

# Vapor communications and public outreach best management practices

## Purpose

This best management practices (BMPs) document describes the roles and expectations for communications and public outreach throughout the vapor intrusion evaluation lifecycle (initial investigation, building mitigation decision, mitigation, and long-term operations and maintenance). This BMP was developed with the Minnesota Department of Health (MDH) and includes tools and resources intended to complement the investigation BMPs (*Vapor investigation and mitigation decision BMP* for MERLA sites [[c-rem3-06e](#)] and the *Vapor intrusion assessments performed during site investigations* [[c-prp4-01a](#)] for PRP sites) and the *Vapor mitigation BMP* [[c-rem3-06](#)].

This BMP document applies to the following Minnesota Pollution Control Agency (MPCA) programs:

- Resource Conservation and Recovery Act (RCRA)
- Superfund
- Site Assessment
- Brownfields Program (Voluntary Investigation and Cleanup [VIC] and Petroleum Brownfields)
- Petroleum Remediation Program (PRP)

The primary goal of a vapor intrusion evaluation is to protect the health of building Occupants from indoor air contamination that enters from the vapor intrusion pathway. This document contains three overarching sections regarding communications during the vapor intrusion investigation and mitigation process to achieve this goal:

- Communication responsibilities of the Party Conducting the Investigation and communication responsibilities of the Property Owner
  - The Party Conducting the Investigation must communicate with impacted Property Owners during all stages of a vapor investigation
  - The Property Owner must communicate with Occupants when a potential vapor intrusion risk has been identified
- Communication responsibilities of the current Property Owner to future Property Owners
- MPCA/MDH Involvement in Communication Efforts

The MPCA recommends this BMP be followed even in cases where vapor intrusion evaluations are not presently being conducted under the oversight of one of the above-referenced programs. Early and effective communication among all individuals and organizations involved is an important part of meeting the BMPs, meeting the primary goal of protecting health of building Occupants, and building trust.

### **Guiding principles of vapor communication and public outreach**

All people should be notified when they own or spend significant time in a building with a potential vapor intrusion risk.

Prompt and effective notifications are needed when indoor air data shows that vapor intrusion may affect the quality of the air people breathe.

All people should be given the opportunity to self-identify as a sensitive individual.

In this BMP, the following definitions are used to identify various individuals and organizations related to a vapor intrusion evaluation:

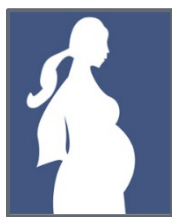
- **Occupant** – any person occupying a building or property within a building, which could include property owners, tenants, residents, renters, employees, students, etc.
- **Property Owner** – the legal owner of a building and/or the legal owner of a property within a building (in cases where the building is owned by a separate legal entity).
- **Party Conducting the Investigation** – the party conducting the vapor intrusion evaluation. These parties may include prospective property owners or lenders engaging in environmental due-diligence activities, responsible or voluntary parties, and/or property owners.
- **Responsible or Voluntary Party** – the party collaborating with MPCA program staff in a voluntary or non-voluntary capacity. These parties may be pursuing regulatory closure of a release or liability assurance letters and are often the parties providing vapor investigation data to the MPCA.

### Opportunity to identify as a sensitive individual

One of the main purposes of this BMP is to explain the importance of notifying building Occupants of potential vapor intrusion impacts because it allows them the opportunity to identify themselves or their family members as sensitive individuals. Some people may be more sensitive or vulnerable to chemical exposures and identifying as a sensitive individual helps the MPCA and MDH address health concerns and prioritize properties. MDH may be able to suggest actions to reduce potential exposure, share what is known about health risks, and work with the MPCA to expedite sampling or building mitigation.

MDH identifies the following people as potentially sensitive or vulnerable:

- People who are pregnant or may become pregnant
- Infants and young children
- Elderly people
- People who are living with chronic disease or a compromised immune system
- People who face socioeconomic inequities and circumstances that affect their ability to be healthy



Timely notification of potential vapor intrusion exposure is important. MDH is concerned about pregnancies in the first trimester when the contaminant trichloroethylene (TCE) is present.

