

## **Update Regarding the Highway 96 Dump Superfund Site**

By Wenck Associates at the  
North Oaks City Council Meeting  
September 10, 2009

Wenck has been providing monthly status reports to the City Council on the activities performed on behalf of the Responsible Parties for the Highway 96 Dump Superfund Site. Wenck was last before the City Council on April 9, 2009. Following is a summary of activities since April 2009.

### **Replacement Wells**

- Deeper replacement wells have been installed at 13 West Shore Road and 2 Hummingbird Hill.
- The Minnesota Department of Health issued a well advisory for 12 West Shore Road in December 2008, making the home eligible for a deeper replacement well. The homeowner and the Responsible Parties just recently signed an access agreement for installation of the replacement well. CRA will be contacting the homeowner to schedule the work.
- When existing water supply wells are replaced, the intent is to keep as many of the old wells as possible for use as on-going monitoring wells. Two of the three homeowners thus far have refused permission to keep the old well, and the third homeowner is wavering.

### **Groundwater Monitoring**

- Another round of well testing was performed in April 2009. A map showing the results is posted on the City webpage. Vinyl chloride was detected for the first time at 10 West Shore Road. The result of 0.16 micrograms per liter was below the Health Risk Limit of 0.2 micrograms per liter established by the Minnesota Department of Health.
- The next round of well sampling will be in October 2009. A listing of the wells to be sampled, along with a map, is posted on the City webpage. The sampling will include 10 West Shore Road.

### **Angle Monitoring Wells Beneath Gilfillan Lake**

- The 2008 Minnesota Decision Document (MDD) Amendment specifies that the Responsible Parties install three monitoring wells angled beneath Gilfillan Lake to provide an indication of the groundwater quality before it arrives at residential wells on the west side of the lake. The logistical issue is getting access to private property on the west shore from which to install the wells that will angle out beneath the lake.
- The Responsible Parties entered into discussions with various property owners before the MDD Amendment was signed, and to date have been unsuccessful in obtaining access agreements for the angled monitoring wells.
- CRA sent a letter to the MPCA on June 1, 2009 regarding the status of the angle monitoring wells. The letter basically says that since CRA and the Responsible Parties have put forth reasonable efforts since 2007 to obtain access agreements, and since the property owners have not been willing to grant access, then the Responsible Parties cannot install the angle wells.
- The MPCA is sending a response letter this week stating 1) the MPCA does not intend to invoke its legal authority in this access matter, and 2) the Responsible Parties do not have to take any further action at this time with respect to the angle wells. Thus, at least for the time being, the angle wells will not be installed.
- As was discussed at the April council meeting, and in follow-up answers provided by Wenck in May (posted on the City webpage), there are no reasonable alternatives for installing these monitoring wells. Installing monitoring wells beneath a lake is a highly unusual undertaking.
- The MPCA's decision included consideration of the importance of the data and the impact on decisions regarding protection of human health. Presumably, the MPCA decided that the loss of data from beneath the lake will not decrease protection of human health since there is a remedy available (replacement well) for any home issued a well advisory by the Minnesota Department of Health.
- As you consider this matter, I suggest thinking about what decisions are likely to be made based upon the data from the monitoring wells angled under the lake. The well data would represent the conditions in groundwater that is flowing toward the homes on the west side of Gilfillan Lake. Let's consider some hypothetical situations.

