

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



Access road preparation at MP-12.00 R1.

Subject: SITREP # 81
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

US EPA ARCHIVE DOCUMENT

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
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Date: 01/12/2011

Reporting Period: 0700 hours 12/20/2010 to 1200 hours 01/10/2011

1 Introduction

1.1 Background

1.1.1 Site History

Background Information

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
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E10527	Reimbursable Account:	

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: 12/20/2010 07:00 to 01/10/2011 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 sorbent material (boom, pads and/or pom-pom) to ensure proper placement and effectiveness. Additionally, winter O&M operations

(i.e., frost driving, ice-rod construction) were commenced. 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

Activity	Number of Locations	Location (MP)
Sheen observation	24	Talmadge (I-69 to 15 ½ Mile Rd.); 2.25 L2; 2.50 L1; 2.75 I1; 3.25 R1; 3.25 IA; 3.75 RIC; 4.50 L1; 4.50 IE; 7.00 R1; 8.50 L1; 10.50 L2; 10.75 L2; 11.00 R1; 11.25 R1; 11.25 R2; 11.50 R1; 11.75 R1; 12.00 R1; 12.75 I1; 12.75 R1; 13.00 R1; 13.50 L1; 15.00 L1
New Work Plans Prepared or Pending	15	2.50 L1; 3.25 R1; 7.00 R1; 8.50 L1; 8.50 L2; 10.50 L2; 11.00 R1; 11.25 R1; 11.25 R2; 11.50 R1; 11.75 R1; 12.00 R1; 12.75 R1; 13.00 R1; 15.00 L1
Boom Removal	4	13.50 L2; 12.75 R1; 13.75 R1; 17.00 L1
Frost Driving	4	2.50 L1; ; 3.25 R1; 7.00 R1; 12.00 R1
Vegetation Removal	3	2.50 L1; 3.25 R1; 12.75 I1
Dewatering; and/or Preparation for Excavation	2	2.50 L1; 7.00 R1
Excavation	1	12.00 R1

A summary of the quantity of sites in the O&M process is summarized in Table 2.

Table 2 – O&M Maintenance and Monitoring Areas

O&M Process	Area Status
	1/10/2011
Active	7
Monitoring	35
Cleared	8
Signed Off	51

1.3.2 Drinking and Groundwater Studies

Drinking water well sampling of 39 wells was performed during this period by Enbridge under MDNRE oversight.

1.3.3 Decontamination

Equipment and boom that were decontaminated during this operational period are summarized in Table 3.

Table 3 - Equipment Decontamination

Location/Media	Total	January 2011								December 2010			
		10	9	8	7	6	5	4	3	12/23-1/2	22	21	20
Frac Tanks	6	1	0	1	1	1	1	0	0	Holiday Period (Critical Maintenance Only)	0	0	1
Vac Trucks-Tankers	2	0	0	0	0	0	1	0	0		0	0	1
Roll-Off Boxes	1	1	0	0	0	0	0	0	0		0	0	0
Yellow Iron - Light	2	0	0	0	0	0	0	0	0		1	1	0
Yellow Iron - Heavy	2	0	0	0	1	0	0	0	0		0	1	0
Marine Vessels	8	0	0	0	0	0	0	0	0		0	6	2
Vehicles	0	0	0	0	0	0	0	0	0		0	0	0
Boom (feet)	4,200	600	0	450	750	500	500	600	0		N/R	400	200

N/R = Not reported by Enbridge.

1.3.4 Additional Operations

Air Operations

- There were 7 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 sediment and surface water sampling at Lake Morrow 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.

Table 4 – Samples Collected By Enbridge

Sample Type	Total	January 2011								December 2010			
		10	9	8	7	6	5	4	3	12/23-1/2	22	21	20
Surface Water	32	5	0	0	0	0	3	4	11	Holiday Period (Critical Maintenance Only)	4	5	0
Private Well Samples	39	9	0	0	7	10	7	6	0		0	0	0
Groundwater Samples	4	0	0	0	0	0	0	0	0		0	4	0
Sediment Samples	103	26	9	15	0	20	20	11	2		0	0	0
Soil Samples	167	28	0	0	42	20	23	24	13		0	17	0

1.3.5 Landowner Environmental Issues

Landowner environmental issues for the referenced period are represented in Table 5.

Table 5 – Landowner Environmental Issues

Issues this Period	Issues Undergoing Evaluation	Issues Considered Addressed
0	11	24

1.3.6 Progress Metrics

All progress metrics in Section 1.3.5 are as reported by Enbridge unless otherwise indicated.

