



Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon WI 53092
Tel: (262) 241-4466
Fax: (262) 241-4901

February 11, 2021

Mr. Michael Gral
Integral Management Company, LLC
1437 North Prospect Avenue
Milwaukee, WI 53202

**Reference: Request for Indoor Air and Sub-Slab Vapor Sampling
429 West Silver Spring Drive, Glendale, Wisconsin
Stantec Project No.: 193707230**

Dear Mr. Gral

Stantec Consulting Services, Inc. (Stantec), on behalf of our client Whitefish Bay Cleaners located at 419 West Silver Spring Drive, Glendale, Wisconsin, is investigating soil and groundwater contamination resulting from a historical release of dry cleaner solvents at Whitefish Bay Cleaners. During investigation conducted to date, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in soil and groundwater. These contaminants belong to a class of chemicals known as chlorinated volatile organic compounds (CVOCs). Recent sampling has indicated that a plume of CVOC-contaminated groundwater has migrated off-site south and west of Whitefish Bay Cleaners.

You received a letter from the Wisconsin Department of Health Services (WDHS) dated February 5, 2021 indicating that an investigation of the vapor intrusion exposure pathway is recommended (see attached). Stantec will soon be evaluating nearby buildings to determine if the occupants of these buildings are at risk for exposure to CVOCs due to potential intrusion of CVOC vapors into the building. Enclosed are fact sheets explaining how vapor intrusion occurs, how testing for the presence of CVOC vapors is conducted, why testing is recommended, and how vapor intrusion will be addressed if found to be present.

We would like to evaluate your building located at 429 West Silver Spring Drive for vapor intrusion risks as part of planned additional investigation activities associated with the Whitefish Bay Cleaners that have been requested by the Wisconsin Department of Natural Resources (WDNR) and WDHS. As part of this process, representatives from Stantec would like to install a 5/8-inch diameter vapor monitoring point through the slab or basement floor of your building and collect a sub-slab soil gas sample from the monitoring point. The vapor monitoring point installation and sample collection can be completed in approximately 1 hour. In addition, Stantec will collect a 24-hour indoor air sample. Both samples will be analyzed by a State of Wisconsin-certified laboratory for CVOCs. The sampling will be conducted at **no cost to you** and a summary of the analytical results will be provided to you. All sampling will be performed in accordance with the WDNR's "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*" guidance document, which is available at <https://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

We desire to conduct the sampling during March 2021. We will require access to your building to install and sample the vapor monitoring point and at the beginning and end of the 24-hour indoor air sampling process. Please contact Erin Gross at Stantec via cell phone, (608) 628-6278, or email, erin.gross@stantec.com, no later than February 28, 2021 to discuss this matter further and arrange a sampling appointment. Enclosed for your review is a Questionnaire that we request you to complete and return using the pre-addressed postage-paid envelope enclosed. We also request that the sub-slab vapor monitoring point remain in place until we are able to communicate the results to the WDNR

Design with community in mind

Reference: Request for Indoor Air and Sub-Slab Sampling

for concurrence. Following concurrence, Stantec will return at a mutually agreed time and remove the sample point, grout the borehole, and fully seal the hole in the floor slab.

Please also note that it is important that we obtain access to your property for the required environmental investigation in order to protect public health and the environment. For more information about providing access to your property and more information regarding vapor intrusion, please visit the WDNR's website: <https://dnr.wi.gov/topic/Brownfields/Vapor.html>

Thank you for your cooperation and attention to this matter. If you have any questions about the vapor intrusion investigation or remedial activities underway at the Whitefish Bay Cleaners site, please contact Erin Gross via cell phone, (608) 628-6278, or email, erin.gross@stantec.com.

Regards,

STANTEC CONSULTING SERVICES INC.



Erin Gross, PG
Staff Geologist
Phone: (608) 628-6278
Fax: (262) 241-8222
Erin.Gross@Stantec.com

Enclosures: Review of VOC data indicating investigation of the vapor intrusion exposure pathway
What is Vapor Intrusion? fact sheet
Why Test for Vapor Intrusion? fact sheet
What to Expect During Vapor Intrusion Sampling fact sheet
Owner Questionnaire for Home Vapor Assessment

C: Whitefish Bay Cleaners, Charlie Mathers, (414) 332-5560
WDNR, Joseph J. Martinez, (414) 218-6042
WDHS, Curtis J. Hedman, Ph.D., (608) 266-1251

Tony Evers
Governor

Karen E. Timberlake
Secretary



State of Wisconsin
Department of Health Services

DIVISION OF PUBLIC HEALTH

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

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

February 5, 2021

Mr. Michael Gral
Integral Management Company, LLC
1437 North Prospect Avenue
Milwaukee, WI 53202

Re: Review of VOC data indicating investigation of the vapor intrusion exposure pathway for 429 W Silver Spring Road in Glendale, Wisconsin: WDNR BRRTS Number 02-41-550821

Dear Mr. Gral:

I was recently asked by Wisconsin Department of Natural Resources (WI DNR) staff to review laboratory results for volatile organic compounds (VOCs) related to a historical chlorinated compound releases that were identified nearby the property located at 429 W Silver Spring Road in Glendale, Wisconsin.

These results indicate that chlorinated (CVOC) compound contaminated soil and groundwater are present within close proximity to foundation for the building at this address. The concentrations detected for these compounds exceed screening levels that indicate a vapor intrusion exposure pathway investigation should take place. Chlorinated chemicals detected include 1,2-dichloroethene (DCE), trichloroethene (TCE), and tetrachloroethene (PCE).

The chlorinated chemicals listed above can produce adverse health effects when vapor intrusion exposures occur. TCE exposure has been associated with developmental effects, including heart defects, in animal and human epidemiological studies. These effects can occur in as little as several weeks of exposure during a time when a woman may not yet know she is pregnant. Long term exposures to TCE and PCE are all associated with symptoms in many systems and organs (nervous, immune, liver, kidney, lung) as well as a variety of cancers.

As a result of the soil and groundwater results observed and the human health concerns associated with exposure to chlorinated VOCs in air by vapor intrusion described above, the Wisconsin Department of Health Services (WI DHS) recommends investigation of the potential vapor intrusion exposure pathway occur for CVOCs at 429 W Silver Spring Road, and the prompt interruption of this exposure pathway if it is determined to exist to protect workers and customers at this building.

Please reach out to me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any comments or questions about this letter and its recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Curtis J. Hedman".

Curtis J. Hedman, Ph.D., Toxicologist, WI DHS

Cc: Joseph Martinez, Hydrogeologist, WI DNR
Christine Cordova, Public Health Nurse, North Shore Health Department

www.dhs.wisconsin.gov

What is Vapor Intrusion?



Chemicals used in commercial or industrial activities – dry cleaning chemicals, chemical degreasers and petroleum products such as gasoline – are sometimes spilled and leak into nearby soil or groundwater. When this happens, these chemicals may release gases or vapors, which travel from the contaminated groundwater or soil and move into nearby homes or businesses. This is called vapor intrusion.

The process when chemical vapors from contaminated soil or groundwater enter a home or other structure is called vapor intrusion.

Why are these chemical vapors a problem?

The chemicals that cause vapor intrusion are known as volatile organic compounds, or VOCs. Even when spilled into soil or water, these chemicals easily evaporate. They don't cause human health problems when they evaporate into the outside air, but when their vapors move into homes or businesses, they may cause long-term health problems for the people who live or work in those buildings. These vapors are usually odorless and colorless and undetectable without special testing equipment.

Why is vapor intrusion a concern?

Exposure to some chemical gases or vapors can cause an increased risk of adverse health effects. Whether or not a person experiences any health effects depends on several factors, including the amount and length of exposure, the toxicity of the chemical, and the individual's sensitivity to the chemical. When harmful chemical vapor intrusion is the result of environmental contamination, the Wisconsin Department of Natural Resources (DNR) requires that steps be taken to reduce or eliminate exposures which could be harmful to human health.

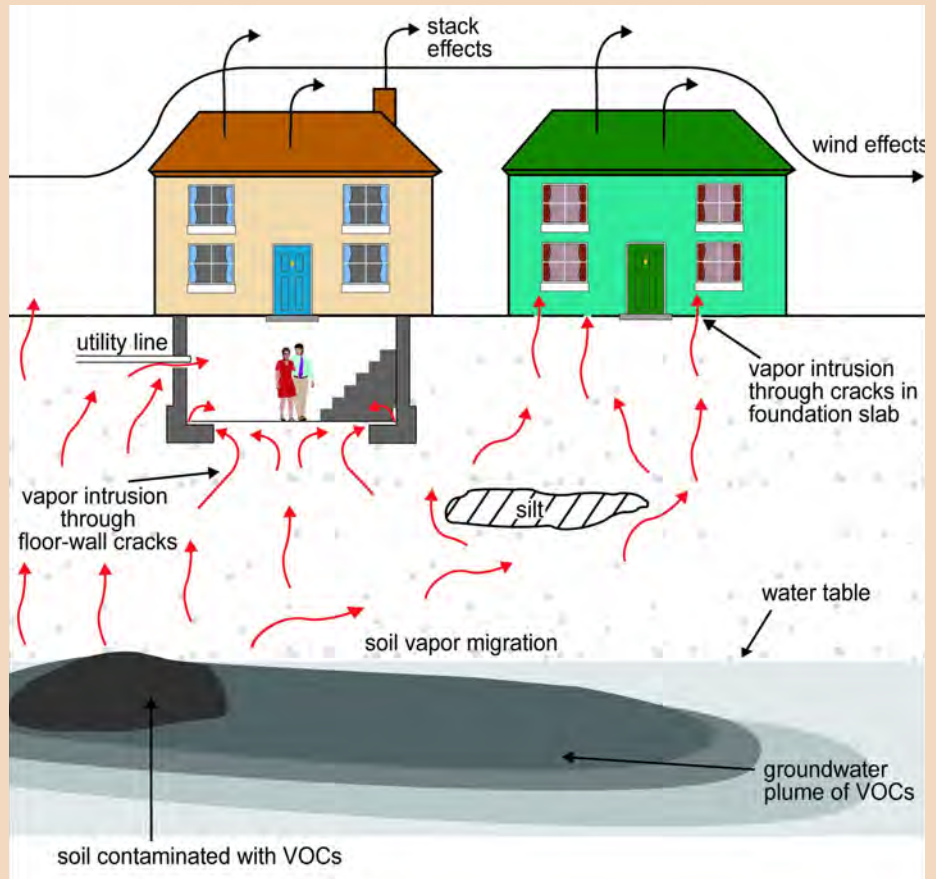
What should I expect if vapor intrusion is suspected near my home or business?

For businesses or other locations where VOC contamination has been found, the DNR requires that the potential for vapor intrusion be investigated. If you live near a site being cleaned up, you may be contacted by the site owner or others working on the cleanup. Your cooperation and consent will be requested before any testing or sampling is conducted on your property. Ask the person contacting you any questions you have about the work being done, or contact the DNR for more information (see DNR contact information on reverse). For more information about testing for vapor intrusion, see DNR-Pub-RR-954, "What to Expect During Vapor Intrusion Sampling."



How Vapors Enter a Building

If you live near a commercial or industrial facility or landfill where VOCs have entered either the soil or groundwater, there may be a potential for those chemicals to travel as vapors into your home or business. Vapors can enter buildings in various ways, including through cracks in the foundation and openings for utility lines. Building ventilation and weather can influence the extent of vapor intrusion.



Adapted from U.S. Environmental Protection Agency (EPA) graphic.
www.epa.gov/oswer/vaporintrusion/basic.html

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search "Vapor." For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR's Remediation and Redevelopment (RR) Program's Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

Additional information can be obtained through the DNR field office in your region. To find the correct office, visit the RR Program Staff Contacts page at dnr.wi.gov/topic/Brownfields/Contact.html or call the RR Program at (608) 266-2111.

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.

Why Test for Vapor Intrusion?



Vapor intrusion is likely an unfamiliar term to you, and hearing that your property should be tested for possible chemical vapor intrusion may cause you some concern. That is understandable, and this information sheet is designed to answer basic questions many people have. Please refer to DNR PUB-RR-892, “What is Vapor Intrusion?” for a summary discussion of the term “vapor intrusion.”

