United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Thursday, December 20, 2007
From: James Augustyn

Subject: Removal action
Saginaw River Sediment Dioxin Contamination Site (Wickes Park)
Wickes Park, Saginaw, MI
Latitude: 43.3936000
Longitude: -83.9644000

POLREP No.:	4	**Site #:**	B5KF
Reporting Period:	December 10-16, 2007	**D.O. #:**	
Start Date:	11/24/2007	**Response Authority:**	CERCLA
Mob Date:	11/12/2007	**Response Type:**	Time-Critical
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:	MID 980 994 354	**Contract #**	
RCRIS ID #:			

Site Description

Late on Friday, November 9, 2007, Dow notified U.S. EPA that preliminary data for a sediment sample collected from within the channel of the Saginaw River was in excess of 1.6 parts per million (ppm) Dioxin TEQ. This is the highest TEQ analytical result recorded for either the Tittabawassee or Saginaw Rivers. On November 11, 2007, U.S. EPA issued a verbal General Notice Letter of Potential Liability to Dow.

On Monday, November 12, 2007, U.S. EPA, MDEQ and Dow representatives met at Wickes Park in the City of Saginaw to review site conditions and discuss U.S. EPA's expectations for the conduct of an expedited time-critical removal action. An Administrative Order by Consent was signed by U.S. EPA and Dow on November 15, 2007, for the performance of the removal. Dow has collected physical site data such as river depth, velocity measurements, channel profile measurements, and collected additional sediment samples for waste characterization and dewatering studies.

Current Activities

The following tasks were completed by Dow's contractor during the period from December 10 - 16, 2007:

Monday, December 10th, dredging activities continued. A total of 4 trucks, approximately 20 cubic yards each, were loaded with dewatered sediment and transported to Salzburg Road Landfill for disposal.

Dow added two additional 20,000 gallon fractionation tanks (frac) (no baffles) to the water treatment system. The new frac tanks were elevated by placing them on top of two foot mats. The water flows out of the dewatering system into the top of the two new frac tanks. The water from these tanks gravity feeds out of the top of the tanks and into the weir tanks before continuing on through the rest of the water treatment system.

These new tanks will allow additional retention time for suspended solids to settle out of the water column. The sediment that is settling out and collecting in the bottom of the weir tanks and frac tanks is pumped out with the use of turbo-vac trucks in the evening and the sediment is transported to the Reach D containment/dewatering pad at the Dow facility and placed in vacuum boxes. The sludge will be transported to the Salzburg Road Landfill for solidification within the landfill cell.

A water sample of the Site treatment system effluent was collected and analyzed for total suspended solids (TSS) and toxic equivalency (TEQ). The results reported to the U.S. EPA were: TSS 5 mg/L and TEQ 0.013 ppt. Dow continued to monitor the turbidity levels in the river upstream and downstream of the dredging operation. Downstream turbidity levels remain below 2 times the upstream turbidity levels.

Tuesday, December 11th, dredging activities continued. The dredged sediment was primarily sand and the entire treatment system operated smoothly. A total of 5 trucks, approximately 20 cubic yards each, were loaded and transported to the Salzburg Road Landfill for disposal. The addition of the two new frac tanks is allowing the suspended sediments to settle out of the water prior to the water filtration process. Crews are changing out the bag and cartridge filters after approximately 1.5 hours of use. The filters, along with the used personal protective equipment (PPE) are transported and disposed of with the sediment at the Salzburg Road Landfill.

A sample of the effluent water was collected and analyzed for TSS and TEQ. The results reported to the U.S. EPA were: TSS 10 mg/L and TEQ 0.016 ppt. Downstream turbidity levels remain below 2 times the upstream turbidity levels.

Wednesday, December 12th, dredging activities continued. A total of 4.5 trucks, approximately 20 cubic yards each, were loaded with dewatered sediment and transported to the Salzburg Road Landfill for disposal.

MDEQ representatives visited the Site to observe Site operations. MDEQ collected one sediment sample directly off the truck loading conveyor system. In addition, MDEQ collected effluent water samples.

Dow collected two post-removal confirmation samples from areas where Dow completed initial dredging. Both U.S. EPA and MDEQ collected split samples from Dow's post-removal samples.

