Trichloroethylene and Tetrachloroethylene in Your Environment: **What You Should Know**

Trichloroethylene (TCE) and tetrachloroethylene (PCE) are man-made chemicals used in adhesives, paint removers, solvents, lubricants, spot removers, and dry-cleaning. While these chemicals aren't used as often as they once were because of policies that restrict how they are made and used, TCE and PCE are still found in Rhode Island. Here's what you should know:

What are TCE and PCE?

TCE and PCE are colorless liquids with similar chemical structures. Both chemicals were used widely in industries like metal plating and dry cleaning.

How Do TCE and PCE Get into the Environment?

Even though they are now used less often in consumer products, TCE and PCE may still be found in our water, soil, and air. Aerosols—a product designed to be sprayed—can release TCE or PCE into the air. In the past, some products containing TCE or PCE were disposed of through dumping, which led to contaminated soil and groundwater that could be used for drinking. Sometimes, TCE and PCE evaporate from contaminated soil and groundwater and enter buildings through the basement—this is called soil vapor intrusion (What is Vapor Intrusion? | US EPA). Soil vapor intrusion from TCE or PCE usually affects a building's lowest levels. Basements and first floors are usually impacted the most.

How Can Exposure to TCE and PCE Affect Your Health?

You may be exposed to TCE and PCE when you touch contaminated water or soil or when you breathe contaminated air. Both TCE and PCE can affect your health, and they are often found together in the environment. Typically, people are exposed to small amounts of TCE and/or PCE over a long period of time. Such exposures may lead to heart problems in the fetuses of pregnant women, autoimmune disorders, and nervous system dysfunction. TCE and PCE exposures have also been linked to some types of cancer, including kidney and liver cancer. For more information on potential health impacts, see the ATSDR TCE and PCE fact sheets.

How To Protect Yourself from TCE and PCE:

It's important to take steps to protect yourself from exposure to TCE and PCE. You should:

Know what's in your drinking water:

- If you have a private well, **test your drinking water** every 5-10 years. RIDOH's Center for Drinking Water Quality has resources for private well owners. Visit Private Wells | Department of Health to learn more.
- If you have concerns about TCE/PCE in your public water supply, contact your drinking water supplier or the Center for Drinking Water Quality at 401-222-6867 or DOH.RIDWQ@health.ri.gov. Public water systems routinely test their water for contaminants like TCE and PCE.

Limit contact with soil that may be contaminated:

- **Ensure that contaminated ground is covered** by thick grass, wood chips, or clean soil.
- **Leave your shoes at the door** when entering your home to avoid bringing in soil that may be contaminated.
- **Wash floors and vacuum carpets** in your home frequently to help remove dust and dirt that may contain TCE and PCE.
- **Prevent children from eating dirt**. Wash kids' hands and toys when they have been playing outside. Encourage play in a sandbox or areas that are known to be free of contamination.

Protect yourself from airborne TCE and PCE:

- **Minimize the use of products containing TCE and PCE**. Follow instructions on product labels and make sure you're using products safely. Use aerosols only in well-ventilated areas.
- **Increase ventilation** in your basement (if you have one) or in the lowest level of your building. Enclose sumps and make sure they are vented.
- **Seal cracks** in the building's bottom floor and in any walls underground.
- **Adjust the HVAC system** to bring in outside air for heating and cooling systems.

If you are concerned that your health is being impacted by TCE and/or PCE, contact your primary care provider. For questions about health effects associated with exposure to TCE and PCE in Rhode Island, contact the Environmental Health Risk Assessment Program at the Rhode Island Department of Health at 401-222-7746 or RIDOH.EHRAP@health.ri.gov.

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