

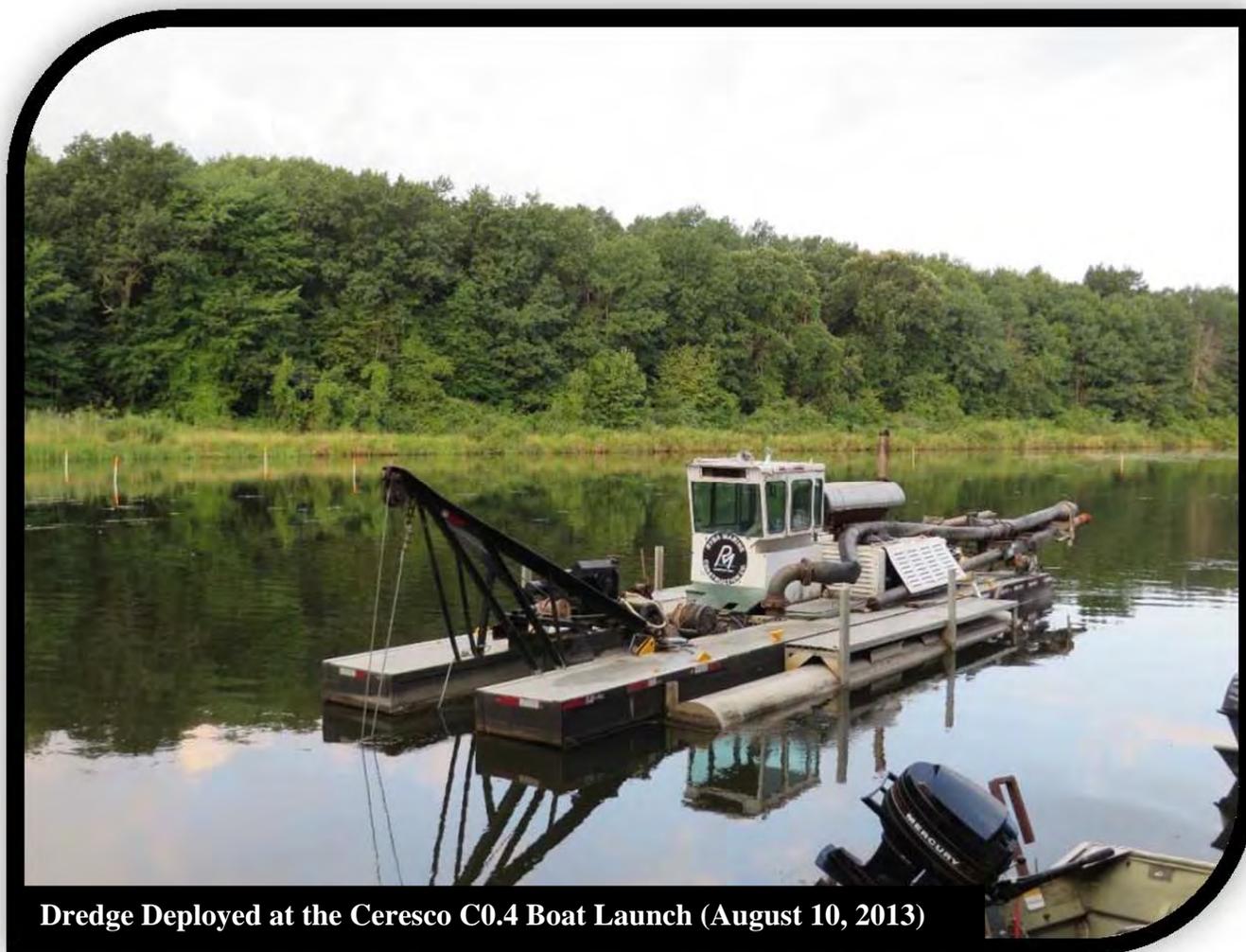
US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #186**



