

Dow Chemical Activity Report – U.S. EPA – Ordered Dioxin Hot Spot Cleanup

July 13, 2007

The Dow Midland facility is a 1,900-acre chemical plant located in Midland, Michigan. Past operations at the plant have resulted in dioxin and furan (dioxin) contamination of the Saginaw Bay Watershed. Corrective action is taking place under a State Operating License issued in 2003. However, progress concerning off-site corrective action has experienced many delays, and has been unacceptably slow from EPA's perspective. In late November 2006, Dow identified dioxin hot spots along the first six miles of the Tittabawassee River contaminated with dioxin levels up to 87,000 parts per trillion (Reaches D, J/K, and O on map on reverse). The hot spot areas are subject to flooding and erosion that could spread the contamination. On June 7, 2007, Dow informed MDEQ of significant revisions to their proposed schedule for addressing the Tittabawassee River dioxin hot spots which would delay corrective action for Reach O and portions of Reach D until 2008. U.S. EPA determined that Dow's proposed delay was unacceptable. U.S. EPA notified Dow on June 27, 2007, that it must immediately start cleanup of the three Tittabawassee River dioxin hot spots. The notification included a CERCLA administrative consent order requiring cleanup for each of the three hot spots and requires that Dow and EPA negotiate the final terms of the orders within 15 days and start field work by August 15. Dow and U.S. EPA met between July 2 and July 12 to negotiate the terms of the orders. On July 12, U.S. EPA reached agreement with Dow to clean up the three hot spots by December 15, 2007. The EPA-ordered corrective action will include three reaches of the river between Imerman Park in Saginaw Township and Midland's Tridge:

- Reach D includes a discharge flume bounded by sheet piling containing approximately 15,000 cubic yards of dioxin-contaminated sediment. The flume goes upstream from the Dow Dam on plant property and is bounded by old sheet piling along the northeast and east banks of the Tittabawassee River. Dow had historically used this channel to discharge waste waters to the river. Dow will isolate this area from the river and remove the dioxin-contaminated sediment.
- Reach J-K is located 3.6 miles downstream of the confluence of the Chippewa and Tittabawassee Rivers. The corrective action will address contamination of the levee deposits adjacent to the riverbank and flood plain terraces, including wetlands subject to sediment deposition during floods. Dow will remove approximately 32,000 cubic yards of levee deposits, the riverbank will be stabilized, sediment deposits removed and disposed of and bank areas will be revegetated with native plants. In addition, an area of dioxin-contaminated soil in the floodplain will be capped and a wooded wetland area will be fenced off as an interim measure.
- Reach O is a sediment deposit about 6 miles downstream of the confluence of the Chippewa and Tittabawassee Rivers. It is adjacent to property owned by Dow. Dow will isolate this area from the river and remove approximately 7,000 cubic yards of sediment.

In addition, on June 7, 2006, Region 5 submitted comments to MDEQ on Dow's revised Remedial Investigation Work Plans for the Tittabawassee River and the City of Midland. Major deficiencies include: lack of implementation schedules, human health and ecological risk assessments that are inconsistent with U.S. EPA guidance, lack of progress in addressing dioxin hot spots, and an inadequate description of Dow's historic plant operations for use in developing a target analyte list. MDEQ has stated that they will work with Dow to address U.S. EPA's comments after MDEQ approval of Dow's proposed work plans for continued characterization of the middle Tittabawassee River scheduled to be completed in 2007.

Reach Overview "Upper Tittabawassee River"



- Reach
- Dow Midland Plant
- Major Roads
- 2006 Air Photo



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Reach Overview "A through O"
 GeoMorph® Site Characterization
 Upper Tittabawassee River
 Midland, Michigan

ET Project Number: 01803
 ET Map File Location:
 GeoMorph Site Characterization.mxd
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