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April 27, 2007

The Honorable Thomas N. Watson
Mayor of the City of North Oaks
100 Village Center Drive, Suite 150
North Oaks, MN 55127

Re: Highway 96 Site groundwater impacts – MPCA letter of April 6, 2007

Dear Mr. Watson:

Based on our review of the April 6, 2007 letter you received from the Minnesota Pollution Control Agency (MPCA) regarding a Feasibility Study of remedies for groundwater impacts west of Gilfillan Lake from the Highway 96 Site, we present Wenck Associates' comments and recommendations below. The MPCA expects to issue a Public Notice on its Proposed Plan for response actions, developed by the MPCA on the basis of the Feasibility Study, in July 2007. After a 30-day public comment period, the MPCA will then proceed with amending the Minnesota Decision Document for the Highway 96 Site.

The current Minnesota Decision Document (MDD) for the Highway 96 Site was prepared in 1993 and was focused on the east side of Gilfillan Lake, where a dozen well advisories had been issued. The provisions in the current MDD remain appropriate for that area; however, the finding of vinyl chloride west of Gilfillan Lake beginning in 2004 makes it necessary now to consider additional remedial alternatives that were outside the view of the MDD developers in 1993. The City of North Oaks and its citizens have the opportunity to provide input to the MPCA during the MDD amendment process.

Summary of MPCA's Letter

The MPCA's letter

- Notifies the City that the Highway 96 Site responsible parties will, at the MPCA's direction, undertake a Feasibility Study of remedial alternatives for the groundwater impacts west of Gilfillan Lake,
- Lists the remedial alternatives to be evaluated in the Feasibility Study, and
- Invites the City's comments on the remedial alternatives to be evaluated.

We note that the MPCA's invitation to comment on remedial alternatives to be evaluated prior to the initiation of a Feasibility Study (FS) is a very unusual procedure, but a welcome one. It gives the City an early opportunity to ensure that the FS will consider worthy remedial alternatives that address the City's concerns. The usual procedure allows for comments only after completion of the FS, the MPCA's review of the FS, and public notice of the MPCA's Proposed Plan for response actions. The invitation to comment at this early stage should make the whole process more efficient and is a sign that the MPCA takes seriously the City's concerns in this matter.

MPCA's Two Scenarios

The MPCA lists the remedial alternatives to be evaluated under two scenarios based on the Health Risk Limits (HRLs) determined by the Minnesota Department of Health (MDH) for vinyl chloride and possibly other volatile organic compounds (VOCs). The MPCA's two scenarios, paraphrased, are as follows:

- 1) Where there is no residential well exceedence of the vinyl chloride HRL, and
- 2) Where the MDH issues a well advisory for one or more residential wells for a vinyl chloride HRL exceedence or a multiple-VOC "additivity" HRL exceedence.

In essence, the MPCA is building a contingency plan right into the FS and the Amended Remedy. This is a positive development. We have previously indicated to the City the need for a contingency plan because, in our opinion, little may be needed right now in the way of remedial actions, but there may be a need in the future if certain triggering events occur. It is prudent and reasonable to take it one step at a time.

We do note that the MPCA's two scenarios are not worded the same, with the first scenario only mentioning the vinyl chloride HRL, and the second scenario mentioning vinyl chloride and a possible multiple-VOC additivity HRL. We suspect the differences were unintentional, but suggest that the MPCA use clearer language on this point.

MPCA's Remedial Alternative to Be Evaluated

The remedial alternatives identified in the MPCA letter are listed below, with Wenck's paraphrased and modified scenario descriptions:

- 1) Where there is no residential well advisory for a HRL exceedence or a multiple-VOC additivity HRL exceedence:
 - a. No Action;
 - b. Continued Monitoring; and
 - c. Installation and operation of a pumpout well and treatment system in the Ski Lane ravine area.

- 2) Where the MDH issues a well advisory for one or more residential wells for a HRL exceedence or a multiple-VOC additivity HRL exceedence:
 - a. No Action;
 - b. Installation of a carbon filter at the home with a well advisory;
 - c. Installation of a new well into a different/deeper aquifer at the home with a well advisory; and
 - d. Installation of a municipal water system.

