

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #187



KALAMAZOO RIVER/ENBRIDGE SPILL – REMOVAL
SITE # Z5JS
MARSHALL, MICHIGAN
LATITUDE: 42.2395273; LONGITUDE: -84.9662018

US EPA ARCHIVE DOCUMENT



Ceresco Dredging Operations (08/20/2013)

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From: Jeffrey Kimble, U.S. EPA, Federal On-Scene Coordinator

Date: 09/09/2013

Operational Period: 0700 hours 08/12/2013 through 0700 hours 08/19/2013
 0700 hours 08/19/2013 through 0700 hours 08/26/2013

Reporting Period: 0700 hours 08/12/2013 through 0700 hours 08/26/2013

1. Site Data

Site Number:	Z5JS	Response Type:	Emergency
Response Authority:	OPA	Incident Category:	Removal Action
Response Lead:	RP	NPL Status:	Non-NPL
Mobilization Date:	7/26/2010	Start Date:	7/26/2010
FPN#:	E10527		

2. Operations Section

- The organizational response structure consisted of the following Branches: 1) Environmental Field Teams; and 2) Dredge Operations.

2.1 Environmental Field Teams Branch

2.1.1 Science Division

- Sediment trap monitoring continued throughout the reporting period, in accordance with the approved Sediment Trap Monitoring and Maintenance Plan (July 10, 2012). Monthly cylindrical sampling device (CSD) sampling was conducted from August 12 – 16, 2013. Monthly sediment trap poling was conducted from August 19 – 23, 2013. Round 3 of 2013 quarterly bathymetry surveys continued throughout the reporting period.
- E4.0 Containment System monitoring and maintenance continued in accordance with the 2012 Morrow Lake Delta and Morrow Lake Monitoring and Management Work Plan (November 15, 2012). Monthly bathymetry surveys upstream and downstream of the containment structures were conducted from August 19 – 23, 2013.

2.1.2 Water Operations Division

- Enbridge monitored and maintained 725 feet of surface hard boom at the Ceresco Dam control point, and 4,900 feet of surface hard boom and 4,250 feet of subsurface half-curtain at the E 4.0 Containment System.
- Pursuant to the Emerging Oil Management Program (EOMP), Enbridge and U.S. EPA continued to track the location of sheen and/or oil globules in the main channel and overbank areas. Observations of sheen and/or oil globules were reported back to Operations Section Chiefs for response, if appropriate. Refer to Section 3.1 for locations of oil sheen and globule observations.
- Management of oil sheen and/or globules continued throughout the period. Twenty-six responses were conducted during the reporting period, 12 of which were at the Ceresco impoundment. Refer to Table 1 for a summary of sheen responses by day.
- Beginning August 21, 2013, sheen responses are no longer requested at the Ceresco Dam impoundment if the sheen is identified to be within containment, despite sheen observations meeting response criteria. Sheen collecting within containment is managed by crews maintaining the containment booms.

2.1.3 Compliance Division

- On August 16, 2013, MDEQ issued a dredge permit to Enbridge for the Mill Ponds impoundment.
- As of the close of the reporting period, Enbridge's dredging permit applications for the MP 21.50 sediment trap and the Morrow Lake Delta were pending issuance by MDEQ.
- On August 16, 2013, the MDEQ public comment period for Enbridge's MP 10.5 sediment trap dredging permit application expired. As of the close of the reporting period, the permit was pending issuance by MDEQ.
- As of the close of the reporting period, Enbridge's permit application for the notching of Ceresco Dam remained posted for public comment.

2.2 Dredge Operations Branch

2.2.1 Ceresco, Mill Ponds, Delta/Morrow Lake, and Sediment Trap Divisions

- Enbridge completed setup of administrative and oversight facilities, and infrastructure for dredge support areas at the C0.4 launch, Ceresco Dredge Pad, C5 launch, and Mill Pond Dredge Pad. Setup activities included access roadway improvements, construction of gravel parking areas, installation of barrier fencing, mobilization of temporary office trailers, and installation of temporary power and internet.
- On August 22, 2013, the Comstock Township Planning Commission denied Enbridge's permit application for the Morrow Lake Dredge Pad location.
- Dredge pad construction and equipment mobilization was completed at Ceresco Dredge Pad and the Mill Ponds Dredge Pad. Dredge pad construction activities included development of bag filter pad, pugmill pad, water treatment pad, and sediment staging areas. Equipment mobilization included water treatment equipment, dredge barges and supporting equipment, and dredge conveyance piping.

