

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #182**



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



Legacy Contamination Coring Operations (June 4, 2013)

US EPA ARCHIVE DOCUMENT

To: Susan Hedman, U.S. EPA Regional Administrator
 James Sygo, MDEQ
 Michelle DeLong, MDEQ
 Dr. Linda Dykema, MDCH
 Deb Cardiff, Kalamazoo County Public Health
 Richard Fuller, Kalamazoo County Sheriff's Office
 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: Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator

Date: 06/21/2013

Reporting Period: 0700 hours 06/03/2013 through 0700 hours 06/17/2013

Operational Periods: 0700 hours 06/03/2013 through 0700 hours 06/10/2013
 0700 hours 06/10/2013 through 0700 hours 06/17/2013

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) Submerged Oil; 2) Containment; and 3) Waste Management.

2.1 Submerged Oil Branch

2.1.1 Submerged Oil Science Group

- Evaluation of legacy contamination in the proposed dredge areas through the collection and analysis of sediment cores continued throughout the reporting period. Core collection was completed on June 6, 2013. Core logging and sampling was completed on June 12, 2013.
- The Spring 2013 Submerged Oil Reassessment continued throughout the operational periods.
- Monthly cylindrical sample device (CSD) sampling was conducted from June 10 - 13, 2013.
- Quarterly sediment trap bathymetry surveys were conducted throughout the operational periods, pursuant to the Sediment Trap Monitoring and Maintenance Plan.
- Sediment trap poling began on June 17, 2013.

2.1.2 Submerged Oil Compliance Group

- On May 20, 2013, Enbridge submitted MDEQ dredging permit applications for MP 13.90 – 15.70 (Mill Ponds), Morrow Lake Delta, MP 10.40 Sediment Trap, and MP 21.50 Sediment Trap.
- On June 12, 2013, Enbridge submitted revised MDEQ dredging permit applications for Ceresco, MP 13.90 – 15.70 (Mill Ponds), Morrow Lake Delta, MP 10.40 Sediment Trap, and MP 21.50 Sediment Trap to incorporate MDEQ comments. The revised permit applications were in review with MDEQ as of the close of the reporting period.

2.2 Containment Branch

2.2.1 Containment Compliance Group

- No activities were conducted during the operational periods.

2.2.2 Containment Recovery Group

- 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.
- Monthly poling of the E4.0 Containment System was completed on June 4, 2013.
- 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 periods. Refer to Table 1 for sheen differentiation testing information and to Section 3.1 for locations of oil sheen and glob observations.
- Management of oil sheen and/or globules continued. Twenty-seven sheen responses were conducted during the operational periods. Refer to Table 2.

2.4 Waste Management Branch

- 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

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 periods, overflights were conducted on June 5 and 13, 2013. See Section 2.2.2 for additional details regarding the EOMP.
- During the operational periods, oil sheen and/or globules were observed at:

- Ceresco Dam Impoundment at various locations between MP 4.5 and MP 5.89 on June 3 – 8 and 10 - 15;
 - MP 8.50 LDB on June 10 and 14;
 - Mill Pond Impoundment at various locations between MP 14.25 and MP 15.65 on June 3 – 8, 10 – 13, and 15;
 - Various locations between MP 21.5 and MP 36.5 on June 4 – 8 and 10 - 15;
 - Morrow Lake Delta and/or Neck on June 3 – 8 and 10 - 15;
 - Morrow Lake North and/or South Coves on June 3, 4, 6 – 8, 10 – 13, and 15; and
 - Morrow Lake on June 7 and 15.
- 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.

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 90.2% of the ceiling has been spent through June 16, 2013. The latest average 14-day burn rate was \$43,700 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

- Entities participating in the MAC include:
 - U.S. Environmental Protection Agency
 - Michigan Department of Environmental Quality
 - Michigan Department of Community Health
 - City of Battle Creek
 - City of Marshall
 - Allegan County Emergency Management
 - Calhoun County Public Health Department
 - Calhoun County Emergency Management
 - Calhoun County Water Resources Commission
 - Kalamazoo County Health and Community Services Department
 - Kalamazoo County Sheriff
 - Enbridge (Responsible Party)
- For a list of cooperating and assisting agencies, see SITREP #51 (Sections 3.2 and 3.3).
- 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, a Stakeholder meeting was held on June 13, 2013.

