

## Kelly, Joseph

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**From:** Quackenbush, Peter (DEQ) <QUACKENBUSHP@michigan.gov>  
**Sent:** Tuesday, December 10, 2013 5:08 PM  
**To:** Crockford, Graham (GCrockford@trcsolutions.com)  
**Cc:** Bridgford, Dale (DEQ); MontgomeryD1@michigan.gov; Himich, Virginia (DEQ); jason.smith@tecumseh.com; chris.dewetter@tecumseh.com; Kelly, Joseph  
**Subject:** Former Tecumseh Products Site, Tecumseh, MI Site Specific GSI Criteria Review  
**Categories:** Record Saved - Shared

Graham, Office of Waste Management and Radiological Protection staff have reviewed your August 29, 2013 request and have the following comments:

De Minimis Determinations – Please be advised that the Part 111 program only adopts the environmental protection standards of Part 201 (provided they are not less stringent than Federal standards), however not the process or timeframes established in the statutes and rules of Part 201 as Part 111 is an authorized state program for implementing RCRA. As such, there would not be an automatic acceptance of any de minimis determination submitted to the Hazardous Waste Program within 90 days of receipt.

Regarding the mixing zone request and the de minimis determination which was included in the August 29, 2013 “Request for MDEQ Review of Site-Specific GSI Criteria”, which was submitted to the MDEQ and received on September 12, 2013 by the Hazardous Waste Program, there has been insufficient determination on the fate of the groundwater as it flows east of the bluff, toward the wetland and River Raisin. The flow path and fate of the impacted groundwater has not been adequately delineated and needs to be determined prior to a mixing zone evaluation or possibly the de minimis determination effort, should the de minimis option be determined by EPA as not less stringent than Federal standards. There is no data regarding whether groundwater is discharging directly into the River Raisin or first into the wetland, then to the river.

Based on the April 2013 water levels, the upstream staff gauge for the River Raisin is 742.20 feet mean sea level (MSL) upstream and the downstream staff gauge is 733.13 feet MSL. The lowest measured water levels in the monitor well network are at MW-17s (749.29 feet MSL) and MW-31 (749.68 feet MSL). Additionally, soil boring information, based on available logs, show that only two borings (B-69/MW-29d, end of boring elevation: 721.54 feet MSL and MW-40D EOB: 730.7 feet MSL) had extended to depths slightly below the river stage, yet are nearly 2000 and 750 feet west of the river, respectively.

The area east of the bluff needs to be investigated with attention paid to the base flow of the river, its bank storage and vertical gradients within the aquifer east of the bluff. There is an absence of nested wells within the wetland and therefore, vertical gradient data in the wetland.

Based on LIDAR data for the area, there are several viable areas of higher topography for further investigation within the area delineated as wetland in the TRC figures for the area.

Within the regulatory framework in Michigan, impacted groundwater discharging into a wetland is afforded no dilution or mixing, so only the generic GSI criteria apply. Until the volume of impacted groundwater discharging to the wetland and the volume of impacted groundwater discharging to the River Raisin can be quantified, it is inappropriate to evaluate the mixing zone at this time, let alone the de minimis determination. Therefore, this request for MDEQ review of site-specific GSI criteria is found to be inadequate.

Please note that while the cover letter of the report indicates that the US EPA “indicated that the Michigan Department of Environmental Quality (MDEQ) Part 201 guidance/rules would be used to assess the acceptability of any discharge of groundwater to surface water”, the utilization of Part 201 within the Part 111 framework is still governed by the November 3, 2000 Memorandum of Understanding (MOU) with the US EPA, the April 15, 2002 Technical Addendum to

the MOU, and the March 17, 2008 Part 111 rules. This suite of materials is what currently governs how the RCRA program in Michigan is implemented by both EPA and Michigan. The November 5, 2013 Part 111 rules, which would reflect the recent 201 amendments, have not been evaluated by EPA yet, and therefore, they are not authorized for use in the RCRA program.

The MDEQ has submitted the November 5, 2013 Part 111 Rules package to the U.S EPA for review and determination for state authorization back on November 12, 2013. As for the Part 201 statute and rule criterion referenced in R 299.9629(3)(a)(ii), EPA will need to determine whether any of the recent changes to Part 201 are not less stringent than allowed by RCRA.

If you have any questions regarding the above comments you may address them to Dale Bridgford and copy me.

Thanks!

*Peter Quackenbush  
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*\*Effective August 12th, my new phone number is 517.284.6568*