

The Environmental Corner

By: Steve Henshaw



Over the past few years, Randy Wente, the editor of *Western Cleaner and Launderer*, and I have talked about various environmental issues that threaten the financial viability of operating a dry cleaning business. Last month Randy asked if I would be willing to prepare periodic articles for this publication focusing on educating dry cleaners about these various issues. As a staunch supporter of the dry cleaner industry, I am pleased to share my experiences and thoughts with readers, in an effort to demystify the topic of environmental contamination, the process of site investigations, describe different remedial alternatives, and provide insight on ways to protect you from this long tail liability. I welcome your feedback and topic requests.

As a primary for understanding how soil and groundwater contamination associated with the dry cleaning industry can occur, we need to understand what contamination is. In the dry cleaner industry, the contamination is typically associated with the spillage and

release of tetrachloroethylene, also known as perchloroethylene (PCE). PCE was discovered by Michael Faraday, a physicist and chemist, in 1821. PCE is commonly used, because it is an effective, yet relatively nonflammable, solvent, unlike kerosene or gasoline. PCE also has a reasonably pleasant odor, unlike petroleum-derived solvents. Though PCE is most often thought of in conjunction with the drycleaning industry, only 25 percent of all PCE production in the United States is used by drycleaners. PCEs other uses

include metal cleaning, vapor degreasing, and as an ingredient in automotive aerosols. PCE is a volatile organic compound (VOC). VOCs are organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere.

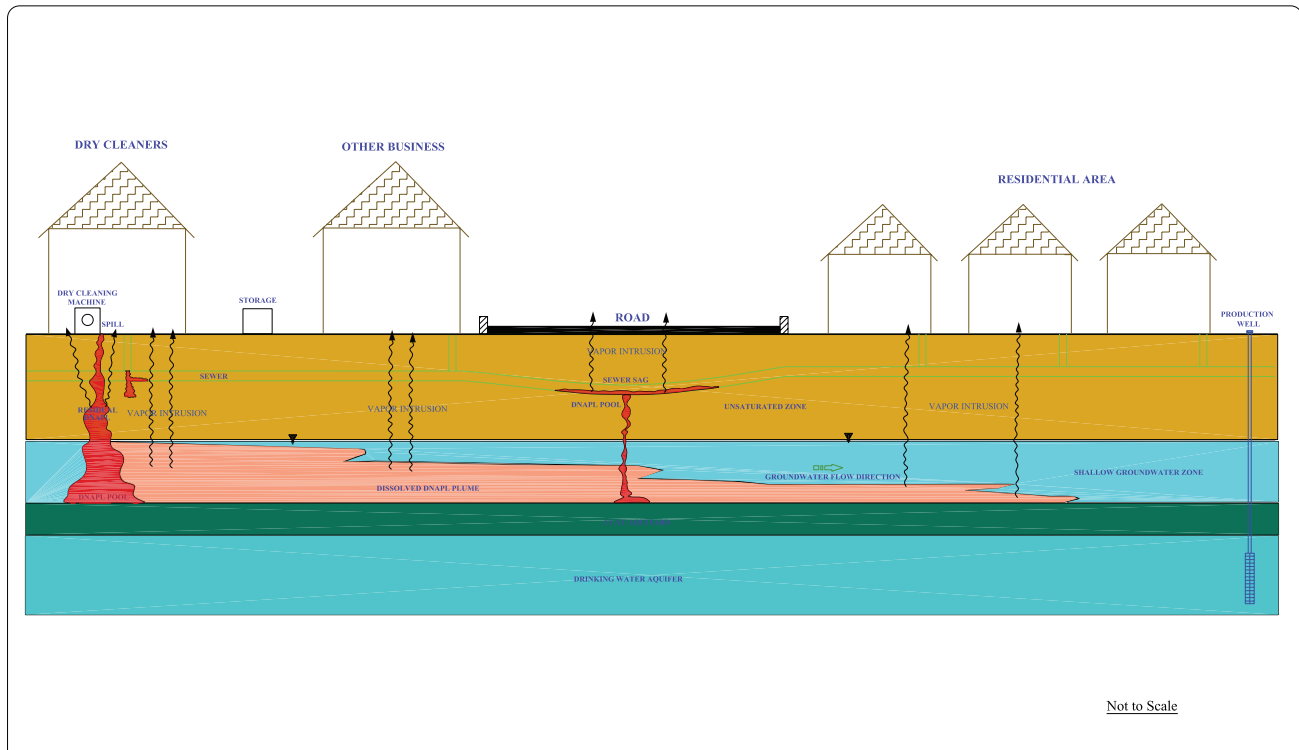
There are over 50 chemical compounds that are reported under a common United States Environ-


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As Seen In...

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mental Protection Agency test method for measuring the concentration of VOCs. Such chemical compounds include benzene, a major component of gasoline, trichloroethylene (TCE), a common industrial degreaser, Freon, a common refrigerant, and PCE, a common dry cleaning solvent. PCE and TCE, belong to a class of chemical compounds known as Chlorinated VOCs. PCE and TCE are both denser than water, which means that if they are spilled or released into groundwater they can sink through the groundwater.

The dry cleaning industry has always lead the way in recycling of solvents as a standard business

practice. Every generation of dry cleaning equipment has improved on the recovery of cleaning solvents. Because most dry cleaners have maintained a clean store, followed environmental laws, cleaned up spills quickly and have been involved with solvent recycling, many are surprised when they learn that the soil and groundwater beneath their facility has measureable levels of PCE. Unfortunately, the federal and state governments have set extremely low water quality standards for the protection of groundwater. The maximum contaminant level of PCE in drinking water is just 5 parts per billion. This level is

equivalent to 2.5 teaspoons of PCE poured into an Olympic sized swimming pool (600,000 gallons).

The next topic I intend to deal with is some of the details of how PCE contamination moves in the environment. However, your interests should drive the discussion in this series. So please let Randy or me know what it is that concerns you most about your position in environmental issues.

Steve Henshaw, President and CEO of EnviroForensics, is an industry leader in environmental issues. He may be contacted by e-mail at: shenshaw@enviroforensics.com.