

SAYRE, PENNSYLVANIA VAPOR INTRUSION PROJECT FAQs

A. Site History / Source(s) of Contamination / ADC's Efforts to Date

1. What and where is the contamination associated with the former Paxar facility?

Chemicals including trichloroethylene (TCE), perchloroethylene (PCE) and the chemicals into which they naturally break down are present in soils on the property at two locations. In addition, these chemicals have been found in groundwater beneath the property and off the property in the vicinity of the neighborhood at Hoover and Draper streets. Tests of the air between soil particles underground (commonly referred to as soil gas or soil vapor) show that soil gas near the facility contains some of the same chemicals.

2. Is our drinking water contaminated?

No. Drinking water in the borough of Sayre comes from a public water supply managed by Aqua America. The source of the Borough's drinking water is located in Athens, Pennsylvania, miles away from the site. Aqua America is required to comply with the requirements of the Pennsylvania and United States Safe Drinking Water Acts. Those requirements include periodic water quality testing. Results of these tests are available at Aqua America's website: <https://www.aquaamerica.com>.

3. Who caused the contamination?

The contamination was already present when Avery Dennison Corporation (ADC) acquired the property as part of its acquisition of Paxar Corporation in 2007. All manufacturing ceased at the site in the fall of 2011.

4. What has been done so far to clean it up?

Since acquiring the property in 2007, ADC has performed extensive voluntary activities, including the following:

- conducted investigations of soil and groundwater both on and off the former Paxar property;
- installed a sub-slab depressurization system at the former Paxar property;
- installed a groundwater extraction, treatment and reinjection system to capture the groundwater plume that could otherwise migrate off of the former Paxar property in the soils above bedrock; and
- investigated the potential for off-property vapor intrusion to occur.

5. When will the contamination be cleaned up?

It is difficult to predict how long it will take before the levels of chemicals present in groundwater are reduced to levels allowable under the regulations and guidance of the

Pennsylvania Department of Environmental Protection (PADEP). The remediation is expected to take years, and not months or weeks. ADC will continue to operate remediation systems, both on the property and those to be installed at residences in the Hoover/Draper neighborhood, until ADC demonstrates to PADEP's satisfaction that all relevant standards have been met.

B. Vapor Intrusion

1. What is vapor intrusion?

Soil vapor, sometimes called soil gas, is the air found in the spaces between soil particles below the ground. If the soils, or the groundwater flowing near or through the soils, contain volatile chemicals (substances that readily evaporate), the soil vapor can contain those same chemicals. Soil vapor can enter a building whether it is old or new, and whether it has a basement, a crawl space, or is on a slab. Vapors can enter through cracks in slabs or basement floors and walls, and through openings for utility lines. In some cases, vapor intrusion results from a difference in air pressure inside a building compared to the pressure outside the building. Heating, ventilation or air-conditioning (HVAC) systems may draw soil vapor into the building. This is similar to the way radon gas can enter buildings.

2. Are soil vapors getting into my home?

In general, we can investigate the potential for vapor intrusion to occur, and, where appropriate, take steps to prevent that from happening. That's what ADC is doing here. But it can be difficult to demonstrate that vapor intrusion has actually occurred. First, many factors affect the potential for vapors to migrate into buildings. These include the type of soil beneath the building, how far below the building the contaminated groundwater is present, the levels of chemicals in the groundwater, building construction, HVAC systems, and weather. These factors can result in vapor intrusion at some times but not others. As the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) explains, "The amount of vapors entering a building can be different over time – changing hourly, daily, weekly, and seasonally." (See "Vapor Intrusion" Fact Sheet, available on the Pennsylvania Department of Health (PaDOH) website, www.health.pa.gov.) Second, indoor air tests don't necessarily tell us that vapor intrusion is occurring. Chemicals detected in indoor air can come from many sources that have nothing to do with vapor intrusion. For example, the storage of lawnmowers or other gas-powered equipment, including cars, in attached garages, recently dry-cleaned clothes, cleaning fluids and lubricants, hobby supplies, and new carpeting and furniture can cause certain chemicals to be present in indoor air. Chemicals can also migrate into indoor air from the ambient air outside. Because of this, an indoor air test might detect the presence of a chemical, but would not necessarily identify its source.

3. Can vapor intrusion be prevented?

Yes. In new construction, barriers can be installed beneath foundations to prevent vapors from entering structures. Other measures include installing ventilation systems beneath buildings or systems to pressurize the insides of buildings. The most common technology to prevent vapor intrusion into existing residential structures is a subslab depressurization system. This system functions much like a radon mitigation system, removing soil vapor from below the

basement or foundation before it can enter the home. Soil vapor is then vented to the air outside the home at a point above the roof. Subslab depressurization systems are considered effective at preventing vapor intrusion.

