

VAPOR INTRUSION MITIGATION FACT SHEET

Former Teledyne Semiconductor & Spectra-Physics Lasers, Inc. sites – Mountain View, California

April 2014

A Guide to Vapor Intrusion Mitigation

TDY Industries, LLC., for the former Teledyne Semiconductor Site and Thermo Fisher Scientific, Inc. for the former Spectra-Physics Lasers, Inc. Site, located respectively at 1300 Terra Bella Avenue and 1250 West Middlefield Road in Mountain View, California, are working with the United States Environmental Protection Agency (USEPA) to complete investigation and mitigation activities related to the former Sites located in Mountain View, California. Air samples were collected from the indoor air within your home. The crawl space air below your home was also sampled. Trichloroethene (TCE), a volatile organic compound (VOC), was detected in one or both of these air samples at concentrations that were above the USEPA Region 9 Regional Screening Levels (Action Levels) for air. Therefore, USEPA recommends mitigation. This fact sheet describes the mitigation system and the steps that, with your permission, will be taken to design and install the mitigation system in your home.

Contact Information

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For more information on vapor intrusion and mitigation, please visit U.S. EPA's website:

<http://www.epa.gov/oswer/vaporintrusion/>

What is an Active Mitigation System?

A mitigation system is designed to prevent vapors from below your home from entering the indoor air within your home. This is done by creating a negative pressure (vacuum) below your home. In order to accomplish this, piping is installed below a liner placed in the crawlspace. The piping is connected to a fan that discharges the vapors above the roofline of the home. See the figures below.

Typically one extraction point will be sufficient to create the required negative pressure across the entire foundation of the home. In some cases, more extraction points may be necessary.

Installation Process

The mitigation system will be designed by ARCADIS U.S., Inc. (ARCADIS), who will also direct and oversee a subcontractor conducting the installation work. By signing the access agreement provided to you for this work, you will be allowing ARCADIS to contact you to complete the following activities at times convenient to you and your household's schedule:

1. An initial design visit will be completed by ARCADIS to develop plans for installing the mitigation system components in your home. During this visit the proposed location of the mitigation piping will be identified.

Piping may either be installed from the crawl space through an opening and up the outside of the home to the discharge point located above the roof (Design A or Design B; shown on the following page), or up through the garage (Design C; shown on the following page). The corresponding location of the fan will be on the piping outside of the home or in the garage. This initial visit will take approximately 1 to 3 hours.

2. The installation of the mitigation system will be conducted on days that are acceptable to you. An ARCADIS team member will accompany the installation contractor and facilitate the installation of the mitigation system per the ARCADIS design. The installation is expected to take approximately 3 to 4 days.

3. Air sampling will be conducted approximately 30 days following the system installation to verify that TCE concentrations in indoor air are below the Action Levels. If needed, system adjustments will be made.

(Continued from front)

4. In the case that the active mitigation system does not reduce indoor air concentrations of TCE below the USEPA action level, ARCADIS will further investigate potential pathways and sources of the TCE. These investigations may include, but are not limited to, an evaluation of cleaning products stored on the property and air sampling below the slab of the garage ("sub-slab sampling"). In the case that sub-slab sampling is necessary, a utility clearance check will be completed, a small sample point will be installed in the garage floor and a sample will be collected and analyzed for VOCs. Once the sample is collected, the slab would be repaired.

5. An annual inspection will be conducted by ARCADIS to ensure the system is functioning properly. Additional visits will be scheduled, if needed.

During system installation, some minimal noise should be expected. The installation contractor is a licensed and insured contractor and will perform all work in compliance with local code requirements. The installation will be conducted at no cost to you.

Health and Safety

TDY Industries, LLC, Thermo Fisher Scientific, Inc., and ARCADIS are committed to the safety of our neighbors and the workers that will be performing the work inside your home. All work has and will be conducted in a safe manner that follows a Health and Safety Plan and other detailed plans prepared specifically for this project. Throughout the installation process, ARCADIS and their subcontractors will work closely with you to safely complete the work and limit disruptions.

