

United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, July 20, 2010

From: Sam Borries, OSC

To: Mike Ribordy, U.S. EPA
David Chung, U.S. EPA
Lisa Williams, FWS

Michael Chezik, U.S. DOI
Todd Goeks, NOAA
Sharon Hanshue, MDNR

Subject: Plainwell No. 2 Dam
Plainwell, MI
Latitude: 42.4279865
Longitude: -85.6292009

POLREP No.:	5	Site #:	059B
Reporting Period:		D.O. #:	
Start Date:	8/5/2009	Response Authority:	CERCLA
Mob Date:	8/5/2009	Response Type:	Time-Critical
Demob Date:		NPL Status:	NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:			

Site Description

Former industrial and waste water treatment practices, that took place from approximately the 1950s to the mid-1970s, released polychlorinated biphenyls (PCBs) into the Kalamazoo River in southwest Michigan. At least one source of the PCBs was the waste water released from the paper mills operating in the Kalamazoo, Michigan area; specifically, from the processing and de-inking of carbonless copy paper containing PCBs. These paper mills released PCBs into the Kalamazoo River system, some of which deposited in the area of the river known as the Plainwell Impoundment (which was created as a result of the building of a hydroelectric dam on the Kalamazoo River in the early 1900s).

Beginning in 2007 and continuing through 2008, investigations in Area 1 of the Kalamazoo River OU, including Plainwell Dam #2, were conducted as part of the Supplemental Remedial Investigation/Feasibility Study (SRI/FS). Phase 1 of that work involved the delineation of frequently inundated areas of the floodplain upstream of Plainwell Dam #2. Phase 2 of the investigation involved the sampling of Plainwell Dam #2. Results of the Phase 2 investigation of Plainwell Dam #2 found elevated levels of PCBs in bank and floodplain soils and, to a limited extent, in in-stream river plain soil. Samples were collected at 94 locations from a uniform grid in the floodplain, including in-stream islands. A total of 302 individual samples were collected from the floodplain, with total PCB concentrations ranging from non-detect to 60 milligrams per kilogram (mg/kg). Bank soil samples were collected from 78 locations. A total of 265 samples were analyzed for PCBs, with total PCB concentrations ranging from non-detect to 45 mg/kg. River plain soil samples were collected from 60 locations, resulting in 267 samples analyzed for PCBs. PCB concentrations in the river plain soil ranged from non-detect to 100 mg/kg. A summary of the investigation results is presented in the Plainwell No. 2 Conceptual Design Report.

On December 10 and 11, 2008, MDEQ collected 30 river plain soil cores and 18 bank cores. A total of 50 individual river plain soil and 25 soil samples were analyzed for PCBs. Total PCB concentrations in the river plain soil ranged from non-detect to 80.2 mg/kg. Total PCB concentrations in soil ranged from non-detect to 80.5 mg/kg.

The Allied Paper Inc./Portage Creek/Kalamazoo River Superfund Site (Site) encompasses the Kalamazoo River from Morrow Dam to Lake Michigan and approximately 3 miles of Portage Creek to the Kalamazoo River. The Plainwell Dam #2 (Site) is located approximately 3.5 miles upstream of the former Plainwell Dam in the Township of Gun Plain, T 1N, R 11 W, in portions of Sections 32 and 33 upstream to the Penn Central Railroad Bridge.

On June 8, 2009, an Administrative Order on Consent (AOC) was entered into between U.S. EPA and Georgia-Pacific, LLC, whereby, Georgia-Pacific agreed to conduct a time-critical removal action at the Site. The response actions include dredging and/or excavation of river plain soil, riverbank soils and

floodplain soil, containment, monitoring, water treatment, stabilization and off-Site disposal of excavated material in accordance with federal PCB regulations at 40 C.F.R. § 761.61. The response activities will require approximately 200 on-Site working days to complete, and will result in the removal of approximately 12,000 cubic yards of waste material, containing approximately 89% of the PCBs in the Plainwell Dam #2.

Additional site description and history can be found in the July 2009 Plainwell No. 2 Dam Area Time-Critical Removal Action Design Report, the June 8, 2009, Administrative Settlement Agreement and Order on Consent for Removal Action, the June 8, 2009, Time-Critical Removal Action Memorandum, and other Administrative Record documents.

