Department of the Environment

Facts About...

OFF-SITE INVESTIGATION
TAKOMA PARK SHOPPING CENTER AREA

The Maryland Department of the Environment's (MDE) Land Restoration Program (LRP) is overseeing the environmental assessment and cleanup activities related to the release of dry cleaning solvents from the Takoma Park Shopping Center. Under the LRP, there are two units involved: the Voluntary Cleanup Program (VCP) and the Controlled Hazardous Substance (CHS) Enforcement Division. The following is a list of frequently asked questions:

What's the problem at the area near the Takoma Park Shopping Center?

The VCP and CHS Enforcement Division are overseeing the on-site and off-site assessment and cleanup of dry cleaning solvents from the Takoma Park Shopping Center, respectively. In March 2008, the responsible party completed its off-site groundwater plume investigation. The investigation reported that the off-site migration of tetrachloroethylene (PCE) and trichloroethene (TCE) in the shallow groundwater is potentially above the Department's risk threshold for the properties located downgradient of the Takoma Park Shopping Center. The CHS Enforcement Division required the responsible party to collect soil gas samples from properties located downgradient of the Takoma Park Shopping Center in July and August, 2008. The data from these samples indicate that vapor intrusion into residential buildings from PCE and TCE may pose a potential risk. As a result, the responsible party is required to evaluate the contaminants impact to indoor air associated with the release.

What caused the problem?

Dry-cleaning operations over four decades at the Takoma Park Shopping Center have resulted in groundwater contaminated by chlorinated hydrocarbons, primarily PCE and products produced during its breakdown – TCE. PCE is a manufactured chemical used for dry cleaning.

How serious is the problem?

As contaminated groundwater moved away from the site, it flowed to the south towards the neighborhood on Ray Road (see Figure 1). Based on soil gas data collected by the responsible party, the CHS Enforcement Division had to assess the potential for vapor intrusion from PCE and TCE into the residences in the area.