Most cases of vapor intrusion will pose no immediate threat to your health and safety. However, when other neighborhood properties are contaminated, it is wise to get your home or building tested to determine if there is any cause for concern. If potentially harmful chemical vapors are detected inside your home or building, the Department of Natural Resources (DNR), working in collaboration with other health and environmental professionals, will help you come up with a solution to protect you and your family.

Please consider the following factors when deciding whether to allow access for sampling:

Peace of mind

If there’s a chance that chemical vapor or soil gas is seeping into your home or business, testing can determine whether it really is and to what extent. If testing reveals a problem, then steps can be taken to resolve it, making the indoor air you breathe safer for you and your family. Like radon gas, vapors from nearby soil or groundwater contamination can be diverted from beneath your home or office building and safely expelled into the outdoors, thus improving air quality inside your home or building.

The goal of sampling a residence or business is to eliminate as many of the unknowns as possible and safely address any concerns.

Who pays for testing?

You didn’t cause this problem, so you don’t have to pay for testing just as long as you allow reasonable and timely access to have testing done. The cost of sampling at potentially impacted residences or workplaces, like yours, is covered by the responsible party (the person or business legally obligated to investigate and clean up the contamination). In some cases, it’s paid for directly by DNR, the Department of Health Services (DHS), or some other agency. Vapor sampling will be performed by a professional, and samples will be sent to a specialized lab for analysis.

Trained professionals and experts oversee the process

Multiple state and local agencies often work together to determine if vapor intrusion is a potential health risk in an area. The DNR, DHS, local health officials, the responsible party and environmental consultants are working together to ensure that quality samples are taken and that all results are given extensive review. It is important to gather the information in order to adequately understand if or where there may be a risk of vapor intrusion in your neighborhood.

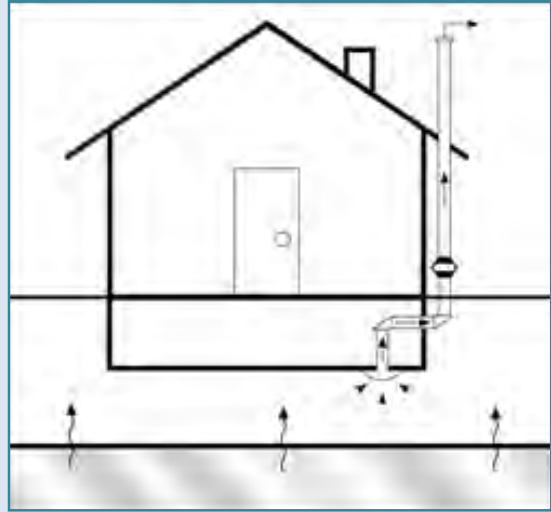


A simple, cost effective solution exists

If vapor intrusion is a problem in a house or building, it can generally be solved by installing a vapor mitigation system. These sub-slab depressurizing systems are similar to those used to eliminate radon gas underneath homes, and have been used for years in a safe and effective manner. If the source of the vapor is tied to a responsible party, they will often pay to have a system installed at your home. The annual upkeep and operation of a typical system is generally less than \$100 per year, mostly for electricity. These annual costs are typically the responsibility of the homeowner.

How will I know if the vapors have been eliminated?

After a vapor mitigation system is installed, follow-up testing of indoor air typically takes place three to six months later. The systems are usually considered permanent fixtures of the building. In cases where the source of the vapor is completely eliminated, the systems should no longer be needed.



If potentially harmful chemical vapor intrusion is detected in a home or business, the most common solution is to install a sub-slab depressurization system. This system captures and redirects soil vapors from below the building foundation before they enter the indoor air. Vapors are vented outside of the building where they disperse into the air and are rendered harmless.

Sub-slab depressurization systems also prevent radon from entering homes, which is an added health benefit in radon-prone areas.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR’s Remediation and Redevelopment (RR) Program’s Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

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What to Expect During Vapor Intrusion Sampling



The sampling procedure for vapor intrusion is performed by health and environmental professionals. It involves drilling one or more small holes into the basement or lowest level of your building, collecting a vapor sample from those holes - also called ports - and then sending the sample to a specialized lab for analysis. This is called sub-slab sampling. Sampling professionals try to minimize any inconveniences to you by informing you up front on what to expect and working with your schedule on the days of sampling.

Vapor sampling provides information about the extent of potential contamination in your neighborhood.

Should I be on site for the sampling?

It's up to you. Sampling professionals will need to be let in to install the testing equipment and collect the samples. The arrangements you make are completely dependent on your availability and comfort level with others on your property.

How many times will sampling professionals enter my property, and how is sampling done?

In general, you should plan on two or three visits over two or three days. While the actual sampling procedure and schedule may vary, the following provides a typical approach:

Day 1: The first day includes locating suitable locations for port installation, then drilling and installing the ports. This usually takes about an hour or two.

Day 2: The second day involves attaching the collection canister to the port to begin collecting the samples. A 24-hour indoor air sampling kit may also be set up. This visit will also take an hour or two.

Day 3: The third day is a shorter visit to gather all of the sampling equipment and seal off the ports. Sometimes the port site is left in place in case samples may need to be collected in the future.

Why not take indoor air samples instead of sub-slab samples?

Indoor air quality often changes from day to day, creating misleading assumptions about long-term indoor air quality. Indoor air quality may be affected by vapors given off by household or commercial products including paints, glues, fuels, cleaners, cigarette smoke, aerosol sprays, new carpeting or furniture. Also, any outdoor air that enters the inside of your house may also contain vapors which can alter test results. By itself, indoor air testing will not necessarily confirm that the vapors in the indoor air are entering a building from underground sources. However, indoor air samples are usually collected at the same time as the sub-slab samples for comparison purposes.



What if there is a crawl space instead of a basement?

If there is a crawl space or a basement with a dirt floor, it is not possible to install a port. In these cases, a sample of air is collected from the crawl space or basement over a 24 hour period. Sometimes a port can be installed in the side wall of the foundation.

Who pays for testing, and when will I get the results?

In many cases, the responsible party (the person or business legally obligated to investigate and clean up the environmental contamination) pays for the testing. The responsible party may also pay for the installation of a mitigation system if it is necessary. Sometimes, other parties such as DNR or the Dept. of Health may pay for testing. As long as the property owner provides reasonable and timely access for testing, rarely would they be responsible for the cost.

The laboratory results are usually available in two to four weeks and will be shared with you through a state or local health agency, the Wisconsin DNR, the responsible party or a hired consultant. An explanation of the findings and additional steps to be taken, if any, will also be provided.



A sub-slab vapor sampling system is usually in place for a day or two during the sampling process. The metal canisters (foreground) collect the vapor sample from the port (smaller canister in back of photo). The same canisters can be used to collect indoor air samples.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

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OWNER QUESTIONNAIRE FOR HOME VAPOR ASSESSMENT

**Whitefish Bay Cleaners
Glendale, Wisconsin**

Please complete this questionnaire to the best of your ability. Upon completion of the questionnaire, please return the form to erin.gross@stantec.com or mail to:

Stantec
Attn: Erin Gross
12075 Corporate Parkway, Suite 200
Mequon, WI 53092-2649

Should you have questions while completing this questionnaire, please contact Erin Gross of Stantec at (608) 628-6278. Thank you.

CONTACT INFORMATION

PROPERTY OWNER:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

TENANTS:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

PROPERTY INFORMATION/QUESTIONS

1) What are the best days to sample indoor air and sub-slab soil vapor? Indoor air will involve Stantec personnel entering your house/building in the morning to set up the sample containers. The sample containers will be left in place for approximately 8 hours at which time Stantec personnel will return to your property to retrieve sampling equipment.

2) Where is the best location to install a temporary sub-slab vapor point? The sample point must be installed through the basement floor slab (or through ground floor slab, if no basement if present). Note, the sample point will be removed, the hole grouted, and the hole in the concrete fully sealed upon completion of sampling and WDNR approval of the completed sample process and test results. _____

3) Do you currently have clothing in your residence/building (in particular your basement) that has been dry cleaned?

If not, when was the last time you had dry cleaned clothing in your basement, residence, or building?

4) Do you currently store mothballs or any other chemicals (i.e. paint, solvents, stains, etc.) in your basement?

If not, when was the last time you stored mothballs or other chemicals in your basement?

5) Do you or someone who resides in your home, work at a dry-cleaning business?

SIGNATURE

Signature of Person Completing Form: _____

Printed Name of Person Completing Form: _____

Date: _____

Affiliation with the Property: _____

Years Affiliated with Property: _____

Years You Owned the Property (if applicable): _____

Years You Operated at the Property (if applicable): _____



Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon WI 53092
Tel: (262) 241-4466
Fax: (262) 241-4901

February 11 2021

James Fontana
5570 N. Iroquois Ave.
Glendale, Wisconsin 53217-5048

**Reference: Request for Indoor Air and Sub-Slab Vapor Sampling, 5570 North Iroquois Avenue, Glendale, Wisconsin
Stantec Project No.: 193707230**

Dear resident

Stantec Consulting Services, Inc. (Stantec), on behalf of our client Whitefish Bay Cleaners located at 419 West Silver Spring Drive, Glendale, Wisconsin, is investigating soil and groundwater contamination resulting from a historical release of dry cleaner solvents at Whitefish Bay Cleaners. During investigation conducted to date, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in soil and groundwater. These contaminants belong to a class of chemicals known as chlorinated volatile organic compounds (CVOCs). Recent sampling has indicated that a plume of CVOC-contaminated groundwater has migrated off-site south and west of Whitefish Bay Cleaners.

You received a letter from the Wisconsin Department of Health Services (WDHS) dated February 5, 2021 indicating that an investigation of the vapor intrusion exposure pathway is recommended (see attached). Stantec will soon be evaluating nearby buildings to determine if the occupants of these buildings are at risk for exposure to CVOCs due to potential intrusion of CVOC vapors into the building. Enclosed are fact sheets explaining how vapor intrusion occurs, how testing for the presence of CVOC vapors is conducted, why testing is recommended, and how vapor intrusion will be addressed if found to be present.

We would like to evaluate your residence at 5570 Iroquois Avenue for vapor intrusion risks as part of planned additional investigation activities associated with the Whitefish Bay Cleaners that have been requested by the Wisconsin Department of Natural Resources (WDNR) and WDHS. As part of this process, representatives from Stantec would like to install a 5/8-inch diameter vapor monitoring point through the slab or basement floor and collect a sub-slab soil gas sample from the monitoring point. The vapor monitoring point installation and sample collection can be completed in approximately 1 hour. In addition, Stantec will collect a 24-hour indoor air sample. Both samples will be analyzed by a State of Wisconsin-certified laboratory for CVOCs. The sampling will be conducted at **no cost to you** and a summary of the analytical results will be provided to you. All sampling will be performed in accordance with the WDNR's "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*" guidance document, which is available at <https://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

We desire to conduct the sampling during March 2021. We will require access to your building to install and sample the vapor monitoring point and at the beginning and end of the 24-hour indoor air sampling process. Please contact Erin Gross at Stantec via cell phone, (608) 628-6278, or email, erin.gross@stantec.com, no later than February 28, 2021 to discuss this matter further and arrange a sampling appointment. **This is the third attempt to arrange vapor/air sampling at your location.** Enclosed for your review is a Questionnaire that we request you to complete and return using the pre-addressed postage-paid envelope enclosed. We also request that the sub-slab vapor monitoring point remain in place until we are able to communicate the results to the WDNR for concurrence. Following

Reference: 2nd Request for Indoor Air and Sub-Slab Sampling

concurrency, Stantec will return at a mutually agreed time and remove the sample point, grout the borehole, and fully seal the hole in the floor slab.

Please also note that it is important that we obtain access to your property for the required environmental investigation in order to protect public health and the environment. For more information about providing access to your property and more information regarding vapor intrusion, please visit the WDNR's website: <https://dnr.wi.gov/topic/Brownfields/Vapor.html>

Thank you for your cooperation and attention to this matter. If you have any questions about the vapor intrusion investigation or remedial activities underway at the Whitefish Bay Cleaners site, please contact Erin Gross via cell phone, (608) 628-6278, or email, erin.gross@stantec.com.

Regards,

STANTEC CONSULTING SERVICES INC.



