



Focus on Indoor Air

Toxic Cleanup Program

Update about Fruit Valley Neighborhood indoor air

The Washington departments of Ecology (Ecology) and Health (DOH), along with Cadet Manufacturing of Vancouver, continue to work together to assess environmental and public health effects from solvents in underground water from the Cadet Manufacturing site on 2500 W. Fourth Plain Boulevard in Vancouver.

Trichloroethylene (TCE) and other solvents were detected in water under the Cadet site and the nearby Fruit Valley neighborhood. Solvents are evaporating from contaminated groundwater, moving through the soil as a vapor, and entering breathable air in some homes.

Cadet collected indoor air samples in the Fruit Valley neighborhood in January and August of 2002 to evaluate the potential for solvent vapors to enter indoor air. As a result of the sampling, solvent vapors were detected in several homes. DOH determined that the levels pose no immediate health hazard.

However, solvent vapor levels in three homes are higher than what is normally expected. A just-released Health Consultation prepared by DOH indicates that these vapor levels could pose a long-term health risk at these three homes unless measures are taken to stop solvent vapors from moving into indoor air.

Cadet, in coordination with Ecology and DOH, is working to protect the health of the homeowners. Ecology is requiring Cadet to conduct an immediate response to install systems designed to prevent solvent vapors from moving into indoor air.

In addition, the state and Cadet are working on ways to assess the need for additional sampling in the neighborhood to evaluate if other homes may be at risk. Homeowners will be advised about steps they can take to protect their homes from solvent vapors.

Fortunately, the neighborhood is connected to city water, so its drinking water is safe.

Commonly asked questions

Q: How long have the solvents been in the soils and underground water?

There is a good chance that the solvents have been in ground water for a very long time, perhaps 30 years. From 1964 to 1976, Cadet Manufacturing Company used the chemical solvent trichloroethylene to clean metal parts. Over the years, it is believed that the solvent seeped into site soil and then into ground water. The contamination was discovered in 1998 when Mill Plain Blvd. was being extended.

Q: What will happen if solvent vapors are detected in the air of my house?

The state and Cadet are working together to further assess homes and to give advice to residents about what actions they can take to prevent exposing themselves to contaminated air. There are many other sources of solvent vapors in homes found in common household items such as adhesives, paint removers, spot removers, glues, new carpet or freshly dry-cleaned drapes or clothes. If air quality problems continue after these types of indoor sources are assessed and eliminated, Cadet will be asked to pay for whatever corrective actions are required by the state.

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Q: What might happen if my house has an indoor air problem?

Once other sources are eliminated, a vapor extraction system might be installed at no cost to you. The system would remove solvent vapors from the ground before they can move into indoor air. Other steps might include sealing cracks in slab foundation floors, sealing open soil walls or floor space in basements, refurbishing vapor seals in crawl spaces and vents in house foundations.

Q: Will soil vapors be a permanent problem in my neighborhood?

No. Ecology and Cadet are working to eliminate the contaminants from the ground water. Plans are being prepared for a system to reduce ground water contaminant levels in the neighborhood in the near term. When contaminant levels in groundwater are reduced, the potential for vapor movement will also be reduced or eliminated.

Q: What is the risk of my exposure to solvent vapors in my house?

Based on the January and August 2002 sample results, Ecology and DOH believe the health risk from exposure to solvent vapors in the tested Fruit Valley neighborhood homes is low.

You can reduce your exposure to solvent vapors by avoiding new soil excavations for utilities or home foundations over areas with contaminated groundwater. Contact Craig Rankine at Ecology (phone number listed below) for information about the location of contaminated groundwater.

Q: What is trichloroethylene (*try-klor'oh eth'ul-leen*) and how can it affect my health?

Trichloroethylene (TCE) is a non-flammable, colorless liquid with a somewhat sweet odor with a sweet, burning taste. It is used mainly as a solvent to remove grease from metals parts, but it is also an ingredient in adhesives, paint removers and spot removers.

A recent evaluation of TCE toxicity by the federal Environmental Protection Agency shows that it is likely to be a human carcinogen, but at much higher doses than expected from the Cadet contamination.

Q: Were other similar chemicals found in indoor air samples?

Other, smaller amounts of less-toxic solvents were detected in the indoor air samples. They were tetrachloroethylene, 1,1-dichloroethylene, cis-1,2-dichloroethylene and 1,1,1-trichloroethane. TCE has been the focus of the soil-vapor evaluation because it is more toxic than the other detected compounds. For more information on these solvents and other chemicals, check out the Agency for Toxic Substances and Disease Registry's website at: www.atsdr.cdc.gov.

Q: How can I find out if TCE is in my home breathing space?

If you suspect you have a problem, please call the Department of Ecology at the phone number listed below for an individual consultation. We plan to conduct additional sampling to evaluate potential solvent vapor pathways and to assess if other homes are at risk.

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Q: What areas of the neighborhood were tested for indoor air quality?

Indoor air quality was tested in areas where concentrations of TCE in groundwater were the most elevated. This is the area east of Cadet, north of Fourth Plain Boulevard, south of 31st Street and west of Fruit Valley Road.

Q: What factors determine how severe the solvent vapors can be?

Solvent vapors pose the greatest exposure when they can accumulate. Outdoors, the vapors easily dissipate and are not likely to be breathed. When air flow is restricted, vapors can collect in crawl spaces of homes or under concrete slabs where there is limited or no air movement. Crawl spaces would not concentrate the vapor release the same way a crack or void in a concrete floor would.

Q: Should I be worried about my pets?

We have no reason to believe there is a problem for pets. If you are concerned, keep them in a well-ventilated area.

Q: Should I be worried about growing a garden?

We have no reason to believe that solvents in the groundwater will move into fruits, herbs or vegetables to any significant extent.

Q. How will I know if I have been exposed to harmful vapors?

Breathing small concentrations will probably be impossible to notice. There is no way to know without collecting air samples. Sampling data indicates there may be seasonal variations with lower solvent vapor levels occurring during warmer weather periods when there is more ventilation.

For more information, please contact:

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