

Residential Vapor Intrusion Mitigation

The Proposed Approach

Overview

In the mid-1990s, with oversight by the Pennsylvania Department of Environmental Protection (PADEP) North Central Regional Office, Paxar Corporation (Paxar) began efforts to remediate soil and groundwater found to contain perchloroethylene (PCE), trichloroethylene (TCE), and similar substances known as volatile organic compounds (VOC) at the former Paxar facility located at and near 1 Wilcox Street in Sayre, Pennsylvania.

Avery Dennison Corporation purchased the property from Paxar in 2007, and is working under PADEP oversight to conduct voluntary efforts to investigate and remediate the soil and groundwater under the requirements of the Pennsylvania voluntary remediation program.

This fact sheet provides neighborhood residents and homeowners with information about Avery Dennison's offer to install vapor mitigation systems in homes within the neighborhood of Hoover and Draper Streets in Sayre, Pennsylvania. Area groundwater and soil vapor sampling results indicate that systems are needed to eliminate the possibility of vapor intrusion in these homes. It is important to note that the Borough of Sayre is providing safe drinking water from AquaAmerica.

Mitigation system description

With your permission and input, a vapor mitigation system (System), similar to a radon mitigation system, will be installed in your home. The System will collect air containing vapors from the soil beneath the concrete slab in your basement or crawl space, and transfer the collected air and vapors through airtight piping to an exhaust vent above the eave on the outside of your home. The figure on the right illustrates a typical System, which is simple, effective, and the most common vapor mitigation solution used in homes.

What is my cost?

There is no cost to the homeowner or resident. Avery Dennison Corporation will cover the costs for System design, installation, maintenance, and operation, including the cost of electricity to operate the system.

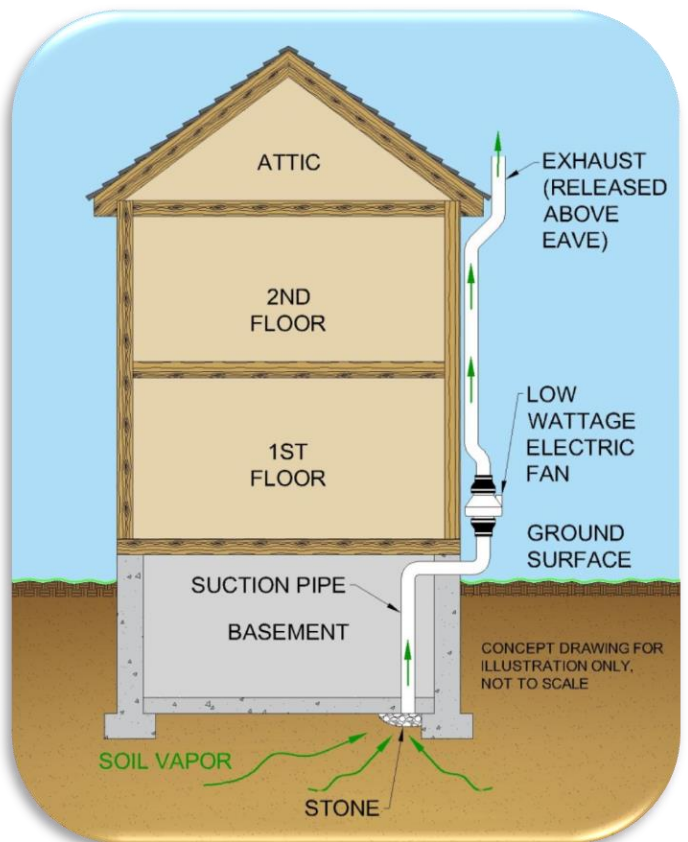
What are the key steps in the process?

For most homes, the process for installing a System will involve the following key steps, which will only be performed with your permission:

- Initial Home Visit & Review of Access Agreement
- Diagnostic Work
- System Design

- System Installation and Tuning
- Maintenance, as Needed

The entire process for installing a typical System in most homes takes approximately three to four visits, depending on the construction of the home. Every effort will be made to arrange convenient appointments for the owners.



What happens during the initial home visit and diagnostic testing?

The initial home visit will allow Avery Dennison's contractor to enter your home, answer your questions, and review the access agreement, while they also review your home construction and determine the type of diagnostic work appropriate to design and build a system specific to your dwelling. The initial home visit takes less than an hour.

Once you have agreed to the installation, the contractors will schedule the next visit. The purpose of the Diagnostic visit is to determine how well the air moves under your basement slab. This involves drilling several small holes in the basement floor and using a blower to extract air

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while measuring the vacuum created – a necessary step for designing an appropriate system for homes with basements. The diagnostic work does not involve collecting air samples for laboratory analysis. All holes are properly patched when completed. During the diagnostic visit, the contractors will also:

- Record specific information related to the construction of your home.
- Prepare a scaled sketch of the lowest level within your home, which is typically your basement or crawlspace.
- Photograph the area in your home where the System will be installed.

This visit will take from 2 to 4 hours depending on the size and construction of the home.

How is the system designed?

The data and home construction details collected during the diagnostic visit allow the contractor to calculate the required number and location of suction points, size of the electric fan, and electrical circuit requirements. The contractor will also determine the location of the blower, and the route and size of the suction piping and discharge stack. Then, the contractors will work with you to review the proposed System design and receive your sign-off on the design.

How is the system installed?

A typical System can be installed in a single day. The contractors will install the suction points and assemble the suction piping inside your home, attach the fan and exhaust stack to the outside wall, and install the required electrical circuit. A more complicated home, such as an older home without concrete foundation walls or floors, may require more time and additional visits to prepare the home for the installation. Avery Dennison Corporation will cover the cost of necessary modifications, such as the installation of a subfloor, if needed. The contractors will comply with applicable building and permitting requirements, and the electrical connections will be inspected by a Pennsylvania-licensed electrician.

How is the system tuned?

The System will be tuned after it is installed, passes the electrical inspection, and is turned on. This may happen at the end of the day when the System is installed or it may be scheduled for a later day. Tuning includes:

- Measuring the vacuum created at the surrounding monitoring holes installed during the diagnostic testing visit and/or System installation.
- Testing for possible backdrafts (i.e., air flow reversal) from operating the furnace.
- Photographing the installed System Components.
- Showing you the System layout and components.
- Providing you with an information packet describing the System, how to check that the System is operating, and who to call with questions about the System.



How is the system maintained?

The System will be designed to operate continuously for many years. Avery Dennison Corporation will continue to maintain the System as long as needed and annually cover the electrical costs of operating the system. For the first two years, a contractor will inspect the System at least annually to verify that it is operating properly and to identify any necessary repairs. After the first two years, Avery Dennison Corporation will conduct routine annual inspections only at the request of the property owner. The System inspection takes about one hour and will be scheduled with you at a convenient time. Avery Dennison Corporation or its contractors will also respond to your calls, at no cost, if you notice a problem with the System.

Need more information?

Alison Spare, the project's Community Contact is available at 717-919-4723. The PADEP Community Relations Coordinator, Megan Lehman, can be reached at 570-327-3659.

For more information

Alison Spare, Community Contact
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