

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #93**



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



MP-7.25 Shoreline Restoration and Erosion Control

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
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From: Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator
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Date: 04/05/2011

Reporting Period: 0700 hours 03/28/2011 through 0700 hours 04/04/2011

1. Site Data

Site Number:	Z5JS	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non-NPL	Operable Unit:	
Mobilization Date:	7/26/2010	Start Date:	7/26/2010
Demobilization Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E10527	Reimbursable Account:	

2. Previous Response Actions and Current Response Governance

See SITREP #51 for a comprehensive description of preliminary operations. Previous response actions performed to date may be found in Situation Reports (SITREPs) #1 through #92.

Governance for the project is provided by the U.S. Environmental Protection Agency (U.S. EPA) Federal On-Scene Coordinator (FOSC) and the Michigan Department of Environmental Quality. The structure of the response is the Incident Command System (ICS), with the FOSC serving as the Incident Commander (IC).

The Operational Period covered in this report is: 0700 03/28/2011 through 0700 04/04/2011.

3. Operations

This current operational phase of the response consists of: 1) Operations and Maintenance (O&M); 2) Decontamination; and 3) Other Operations.

3.1 Operations and Maintenance (O&M)

Teams inspected O&M locations. In general, team activities included an inspection of containment boom to ensure proper placement and effectiveness and inspection for readily visible oil or oil-saturated soils. Additionally, O&M operations (i.e., access road construction, excavation) continued. A summary of significant actions for this period is presented in Table 1.

Table 1 – O&M Actions

Activity	Number of Locations	Location (MP)
Sheen and/or Product Observation		Talmadge Creek Bank Areas/Culverts; 2.25 L2, 3.25 R1, 4.50 L1, 4.25 IE, 4.50 IF, 5.55 N, 10.50 L2; B5, 6.00 R1, 6.00 R3, 6.00 R4, 8.50 L1, 9.00 L1, 9.00 RDB, 9.50 L1, 10.50 L2, 10.75 L2, 10.75 L2 SO; 11.25 R1, 11.25 R2, 13.00 R1, 28.25 R1, B5, C0 0.5, C6, D3, E4, E3
Aqua Barrier Installation	0	None
Excavation Ancillary Activities (i.e., dewatering, bridges, sheet pile, staging, etc.)	2	10.50 L2; 10.75 L2;
Excavation	2	10.50 L2; 10.75 L2;

A summary of the number of sites in the O&M process as reported by Enbridge is summarized below.

Table 2 – O&M Maintenance and Monitoring Areas

O&M Process	April 2011			March 2011			
	3	2	1	31	30	29	28
Active	0	0	0	0	0	1	2
Monitoring	31	31	33	33	33	32	33
Recommended to Cleared	18	18	16	16	16	16	14
Signed Off	54	54	54	54	54	54	54
Total	103	103	103	103	103	103	103

3.2 Decontamination

Equipment and boom that were decontaminated during this operational period as reported by Enbridge is presented below.

Table 3 - Equipment Decontamination

Location/Media	Total	April 2011			March 2011			
		3	2	1	31	30	29	28
Frac Tanks	1	0	0	0	0	0	1	0
Vac Trucks-Tankers	1	0	0	0	0	0	1	0
Roll-Off Boxes	3	0	0	0	2	0	1	0
Yellow Iron	0	0	0	0	0	0	0	0
Marine Vessels	2	0	0	2	0	0	0	0
Vehicles	7	0	0	0	3	4	0	0
Boom (feet)	0	0	0	0	0	0	0	0

N/R = Not reported by Enbridge.

3.3 Additional Operations

3.3.1 Air Operations

There were 3 over-flights for situational awareness during this operational period. Air Operations personnel observed and documented O&M progress in all operational areas and continued to assess areas of interest such as oil mobilization and decontamination activities.

3.3.2 Environmental Compliance and Oversight

Continued waste management characterization, documentation and coordination. Coordination with the MDEQ continues, particularly with regards to MDEQ concurrence of work contemplated by Enbridge in ecologically sensitive areas during operations.

3.3.3 Monitoring Branch

Under MDEQ direction, potable water, groundwater, soil, sediment and surface water sampling were performed in accordance with the existing U.S. EPA-approved Sampling and Analysis Plan (SAP) (adopted by MDEQ) and a reduced sampling frequency as approved by the MDEQ.

Samples reported by Enbridge are provided below.