4. Why is ADC installing mitigation systems now?

ADC tested soil vapor at locations off of the former Paxar facility property in November 2015. PADEP guidance establishes certain screening levels to be used in evaluating test results to determine whether additional actions are necessary. ADC's soil gas test results indicated that no further action was necessary based on those screening levels. In November 2016, PADEP published new vapor intrusion guidance which lowered the applicable screening levels for some of the chemicals that have been detected at the site. When ADC compared its most recent results to the screening levels, the new guidance indicated the need for further action. Under the new guidance, which became effective in January 2017, ADC has the option of either conducting subslab air or indoor air sampling, or foregoing air sampling and installing mitigation systems to prevent any potential vapor intrusion. ADC chose the latter.

C. Vapor Intrusion Mitigation Systems to be Installed in the Neighborhood

1. How will ADC decide which homes will be offered a system?

With oversight by the PADEP, ADC will follow the procedures in the most recent Pennsylvania Vapor Intrusion Guidance document to identify those properties for which a mitigation system will be offered.

2. What do they look like and how do they work?

A fact sheet explaining how the systems operate, including pictures of typical components, is available on the PADEP website. To access the website, please follow these steps:

- A. Go to <http://www.dep.pa.gov>
- B. Click Regional Resources (on right side of page)
- C. Click Northcentral Regional Office
- D. Click Community Information
- E. Select Former Paxar Wilcox Street Site in Sayre

While the design of a vapor mitigation system can vary from house to house, a typical system has an exhaust fan/blower connected to a pipe network that creates a slight vacuum under the building footprint. The vacuum prevents vapors from migrating into the house from the subsurface. Most often, a hole is cut into the existing concrete basement floor that is large enough for a vertical pipe. This area where a vertical pipe is installed through the concrete floor is called a suction pit or vacuum point. One or more of these points will be installed inside each home and the pipes will be connected to a fan/blower that will draw air and subsurface vapors from beneath the concrete slab. The air and vapors are then released to the outside air at a point above the roof.

Similar systems are used to prevent radon from entering homes.

3. Who will pay for them?

ADC will pay the costs to install and maintain the systems.

4. Are they noisy?

The fan (sometimes called a blower) is usually small and quiet, similar to a fan that may be installed in a kitchen or bathroom of a single-family home, and is installed outside.

5. Will they affect my HVAC system or costs to heat / cool my home?

Installation of the sub-slab depressurization system involves sealing significant cracks in the floor and walls of the basement to minimize air flow from the home and to maximize the creation of vacuum. Soil vapor drawn into the piping by the vacuum is vented directly outside and has negligible effect on inside air temperature. During startup activities, a licensed contractor engaged by ADC will evaluate if sealing the basement walls and floor would increase the costs of heating/cooling by reducing the air supply to heating/cooling appliances such as furnaces and hot water heaters; if so, ADC will arrange for an HVAC professional to provide a sealed duct of outdoor air to the affected appliance.

6. Do I have to agree to have one installed?

No. Each homeowner is free to decide whether or not they want a system installed in their home.

7. What if I don't want a system now but change my mind later?

For as long as the systems need to be operated, ADC will check back annually with homeowners who decline to have a system installed at this time. If you change your mind when contacted or at any other time during that period and want a system installed, ADC will install a system at no cost.

8. Who will fix the system if it isn't working properly?

ADC will arrange for a qualified contractor to fix systems that aren't working properly.

9. Can people tell from the outside whether my house has a system?

The typical system has a white pipe that runs from the ground to a discharge point just above the roof, similar to common radon mitigation systems. Whether or not the pipe would be visible from the street or other locations off the property depends on the system design for the particular home.

10. Do we have to move out during installation?

No; however, there may be typical construction noise, i.e., sawing, cutting, and other minor inconveniences associated with the installation. A typical system generally can be installed in a single day; at some homes, installation may require a few days.

11. Who will move my stuff out of my basement so the system can be installed and put it back when it's done?

ADC's qualified contractors will assist homeowners in making room for the system installation, including temporarily relocating belongings within their basement or elsewhere in the home until system installation is complete. They will also help put things back after installation is complete.

12. I have carpet/hardwood/ linoleum/painted concrete in my basement. Are you going to rip it up to install the system? Will you replace/repair?

ADC's qualified contractors will take reasonable steps to minimize disturbance of floors and floor coverings, although system design requires drilling holes in basements with floors. Each home is different and these contractors will work with homeowners to clean up and repair drilling spots.

13. How long will I have to have this in my home?

The system will need to operate until the groundwater has been cleaned up to levels deemed acceptable by the PADEP. It is not possible at this time to estimate how long it will take to achieve those levels.

14. I already have a radon mitigation system. Do I need a VI mitigation system, too?

It is possible that an existing radon mitigation system could prevent soil vapors from entering a structure, although the effectiveness of the radon system at preventing vapor intrusion, if any, will depend on its design. If the existing radon system meets vapor intrusion design standards and vacuum testing in your home indicates it is effective at preventing vapors from entering, then the existing radon system can address potential vapor intrusion without the installation of a separate vapor mitigation system. If the existing radon system does not meet vapor intrusion design standards or is not effectively preventing potential vapor intrusion, it may be modified, replaced, or supplemented with an additional vapor mitigation system.