- Scenario #1: The angle monitoring wells are non-detect for vinyl chloride. This would be interpreted as good news and would probably give some peace of mind to residents. However, the wells would only represent the conditions at the three well locations and it is possible that contamination could be flowing along other nearby flow paths. Thus, even if the angle monitoring wells are non-detect, it is possible that vinyl chloride could show up in a private well at concentrations exceeding the Health Risk Limit. This would trigger a well advisory, and the remedy under the Minnesota Decision Document Amendment is a replacement well, which is protective of human health.
  - Scenario #2: The angle monitoring wells have vinyl chloride detections, but below the Health Risk Limit. Same as #1, but with less peace of mind for the residents.
  - Scenario #3: Some or all of the angle monitoring wells have vinyl chloride concentrations above the Health Risk Limit. This would cause concern for residents. The question is, would this information cause the MPCA to seek a different remedy besides replacement wells for affected homes (e.g., municipal water)? This is a difficult question to answer, but in Wenck's opinion, the answer is no. Replacement wells are protective of human health, no matter how many have to be installed.
- In Wenck's opinion, the MPCA decision is reasonable. The angle well monitoring data would be "nice to have," but is not "critical." The remedy of replacement wells for affected homes remains effective even without the angle monitoring wells.

### **Annual Monitoring Report**

- In March 2009, CRA submitted a *2008 Annual Monitoring Report, Highway 96 Site*. Wenck provided comments on the report to the MPCA in early May. The Wenck comments were focused on 1) effectiveness of remedial actions at the dump site to prevent further migration of groundwater contamination, and 2) suggestions to make future reports more user-friendly in terms of understanding the vinyl chloride contamination.
- The MPCA provided its comments on the report to CRA in late May, and attached the Wenck comments, noting that the MPCA would respond to two of the comments and CRA should respond to the rest.
- CRA responded to the MPCA and Wenck comments in June and submitted a revised report (posted on the City webpage). The MPCA approved the responses and the Annual Monitoring Report in a letter dated August 27, 2009.
- The MPCA sent a letter to the City on August 26, 2009, responding to two of the Wenck comments. (It is suggested to post this letter on the City webpage.)

- Wenck is satisfied with both the CRA and MPCA responses, given the current conditions where the dump site groundwater extraction systems are effectively preventing vinyl chloride from migrating further west. Wenck still has some mild concern that there is a different vinyl chloride cleanup standard for the dump site extraction systems versus for water supply wells (2 micrograms per liter versus 0.2 micrograms per liter). Theoretically, the MPCA could allow vinyl chloride above 0.2 micrograms per liter to migrate beyond the dump site towards residential homes. The concern is lessened by having the remedy of a replacement well for any home issued a well advisory by the Minnesota Department of Health. Allowing vinyl chloride above 0.2 micrograms per liter to migrate west would lengthen the time of concern for downgradient residents and could result in more homes having low levels of contamination below the Health Risk Limit needed to trigger a replacement well. To reiterate, the 2008 Annual Monitoring Report shows that the dump site remedial actions are currently preventing vinyl chloride contamination above 0.2 micrograms per liter from migrating beyond the compliance wells downgradient of the dumpsite. It is recommended that this issue be re-visited if a future annual report were to show otherwise.

### **Contingency Groundwater Extraction System in Ski Lane Ravine**

- Another component of the 2008 MDD Amendment was establishment of a contingency groundwater extraction system located in Ski Lane Ravine. The installation and operation of the system would be triggered if any of the monitoring wells located in Ski Lane ravine show site-related contaminant concentrations above the Health Risk Limits. The intent of this extraction system would be to prevent the contamination from migrating further west, if it were to advance this far.
- To date, there have been no detections of site-related contaminants in any of the Ski Lane ravine monitoring wells, so it is unlikely that the system operation will be triggered any time soon.
- CRA estimates it would take 6-12 months from the trigger to having a fully functional extraction system. In order to reduce this timeframe, it is possible for the Responsible Parties to complete some tasks beforehand (e.g., delineate the wetland and perform an infiltration test in Ski Lane ravine to assess the feasibility of using an infiltration gallery for water after treatment, and/or secure access agreements for a pipeline to carry the treated water to Gilfillan Lake).
- It is recommended that the City discuss this matter with the MPCA when (if) contamination is first discovered at any of the Ski Lane ravine monitoring wells, and not wait for the trigger of contamination levels exceeding the Health Risk Limits.