April 22, 2022

Patrick Reardon
4701 7th Avenue
Kenosha, WI 53140

Subject: Vapor Sampling Results – Contaminants Not Detected
Property: Martino's Master Drycleaners, BRRTS: 02-30-287150

Dear Mr. Reardon:

In accordance with the executed Agreement to Provide Access for Sampling Activities, and in accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, EnviroForensics, LLC (EnviroForensics) is providing the results of environmental samples collected from your property located at 4709 7th Avenue in Kenosha, Wisconsin. The sampling activities are part of an environmental investigation being performed for the Martino's Master Drycleaners facility located at 4700 7th Avenue in Kenosha at the direction of the WDNR pursuant to the authority granted to it under State and Federal law. The chemicals of concern for the investigation are the dry cleaning solvent tetrachloroethene (PCE) and its associated breakdown products.

On March 28-29, 2022, EnviroForensics staff collected two indoor air samples designated 6189-4709-IA-1 and 6189-4709-IA-B from the first floor and the basement of your home, respectively. Two (2) samples of sub-slab vapor designated 6189-4709-SSV-1 and 6189-4709-SSV-2 were collected from beneath the basement floor. The approximate sampling locations are depicted on the attached **Figure 1**.

Your Test Results:

The results of the air and vapor samples are summarized and compared to WDNR standards on the attached **Table 1**. Previous sampling results from June and September 2015 are included in **Table 1** for reference. A copy of the laboratory report that relates to the samples is also attached. The chemicals of concern were not detected in the indoor air or sub-slab vapor samples.

These sampling results confirm the previous conclusion that there does not appear to be a risk of PCE vapor entering your home from beneath the foundation. If you have any questions or concerns, please contact me at 262-290-4001 or by email at bkappen@enviroforensics.com. The WDNR project manager, Jane Pfeiffer, can be reached at 414-435-8021.

Document: 6189-2592

We greatly appreciate your help and patience with this matter.