- Dredging began at the Ceresco Dam impoundment on August 15, 2013. As of August 25, 2013, 10,682,000 gallons of water was treated at the Ceresco Dredge Facility and 6,198 yd³ of dredged material remained onsite. Removed sediment will be solidified and transported off-site for disposal. As of the close of the reporting period, no solid waste sediment from the Ceresco dredge has been shipped off site for disposal. Work area air monitoring was conducted during dredging activities. No triggers for initiation of community air monitoring were exceeded. Dissolved oxygen and turbidity water quality monitoring was conducted during dredging activities. No triggers were exceeded.

2.2.2 Waste Management Division

- Cumulative quantities of soil, debris, and liquid shipped off-site during the response are presented in Tables 2 and 3.
- The cumulative quantity of recovered oil has been estimated using actual waste stream volumes, analytical data, and physical parameters of oil-containing media. A summary of the estimated volume of recovered oil is presented in Table 4.

3. Planning Section

3.1 Situation Unit

- Situation Unit personnel conducted field observations and overflights to document all operational areas, including the dredging activities; locations and integrity of CSDs, buoys and sediment trap structures; and locations of oil sheen and/or globules. During the reporting period, overflights were conducted on August 14 and 21, 2013. See Section 2.1.2 for additional details regarding the EOMP.
- During the reporting period, oil sheen and/or globules were observed at:
 - Ceresco Dam impoundment at multiple locations between MP 4.5 and MP 5.89 on August 12 – 17, and 19 - 24;
 - Mill Ponds impoundment at multiple locations between MP 14.25 and MP 15.65 on August 13, 16, 17, and 19 - 23;
 - Multiple locations between MP 21.5 and MP 36.5 on August 12 – 17, and 19 - 24;
 - Morrow Lake Delta and/or Neck on August 12 – 17, and 19 - 24;
 - Morrow Lake North and/or South Coves on August 12, 14 – 17, and 19 - 24; and
 - Morrow Lake on August 14, 19 – 22, and 24.
- Photographs were taken and distributed to project participants during the weekly Consolidated ICS Meetings.

3.2 Environmental Unit

- U.S. EPA, USGS, and the U.S. Army Corps of Engineers held weekly meetings to discuss Hydrodynamic Model (HDM) activities.
- U.S. EPA continued review of sediment sample analytical results from legacy cores collected by Enbridge.
- U.S. EPA continued review of oil fingerprinting analytical results from sheen and globule samples collected by Enbridge to determine the presence/absence of Line 6B oil.

3.3 Documentation Unit

- The Documentation Unit continued organizing and archiving electronic and paper files for post-incident use.

3.4 Resource Unit

- The Resources Unit continued to support production of the Incident Action Plan (IAP), supported the planning efforts of operations, and provided information to Logistics personnel in order to properly prepare and procure resources.

4. *Command*

4.1 Safety Officers

- Enbridge safety personnel continued conducting work-site safety inspections and implementing the plan for integration of public safety and worker safety on the Kalamazoo River.

4.2 Public Information

- The number of public inquires reported by Enbridge for this period is presented in Table 6.

5. *Finance*

- The current National Pollution Funds Center (NPFC) ceiling is \$63.25 million. Approximately 88.6% of the ceiling has been spent through August 26, 2013. The latest average 14-day burn rate was \$36,410 per day. These cost summaries reflect only U.S. EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 7.

6. *Scientific Support Coordination Group (SSCG)*

- No activities were conducted during this operational period.

7. *Participating Entities*

- U.S. EPA and MDEQ continued to meet bi-weekly with a group of stakeholders to discuss how to continue to effectively communicate, share information about site progress, and receive feedback about the communication needs of the local communities.
- For a list of cooperating and assisting agencies, see SITREP #51 (Sections 3.2 and 3.3).

8. *Personnel On-Site*

- Staffing numbers for the entities and agencies active in the response are presented in Table 8.