Erin Gross, PG
Staff Geologist
Phone: (608) 628-6278
Fax: (262) 241-8222
Erin.Gross@Stantec.com

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C: Whitefish Bay Cleaners, Charlie Mathers, (414) 332-5560
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DIVISION OF PUBLIC HEALTH

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

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

February 5, 2021

James Fontana
5570 North Iroquois Avenue
Glendale, WI 53217

Re: Review of VOC data indicating investigation of the vapor intrusion exposure pathway for 5570 North Iroquois Avenue in Glendale, Wisconsin: WDNR BRRTS Number 02-41-550821

Dear Mr. Fontana:

I was recently asked by Wisconsin Department of Natural Resources (WI DNR) staff to review laboratory results for volatile organic compounds (VOCs) related to a historical chlorinated compound releases that were identified nearby the property located at 5570 North Iroquois Avenue in Glendale, Wisconsin.

These results indicate that chlorinated (CVOC) compound contaminated soil and groundwater are present within close proximity to foundation for the home at this address. The concentrations detected for these compounds exceed screening levels that indicate a vapor intrusion exposure pathway investigation should take place. Chlorinated chemicals detected include 1,2-dichloroethene (DCE), trichloroethene (TCE), and tetrachloroethene (PCE).

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As a result of the soil and groundwater results observed and the human health concerns associated with exposure to chlorinated VOCs in air by vapor intrusion described above, the Wisconsin Department of Health Services (WI DHS) recommends investigation of the potential vapor intrusion exposure pathway occur for CVOCs at 5570 North Iroquois Avenue, and the prompt interruption of this exposure pathway if it is determined to exist to protect the occupants of this dwelling.

Please reach out to me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any comments or questions about this letter and its recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Curtis J. Hedman".

Curtis J. Hedman, Ph.D., Toxicologist, WI DHS

Cc: Joseph Martinez, Hydrogeologist, WI DNR
Christine Cordova, Public Health Nurse, North Shore Health Department

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Why is vapor intrusion a concern?

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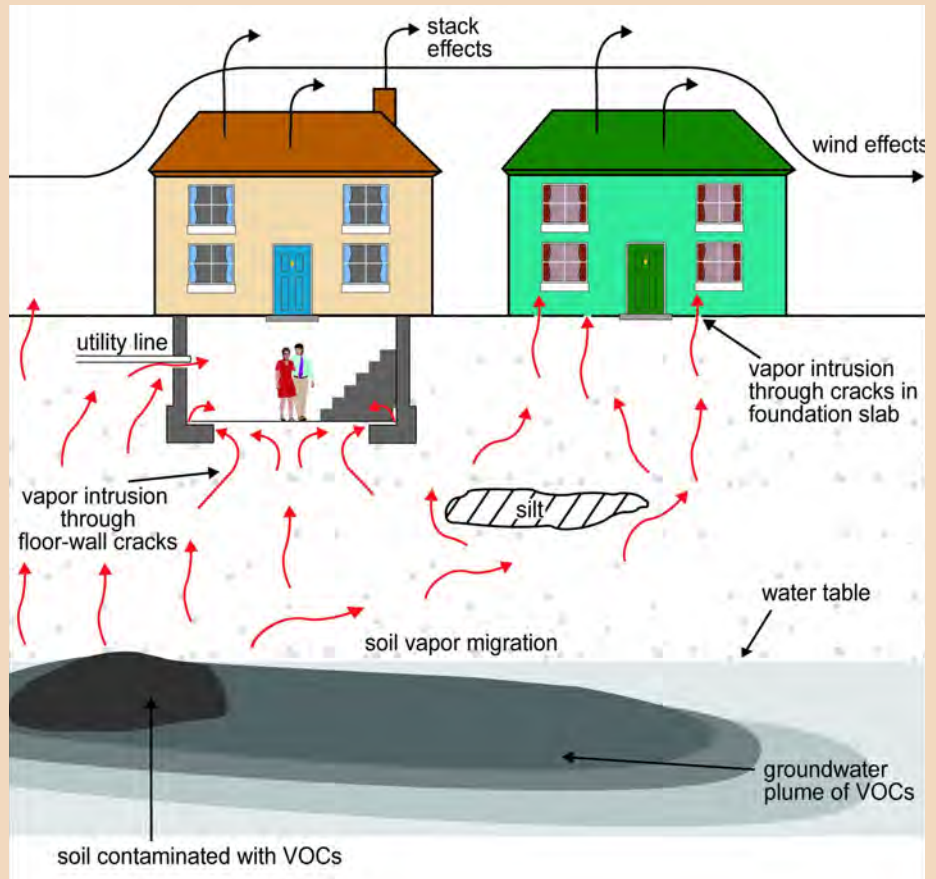
What should I expect if vapor intrusion is suspected near my home or business?

For businesses or other locations where VOC contamination has been found, the DNR requires that the potential for vapor intrusion be investigated. If you live near a site being cleaned up, you may be contacted by the site owner or others working on the cleanup. Your cooperation and consent will be requested before any testing or sampling is conducted on your property. Ask the person contacting you any questions you have about the work being done, or contact the DNR for more information (see DNR contact information on reverse). For more information about testing for vapor intrusion, see DNR-Pub-RR-954, "What to Expect During Vapor Intrusion Sampling."



How Vapors Enter a Building

If you live near a commercial or industrial facility or landfill where VOCs have entered either the soil or groundwater, there may be a potential for those chemicals to travel as vapors into your home or business. Vapors can enter buildings in various ways, including through cracks in the foundation and openings for utility lines. Building ventilation and weather can influence the extent of vapor intrusion.



Adapted from U.S. Environmental Protection Agency (EPA) graphic.
www.epa.gov/oswer/vaporintrusion/basic.html

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search "Vapor." For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

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Why Test for Vapor Intrusion?



Vapor intrusion is likely an unfamiliar term to you, and hearing that your property should be tested for possible chemical vapor intrusion may cause you some concern. That is understandable, and this information sheet is designed to answer basic questions many people have. Please refer to DNR PUB-RR-892, “What is Vapor Intrusion?” for a summary discussion of the term “vapor intrusion.”

Most cases of vapor intrusion will pose no immediate threat to your health and safety. However, when other neighborhood properties are contaminated, it is wise to get your home or building tested to determine if there is any cause for concern. If potentially harmful chemical vapors are detected inside your home or building, the Department of Natural Resources (DNR), working in collaboration with other health and environmental professionals, will help you come up with a solution to protect you and your family.

Please consider the following factors when deciding whether to allow access for sampling:

Peace of mind

If there’s a chance that chemical vapor or soil gas is seeping into your home or business, testing can determine whether it really is and to what extent. If testing reveals a problem, then steps can be taken to resolve it, making the indoor air you breathe safer for you and your family. Like radon gas, vapors from nearby soil or groundwater contamination can be diverted from beneath your home or office building and safely expelled into the outdoors, thus improving air quality inside your home or building.

The goal of sampling a residence or business is to eliminate as many of the unknowns as possible and safely address any concerns.

Who pays for testing?

You didn’t cause this problem, so you don’t have to pay for testing just as long as you allow reasonable and timely access to have testing done. The cost of sampling at potentially impacted residences or workplaces, like yours, is covered by the responsible party (the person or business legally obligated to investigate and clean up the contamination). In some cases, it’s paid for directly by DNR, the Department of Health Services (DHS), or some other agency. Vapor sampling will be performed by a professional, and samples will be sent to a specialized lab for analysis.

Trained professionals and experts oversee the process

Multiple state and local agencies often work together to determine if vapor intrusion is a potential health risk in an area. The DNR, DHS, local health officials, the responsible party and environmental consultants are working together to ensure that quality samples are taken and that all results are given extensive review. It is important to gather the information in order to adequately understand if or where there may be a risk of vapor intrusion in your neighborhood.

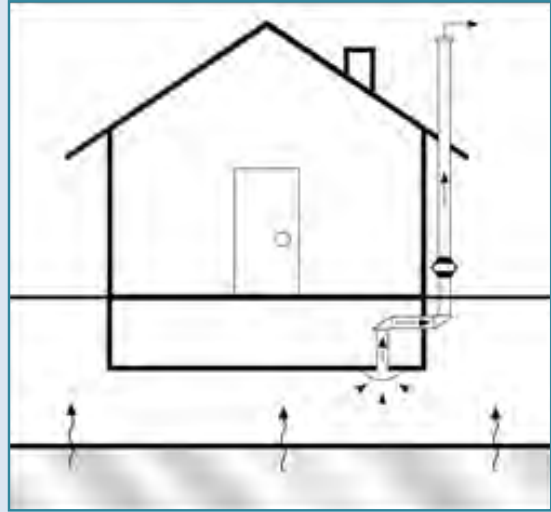


A simple, cost effective solution exists

If vapor intrusion is a problem in a house or building, it can generally be solved by installing a vapor mitigation system. These sub-slab depressurizing systems are similar to those used to eliminate radon gas underneath homes, and have been used for years in a safe and effective manner. If the source of the vapor is tied to a responsible party, they will often pay to have a system installed at your home. The annual upkeep and operation of a typical system is generally less than \$100 per year, mostly for electricity. These annual costs are typically the responsibility of the homeowner.

How will I know if the vapors have been eliminated?

After a vapor mitigation system is installed, follow-up testing of indoor air typically takes place three to six months later. The systems are usually considered permanent fixtures of the building. In cases where the source of the vapor is completely eliminated, the systems should no longer be needed.



If potentially harmful chemical vapor intrusion is detected in a home or business, the most common solution is to install a sub-slab depressurization system. This system captures and redirects soil vapors from below the building foundation before they enter the indoor air. Vapors are vented outside of the building where they disperse into the air and are rendered harmless.

Sub-slab depressurization systems also prevent radon from entering homes, which is an added health benefit in radon-prone areas.

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The sampling procedure for vapor intrusion is performed by health and environmental professionals. It involves drilling one or more small holes into the basement or lowest level of your building, collecting a vapor sample from those holes - also called ports - and then sending the sample to a specialized lab for analysis. This is called sub-slab sampling. Sampling professionals try to minimize any inconveniences to you by informing you up front on what to expect and working with your schedule on the days of sampling.

Vapor sampling provides information about the extent of potential contamination in your neighborhood.

Should I be on site for the sampling?

It's up to you. Sampling professionals will need to be let in to install the testing equipment and collect the samples. The arrangements you make are completely dependent on your availability and comfort level with others on your property.

How many times will sampling professionals enter my property, and how is sampling done?

In general, you should plan on two or three visits over two or three days. While the actual sampling procedure and schedule may vary, the following provides a typical approach:

Day 1: The first day includes locating suitable locations for port installation, then drilling and installing the ports. This usually takes about an hour or two.

Day 2: The second day involves attaching the collection canister to the port to begin collecting the samples. A 24-hour indoor air sampling kit may also be set up. This visit will also take an hour or two.

Day 3: The third day is a shorter visit to gather all of the sampling equipment and seal off the ports. Sometimes the port site is left in place in case samples may need to be collected in the future.

Why not take indoor air samples instead of sub-slab samples?

Indoor air quality often changes from day to day, creating misleading assumptions about long-term indoor air quality. Indoor air quality may be affected by vapors given off by household or commercial products including paints, glues, fuels, cleaners, cigarette smoke, aerosol sprays, new carpeting or furniture. Also, any outdoor air that enters the inside of your house may also contain vapors which can alter test results. By itself, indoor air testing will not necessarily confirm that the vapors in the indoor air are entering a building from underground sources. However, indoor air samples are usually collected at the same time as the sub-slab samples for comparison purposes.



What if there is a crawl space instead of a basement?

If there is a crawl space or a basement with a dirt floor, it is not possible to install a port. In these cases, a sample of air is collected from the crawl space or basement over a 24 hour period. Sometimes a port can be installed in the side wall of the foundation.

Who pays for testing, and when will I get the results?

In many cases, the responsible party (the person or business legally obligated to investigate and clean up the environmental contamination) pays for the testing. The responsible party may also pay for the installation of a mitigation system if it is necessary. Sometimes, other parties such as DNR or the Dept. of Health may pay for testing. As long as the property owner provides reasonable and timely access for testing, rarely would they be responsible for the cost.

