

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #173**



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



Dewatering and Construction Activities at Frac Tank City (January 30, 2013)

To: Susan Hedman, U.S. EPA Regional Administrator
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 Scott Corbin, Allegan County Emergency Management
 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: 02/19/2013

Reporting/Operational Period: 0700 hours 01/28/2012 through 0700 hours 02/11/2013

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

- On January 28, 2013, Enbridge conducted UV assessment of hexane sheen test vials previously collected from locations for which the Emerging Oil Management Program (EOMP) sheen tests were inconclusive in determining whether the sheen was petroleum or biogenic. Of the seven (7) vials assessed, three (3) were positive for UV fluorescence (6.60 RDB, MP 36.30 LDB, and MP 36.5 RDB).
- 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. See Table 1 for a summary of sheen differentiation tests conducted during the reporting period.
- Management of oil sheen and/or globules continued. During this reporting period, no sheen responses were conducted. See Table 2 for a summary of responses to oil sheen and/or globules by date.

2.4 Waste Management Branch

- From January 30 to February 1, 2013, Enbridge completed clearing and grading work at Frac Tank City, pursuant to the approved Winter Water Management Work Plan Frac Tank City 2012, dated December 20, 2012. The work was conducted to allow for better management of precipitation during Winter 2012/2013.
- Cumulative quantities of soil, debris, and liquid shipped off-site during the response are presented in Tables 3 and 4.
- The total amount of recovered oil from the inception of the response 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 observed and documented progress in operational areas, river icing conditions, and locations of oil sheen and/or globules through field observations and overflights. During this operational period, an overflight was conducted on January 31, 2013. See Section 2.2.2 for additional details regarding the EOMP.
- Specific observations during this period include the observation of oil sheen at Ceresco Dam LDB on January 30, 2013; and at MP 21.5 RDB on February 7, 2013.
- Situation Unit personnel continued documenting occurrences of ice formation and melt throughout the river system.
- Photographs were taken and distributed to project participants during the weekly Consolidated ICS Meetings and the MAC Meeting.

3.2 Environmental Unit

- U.S. EPA continued to track the progress of the Oil Quantification process by reviewing core logs submitted by Enbridge and tracking the samples submitted for laboratory analysis.

- Review and evaluation of bathymetry data submitted by Enbridge from the E4.0 Containment System (post removal) and quarterly sediment trap bathymetry tasks continued.

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 inquiries 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 89.4% of the ceiling has been spent through February 7, 2012. The latest average 7-day burn rate was \$28,198 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)

- SSCG and Enbridge forensic chemists continued regular conference calls to examine the oil chemical fingerprinting results and compare procedures for applying oil fingerprinting results to measuring 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

- o Calhoun County Water Resources Commission
 - o Kalamazoo County Health and Community Services Department
 - o Kalamazoo County Sheriff
 - o 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	February 2013										January 2013			
		10	9	8	7	6	5	4	3	2	1	31	30	29	28
Sheen Tests Performed	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
Results Indicated Biogenic Source	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

Table 2 – Sheen Responses

Total	February 2013										January 2013			
	10	9	8	7	6	5	4	3	2	1	31	30	29	28
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3 - Soil and Debris Shipped Off Site (as of 2/10/2013)

Waste Stream	Cumulative	Disposal Facility
Haz Soil (yd ³)	19,644	Envirosafe (Oregon, OH)
Non-Haz Soil (yd ³) (Excluding Ceresco Dredge)	78,111	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 2/10/2013)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons)†
Non-Haz Water	Dynecol	Detroit, MI	981,792
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>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			17,346,512

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 2/10/2013)

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>	<i>1,298</i>
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>	<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			1,149,180

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	February 2013										January 2013			
		10	9	8	7	6	5	4	3	2	1	31	30	29	28
Surface Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private Well	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Groundwater	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sediment	18	0	0	4	6	0	5	0	0	0	2	0	0	0	1
Soil	92	0	0	3	7	13	9	7	0	0	5	13	13	11	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7 – Public Inquiries Received by Enbridge

Location/Med	February 2013										January 2013			
	10	9	8	7	6	5	4	3	2	1	31	30	29	28
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	1
Total Public Inquiries	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Table 8 - Financial Summary (as of 2/7/2013)

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	\$ 29,802,297
T032-Sampling	\$ 184,992
T037-Doc Support	\$ 1,858,317
Total START Contractor	\$ 31,845,606
Response Contractor Sub-Totals	\$ 36,215,197
U.S. EPA Funded Costs: Total U.S. EPA Costs	\$ 6,270,037
Pollution Removal Funding Agreements	
Total Other Agencies	\$ 2,063,535
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	\$ 442,543
Cost Documentation/Billing Admin Fee (2.93%)*	\$ 361,549
Total Est. Oil Spill Cost	\$ 50,261,973
Oil Spill Ceiling Authorized by USCG	\$ 56,250,000
Oil Spill Ceiling Available Balance	\$ 5,988,027

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	February 2013										January 2013			
	10	9	8	7	6	5	4	3	2	1	31	30	29	28
U.S. EPA	0	0	2	2	2	2	2	0	0	2	3	2	1	1
START	0	1	8	9	11	9	9	0	1	7	9	10	8	6
Other Agencies	0	0	0	1	1	1	0	0	0	0	0	0	0	0
Calhoun County (CC) Public Health	0	0	0	0	0	0	0	0	0	0	2	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	1	0	0	0
City of Battle Creek	0	0	0	0	0	0	0	0	0	0	1	0	0	0
City of Marshall	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Kalamazoo County Public Health	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Kalamazoo Sheriff	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	1	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	12	13	14	13	10	0	0	9	12	12	13	13
Enbridge – Containment*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Submerged Oil*	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Waste Management*	0	0	0	2	1	1	1	0	0	1	1	1	1	1
Enbridge – Marshall Office*	0	1	28	29	30	31	28	0	1	24	30	33	33	29
Total	0	2	50	56	59	57	50	0	2	43	62	58	56	50

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