

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V  
POLLUTION/SITUATION REPORT #92**



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



MP-10.75 L2 SO Excavation of Sediments with Submerged Oil

**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, MDEQ  
 Mike McKenzie, City of Battle Creek  
 Susan Hedman, U.S. EPA Regional Administrator  
 James Sygo, MDEQ  
 Cheryl Vosburg, City of Marshall  
 Christine Kosnowski, City of Battle Creek

**From:** Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator  
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**Date:** 03/29/2011

**Reporting Period:** 0700 hours 03/21/2011 through 0700 hours 03/28/2011

### 1. Site Data

<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>	

### 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 #91.

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 organizational 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 03/21/2011 through 0700 03/28/2011.

### 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	28	Talmadge Creek Bank Areas/Culverts; B5 Sediment Trap; 2.25 L2; 2.50 L1; 3.25 IA; 3.75 IC; 4.50 L1; 5.55 N; 5.75N; 6.00 L1; 6.00 R1; 6.00 R3; 6.00 R4; 7.00 R1; 8.50 L1; 8.50 L2; 9.00 L1; 9.0 I1; 9.50 L1; 10.50 L2; 10.75 L2; 11.25 R1; 11.25 R2; 12.75 I1; 13.00 R1; 13.50 L1; 15.50 L1; 21.50 R1
O& M Plans Approved	0	
Excavation Work Plans Approved	0	
Aqua Barrier Installation	0	
Excavation Ancillary Activities (i.e., dewatering, bridges, sheet pile, staging, etc.)	2	3.25 IA; 10.75 L2 SO
Excavation	2	3.25 IA; 10.75 L2 SO

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	March 2011						
	27	26	25	24	23	22	21
Active	2	2	1	1	2	2	2
Monitoring	33	33	35	36	36	34	34
Recommended to Cleared	14	14	13	12	11	10	10
Signed Off	54	54	54	54	54	56	56
<b>Total</b>	103	103	103	103	103	102	102

### 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	March 2011						
		27	26	25	24	23	22	21
Frac Tanks	0	0	0	0	0	0	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	3	0	0	0	0	0	2	1
Marine Vessels	3	0	0	0	0	0	0	3
Vehicles	3	0	0	3	0	0	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 the presence or movement of visible oil and/or sheen 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	March 2011						
		27	26	25	24	23	22	21
Surface Water	11	0	0	0	5	0	6	0
Private Well Samples	0	0	0	0	0	0	0	0
Groundwater Samples	7	0	0	2	2	3	0	0
Sediment Samples	0	0	0	0	0	0	0	0
Soil Samples	39	0	0	22	7	10	0	0

## 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	0

## 5. Progress Metrics

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

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

Metric	March 2011						
	27	26	25	24	23	22	21
# Boom Locations	38	38	38	37	37	37	36
[# control points included]	[6]	[6]	[6]	[6]	[6]	[6]	[6]
Total Surface Boom Deployed (ft)	19,050	19,050	19,000	17,700	17,800	17,800	17,500
[ft of control point surface boom]	[6,300]	[6,300]	[6,300]	[6,300]	[6,300]	[6,300]	[6,300]
# Aqua Dam Locations	10	10	10	10	10	10	10
Aqua Dam Deployed (ft)	1,035	1,035	1,035	1,035	1,035	1,035	1,035
Sand-Super Sacks	39	39	39	39	39	39	39
[Sand Bags]	[1,591]	[1,591]	[1,591]	[1,591]	[1,431]	[1,431]	[1,431]

NR = Not Reported by Enbridge

**Table 7 - Soil and Debris Shipped Off Site as of 3/28/2011**

<b>Waste Stream</b>	<b>Cumulative</b>	<b>Disposal Facility</b>
Haz Soil (yd <sup>3</sup> )	19,644	Envirosafe (Oregon, OH)
Non-Haz Soil & Debris (yd <sup>3</sup> ) (Excluding Ceresco Dredge)	71,985	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)	236	EQ/Republic (Marshall, MI); C&C
Non-Haz Impacted Debris (ton)	1,573	

**Table 8 – Oil/Water Collected by Location (as of 3/28/2011)**

<b>Location</b>	<b>Cumulative (gallons)</b>
Division A	5,338,315
Division B	4,843,782
Division C	1,891,406
Division D	121,106
Division E	47,438
Decontamination	1,421,737
Site A	109,555
Other Locations*	1,173,440
Subtotal	14,946,779
<b>Sludge**</b>	<b>(467,660)</b>
<b>Total Oil/Water</b>	<b>14,479,119</b>