The laboratory results are usually available in two to four weeks and will be shared with you through a state or local health agency, the Wisconsin DNR, the responsible party or a hired consultant. An explanation of the findings and additional steps to be taken, if any, will also be provided.



A sub-slab vapor sampling system is usually in place for a day or two during the sampling process. The metal canisters (foreground) collect the vapor sample from the port (smaller canister in back of photo). The same canisters can be used to collect indoor air samples.

Where can I find more information?

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OWNER QUESTIONNAIRE FOR HOME VAPOR ASSESSMENT

Whitefish Bay Cleaners

Glendale, Wisconsin

Please complete this questionnaire to the best of your ability. Upon completion of the questionnaire, please return the form to erin.gross@stantec.com or mail to:

Stantec
Attn: Erin Gross
12075 Corporate Parkway, Suite 200
Mequon, WI 53092-2649

Should you have questions while completing this questionnaire, please contact Erin Gross of Stantec at (608) 628-6278. Thank you.

CONTACT INFORMATION

PROPERTY OWNER:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

TENANTS:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

PROPERTY INFORMATION/QUESTIONS

1) What are the best days to sample indoor air and sub-slab soil vapor? Indoor air will involve Stantec personnel entering your house/building in the morning to set up the sample containers. The sample containers will be left in place for approximately 8 hours at which time Stantec personnel will return to your property to retrieve sampling equipment.

2) Where is the best location to install a temporary sub-slab vapor point? The sample point must be installed through the basement floor slab (or through ground floor slab, if no basement if present). Note, the sample point will be removed, the hole grouted, and the hole in the concrete fully sealed upon completion of sampling and WDNR approval of the completed sample process and test results. _____

3) Do you currently have clothing in your residence/building (in particular your basement) that has been dry cleaned?

If not, when was the last time you had dry cleaned clothing in your basement, residence, or building?

4) Do you currently store mothballs or any other chemicals (i.e. paint, solvents, stains, etc.) in your basement?

If not, when was the last time you stored mothballs or other chemicals in your basement?

5) Do you or someone who resides in your home, work at a dry-cleaning business?

SIGNATURE

Signature of Person Completing Form: _____

Printed Name of Person Completing Form: _____

Date: _____

Affiliation with the Property: _____

Years Affiliated with Property: _____

Years You Owned the Property (if applicable): _____

Years You Operated at the Property (if applicable): _____



Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon WI 53092
Tel: (262) 241-4466
Fax: (262) 241-4901

February 11, 2021

Yuri & Catherine Gutich
5575 N. Mohawk Ave.
Glendale, Wisconsin 53217-5048

**Reference: Request for Indoor Air and Sub-Slab Vapor Sampling
5575 North Mohawk Avenue, Glendale, Wisconsin
Stantec Project No.: 193707230**

Dear residents

Stantec Consulting Services, Inc. (Stantec), on behalf of our client Whitefish Bay Cleaners located at 419 West Silver Spring Drive, Glendale, Wisconsin, is investigating soil and groundwater contamination resulting from a historical release of dry cleaner solvents at Whitefish Bay Cleaners. During investigation conducted to date, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in soil and groundwater. These contaminants belong to a class of chemicals known as chlorinated volatile organic compounds (CVOCs). Recent sampling has indicated that a plume of CVOC-contaminated groundwater has migrated off-site south and west of Whitefish Bay Cleaners.

You received a letter from the Wisconsin Department of Health Services (WDHS) dated February 5, 2021 indicating that an investigation of the vapor intrusion exposure pathway is recommended (see attached). Stantec will soon be evaluating nearby buildings to determine if the occupants of these buildings are at risk for exposure to CVOCs due to potential intrusion of CVOC vapors into the building. Enclosed are fact sheets explaining how vapor intrusion occurs, how testing for the presence of CVOC vapors is conducted, why testing is recommended, and how vapor intrusion will be addressed if found to be present.

We would like to evaluate your residence at 5575 North Mohawk Avenue for vapor intrusion risks as part of planned additional investigation activities associated with the Whitefish Bay Cleaners by the Wisconsin Department of Natural Resources (WDNR) and WDHS. As part of this process, representatives from Stantec would like to install a 5/8-inch diameter vapor monitoring point through the slab or basement floor and collect a sub-slab soil gas sample from the monitoring point. The vapor monitoring point installation and sample collection can be completed in approximately 1 hour. In addition, Stantec will collect a 24-hour indoor air sample. Both samples will be analyzed by a State of Wisconsin-certified laboratory for CVOCs. The sampling will be conducted at **no cost to you** and a summary of the analytical results will be provided to you. All sampling will be performed in accordance with the WDNR's "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*" guidance document, which is available at <https://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

We desire to conduct the sampling during March 2021. We will require access to your building to install and sample the vapor monitoring point and at the beginning and end of the 24-hour indoor air sampling process. Please contact Erin Gross at Stantec via cell phone, (608) 628-6278, or email, erin.gross@stantec.com, no later than February 28, 2021 to discuss this matter further and arrange a sampling appointment. **This is the third attempt to arrange vapor/air sampling at your location.** Enclosed for your review is a Questionnaire that we request you to complete and return using the pre-addressed postage-paid envelope enclosed. We also request that the sub-slab vapor monitoring point remain in place until we are able to communicate the results to the WDNR for concurrence. Following

Reference: 2nd Request for Indoor Air and Sub-Slab Sampling

concurrency, Stantec will return at a mutually agreed time and remove the sample point, grout the borehole, and fully seal the hole in the floor slab.

Please also note that it is important that we obtain access to your property for the required environmental investigation in order to protect public health and the environment. For more information about providing access to your property and more information regarding vapor intrusion, please visit the WDNR's website: <https://dnr.wi.gov/topic/Brownfields/Vapor.html>

Thank you for your cooperation and attention to this matter. If you have any questions about the vapor intrusion investigation or remedial activities underway at the Whitefish Bay Cleaners site, please contact Erin Gross via cell phone, (608) 628-6278, or email, erin.gross@stantec.com.

Regards,

STANTEC CONSULTING SERVICES INC.



Erin Gross, PG
Staff Geologist
Phone: (608) 628-6278
Fax: (262) 241-8222
Erin.Gross@Stantec.com

Enclosures: Review of VOC data indicating investigation of the vapor intrusion exposure pathway
What is Vapor Intrusion? fact sheet
Why Test for Vapor Intrusion? fact sheet
What to Expect During Vapor Intrusion Sampling fact sheet
Owner Questionnaire for Home Vapor Assessment

C: Whitefish Bay Cleaners, Charlie Mathers, (414) 332-5560
WDNR, Joseph J. Martinez , (414) 218-6042
WDHS, Curtis J. Hedman, Ph.D., (608) 266-1251

Tony Evers
Governor



Karen E. Timberlake
Secretary

State of Wisconsin
Department of Health Services

DIVISION OF PUBLIC HEALTH

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

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

February 5, 2021

Yuri & Catherine Gutich
5575 North Mohawk Avenue
Glendale, WI 53217

Re: Review of VOC data indicating investigation of the vapor intrusion exposure pathway for 5575 North Mohawk Avenue in Glendale, Wisconsin: WDNR BRRTS Number 02-41-550821

Dear Mr. & Mrs. Gutich:

I was recently asked by Wisconsin Department of Natural Resources (WI DNR) staff to review laboratory results for volatile organic compounds (VOCs) related to a historical chlorinated compound releases that were identified nearby the property located at 5575 North Mohawk Avenue in Glendale, Wisconsin.

These results indicate that chlorinated (CVOC) compound contaminated soil and groundwater are present within close proximity to foundation for the home at this address. The concentrations detected for these compounds exceed screening levels that indicate a vapor intrusion exposure pathway investigation should take place. Chlorinated chemicals detected include 1,2-dichloroethene (DCE), trichloroethene (TCE), and tetrachloroethene (PCE).

The chlorinated chemicals listed above can produce adverse health effects when vapor intrusion exposures occur. TCE exposure has been associated with developmental effects, including heart defects, in animal and human epidemiological studies. These effects can occur in as little as several weeks of exposure during a time when a woman may not yet know she is pregnant. Long term exposures to TCE and PCE are all associated with symptoms in many systems and organs (nervous, immune, liver, kidney, lung) as well as a variety of cancers.

As a result of the soil and groundwater results observed and the human health concerns associated with exposure to chlorinated VOCs in air by vapor intrusion described above, the Wisconsin Department of Health Services (WI DHS) recommends investigation of the potential vapor intrusion exposure pathway occur for CVOCs at 5575 North Mohawk Avenue, and the prompt interruption of this exposure pathway if it is determined to exist to protect the occupants of this dwelling.

Please reach out to me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any comments or questions about this letter and its recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Curtis J. Hedman".

Curtis J. Hedman, Ph.D., Toxicologist, WI DHS

Cc: Joseph Martinez, Hydrogeologist, WI DNR
Christine Cordova, Public Health Nurse, North Shore Health Department

What is Vapor Intrusion?



Chemicals used in commercial or industrial activities – dry cleaning chemicals, chemical degreasers and petroleum products such as gasoline – are sometimes spilled and leak into nearby soil or groundwater. When this happens, these chemicals may release gases or vapors, which travel from the contaminated groundwater or soil and move into nearby homes or businesses. This is called vapor intrusion.

The process when chemical vapors from contaminated soil or groundwater enter a home or other structure is called vapor intrusion.

Why are these chemical vapors a problem?

The chemicals that cause vapor intrusion are known as volatile organic compounds, or VOCs. Even when spilled into soil or water, these chemicals easily evaporate. They don't cause human health problems when they evaporate into the outside air, but when their vapors move into homes or businesses, they may cause long-term health problems for the people who live or work in those buildings. These vapors are usually odorless and colorless and undetectable without special testing equipment.

Why is vapor intrusion a concern?

Exposure to some chemical gases or vapors can cause an increased risk of adverse health effects. Whether or not a person experiences any health effects depends on several factors, including the amount and length of exposure, the toxicity of the chemical, and the individual's sensitivity to the chemical. When harmful chemical vapor intrusion is the result of environmental contamination, the Wisconsin Department of Natural Resources (DNR) requires that steps be taken to reduce or eliminate exposures which could be harmful to human health.

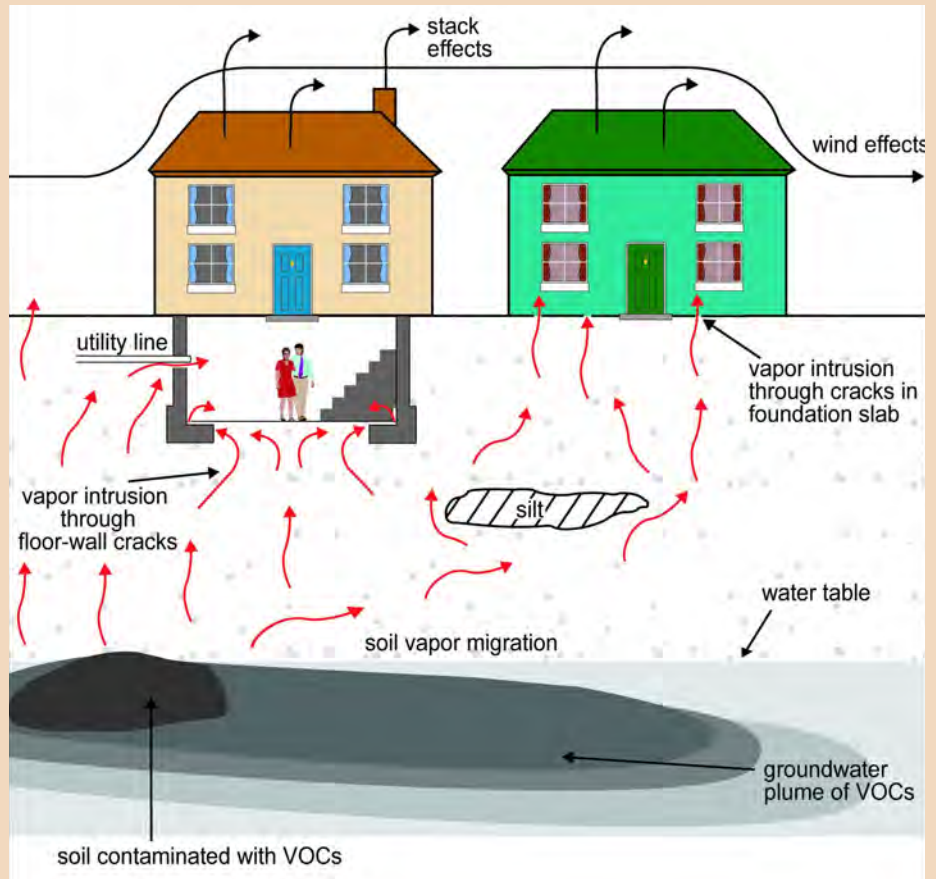
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If you live near a commercial or industrial facility or landfill where VOCs have entered either the soil or groundwater, there may be a potential for those chemicals to travel as vapors into your home or business. Vapors can enter buildings in various ways, including through cracks in the foundation and openings for utility lines. Building ventilation and weather can influence the extent of vapor intrusion.



