

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Kalamazoo River/Enbridge Spill - Removal POLREP-SITREP



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V



MP-3.25 R1 Excavation According to Winter Work Plans

**Subject: SITREP # 84  
Kalamazoo River/Enbridge Spill  
Z5JS  
Marshall, MI  
Latitude: 42.2395273 Longitude: -84.9662018**

**To:** Lt. Paul Baker, Kalamazoo County Sheriff's Office  
 James Rutherford, Calhoun County Public Health Department  
 Durk Dunham, Calhoun County Emergency Management  
 Brian Whitsett, Michigan State Police, Emergency Management.  
 Mark DuCharme, MDNRE  
 Mike McKenzie, City of Battle Creek  
 Susan Hedman, U.S. EPA Regional Administrator  
 James Sygo, MDNRE

**From:** Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator  
 Tricia Edwards, U.S. EPA, On-Scene Coordinator  
 Jeff Kimble, U.S. EPA, On-Scene Coordinator  
 Stephen Wolfe, U.S. EPA, On-Scene Coordinator

**Date:** 02/01/2011

**Reporting Period:** 12:00 hours 01/24/2011 to 12:00 hours 01/31/2011

## 1 Introduction

### 1.1 Background

#### 1.1.1 Site History

##### Background Information

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

#### 1.1.2 Preliminary Site Inspection and Response Activities

See SITREP #51 for a comprehensive description of preliminary operations.

### 1.2 Response Status

Governance for the project is provided by the U.S. EPA Federal On-Scene Coordinator (FOSC) and the Michigan Department of Natural Resources and the Environment (MDNRE). The Operational Period covered in this report is: 01/24/2011 12:00 to 01/31/2011 12:00.

### 1.3 Operations Section

This operational phase of the response consists of: 1) Long Term Operations and Maintenance (O&M); 2) Drinking/Groundwater Monitoring; 3) Decontamination; and 4) Other Operations.

**1.3.1 Long Term 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. Additionally, winter O&M operations (i.e., frost driving, ice-road construction) continued. Teams performed inspection for readily visible contamination. A summary of significant actions for this period is presented in Table 1.

**Table 1 – O&M Actions**

<b>Activity</b>	<b>Number of Locations</b>	<b>Location (MP)</b>
Sheen and/or product observation	7	2.50, 3.25, 7.00, 8.5, 10.5, 11.00, 15.00
Site Access Plans Approved	0	N/A
Excavation Work Plans Approved	0	N/A
Aqua Barrier Installation	4	19.25 (inlet and outlet) and 21.5 (inlet and outlet)
Frost Driving	2	10.50 and 15.00
Vegetation Removal	4	9.00, 11.25, 11.75, 15.00
Dewatering; Preparation for Excavation	2	3.25, 11.00
Excavation	2	2.50, 3.25

\*Remedial Investigation Site under MDNRE oversight.

N/A- Not applicable because no plans were approved during this period.

The excavations at 2.50 L1 and 3.25 R1 were completed. Fractionation tanks were staged at 10.50. Excavation and dewatering at 11.00 was delayed due to clogging of the granular activated carbon (GAC) water treatment system. Aqua dams were installed at the inlets and outlets of 19.25 and 21.50. Installation of the aqua dam at 11.75 was initiated but not completed during this operational period.

A summary of the quantity of sites in the O&M process is summarized in Table 2 (as reported by Enbridge unless otherwise indicated).

**Table 2 – O&M Maintenance and Monitoring Areas**

<b>O&amp;M Process</b>	<b>Area Status</b>
	<b>1/31/2011</b>
Active	10
Monitoring	32
Recommended to Cleared	8
Signed Off	51

**1.3.2 Drinking and Groundwater Studies**

Drinking water well sampling of 19 wells was performed during this period by Enbridge under MDNRE and public health agencies oversight.

**1.3.3 Decontamination**

Equipment and boom that were decontaminated during this operational period are summarized in Table 3 (as reported by Enbridge unless otherwise indicated).

**Table 3 - Equipment Decontamination**

Location/Media	Total	January 2011						
		31	30	29	28	27	26	25
Frac Tanks	1	0	0	0	0	1	0	0
Vac Trucks-Tankers	0	0	0	0	0	0	0	0
Roll-Off Boxes	0	0	0	0	0	0	0	0
Yellow Iron - Light	8	5	0	0	1	1	1	0
Yellow Iron - Heavy	3	0	0	0	0	0	1	2
Marine Vessels	0	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0	0
Boom (feet)	1,550	300	0	0	300	200	750	0

N/R = Not reported by Enbridge.