For more information or to have questions and concerns addressed, please contact ARCADIS or the USEPA as listed on the front page.

Information for Residents

During the design visit, the ARCADIS team member will review the mitigation system design with you. Aesthetics and your preferences will be considered as much as possible in the location of the system components. Note that some preferences may affect functionality or durability and may not be able to be incorporated.

During system installation, some minimal noise should be expected. The installation contractor is a licensed and insured contractor and will perform all work in compliance with local code requirements.

The installation will be conducted at no cost to you.

Operation of the Mitigation System

The mitigation system utilizes an electric powered fan. The fan is designed to have a low energy usage. The energy usage will be calculated and local electric rates will be used to generate the cost associated with operation of the fan.

You will be paid for the fan's calculated electric usage. Usage payments will be issued annually and will continue until the system is no longer necessary.

The mitigation system will be installed with an audible alarm. If the system fan stops or the system is not creating adequate vacuum, the alarm will sound. If the system alarm sounds, contact the phone number listed on the system label and the necessary repairs will be made at no cost to you.

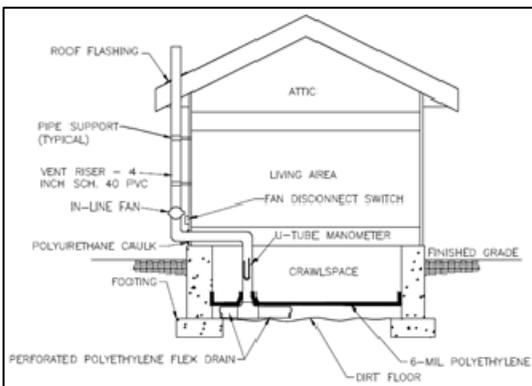
You may note that other homes in your neighborhood do not have mitigation systems. Not all homes were tested and not all homes had readings that exceeded USEPA's recommended level for vapors.

Decommissioning of the Mitigation System

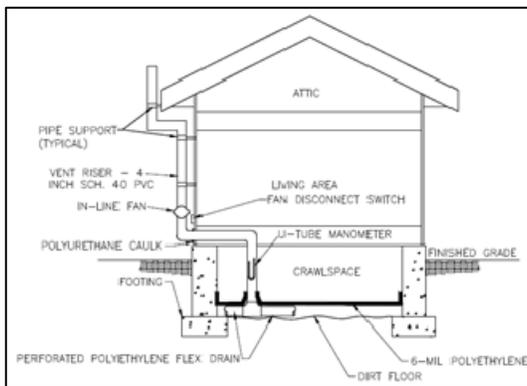
The ongoing groundwater remediation in the area is reducing the TCE concentrations in groundwater and will reduce the TCE present in the soil vapor beneath your home. When it is determined that the vapor levels of TCE are below the USEPA criteria for mitigation, the operation of the mitigation system will no longer be necessary. A confirmation sampling event will be completed to confirm that the mitigation system is no longer needed to reduce TCE concentrations in your home to below the USEPA Action Levels. At that time, you will be notified and will be presented with the following options:

1. The homeowner may choose to continue to operate the system; however, the electricity cost and any maintenance will be the homeowner's responsibility.
2. The homeowner may choose to turn off the system and leave it in place.
3. The homeowner can request that the system be removed, and it will be removed at no cost to the homeowner.

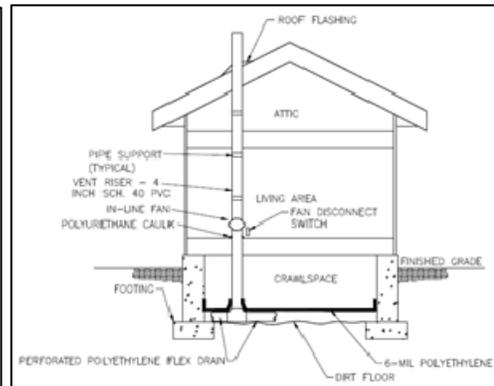
Example of typical mitigation system components



Design A



Design B



Design C