



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Ranney Well Field Ground Water Plume (Anderson, IN)

Federal Programs Section – Site Investigation Program

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Background Information:

- A well field is the land above and surrounding wells that are placed in an underground water source (aquifer).
- The Ranney Well Field is located in Anderson, Indiana. It consists of eight municipal ground water wells and supplies water to the Anderson Water Department's Wheeler Avenue Water Treatment Plant. A population of over 32,000 is served by the Ranney Well Field.
- In 2011, low levels of trichloroethylene (TCE) and other volatile organic compounds (VOCs) were detected in the City of Anderson's drinking water supplied by the Ranney Well Field.
- The City of Anderson's drinking water has been tested and has not exceeded the drinking water Maximum Contaminant Level (MCL) for VOCs. The MCL is a safe drinking water limit established by the United States Environmental Protection Agency (U.S. EPA) under the Safe Drinking Water Act.
- In response to the discovery of the contaminants, the Indiana Department of Environmental Management (IDEM) initiated an environmental investigation.
- In July 2014, IDEM's Site Investigation Program sampled ground water from four wells within the Ranney Well Field and several nearby private properties. Elevated levels of TCE and other VOCs were detected in samples from three wells in the Ranney Well Field and five surrounding properties.
- Under a cooperative agreement with U.S. EPA, IDEM's Site Investigation Program is expanding its investigation into the ground water contamination discovered in Anderson. The objective is to identify the potential source(s) of the Ranney Well Field ground water contamination and determine future actions needed to mitigate possible impacts. The Anderson Water Department is also assisting IDEM with this investigation.

Next Steps:

- In the summer of 2015, IDEM's Site Investigation Program will be conducting a soil and ground water investigation in Anderson, Indiana.
 - IDEM will use a direct push sampling device to collect:
 - Discreet subsurface soil samples. Discreet samples are individual samples collected from specific points. The approximate depth of the soil sampling will range from 30 to 40 feet below the surface.
 - Ground water samples from various locations within the sampling area.
- IDEM staff may contact private property owners in the area for permission to collect soil and/or ground water samples from their businesses or residences.
 - Property owners who are asked to aid in this investigation will be asked to sign a property access agreement.
 - The sampling will be done at no cost to property owners.
 - A direct push sampler is a tracked vehicle approximately the size of a small car. Where the direct push sampling device is used, IDEM will take the necessary precautions to avoid damaging property or landscaping.

- IDEM will provide the property owners with their soil and/or ground water sampling results, at no cost.

Environmental Impacts:

- Left unaddressed, the ground water contamination may become more widespread and pose a more significant threat in the future.
- Trichloroethylene (TCE) is a nonflammable, colorless liquid with a sweet odor. It is used mainly as a solvent to remove grease from metal parts. TCE is also a breakdown product of tetrachloroethylene (also known as tetrachloroethene, perchloroethylene, perc, perclene, perclor, and PCE), which is used in dry cleaning and industrial degreasing activities. TCE does not occur naturally in the environment.
- The U. S. Department of Health and Human Services has determined that TCE is “reasonably anticipated to be a human carcinogen.” Studies have shown that drinking large amounts of TCE may cause nausea, liver damage, unconsciousness, impaired heart function, or death. Drinking small amounts of TCE for long periods of time may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear.
- People can be exposed to TCE from ingesting contaminated water used for drinking, cooking, and bathing (showering). A contaminated water supply can also impact indoor air quality in the home as TCE gases can be released from water during bathing, cooking, and laundry activities.
- Along with this fact sheet, IDEM is distributing the *ToxFAQs™ for Trichloroethylene* fact sheet from the Agency for Toxic Substances and Disease Registry, which describes TCE and its effects in greater detail.

Additional Information:

- The public may direct questions and concerns regarding IDEM’s environmental investigation in the Anderson area, including additional information on sampling results to date, environmental impacts of TCE, and potential drinking water impacts, to Allie Praeuner, IDEM Project Manager, at (317) 234-8674; toll free at (800) 451-6027, ext. 4-8675; or by e-mail at apraeune@idem.IN.gov.
- Questions and concerns about health-related impacts should be directed to the Agency for Toxic Substances and Disease Registry (ATSDR) at (312) 886-1462 or to the Madison County Health Department at (765) 641-9523.
- For additional information on the Safe Drinking Water Act, visit U.S. EPA’s website at www.epa.gov/safewater/sdwa/pdfs/fs_30ann_sdwa_web.pdf.
- For a copy of *ToxFAQs™ for Trichloroethylene*, visit the ATSDR website at www.atsdr.cdc.gov/toxprofiles/tp.asp?id=173&tid=30.
- For information about IDEM’s Site Investigation Program, visit IDEM’s website at www.idem.IN.gov/4143.htm.
- The news media may contact Barry Sneed, IDEM Public Information Officer, at (317) 232-8596; toll free at (800) 451-6027, ext. 2-8596; or by e-mail at bsneed@idem.IN.gov.