

DATE: October 13, 2017

FILE REF:

TO: Eric Christiansen, C.M. Christiansen Co. Inc.

FROM: Chris Saari – DNR Ashland

SUBJECT: Review Comments – Site Investigation/Remedial Action Option Report
C.M. Christiansen Co. Inc. Former Pole Yard, Military Creek, Phelps, Wisconsin
WDNR BRRTS Activity #02-64-000068

The following summarizes Department of Natural Resources (DNR) review comments for the *Site Investigation/Remedial Action Option Report* (SI/RAOR) prepared for the above-named site by Natural Resources Technology and dated August 4, 2017. My understanding is that we will discuss these comments on our conference call scheduled for 9:00 AM on October 17, 2017.

Overall comments:

- Past studies of this site have all shown unacceptable risk to humans and the environment. The SI/RAOR information does not change the Department's opinion that contaminants at the site are a current risk and will be a risk for future uses of the site if not addressed.
- Given decades of study there is no information to show that specific site conditions are more protective than other sites and would significantly reduce the risk to people and wildlife of the contamination at this location compared to other sites with similar contaminants.
- Given the lack of substantive information to the contrary we believe that current standard screening values are valid and should be used to identify site soils and sediment that should be remediated to reduce the present and future risks.
- The SI/RAOR has offered incomplete elements of a risk assessment.
- The use of risk assessments for developing environmental standards that depart from promulgated standards is regulated under Wisconsin Administrative Code § NR 722.11.
- The Department doesn't believe that a departure from state standards is necessary, that the SI/RAOR has made a case for departing from the standards, nor that the contractors performing the SI/RAOR have followed the NR 722.11 process for authorization for departure from existing environmental standards.
- The impacts to North Twin Lake have not been evaluated sufficiently. As has been pointed out by members of the public and DNR staff, contaminants transported through Military Creek may eventually be deposited in the lake. The site has potentially contributed significant quantities of site contamination to North Twin Lake via streamflow. We remain concerned that the concentrations of contaminants in fish and lake sediment has not been quantified.
- The SI/RAOR as a whole is limited in terms of descriptive narrative, background and supportive documentation. In some instances, fairly complex technical issues related to risk evaluation were covered by just a few sentences, with little or no supporting material provided.
- Items such as toxic equivalency (TEQ) calculations were not included with the report. As I mentioned during our September 28 call, DNR expects you to "show your work", consistent with the requirements of Wis. Admin. Code §§ NR 716.15 and 716.17. The limited nature of the report makes it hard for DNR to fully evaluate the document's conclusions and recommendations.



- The chosen evaluation assumptions appear to have influenced the proposed extent of contamination that would be addressed under Remedial Action Option No. 3, potentially leading to an area insufficient to address the risks at the site.
- Issues with the risk evaluation process used in the report include:
 - The evaluation of human health risks related only to current site conditions (i.e., private property with restricted access and use), despite the fact that the stated plan is to transfer the property to the Town of Phelps to be redeveloped for public use.
 - The risk evaluation assumes that the existing road culvert under County Highway E will remain at its current configuration and elevation, and therefore will maintain existing sediment depositional patterns and contaminant distribution. The Department believes that this is an unrealistic assumption, as culvert replacements (both planned and unplanned) do occur. If the invert of a replacement culvert was set at a lower elevation, sediment deposits upstream of the culvert would be subject to downstream migration.
 - The risk evaluation was focused mainly on ecological receptors, and the evaluation of those receptors was limited (e.g., discussion of toxicity to benthic macroinvertebrates but not of the potential for bioaccumulation into higher trophic level organisms).
 - The evaluation appeared selective with regard to evaluation criteria.

Specific comments:

- Appendix C – All 10 photographs are labeled as “Photo Number 1”
- Section 4.3, top of page 7 – The modified assessment approach text references Tables 5 and 6; should this be Tables 6 and 7?
- TOC Normalization, Table 3 – The TEQs were computed by normalization to TOC outside of the range described in the CBSQG. The CBSQG recommends limiting TOC normalization to a range of 0.5-10%. The normalized values in Table 3 should be corrected.
- TOC and DRO appear to be correlated in the lab results. This indicates that the DROs are the source of the TOC. The CBSQG recommends against using TOC values from anthropogenic sources and using an un-impacted reference site TOC for normalization to predict the toxicity of the COC.
- Table 3 – The “U” and “L” flags are not defined in the table.
- Table 3 – The measured parameter of “moisture” should be defined in the table.
- The report has no discussion of the data quality and the degree that the laboratory analyses met the data quality objectives.
 - The Pace sample condition report from 10-20-16 noted that sample labels did not match the chain of custody form.
 - TOC analyses – All of the lab quality control tests for TOC were outside of the recovery limits. The report should disclose this situation and make a case to the reader why the TOC data are suitable for use in the site investigation.
- Sediment cores were collected “generally at the midpoint of Military Creek.” The report does not detail whether these locations also held the greatest sediment thicknesses, and the most likely contaminant presence, within any given transect.

cc: Laurie Parsons – Natural Resource Technology
 Judy Fassbender – DNR Madison RR/5
 Bill Fitzpatrick – DNR Madison RR/5

Tom Aartila – DNR Park Falls
Rob Thiboldeaux – Department of Health Services