Sometimes the presence of sensitive/vulnerable individuals is clear (e.g., schools, childcare centers, environmental justice neighborhoods, etc.); however, in some circumstances, it is difficult to identify the presence of sensitive or vulnerable individuals (e.g., a pregnancy where exposure to TCE in the first eight weeks of pregnancy may increase the risk of heart defects in the baby). Therefore, timely notification of VI exposure should be prioritized.

When potential for exposure to contamination is found to be high and the presence of sensitive individuals is unknown, additional effort may be needed to gather more information about the Occupants of affected buildings.

The MDH information sheet *Your Health and Vapor Intrusion* ([residential](#) or [commercial](#)), found on the [MDH Vapor Intrusion webpage](#), encourages people to contact MDH if they are concerned about their health. More information regarding the distribution of this info sheet is included in this BMP.

## Communication responsibilities of the Party Conducting the Investigation and communication responsibilities of the Property Owner

The Party Conducting the Investigation, if different from the Property Owner, is expected to communicate with Property Owners during each step of the vapor intrusion evaluation to protect the health of building Occupants. At a minimum, the Party Conducting the Investigation should promptly notify the Property Owner when a potential vapor intrusion risk has been identified, such as a determination that building mitigation is necessary or in cases where the building is located within a Vapor Intrusion Area of Concern (VI AOC).

Similarly, when a potential vapor intrusion risk has been identified, the Property Owner, including commercial owners and residential rental owners, must promptly notify Occupants of the potential impact of vapor intrusion. The Property Owner should forward to the Occupants information they have received from the Party Conducting the Investigation or information the Property Owner independently collected.

At any time during the vapor evaluation process, the MPCA may request the Party Conducting the Investigation to submit documentation of its best faith efforts to communicate with Property Owners and may request the Property Owners to submit documentation of its best faith efforts to communicate with Occupants. Although it is the responsibility of the Party Conducting the Investigation to share vapor investigation information as described in this BMP, the MPCA and/or the MDH may assist with vapor intrusion site communications for a variety of site-specific reasons (See *The MPCA and MDH involvement in communication efforts* section below). In most cases, vapor investigation reports provided to the MPCA are classified as public data and information regarding the investigation will be shared upon request.

The Party Conducting the Investigation and the Property Owner should communicate information regarding the potential vapor intrusion during at least three investigation stages:

1. Initial notification of investigation
2. Sample results and subsequent mitigation decisions or next steps
3. Final results, reporting, and mitigation information

**All people should be notified when they own or spend significant time in a building with a potential vapor intrusion risk.**

### Recommendations for successful communications

- **Build partnerships.** The community, residents, property owners, and local and state governments are all important partners on vapor intrusion projects.
  - Make a space for partners to participate. Respect and honor everyone involved.
  - Show your commitment to the community and the project.
  - Follow through and be available.
- **Connect** with partners early and stay connected throughout the project.
  - Adapt your communication style to meet the needs of the person or audience.
  - Respect and honor feelings. All feelings are valid. Hear and acknowledge all concerns.
- **Communicate clearly.** Be clear about what you do know and what you don't know, and what the process is for figuring out what needs to be known.
  - Use plain language. Be mindful of communities or individuals who may not speak English or speak English as a second language.
  - Be accurate. Know the facts and the science.
  - Let people know how they can get their questions answered.
- **Listen and adjust.** Pay attention to feelings—yours and others. Listen to what is being said, and just as importantly, listen for what is NOT being said. Pay attention to what is being communicated to you in writing.

## Stage 1: Initial notification of investigation

The Party Conducting the Investigation should notify the Property Owner about a vapor intrusion investigation. This is typically done through an “access packet” that is sent to the Property Owner to request access to sample the property. Refer to [Table 1](#) for a minimum list of information that should be communicated when requesting access, including MDH info sheets *Your Health and Vapor Intrusion* ([residential](#) or [commercial](#)), *What is Vapor Intrusion?* ([residential](#) or [commercial](#)), [TCE in Air](#) and/or [PCE in Air](#) found on the MDH Vapor Intrusion webpage at:

**It is important to use MDH’s Your Health and Vapor Intrusion information sheets when notifying occupants of a vapor intrusion investigation.**

<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>. The Party Conducting the Investigation should document attempts to obtain access. The MPCA expects that at least two documented attempts at access will be made. For large area-wide investigations that require a more robust communication plan, please follow the terms and conditions set out in the [United States Environmental Protection Agency \(EPA\) Region 5 Superfund and Emergency Management Division’s Vapor Intrusion Handbook \(March 2020\)](#).

