



**CONESTOGA-ROVERS
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May 15, 2013

Reference No. 002012

Mr. Nile Fellows
Minnesota Pollution Control Agency
Site Remediation and Redevelopment Section
Remediation Division
520 Lafayette Road
St. Paul, Minnesota 55155-4194

Dear Mr. Fellows:

Re: Response to MPCA Comments
2012 Annual Monitoring Report
Highway 96 Dump Superfund Site
White Bear Township, Minnesota

Conestoga-Rovers & Associates (CRA), on behalf of Reynolds Metals Company and Whirlpool Corporation (Highway 96 RP Group), submits the following responses to comments set forth in the Minnesota Pollution Control Agency's (MPCA) letter dated April 15, 2013, regarding CRA's 2012 Annual Monitoring Report (AMR) for the Highway 96 Site in White Bear Township, Minnesota (Site).

MPCA's comments are shown in italics below, followed by the Highway 96 RP Group's responses in standard type.

MPCA COMMENT NO. 1

The discussion in Section 4.3.5 (Residential Wells) should explain that the MPCA recently requested the Minnesota Department of Health (MDH) to utilize the method detection limit as the reporting limit for all Volatile Organic Compounds (VOCs) for certain sampling events at the Site, and that this resulted in more detections of VOCs in more residential wells than in the past.

Response:

An explanation of the laboratory reporting changes that were requested by MPCA in 2012 was provided previously in CRA's "April/May 2012 Residential Well Data Report", dated September 5, 2012. The following text (taken from the above-referenced Data Report) will be added to Section 4.3.5 of the 2012 AMR:

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The 2012 [residential well] sampling results are generally consistent with results from previous sampling rounds conducted from October 2004 through October 2011, with the exception of new detections of vinyl chloride and lower estimated concentrations for various VOCs. As stated in the MPCA's letter to residents of North Oaks dated August 29, 2012:

"In response to a request from the Minnesota Pollution Control Agency (MPCA), the MDH recently updated its reporting procedures to be consistent with the U.S. Environmental Protection Agency reporting procedures. One of the results of this update is that the MDH is now reporting lower estimated concentrations of Volatile Organic Compounds (VOCs) than were previously reported.

[...]A VOC's reporting limit indicates the minimum concentration that can be quantified accurately within specified limits of precision, using a specific analytical method. [...] In some cases, the laboratory can detect concentrations of VOCs below the reporting limit. Because the quantification at these lower concentrations is not as exact, these results are considered to be "estimated" and are flagged with a "J" qualifier. Estimated concentrations are below the reporting limit, but greater than the method detection limit. The method detection limit is the minimum concentration that can be measured with confidence that the concentration is greater than zero, using a specific analytical method.

[...] Please note that the MPCA-requested change in MDH's reporting procedures resulted in more low-level, estimated VOC detections (including more vinyl chloride detections) compared to previous residential well sampling events conducted in North Oaks."

MPCA COMMENT NO. 2

Page 38, Section 5.0, 5th paragraph; The text indicates that the gas probes (except GP3) had PID readings greater than 1 ppm. Although the highest PID reading was only 14.4 ppm and vinyl chloride was not detected in the probes, additional consideration should be given to adding blowers to the vents. The presence of methane and other VOCs indicates that (bio) degradation has not ended. Thus, it may be productive to more actively vent the site. This may also reduce the operating time for the groundwater extraction system.



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Response:

The preliminary soil gas evaluation was initiated [voluntarily] by the Highway 96 RP Group to identify whether any areas in the Consolidated Waste Area (CWA) had high concentrations of VOCs, specifically vinyl chloride, in soil gas within the vadose zone above the perched groundwater unit. If high concentrations of VOCs/vinyl chloride were identified, the Highway 96 RP Group planned to further evaluate potential implementation of low cost supplemental remediation methods (e.g., retrofitting gas vents with solar powered blowers) to reduce the overall time frame associated with Site remediation (i.e. operation of the groundwater extraction system).

The soil gas evaluation was conducted as outlined in CRA's email to MPCA dated June 12, 2012 (approved by MPCA on June 25, 2012). The steps outlined in the above-referenced email included an initial soil gas screening event, with follow-up soil gas sampling for laboratory analysis only if warranted based on high screening results. As summarized in Section 5.0 of the 2012 AMR, the maximum PID reading detected during the soil gas screening event was 14.4 ppm and vinyl chloride was not detected by colorimetric detector tubes at any of the gas probe locations.

Based on the apparent low concentrations of VOCs and lack of detectable vinyl chloride observed within the CWA in soil gas within the vadose zone above the perched groundwater unit, the Highway 96 RP group does not plan to pursue additional evaluation of supplemental soil gas remediation at this time.