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

US EPA ARCHIVE DOCUMENT



Dredge Deployed at the Ceresco C0.4 Boat Launch (August 10, 2013)

To: Susan Hedman, U.S. EPA Regional Administrator
 James Sygo, MDEQ
 Michelle DeLong, MDEQ
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 Deb Cardiff, Kalamazoo County Public Health
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 James Rutherford, Calhoun County Public Health Department
 Durk Dunham, Calhoun County Emergency Management
 Scott Corbin, Allegan County Emergency Management
 Tiffany Eichorst, City of Battle Creek
 Cheryl Vosburg, City of Marshall
 Christine Kosmowski, Calhoun County Water Resources Commissioner

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

Date: 08/21/2013

Operational Period: 0700 hours 07/29/2013 through 0700 hours 08/05/2013
 0700 hours 08/05/2013 through 0700 hours 08/12/2013

Reporting Period: 0700 hours 07/29/2013 through 0700 hours 08/12/2013

1. Site Data

Site Number:	Z5JS	Response Type:	Emergency
Response Authority:	OPA	Incident Category:	Removal Action
Response Lead:	PRP	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). Round 2 of 2013 quarterly bathymetry surveys was completed and Round 3 began on August 1, 2013.
- Monthly Morrow Lake Delta and Morrow Lake monitoring (poling) was conducted from August 5 - 9, 2013, in accordance with the 2012 Morrow Lake Delta and Morrow Lake Monitoring and Management Work Plan (November 15, 2012).

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 E4.0 Containment System.

- On August 2, 2013, Enbridge removed 125 feet of surface hard boom from the MP 15.25 South Mill Ponds control point location in response to a decreased number of sheen observations within the previously boomed area.
- 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-eight responses were conducted during the reporting period, 16 of which were at the Ceresco impoundment. Refer to Table 1 for a summary of sheen responses by day.

2.1.3 Compliance Division

- On July 30, 2013, MDEQ issued a dredge permit to Enbridge for the Ceresco impoundment.
- As of the close of the reporting period, Enbridge's dredging permit applications for Mill Ponds and MP 21.50 sediment trap were pending issuance by MDEQ.
- As of the close of the reporting period, Enbridge's dredging permit application for the Morrow Lake Delta was pending submission of supplemental information by Enbridge to MDEQ.
- As of the close of the reporting period, Enbridge's MP 10.5 sediment trap dredging permit application remained posted for public comment.
- On August 5, 2013, MDEQ posted Enbridge's permit application for the notching of Ceresco Dam for public comment.

2.2 Dredge Operations Branch

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

- Setup of administrative and oversight facilities, and infrastructure for dredge support areas continued 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.
- Setup of administrative and oversight facilities, infrastructure, and dredge pad construction at the Morrow Lake Dredge Pad are pending approval from the Township of Comstock Planning Commission.
- Dredge pad construction and equipment mobilization continued 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.
- From August 6 – 9, 2013, Enbridge staked the proposed pilot channel at the Ceresco impoundment in preparation for dredging activities.
- Dredging was conducted at the MP 10.40 North sediment trap from July 30 to August 8, 2013. Removed sediment was solidified and transported off-site for disposal. In total, 406 tons of waste sediment were shipped off site for disposal at the 10.4 North sediment trap. 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. Crews began to demobilize from the site on August 8, 2013.

