

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #91**



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



MP-3.25 Island A: Excavation & Restoration Activities

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
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 Durk Dunham, Calhoun County Emergency Management
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Date: 03/23/2011

Reporting Period: 0700 hours 03/14/2011 through 0700 hours 03/21/2011

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 #90.

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 (formerly known as the Michigan Department of Natural Resources and the Environment-MDNRE prior to March 14, 2011). 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 03/14/2011 through 0700 03/21/2011.

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; 2.5 L1; 2.75 I1; 3.25 R1; 3.75 IC; 4.50 L1; 4.25 IE; 4.50 IF; 5.55 N; 6.00 R4; 7.00 R1; 8.5 L1; 9.0 I1; 9.50 L1; 10.5 L2; 10.75 L2; 10.75 L2 SO; 11.25 R1; 11.25 R2; 12.75 I1; 13.00 R1; 13.50 L1; 15.50 L1; 16.00 LR1; Control Point D3; Control Point 21.50 R1
O& M Plans Approved	0	
Excavation Work Plans Approved	0	
Aqua Barrier Installation	0	
Pre-Excavation Activities (i.e., dewatering, bridges, sheet pile, staging, etc.)	3	3.25 IA; 3.75 IC; 10.75 L2 SO
Excavation	2	3.25 IA; 3.75 IC

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	Area Status
	3/21/2011
Active	2
Monitoring	36
Recommended to Cleared	8
Signed Off	56
Total	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						
		20	19	18	17	16	15	14
Frac Tanks	0	0	0	0	0	0	0	0
Vac Trucks-Tankers	1	0	0	0	0	0	0	1
Roll-Off Boxes	0	0	0	0	0	0	0	0
Yellow Iron	4	0	0	1	1	1	0	1
Marine Vessels	0	0	0	0	0	0	0	0
Vehicles	0	0	0	0	0	0	0	0
Boom (feet)	300	0	0	0	0	0	250	50

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.

One EPA aerial imagery flight was conducted during this operational period. High definition aerial photography and video was collected to assess potential floodplain and overbank impact areas.

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						
		20	19	18	17	16	15	14
Surface Water	13	0	0	0	2	2	5	4
Private Well Samples	0	0	0	0	0	0	0	0
Groundwater Samples	0	0	0	0	0	0	0	0
Sediment Samples	8	0	0	0	0	2	4	2
Soil Samples	39	0	0	0	4	6	16	13

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
1	12	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						
	20	19	18	17	16	15	14
# Boom Locations	36	36	36	35	34	34	34
[# control points included]	[6]	[6]	[6]	[5]	[4]	[4]	[4]
Total Surface Boom Deployed (ft)	17,350	17,350	17,350	17,100	15,700	15,700	15,500
# 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

NR = Not Reported by Enbridge

Table 7 - Soil and Debris Shipped Off Site as of 3/20/2011

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)	6,330	
Haz Debris (yd ³)	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)	1,569	

Table 8 – Oil/Water Collected by Location (as of 3/21/2011)

Location	Cumulative (gallons)
Division A	5,338,315
Division B	4,843,782
Division C	1,796,406
Division D	121,106
Division E	47,438
Decontamination	1,357,945
Site A	86,690
Other Locations*	1,173,440
Total	14,771,122

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

Table 9 – Oil/Water Separation 3/20/2011 (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 3/20/2011

Item	Cumulative (gallons)
Oil/Water Collected	14,771,122
Oil/Water Shipped Off-Site	14,761,203
Total Oil/Water Remaining On-Site	9,405

Table 11 - Liquid Shipped Off-site as of 3/20/2011

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	376,166
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	684,420
Sludge			467,660
Total			14,761,203

* 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 to transition from project management to full-scale ICS and developed a new 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.

6.1.3 Documentation Unit

Continued organization and archiving of electronic and paper files.

6.2 Safety

A boat operator safety and educational class on boat operation safety and operating on step to minimize erosion and noise was conducted for all boat operators. Buoy markers have been placed in the river to indicate areas where boats may operate on step or must operate at an idle speed.

New 450 MHz Incident Communication Radios have been purchased by Enbridge and will be arriving this operational period and deployed to all appropriate EPA and Enbridge personnel. There will not be a time of no radio coverage. The Michigan State Police 900 MHz radios will be collected and inventoried after the new radios arrive and are distributed.

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						
		20	19	18	17	16	15	14
Marshall Community Center	1	0	0	0	1	0	0	0
Oil Spill Public Information Hotline	12	0	0	2	4	3	2	1
Enbridge Response Website	7	1	0	0	0	2	2	2
Total Public Inquiries	20	1	0	2	5	5	4	3

6.4 Finance

The current NPFC issued ceiling is \$31.2 Million. Approximately 81.5% of the ceiling has been spent through March 20, 2011. As of March 20, 2011, the latest average 7-day burn rate was \$17,606 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 3/20/2011
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	\$ 9,702,514
T032-Sampling	\$ 180,214
T037-Doc Support	\$ 596,463
Total START Contractor	\$ 10,479,191
Response Contractor Sub-Totals	\$ 15,514,226
EPA Funded Costs: Total EPA Costs	\$ 4,681,264
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,723,682
Sub-Totals	\$ 21,919,172
Indirect Cost (16.00%)	\$ 3,507,068
Total Est. Oil Spill Cost	\$ 25,426,240
Oil Spill Ceiling Authorized by USCG	\$ 31,200,000
Oil Spill Ceiling Available Balance	\$ 5,773,760

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						
	20	19	18	17	16	15	14
U.S. EPA	0	2	2	2	2	3	4
START	3	7	10	10	10	12	10
Calhoun County Public Health	0	0	0	1	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	2	1	4	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	0	15	17	17	16	15
Enbridge – Operations Contractor	10	23	91	114	110	100	85
Enbridge – Field	0	0	0	0	0	0	0
Enbridge – Field Contractors	3	71	96	97	97	101	91
Total	16	103	216	242	241	243	206

*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>.