MPCA COMMENT NO. 3

Page 40, Section 7.0, Conclusion #3; The report concludes that the vinyl chloride detections west of Lake Gilfillan are of limited extent. In this context, the report should also mention that the number of wells with vinyl chloride detections west of the Lake has increased.

Response:

The intent of Conclusions #2, #3, and #4 in Section 7.0 of the AMR is to note the general extent of the contamination within each of the aquifers that are monitored in association with the Site. The number of vinyl chloride detections in residential wells is discussed in detail in Section 4.3.5 of the AMR and summarized in Conclusion #5 of Section 7.0 of the AMR (see response to MPCA Comment No. 4).



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MPCA COMMENT NO. 4

Conclusion #5 lists the residences with vinyl chloride detections. It should also indicate that the number has increased in part due to the lower detection limits at the MDH Laboratory during the past two sampling events.

Response:

As noted in Section 4.3.5 of the 2012 AMR, new vinyl chloride detections were observed at three residential well locations in 2012 (3 Heron Lane, 1 Hummingbird Hill, and 11 West Shore Road). The laboratory reporting changes requested by MPCA in 2012 resulted in new detections of vinyl chloride at two of these three locations (3 Heron Lane and 1 Hummingbird Hill).

Conclusion #5 of Section 7.0 of the 2012 AMR will be updated to include "(new detection, see Section 4.3.5)" after 3 Heron Lane, 1 Hummingbird Hill, and 11 West Shore Road in the list of residential well locations with vinyl chloride detections.

MPCA COMMENT NO. 5

Page 41, Section 8.0, Recommendation #4; As pointed out by CRA in an email, the 2 Heron Lane address inside the parentheses should be 3 Heron Lane.

Response:

As stated in CRA's email to the MPCA dated March 19, 2013, Recommendation #4 in Section 8.0 of the 2012 AMR will be corrected to read:

4. Three residential wells west of 2 Heron Lane (1 Heron Lane, 3 Heron Lane, and 5 Heron Lane) should be sampled in 2013, concurrent with the routine sampling events scheduled to be conducted in April and October.



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MPCA COMMENT NO. 6

Page 41, Section 8.0, Recommendations #6 and #7; Gas probe monitoring and soil cap inspections are scheduled to continue until 2014. The MPCA is evaluating whether the gas probe monitoring and soil cap inspections should be extend beyond 2014. Any change to these requirements will be communicated by separate letter.

Response:

The requirements for gas probe monitoring and soil cap inspections are stipulated in the Post Closure Operation and Maintenance (O&M) Plan (CRA, 1994) and subsequent MPCA-approved modifications. The Highway 96 RP Group would like to schedule a meeting with the MPCA in late 2013/early 2014 to discuss the status of the O&M Plan.

MPCA COMMENT NO. 7

Additionally, the MPCA is evaluating the need for additional samples in 2013 at the residences east of 2 Heron Lane.

Response:

In the 2012 AMR, the Highway 96 RP Group recommends that additional sampling be conducted in 2013 at three residences west of 2 Heron Lane (1 Heron Lane, 3 Heron Lane, and 5 Heron Lane), concurrent with the routine sampling events scheduled to be conducted in April [May] and October. This recommendation is based on the 2012 vinyl chloride HRL exceedance at 2 Heron Lane and the limited amount of historical sampling data collected to date from residences located west (downgradient) of 2 Heron Lane.

Additional sampling in 2013 at residences east (upgradient) of 2 Heron Lane was not recommended in the 2012 AMR based on the current (annual) sampling frequency stipulated under the long-term monitoring program for homes in Area 5 west of Gilfillan Lake (conducted most recently in October 2012 and scheduled to be conducted again in October 2013) and the extensive amount of sampling data collected from these homes since 1993 (showing no detections of vinyl chloride). The Highway 96 RP Group believes the current (annual) sampling frequency of homes in Area 5 west of Gilfillan Lake is appropriate for monitoring the risks posed by potential chronic (long-term) exposure to low-level concentrations of vinyl chloride in groundwater.



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Following the MPCA's approval of the proposed changes to the 2012 AMR outlined in this letter, CRA will update the 2012 AMR to reflect the changes noted and resubmit the AMR.

Should you have any questions or require additional information, please call me at (651) 639-0913.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Sarah Illi, P.E.

SI/sb/16

cc: Fred Campbell, Minnesota Pollution Control Agency
Emily Hansen, Minnesota Department of Health
Mayor John Schaaf, City of North Oaks
Melinda Coleman, City of North Oaks
Shane Waterman, Wenck Associates
Highway 96 Group