**From:** Sybil Kolon
**To:** Gelman Information
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**Subject:** Gelman - Periodic DEQ Update - Downgradient Investigation

This note is to update you on the progress of the downgradient investigation. The previous note on this subject is available on the DEQ web site, with links to the proposed monitoring locations (http://www.michigan.gov/documents/deq/deq-rrd-GS-downgradientInvestigation-01-05-06_311023_7.pdf), although the West Park location is likely to be changed.

The first boring, on Fountain near W. Summit, was completed yesterday. Two monitoring wells will be installed at this location, today and Friday. No dioxane was detected at this location. More details can be found at the end of this note.

The order of drilling has been revised. The next boring will begin on January 16 at Arbana and Huron. The West Park location is being revised and may be in the right-of-way of Maple Ridge, south of Miller the Road. The exact location has not been determined yet. The Mulholland Street location may be revised, pending results of the other MW installations.

We would like to clarify that the purpose of this investigation is to help determine where the plume of groundwater contamination will migrate to. We do not expect to find 1,4-dioxane at these downgradient locations. However, dioxane is being tested for and the MWs will be sampled for 1,4-dioxane at a schedule to be determined. The contamination is expected to migrate with the groundwater in a generally easterly direction. By installing two monitoring wells (MWs) at each location, screened at different depths, and comparing the water level data collected from many MWs, it will be possible to predict with better accuracy the direction of groundwater flow, and thus, where the contamination will migrate to. Ongoing monitoring of these and other MWs will then be used to confirm the location of the plume as it migrates.

A map showing the current leading edge of the plume (as defined by the cleanup standard of 85 parts per billion of 1,4-dioxane) can be viewed at the following link:
http://www.michigan.gov/documents/deq/deq-rrd-GS-GroundwaterProhibitionZoneBoundaryMap_311075_7.pdf
This map also shows the Prohibition Zone where use of groundwater is restricted. The results of the downgradient investigation will help determine if the Prohibition Zone is adequate or needs to be expanded.

The MWs installed at Fountain near W. Summit will be called MW-97s and MW-97d. The boring was drilled to 193 feet, bedrock was encountered at 190 feet. Most of the boring consisted of a silty clay matrix that does not yield water. Sand and gravel was encountered at 98 to 108 feet, 160-170 feet and 176-186 feet. Water samples taken from these depths were all non-detect for 1,4-dioxane. MW-97s will be screened at 98-103 feet and MW-97d will be screened at 178-183 feet.

Please contact me if you have any questions.

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