Current Activities

During the week ending June 12, 2010, START mobilized to the Site to begin oversight of the removal activities associated with the excavation of impacted river and floodplain soil from the banks of Island 2 and Areas 3B through 5B.

During the week, Terra began installing turbidity curtains along the eastern and northern banks of Island 2; continued to assemble the water treatment system on the pad of Staging Area 1; transferred approximately 5,000 gallons of water from Staging Area 2 to Staging Area 1; and continued to remove the trees located along the banks of Island 2 and the small island located to the southwest of Island 2 (i.e., cutting, pulling, bucking, and grinding of the trees). Note: After removing the tree stumps from Island 2 and the small island, Terra hauled the stumps to the pad located at Staging Area 2. At Staging Area 2, the trees underwent additional grinding, if necessary, and were eventually hauled to the landfill.

Arcadis collected one wipe sample from the interior of the vacuum truck tank that Terra used to transfer the water from Staging Area 2 to Staging Area 1 (VT-42); and collected a total of five water samples from the water treatment system located at Staging Area 1 (W_SA1_In_001, W_SA1_RM_001, W_SA1_LM_001, W_SA1_RE_001, and W_SA1_LE_001). The analytical results for these samples were non-detect for PCB content.

During the week ending June 19, 2010, Terra continued to remove the trees located on Island 2 and the small island located to the southwest of Island 2; completed the installation of turbidity curtains along the northern side of Island 2; began and completed the installation of turbidity curtains along the southern side of the small island; installed the turbidity monitors; began to excavate riverbank soil from the northeastern side of the small island, as well as the hauling of this soil to Staging Area 2; and completed the setup of the pugmill, conveyor belt, and silo at Staging Area 1.

Terra shipped a total of 7 loads (290.91 tons) of non-TSCA soil to the C&C Landfill in Marshall, MI.

Arcadis collected seven soil samples from Island 2 (TS20339 through TS20345), and split one of these samples, TS20340, with START (Note: the START-designated name of its sample is PD2-061710-07-SD/TS20340); two surface water samples from the Kalamazoo River (TS30151 and TS30152); and one rinsate sample (TS30153). With the exception of Sample TS20345 from Grid 7, which had a total PCB content of 6.42 mg/Kg, each of the other samples had an analytical result below the cleanup criteria for PCBs (i.e., 5.0 mg/Kg). Note: After an additional six-inch excavation from Grid 7 the follow-up sample TS20360 was 0.709 mg/Kg.

Arcadis also monitored the turbidity of the river from June 16 to June 19, 2010. From approximately 1500 to 1630 on June 16, elevated turbidity readings at monitoring location TML-2 (200 feet downstream from the excavation) resulted in the inspection of the turbidity curtain along the northern side of Island 2. After determining that the turbidity curtain was intact, Arcadis attributed the elevated readings to debris that had built up on the turbidity sensor. All other downstream turbidity readings were less than twice the upstream turbidity readings.

During the week ending June 26, 2010, Terra continued to excavate riverbank soil from the northern side of Island 2; installed turbidity curtain sections along the southern bank of the small island located southwest of Island 2 and along the southwest bank of Island 2; installed turbidity curtain sections along the bank directly across from the southern side of Island 2 (Area 3B); installed silt fencing along the access road that leads from Staging Area 2 to Island 2 and from the oxbow access road to Staging Area 1; began and completed the initial excavation of riverbank soil from the small island located southwest of Island 2; and began restoration activities in Grids 1 through 6 of Island 2.

Terra shipped a total of 35 loads (1,477.22 tons) of non-TSCA soil and 11 loads (269.38 tons) of tree stumps to the C&C Landfill in Marshall, MI, and four loads (144.52 tons) of non-TSCA soil to the

Ottawa Farms Landfill in Coopersville, MI.