15. I have a dirt floor basement. How will the system be installed?

A vapor barrier (i.e., plastic liner or equivalent) will be installed on the floor to isolate sub-floor vapor extraction points from the basement, thereby creating a depressurized zone under the barrier. A physically protective subfloor may be necessary, depending on the circumstances.

16. Can I use my basement after the system is installed?

Yes, although you will be asked to take care not to damage, modify, or turn off the system. In addition, you will be asked to notify ADC before making significant modifications to your home through significant renovation or construction projects.

17. After it's installed, how much notice will I have before someone comes to check the system?

You will generally have at least two weeks' advance notice prior to ADC's qualified contractor visits to perform system checks. In cases of system malfunction, ADC's contractors may need to access the system with less notice; however, these contractors will not enter your home without your permission.

18. How do I know that the vapor mitigation system is protecting me?

When residential vapor mitigation systems are operating as designed, they are effective in preventing vapors from migrating into your home through foundations and basements. For the first two years, a qualified contractor will inspect each system at least annually to verify that it is operating effectively and to identify any necessary repairs. After the first two years, ADC will conduct periodic inspections only if requested by the property owner or tenant. In addition, ADC's contractors will show homeowners how to tell whether the system is working.

19. Will visits to my property be supervised by State personnel?

The PADEP will oversee the project, and representatives from PADEP may be at the location from time to time to observe the work being performed by ADC's qualified contractors. But state personnel will not routinely be present during work in residents' homes.

20. How will costs of electricity be reimbursed?

ADC will provide an annual credit or payment for the anticipated cost of electricity to operate your system. The annual credit will appear as a payment made on the statement of whoever is paying the electricity for that meter, or it will come as an annual check to the owner of the property. ADC is presently in discussions with the electric utility company to determine which method is to be used.

D. Exposure and Health Effects

1. What are the potential adverse health effects from exposure to TCE or PCE?

The ATSDR publishes "Public Health Statements" that may be helpful in understanding potential adverse health effects from exposure to TCE or PCE. Links to those fact sheets appear below.

<https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=30>
<https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=48>

2. People in our neighborhood have had cancer. Did the contamination cause these cancers?

Cancer is not one disease, but many different diseases. In many cases it can be difficult to identify a "cause" of cancer. A PADOH document called "Cancer Facts and Figures, Pennsylvania 2016" contains helpful information about different risk factors for different types

of cancers. According to the PADOH, 2 in 5 men and 1 in 3 women are expected to get cancer in their lifetimes. PADOH also maintains a cancer registry and information about cancer incidence by county.

3. Will the air in our neighborhood/near my house be safe to breathe when the VI mitigation systems are operating?

Vapors are extracted at a relatively low rate, and contain low, if any, concentrations of chemicals, allowing for quick dispersion into the atmosphere. Conservative calculations indicate that emissions should be far below any levels that will require a permit from PADEP. Those calculations will be submitted to PADEP prior to installation of the mitigation systems to ensure that all air quality requirements are met.

4. Is there a medical test that can tell me whether I have been exposed to TCE, PCE or the chemicals into which they naturally break down?

According to the ATSDR TCE Fact Sheet, TCE and its breakdown products (sometimes called metabolites) can be measured in blood and urine, but because TCE and its metabolites leave the body fairly rapidly, the tests would need to be conducted within days after exposure. The ATSDR also points out that even if TCE and its metabolites were detected in blood or urine, the health effects, if any, that might develop from that exposure cannot be predicted.

E. Indoor Air Testing

1. Does ADC plan to test the air inside my home?

PADEP's guidance allows for a company to proceed directly with installation of mitigation systems without conducting a vapor intrusion investigation. ADC has already made a decision to install mitigation systems that will prevent any potential vapor intrusion. ADC will install mitigation systems and test to be sure that they are working properly, but has no plans to test indoor air for the presence of chemicals.

F. Resources/Contacts

For information about vapor mitigation systems, the installation process, electricity credits, and other issues related to the system, or to schedule an appointment, please contact Alison Spare, ADC Community Contact, Phone: 717-919-4723.

Additional information is available for review at the Sayre Public Library, 122 S. Elmer Ave., Sayre, PA (570-327-3636), PADEP's Williamsport Office, 208 W. 3rd St. #101, Williamsport, PA, and on the PADEP website. To access the PADEP website, please follow these steps:

- A. Go to <http://www.dep.pa.gov>
- B. Click Regional Resources (on right side of page)
- C. Click Northcentral Regional Office
- D. Click Community Information
- E. Select Former Paxar Wilcox Street Site in Sayre

For information about potential health effects associated with exposure to TCE and PCE, visit the following web sites:

<https://www.atsdr.cdc.gov/toxfaqs/tfacts19.pdf>

<https://www.atsdr.cdc.gov/toxfaqs/tfacts18.pdf>

For general information about vapor intrusion, visit the PADEP or PADOH websites at:

https://www.atsdr.cdc.gov/docs/atsdr_vapor_intrusion.pdf

https://www.atsdr.cdc.gov/docs/atsdr_vapor_investigation.pdf