

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #202**



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



Morrow Lake Delta E4 Containment System Installation (03/26/2014)

US EPA ARCHIVE DOCUMENT

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

Date: 04/16/2014

Operational/Reporting Period: 0700 hours 03/17/2014 through 0700 hours 03/31/2014

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 Divisions/Groups: 1) Water Operations; and 2) Mill Ponds; 3) Morrow Lake; and 4) Waste Management.

2.1 Water Operations Group

- Installation of the Morrow Lake Delta E4 Containment System began on March 25, 2014 and continued throughout the reporting period.
- No sheen responses were conducted during this reporting period.

2.2 Mill Ponds Division

- Dredging operations at the Mill Ponds impoundment and the MP 36.1 sediment trap remained suspended throughout the reporting period.
- Water treatment was conducted at the Mill Ponds dredge pad from March 26 through 28, 2014.

2.3 Morrow Lake Division

- Enbridge continued planning and preparations for construction of the dredge pad for continued sediment removal actions at Morrow Lake and the Morrow Lake Delta, as required by the March 14, 2013 Order.

- On March 28, 2014, Enbridge submitted its “Morrow Lake Dredge, Benteler Site Specific Air Monitoring and Sampling Supplement to the 2011 Air Monitoring and Sampling Addendum to the Sampling and Analysis Plan.” The plan is currently in review with U.S. EPA.

2.4 Waste Management Division

- Cumulative quantities of soil, debris, and liquid shipped off-site during the response are presented in Tables 1 and 2.
- 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 3.

3. Planning Section

3.1 Situation Unit

- During the reporting period, an overflight was conducted on March 26, 2014 to document all operational areas and river icing/melting conditions. 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. Development of the HDM and sediment transport model continued throughout the reporting period.
- U.S. EPA used the results of the HDM activities to propose adjustments to the E4 Containment System, specifically shortening the C-1 boom.

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 5.

5. Finance

- The current National Pollution Funds Center (NPFC) ceiling is \$69.25 million. Approximately 87.3% of the ceiling has been spent through March 30, 2014. The latest average 14-day burn rate was \$16,088 per day. These cost summaries reflect only U.S. EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 6.

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. During this reporting period, the Stakeholder group met on March 27, 2014.
- 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 7.

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 - Soil and Debris Shipped Off Site (as of 03/30/2014)

Waste Stream	Cumulative	Disposal Facility
<i>Haz Soil (yd³)</i>	19,644	<i>Envirosafe (Oregon, OH)</i>
Non-Haz Soil (yd ³)	239,630	SET/C&C
Non-Haz Soil (yd ³)	4,476	SET/Ottawa County Farms
Non-Haz Soil (yd ³)	14,673	SET/WM Westside
<i>Non-Haz Soil & Debris (yd³) (Excluding 2010 Ceresco Dredge)</i>	64,815	<i>Westside Recycling (Three Rivers, MI)</i>
<i>Non-Haz Soil (yd³) (2010 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)	2,259	SET/C&C
Non-Haz Impacted Debris (ton)	14,562	

Shaded and italicized items are discontinued waste streams.

Table 2 - Liquid Shipped Off-Site (as of 03/30/2014)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) [†]
Non-Haz Water	Liquid Industrial Waste	Holland, MI	1,557,407
Non-Haz Water	Plummer	Kentwood, MI	866,009
<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
Treated Non-Haz Water	Liquid Industrial Waste	Holland, MI	370,200
Treated Non-Haz Water	Plummer	Kentwood, MI	4,976,140
<i>Hazardous Water</i>	<i>Safety Kleen^a</i>		825
Treated Non-Haz Water	Dynecol	Detroit, MI	150,700
Treated Non-Haz Water	Battle Creek POTW	Battle Creek, MI	1,968,700
Total			17,781,445

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 3 – Estimated Recovered Oil (as of 03/31/2014)

Waste Stream Containing Recovered Oil	Destination Company	Destination Location	Estimated Oil Volume in Waste Stream (gallons)
Soil - Sediment Impacted Soil & Debris	C&C Landfill	Marshall, MI	25,504
	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	57,091
<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	46,183
	Liquid Industrial Waste Services, Inc.	Kentwood, MI	
	Plumbers 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			1,183,238

Shaded and *italicized* items represent discontinued waste streams.

Table 4 – Samples Collected By Enbridge

Sample Type	Total	March 2014													
		29	28	27	26	25	24	23	22	21	20	19	18	17	16
Surface Water	9	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Private Well	20	0	0	0	0	0	0	0	0	0	1	4	15	0	0
Groundwater	25	0	1	1	0	1	2	0	0	3	9	3	0	5	0
Sediment	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
Soil	10	0	3	5	1	0	0	0	0	0	0	0	0	1	0
Product	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dewatering	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Sheen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 5 – Public Inquiries Received by Enbridge

Location/Mod	March 2014														
	28	27	26	25	24	23	22	21	20	19	18	17	16	15	
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 6 - Financial Summary (as of 03/30/2014)

Item	Expended (Cumulative)
ERRS Contractors	
<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
Other Contractors	
<i>Lockheed Martin (EPW09031) – TAGA Support</i>	\$ 198,379
<i>Lockheed Martin (EPW09031) -Biodegradability Study</i>	61,917
<i>T&T Bisso (EPA:HS800008)</i>	\$ 882,087
Total Other Contractors	\$ 1,142,383
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 37,425,753
Community Relations	\$ 114,563
T032-Sampling	\$ 161,045
T037-Doc Support	2,074,674
Total START Contractor	\$ 39,776,035
Response Contractor Sub-Totals	\$ 44,182,661
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,909,320
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	\$ 1,316,128
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 613,727
Total Est. Oil Spill Cost	\$ 60,471,703
Oil Spill Ceiling Authorized by USCG	\$ 69,250,000
Oil Spill Ceiling Available Balance	\$ 8,778,297

Shaded and *italicized* items are discontinued

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

Table 7 - Personnel On-Site

Agency/Entity	March 2014													
	30	29	28	27	26	25	24	23	22	21	20	19	18	17
U.S. EPA	0	0	1	3	3	2	1	0	0	1	2	1	2	0
START	0	0	8	9	10	10	10	0	0	9	9	10	11	11
MDEQ	0	0	1	4	3	3	2	0	0	2	5	3	4	3
MDEQ Contractors	0	0	1	2	2	2	2	0	0	1	1	2	3	3
Other Agencies	0	0	3	3	4	4	4	0	0	4	4	2	2	2
Enbridge – Environmental Field Teams – Water Ops*	2	2	19	18	15	18	14	2	2	0	4	4	6	2
Enbridge – Dredge Operations – Mill Ponds*	0	0	3	2	2	0	0	0	0	0	0	0	0	0
Enbridge – Dredge Operations – Delta/Morrow Lake*	0	0	2	2	2	2	3	0	0	0	0	0	0	0
Enbridge – Waste Management*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Office Support*	4	8	39	41	38	38	37	1	7	21	22	23	23	19
Total	6	10	77	84	79	79	73	3	9	38	47	45	51	40

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