The Property Owner should promptly notify Occupants at minimum when a potential vapor intrusion risk has been identified, such as a determination that building mitigation is necessary or in cases where the building is located within a Vapor Intrusion Area of Concern (VI AOC), to allow Occupants the opportunity to identify themselves or their family members as sensitive individuals. The Property Owner should include the information sheets listed above when notifying the Occupants of the vapor intrusion investigation. Refer to [Table 1](#) for a minimum list of information to be provided to the Occupants.

### Addressing reluctant Property Owners

Some Property Owners may be reluctant to grant access or outright refuse to grant access. The Party Conducting the Investigation should notify the MPCA when this occurs and submit to the MPCA a communication history documenting attempts to gain access. The MPCA may be able to provide assistance, explain the need for sampling, and encourage the Property Owner to work with the Party Conducting the Investigation to address the potential vapor intrusion issue. In addition, the Party Conducting the Investigation should notify the Property Owner that, in most cases, vapor investigation information is public data, including if access to conduct a vapor investigation was denied and the potential risk of such contamination is present on the Property. It is in the Property Owner’s best interest to grant access for investigation and to notify occupants of any potential vapor intrusion risk.

The Party Conducting the Investigation should provide the Property Owner with sufficient information regarding potential health risks of vapor intrusion, the benefits of vapor intrusion evaluation, and potential risks of refusing access to investigate and, if necessary, mitigate the vapor intrusion. The Party Conducting the Investigation should not continue to pressure reluctant owner-occupied single-family owners.

If Property Owners, especially rental Property Owners (residential or otherwise), refuse access, the MPCA and/or the MDH may notify Occupants of the Property Owner’s refusal to provide access (See *The MPCA and MDH involvement in communication efforts* section below). In addition, the MPCA project team may refer this matter to Attorney General’s Office to initiate legal action to obtain access to complete the sampling or file an Affidavit on the Property records with the County Recorder’s Office stating that the Property may be impacted by a release of hazardous substances or pollutants or contaminants.

## Stage 2: Sample results and subsequent mitigation decisions or next steps

The Party Conducting the Investigation should promptly forward laboratory reports to the Property Owners with a cover letter that summarizes the results, any next steps (e.g., additional sampling, mitigation, etc.), the MPCA’s information sheet [Understanding your vapor intrusion test results](#), and appropriate MDH information sheets. For example, it is important to include *Your Health and Vapor Intrusion?* ([residential](#) or [commercial](#)) when a vapor intrusion risk is identified and [TCE in Air](#) and/or [PCE in Air](#) when TCE and/or PCE is a chemical of concern.

**The Property Owner** should promptly forward to the Occupants the results summary and next steps, along with applicable MPCA/MDH information sheets, at minimum when a potential vapor intrusion risk has been identified. If requested, the Property Owner should also forward all laboratory reports and cover letters to the Occupants. Note that expedited actions may be needed in certain cases based on sample results according to the Vapor investigation and mitigation decision BMP and any communication should consider and mirror any expedited actions.

**Prompt and effective notifications are needed when indoor air data shows that vapor intrusion may affect the quality of the air people breathe.**

It is particularly important to share indoor air testing results with Occupants who may be breathing contaminated air. The MPCA and MDH staff are available to assist with communications among the parties, interpretation of test results, and as appropriate, broader site communications.

### **Stage 3: Final results, reporting, and mitigation information**

**The Party Conducting the Investigation** is required to prepare a final report for a vapor investigation and submit to the Property Owner. The specific final report is dictated by the applicable MPCA regulatory program (e.g., implementation report, summary report, property summary report, etc.) and generally includes information required in a Property Summary Report (PSR) as outlined by the *Vapor mitigation BMP*. An example of the information required in a final report for vapor investigation can be found in the PSR template on the MPCA website at: <https://www.pca.state.mn.us/waste/vapor-intrusion-best-management-practices-0>.