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 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 July 31 and August 9, 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 4.25 and MP 5.89 on July 29 – August 3, and August 5 - 10;
 - Mill Ponds impoundment at multiple locations between MP 14.25 and MP 15.65 on July 29 – 30, August 1 – 2, 5 – 6, and 8 – 10;
 - Multiple locations between MP 21.5 and MP 36.5 on July 29 – August 3, and August 5 - 10;
 - Morrow Lake Delta and/or Neck on July 29 – August 3, and August 5 - 10;
 - Morrow Lake North and/or South Coves on July 29 – August 3, and August 5 - 10; and
 - Morrow Lake on July 29 – August 3, and August 5, 9 and 10.
- 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 \$59.8 million. Approximately 92.6% of the ceiling has been spent through August 12, 2013. The latest average 14-day burn rate was \$29,978 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											July 2013		
	11	10	9	8	7	6	5	4	3	2	1	31	30	29
28	0	2	2	3	1	3	3	0	0	3	3	2	3	3

Table 2 - Soil and Debris Shipped Off Site (as of 8/11/2013)

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)	79,065	SET/C&C
<i>Non-Haz Soil & Debris (yd³) (Excluding Ceresco Dredge)</i>	64,815	<i>Westside Recycling (Three Rivers, MI)</i>
<i>Non-Haz Soil (yd³) (Ceresco Dredge Only)</i>	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)	1,936	SET/C&C
Non-Haz Impacted Debris (ton)	7,285	

Shaded and italicized items are discontinued waste streams.

Table 3 - Liquid Shipped Off-Site (as of 8/11/2013)

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 8/12/2013)

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	14,078
	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	34,641
<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			1,149,356

Shaded and *italicized* items represent discontinued waste streams.

Table 5 – Samples Collected By Enbridge

Sample Type	Total	August 2013											July 2013		
		11	10	9	8	7	6	5	4	3	2	1	31	30	29
Surface Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private Well	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Groundwater	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Sediment	33	0	0	11	0	0	16	0	0	0	0	2	0	1	3
Soil	78	0	4	11	2	8	1	9	0	0	10	10	9	7	7
Product	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dewatering	4	0	0	0	0	0	2	0	0	0	0	2	0	0	0
Sheen	19	0	1	1	0	0	2	2	0	0	4	3	3	3	0

Table 6 – Public Inquiries Received by Enbridge

Location/Med	August 2013											July 2013				
	9	8	7	6	5	4	3	2	1	31	30	29	28	27		
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 8/12/2013)

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	\$ 33,728,681
Community Relations	\$ 114,563
T032-Sampling	\$ 161,045
T037-Doc Support	1,952,701
Total START Contractor	\$ 35,956,990
Response Contractor Sub-Totals	\$ 40,358,833
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,530,352
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	\$ 889,545
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 490,585
Total Est. Oil Spill Cost	\$ 55,402,376
Oil Spill Ceiling Authorized by USCG	\$ 59,800,000
Oil Spill Ceiling Available Balance	\$ 4,397,624

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											July 2013		
	11	10	9	8	7	6	5	4	3	2	1	31	30	29
U.S. EPA	0	0	3	4	5	4	4	0	0	2	3	3	3	3
START	0	5	17	17	17	17	15	0	6	16	19	19	19	19
MDEQ	0	0	3	5	4	5	4	0	0	4	4	3	4	5
MDEQ Contractors	0	0	1	2	2	2	2	0	0	0	2	1	2	2
Other Agencies	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Enbridge – Environmental Field Team Branch – Science*	0	6	32	32	29	29	27	1	8	28	31	30	31	31
Enbridge – Environmental Field Team Branch – Water Ops*	0	48	46	44	34	34	31	0	27	29	30	30	25	27
Enbridge – Dredge Operations – Ceresco*	34	71	59	55	50	46	38	0	28	35	35	25	34	21
Enbridge – Dredge Operations – Mill Ponds*	0	3	12	18	18	26	27	0	18	29	24	24	23	20
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	0	8	0	0	0	0	0	0	1	6	7	7	0
Enbridge – Dredge Operations – Sediment Traps*	0	10	18	21	27	22	23	0	21	26	26	26	27	28
Enbridge – Waste Management*	0	1	6	6	6	6	6	0	1	6	6	5	5	6
Enbridge –Office Support*	5	35	54	64	60	58	56	5	25	55	62	60	58	55
Total	39	179	259	268	252	249	233	6	134	232	249	234	239	218

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