9. *Source of Additional Information*

- For additional information, refer to <http://www.epa.gov/enbridgespill>. For sampling analysis data, see <http://response.enbridge.com/response/>.

10. Clean-up Progress Metrics

Table 1 – Sheen Responses

Total	August 2013													
	25	24	23	22	21	20	19	18	17	16	15	14	13	12
26	0	1	3	4	3	5	3	0	1	2	1	2	1	0

Table 2 - Soil and Debris Shipped Off Site (as of 8/25/2013)

Waste Stream	Cumulative	Disposal Facility
<i>Haz Soil (yd³)</i>	19,644	<i>Envirosafe (Oregon, OH)</i>
Non-Haz Soil (yd ³) (Excluding Ceresco Dredge)	79,255	SET/C&C
<i>Non-Haz Soil & Debris (yd³)</i> (Excluding Ceresco Dredge)	64,815	<i>Westside Recycling (Three Rivers, MI)</i>
<i>Non-Haz Soil (yd³)</i> (Ceresco Dredge Only)	5,562	<i>EQ/Republic (Marshall, MI)</i>
<i>Haz Debris (yd³)</i>	12,075	<i>EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)</i>
Non-Haz Household Debris (ton)	1,954	SET/C&C
Non-Haz Impacted Debris (ton)	7,324	

Shaded and italicized items are discontinued waste streams.

Table 3 - Liquid Shipped Off-Site (as of 8/25/2013)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons)†
Non-Haz Water	Liquid Industrial Waste	Holland, MI	1,447,957
Non-Haz Water	Plummer	Kentwood, MI	620,526
<i>Non-Haz Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	981,792
<i>Non-Haz Water</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	1,143,280
<i>Hazardous Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	3,594,579
<i>Oil</i>	<i>Enbridge Facility</i>	<i>Griffith, IN</i>	766,288
<i>Other Material</i>			1,405,525
<i>Treated Non-Haz Water</i>	<i>Liquid Industrial Waste</i>	<i>Holland, MI</i>	370,200
<i>Treated Non-Haz Water</i>	<i>Plummer</i>	<i>Kentwood, MI</i>	4,976,140
<i>Hazardous Water</i>	<i>Safety Kleen^a</i>		825
<i>Treated Non-Haz Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	150,700
<i>Treated Non-Haz Water</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	1,968,700
Total			17,426,512

Shaded and italicized items are discontinued waste streams.

† Cumulative quantities may not reconcile with previous reports (due to auditing).

a New Age lab water and methanol mix generated by mobile laboratory.

Table 4 – Estimated Recovered Oil (as of 8/26/2013)

Waste Stream Containing Recovered Oil	Destination Company	Destination Location	Estimated Oil Volume in Waste Stream (gallons)
Soil Impacted Soil & Debris	C&C Landfill	Marshall, MI	14,125*
	Envirosafe/ Westside RDF	Oregon, OH	278,665
<i>Geotube Sediment - (Impacted Sediment)</i>	<i>Envirosafe/ Westside RDF</i>	<i>Oregon, OH</i>	<i>1,298</i>
Debris - (Roll Off Boxes with Impacted Sorbents, boom, pads, plastic, PPE, vegetation, and biomass)	EQ Michigan	Belleville, MI	34,645
<i>Frac Tank City - Influent to Carbon Filtration System</i>	<i>C&C Landfill</i>	<i>Marshall, MI</i>	<i>8,109</i>
Frac Tank City - Water	Dynecol	Detroit, MI	46,178
	Liquid Industrial Waste Services, Inc.	Kentwood, MI	
	Plummers Env. Inc.	Holland, MI	
	BC POTW	Battle Creek, MI	
<i>Ceresco Pretreatment System</i>	<i>C&C Landfill</i>	<i>Marshall, MI</i>	<i>90</i>
<i>A-1 Pretreatment System</i>	<i>C&C Landfill</i>	<i>Marshall, MI</i>	<i>9</i>
Oily Water - RPP	Enbridge Facility	Griffith, IN	766,288
Total			1,149,407

Shaded and *italicized* items represent discontinued waste streams.
 *Total updated for analytical received after report generation.