The final reporting should include, as applicable, information regarding the investigation, mitigation decision, mitigation system installation, post-mitigation confirmation results, and operation and maintenance (O&M) procedures. If requested, the Party Conducting the Investigation must document and attach all communication efforts in the final report from initial access to after mitigation completion.

#### **The Property Owner should inform Occupants:**

- If a mitigation system is installed and is operational, or,
- If a potential vapor intrusion risk was identified and the Occupants were notified, but the investigation determined no risk exists or no mitigation is needed.

Often, coordination with the Occupants is required for mitigation system installation, but all Occupants should be kept apprised even when coordination isn't needed. Although the Property Owner is not required to be forward the final report to the Occupants, it should be made available upon request.

#### **Mitigation system Operations & Maintenance (O&M)**

**The Property Owner** is responsible for operating and maintaining the vapor mitigation system, even if the Property Owner delegates this role to others. In addition, the Property Owner must forward the O&M manual required in a PSR (or applicable final report) to the person(s) in charge of the building. In some cases, for example in a single-family residential rental property, it might be appropriate for the Property Owner to notify the Occupants of the components of the mitigation system they have access to, any basics for detecting an issue, and the signage/placards required by the *Vapor mitigation BMP*.

### **Communications responsibilities of current Property Owners to future Property Owners**

**The Property Owner** must retain all documentation from a vapor investigation with the property records and notify future property owners of environmental conditions on site, including the presence of a potential environmental concern, any vapor investigation results and decisions, and the presence of a vapor mitigation system.

#### **Environmental Covenants**

The MPCA requires an Environmental Covenant and Easement (ECE) when an affirmative obligation or activity/use limitation is needed to protect human health or the environment. For vapor intrusion evaluations,

ECEs document the affirmative obligation of current and future property owners to operate and maintain the vapor mitigation system.

With the exception of single-family residential properties, the MPCA generally requires ECEs at all buildings in which a vapor mitigation system has been installed; however, the MPCA may require an ECE at a single-family residential property in certain circumstances (e.g., when the source of vapor intrusion is located on the property and other corrective actions are not feasible).

Directions on how to prepare an institutional control, including ECEs, and annual reporting requirements can be found on the MPCA's Cleanup guidance and assistance website: <https://www.pca.state.mn.us/waste/cleanup-guidance>.

## Single-family residential disclosure

The Property Owner of a residential home in Minnesota, including a single condominium or townhome unit, is required, at the time of sale, to disclose any environmental concerns and explanations on the Seller's Property Disclosure Statement. Ask your realtor for the REALTORS®-approved disclosure template. Specifically, the 2018 Minnesota Association of REALTORS®-approved disclosure statement template mandates disclosure of:

- Any environmental concerns (such as vapor intrusion).
- If the property owner has ever been contacted or has received any info from any governmental authority pertaining to possible or actual environmental contamination (such as vapor intrusion) affecting the property.
- Additional clarification or further explanation if the answer is yes to either of the above disclosure questions.
- The existence of any environmental remediation system (such as a radon or vapor intrusion system).

Similarly, [Minneapolis Ordinance 244.275](#) requires residential rental Property Owners in Minneapolis to disclose information regarding environmental contamination testing, abatement, removal, or remediation of designated sites. The term "designated sites" includes MPCA sites. The residential rental property owner must provide pertinent information to the tenant or lessee at each of the following times:

- Within any reasonable time specified in any notification from the director of regulatory services or the director's designee
- Within thirty (30) days of receiving new information from the EPA, the MPCA, or other identified governmental agency or their agents or contractors
- Prior to signing a lease for the premises or prior to agreement upon a tenancy, if no lease is provided

Specific questions regarding Minnesota real estate disclosure and ordinance law should be directed to independent legal counsel. This broad overview on real estate disclosure is not a substitute for receiving situation-specific professional advice.