Wenck's Recommendations Regarding Remedial Alternative to Be Evaluated

The remedial alternatives identified in the MPCA letter look like the right ones to evaluate for this situation overall. However, we recommend that the MPCA consider the following items for preparation of the FS:

- While the focus has clearly been on vinyl chloride, the FS and amended MDD should be worded to reflect that both of the MPCA's scenarios are based on the HRLs for all VOCs related to the Highway 96 Site (not just vinyl chloride), as well as the additivity Hazard Index.
- One thing that should be made clear is that monitoring would be part of all the alternatives, except the No Action alternatives. To avoid confusion, perhaps alternative 1b should be called something like "Only Monitoring." Since monitoring specifics such as frequency can vary between alternatives, it is recommended that the FS clearly spell out the monitoring assumptions. As recommended in Wenck's earlier report, a minimum frequency of annual sampling is recommended for most of Area 3 west. Higher frequency monitoring is needed for wells near the vinyl chloride plume axis and along the west shore of Gilfillan Lake. Quarterly monitoring would be typical along the plume axis, but the frequency would also depend on other factors, in particular on whether or not the plume-axis wells were served by carbon filters.
- Three recommendations concern the pump-and-treat alternative:
 - We recommend that the pump-and-treat alternative be included in the second scenario, either in addition to, or instead of, being in the first scenario. It seems that the main purpose of the pumpout well is to prevent further spreading of the plume (to protect downgradient wells and comply with MN's non-degradation policy). It would seem to make more sense to turn it on only after one or more of the handful of upgradient private wells have concentrations exceeding the HRL. If it is turned on now, it may tend to pull contamination towards these homes. In other words, we believe the pump-and-treat alternative is appropriate to consider, but recommend that the FS discuss the options for when to turn it on and the potential implications for nearby homes. The trigger criteria are a bigger concern than the technology itself.
 - We believe the FS needs to provide a transparent explanation of how and when a pumpout well location is selected, and what triggers a

pumpout well's activation. Questions raised after the February 26 special Council Meeting support our viewpoint on this issue.

- We recommend that the FS address options for disposal of the treated pumpage from the Ski Lane ravine pumpout well, including potential air quality impacts of each option. Concerns expressed after the February 26 special Council Meeting support our viewpoint on this issue as well.
- Regarding carbon filters versus new, deeper wells, we suggest that individual homeowners could be offered the choice of either one, rather than a mandate in the amended MDD that only one of these remedies would be available.
- Regarding the municipal water system remedy, if not the recommended remedy at this time, we suggest that the FS discuss what would trigger its being a preferred remedy in the future.

Further Contingencies

Several "what if" issues secondary to the above considerations pertain to the FS. We think these should be discussed in the FS and considered in the amended MDD. The issues include:

- What if the MDH adopts changes it has proposed for the HRLs for vinyl chloride and other VOCs?
- What if a new VOC that is not GAC-treatable appears in residential wells above its HRL?
- What if the St. Paul Regional Water Services installs more high-capacity wells and either is forced to, or chooses to, make use of the wells continuously and this has an impact on the Highway 96 Site?
- What if the vinyl chloride plume west of Gilfillan Lake becomes much wider than expected (i.e., wider than about 300 feet)?

We recognize that it is impractical to have a specific response to every possible contingency, but suggest that the FS acknowledge these types of issues. We also suggest that the amended MDD acknowledge these issues and require periodic reporting on the status of such issues (no less often than in an annual report).

Communication

In addition to our specific comments and recommendations specific to the FS, we suggest that the MPCA and MDH increase their efforts to communicate to the North Oaks citizenry. Communications in the form of fact sheets and/or meeting presentations and question-and-answer sessions would be most welcome.

Closing

The main thing we are advocating is **transparency in the decision-making process**. This means that the FS must be clear on the options considered and on their pros and

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cons, which will support a similarly clear Proposed Plan. Along with the opportunity for public participation through the process, this will provide the City and its citizens with a clear understanding of the decision(s) to be documented in the amended MDD. It appears that the MPCA is currently on a path consistent with transparency in the decision-making process.

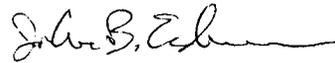
In closing, please feel free to use this letter, in whole or in part, to form the City's response to the MPCA letter.

Respectfully submitted,

WENCK ASSOCIATES, INC.



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c: North Oaks City Council
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