Table 4 – Samples Collected By Enbridge

Sample Type	Total	April 2011			March 2011			
		3	2	1	31	30	29	28
Surface Water	31	0	0	0	2	10	11	8
Private Well Samples	0	0	0	0	0	0	0	0
Groundwater Samples	4	0	0	0	4	0	0	0
Sediment Samples	11	0	0	0	0	7	2	2
Soil Samples	131	0	0	0	29	32	56	14

4. Landowner Environmental Issues

Landowner environmental issues, as reported by Enbridge for this period are represented below.

Table 5 – Landowner Environmental Issues

Issues this Period	Issues Undergoing Evaluation	Issues Considered Addressed
2	13	2

5. Progress Metrics

Progress metrics reported in this section are as reported by Enbridge.

Table 6 - Boom and Aqua Dam Report

Metric	April 2011			March 2011			
	3	2	1	31	30	29	28
# Boom Locations [# control points included]	44	44	44	44	44	45	45
Total Surface Boom Deployed (ft) [ft of control point surface boom]	19,450	19,450	19,450	19,450	19,450	18,950	19,000
# Aqua Dam Locations	6	6	6	7	7	8	10
Aqua Dam Deployed (ft)	670	670	670	830	830	910	1035
Sand-Super Sacks [Sand Bags]	39	39	39	39	39	39	39

NR = Not Reported by Enbridge

Table 7 - Soil and Debris Shipped Off Site as of 4/4/2011

Waste Stream	Cumulative	Disposal Facility
Haz Soil (yd ³)	19,644	Envirosafe (Oregon, OH)
Non-Haz Soil & Debris (yd ³) (Excluding Ceresco Dredge)	64,815	Westside Recycling (Three Rivers, MI); Terra/C&C and EQ/Republic (Marshall, MI)
Non-Haz Soil (yd ³) (Ceresco Dredge Only)	5,562	
Haz Debris (yd ³)	12,075	EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)
Non-Haz Household Debris (ton)	370	EQ/Republic (Marshall, MI); C&C
Non-Haz Impacted Debris (ton)	1,597	

Table 8 – Oil/Water Collected by Location (as of 4/4/2011)

Location	Cumulative (gallons)
Division A	5,356,315
Division B	4,843,782
Division C	1,891,406
Division D	121,106
Division E	47,438
Decontamination	1,433,200
Site A	115,755
Other Locations*	1,173,440
Subtotal	14,984,518
Sludge**	(467,660)
Total Oil/Water	14,516,858

* Decontamination Operations, Wildlife Center Operations, Sediment Trap Cleaning, Hydro-Vacuuming.

** Sludge collected is tracked as a liquid waste; however, after stabilization, the sludge is disposed of as a solid waste. Therefore the volume of sludge is not included within the cumulative oil/water totals. Stabilized sludge is included in the solid waste disposal numbers shown in Table 7.

Table 9 – Oil/Water Separation 4/4/2011 (Enbridge Facility in Griffith, IN)

Item	Cumulative (gallons)
Oil	766,288
Other Material	1,405,525
Total	2,171,813

Table 10 - Oil/Water Remaining On-Site 4/4/2011

Item	Cumulative (gallons)
Oil/Water Collected	14,516,858
Oil/Water Shipped Off-Site	14,508,380
Total Oil/Water Remaining On-Site	8,478

Table 11 - Liquid Shipped Off-site as of 4/4/2011

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
Hazardous Water	Dynecol	Detroit, MI	3,594,579
Oil/Water	Enbridge Facility	Griffith, IN	2,171,813
Treated Non-Haz Water	Liquid Industrial Waste	Holland, MI	370,200
Treated Non-Haz Water	Plummer	Kentwood, MI	4,976,140
Hazardous Water	Safety Kleen ^a		825
Non-Haz Water	Dynecol	Detroit, MI	479,003
Treated Non-Haz Water*	Dynecol	Detroit, MI	150,700
Treated Non-Haz Water*	Battle Creek POTW	Battle Creek, MI	1,968,700
Non-Haz Water	Battle Creek POTW	Battle Creek, MI	796,420
Total			14,508,380

* Treated Non-Haz Water no longer sent to this location.

† Cumulative quantities may not reconcile with previous reports (due to auditing).

a. New Age lab water and methanol mix generated by mobile laboratory.

6. Support Operations

6.1 Planning

The Planning Department coordinated with Enbridge Planning in the ICS planning cycle.