Ice formed in the river and moved the up stream turbidity monitor out of position. Dow broke up the ice and repositioned the turbidity monitor. Dow also repositioned the down stream turbidity monitor into a position more inline with the dredging activities.

A sample of the effluent water was collected and analyzed for TSS and TEQ. The results reported to the U.S. EPA were: TSS 6 mg/L and TEQ not available. The downstream turbidity levels remain below 2 times the upstream turbidity levels.

The sediment that settled out and collected in the bottom of the weir tanks and frac tanks was pumped out with a turbo-vac truck and transported to the Reach D containment pad where the truck unloaded the sediment into vacuum boxes. The sludge will be transported to the Salzburg Road Landfill for solidification within the landfill cell.

Thursday, December 13th, dredging activities continued. A total of 2 trucks, approximately 20 cubic yards each were loaded with dewatered sediment and transported to the Salzburg Road Landfill for disposal.

Dow repositioned the barge on the southeast corner of the dredge area. Dow began dredging along the eastern side of the dredge area which contains significant gravel/rock and wood debris deposits. Dredging was slow due to the debris building up in the slurry line between the barge and the dewatering system. In order to speed up the process Dow added a 6-inch booster pump on land between the barge and the dewatering system to help move the heavier sediment through the slurry line.

One post-removal confirmation sample was collected from areas where Dow had completed dredging. U.S. EPA and MDEQ collected split samples.

TSS and TEQ results were not available. The downstream turbidity levels remain below 2 times the upstream turbidity levels.

Friday, December 14th, dredging activities continued. A total of 1 truck, approximately 20 cubic yards, was loaded with dewatered sediment and transported to the Salzburg Road Landfill for disposal.

The conveyor belt system broke down and the 6-inch booster pump kept getting clogged with debris. Dow worked through the night to fix the conveyor belt system and replaced the 6-inch booster pump with a 12-inch booster pump.

TSS and TEQ results were not available. The downstream turbidity levels remain below 2 times the upstream turbidity levels.

Saturday, December 15th, the dredging activities continued. A total of 2 trucks, approximately 20 cubic yards each, were loaded and transported to the Salzburg Road Landfill for disposal.

A conveyor belt motor broke and had to be replaced. The replacement motor would not function so a

new motor was brought in and the conveyor was repaired overnight.

The new booster pump also caused operations to shutdown periodically when it would get clogged with large debris. The new booster pump was setup outside the containment area on the grass next to the river. The U.S. EPA had Dow place the booster pump within a containment setup in order to catch water and debris during pump maintenance activities.

Dow collected stepout samples along the eastern side of the dredge area where the sandy sediment meets the gravel/rock and wood debris deposit. The section containing the gravel and wood debris extends approximately 10 feet to the west of the eastern border of the proposed dredge area and begins in the northeast corner of the proposed dredge area. Dow collected samples in this area beneath the thin layer of sediment and will propose removing the surface sediments only in this area instead of dredging to the 18 inch depth originally proposed. U.S. EPA collected split samples from Dow's step out samples.

The sediment that settled out and collected in the bottom of the weir tanks and frac tanks was pumped out and transported to the Reach D containment pad.

Sunday, December 16th, dredging activities continued. Heavy snow fall delayed the startup of dredging activities. A total of 3 trucks, approximately 20 cubic yards each, were loaded with dewatered sediment and transported to the Salzburg Road Landfill for disposal.

The new booster pump caused operations to shutdown periodically throughout the day when it would get clogged with large debris and required maintenance.

Planned Removal Actions

- Dow will continue to monitor the turbidity stations up river and downriver of the dredge area.
- Dow will continue to collect samples of the effluent to verify the water treatment system is effective.
- Dow will continue to dredge and remove contaminated sediments within the proposed dredging area.
- Dow will continue to transport and dispose of the impacted sediment at Salzburg Road Landfill.

Next Steps

- Dow will collect the remainder of the post-removal confirmation samples throughout the dredged area.

Disposition of Wastes

To date, a total of 29 trucks have been loaded with sediment and transported to the Salzburg Road Landfill, totaling approximately 625 cubic yards of sediment.