

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

April 6, 2005

TO: Sybil Kolon, Project Manager
Remediation and Redevelopment Division
Jackson District

FROM: Leonard Lipinski, Senior Geologist
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SUBJECT: Gelman Sciences, Inc. (Washtenaw County)
Maple Road Work Plan

In the work plan, dated January 17, 2005, Pall proposes using one extraction well and two re-injection wells. Two extraction wells would be preferable. While, it is possible only one extraction well would be adequate to capture the portion of the plume exceeding 2800 ug/l, two extraction wells would provide greater flexibility and improve the chance of capture. The screen length for the extraction wells should be determined after the test wells have been drilled. It is important that the well screens are long enough to capture the highest concentrations of 1,4-dioxane approaching the extraction well, but not longer than necessary, to avoid extracting lower concentrations of contamination and utilize the treatment capacity most effectively.

In the vicinity of Maple Road, there appears to be a change or transition in the geology. The major change in the groundwater potentiometric surface is evidence of this transition. This transition is bordered by MW-85, MW-79 and MW-81 on the northwest side and MW-87, MW-84, and MW-91 on the southeast side. I believe this transition has a major impact on groundwater flow. It is important that the extraction well(s) be installed on the upgradient (NW) side of the transition. According to the work plan, before an extraction well is installed, a test well will be installed at that location. If the potentiometric surface in the test well indicates that the location is downgradient (SE) of the transition, the extraction well location will need to be moved.

It is important that any new monitoring wells required as part of the performance monitoring plan be installed and sampled prior to the initiation of groundwater extraction and re-injection at Maple Road. When we met with the company, we agreed that it makes sense to postpone the decision on a performance monitoring plan until a pump test on the new extraction well(s) is performed. Regardless of the pump test results, it is likely that an additional monitoring well or wells will be needed northwest of the intersection of Dexter and Maple Roads. It would be worthwhile for Pall to start work on access for this well location even before the pump test. Due to their proximity to the proposed re-injection wells, it is likely that MW-87s, MW-87d and MW-88 will be of very limited value for future monitoring.

LL/KJ