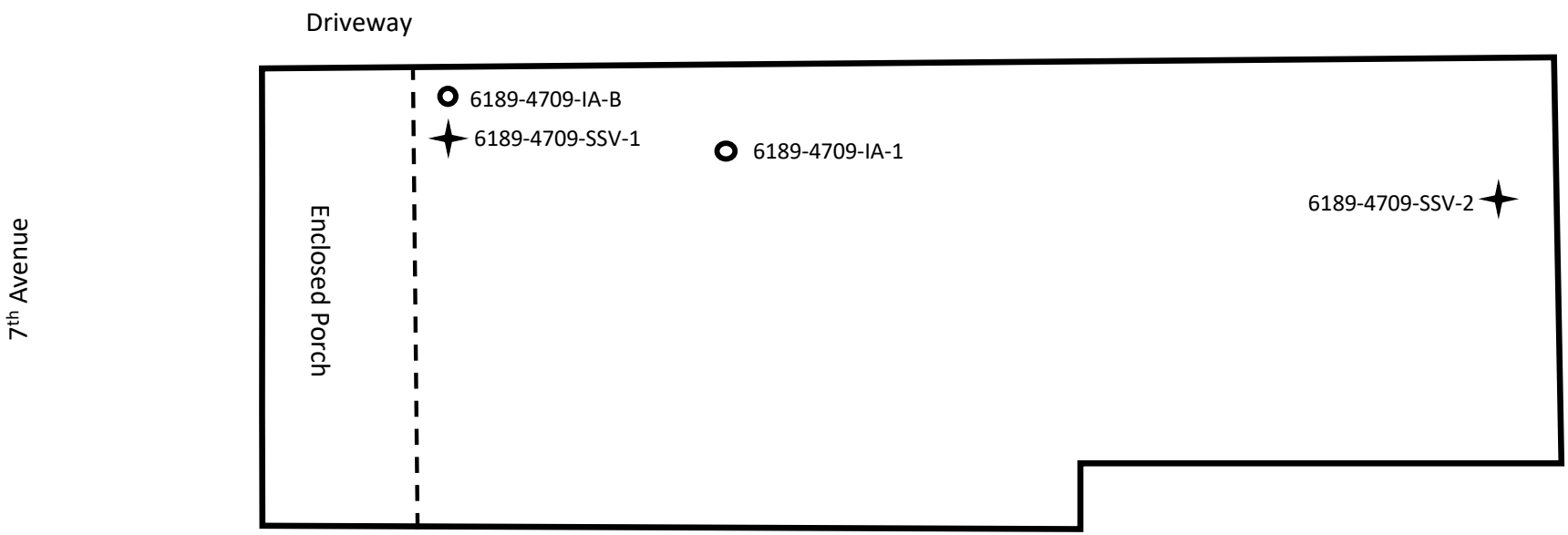
Sincerely,
EnviroForensics, LLC

Brian Kappen, PG
Project Manager

Attachments: Figure 1 – Vapor Intrusion Sample Locations
Table 1 – Vapor Intrusion Assessment Results Summary
Laboratory Analytical Report

ec: Jane Pfeiffer, Wisconsin Department of Natural Resources

VAPOR INTRUSION SAMPLE LOCATIONS
4709 7th Ave, Kenosha, Wisconsin



Legend

Indoor/Outdoor Air Sample

Sub-Slab Vapor Sample

IA-B = Basement
IA-1 = 1st Floor

N

TABLE 1
SUMMARY OF VAPOR INTRUSION SAMPLING RESULTS - 4709 7th AVENUE

Martino's Master Dry Cleaners

4700 7th Avenue, Kenosha, Wisconsin

Sample Address	Sample Identification	Sample Location	Applicable Criteria	Sample Date	Tetrachloroethene	Trichlorethene	Chloroform
INDOOR/ OUTDOOR AIR							
Residential Vapor Action Level					**42**	**2.1**	**1.2**
4709 7th Avenue	6189-4709-IA-B	Basement	Residential	6/16/2015	**110**	<1.07	**1.22**
				9/17/2015	<3.19	<1.07	<0.83
				3/29/2022	<3.19	<1.07	NA
	6189-4709-IA-1	1st Floor	Residential	6/16/2015	**3,270**	<1.07	<0.83
				9/17/2015	<3.19	<1.07	<0.83
				3/29/2022	<3.19	<1.07	NA
	6189-4709-IA-2	2nd Floor	Residential	6/16/2015	**5,140**	<1.07	<0.83
				9/17/2015	<3.19	<1.07	<0.83
	6189-4709-OA	Outdoor	NA	9/17/2015	<3.19	<1.07	<0.83
SUB-SLAB VAPOR							
Residential Vapor Risk Screening Level					**1,400**	**70**	**41**
4709 7th Avenue	6189-4709-SSV-1	Basement	Residential	6/16/2015	**326**	<10.7	<8.30
				9/17/2015	**870**	<10.7	<8.30
				3/29/2022	<31.9	<10.7	NA
	6189-4709-SSV-2	Basement	Residential	6/16/2015	<31.9	<10.7	<8.30
				9/17/2015	**68.5**	<10.7	<8.30
				3/29/2022	<31.9	<10.7	NA
	6189-4709-SSV-3	Basement	Residential	9/17/2015	**218**	<10.7	<8.30

Notes:

Results reported in microgragms per cubic meter ($\mu g/m^3$)

Analysis performed by Envision Laboratories according to EPA Method TO-15

Bolded values are above detection limits

Bolded and blue shaded concentrations exceed the applicable residential screening or action level

NA = Not Analyzed

ENVIRO forensics

EnvisionAir
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Mr. Brian Kappen
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

April 18, 2022

EnvisionAir Project Number: 2022-255
Client Project Name: 6189 – Martino's 7th Ave.