## The MPCA and MDH involvement in communication efforts

The MPCA and MDH goal is for vapor intrusion communications to be effective and accessible to all Minnesotans in all communities. The MPCA and/or MDH may assist with vapor intrusion site communications for a variety of site-specific reasons. These include, but are not limited to:

- Special populations or community needs
  - MPCA and/or MDH may offer to develop an information sheet or write an email that can be distributed by the Property Owner or building operator for sensitive populations (e.g., schools, childcare centers, etc.).
  - MPCA and/or MDH will work with the affected communities to address differences in demographics, including age, culture, language, socioeconomic status, etc. Local partners may be needed to assist with special needs, including translations and interpreters.
  - MPCA and/or MDH will seek public involvement opportunities for large-scale or high public interest investigations by holding public meetings, etc.

- Immediate health concerns or interpretation of indoor air data
  - MPCA and/or MDH can interpret indoor air results and make recommendations for building occupants. This is particularly important at properties with non-owner occupants.
  - MDH may conclude that women who are pregnant or may become pregnant should avoid or minimize time in a building that is affected by TCE vapor intrusion until steps are taken to reduce exposures. MDH may also conclude that indoor air concentrations may be a health concern for all occupants. In these cases, MPCA and MDH will work with property owners, consultants, and the affected occupants to communicate health risks as soon as possible.
- Non-owner-occupied properties
  - MPCA and/or MDH may get involved in notifying occupants of buildings of the vapor intrusion investigation, especially if property owners do not provide evidence of notification or refuse access to sample or mitigate.

The situations above may result in the MPCA reaching out to agency leadership, elected officials, local government officials, etc. Additional outreach methods may be utilized as well, including but not limited to public meetings, speaking at neighborhood group meetings, availability sessions, door-to-door visits, telephone contact, etc.

Although MPCA and/or MDH may assist in communication, The Party Conducting the Investigation and the Property Owner retain full responsibility for communication as outlined in this BMP.

**Table 1 – Summary of vapor communications and public outreach responsibilities**

Stages of Vapor Investigation	Party Conducting the Investigation must communicate the following to Property Owners	Property Owner must communicate the following to Occupants
Initial notification of vapor investigation	Access agreement	May need to arrange access for sampling
	Site-specific info regarding the investigation: <ul style="list-style-type: none"> <li>• Why the investigation is needed</li> <li>• Contaminants of concern, where they are from, and vapor Area of Concern</li> <li>• Description of the sampling process, who is conducting the sampling/investigation, and next steps if a risk is identified</li> <li>• What the owner needs to do (e.g., sign the access agreement, coordinate/arrange property access)</li> <li>• Contact information, including the MPCA project manager and MDH when applicable</li> </ul> <p><b>Note that large area-wide investigations might require a more robust communication plan.</b></p>	Site-specific info regarding the investigation at a minimum <b>when a potential vapor intrusion risk has been identified:</b> <ul style="list-style-type: none"> <li>• Why the investigation is needed</li> <li>• Contaminants of concern</li> <li>• Contact information for questions (including, if applicable, the MPCA and MDH contacts)</li> </ul> <p><b>All people should be notified when they own or spend significant time in a building with vapor intrusion risk.</b></p> <p><b>Examples of identifying potential vapor intrusion risk:</b></p> <ul style="list-style-type: none"> <li>• Building mitigation is determined to be necessary</li> <li>• Building is located within a Vapor Area of Concern</li> </ul>
	MDH info sheet <i>Your Health and Vapor Intrusion</i> ( <a href="#">residential</a> or <a href="#">commercial</a> ) found on the <a href="#">MDH Vapor Intrusion webpage</a> to give building occupants the opportunity to identify themselves or their family members as sensitive individuals to help MPCA and MDH address health concerns and prioritize buildings.  MDH info sheets <i>What is Vapor Intrusion?</i> ( <a href="#">residential</a> or <a href="#">commercial</a> ), <a href="#">TCE in Air</a> and/or <a href="#">PCE in Air</a> found on the <a href="#">MDH Vapor Intrusion webpage</a> .	
Sample results and subsequent vapor mitigation decisions and next steps	Share laboratory report and cover letter that summarizes the results, any mitigation decisions, and next steps.	Share results, any mitigation decisions, and next steps <b>when a vapor intrusion risk has been identified</b> and especially when indoor air data shows that vapor intrusion may affect the air people breathe. Share laboratory report and cover letter upon request.
	MPCA info sheet <a href="#">Understanding your vapor intrusion test results</a> and applicable MDH info sheets (above).  <p><b>Note that expedited actions may be needed based on sample results according to the Vapor investigation and mitigation decision BMP and any communication should consider and mirror any expedited actions.</b></p>	
Final results and reporting, including vapor mitigation information	Provide the final report directly to the property owner.	Notify when a mitigation system is operational. Share decisions of no risk/no mitigation when potential vapor intrusion risk was initially identified. Share final report upon request.
	<p><i>Mitigation system Operation and Maintenance (O&amp;M) Manual is included in the final report and is therefore shared with the owner. Property Owners are responsible for operating and maintaining the vapor mitigation system, even if the property owner delegates this role to others.</i></p>	<p><i>The O&amp;M Manual should be shared with the person/s in charge of building O&amp;M. It might be appropriate for tenants to be made aware of the components of the mitigation system they have access to, any basics for detecting an issue, and signage/placards required by the Vapor mitigation BMP.</i></p>
Long-term	<p><i>Although it is the Party Conducting the Investigation’s and Property Owner’s responsibilities to share vapor investigation info as described in this BMP, MPCA and/or MDH may assist with vapor intrusion site communications for a variety of site-specific reasons. In most cases, vapor investigation reports provided to the MPCA are classified as public data and info regarding the investigation will be shared upon request.</i></p> <p><b>Notify future property owners:</b></p> <ul style="list-style-type: none"> <li>• Property owners should retain all documentation from an investigation with property records and notify buyers of any environmental conditions on site (e.g., the presence of a potential environmental concern, vapor results and mitigation decisions, the presence of a mitigation system, etc.).</li> <li>• An Environmental Covenant and Easement (ECE) is required to document the property owners and future property owners need to operate and maintain the vapor mitigation system.</li> </ul>	



