

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #184



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



Mill Ponds Dredge Pad (July 10, 2013)

US EPA ARCHIVE DOCUMENT

To: Susan Hedman, U.S. EPA Regional Administrator
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Christine Kosmowski, Calhoun County Water Resources Commissioner

From: Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator

Date: 07/29/2013

Reporting/Operational Period: 0700 hours 07/01/2013 through 0700 hours 07/15/2013

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

- On July 12, 2013, Enbridge completed collecting sheen net samples following laboratory agitation of legacy contamination sediment cores from the proposed dredge areas. Sheen samples were sent to Ann Arbor Technical Services for Line 6B oil fingerprinting analysis.
- Quarterly sediment trap bathymetry surveys continued throughout the reporting period.
- Sediment trap poling was conducted at MP 36.10 RDB on July 8, 2013.
- Monthly CSD sampling was completed on July 12, 2013.
- Monthly Morrow Lake and Morrow Lake Delta monitoring was completed on July 12, 2013.

2.1.2 Water Operations Division

- Enbridge monitored and maintained 725 feet of surface hard boom at the Ceresco Dam control point; 125 feet of surface hard boom at the MP 15.25 South Mill Ponds control point; and 4,900 feet of surface hard boom and 2,750 feet of subsurface half-curtain at the E4.0 Containment System.

- Pursuant to the Emerging Oil Management Program (EOMP), Enbridge and U.S. EPA continued to track the location, response, and sheen differentiation test results (when necessary) 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. No sheen differentiation tests were conducted during the operational period. Refer to Table 1 for sheen differentiation testing information and to Section 3.1 for locations of oil sheen and globule observations.
- Management of oil sheen and/or globules continued throughout the period. Twenty-three responses were conducted during the operational period, 17 of these were at the Ceresco impoundment. Refer to Table 2 for a summary of sheen responses by day.

2.1.3 Compliance Division

- By July 12, 2013, the public comment periods were expired for Enbridge's MDEQ dredging permit applications for Ceresco, Mill Ponds, Morrow Lake Delta, MP 10.40 Sediment Trap, and MP 21.50 Sediment Trap. MDEQ is working to respond to public comments received for the permit applications.
- Enbridge submitted a MDEQ permit application for the notching of Ceresco Dam on July 3, 2013 and a MDEQ dredging permit application modification for Ceresco on July 9, 2013.

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, MP 10.4 sediment trap, C5 launch, Mill Pond Dredge Pad, and E4 launch. 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 July 8 - 12, 2013, equipment was demobilized from the E3.5 staging area and from the Morrow Lake Dredge Pad. Setup of administrative and oversight facilities, and infrastructure for these dredge support areas are pending approval from the Township of Comstock Planning Commission.
- Dredge pad construction continued at Ceresco Dredge Pad, MP10.4 sediment trap, 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.

2.2.2 Waste Management Division

- Cumulative quantities of soil, debris, and liquid shipped off-site during the response are presented in Tables 3 and 4.
- 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 5.

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 operational period, overflights were conducted on July 2 and 10, 2013. See Section 2.1.2 for additional details regarding the EOMP.
- During the operational period, oil sheen and/or globules were observed at:
 - Ceresco Dam impoundment at multiple locations between MP 4.5 and MP 5.89 on July 1 – 3, 5 – 6, and 8 – 13;
 - Mill Ponds impoundment at multiple locations between MP 14.5 and MP 15.5 on July 1, 3, 5, 6, and 8 – 13;
 - Multiple locations between MP 21.5 and MP 36.5 on July 1 – 3, 5 – 6, and 8 – 13;
 - Morrow Lake Delta and/or Neck on July 1 – 3, 5 – 6, and 8 – 13;
 - Morrow Lake North and/or South Coves on July 1 – 3, 5 – 6, and 8 – 13; and
 - Morrow Lake on July 10 – 11, and 13.
- 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 upcoming Hydrodynamic Model (HDM) activities.
- Enbridge's Management of Public River Access During Dredging Operations Work Plan (May 17, 2013) is in review with U.S. EPA.
- On May 30, 2013, U.S. EPA transmitted comments to Enbridge regarding its Legacy Contamination Data Gap Evaluation Work Plan (May 17, 2013). On June 7, 2013 Enbridge resubmitted the plan in response to U.S. EPA's comments. The revised plan is in review with U.S. EPA.
- U.S. EPA began review of legacy core sediment sample analyses received by Enbridge.
- U.S. EPA continued review of oil fingerprinting analytical results of 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 7.