6.1.1 Environmental Unit

Nothing to report.

6.1.2 Data Management Unit

Continued importing preliminary and validated analytical results into Scribe, exporting daily briefings; and processing and printing maps as requested. Database management is being done in Vernon Hills, IL and/or Houston, TX.

Information from the EPA aerial imagery flight continues to be synthesized by GIS personnel.

6.1.3 Documentation Unit

Continued organization and archiving of electronic and paper files.

6.2 Safety

Due to the continued changing of the seasons, an emphasis continues to be placed on weather awareness (heavy rain, fog, snow, flood watch and rising of water levels) with the work crews.

Due to an increase in operations, site condition awareness was a new focus of the operational period.

6.3 Public Information

The quantity of public inquires reported by Enbridge for this period is presented below.

Table 12 – Public Inquiries Received by EPA and Enbridge

Location/Media	Total	April 2011			March 2011			
		3	2	1	31	30	29	28
Marshall Community Center	5	0	0	1	0	1	1	2
Oil Spill Public Information Hotline	14	0	0	6	2	4	0	2
Website	1	0	0	0	0	0	0	1
Total Public Inquiries	20	0	0	7	2	5	1	5

6.4 Finance

The current NPFC issued ceiling is \$31.2 Million. Approximately 82.5% of the ceiling has been spent through April 3, 2011. As of April 3, 2011, the latest average 7-day burn rate was \$23,353 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented below.

Table 13 - Financial Summary

Item	Expended (Cumulative) as of 4/3/2011
ERRS Contractors	
EQM (EPS50802) T057	\$ 1,250,065
T060	\$ 204,905
LATA (EPS50804) T019	\$ 1,451,396
ER LLC (EPS50905) T040	\$ 723,669
Total ERRS Contractors	\$ 3,630,035
Other Contractors	
Lockheed Martin (EPW09031) – TAGA Support	\$ 150,000
T&T Bisso (EPA:HS800008)	\$ 1,255,000
Total Other Contractors	\$ 1,405,000
START Contractor – WESTON (EPS50604)	
T030-Response	\$9,898,892
T032-Sampling	\$180,214
T037-Doc Support	\$641,334
Total START Contractor	\$10,720,440
Response Contractor Sub-Totals	\$15,755,475
EPA Funded Costs: Total EPA Costs	\$4,701,943
Pollution Removal Funding Agreements – Total Other Agencies	\$1,723,682
Sub-Totals	\$22,181,100
Indirect Cost (16.00%)	\$3,548,976
Total Est. Oil Spill Cost	\$25,730,076
Oil Spill Ceiling Authorized by USCG	\$ 31,200,000
Oil Spill Ceiling Available Balance	\$5,469,924

7. Participating Entities

A Multi-Agency Coordination (MAC) Group meets weekly regarding the progress of the response. Entities participating in the MAC include:

- U.S. Environmental Protection Agency
- Michigan Department of Environmental Quality
- Michigan State Police Emergency Management Division
- City of Battle Creek

- City of Marshall
- Calhoun County Public Health Department
- Calhoun County Emergency Management
- Kalamazoo County Sheriff
- Enbridge (Responsible Party)

For a list of cooperating and assisting agencies and the congressional presence, 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 14.

Table 14 - Personnel On-Site

Agency/Entity	April 2011			March 2011			
	3	2	1	31	30	29	28
U.S. EPA	1	1	2	4	4	2	2
START	5	10	13	13	13	15	12
Calhoun County Public Health	0	0	0	0	0	0	0
Calhoun County (CC) EM	0	0	0	0	0	0	0
City of Battle Creek	0	0	0	0	0	0	0
City of Marshall	0	0	0	0	0	0	0
Kalamazoo Sheriff	0	0	0	0	0	0	0
MDEQ	0	0	1	4	5	4	3
Michigan State Police EMD	0	0	0	0	0	0	0
NOAA – National Weather	0	0	0	0	0	0	0
USFWS	0	0	0	0	0	0	0
Enbridge – Operations	0	4	13	13	14	13	12
Enbridge – Operations Contractor	13	20	80	104	107	107	93
Enbridge – Field	0	0	0	0	0	0	0
Enbridge – Field Contractors	19	33	100	102	111	121	122
Total	38	68	219	240	254	262	244

*Enbridge Operations included with contractors as reported by Enbridge

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/main.aspx?id=13168>.