

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #176**



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



Sheen Sampling at MP 5.80 RDB

US EPA ARCHIVE DOCUMENT

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Andrew Michalowski, 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: 04/05/2013

Reporting/Operational Period: 0700 hours 03/11/2013 through 0700 hours 03/25/2013

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

- All submerged oil field activities were stood down during this operational period due to river icing conditions.
- Teams continued to evaluate sediment trap bathymetry data collected in December 2012.

2.1.2 Submerged Oil Compliance Group

- No activities were conducted during this operational period.

2.2 Containment Branch

2.2.1 Containment Compliance Group

- No activities were conducted during this operational period.

2.2.2 Containment Recovery Group

- 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 each identified 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. A sheen test was conducted at the Ceresco Dam on March 15, 2013. Refer to Table 1.
- Management of oil sheen and/or globules continued. A sheen response was conducted on March 15, 2013 at the Ceresco Dam impoundment. 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 this operational period, an overflight was conducted on March 14, 2013. See Section 2.2.2 for additional details regarding the EOMP.
- During this operational period, oil sheen and/or globules were observed at:
 - C0.4 Boat Launch on March 19, 2013;
 - Ceresco Dam Impoundment at various locations between MP 5.20 LDB and MP 5.89 RDB on March 11, 13, 14, 15, 16, 22, and 23, 2013;
 - MP 15.0 LDB on March 13, 2013;
 - MP 15.25 South Mill Pond on March 11, 2013;
 - E4 Boat Launch on March 15, 2013;
 - Morrow Lake Delta West Cove on March 15, 2013; and
 - Morrow Lake South Cove on March 18, 2013.
- Situation Unit personnel continued documenting occurrences of ice formation, ice melt, and elevated water levels throughout the river system.
- Photographs were taken and distributed to project participants during the weekly Consolidated ICS Meetings.

3.2 Environmental Unit

- On March 21, 2013, Enbridge submitted their Quantification of Submerged Oil Report. The report is currently in review with US 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 \$56.25 Million. Approximately 90.8% of the ceiling has been spent through March 22, 2013. The latest average 12-day burn rate was \$13,673 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)*

- On March 11, 2013, SSCG and Enbridge forensic chemists concluded the regular conference calls to examine the oil chemical fingerprinting results and compare procedures for applying oil fingerprinting results to measuring submerged Line 6B oil remaining in the Kalamazoo River sediments.

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).

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	March 2013													
		24	23	22	21	20	19	18	17	16	15	14	13	12	11
Sheen Tests Performed	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Results Indicated Petroleum Source	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
Inconclusive Test Results	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Table 2 – Sheen Responses

Total	March 2013													
	24	23	22	21	20	19	18	17	16	15	14	13	12	11
1	0	0	0	0	0	0	0	0	0	1	0	0	0	0

Table 3 - Soil and Debris Shipped Off Site (as of 3/24/2013)

Waste Stream	Cumulative	Disposal Facility
Haz Soil (yd ³)	19,644	Envirosafe (Oregon, OH)
Non-Haz Soil (yd ³) (Excluding Ceresco Dredge)	78,112	SET/C&C
Non-Haz Soil & Debris (yd ³) (Excluding Ceresco Dredge)	64,815	Westside Recycling (Three Rivers, MI)
Non-Haz Soil (yd ³) (Ceresco Dredge Only)	5,562	EQ/Republic (Marshall, MI)
Haz Debris (yd ³)	12,075	EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)
Non-Haz Household Debris (ton)	1,805	SET/C&C
Non-Haz Impacted Debris (ton)	7,162	

Shaded items are discontinued waste streams.

Table 4 - Liquid Shipped Off-Site (as of 3/24/2013)

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	611,726
<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			17,346,512

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 3/25/2013)

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	14,034
	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	34,510
<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	46,176
	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>	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			1,149,180

Shaded and italicized items represent discontinued waste streams.

Table 6 – Samples Collected By Enbridge

Sample Type	Total	March 2013													
		24	23	22	21	20	19	18	17	16	15	14	13	12	11
Surface Water	18	0	0	0	0	0	0	0	0	0	7	11	0	0	0
Private Well	18	0	0	0	0	3	4	11	0	0	0	0	0	0	0
Groundwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sediment	6	0	0	1	1	0	0	0	0	0	1	2	1	0	0
Soil	117	0	0	9	11	16	12	11	0	0	12	10	12	13	11
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	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0

Table 7 – Public Inquiries Received by Enbridge

Location/Med	March 2013														
	24	23	22	21	20	19	18	17	16	15	14	13	12	11	
Marshall Community Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Oil Spill Public Information Hotline	0	0	1	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	1	0											

Table 8 - Financial Summary (as of 3/22/2013)

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>	31,554
<i>T&T Bisso (EPA:HS800008)</i>	\$ 882,087
Total Other Contractors	\$ 1,112,020
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 30,298,449
Community Relations	\$ 114,563
T032-Sampling	\$ 184,992
T037-Doc Support	1,867,169
Total START Contractor	\$ 32,465,173
Response Contractor Sub-Totals	\$ 36,834,764
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,315,770
Pollution Removal Funding Agreements	
Total Other Agencies	\$ 2,797,081
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	\$ 510,071
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 381,043
Total Est. Oil Spill Cost	\$ 51,079,822
Oil Spill Ceiling Authorized by USCG	\$ 56,250,000
Oil Spill Ceiling Available Balance	\$ 5,170,178

Shaded and italicized items are discontinued

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

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Table 9 - Personnel On-Site*

Agency/Entity	March 2013													
	24	23	22	21	20	19	18	17	16	15	14	13	12	11
U.S. EPA	0	0	2	2	2	2	0	0	0	0	0	0	0	0
START	0	1	7	9	10	10	10	0	1	4	7	8	8	8
MDEQ	0	0	3	2	2	3	2	0	0	4	1	3	4	3
MDEQ Contractors	0	0	1	3	3	3	2	0	0	1	2	2	2	2
Other Agencies	0	0	0	0	0	0	0	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 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 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	0	0	0	0	0	0	0	0
Enbridge – Kalamazoo River*	0	0	11	9	10	10	11	0	0	10	10	8	8	12
Enbridge – Containment*	0	0	2	0	0	0	0	0	2	2	0	0	0	0
Enbridge – Submerged Oil*	0	0	0	0	0	0	0	0	0	1	1	0	0	0
Enbridge – Waste Management*	0	0	1	1	1	1	1	0	0	1	1	1	1	1
Enbridge – Marshall Office*	2	6	43	46	41	42	43	2	2	38	44	43	45	35
Total	2	7	70	72	69	71	69	2	5	61	66	65	68	61

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