\* 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 3/28/2011 (Enbridge Facility in Griffith, IN)**

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

**Table 10 - Oil/Water Remaining On-Site 3/28/2011**

<b>Item</b>	<b>Cumulative (gallons)</b>
Oil/Water Collected	<b>14,479,119</b>
Oil/Water Shipped Off-Site	<b>14,458,979</b>
<b>Total Oil/Water Remaining On-Site</b>	20,140



**Table 11 - Liquid Shipped Off-site as of 3/28/2011**

<b>Stream</b>	<b>Destination Company</b>	<b>Destination Location</b>	<b>Cumulative Volume (gallons) †</b>
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	Detroit, MI	446,602
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	779,420
<b>Total</b>			<b>14,458,979</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.

## **6. Support Operations**

### **6.1 Planning**

The Planning Section 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 performed last operating period (see SitRep #91) is being synthesized by GIS personnel.

#### **6.1.3 Documentation Unit**

Continued organization and archiving of electronic and paper files.

### **6.2 Safety**

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

Due to wet weather conditions, the access road to the MP-3.25 Island A staging area became inaccessible due to the mud and ruts. After excavation/response activities were complete, the staging area was secured and left to dry out before demobilization of the area occurs.

New 450 MHz Incident Communication Radios have been purchased by Enbridge and arrived during this operational period. The radios are currently being tested and will be deployed to all appropriate State DEQ, EPA and Enbridge personnel once they are set up and tested. The projected date for full changeover is April 1, 2011. A lapse in radio coverage will not occur as the radios from the Michigan State Police will not be discontinued until the replacement units are completely functional.

### 6.3 Public Information

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

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

Location/Media	Total	March 2011						
		27	26	25	24	23	22	21
Marshall Community Center	3	0	0	2	0	0	0	1
Oil Spill Public Information Hotline	6	0	0	0	1	3	1	1
Website	2	0	0	1	1	0	0	0
<b>Total Public Inquiries</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>2</b>

### 6.4 Finance

The current NPFC issued ceiling is \$31.2 Million. Approximately 81.9% of the ceiling has been spent through March 27, 2011. As of March 27, 2011, the latest average 7-day burn rate was \$22,092 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 3/28/2011
<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>
<b>Other Contractors</b>	
Lockheed Martin (EPW09031) – TAGA Support	\$ 150,000
T&T Bisso (EPA:HS800008)	\$ 1,255,000
<b>Total Other Contractors</b>	<b>\$ 1,405,000</b>
<b>START Contractor – WESTON (EPS50604)</b>	
T030-Response	\$ 9,799,202
T032-Sampling	\$ 180,214
T037-Doc Support	\$ 618,109
<b>Total START Contractor</b>	<b>\$ 10,597,525</b>
<b>Response Contractor Sub-Totals</b>	<b>\$ 15,632,560</b>
<b>EPA Funded Costs: Total EPA Costs</b>	<b>\$ 4,662,308</b>
<b>Pollution Removal Funding Agreements – Total Other Agencies</b>	<b>\$ 1,723,682</b>
<b>Sub-Totals</b>	<b>\$ 22,541,519</b>
Indirect Cost (16.00%)	\$ 3,522,968
<b>Total Est. Oil Spill Cost</b>	<b>\$ 25,541,519</b>
<b>Oil Spill Ceiling Authorized by USCG</b>	<b>\$ 31,200,000</b>
<b>Oil Spill Ceiling Available Balance</b>	<b>\$ 5,658,481</b>



## 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	March 2011						
	27	26	25	24	23	22	21
U.S. EPA	1	1	2	2	2	2	1
START	9	11	11	12	11	12	9
Calhoun County Public Health	0	0	0	1	0	0	0
Calhoun County (CC) EM	0	0	0	1	0	0	0
City of Battle Creek	0	0	0	0	0	0	0
City of Marshall	0	0	0	1	0	0	0
Kalamazoo Sheriff	0	0	0	0	0	0	0
MDEQ	0	0	4	4	3	2	1
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	17	22	22	19	13
Enbridge – Operations Contractor	13	28	95	92	7	95	89
Enbridge – Field	0	0	0	0	0	0	0
Enbridge – Field Contractors	78	75	124	116	124	100	99
<b>Total</b>	<b>101</b>	<b>119</b>	<b>253</b>	<b>251</b>	<b>259</b>	<b>230</b>	<b>212</b>

\*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>.