To: Ms. Rebecca Fry
U.S. EPA Region 5
Remedial Project Manager, Velsicol Chemical Superfund Site

From: Ms. Dianne D. Borrello
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RE: Comments on the 5 year review of the Velsicol Chemical Superfund Site, St. Louis, Michigan.

The remediation efforts associated with the Pine River sediment remediation (OU 2) that has recently been completed for this site are commendable. There are, however, issues associated with the plant site (OU 1) and surrounding area that are of an outstanding concern. These main issues are summarized below.

- The EPA discovered that the City of St. Louis' **public drinking water was contaminated by pCBSA** in 2004. The EPA failed to share this information with the City of St. Louis or the Michigan Department of Environmental Quality for one year. The EPA essentially lied to the public during this year as it was understood that EPA was testing the public water supply and would relay any contamination detected. To wait to confirm is understandable, to hide the fact that the public water supply is contaminated for a year is indefensible. This action completely wiped away any trust that the community had begun to have in the EPA in recent years.
- The CAG was unaware that since 2003 **groundwater was being skimmed off of the top of NAPL** collected in the NAPL collection trench and added to the equalization basin until this information appeared in the Review of Final 2005 Clean-up Status Report, Phase 2 Remedial Action prepared by CH2MHill dated October 2006. During 2005 groundwater samples were collected from the three NAPL collection trench manholes "for the purpose of determining if the onsite water treatment plant could treat undiluted groundwater from the manholes (groundwater from the manholes had been treated previously during 2003 and 2004, but it had been greatly diluted with river water)." Notable results included estimated concentrations of mercury and DDT and volatile organic compounds. The highly toxic male sterilent, 1, 2-dibromo-3-choloropropane was found at estimated concentrations of 51.8 parts per billion! This water was being skimmed-off of a hazardous waste, diluted with river water and put through the on-site treatment system. The on-site treatment system was not designed to handle this waste stream and, as stated in the cited report, could not be directly pumped to the treatment without the dilution of river water. When questioned on this matter the EPA simply said they were not required to be permitted for the discharge and considered it that same as treating river water. No industry would be allowed to handle their waste stream in this manner.

- The Human Health Risk Assessment included in the RI fails to recognize **maternal body burden and the human fetus** as necessary components AND fails to identify the risks of the **synergistic affect** of the cocktail of chemicals found at the site. These are BIG and FUNDAMENTAL criticisms of EPA's methods. Because the human health risk assessment model used in the RI does not recognize maternal body burden, the human fetus or the synergistic effects of contaminants it is not an inadequate model upon which to base potential remediation strategies.
- Although the RI has been completed and the FS process has begun , the **ecological assessment** of 20-30 miles of the river has not been done.
- As noted in the RI, **no wells were installed in the till or lower outwash unit in the northeast portion of the site** where contamination is expected to be the highest (this was to prevent creating a conduit for contaminants). Additionally, wells were not screened in many instances to detect the presence of NAPL. If NAPL were present the concentration of contaminants would be much higher than detected in the dissolved phase. Therefore the relative risk associated with groundwater at the site has not been fully evaluated, particularly the risk associated with the potable use of deep groundwater.
- The **future ability to use the aquifers** hydraulically connected to the Former Plant Site and Burn Area is very questionable. The contaminants continue to leak into the aquifer and the river. The RI states that the NAPL moves faster than water through the slurry wall. When the NAPL interception trench was installed as a **temporary interim** measure, an audience member at a CAG meeting questioned the CH2MHILL representative if he had ever known of a site where an interceptor trench had effectively captured escaping contaminants and the response was roughly "don't you want to be the first?" It is important to emphasize the following comment in the RI "*Currently, the effectiveness of the NAPL collection trench and high-density polyethylene (HDPE)/clay barrier is unknown; therefore, it is impossible to say with certainty that NAPL is not entering the river*." Given the complex glacial geology at the site and the different phases of contaminants in groundwater (DNALP, LNAPL and dissolved) it would be virtually impossible to reverse the downward gradient of the contaminants by groundwater pumping. The MDEQ agrees with this position. CH2MHill asserts that reversal of groundwater flow direction can be done, however they are not an independent entity and would gain financially by drawing out remediation activities for as long as possible.
- The lack of recent information regarding the nature and conditions of the five off -site **deep wells** (Breckenridge Radioactive site, Velsicol Well No. 2, two wells on Wells Road and one on State Road) strongly suggests that they should be considered potential sources of contamination and investigation at these wells is warranted

- It has been proven that a containment system with no bottom liner **has not and cannot** contain the contaminants at the site and therefore containment should be eliminated as a viable remediation alternative. It is imperative that the source of contamination, the shallow outwash unit, be **removed** as part of the final remediation process to prevent the migration of contaminants into the drinking water aquifer for the City of St. Louis and the Pine River. **Any alternative remedial action that allows leaving the source material in place (regardless of cap or slurry wall repair or pump and treat systems) or expansion of the waste site is unacceptable, shortsighted and abominable.** Such a remedial action would be reminiscent of the corrupt actions taken in the 1980s. As Hugh Kaufman, assistant to the director of EPA's Division of Hazardous Site Control at the time of the Velsicol settlement said back in 1982 "[T]he action today sent out a 'clear signal' that companies that improperly dispose of hazardous wastes could negotiate with the agency at the last minute and wind up paying only administrative costs." Following this statement Mr. Kaufman nearly lost his job in a corrupt system which brings to mind the current Joseph Wilson/Valere Plame-Wilson scandal. The emperor has no clothes - capping the contamination and leaving hazardous waste in unlined glacial till is what has resulted in the current multimillion dollar remediation. It is not anticipated that remediation costs will decrease in the future nor given the dire state of the Michigan economy is it foreseeable that the State of Michigan will have monies to address the contamination at this site once EPA walks away. This site needs to have a complete and FINAL remedy. Leaving hazardous waste in an unlined landfill adjacent to a river is not acceptable.