

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #196



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



Dredging Operations at the MP 26.0 RDB Sediment Trap (12/19/2013)

US EPA ARCHIVE DOCUMENT

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

Date: 01/21/2014

Operational Period: 0700 hours 12/16/2013 through 0700 hours 12/23/2013
 0700 hours 12/23/2013 through 0700 hours 01/06/2014

Reporting Period: 0700 hours 12/16/2013 through 0700 hours 01/06/2014

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

- No activities were performed during this reporting period.

2.1.2 Water Operations Division

- Management of oil sheen and/or globules continued throughout the period. No responses were conducted during this reporting period.

2.1.3 Compliance Division

- As of the close of the reporting period, Enbridge's MDEQ Ceresco Dam removal permit is in review with MDEQ. A public hearing is scheduled for January 14, 2014.

- As of the close of the reporting period, Enbridge's MDEQ dredging permit application for the MP 28.25 sediment trap remained in review with MDEQ.
- U.S. EPA outlined in Section 47 of the March 14, 2013 Administrative Order and subsequently verbally communicated to Enbridge that it is Enbridge's responsibility to apply for MDEQ dredging permits and to modify existing permits to include dredging as the submerged oil recovery method, in a timeframe which allows for compliance with the U.S. EPA Order deadline of December 31, 2013. Enbridge has elected to wait for triggers to occur before applying for or modifying the existing MDEQ dredging permits.

2.2 Dredge Operations Branch

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

- Excavation of the newly exposed overbank soils in the "bowl" area immediately upstream of Ceresco Dam was completed on December 16, 2013. Sediment staging in cubic yard sacks and pumping of sediment slurry across the river was completed during the reporting period.
- Dredging operations at the Mill Ponds impoundment and the MP 36.1 sediment trap remained suspended throughout the reporting period due to icing conditions.
- Sediment removal from the MP 26.0 RDB sediment trap via Toyo pump suction dredging was conducted from December 16 - 30, 2013. Work was suspended for the remainder of the reporting period due to heavy snow and extreme cold conditions.
- Removal of the E-4 containment system was suspended on December 16, 2013, due to icing conditions. The remaining portions of the E-4 containment system silt curtain and surface boom were removed on December 22, 2013. Portions of the E-4 containment system silt curtain along the E and F booms were removed without dredging of accumulated sediment due to the early onset of icing conditions. The E-4 system anchor posts remain in place.
- Surface boom was removed at the MP 36.1 sediment trap on December 22, 2013.
- On December 18, 2013 U.S. EPA met with Enbridge to discuss plans and status of options for continued sediment removal actions at Morrow Lake and Morrow Lake Delta as required by the March 14, 2013 Order.
- Table 1 presents the quantities of water treated at each dredge location during the reporting period. Table 2 presents the estimated dredge waste on-site in Geotube bags, the cumulative estimated dredge waste, and the cumulative waste shipped off-site for disposal.
- Work area air monitoring, dissolved oxygen water quality monitoring, and turbidity water quality monitoring were conducted during dredging activities.

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

- During the reporting period, an overflight was conducted on December 19, 2013 to document all operational areas and locations of oil sheen and/or globules. Photographs were taken and distributed to project participants in a Situation Update photograph log and during the Consolidated ICS Meeting.

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 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.
- The USCG is providing the U.S. EPA with on-site support by monitoring safety throughout all active work areas.

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 \$63.25 million. Approximately 93.6% of the ceiling has been spent through January 6, 2014. The latest average 14-day burn rate was \$9,373 per day, which reflects decreased staffing during the December and January holidays. 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. Due to the holiday break, the Stakeholders Group did not meet during this reporting period.
- 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 – Water Treated During Dredging Operations for the Reporting Period

Dredge Location	Water Treated (gal)
Ceresco	0
Mill Ponds	0
Sediment Traps	1,544,170
Morrow Lake	0

Table 2 – Dredging Waste (as of 01/06/2014)

Waste Stream	Estimated Dredge Waste On-Site in Geotube bags (yd ³)	Waste Transferred to Ceresco Dredge Pad (yd ³)	Cumulative Estimated Dredge Waste (yd ³)	Cumulative Waste Shipped Off-Site for Disposal (tons)
Ceresco Pad Total	625*	0	108,378	110,319
Mill Ponds	6,743	0	21,033	15,759
Sediment Traps	0	625	12,023	10,651
Morrow Lake Delta	0	0	175	38
C0.4/Wildlife Center/C3.2/FTC	N/A	0	929**	189
Total	7,368	625*	142,537	136,957

*Estimate of Ceresco Pad waste includes waste from multiple sites as indicated.

**Estimated dredge waste related to oily debris.

Table 3 - Soil and Debris Shipped Off Site (as of 01/05/2014)

Waste Stream	Cumulative	Disposal Facility
<i>Haz Soil (yd³)</i>	<i>19,644</i>	<i>Envirosafe (Oregon, OH)</i>
Non-Haz Soil (yd ³)	191,022	SET/C&C
Non-Haz Soil (yd ³)	4,436	SET/Ottawa County Farms
Non-Haz Soil (yd ³)	14,303	SET/WM Westside
<i>Non-Haz Soil & Debris (yd³) (Excluding 2010 Ceresco Dredge)</i>	<i>64,815</i>	<i>Westside Recycling (Three Rivers, MI)</i>
<i>Non-Haz Soil (yd³) (2010 Ceresco Dredge Only)</i>	<i>5,562</i>	<i>EQ/Republic (Marshall, MI)</i>
<i>Haz Debris (yd³)</i>	<i>12,075</i>	<i>EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)</i>
Non-Haz Household Debris (ton)	2,214	SET/C&C
Non-Haz Impacted Debris (ton)	13,420	

Shaded and italicized items are discontinued waste streams.

