

Hemphill Road Health Consultation

October 2019

Background

The Hemphill Road Site is located on the east side of Hemphill Road, north of Forbes Road in southeast Gastonia in Gaston County, NC. During the 1950s the site was used to recycle several thousand chemical drums. Residue from the drums were emptied into the ground and then the drums were rinsed, burned and flattened for resale as scrap metal. In 1988 trichloroethylene (TCE) contamination was found in a nearby drinking water well at a private residence. Later, contamination from the site was found in additional private residential drinking water wells and community water systems. Groundwater contamination was found on site in 1989. The suspected source of TCE contamination is from the chemical drum recycling that took place on site.



Purpose of the Public Health Consultation

In 2013 the Hemphill Road Site was proposed to be added to the Environmental Protection Agency's (EPA) National Priority List (NPL) site. The EPA identifies hazardous waste sites and provides federal funding for cleanup of NPL sites. When a site is added to the NPL the NC Division of Public Health's Health Assessment Consultation and Education (HACE) program conducts a public health consultation for the site. The purpose of this public health consultation was to determine potential health effects from exposure to TCE in drinking water wells and community water systems. Some of the possible health effects of TCE may include heart defects, liver damage, kidney damage, and certain types of cancer. The effects of exposure to any hazardous substance depends on the amount of substance you are exposed to, how long you are exposed and how you are exposed (breathing, drinking). Not everyone that has been exposed to TCE or any chemical will experience a health problem. The primary source of exposure to the contaminant is through drinking contaminated water, getting contaminated water on skin, and/or breathing in chemicals.

How was the Public Health Consultation conducted?

This public health consultation estimated potential health risks associated with drinking contaminated water. N.C. DPH looked at data collected from 1988, when groundwater contamination was first identified, through 2015. The data includes samples from private residential drinking water wells, privately-owned community water systems and an on-site well. The exact time frame of exposure is unknown. Because exact time frames of exposure are unknown, estimated exposure times are used in the assessment.

Conclusions

- In the past, using untreated water for drinking and showering for several years from two private wells or one privately-owned community well system contaminated with TCE near the Hemphill Road NPL site could have harmed people's health. People with greater than average water usage are at higher risk for potential health effects.
- Currently, drinking and showering with treated water from six private wells or two privately-owned community well systems contaminated with TCE near the Hemphill Road NPL site is not expected to harm people's health. Harmful exposure could occur if filtration is not maintained on the affected private wells.

The NC Division of Public Health recommends:

- Residents with affected wells continue using a clean water source such as a properly maintained whole-house filter system specifically designed to remove volatile organic chemicals or bottled water. This is especially important for children or women who are or may become pregnant.
- EPA conduct regular testing of drinking water at homes that have filter systems to make sure filter systems are removing harmful chemicals.
- EPA and DEQ continue to test drinking water wells in the area of the groundwater plume for TCE and other related chemicals.
- EPA consider connecting municipal water to homes in the affected areas to reduce contact with unsafe drinking water through private wells.
- Community water systems update water treatment to reduce TCE levels in drinking water as a precaution.

The full report is available under Gaston County at https://epi.dph.ncdhhs.gov/oeo/by_county.html#Gaston

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