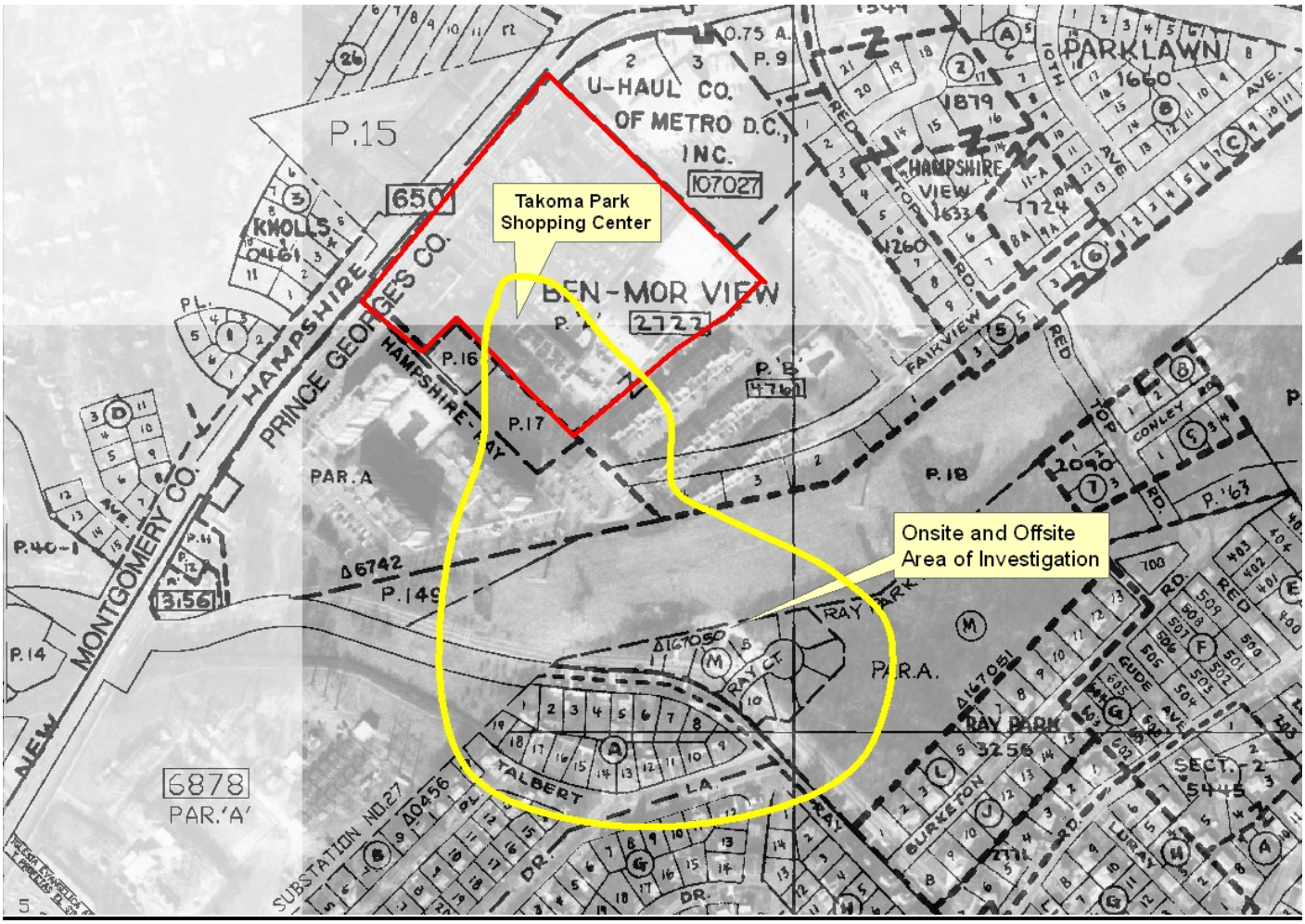
The CHS Enforcement Division has approved the work plans for testing at residential properties located on Ray Road, Ray Court, Knollbrook Drive, and Talbert Lane. In addition to collecting indoor air and sub-slab soil gas samples from the residential properties previously tested for exterior soil gas, the responsible party was required to collect exterior soil gas samples from residential properties located to the south of Talbert Lane and Knollbrook Drive to confirm the extent of the contamination plume. Based on the testing results conducted between September and November 2008, the Department approved the Work Plan for Vapor Mitigation by Sub-Slab Depressurization System (SSDS) in December 2008. The SSDS will be installed in homes where PCE concentration in indoor air or sub-slab soil gas was detected above the Department's risk threshold.

What is vapor intrusion?

Vapor intrusion is a way that chemicals in soil or groundwater can get into indoor air. Sometimes, chemicals are spilled on the ground at a factory, shopping center or gas station or leak from an underground storage tank. These chemicals can seep into the soil and groundwater. Some chemicals can also travel through soil as vapors or via the groundwater. These vapors may then move up through the soil and groundwater and into nearby buildings, contaminating indoor air. Homes in the same neighborhood and right next to each other can be affected differently by vapor intrusion.

Vapor intrusion is similar to how radon, a naturally occurring radioactive gas, can enter a home through cracks in the foundation. Vapor intrusion should be considered when there is a known source of soil or groundwater contamination nearby and conditions like soil type and depth to groundwater indicate a potential for vapor intrusion exists**.**

Figure 1 - Off-site Soil Gas Investigation



What are the potential health impacts of PCE and TCE exposure?

For additional information on the potential health impacts of PCE and TCE, the CHS Enforcement Division has posted fact sheets about the most frequently asked health questions (FAQs) about PCE and TCE at http://www.mde.state.md.us/Programs/LandPrograms/ERRP_Brownfields/ERRP_Superfund/index.asp. These fact sheets, prepared by the federal Agency for Toxic Substances and Disease Registry (ATSDR) provide a summary about PCE and TCE and their health effects. The same fact sheets can also be obtained directly from ATSDR at http://www.atsdr.cdc.gov/tfacts18.html and http://www.atsdr.cdc.gov/tfacts19.html. Any personal health-related questions should be consulted with a personal physician.

Contact

For additional information, please contact the Land Restoration Program at (800) 633-6101, extension 3437.

Last Update: December 2008