Adapted from U.S. Environmental Protection Agency (EPA) graphic.
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If there’s a chance that chemical vapor or soil gas is seeping into your home or business, testing can determine whether it really is and to what extent. If testing reveals a problem, then steps can be taken to resolve it, making the indoor air you breathe safer for you and your family. Like radon gas, vapors from nearby soil or groundwater contamination can be diverted from beneath your home or office building and safely expelled into the outdoors, thus improving air quality inside your home or building.

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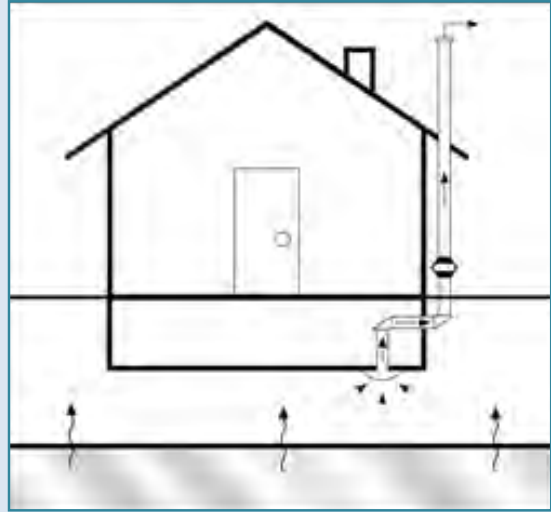


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After a vapor mitigation system is installed, follow-up testing of indoor air typically takes place three to six months later. The systems are usually considered permanent fixtures of the building. In cases where the source of the vapor is completely eliminated, the systems should no longer be needed.



If potentially harmful chemical vapor intrusion is detected in a home or business, the most common solution is to install a sub-slab depressurization system. This system captures and redirects soil vapors from below the building foundation before they enter the indoor air. Vapors are vented outside of the building where they disperse into the air and are rendered harmless.

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Day 3: The third day is a shorter visit to gather all of the sampling equipment and seal off the ports. Sometimes the port site is left in place in case samples may need to be collected in the future.

Why not take indoor air samples instead of sub-slab samples?

Indoor air quality often changes from day to day, creating misleading assumptions about long-term indoor air quality. Indoor air quality may be affected by vapors given off by household or commercial products including paints, glues, fuels, cleaners, cigarette smoke, aerosol sprays, new carpeting or furniture. Also, any outdoor air that enters the inside of your house may also contain vapors which can alter test results. By itself, indoor air testing will not necessarily confirm that the vapors in the indoor air are entering a building from underground sources. However, indoor air samples are usually collected at the same time as the sub-slab samples for comparison purposes.



What if there is a crawl space instead of a basement?

If there is a crawl space or a basement with a dirt floor, it is not possible to install a port. In these cases, a sample of air is collected from the crawl space or basement over a 24 hour period. Sometimes a port can be installed in the side wall of the foundation.

Who pays for testing, and when will I get the results?

In many cases, the responsible party (the person or business legally obligated to investigate and clean up the environmental contamination) pays for the testing. The responsible party may also pay for the installation of a mitigation system if it is necessary. Sometimes, other parties such as DNR or the Dept. of Health may pay for testing. As long as the property owner provides reasonable and timely access for testing, rarely would they be responsible for the cost.

The laboratory results are usually available in two to four weeks and will be shared with you through a state or local health agency, the Wisconsin DNR, the responsible party or a hired consultant. An explanation of the findings and additional steps to be taken, if any, will also be provided.



A sub-slab vapor sampling system is usually in place for a day or two during the sampling process. The metal canisters (foreground) collect the vapor sample from the port (smaller canister in back of photo). The same canisters can be used to collect indoor air samples.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR’s Remediation and Redevelopment (RR) Program’s Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

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OWNER QUESTIONNAIRE FOR HOME VAPOR ASSESSMENT

**Whitefish Bay Cleaners
Glendale, Wisconsin**

Please complete this questionnaire to the best of your ability. Upon completion of the questionnaire, please return the form to erin.gross@stantec.com or mail to:

Stantec
Attn: Erin Gross
12075 Corporate Parkway, Suite 200
Mequon, WI 53092-2649

Should you have questions while completing this questionnaire, please contact Erin Gross of Stantec at (608) 628-6278. Thank you.

CONTACT INFORMATION

PROPERTY OWNER:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

TENANTS:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

PROPERTY INFORMATION/QUESTIONS

1) What are the best days to sample indoor air and sub-slab soil vapor? Indoor air will involve Stantec personnel entering your house/building in the morning to set up the sample containers. The sample containers will be left in place for approximately 8 hours at which time Stantec personnel will return to your property to retrieve sampling equipment.

2) Where is the best location to install a temporary sub-slab vapor point? The sample point must be installed through the basement floor slab (or through ground floor slab, if no basement if present). Note, the sample point will be removed, the hole grouted, and the hole in the concrete fully sealed upon completion of sampling and WDNR approval of the completed sample process and test results. _____

3) Do you currently have clothing in your residence/building (in particular your basement) that has been dry cleaned?

If not, when was the last time you had dry cleaned clothing in your basement, residence, or building?

4) Do you currently store mothballs or any other chemicals (i.e. paint, solvents, stains, etc.) in your basement?

If not, when was the last time you stored mothballs or other chemicals in your basement?

5) Do you or someone who resides in your home, work at a dry-cleaning business?

SIGNATURE

Signature of Person Completing Form: _____

Printed Name of Person Completing Form: _____

Date: _____

Affiliation with the Property: _____

Years Affiliated with Property: _____

Years You Owned the Property (if applicable): _____

Years You Operated at the Property (if applicable): _____



Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon WI 53092
Tel: (262) 241-4466
Fax: (262) 241-4901

February 11, 2021

Scott Kalka & Minh Hoang
5576 N. Iroquois Ave.
Glendale, Wisconsin 53217-5048

**Reference: Request for Indoor Air and Sub-Slab Vapor Sampling
5576 North Iroquois Avenue, Glendale, Wisconsin
Stantec Project No.: 193707230**

Dear residents

Stantec Consulting Services, Inc. (Stantec), on behalf of our client Whitefish Bay Cleaners located at 419 West Silver Spring Drive, Glendale, Wisconsin, is investigating soil and groundwater contamination resulting from a historical release of dry cleaner solvents at Whitefish Bay Cleaners. During investigation conducted to date, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in soil and groundwater. These contaminants belong to a class of chemicals known as chlorinated volatile organic compounds (CVOCs). Recent sampling has indicated that a plume of CVOC-contaminated groundwater has migrated off-site south and west of Whitefish Bay Cleaners.

You received a letter from the Wisconsin Department of Health Services (WDHS) dated February 5, 2021 indicating that an investigation of the vapor intrusion exposure pathway is recommended (see attached). Stantec will soon be evaluating nearby buildings to determine if the occupants of these buildings are at risk for exposure to CVOCs due to potential intrusion of CVOC vapors into the building. Enclosed are fact sheets explaining how vapor intrusion occurs, how testing for the presence of CVOC vapors is conducted, why testing is recommended, and how vapor intrusion will be addressed if found to be present.

We would like to evaluate your residence at 5576 North Iroquois Avenue for vapor intrusion risks as part of planned additional investigation activities associated with the Whitefish Bay Cleaners that have been requested by the Wisconsin Department of Natural Resources (WDNR) and WDHS. As part of this process, representatives from Stantec would like to install a 5/8-inch diameter vapor monitoring point through the slab or basement floor and collect a sub-slab soil gas sample from the monitoring point. The vapor monitoring point installation and sample collection can be completed in approximately 1 hour. In addition, Stantec will collect a 24-hour indoor air sample. Both samples will be analyzed by a State of Wisconsin-certified laboratory for CVOCs. The sampling will be conducted at **no cost to you** and a summary of the analytical results will be provided to you. All sampling will be performed in accordance with the WDNR's "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*" guidance document, which is available at <https://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

We desire to conduct the sampling during March 2021. We will require access to your building to install and sample the vapor monitoring point and at the beginning and end of the 24-hour indoor air sampling process. Please contact Erin Gross at Stantec via cell phone, (608) 628-6278, or email, erin.gross@stantec.com, no later than February 28, 2021 to discuss this matter further and arrange a sampling appointment. **This is the third attempt to arrange vapor/air sampling at your location.** Enclosed for your review is a Questionnaire that we request you to complete and return using the pre-addressed postage-paid envelope enclosed. We also request that the sub-slab vapor monitoring point remain in place until we are able to communicate the results to the WDNR for concurrence. Following



February 11, 2021
Page 2 of 2

Reference: 2nd Request for Indoor Air and Sub-Slab Sampling

concurrency, Stantec will return at a mutually agreed time and remove the sample point, grout the borehole, and fully seal the hole in the floor slab.

Please also note that it is important that we obtain access to your property for the required environmental investigation in order to protect public health and the environment. For more information about providing access to your property and more information regarding vapor intrusion, please visit the WDNR's website: <https://dnr.wi.gov/topic/Brownfields/Vapor.html>

Thank you for your cooperation and attention to this matter. If you have any questions about the vapor intrusion investigation or remedial activities underway at the Whitefish Bay Cleaners site, please contact Erin Gross via cell phone, (608) 628-6278, or email, erin.gross@stantec.com.

Regards,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink that reads "Erin Gross".

Erin Gross, PG
Staff Geologist
Phone: (608) 628-6278
Fax: (262) 241-8222
Erin.Gross@Stantec.com

Enclosures: Review of VOC data indicating investigation of the vapor intrusion exposure pathway
 What is Vapor Intrusion? fact sheet
 Why Test for Vapor Intrusion? fact sheet
 What to Expect During Vapor Intrusion Sampling fact sheet
 Owner Questionnaire for Home Vapor Assessment

C: Whitefish Bay Cleaners, Charlie Mathers, (414) 332-5560
 WDNR, Joseph J. Martinez, (414) 218-6042
 WDHS, Curtis J. Hedman, Ph.D., (608) 266-1251

Tony Evers
Governor

Karen E. Timberlake
Secretary



State of Wisconsin
Department of Health Services

DIVISION OF PUBLIC HEALTH

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

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

February 5, 2021

Scott Kalka and/or Minh Hoang
5576 N Iroquois Avenue
Glendale, WI 53217

Re: Review of VOC data indicating investigation of the vapor intrusion exposure pathway for 5576 N Iroquois Avenue in Glendale, Wisconsin: WDNR BRRTS Number 02-41-550821

Dear Mr. Kalka/Ms. Hoang:

I was recently asked by Wisconsin Department of Natural Resources (WI DNR) staff to review laboratory results for volatile organic compounds (VOCs) related to a historical chlorinated compound releases that were identified nearby the property located at 5576 N Iroquois Avenue in Glendale, Wisconsin.

These results indicate that chlorinated (CVOC) compound contaminated soil and groundwater are present within close proximity to foundation for the home at this address. The concentrations detected for these compounds exceed screening levels that indicate a vapor intrusion exposure pathway investigation should take place. Chlorinated chemicals detected include 1,2-dichloroethene (DCE), trichloroethene (TCE), and tetrachloroethene (PCE).