5. Finance

- The current National Pollution Funds Center (NPFC) ceiling is \$59.8 million. Approximately 91.4% of the ceiling has been spent through July 15, 2013. The latest average 14-day burn rate was \$18,961 per day. These cost summaries reflect only U.S. EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 8.

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 9.

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 Differentiation Test Results

Description	Total	July 2013														
		14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Sheen Tests Performed	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Results Indicated Petroleum Source	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Results Indicated Biogenic Source	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inconclusive Test Results	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2 – Sheen Responses

Total	July 2013													
	14	13	12	11	10	9	8	7	6	5	4	3	2	1
23	0	1	3	2	2	6	2	0	1	1	0	1	2	2

Table 3 - Soil and Debris Shipped Off Site (as of 7/14/2013)

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)	78,639	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)	1,926	SET/C&C
Non-Haz Impacted Debris (ton)	7,256	

Shaded and italicized items are discontinued waste streams.

Table 4 - Liquid Shipped Off-Site (as of 7/14/2013)

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 5 – Estimated Recovered Oil (as of 7/15/2013)

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	14,072
	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	34,619
<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			1,149,329

Shaded and *italicized* items represent discontinued waste streams.

Table 6 – Samples Collected By Enbridge

Sample Type	Total	July 2013													
		14	13	12	11	10	9	8	7	6	5	4	3	2	1
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	23	0	0	6	6	6	0	0	0	0	0	0	0	5	0
Sediment	75	0	0	6	23	18	14	13	0	0	0	0	0	1	0
Soil	53	0	0	5	2	8	11	5	0	0	0	0	0	6	16
Product	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dewatering	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheen	111	0	0	1	22	23	20	22	0	2	2	0	1	8	10

Table 7 – Public Inquiries Received by Enbridge

Location/Med	July 2013														June 2013	
	12	11	10	9	8	7	6	5	4	3	2	1	30	29		
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	1	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	1	0		

Table 8 - Financial Summary (as of 7/15/2013)

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>	31,554
<i>T&T Bisso (EPA:HS800008)</i>	\$ 882,087
<i>Total Other Contractors</i>	\$ 1,112,020
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 33,026,309
Community Relations	\$ 114,563
T032-Sampling	\$ 161,045
T037-Doc Support	1,941,318
Total START Contractor	\$ 35,243,235
Response Contractor Sub-Totals	\$ 39,645,078
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,516,197
Pollution Removal Funding Agreements	
Total Other Agencies	\$ 2,897,081
Indirect Cost (16.00%)	\$ 3,598,252
Indirect Cost (8.36%)-payments after 10/1/2011	\$ 1,310,859
Indirect Cost (10.15%)-payments after 10/1/2012	\$ 815,662
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 469,257
Total Est. Oil Spill Cost	\$ 54,656,988
Oil Spill Ceiling Authorized by USCG	\$ 59,800,000
Oil Spill Ceiling Available Balance	\$ 5,143,012

Shaded and *italicized* items are discontinued

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

Table 9 - Personnel On-Site

Agency/Entity	July 2013													
	14	13	12	11	10	9	8	7	6	5	4	3	2	1
U.S. EPA	0	0	3	4	4	4	3	0	0	0	0	1	3	4
START	0	2	17	18	18	19	17	0	1	1	0	1	13	12
MDEQ	0	0	4	4	4	2	4	0	0	1	0	4	4	4
MDEQ Contractors	0	0	0	3	2	3	2	0	0	0	0	3	3	3
Other Agencies	0	0	1	1	1	1	1	0	0	0	0	0	0	0
Enbridge – Environmental Field Team Branch – Science*	1	1	28	30	44	43	39	2	8	8	0	10	25	25
Enbridge – Environmental Field Team Branch – Water Ops*	0	12	39	36	39	37	33	2	8	8	0	10	25	25
Enbridge – Dredge Operations – Ceresco*	0	34	35	26	24	29	20	0	0	0	0	16	20	21
Enbridge – Dredge Operations – Mill Ponds*	0	30	30	33	26	32	3	0	0	0	0	0	0	0
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	1	8	9	2	2	24	0	0	0	0	21	25	24
Enbridge – Dredge Operations – Sediment Traps*	0	2	11	14	13	12	12	0	0	0	0	13	9	16
Enbridge – Waste Management*	0	0	7	7	7	7	8	0	0	0	0	0	1	1
Enbridge – Marshall Office*	0	22	44	49	49	43	46	1	1	5	0	16	45	42
Total	1	104	227	234	233	234	212	5	18	23	0	95	173	177

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