Table 5 – Samples Collected By Enbridge

Sample Type	Total	August 2013													
		25	24	23	22	21	20	19	18	17	16	15	14	13	12
Surface Water	19	0	0	0	0	0	0	0	0	1	0	7	11	0	0
Private Well	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Groundwater	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0
Sediment	93	0	1	4	0	0	0	0	15	30	20	15	8	0	0
Soil	59	4	5	6	2	8	0	0	6	7	7	8	6	0	0
Product	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dewatering	26	0	0	8	0	8	0	0	0	8	0	2	0	0	0
Sheen	13	1	3	2	5	0	0	0	0	0	2	0	0	0	0

Table 6 – Public Inquiries Received by Enbridge

Location/Med	August 2013														
	23	22	21	20	19	18	17	16	15	14	13	12	11	10	
Marshall Community Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oil Spill Public Information Hotline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Website	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Public Inquiries	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Table 7 - Financial Summary (as of 8/27/2013)

Item	Expended (Cumulative)
<i>ERRS Contractors</i>	
<i>EQM (EPS50802)</i> T057	\$ 1,199,522
T060	\$ 213,636
<i>LATA (EPS50804)</i> T019	\$ 1,161,082
<i>ER LLC (EPS50905)</i> T040	\$ 683,330
<i>Total ERRS Contractors</i>	\$ 3,257,571
<i>Other Contractors</i>	
<i>Lockheed Martin (EPW09031) – TAGA Support</i>	\$ 198,379
<i>Lockheed Martin (EPW09031) -Biodegradability Study</i>	57,134
<i>T&T Bisso (EPA:HS800008)</i>	\$ 882,087
<i>Total Other Contractors</i>	\$ 1,112,020
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 34,212,421
Community Relations	\$ 114,563
T032-Sampling	\$ 161,045
T037-Doc Support	1,975,957
Total START Contractor	\$ 36,463,986
Response Contractor Sub-Totals	\$ 40,865,829
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,589,335
Pollution Removal Funding Agreements	
Total Other Agencies	\$ 2,897,081
Indirect Cost (16.00%)	\$ 3,520,519
Indirect Cost (8.36%)-payments after 10/1/2011	\$ 1,310,859
Indirect Cost (10.15%)-payments after 10/1/2012	\$ 946,991
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 507,168
Total Est. Oil Spill Cost	\$ 56,042,384
Oil Spill Ceiling Authorized by USCG	\$ 63,250,000
Oil Spill Ceiling Available Balance	\$ 7,207,616

Shaded and *italicized* items are discontinued

* Effective on EPA Enbridge costs billed to USCG for bills issued after 6/5/12.

Table 8 - Personnel On-Site

Agency/Entity	August 2013													
	25	24	23	22	21	20	19	18	17	16	15	14	13	12
U.S. EPA	0	0	4	4	4	4	4	0	0	1	3	3	4	3
START	5	14	23	23	23	23	22	0	6	22	22	21	22	21
MDEQ	0	0	3	6	3	4	4	0	0	3	4	7	6	4
MDEQ Contractors	0	0	2	3	3	3	3	0	0	1	3	3	3	3
Other Agencies	2	2	2	2	0	0	0	0	0	0	1	5	1	1
Enbridge – Environmental Field Teams – Science*	9	13	45	46	46	46	41	0	8	33	38	39	33	35
Enbridge – Environmental Field Teams – Water Ops*	16	57	56	56	52	52	47	0	45	50	52	50	42	42
Enbridge – Dredge Operations – Ceresco*	74	74	87	90	101	91	90	11	94	103	93	94	84	89
Enbridge – Dredge Operations – Mill Ponds*	0	26	23	30	29	23	19	0	20	12	7	5	1	2
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	0	0	1	0	0	0	0	0	0	1	5	7	0
Enbridge – Dredge Operations – Sediment Traps*	1	12	15	6	5	9	9	0	1	14	15	16	13	7
Enbridge – Waste Management*	0	1	5	6	6	6	6	0	1	6	6	6	6	1
Enbridge – Office Support*	6	25	57	63	65	67	66	1	29	66	63	62	68	60
Total	113	224	322	336	337	328	311	12	204	311	308	316	290	268

*Enbridge Operations and Field include Enbridge and contractors as reported by Enbridge