

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

April 25, 2008

To: Jim Sygo, Deputy Director, Department of Environmental Quality (DEQ)

From: Jim Janiczek, Chief, Groundwater Permits Unit, Water Bureau, DEQ

Subject: Saginaw DMDF, Groundwater Discharge Permit Application, Slurry Wall Justification

I have reviewed the letter that you forwarded, which was sent April 22, 2008, to Mr. James Koski, Saginaw County Department of Public Works, from the Environ Corporation. In that letter, Environ indicates that they have reviewed a number of materials including the Industry Waste Management Evaluation Model, data from STS Consultants, Inc. gathered at the facility, and DEQ's letter to James Koski from July, 2006, among others. Their conclusion is that the modeling effort conducted by the US Army Corps of Engineers (ACOE) at the Saginaw DMDF was appropriate, that dioxin will not migrate from the dredge materials, and a slurry wall is not required. We strongly disagree with that conclusion, and indicated that to Mr. Koski in my July 19, 2006 letter.

The review of the model was assigned to Mr. Eric Chatterson. His conclusion was "the applicability of the IWEM model using a "waste pile" facility type for dredge sediments is not well validated. Lastly, the modeling effort focused exclusively on dioxin, and there are potentially other parameters associated with the dredge material, such as heavy metals, that were not addressed. As currently presented, the model is over reaching in that it presents conclusions without an adequate foundation." I would go beyond Mr. Chatterson's statement that the model is not well validated, to say that the application of this model is totally out of context relative to DEQ's concern for protection of the waters of the state. The model is accurate relative to the dredge disposal portion of the site. However, the design of the site includes a large storage area for decant water, which cannot be discharged until the decant water meets the surface water quality standards in the 401 Certification. Without a treatment system, there is no guarantee that those limits will be met immediately, and therefore the head produced by the decant water may not be removed from the site in a timely fashion.

The surface water storage area includes an 8 foot channel below grade, in addition to the height of the perimeter berms above grade. This channel was originally dug to a depth of between 20-30 feet, and backfilled to within 8 feet of grade. The DEQ has never been provided any data to indicate whether the compactive effort used to backfill this trench meets acceptable criteria for compacted clay liner installations. This scenario provides the possibility that a head of 10+ feet of water on the perimeter of the facility that does not contain dredged sediments. The Environ letter quotes Depth To Water Table as 0.85 meters, regional hydraulic gradient at 0.006 to 0.0006 feet per foot, and describes an Unsaturated Zone Hydraulic Conductivity. With a 10 foot head of water at the site that will be generally be there 6 months out of the year, and could be there indefinitely, those assumptions are invalid.

The open water portion of this site simply cannot be modeled as a "Waste Pile", it is a lagoon of a certain depth, containing wastewater that has a strong potential to exceed groundwater quality standards for not only dioxin, but also metals and any other contaminants that may be associated with Saginaw River sediments. It was constructed by nothing more than excavating the natural soil to a prescribed depth. Rule 2237 of the Part 22 Rules of Part 31 of Act 451 requires that a wastewater treatment or storage lagoon be designed with a composite liner. We did not require the ACOE or the County to line the entire site with a flexible membrane liner, which would have met the requirements of Rule 2237. We stated in numerous letters to the County that the including a perimeter cutoff wall would allow the site to come into compliance as an equivalent to a composite liner, which is allowed pursuant to Rule 2237(4).