The chlorinated chemicals listed above can produce adverse health effects when vapor intrusion exposures occur. TCE exposure has been associated with developmental effects, including heart defects, in animal and human epidemiological studies. These effects can occur in as little as several weeks of exposure during a time when a woman may not yet know she is pregnant. Long term exposures to TCE and PCE are all associated with symptoms in many systems and organs (nervous, immune, liver, kidney, lung) as well as a variety of cancers.

As a result of the soil and groundwater results observed and the human health concerns associated with exposure to chlorinated VOCs in air by vapor intrusion described above, the Wisconsin Department of Health Services (WI DHS) recommends investigation of the potential vapor intrusion exposure pathway occur for CVOCs at 5576 N Iroquois Avenue, and the prompt interruption of this exposure pathway if it is determined to exist to protect the occupants of this dwelling.

Please reach out to me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any comments or questions about this letter and its recommendations.

Sincerely,

A handwritten signature in cursive script that reads 'Curtis J. Hedman'.

Curtis J. Hedman, Ph.D., Toxicologist, WI DHS

Cc: Joseph Martinez, Hydrogeologist, WI DNR
Christine Cordova, Public Health Nurse, North Shore Health Department

What is Vapor Intrusion?



Chemicals used in commercial or industrial activities – dry cleaning chemicals, chemical degreasers and petroleum products such as gasoline – are sometimes spilled and leak into nearby soil or groundwater. When this happens, these chemicals may release gases or vapors, which travel from the contaminated groundwater or soil and move into nearby homes or businesses. This is called vapor intrusion.

The process when chemical vapors from contaminated soil or groundwater enter a home or other structure is called vapor intrusion.

Why are these chemical vapors a problem?

The chemicals that cause vapor intrusion are known as volatile organic compounds, or VOCs. Even when spilled into soil or water, these chemicals easily evaporate. They don't cause human health problems when they evaporate into the outside air, but when their vapors move into homes or businesses, they may cause long-term health problems for the people who live or work in those buildings. These vapors are usually odorless and colorless and undetectable without special testing equipment.

Why is vapor intrusion a concern?

Exposure to some chemical gases or vapors can cause an increased risk of adverse health effects. Whether or not a person experiences any health effects depends on several factors, including the amount and length of exposure, the toxicity of the chemical, and the individual's sensitivity to the chemical. When harmful chemical vapor intrusion is the result of environmental contamination, the Wisconsin Department of Natural Resources (DNR) requires that steps be taken to reduce or eliminate exposures which could be harmful to human health.

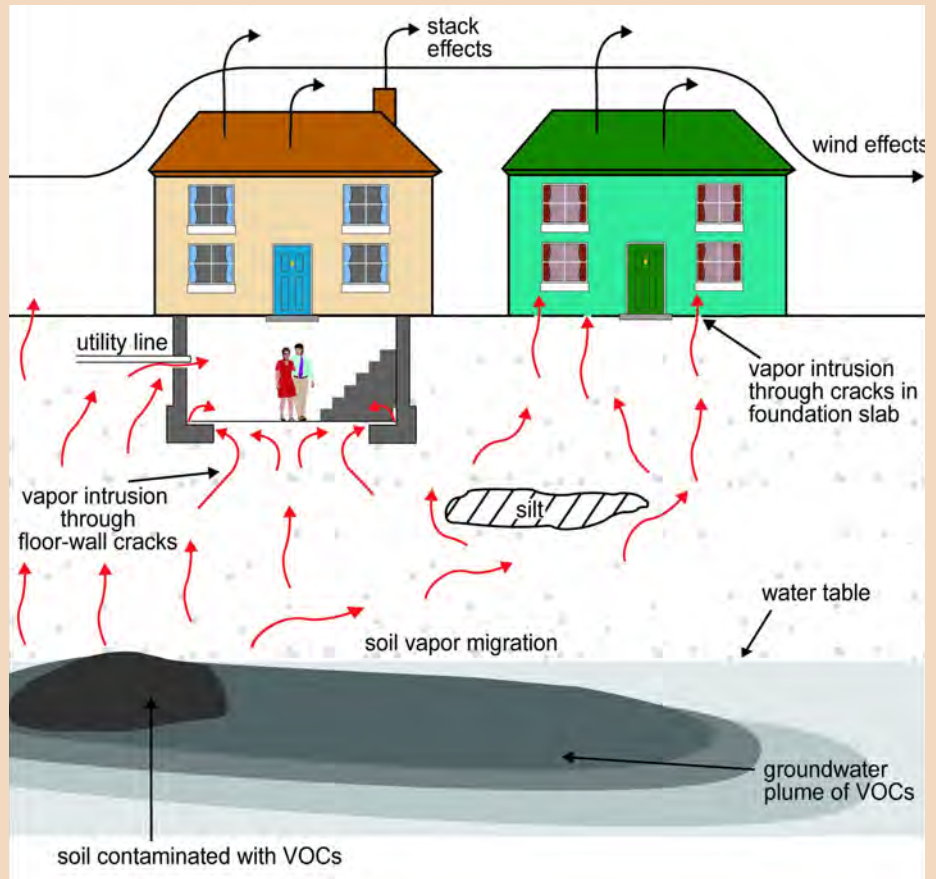
What should I expect if vapor intrusion is suspected near my home or business?

For businesses or other locations where VOC contamination has been found, the DNR requires that the potential for vapor intrusion be investigated. If you live near a site being cleaned up, you may be contacted by the site owner or others working on the cleanup. Your cooperation and consent will be requested before any testing or sampling is conducted on your property. Ask the person contacting you any questions you have about the work being done, or contact the DNR for more information (see DNR contact information on reverse). For more information about testing for vapor intrusion, see DNR-Pub-RR-954, "What to Expect During Vapor Intrusion Sampling."



How Vapors Enter a Building

If you live near a commercial or industrial facility or landfill where VOCs have entered either the soil or groundwater, there may be a potential for those chemicals to travel as vapors into your home or business. Vapors can enter buildings in various ways, including through cracks in the foundation and openings for utility lines. Building ventilation and weather can influence the extent of vapor intrusion.



Adapted from U.S. Environmental Protection Agency (EPA) graphic.
www.epa.gov/oswer/vaporintrusion/basic.html

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search "Vapor." For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR's Remediation and Redevelopment (RR) Program's Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

Additional information can be obtained through the DNR field office in your region. To find the correct office, visit the RR Program Staff Contacts page at dnr.wi.gov/topic/Brownfields/Contact.html or call the RR Program at (608) 266-2111.

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Why Test for Vapor Intrusion?



Vapor intrusion is likely an unfamiliar term to you, and hearing that your property should be tested for possible chemical vapor intrusion may cause you some concern. That is understandable, and this information sheet is designed to answer basic questions many people have. Please refer to DNR PUB-RR-892, “What is Vapor Intrusion?” for a summary discussion of the term “vapor intrusion.”

Most cases of vapor intrusion will pose no immediate threat to your health and safety. However, when other neighborhood properties are contaminated, it is wise to get your home or building tested to determine if there is any cause for concern. If potentially harmful chemical vapors are detected inside your home or building, the Department of Natural Resources (DNR), working in collaboration with other health and environmental professionals, will help you come up with a solution to protect you and your family.

Please consider the following factors when deciding whether to allow access for sampling:

Peace of mind

If there’s a chance that chemical vapor or soil gas is seeping into your home or business, testing can determine whether it really is and to what extent. If testing reveals a problem, then steps can be taken to resolve it, making the indoor air you breathe safer for you and your family. Like radon gas, vapors from nearby soil or groundwater contamination can be diverted from beneath your home or office building and safely expelled into the outdoors, thus improving air quality inside your home or building.

The goal of sampling a residence or business is to eliminate as many of the unknowns as possible and safely address any concerns.

Who pays for testing?

You didn’t cause this problem, so you don’t have to pay for testing just as long as you allow reasonable and timely access to have testing done. The cost of sampling at potentially impacted residences or workplaces, like yours, is covered by the responsible party (the person or business legally obligated to investigate and clean up the contamination). In some cases, it’s paid for directly by DNR, the Department of Health Services (DHS), or some other agency. Vapor sampling will be performed by a professional, and samples will be sent to a specialized lab for analysis.

Trained professionals and experts oversee the process

Multiple state and local agencies often work together to determine if vapor intrusion is a potential health risk in an area. The DNR, DHS, local health officials, the responsible party and environmental consultants are working together to ensure that quality samples are taken and that all results are given extensive review. It is important to gather the information in order to adequately understand if or where there may be a risk of vapor intrusion in your neighborhood.

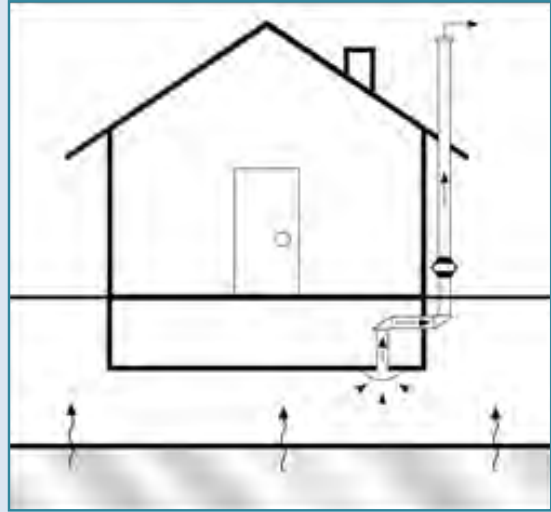


A simple, cost effective solution exists

If vapor intrusion is a problem in a house or building, it can generally be solved by installing a vapor mitigation system. These sub-slab depressurizing systems are similar to those used to eliminate radon gas underneath homes, and have been used for years in a safe and effective manner. If the source of the vapor is tied to a responsible party, they will often pay to have a system installed at your home. The annual upkeep and operation of a typical system is generally less than \$100 per year, mostly for electricity. These annual costs are typically the responsibility of the homeowner.

How will I know if the vapors have been eliminated?

After a vapor mitigation system is installed, follow-up testing of indoor air typically takes place three to six months later. The systems are usually considered permanent fixtures of the building. In cases where the source of the vapor is completely eliminated, the systems should no longer be needed.



If potentially harmful chemical vapor intrusion is detected in a home or business, the most common solution is to install a sub-slab depressurization system. This system captures and redirects soil vapors from below the building foundation before they enter the indoor air. Vapors are vented outside of the building where they disperse into the air and are rendered harmless.

Sub-slab depressurization systems also prevent radon from entering homes, which is an added health benefit in radon-prone areas.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

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What to Expect During Vapor Intrusion Sampling



The sampling procedure for vapor intrusion is performed by health and environmental professionals. It involves drilling one or more small holes into the basement or lowest level of your building, collecting a vapor sample from those holes - also called ports - and then sending the sample to a specialized lab for analysis. This is called sub-slab sampling. Sampling professionals try to minimize any inconveniences to you by informing you up front on what to expect and working with your schedule on the days of sampling.

Vapor sampling provides information about the extent of potential contamination in your neighborhood.

Should I be on site for the sampling?

It's up to you. Sampling professionals will need to be let in to install the testing equipment and collect the samples. The arrangements you make are completely dependent on your availability and comfort level with others on your property.

How many times will sampling professionals enter my property, and how is sampling done?

In general, you should plan on two or three visits over two or three days. While the actual sampling procedure and schedule may vary, the following provides a typical approach:

Day 1: The first day includes locating suitable locations for port installation, then drilling and installing the ports. This usually takes about an hour or two.

Day 2: The second day involves attaching the collection canister to the port to begin collecting the samples. A 24-hour indoor air sampling kit may also be set up. This visit will also take an hour or two.

Day 3: The third day is a shorter visit to gather all of the sampling equipment and seal off the ports. Sometimes the port site is left in place in case samples may need to be collected in the future.

Why not take indoor air samples instead of sub-slab samples?

Indoor air quality often changes from day to day, creating misleading assumptions about long-term indoor air quality. Indoor air quality may be affected by vapors given off by household or commercial products including paints, glues, fuels, cleaners, cigarette smoke, aerosol sprays, new carpeting or furniture. Also, any outdoor air that enters the inside of your house may also contain vapors which can alter test results. By itself, indoor air testing will not necessarily confirm that the vapors in the indoor air are entering a building from underground sources. However, indoor air samples are usually collected at the same time as the sub-slab samples for comparison purposes.



