

SUMMARY OF CONESTOGA-ROVERS & ASSOCIATES (CRA) REPORT ENTITLED:
“Groundwater and Residential Well Evaluation in North Oaks, Minnesota”

June 2005

This fact sheet provides an update on the vinyl chloride issue in residential wells in North Oaks. The map shows the vinyl chloride results for each residential well sampled in the last six months. Since many have been sampled more than one time, the highest reading is shown for each well.

BACKGROUND:

From the 1920s until 1973, the area located near Allendale Drive and Highway 96 in White Bear Township was used as a small burning dump. Beginning in the late 1960's the dump owners operated a business involving the transfer of waste solvents to other facilities for recycling. Some solvents were disposed of at the dump. In 1986, the United States Environmental Protection Agency (US EPA) determined that the groundwater near the area was contaminated by several chemicals, including vinyl chloride. As a result, the Minnesota Pollution Control Agency (MPCA) placed the dump on its list of state Superfund sites.

Two of the companies that had contracted with the owners of the dump during its time of operation, Whirlpool Corporation (Whirlpool) and Reynolds Metal Company (Reynolds), undertook to remediate the site. By 1994, they had removed drums, the primary source of the contamination, and had connected residents on the east side of Gilfillan Lake to a municipal water supply. They continue to extract contaminated groundwater from the site and monitor offsite groundwater including residential wells in all areas surrounding Gilfillan Lake.

GROUNDWATER STUDY:

During routine monitoring in October 2004, low levels of vinyl chloride were detected in the wells of two adjacent homes on the west side of the lake. Although the levels of vinyl chloride were at or below the Health Risk Limit set by the Minnesota Department of Health (MDH), the MPCA requested that Whirlpool and Reynolds undertake a six month residential well study to determine the nature and extent of any vinyl chloride contamination.

Whirlpool and Reynolds complied with this request. The number of residential wells tested over the six months study was much more extensive than the routine testing. This intense sampling program found that the vinyl chloride contamination was limited to these two residential wells and a third nearby residential well, and has not exceeded Federal or State health standards.

The US EPA, under the federal Safe Drinking Water Act, sets a level of vinyl chloride for municipal water supplies at 2.0 µg/L that is safe for consumption over a lifetime exposure. States can choose to set lower safe exposure limits.

Minnesota's safe exposure limit for private wells is ten times more stringent, at 0.2 µg/L, which is among the most stringent in

the nation. Vinyl chloride is present in the three residential wells on the west side of the lake at concentrations which are at or below the 0.2 µg/L Health Risk Limit. The MDH issued a drinking water advisory for one of those three locations – 13 West Shore Road – because of the additive effects of vinyl chloride and other VOCs. Vinyl chloride was not detected at any of the other 42 wells tested.

Of the three wells with vinyl chloride detections in North Oaks, one well is at the state health exposure limit (the other two wells are within the state limit). Whirlpool and Reynolds have voluntarily agreed to provide bottled water to any homeowner whose water contains vinyl chloride in concentrations at or above 0.08 µg/L, which includes the three currently affected homeowners. The companies have also evaluated options for a more permanent solution to the presence of vinyl chloride in any residential well with water subject to an MDH advisory, and to determine which solution is best suited to the area. Possible solutions explored included home water treatment, installation of a deeper well and connection to a municipal water supply. CRA (on behalf of Reynolds and Whirlpool), in cooperation with and under

the supervision of the MPCA, continues to monitor the wells in which the chemical has been found in order to provide ongoing information.

COMMUNICATION/MONITORING:

Information about sample results has been communicated to each homeowner as the sampling process has progressed. Whirlpool and Reynolds have also reported their results to the public via meetings and the City of North Oaks Web site, and to the City Council of North Oaks through July 2005, including the CRA report dated June 2005 which will be presented to Council at the July 14th council meeting.

The CRA report, which was submitted to the MPCA on June 30th, contains the study findings for the last six months of monitoring, and an evaluation of possible permanent solutions to the presence of vinyl chloride in any private residential well in North Oaks with drinking water subject to an MDH well advisory.

RECOMMENDATIONS:

CRA has recommended that Reynolds and Whirlpool install a new well for 13 West Shore Road, which has received a well advisory, in order to provide that

home with a permanent water supply from a deeper aquifer which will provide superior water quality (Reynolds and Whirlpool have also recently offered to install new wells for 12 West Shore Road and 2 Hummingbird Hill, where vinyl chloride has been detected but which are not subject to well advisories. The MPCA did not require this response action).

The report also recommends that the monitoring undertaken by Reynolds and Whirlpool continue in North Oaks to detect any possible spread in the future. Since groundwater moves very slowly, quarterly monitoring will be sufficient to detect any spread of vinyl chloride in the area. Studies will include an investigation of the variation of vinyl chloride with depth.

Because septic systems can cause groundwater contamination, the report also recommends that analysis of possible septic releases be conducted.

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