Dear Mr. Kappen,

Please find the attached analytical report for the samples received April 1, 2022. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

David Norris
Project Manager
EnvisionAir, LLC

EnvisionAir
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Client Name: ENVIROFORENSICS

Project ID: 6189 - MARTINO'S 7TH AVE.

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2022-255

Sample Summary

Laboratory Sample Number:	Sample Description:	Matrix:	START Date Collected:	START Time Collected:	End Date Collected:	End Time Collected:	Date Received:	Time Received	Canister Pressure / Vacuum Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)
22-1432	6189-4709-IA-B	A	3/28/22	9:15	3/29/22	9:15	4/1/22	10:30	-29	0	0
22-1433	6189-4709-IA-1	A	3/28/22	9:20	3/29/22	9:16	4/1/22	10:30	-29	-2	-2
22-1434	6189-4709-SSV-1	A	3/29/22	9:38	3/29/22	9:43	4/1/22	10:30	-30	-4	-4
22-1435	6189-4709-SSV-2	A	3/29/22	10:01	3/29/22	10:06	4/1/22	10:30	-30	-4	-4

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Client Name: ENVIROFORENSICS

Project ID: 6189 - MARTINO'S 7TH AVE

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2022-255

Analytical Method: TO-15
Analytical Batch: 040822AIR

Client Sample ID: 6189-4709-IA-B
EnvisionAir Sample Number: 22-1432
Sample Matrix: AIR

Sample Collection START Date/Time: 3/28/22 9:15
Sample Collection END Date/Time: 3/29/22 9:15
Sample Received Date/Time: 4/1/22 10:30

Compounds	Sample Results ug/m³	Reporting Limit ug/m³	Flag
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	98%		
Analysis Date/Time:	4-10-22/11:19		
Analyst Initials	tjg		

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Client Name: ENVIROFORENSICS

Project ID: 6189 - MARTINO'S 7TH AVE

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2022-255

Analytical Method: TO-15
Analytical Batch: 040822AIR

Client Sample ID: 6189-4709-IA-1
EnvisionAir Sample Number: 22-1433
Sample Matrix: AIR

Sample Collection START Date/Time: 3/28/22 9:20
Sample Collection END Date/Time: 3/29/22 9:16
Sample Received Date/Time: 4/1/22 10:30

Compounds	Sample Results ug/m³	Reporting Limit ug/m³	Flag
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	92%		
Analysis Date/Time:	4-10-22/11:54		
Analyst Initials	tjg		

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Client Name: ENVIROFORENSICS

Project ID: 6189 - MARTINO'S 7TH AVE

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2022-255

Analytical Method: TO-15
Analytical Batch: 040822AIR

Client Sample ID: 6189-4709-SSV-1
EnvisionAir Sample Number: 22-1434
Sample Matrix: AIR

Sample Collection START Date/Time: 3/29/22 9:38
Sample Collection END Date/Time: 3/29/22 9:43
Sample Received Date/Time: 4/1/22 10:30

Compounds	Sample Results ug/m³	Reporting Limit ug/m³	Flag
cis-1,2-Dichloroethene	< 198	198	
Tetrachloroethene	< 31.9	31.9	
trans-1,2-Dichloroethene	< 396	396	
Trichloroethene	< 10.7	10.7	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	104%		
Analysis Date/Time:	4-10-22/15:37		
Analyst Initials	tjg		

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Client Name: ENVIROFORENSICS

Project ID: 6189 - MARTINO'S 7TH AVE

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2022-255

Analytical Method: TO-15
Analytical Batch: 040822AIR

Client Sample ID: 6189-4709-SSV-2
EnvisionAir Sample Number: 22-1435
Sample Matrix: AIR

Sample Collection START Date/Time: 3/29/22 10:01
Sample Collection END Date/Time: 3/29/22 10:06
Sample Received Date/Time: 4/1/22 10:30