**1.3.4 Additional Operations**

Air Operations

- There were 3 over-flights for situational awareness during this operational period.
- Air Ops observed and documented O&M progress in all operational areas.
- Air Ops continued to investigate/report areas of interest, oil mobilization, O&M and decontamination.

Environmental Compliance and Oversight

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

Monitoring Branch

- Under MDNRE direction, performed potable water, groundwater, soil, sediment and surface water sampling in accordance with the existing U.S. EPA-approved Sampling and Analysis Plan (SAP), (adopted by MDNRE) and a reduced sampling frequency as approved by the MDNRE.
- Samples reported by Enbridge are provided in Table 4 (as reported by Enbridge unless otherwise indicated).

**Table 4 – Samples Collected By Enbridge**

Sample Type	Total	January 2011						
		31	30	29	28	27	26	25
Surface Water	11	6	0	0	0	0	5	0
Private Well Samples	19	10	0	0	0	4	3	2
Groundwater Samples	0	0	0	0	0	0	0	0
Sediment Samples	27	0	0	0	0	0	15	12
Soil Samples	83	0	0	0	30	11	18	24

**1.3.5 Landowner Environmental Issues**

Landowner environmental issues for the referenced period are represented in Table 5 (as reported by Enbridge unless otherwise indicated).

**Table 5 – Landowner Environmental Issues**

Issues this Period	Issues Undergoing Evaluation	Issues Considered Addressed
0	10	1

**1.3.6 Progress Metrics**

All progress metrics in Section 1.3.6 are as reported by Enbridge unless otherwise indicated.

**Table 6 - Boom and Aqua Dam Report**

Metric	January 2011						
	31	30	29	28	27	26	25
# Locations	26	26	26	26	26	26	26
Boom Deployed (ft)	8,700	8,700	8,700	8,700	8,700	8,700	8,700
# Locations	7	7	7	6	5	4	3
Aqua Dam Deployed (ft)	770	770	770	720	620	500	350

**Table 7 - Soil and Debris Shipped Off Site as of 1/31/2011**

Waste Stream*	Cumulative†	Disposal Facility
Haz Soil (yd <sup>3</sup> )	19,644	Envirosafe (Oregon, OH)
Non Haz Soil & Debris (yd <sup>3</sup> ) (Excluding Ceresco Dredge)	65,485	Westside Recycling (Three Rivers, MI), Terra/C&C and EQ/Republic (Marshall, MI)
Non Haz Soil (yd <sup>3</sup> ) (Ceresco Dredge Only)	5,562	
Haz Debris (yd <sup>3</sup> )	12,075	EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)
Non Haz Household Debris (ton)	234	EQ/Republic (Marshall, MI)
Non Haz Impacted Debris (ton)	1,563	

Oil/Water Recovery Tracking:

Note: Some of the values in the tables below have been audited and reconciled by Enbridge and may not correlate with previously reported values.

**Table 8 – Oil/Water Collected by Location (as of 1/31/2011)**

Location	Cumulative (gallons)
Division A	5,338,315
Division B	4,843,782
Division C	1,532,706
Division D	114,906
Division E	47,438
Decontamination	1,108,310
Other Locations*	982,440
<b>Total</b>	<b>13,967,897</b>

\* Includes fluids stored in Fractionation Tanks which was generated from Decontamination Operations, Wildlife Center Operations, Sediment Trap Cleaning, Hydro-Vacuuming activities.

**Table 9 – Oil/Water Separation 1/31/2011 (Enbridge Facility in Griffith, IN) (Gallons)**

Item	Cumulative (gallons) Age
Oil	766,288
Other Material	1,405,525
<b>Total</b>	<b>2,171,813</b>

**Table 10 - Oil/Water Remaining On-Site (Gallons) 1/31/2011**

Item	Cumulative (gallons)
Oil/Water Collected	13,967,897
Oil/Water Shipped Off-Site	13,922,137
<b>Oil/Water Remaining On-Site</b>	<b>45,760</b>

**Table 11 - Liquid Shipped Off-site as of 1/31/2011**

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 <sup>a</sup>		825
Non-Haz Water	Dynecol		14,800
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	206,720
Sludge			467,660
<b>Total</b>			<b>13,922,137</b>

\* 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.