What if there is a crawl space instead of a basement?

If there is a crawl space or a basement with a dirt floor, it is not possible to install a port. In these cases, a sample of air is collected from the crawl space or basement over a 24 hour period. Sometimes a port can be installed in the side wall of the foundation.

Who pays for testing, and when will I get the results?

In many cases, the responsible party (the person or business legally obligated to investigate and clean up the environmental contamination) pays for the testing. The responsible party may also pay for the installation of a mitigation system if it is necessary. Sometimes, other parties such as DNR or the Dept. of Health may pay for testing. As long as the property owner provides reasonable and timely access for testing, rarely would they be responsible for the cost.

The laboratory results are usually available in two to four weeks and will be shared with you through a state or local health agency, the Wisconsin DNR, the responsible party or a hired consultant. An explanation of the findings and additional steps to be taken, if any, will also be provided.



A sub-slab vapor sampling system is usually in place for a day or two during the sampling process. The metal canisters (foreground) collect the vapor sample from the port (smaller canister in back of photo). The same canisters can be used to collect indoor air samples.

Where can I find more information?

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OWNER QUESTIONNAIRE FOR HOME VAPOR ASSESSMENT

Whitefish Bay Cleaners

Glendale, Wisconsin

Please complete this questionnaire to the best of your ability. Upon completion of the questionnaire, please return the form to erin.gross@stantec.com or mail to:

Stantec
Attn: Erin Gross
12075 Corporate Parkway, Suite 200
Mequon, WI 53092-2649

Should you have questions while completing this questionnaire, please contact Erin Gross of Stantec at (608) 628-6278. Thank you.

CONTACT INFORMATION

PROPERTY OWNER:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

TENANTS:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

PROPERTY INFORMATION/QUESTIONS

1) What are the best days to sample indoor air and sub-slab soil vapor? Indoor air will involve Stantec personnel entering your house/building in the morning to set up the sample containers. The sample containers will be left in place for approximately 8 hours at which time Stantec personnel will return to your property to retrieve sampling equipment.

2) Where is the best location to install a temporary sub-slab vapor point? The sample point must be installed through the basement floor slab (or through ground floor slab, if no basement if present). Note, the sample point will be removed, the hole grouted, and the hole in the concrete fully sealed upon completion of sampling and WDNR approval of the completed sample process and test results. _____

3) Do you currently have clothing in your residence/building (in particular your basement) that has been dry cleaned?

If not, when was the last time you had dry cleaned clothing in your basement, residence, or building?

4) Do you currently store mothballs or any other chemicals (i.e. paint, solvents, stains, etc.) in your basement?

If not, when was the last time you stored mothballs or other chemicals in your basement?

5) Do you or someone who resides in your home, work at a dry-cleaning business?

SIGNATURE

Signature of Person Completing Form: _____

Printed Name of Person Completing Form: _____

Date: _____

Affiliation with the Property: _____

Years Affiliated with Property: _____

Years You Owned the Property (if applicable): _____

Years You Operated at the Property (if applicable): _____



Stantec Consulting Services Inc.
12075 Corporate Parkway, Suite 200
Mequon WI 53092
Tel: (262) 241-4466
Fax: (262) 241-4901

February 11, 2021

Karl Krumholz
5579 N. Mohawk Ave.
Glendale, Wisconsin 53217-5048

**Reference: Request for Indoor Air and Sub-Slab Vapor Sampling
5579 North Mohawk Avenue, Glendale, Wisconsin
Stantec Project No.: 193707230**

Dear resident

Stantec Consulting Services, Inc. (Stantec), on behalf of our client Whitefish Bay Cleaners located at 419 West Silver Spring Drive, Glendale, Wisconsin, is investigating soil and groundwater contamination resulting from a historical release of dry cleaner solvents at Whitefish Bay Cleaners. During investigation conducted to date, elevated levels of tetrachloroethene (PCE) and trichloroethene (TCE) have been detected in soil and groundwater. These contaminants belong to a class of chemicals known as chlorinated volatile organic compounds (CVOCs). Recent sampling has indicated that a plume of CVOC-contaminated groundwater has migrated off-site south and west of Whitefish Bay Cleaners.

You received a letter from the Wisconsin Department of Health Services (WDHS) dated February 5, 2021 indicating that an investigation of the vapor intrusion exposure pathway is recommended (see attached). Stantec will soon be evaluating nearby buildings to determine if the occupants of these buildings are at risk for exposure to CVOCs due to potential intrusion of CVOC vapors into the building. Enclosed are fact sheets explaining how vapor intrusion occurs, how testing for the presence of CVOC vapors is conducted, why testing is recommended, and how vapor intrusion will be addressed if found to be present.

We would like to evaluate your residence at 5579 North Mohawk Avenue for vapor intrusion risks as part of planned additional investigation activities associated with the Whitefish Bay Cleaners that have been requested by the Wisconsin Department of Natural Resources (WDNR). As part of this process, representatives from Stantec would like to install a 5/8-inch diameter vapor monitoring point through the slab or basement floor and collect a sub-slab soil gas sample from the monitoring point. The vapor monitoring point installation and sample collection can be completed in approximately 1 hour. In addition, Stantec will collect a 24-hour indoor air sample. Both samples will be analyzed by a State of Wisconsin-certified laboratory for CVOCs. The sampling will be conducted at **no cost to you** and a summary of the analytical results will be provided to you. All sampling will be performed in accordance with the WDNR's "*Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*" guidance document, which is available at <https://dnr.wi.gov/files/PDF/pubs/rr/RR800.pdf>.

We desire to conduct the sampling during March 2021. We will require access to your building to install and sample the vapor monitoring point and at the beginning and end of the 24-hour indoor air sampling process. Please contact Erin Gross at Stantec via cell phone, (608) 628-6278, or email, erin.gross@stantec.com, no later than February 28, 2021 to discuss this matter further and arrange a sampling appointment. **This is the third attempt to arrange vapor/air sampling at your location.** Enclosed for your review is a Questionnaire that we request you to complete and return using the pre-addressed postage-paid envelope enclosed. We also request that the sub-slab vapor monitoring point remain in place until we are able to communicate the results to the WDNR for concurrence. Following

Reference: 2nd Request for Indoor Air and Sub-Slab Sampling

concurrency, Stantec will return at a mutually agreed time and remove the sample point, grout the borehole, and fully seal the hole in the floor slab.

Please also note that it is important that we obtain access to your property for the required environmental investigation in order to protect public health and the environment. For more information about providing access to your property and more information regarding vapor intrusion, please visit the WDNR's website: <https://dnr.wi.gov/topic/Brownfields/Vapor.html>

Thank you for your cooperation and attention to this matter. If you have any questions about the vapor intrusion investigation or remedial activities underway at the Whitefish Bay Cleaners site, please contact Erin Gross via cell phone, (608) 628-6278, or email, erin.gross@stantec.com.

Regards,

STANTEC CONSULTING SERVICES INC.



Erin Gross, PG
Staff Geologist
Phone: (608) 628-6278
Fax: (262) 241-8222
Erin.Gross@Stantec.com

Enclosures: Review of VOC data indicating investigation of the vapor intrusion exposure pathway
 What is Vapor Intrusion? fact sheet
 Why Test for Vapor Intrusion? fact sheet
 What to Expect During Vapor Intrusion Sampling fact sheet
 Owner Questionnaire for Home Vapor Assessment

C: Whitefish Bay Cleaners, Charlie Mathers, (414) 332-5560
 WDNR, Joseph J. Martinez , (414) 218-6042
 WDHS, Curtis J. Hedman, Ph.D., (608) 266-1251

Tony Evers
Governor



Karen E. Timberlake
Secretary

State of Wisconsin
Department of Health Services

DIVISION OF PUBLIC HEALTH

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

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

February 5, 2021

Karl Krumholz
5579 North Mohawk Avenue
Glendale, WI 53217

Re: Review of VOC data indicating investigation of the vapor intrusion exposure pathway for 5579 North Mohawk Avenue in Glendale, Wisconsin: WDNR BRRTS Number 02-41-550821

Dear Mr. Krumholz:

I was recently asked by Wisconsin Department of Natural Resources (WI DNR) staff to review laboratory results for volatile organic compounds (VOCs) related to a historical chlorinated compound releases that were identified nearby the property located at 5579 North Mohawk Avenue in Glendale, Wisconsin.

These results indicate that chlorinated (CVOC) compound contaminated soil and groundwater are present within close proximity to foundation for the home at this address. The concentrations detected for these compounds exceed screening levels that indicate a vapor intrusion exposure pathway investigation should take place. Chlorinated chemicals detected include 1,2-dichloroethene (DCE), trichloroethene (TCE), and tetrachloroethene (PCE).

The chlorinated chemicals listed above can produce adverse health effects when vapor intrusion exposures occur. TCE exposure has been associated with developmental effects, including heart defects, in animal and human epidemiological studies. These effects can occur in as little as several weeks of exposure during a time when a woman may not yet know she is pregnant. Long term exposures to TCE and PCE are all associated with symptoms in many systems and organs (nervous, immune, liver, kidney, lung) as well as a variety of cancers.

As a result of the soil and groundwater results observed and the human health concerns associated with exposure to chlorinated VOCs in air by vapor intrusion described above, the Wisconsin Department of Health Services (WI DHS) recommends investigation of the potential vapor intrusion exposure pathway occur for CVOCs at 5579 North Mohawk Avenue, and the prompt interruption of this exposure pathway if it is determined to exist to protect the occupants of this dwelling.

Please reach out to me at (608) 266-6677, or curtis.hedman@wisconsin.gov if you have any comments or questions about this letter and its recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Curtis J. Hedman".

Curtis J. Hedman, Ph.D., Toxicologist, WI DHS

Cc: Joseph Martinez, Hydrogeologist, WI DNR
Christine Cordova, Public Health Nurse, North Shore Health Department

What is Vapor Intrusion?



Chemicals used in commercial or industrial activities – dry cleaning chemicals, chemical degreasers and petroleum products such as gasoline – are sometimes spilled and leak into nearby soil or groundwater. When this happens, these chemicals may release gases or vapors, which travel from the contaminated groundwater or soil and move into nearby homes or businesses. This is called vapor intrusion.

The process when chemical vapors from contaminated soil or groundwater enter a home or other structure is called vapor intrusion.

Why are these chemical vapors a problem?

The chemicals that cause vapor intrusion are known as volatile organic compounds, or VOCs. Even when spilled into soil or water, these chemicals easily evaporate. They don't cause human health problems when they evaporate into the outside air, but when their vapors move into homes or businesses, they may cause long-term health problems for the people who live or work in those buildings. These vapors are usually odorless and colorless and undetectable without special testing equipment.

Why is vapor intrusion a concern?

Exposure to some chemical gases or vapors can cause an increased risk of adverse health effects. Whether or not a person experiences any health effects depends on several factors, including the amount and length of exposure, the toxicity of the chemical, and the individual's sensitivity to the chemical. When harmful chemical vapor intrusion is the result of environmental contamination, the Wisconsin Department of Natural Resources (DNR) requires that steps be taken to reduce or eliminate exposures which could be harmful to human health.

