

Health Information for Residents
Vapor Intrusion Near Madison Kipp Corporation
201 Waubesa Street, Madison, WI
June 2011

Summary

Groundwater and soils at certain locations on the Madison Kipp Corporation (MKC) property are contaminated with chlorinated solvents. Investigations are continuing to determine the extent of contamination around the neighboring areas to the east of the MKC property at 201 Waubesa Street.

Sampling in 2002 at three adjacent residential yards found solvent contamination at low levels in subsurface soils. Shallow groundwater at the MKC property is also contaminated, but municipal water serves the area and is not affected by this contamination. State and local agencies are coordinating with MKC to investigate the migration of contaminated vapors into residential homes on the eastern side of MKC. The migration of vapors through soils and into nearby buildings is known as Vapor Intrusion.

Background

Since 1994 the Wisconsin Department of Natural Resources (DNR) and MKC have investigated soil and groundwater contamination from chlorinated solvents at the MKC property. In 1995, groundwater beneath MKC was found to be contaminated with tetrachloroethylene (PCE), which has not been used at MKC since 1989 (?). Drinking water is provided by the Madison Water Utility and a nearby municipal well is not affected by this contamination.

In 2002 soils on the east side of the facility were found to contain elevated levels of PCE. In 2002 soil samples were collected from three backyards of homes on the west side of Marquette Street. PCE was found in soils, but the levels did not pose a direct contact health concern. In 2005 MKC injected an oxidizing agent into affected soils on their property and three neighboring properties to breakdown and eliminate PCE.

In 2006, MKC also installed vapor probes in the three backyards to determine whether PCE vapors were migrating through sub-surface soils and towards homes. Initial results did not detect PCE vapors, but more recent sampling found PCE vapors in yards and near homes. In 2010 samples from beneath the three homes found elevated PCE vapors. Sampling of indoor air found a trace amount of PCE in one home. This amount of PCE is not known to cause adverse health effects, but does pose a slightly increased cancer risk.

In April 2011, MKC installed a sub-slab vapor mitigation system in each of the three homes, which effectively removes PCE vapors from beneath the homes and prevents soil vapors from entering indoor air.

What is happening now?

In May 2011 MKC installed mitigation systems in two more homes, one on each side of the affected homes. While soil vapors have not been sampled on these properties, installing the mitigation systems is a precautionary measure. MKC will also be placing soil vapor probes in the yards of two other properties. These probes will be sampled to determine whether PCE vapors are present and if further action is needed.

For backyard soils that were treated in 2005, MKC will collect samples to determine the effectiveness of the treatment and whether any PCE remains.

The DNR and state and local health departments are coordinating with MKC for the installation of additional monitoring wells on the East side of Marquette Street to determine if there is any potential vapor migration issues to residents on this side of the street. If contamination is found in these groundwater monitoring wells, further

investigation and testing of PCE in soil vapor may be done on properties on the east side of Marquette Street as well.

Is there a health risk?

DNR, Public Health – Madison & Dane County, and Wisconsin Department of Health Services (DHS) have reviewed the sampling data and determined that the primary route of exposure to residences is from contamination through vapor intrusion. Three homes next to MKC had elevated levels of PCE beneath the basement concrete floor. Sampling of indoor air found a trace of PCE in one home. Breathing this level of PCE for many years is not known to cause adverse health effects, but does pose a slightly increased cancer risk. Sub-slab mitigation systems are known to effectively remove PCE vapors from beneath the floors and prevent these vapors from reaching indoor air.

Also, as mentioned previously, municipal water that serves this area has not been affected by the contamination.

What to expect

New groundwater monitoring wells will be installed and sampled on the east side of Marquette Street. Soil vapor probes will be installed on the west side of the street. The results from sampling these wells and probes will determine if additional investigation for vapor intrusion is needed.

State and local agencies will continue to coordinate with MKC to identify the extent of the contamination from the release of PCE on MKC property. MKC will continue to clean up the source of the contamination on their property and take action to clean up contaminated soils and prevent exposure to PCE vapors in soil gas

Where can I learn more?

Informational fact sheets on Vapor Intrusion and Tetrachloroethylene are available at these links:

Tetrachloroethylene

<http://www.dhs.wisconsin.gov/eh/ChemFS/fs/Tetrachlor.htm>

Vapor Intrusion

www.dhs.wisconsin.gov/eh/Air/fs/VI.htm

<http://dnr.wi.gov/org/aw/rr/technical/vapor.htm>

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