C): 21.11					
Vinyl Chloride	11,428	1.00	0.816	10.00	5.00	1.07	0.536
trans-1,2-Dichloroethene	11,428	1.00	0.443	10.00	5.00	1.97	0.987
cis-1,2-Dichloroethene	11,428	1.00	0.534	10.00	5.00	1.64	0.819
Trichloroethene	11,428	1.00	0.333	10.00	5.00	2.63	1.32
Tetrachloroethene	11,428	1.00	0.413	10.00	5.00	2.12	1.06

SCS Engineers 2830 Dairy Drive Madison, WI 53718-6751	Site Name: Findley Adhesives Site Location: Milwaukee, WI Project Manager: Jacob Krause	Beacon Proposal: 231222R04 Lab Work Order: 0007502 Reported: 02/14/2024
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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	MD010912023-14	Utah Department of Health	12/31/2024	

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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:

J	Value reported below limit of quantitation (LOQ).
U	Analyte was not detected and is reported as less than the limit of detection (LOD). The LOD has been adjusted for any dilution or concentration of the sample.

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Sample Management Records

Attachment B

WDNR Publication RR-977



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.

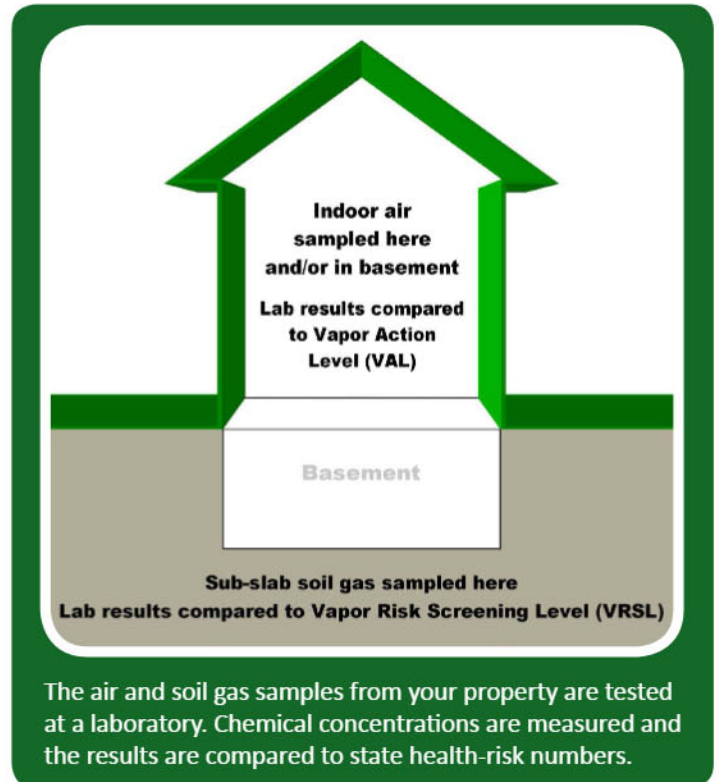
Indoor Air Testing Results

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.



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

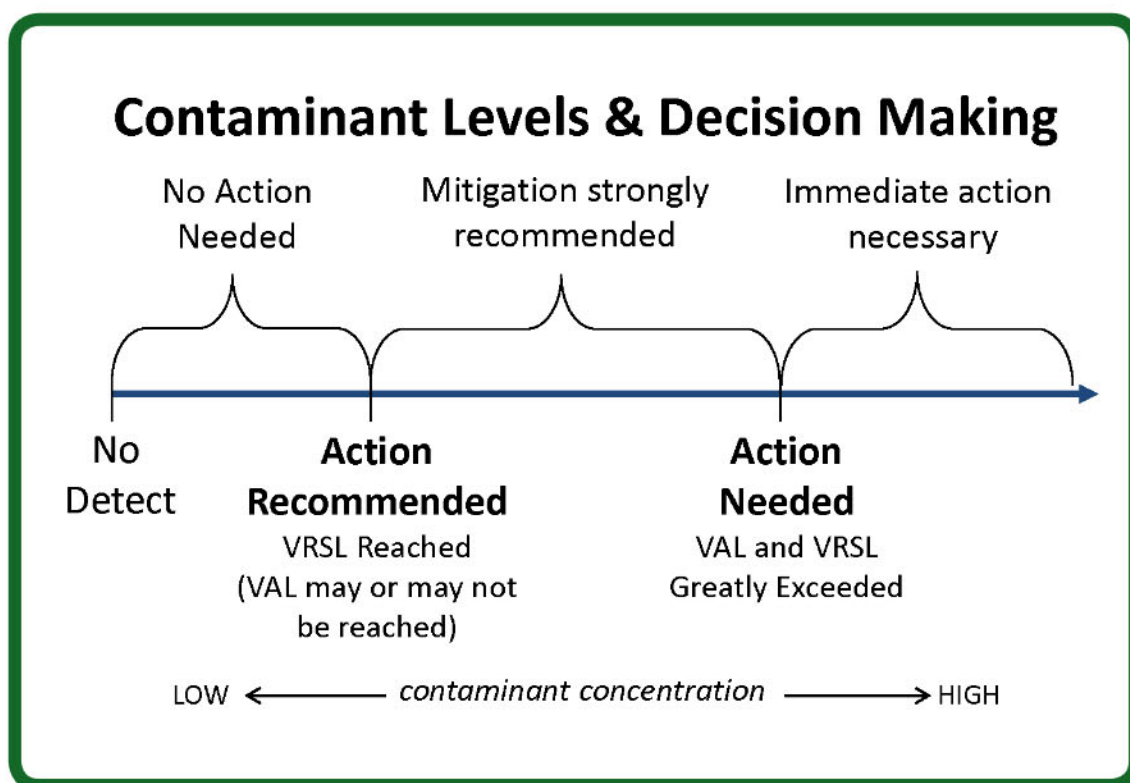
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

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 $\mu\text{g}/\text{m}^3$ 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