Arcadis collected nine soil samples from Island 2 (TS20346 through TS20350 and TS20359 through TS20362); eight soil samples from the small island located southwest of Island 2 (TS20351 through TS20358), and split one of these samples, TS20353, with START (Note: the START-designated name of its sample is PD2-062210-08-SD/TS20353); eleven water samples from the water treatment system located at Staging Area 1 (W_SA1_In_002, W_SA1_RM_002, W_SA1_LM_002, W_SA1_RE_002, and W_SA1_LE_002, W_SA1_In_003, W_SA1_RM_003, W_SA1_LM_003, W_SA1_RE_003, W_SA1_LE_003, and W_SA1_DUP_003); one wipe sample from the vacuum truck that transported untreated water from Staging Area 2 to Staging Area 1 (VT-322); two surface water samples from the Kalamazoo River (TS30154 and TS30155); and one rinsate sample (TS30156). With the exception of Samples TS20346 and TS20362, which had analytical results of 15.8 mg/Kg and 6.66 mg/Kg, respectively, each of the other samples had an analytical result below the cleanup criteria of 5.0 mg/Kg for PCBs. Note: After an additional six-inch excavation from Grid 8 and Grid 14 of Island 2 the follow-up samples TS20359 (Grid 8) and TS20362 (Grid 14) were 0.94 and 3.0 mg/Kg, respectively. Note: Arcadis gave the initial and follow-up samples for TS20362 (Grid 14) the same name due to the fact that the initial sample material was not collected at the appropriate design depth. As such, Arcadis collected the follow-up sample from the appropriate design depth, and designated the follow-up sample with the same name as the initial sample.

Arcadis also monitored the turbidity of the river from June 21 to June 26, 2010. At approximately 1245 on June 21, an elevated turbidity reading, at monitoring location TML-3, (300 ft downstream of the excavation) resulted from the installation of turbidity curtains. All other downstream turbidity readings were less than twice the upstream turbidity readings.

During the week ending July 3, 2010, Terra completed the initial excavation of riverbank soil from all sides of Island 2; began re-excavation of the grids that had composite sample results greater than 5.0 mg/K for PCB content on Island 2; continued the installation of turbidity curtain sections in Area 3B; began installation of turbidity curtain sections in Area 4B; continued restoration activities on the northwest side of Island 2 in the cleared grids; prepared to demobilize from the Site for three days due to the July 4th holiday; began scraping the top six inches or more of the access road, on the southwestern side of Island 2, and started removing the turbidity curtain sections from the completed grids along the northern side of Island 2.

Arcadis collected thirteen soil samples from Island 2 (TS20362 (resample of original TS20362) through TS20374), and split two of these samples, TS20363 and TS20370, with START (Note: the START-designated name of its samples are PD2-062810-09-SD/TS20363 and PD2-070110-10-SD/TS20370); five water samples from the water treatment system located at Staging Area 1 (W_SA1_In_004, W_SA1_RM_004, W_SA1_LM_004, W_SA1_RE_004, and W_SA1_LE_004); two water samples from the Kalamazoo River (TS30157 and TS30158); and one rinsate sample (TS30159). With the exception of Samples TS20363 through TS20366 and Sample PD2-062810-09-SD/TS20363, which had analytical results of 11.7mg/Kg, 11.6 mg/Kg, 5.36 mg/Kg, 6.60 mg/Kg, and 8.57 mg/Kg, respectively, each of the other samples had an analytical result below the cleanup criteria of 5.0 mg/Kg for PCBs. Note: The analytical results for the follow-up samples of TS20363 through TS20366 - Samples TS2071 through TS20374 – were all below the cleanup criteria for PCBs.

Arcadis also monitored the turbidity of the river from June 26 to July 2, 2010. All downstream turbidity readings were less than twice the upstream turbidity readings.

Terra shipped a total of 23 loads (1,023.93 tons) of non-TSCA soil and three loads (85.00 tons) of tree stumps to the C&C Landfill in Marshall, MI.

Planned Removal Actions

See Pollution Report #1.

Next Steps

- (1) Complete excavation of Island 2 and conduct initial restoration activities.
- (2) Decontaminate and demobe pontoon bridge.
- (3) Begin the excavation of bank sediments in Areas 3B through 5B.
- (4) Continue implementation of confirmation sampling protocol.

Key Issues

The progress of excavation activity is based on weather conditions.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
TAT/START	\$100,081.19	\$95,568.00	\$4,513.19	4.51%
Intramural Costs				
Total Site Costs	\$100,081.19	\$95,568.00	\$4,513.19	4.51%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

response.epa.gov/PlainwellNo2Dam

POLREP #5 Last Updated 7/20/2010