Colorado Department of Public Health and Environment

FACT SHEET

Evaluation of PCE contamination in Willow Springs Ponds - Schlage Lock Co., Colorado

April 2007

BACKGROUND

Health Consultation Completed

The Colorado Department of Public Health and Environment (CDPHE) in cooperation with the Agency for Toxic Substances and Disease registry (ATSDR) has recently completed a health consultation titled: "Exposure and Health Effects Evaluation of PCE Contamination in Willow Springs Ponds." The consultation focused on exposures to PCE in the Willow Springs Ponds to see if there are any potential health impacts for those who swim or wade in the ponds or eat fish caught in the ponds.

Site Background

Schlage used PCE as a metal cleaning or degreasing fluid from 1977-1992. In July 1987, the company found PCE contamination on their property during a construction project. Later, PCE contamination was also found in the groundwater near the site. The contamination was found in the Widefield Aquifer, extending approximately 4½ miles south to Willow Spring Ponds. Clean up began in 1987 and continues today.

Should I stop eating fish?

No! Fish are an excellent source of protein and other nutrients and should be part of a healthy diet.

What did CDPHE find in the Health Consultation?

- The PCE concentrations evaluated in this consultation are not likely to result in a significant increase in the potential cancer risks and other health problems.
- Overall, exposures via recreational use of Willow Springs Ponds (swimming, wading, and fishing) are considered to represent no apparent public health hazard for past and current exposures.
- The clean up and removal of PCE from below ground should be continued to further decrease the concentration of PCE in groundwater and surface water.

What's next?

- Continued clean up and removal of PCE from the Widefield Aquifer to further decrease the concentration of PCE in groundwater and surface water.
- CDPHE will evaluate any additional fish tissue data upon request.
- CDPHE will provide health education activities on how to get the positive health benefits from eating fish by minimizing exposure to PCE, if requested.

Where can I find this health consultation?

An electronic copy of the consultation can be found at:
http://www.cdphe.state.co.us/dc/ehs/SchlageLockCo-WillowSpringsPondHC083006.pdf

Printed copies of the consultation can be found at the Security Public Library, 715 Aspen Dr., Security CO, 80911. To request a free copy of the health consultation, call Shannon Rossiter, Health Educator/Community Involvement Specialist, at 303-692-2617.

For more information, please feel free to contact Thomas Simmons, Health Assessor, at 303-692-2961 or Colleen Brisnehan, Environmental Protection Specialist, at 303-692-3357, or toll free at 1 (888) 569-1831, extension 3357.

FREQUENTLY ASKED QUESTIONS

What is a health consultation? A health consultation provides advice on a specific public health issue related to real or possible human exposure to toxic material. A Health Consultation is a way for CDPHE to respond quickly to a need for health information on toxic substances and to make recommendations for actions to protect the public's health. CDPHE staff evaluate information available about toxic material at the site, determine whether people might be exposed to it, and report what harm exposure might cause.

Health Consultations may consider: 1. the levels (or "concentrations") of hazardous substances; 2. if and how people might be exposed to contamination (through "exposure pathways" such as breathing air, drinking or contacting water, contacting or eating soil, or eating food); 3. the harm the substances might cause to people (or the contaminants' "toxicity"); 4. if and how working or living nearby might affect people's health; and 5. other dangers to people, such as unsafe buildings, abandoned mine shafts, or other physical hazards.

What Is human health risk? Human health risk generally refers to the increased chance or possibility that an individual's health may be affected by exposure to chemicals in the environment. The effects can include cancer, or other health effects (rashes, damage to organs, birth defects, etc.).

What is PCE? A colorless, nonflammable liquid, that evaporates easily. It is widely used for dry cleaning and as a metal degreaser. Also used in some consumer products such as typewriter correction fluid and shoe polish, and is often present in common household products such as plastic and vinyl items and latex paint. Also known as perchloroethylene, tetrachloroethylene, PERC, perclene, and perchlor.

Does PCE exist in everyday life? Yes. In addition to PCE being a chemical in many household products, EPA has detected PCE in outdoor air across the United States in both urban and rural settings.

What health effects are associated with PCE? The effects of PCE on human health depend greatly on how much PCE one is exposed to, and the length and frequency of exposure. Short-term exposure to high concentrations of PCE can cause dizziness, headaches, sleepiness, confusion and nausea. Only people working directly with PCE in closed, poorly ventilated areas are likely to be at risk for such an exposure. Contact with PCE in its liquid or vapor form can irritate the skin, eyes, nose and throat. Long-term exposure in animal studies, conducted with amounts much higher than most people would be exposed to, show PCE can cause liver and kidney damage. In addition, the U.S. Department of Health and Human Services has determined that PCE may reasonably be anticipated to be a carcinogen or cancer-causing agent. PCE has been shown to cause liver and kidney tumors in mice and rats.

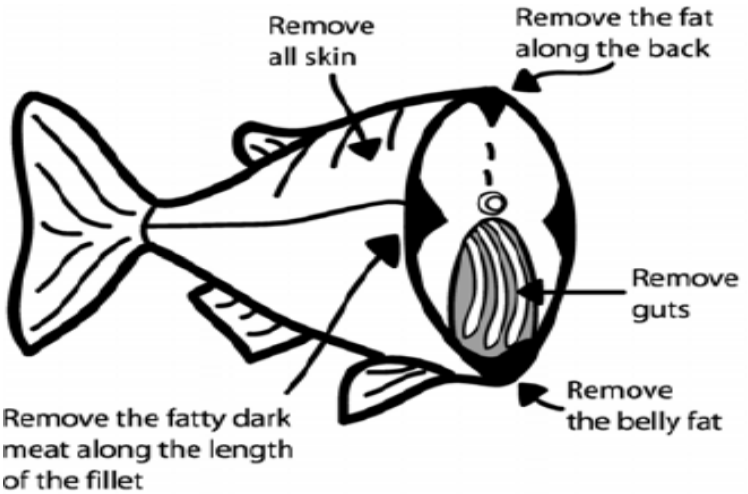
What can we do to reduce our everyday exposures to PCE from sources other than the WSP? Residents should ensure that indoor sources of VOCs (e.g., paints, and household cleaners) are stored in sealed containers preferably outside the home (e.g., garage). In addition, dry-cleaned clothes should not be stored in plastic bagging for extended periods of time and should also be kept in well-ventilated areas.

What are the health benefits of eating fish?

Fish is an excellent sources of protein, minerals, and vitamins, and play a role in maintaining a healthy, well-balanced diet. Fish is also an excellent source of Omega-3 fatty acids. According to the American Heart Association, Ornega-3 fatty acids in fish are also essential for good cardiovascular health for adults.

How can I clean and cook the fish to reduce PCE?

Exposure to PCE may be reduced by removing the skin and the fat, before cooking (see diagram below). Eat the fish filet, but not the skin. Also, grilling or cooking the fish such that the fat drips away, may reduce the levels of PCE.



What can I do to reduce exposure to myself and my child from PCE found in fish?

- Follow the guidelines posted when eating fish caught from the WSP by visiting http://www.cdphe.state.co.us/wq/FishCon/FishCon.html
- Eat a variety of fish
- Avoid eating fish species known to have high levels of PCE
- Find safer ways to prepare fish (as noted above)