## Acronym list

AOC	Area of Concern
BMPs	Best Management Practices
ECE	Environmental Covenant and Easement
EPA	Environmental Protection Agency
MDH	Minnesota Department of Health
MPCA	Minnesota Pollution Control Agency
O&M	Operation and Maintenance
PCE	tetrachloroethylene
PRP	Petroleum Remediation Program
PSR	Property Summary Report
RCRA	Resource Conservation and Recovery Act
TCE	trichloroethylene
VI	Vapor Intrusion
VI AOC	Vapor Intrusion Area of Concern
VIC	Voluntary Investigation and Cleanup

## References

EPA, [\*United States Environmental Protection Agency \(EPA\) Region 5 Superfund and Emergency Management Division's Vapor Intrusion Handbook \(March 2020\)\*](#), document 978577.

MDH, The MDH information sheet *Your Health and Vapor Intrusion (residential or commercial)*, found on the MDH Vapor Intrusion webpage at:

<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>.

MDH, The MDH information sheet *TCE in Air* found on the MDH Vapor Intrusion webpage at:

<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>.

MDH, The MDH information sheet *PCE in Air* found on the MDH Vapor Intrusion webpage at:

<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>. MDH, The MDH information Sheet *What is Vapor Intrusion? (residential or commercial)* found on the MDH Vapor Intrusion webpage at:

<https://www.health.state.mn.us/communities/environment/hazardous/topics/vaporintrusion.html>.

MPCA, The MPCA's Cleanup guidance and assistance website: <https://www.pca.state.mn.us/waste/cleanup-guidance>.

MPCA, The MPCA's Vapor intrusion guidance website:

<https://www.pca.state.mn.us/waste/vapor-intrusion-best-management-practices-0>

MPCA, *Vapor investigation and mitigation decision BMP for MERLA sites*, MPCA document [c-rem3-06e](#).

MPCA, *Vapor intrusion assessments performed during site Investigations*, MPCA document [c-prp4-01a](#).

MPCA, *Vapor mitigation BMP*, MPCA document [c-rem3-06](#).

MPCA, The MPCA's information sheet *Understanding your vapor intrusion test results*, MPCA document [c-s1-07a](#).

Minneapolis Ordinance 244.275, which can also be viewed on Minneapolis Legislative Information Management System website at: <https://lims.minneapolismn.gov/v2/>