Table 4 - Liquid Shipped Off-Site (as of 01/05/2014)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons)†
Non-Haz Water	Liquid Industrial Waste	Holland, MI	1,483,707
Non-Haz Water	Plummer	Kentwood, MI	816,814
<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			17,658,550

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 01/06/2014)

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	23,440*
	Envirosafe/ Westside RDF	Oregon, OH	278,665
<i>Geotube Sediment - (Impacted Sediment)</i>	<i>Envirosafe/ Westside RDF</i>	<i>Oregon, OH</i>	1,298
Debris - (Roll Off Boxes with Impacted Sorbents, boom, pads, plastic, PPE, vegetation, and biomass)	EQ Michigan	Belleville, MI	56,513
<i>Frac Tank City - Influent to Carbon Filtration System</i>	<i>C&C Landfill</i>	<i>Marshall, MI</i>	8,109
Frac Tank City - Water	Dynecol	Detroit, MI	46,182
	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>	90
<i>A-1 Pretreatment System</i>	<i>C&C Landfill</i>	<i>Marshall, MI</i>	9
Oily Water - RPP	Enbridge Facility	Griffith, IN	766,288
Total			1,180,594

Shaded and italicized items represent discontinued waste streams.

*Total updated for analytical received after report generation.

Table 6 – Samples Collected By Enbridge

Sample Type	Total	January 2014				December 2013																	
		4	3	2	1	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	
Surface Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private Well	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	14	11	17	0
Groundwater	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	7	5	7	10	0
Sediment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Soil	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	12	0	0	0
Product	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dewatering	6	0	2	0	0	0	0	0	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Sheen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7 – Public Inquiries Received by Enbridge

Location/Med	January 2014			December 2013																		
	3	2	1	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	
Marshall Community Center	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Website	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0

Table 8 - Financial Summary (as of 01/06/2014)

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
Total ERRS Contractors	\$ 3,257,571
<i>Other Contractors</i>	
<i>Lockheed Martin (EPW09031) – TAGA Support</i>	\$ 198,379
<i>Lockheed Martin (EPW09031) -Biodegradability Study</i>	61,886
<i>T&T Bisso (EPA:HS800008)</i>	\$ 882,087
Total Other Contractors	\$ 1,142,352
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 36,600,504
Community Relations	\$ 114,563
T032-Sampling	\$ 161,045
T037-Doc Support	2,054,065
Total START Contractor	\$ 38,930,177
Response Contractor Sub-Totals	\$ 43,336,772
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,803,251
Pollution Removal Funding Agreements	
Total Other Agencies	\$ 3,637,081
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	\$ 1,219,505
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 585,835
Total Est. Oil Spill Cost	\$ 59,227,481
Oil Spill Ceiling Authorized by USCG	\$ 63,250,000
Oil Spill Ceiling Available Balance**	\$ 4,022,519

Shaded and *italicized* items are discontinued

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

**USCG personnel may increase to compensate for EPA not having all available funds to fully staff the site to execute the OPA Project Plan as approved through 12/31/2013. USCG personnel will fill gaps in contractor/EPA staff planned resources as appropriate.

Table 9 - Personnel On-Site

Agency/Entity	January 2014					December 2013								
	5	4	3	2	1	31	30	29	28	27	26	25	24	23
U.S. EPA	0	0	0	0	0	0	1	0	0	1	0	0	1	1
START	0	1	3	3	0	0	3	2	2	3	3	0	0	5
MDEQ	0	0	1	1	0	0	2	0	0	2	1	0	0	1
MDEQ Contractors	0	0	0	2	0	2	1	0	0	0	0	0	0	0
Other Agencies	0	1	1	1	0	0	1	1	1	1	0	0	0	0
Enbridge – Environmental Field Teams – Science*	1	4	9	7	0	1	9	3	1	6	6	0	0	10
Enbridge – Environmental Field Teams – Water Ops*	0	2	13	13	6	6	12	12	21	17	21	0	0	10
Enbridge – Dredge Operations – Ceresco*	18	89	86	87	11	34	74	66	74	57	40	11	10	69
Enbridge – Dredge Operations – Mill Ponds*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Dredge Operations – Sediment Traps*	15	15	28	27	2	4	31	29	29	25	26	2	0	2
Enbridge – Waste Management*	3	40	84	81	0	0	76	47	54	45	40	0	0	41
Enbridge – Office Support*	11	14	22	22	4	6	19	11	14	18	20	1	1	11
Total	48	166	247	244	23	53	229	171	196	175	157	14	12	150

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

Table 9 - Personnel On-Site (Continued)

Agency/Entity	December 2013						
	22	21	20	19	18	17	16
U.S. EPA	0	0	1	0	2	2	2
START	2	3	10	12	13	12	12
MDEQ	0	0	3	7	4	4	4
MDEQ Contractors	0	0	2	2	2	2	2
Other Agencies	0	0	0	3	3	0	3
Enbridge – Environmental Field Teams – Science*	4	7	22	25	27	27	23
Enbridge – Environmental Field Teams – Water Ops*	7	25	25	31	33	32	28
Enbridge – Dredge Operations – Ceresco*	55	103	117	114	106	97	100
Enbridge – Dredge Operations – Mill Ponds*	1	3	19	17	14	13	14
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	3	4	16	22	25	29
Enbridge – Dredge Operations – Sediment Traps*	0	31	29	30	27	24	26
Enbridge – Waste Management*	41	12	87	88	103	115	131
Enbridge – Office Support*	4	17	32	37	40	41	46
Total	114	204	351	382	396	394	420

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