Compounds	Sample Results ug/m³	Reporting Limit ug/m³	Flag
cis-1,2-Dichloroethene	< 198	198	
Tetrachloroethene	< 31.9	31.9	
trans-1,2-Dichloroethene	< 396	396	
Trichloroethene	< 10.7	10.7	
Vinyl Chloride	< 12.8	12.8	
4-bromofluorobenzene (surrogate)	106%		
Analysis Date/Time:	4-10-22/16:15		
Analyst Initials	tjg		

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Analytical Report

TO-15 Quality Control Data

EnvisionAir Batch Number: 040822AIR

Method Blank (MB):	MB Results (ppbv)	Reporting Limit (ppbv)	Flags
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichlorethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	94%		
Analysis Date/Time:	4-10-22/00:03		
Analyst Initials	tjg		

LCS/LCSD	LCS Results (ppbv)	LCSD Results (ppbv)	LCS/D Conc(ppbv)	LCS Rec.	LCSD Rec.	RPD	Flag
Vinyl Chloride	10.3	10.7	10	103%	107%	3.8%	
trans-1,2-Dichloroethene	10.1	10.6	10	101%	106%	4.8%	
cis-1,2-Dichloroethene	10.3	9.73	10	103%	97%	5.7%	
Trichloroethene	10.2	9.68	10	102%	97%	5.2%	
Tetrachloroethene	10	9.01	10	100%	90%	10.4%	
4-bromofluorobenzene (surrogate)	100%	101%					
Analysis Date/Time:	4-9-22/22:16	4-9-22/22:54					
Analyst Initials	tjg	tjg					

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Flag Number	Comments

CHAIN OF CUSTODY RECORD

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

Client: Envirforensics	P.O. Number: 2022-0162
Report Address: bkappen@envirforensics.com	Project Name or Number: 6189 Martino's 7th Ave
Report To: Brian Kappen	Sampled by: R Brown
Phone: 262-290-4001	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: accounts payable@envirforensics.com	Reporting Units needed: (circle) ug/m³ mg/m³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days Std (5 bus. days)	Media type: 1LC = 1 Liter Canister; 6LC = 6 Liter Canister; TB = Tedlar Bag; TD = Thermal Desorption Tube

REQUESTED PARAMETERS

TO-15 Full List

TO-15 Short List (Specify in notes)

ENVISIONAIR

Sampling Type:
Soil-Gas: ☐
Sub-Slab: ☒
Indoor-Air: ☒

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Air Sample ID	Media Type (see code above)	Coll. Date (Grab/Comp Start)	Coll. Time (Grab/Comp Start)	Coll. Date (Comp. End)	Coll. Time (Comp. End)					Canister Serial #	Flow Controller Serial #	Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)	EnvisionAir Sample Number
6189-4709-1A-B	6LC	3-28-22	915	3-29-22	915		X			11073	5003	-29	Ø	Ø	22-1432
6189-4709-1A-1	6LC	3-28-22	920	↓	916		↓			16089	4658	-29	-2	2	22-1433
6189-4709-SSV-1	1LC	3-29-22	938	↓	943		↓			513	0022	-30	-4	-4	22-1434
6189-4709-SSV-2	1LC	3-29-22	1001	↓	1006		↓			2091	0081	-30	-4	-4	22-1435

Comments:
Short list: PCE, TCE, cDCE, tDCE, VC

Relinquished by:	Date	Time	Received by:	Date	Time
TL TL	3-29-22	1630	FedEX	3-29-22	1630
			H Quillen	4-1-22	10:30

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.