**1.4 Planning Section**

Environmental Unit

- Nothing to report.

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 and/or Houston.

Documentation Unit

- Continued organization and archiving of electronic files.

**1.5 Safety Reports**

Cold weather (below freezing) has been continuously present and ice formation has been observed in slower moving portions of the river.

Cold weather safety continues to be the emphasis. Safety inspections occurred throughout the operational area.

**1.6 Liaison Officer**

- Nothing to report.

**1.7 Public Information Officers**

The public information operation Battle Creek Community Center has been discontinued. Received public inquires are outlined in Table 12 as reported by Enbridge unless otherwise indicated.

**Table 12 – Public Inquiries Received by EPA and Enbridge**

Location/Media	Total	January 2011						
		31	30	29	28	27	26	25
Marshall Community Center	10	4	0	0	1	2	1	2
Oil Spill Public Information Hotline	24	9	0	0	2	6	4	3
Enbridge Response Website (www.response.enbridgeUS.com)	2	1	0	0	0	0	1	0
<b>Total Public Inquiries</b>	<b>36</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>5</b>

**1.8 Finance Section**

The current NPFC issued ceiling is \$27.6 Million. Approximately 88.8% of the ceiling has been spent through January 30, 2011, with the latest weekday average burn rate of \$11,651 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 13.

**Table 13 - Financial Summary**

Item	Expended (Cumulative) as of 1/30/2011
<b>ERRS Contractors</b>	
EQM (EPS50802) T057	\$ 1,250,065
T060	\$ 204,905
LATA (EPS50804) T019	\$ 1,451,396
ER LLC (EPS50905) T040	\$ 723,669
<b>Total ERRS Contractors</b>	<b>\$ 3,630,035</b>
Lockheed Martin (EPW09031) – TAGA Support	\$ 150,000
T&T Bisso (EPA:HS800008)	\$ 1,255,000
<b>START Contractor – WESTON (EPS50604) T030-Response</b>	<b>\$ 9,079,880</b>
T032-Sampling	\$ 180,214
T037-Doc Support	\$ 513,355
<b>Total START Contractor</b>	<b>\$ 9,773,449</b>
<b>Response Contractor Sub-Totals</b>	<b>\$ 14,808,484</b>
<b>EPA Funded Costs: Total EPA Costs</b>	<b>\$ 4,890,070</b>
<b>Pollution Removal Funding Agreements – Total Other Agencies</b>	<b>\$ 1,426,909</b>
<b>Sub-Totals</b>	<b>\$ 21,125,463</b>
Indirect Cost (16.00%)	\$ 3,380,074
<b>Total Est. Oil Spill Cost</b>	<b>\$ 24,505,538</b>
<b>Oil Spill Ceiling Authorized by USCG</b>	<b>\$ 27,600,000</b>
<b>Oil Spill Ceiling Available Balance</b>	<b>\$ 3,094,462</b>

**1.9 Response Actions to Date**

Response Actions to date may be found in SITREPs #1 through #83.

**2 Participating Entities**

**2.1 Multi-Agency Coordination Group**

- U.S. Environmental Protection Agency
- Michigan Department of Natural Resources and the Environment
- 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)

**2.2 Cooperating and Assisting Agencies and Congressional Presence**

For a list of cooperating and assisting agencies and the congressional presence, see SITREP #51.

**3 Personnel On-Site**

Staffing numbers for the various entities and agencies active in the response are presented in Table 14.

**Table 14 - Personnel On-Site**

Agency/Entity	January 2011						
	31	30	29	28	27	26	25
U.S. EPA	6	3	5	5	4	5	5
START	12	1	10	13	13	13	12
Calhoun County Public Health	0	0	0	0	2	1	0
Calhoun County (CC) EM	0	0	0	0	0	0	0
City of Battle Creek	0	0	0	0	1	1	0
City of Marshall	0	0	0	0	1	1	0
Kalamazoo Sheriff	0	0	0	0	0	0	0
MDNRE	3	0	0	4	3	7	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	2	0	0
Enbridge – Operations*	18	1	4	14	16	15	14
Enbridge – Operations Contractor*	79	22	83	70	88	82	88
Enbridge – Field*	0	0	0	0	0	0	0
Enbridge – Field Contractors*	98	15	62	104	101	100	89
<b>Total</b>	<b>216</b>	<b>42</b>	<b>164</b>	<b>210</b>	<b>231</b>	<b>225</b>	<b>211</b>

**4 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>.