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	June 2013															
		16	15	14	13	12	11	10	9	8	7	6	5	4	3		
Sheen Tests Performed	0	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	0
Results Indicated Biogenic Source	0	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	0

Table 2 – Sheen Responses

Total	June 2013													
	16	15	14	13	12	11	10	9	8	7	6	5	4	3
27	0	1	2	1	3	3	4	0	3	2	3	1	3	1

Table 3 - Soil and Debris Shipped Off Site (as of 6/16/2013)

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)	78,539	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)	1,809	SET/C&C
Non-Haz Impacted Debris (ton)	7,192	

Shaded and italicized items are discontinued waste streams.

Table 4 - Liquid Shipped Off-Site (as of 6/16/2013)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons)†
Non-Haz Water	Liquid Industrial Waste	Holland, MI	1,376,757
Non-Haz Water	Plummer	Kentwood, MI	620,526
<i>Non-Haz Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	<i>981,792</i>
<i>Non-Haz Water</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	<i>1,143,280</i>
<i>Hazardous Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	<i>3,594,579</i>
<i>Oil</i>	<i>Enbridge Facility</i>	<i>Griffith, IN</i>	<i>766,288</i>
<i>Other Material</i>			<i>1,405,525</i>
<i>Treated Non-Haz Water</i>	<i>Liquid Industrial Waste</i>	<i>Holland, MI</i>	<i>370,200</i>
<i>Treated Non-Haz Water</i>	<i>Plummer</i>	<i>Kentwood, MI</i>	<i>4,976,140</i>
<i>Hazardous Water</i>	<i>Safety Kleen^a</i>		<i>825</i>
<i>Treated Non-Haz Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	<i>150,700</i>
<i>Treated Non-Haz Water</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	<i>1,968,700</i>
Total			17,355,312

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 6/17/2013)

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	14,071*
	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	34,564**
<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	46,176
	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			1,149,270

Shaded and *italicized* items represent discontinued waste streams.

* Analytical not received before report generation.

**Total updated after EPA review of analytical. Will take new O&G sample and apply to next 10 roll-off boxes after 5/23/13 sample.

Table 6 – Samples Collected By Enbridge

Sample Type	Total	June 2013													
		16	15	14	13	12	11	10	9	8	7	6	5	4	3
Surface Water	18	0	0	0	0	0	8	10	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	8	0	3	6	0	0	0	0	0	0	0
Sediment	499	0	0	0	18	44	51	64	0	38	69	56	49	62	48
Soil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7 – Public Inquiries Received by Enbridge

Location/Med	June 2013													
	16	15	14	13	12	11	10	9	8	7	6	5	4	3
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 8 - Financial Summary (as of 6/3/2013)

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	\$ 32,451,708
Community Relations	\$ 114,563
T032-Sampling	\$ 184,992
T037-Doc Support	1,926,762
Total START Contractor	\$ 34,678,025
Response Contractor Sub-Totals	\$ 39,073,196
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,467,484
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	\$ 752,671
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 451,074
Total Est. Oil Spill Cost	\$ 53,955,219
Oil Spill Ceiling Authorized by USCG	\$ 59,800,000
Oil Spill Ceiling Available Balance	\$ 5,844,781

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	June 2013													
	16	15	14	13	12	11	10	9	8	7	6	5	4	3
U.S. EPA	0	0	1	3	3	4	5	0	0	3	4	4	5	2
START	0	9	22	24	28	26	25	0	13	25	26	28	28	27
MDEQ	0	0	3	3	3	3	6	0	0	4	4	4	10	3
MDEQ Contractors	0	0	2	3	3	3	3	0	0	2	3	3	3	2
Other Agencies	0	0	0	1	1	1	1	0	0	0	0	0	0	0
Calhoun County (CC) Public Health	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CC Emergency Management (EM)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CC Water Resources Commission	0	0	0	0	0	0	0	0	0	0	0	0	0	0
City of Battle Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0
City of Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo County Public Health	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo County EM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo County Sheriff	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MDEQ	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MDCH	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Michigan State Police EMD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allegan County Emergency Mgmt.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MDNR	0	0	0	0	0	0	3	0	0	0	0	0	1	0
Enbridge – Kalamazoo River*	0	1	11	12	10	12	15	0	2	12	11	11	17	2
Enbridge – Containment*	0	6	9	9	9	9	10	0	6	9	9	10	10	9
Enbridge – Submerged Oil*	3	42	78	88	91	90	74	1	57	76	88	89	87	69
Enbridge – Waste Management*	0	1	2	2	2	2	2	0	2	2	2	2	2	2
Enbridge – Marshall Office*	44	26	52	53	52	57	55	2	23	49	51	55	44	74
Total	47	85	180	198	202	207	199	3	103	182	198	206	207	190

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