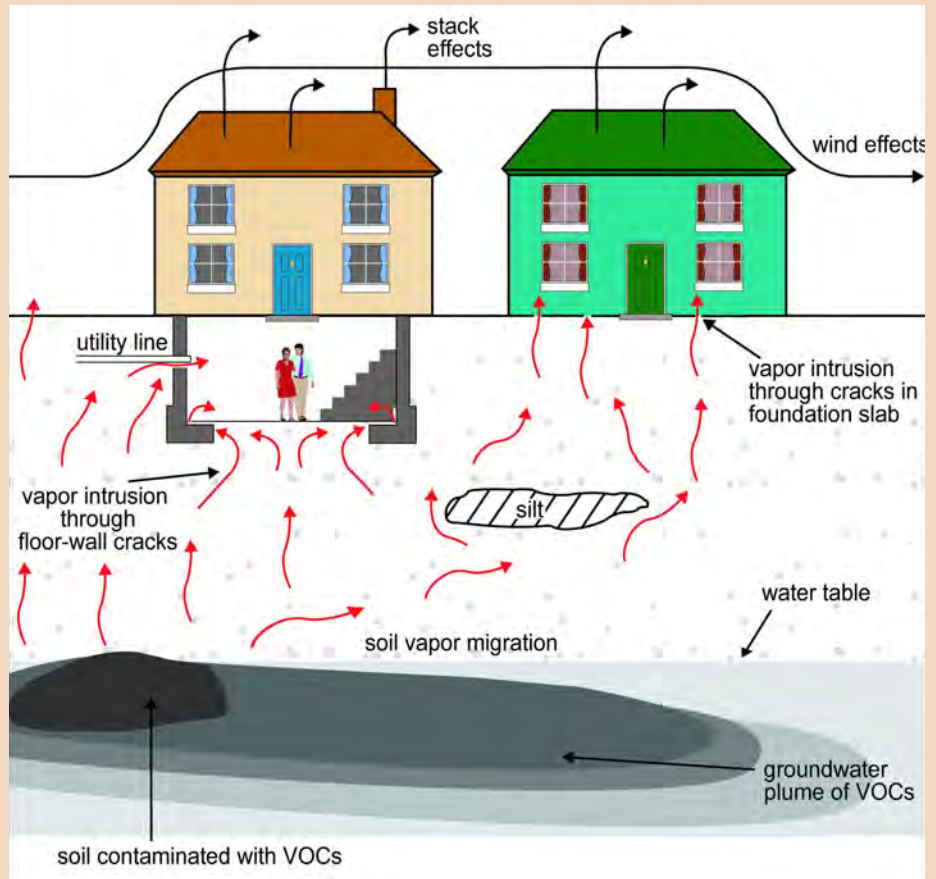
What should I expect if vapor intrusion is suspected near my home or business?

For businesses or other locations where VOC contamination has been found, the DNR requires that the potential for vapor intrusion be investigated. If you live near a site being cleaned up, you may be contacted by the site owner or others working on the cleanup. Your cooperation and consent will be requested before any testing or sampling is conducted on your property. Ask the person contacting you any questions you have about the work being done, or contact the DNR for more information (see DNR contact information on reverse). For more information about testing for vapor intrusion, see DNR-Pub-RR-954, "What to Expect During Vapor Intrusion Sampling."



How Vapors Enter a Building

If you live near a commercial or industrial facility or landfill where VOCs have entered either the soil or groundwater, there may be a potential for those chemicals to travel as vapors into your home or business. Vapors can enter buildings in various ways, including through cracks in the foundation and openings for utility lines. Building ventilation and weather can influence the extent of vapor intrusion.



Adapted from U.S. Environmental Protection Agency (EPA) graphic.
www.epa.gov/oswer/vaporintrusion/basic.html

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR’s Remediation and Redevelopment (RR) Program’s Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

Additional information can be obtained through the DNR field office in your region. To find the correct office, visit the RR Program Staff Contacts page at dnr.wi.gov/topic/Brownfields/Contact.html or call the RR Program at (608) 266-2111.

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Why Test for Vapor Intrusion?



Vapor intrusion is likely an unfamiliar term to you, and hearing that your property should be tested for possible chemical vapor intrusion may cause you some concern. That is understandable, and this information sheet is designed to answer basic questions many people have. Please refer to DNR PUB-RR-892, “What is Vapor Intrusion?” for a summary discussion of the term “vapor intrusion.”

Most cases of vapor intrusion will pose no immediate threat to your health and safety. However, when other neighborhood properties are contaminated, it is wise to get your home or building tested to determine if there is any cause for concern. If potentially harmful chemical vapors are detected inside your home or building, the Department of Natural Resources (DNR), working in collaboration with other health and environmental professionals, will help you come up with a solution to protect you and your family.

Please consider the following factors when deciding whether to allow access for sampling:

Peace of mind

If there's a chance that chemical vapor or soil gas is seeping into your home or business, testing can determine whether it really is and to what extent. If testing reveals a problem, then steps can be taken to resolve it, making the indoor air you breathe safer for you and your family. Like radon gas, vapors from nearby soil or groundwater contamination can be diverted from beneath your home or office building and safely expelled into the outdoors, thus improving air quality inside your home or building.

The goal of sampling a residence or business is to eliminate as many of the unknowns as possible and safely address any concerns.

Who pays for testing?

You didn't cause this problem, so you don't have to pay for testing just as long as you allow reasonable and timely access to have testing done. The cost of sampling at potentially impacted residences or workplaces, like yours, is covered by the responsible party (the person or business legally obligated to investigate and clean up the contamination). In some cases, it's paid for directly by DNR, the Department of Health Services (DHS), or some other agency. Vapor sampling will be performed by a professional, and samples will be sent to a specialized lab for analysis.

Trained professionals and experts oversee the process

Multiple state and local agencies often work together to determine if vapor intrusion is a potential health risk in an area. The DNR, DHS, local health officials, the responsible party and environmental consultants are working together to ensure that quality samples are taken and that all results are given extensive review. It is important to gather the information in order to adequately understand if or where there may be a risk of vapor intrusion in your neighborhood.

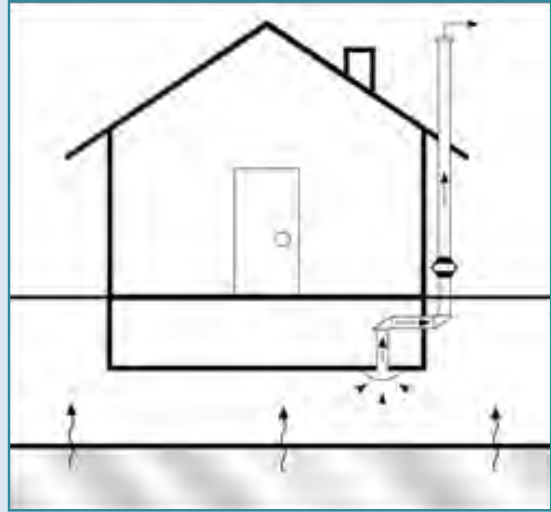


A simple, cost effective solution exists

If vapor intrusion is a problem in a house or building, it can generally be solved by installing a vapor mitigation system. These sub-slab depressurizing systems are similar to those used to eliminate radon gas underneath homes, and have been used for years in a safe and effective manner. If the source of the vapor is tied to a responsible party, they will often pay to have a system installed at your home. The annual upkeep and operation of a typical system is generally less than \$100 per year, mostly for electricity. These annual costs are typically the responsibility of the homeowner.

How will I know if the vapors have been eliminated?

After a vapor mitigation system is installed, follow-up testing of indoor air typically takes place three to six months later. The systems are usually considered permanent fixtures of the building. In cases where the source of the vapor is completely eliminated, the systems should no longer be needed.



If potentially harmful chemical vapor intrusion is detected in a home or business, the most common solution is to install a sub-slab depressurization system. This system captures and redirects soil vapors from below the building foundation before they enter the indoor air. Vapors are vented outside of the building where they disperse into the air and are rendered harmless.

Sub-slab depressurization systems also prevent radon from entering homes, which is an added health benefit in radon-prone areas.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

For more DNR information, please visit the DNR’s Remediation and Redevelopment (RR) Program’s Vapor Intrusion page at dnr.wi.gov/topic/Brownfields/Vapor.html.

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What to Expect During Vapor Intrusion Sampling



The sampling procedure for vapor intrusion is performed by health and environmental professionals. It involves drilling one or more small holes into the basement or lowest level of your building, collecting a vapor sample from those holes - also called ports - and then sending the sample to a specialized lab for analysis. This is called sub-slab sampling. Sampling professionals try to minimize any inconveniences to you by informing you up front on what to expect and working with your schedule on the days of sampling.

Vapor sampling provides information about the extent of potential contamination in your neighborhood.

Should I be on site for the sampling?

It's up to you. Sampling professionals will need to be let in to install the testing equipment and collect the samples. The arrangements you make are completely dependent on your availability and comfort level with others on your property.

How many times will sampling professionals enter my property, and how is sampling done?

In general, you should plan on two or three visits over two or three days. While the actual sampling procedure and schedule may vary, the following provides a typical approach:

Day 1: The first day includes locating suitable locations for port installation, then drilling and installing the ports. This usually takes about an hour or two.

Day 2: The second day involves attaching the collection canister to the port to begin collecting the samples. A 24-hour indoor air sampling kit may also be set up. This visit will also take an hour or two.

Day 3: The third day is a shorter visit to gather all of the sampling equipment and seal off the ports. Sometimes the port site is left in place in case samples may need to be collected in the future.

Why not take indoor air samples instead of sub-slab samples?

Indoor air quality often changes from day to day, creating misleading assumptions about long-term indoor air quality. Indoor air quality may be affected by vapors given off by household or commercial products including paints, glues, fuels, cleaners, cigarette smoke, aerosol sprays, new carpeting or furniture. Also, any outdoor air that enters the inside of your house may also contain vapors which can alter test results. By itself, indoor air testing will not necessarily confirm that the vapors in the indoor air are entering a building from underground sources. However, indoor air samples are usually collected at the same time as the sub-slab samples for comparison purposes.



What if there is a crawl space instead of a basement?

If there is a crawl space or a basement with a dirt floor, it is not possible to install a port. In these cases, a sample of air is collected from the crawl space or basement over a 24 hour period. Sometimes a port can be installed in the side wall of the foundation.

Who pays for testing, and when will I get the results?

In many cases, the responsible party (the person or business legally obligated to investigate and clean up the environmental contamination) pays for the testing. The responsible party may also pay for the installation of a mitigation system if it is necessary. Sometimes, other parties such as DNR or the Dept. of Health may pay for testing. As long as the property owner provides reasonable and timely access for testing, rarely would they be responsible for the cost.

The laboratory results are usually available in two to four weeks and will be shared with you through a state or local health agency, the Wisconsin DNR, the responsible party or a hired consultant. An explanation of the findings and additional steps to be taken, if any, will also be provided.



A sub-slab vapor sampling system is usually in place for a day or two during the sampling process. The metal canisters (foreground) collect the vapor sample from the port (smaller canister in back of photo). The same canisters can be used to collect indoor air samples.

Where can I find more information?

Health and vapor-related information can be found at the Wisconsin Department of Health Services (DHS) website at dhs.wisconsin.gov, search “Vapor.” For other health-related questions, please contact your local health department: www.dhs.wisconsin.gov/localhealth.

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OWNER QUESTIONNAIRE FOR HOME VAPOR ASSESSMENT

Whitefish Bay Cleaners

Glendale, Wisconsin

Please complete this questionnaire to the best of your ability. Upon completion of the questionnaire, please return the form to erin.gross@stantec.com or mail to:

Stantec
Attn: Erin Gross
12075 Corporate Parkway, Suite 200
Mequon, WI 53092-2649

Should you have questions while completing this questionnaire, please contact Erin Gross of Stantec at (608) 628-6278. Thank you.

CONTACT INFORMATION

PROPERTY OWNER:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

TENANTS:

Name: _____ Address: _____

City _____ State: _____ Zip code: _____ Phone # _____

PROPERTY INFORMATION/QUESTIONS

1) What are the best days to sample indoor air and sub-slab soil vapor? Indoor air will involve Stantec personnel entering your house/building in the morning to set up the sample containers. The sample containers will be left in place for approximately 8 hours at which time Stantec personnel will return to your property to retrieve sampling equipment.

2) Where is the best location to install a temporary sub-slab vapor point? The sample point must be installed through the basement floor slab (or through ground floor slab, if no basement if present). Note, the sample point will be removed, the hole grouted, and the hole in the concrete fully sealed upon completion of sampling and WDNR approval of the completed sample process and test results. _____

3) Do you currently have clothing in your residence/building (in particular your basement) that has been dry cleaned?

If not, when was the last time you had dry cleaned clothing in your basement, residence, or building?

4) Do you currently store mothballs or any other chemicals (i.e. paint, solvents, stains, etc.) in your basement?

If not, when was the last time you stored mothballs or other chemicals in your basement?

5) Do you or someone who resides in your home, work at a dry-cleaning business?

SIGNATURE

Signature of Person Completing Form: _____

Printed Name of Person Completing Form: _____

Date: _____

Affiliation with the Property: _____

Years Affiliated with Property: _____

Years You Owned the Property (if applicable): _____

Years You Operated at the Property (if applicable): _____