April 2005 CT Department of Public Health

TCE in Private Drinking Water Wells Still Meadow Neighborhood, Enfield, CT

This fact sheet has been written to give you information about contamination that has been found in some private drinking water wells in the Still Meadow Neighborhood in Enfield. Information in this fact sheet should help answer your questions about health effects from the contamination.

Testing has found that some private drinking water wells have a solvent called trichloroethylene (TCE) at levels near or above the drinking water standard. The CT Department of Environmental Protection (DEP) is working with others to identify the source (s) and the extent of the contamination.





PUBLIC HEALTH

TCE is a colorless liquid used mainly as a solvent to remove grease from metal parts. It was used as an ingredient in many consumer and household products such as adhesives, paints, paint removers, and spot removers. Most of these products no longer contain TCE.

WHAT IS THE DRINKING WATER <u>Standard For TCE?</u>

There is a federal drinking water standard (Maximum Contaminant Level [MCL]) for TCE of 5 parts per billion (ppb) or micrograms per liter (ug/L). This is the standard that public drinking water supplies across the country must meet and it is intended to protect the general population from adverse health impacts from exposure to TCE in drinking water. The MCL is set by the federal Environmental Protection Agency.

In Connecticut, we also have Drinking Water Action Levels for contaminants found in private wells. Action Levels are set by the CT Department of Public Health and are used by DEP to decide when to provide bottled water or drinking water treatment for residents with contaminated private wells. The Action Level for TCE is 5 ppb (the same as the federal MCL). In general, DEP provides bottled water or treatment for residents when their private well water exceeds the Action Level.

BE EXPOSED TO TCE IN MY DRINKING WATER?

If a volatile chemical such as TCE is present in drinking water, you may be exposed to it through several routes. Obviously, drinking the water is one way be exposed. Another way is through breathing TCE in the air. When you have TCE in your drinking water, TCE tends to evaporate during such activities as bathing, doing dishes, or flushing a toilet. As the TCE evaporates into the air, it can be inhaled. TCE can also be absorbed through the skin when exposed to contaminated water.



Any substance or chemical that enters your body can be harmful if you take in too much. Whether your health will be affected by a chemical to which you are exposed, depends on several factors:

- How much of the substance you take in;
- How long you are exposed to it;
- How it enters the body (for example, through eating, drinking, breathing, or touching);
- Your age, general health, and other individual traits that determine how susceptible you are to adverse health effects;
- Other exposures you have to the same or similar substances; and
- How toxic the substance is.

How Can TCE in Drinking Water Affect My Health?

We do not expect any health effects to be caused by TCE in private wells in the Still Meadow Neighborhood. This is because:

• TCE levels in private wells in the Still Meadow Neighborhood are **lower** than TCE levels that caused health effects in human and animal studies.



• Residents of the Still Meadow Neighborhood have NOT been drinking TCE-contaminated water for a long time.

Our general understanding of TCE health risks comes from studies of laboratory animals, studies of humans exposed to TCE in their workplace and studies of humans exposed to TCE in drinking water. If TCE exposure levels are very high and the exposure period is long, the primary health concern would be an increased risk of kidney and liver cancer and possibly leukemia. In general, a few weeks or months of exposure will not lead to much added cancer risk as long as TCE levels are not extremely high.



With regard to non-cancer health effects, exposure to high levels of

TCE over many years can damage the liver, kidney, immune system and nervous system. Studies have not clearly shown whether high levels of TCE in drinking water can harm a developing fetus.

There is some evidence that short-term TCE exposures to young children (birth to 2 years) can result in a similar cancer risk as longer-term exposures to adults. This is because young children may have a greater susceptibility to cancer causing chemicals like TCE. However, there is still some uncertainty surrounding young children's susceptibility to TCE cancer risks. Again, we do not expect any of these health effects among the residents in the Still Meadow neighborhood.

DO I NEED BOTTLED WATER?

If your private well has TCE at "non-detect" levels or trace levels below 1 ppb, DEP will not provide you with bottled water or a treatment system because **there is no health concern from TCE at these levels.**



If your private well results show TCE at levels between 1 and 5 ppb, DEP will be contacting you soon to offer you a treatment system. DEP has decided to take this action to guard against TCE levels that may increase in the future and to provide extra protection for young children.

If your private well has TCE above the Action Level of 5 ppb, DEP will provide you with bottled water right away and will install a treatment system as soon as possible. At TCE levels above 5 ppb, children and adults should not drink the water. In addition, we recommend that young children (birth to 2 years) should not bathe regularly in water above 5 ppb.



IS THERE A MEDICAL TEST TO SHOW WHETHER I HAVE BEEN EXPOSED TO TCE?

TCE leaves the body relatively quickly. Exposure to large amounts of TCE can be measured by blood and urine tests, which can detect TCE and many of its breakdown products for up to a week after exposure. However, exposure to other similar chemicals can produce the same breakdown products, so finding them in blood or urine is not proof of exposure to TCE. At this time, DPH is not recommending any medical testing or follow-up for residents in the Still Meadow Neighborhood because exposures are so low.

FOR MORE INFORMATION:

For Health Questions:

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