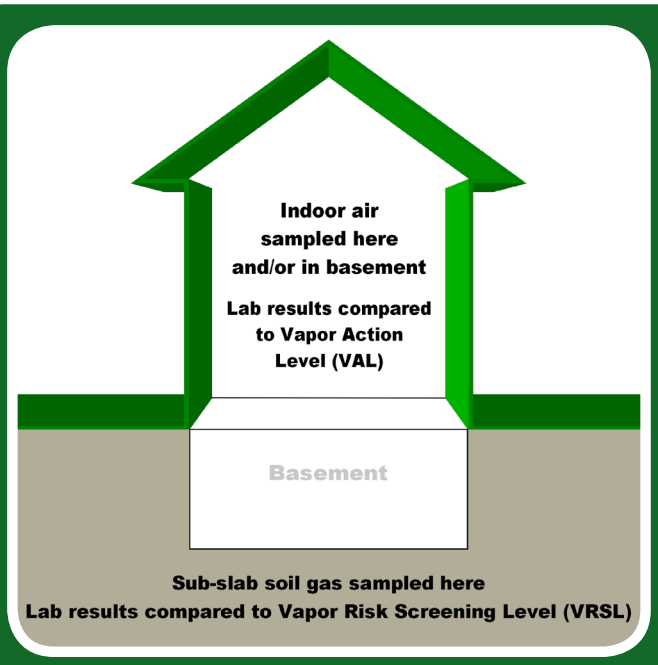
Indoor Air Testing Results

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.

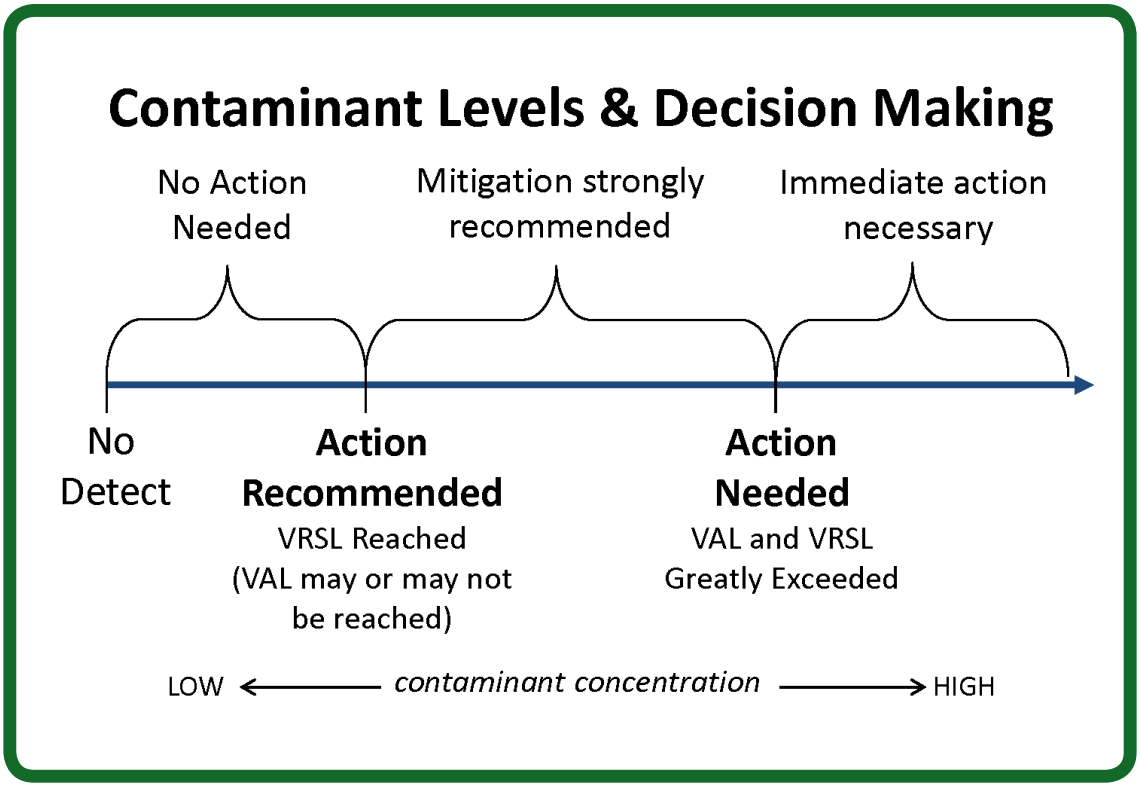
Follow-Up Actions

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**

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.