Table 6 - Boom Report

Metric	January 2011								December 2010			
	10	9	8	7	6	5	4	3	12/23-1/2	22	21	20
# Locations	24	24	25	25	25	25	25	25	26	26	26	27
Boom Deployed (ft)	8,450	8,450	8,450	8,430	8,430	8,430	8,430	8,430	8,580	8,580	8,430	8,330

Table 7 - Soil and Debris Shipped Off Site as of 1/10/2011

Waste Stream*	Cumulative [†]
Haz Soil (yd ³) ^a	19,644
Non Haz Soil (yd ³) ^{b, d}	64,815
Non Haz Soil (yd ³) ^{b, e}	5,562
Haz Debris (yd ³) ^c	12,075
Non Haz Household Debris (ton)	228
Non Haz Impacted Debris (ton) ^c	1,535

* Information for water (other than daily quantity shipped) is reported in other tables below. Quantity awaiting disposal is estimated.

† Due to the auditing of waste manifests, cumulative quantities may not reconcile with previous reports.

a. Haz soil (benzene impacted) is being transported to EnviroSafe (Oregon, OH).

b. Non Haz soil is being sent to Westside Recycling (Three Rivers, MI) and EQ/Republic (Marshall, MI).

c. Roll-off boxes containing waste sorbents, boom, pads, plastic, PPE, and oiled vegetation and biomass are being sent to EQ facility (Michigan Disposal) in Wayne, MI and Republic (Marshall, MI).

d. Excludes dredge spoils from Ceresco.

e. Includes only dredge spoils from Ceresco.

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 1/10/2011)

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	997,113
Other Locations*	982,440
Total	13,856,700

* 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 1/10/2011 (Enbridge Facility in Griffith, IN) (Gallons)

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

Table 10 - Oil/Water Remaining On-Site (Gallons)

Item	Cumulative (gallons)
Oil/Water Collected	13,856,700
Oil/Water Shipped Off-Site	13,814,087
Oil/Water Remaining On-Site	42,613

Table 11 - Liquid Shipped Off-site as of 1/10/2011

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
Hazardous Water	Dynecol	Detroit, MI	3,515,829
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
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, MI	192,220
Sludge			467,660
Total			13,814,087

* 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 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

Received public inquires as outlined in 12.

Table 12 – Public Inquiries Received by EPA and Enbridge

Location/Media	Total	January 2011								December 2010			
		10	9	8	7	6	5	4	3	12/23-1/2	22	21	20
Battle Creek Community Center	5	0	0	0	0	0	0	0	0	0	0	1	4
Marshall Community Center	23	1	0	0	3	4	1	2	8	0	0	2	2
Oil Spill Public Information Hotline	55	6	0	0	3	5	4	6	6	9	3	4	9
Enbridge Response Website (www.response.enbridgeUS.com)	3	0	0	0	1	0	0	0	0	1	0	0	1
Total Public Inquiries	86	7	0	0	7	9	5	8	14	10	3	7	16

1.8 Finance Section

The current NPFC issued ceiling is \$27.6 Million. Approximately 87.0% of the ceiling has been spent through January 7, 2010, with the latest weekday average burn rate of \$21,617 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 1/9/2011
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
Lockheed Martin (EPW09031) – TAGA Support	\$ 150,000
T&T Bisso (EPA:HS800008)	\$ 1,255,000
START Contractor – WESTON (EPS50604) T030-Response	\$ 8,780,128
T032-Sampling	\$ 180,214
T037-Doc Support	\$ 460,317
Total START Contractor	\$ 9,420,659
Response Contractor Sub-Totals	\$ 14,455,694
EPA Funded Costs: Total EPA Costs	\$ 4,816,870
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,426,909
Sub-Totals	\$ 20,699,474
Indirect Cost (16.00%)	\$ 3,311,916
Total Est. Oil Spill Cost	\$ 24,011,390
Oil Spill Ceiling Authorized by USCG	\$ 27,600,000
Oil Spill Ceiling Available Balance	\$ 3,588,610

1.9 Response Actions to Date

Response Actions to date may be found in SITREPs #1 through #80.

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 Tables 14(a) and 14(b). Personnel for the period of December 20, 2010 through January 10, 2011 were estimated by Enbridge.

Table 14 (a) - Personnel On-Site (January 1-10, 2011)

Agency/Entity	January 2011									
	10	9	8	7	6	5	4	3	2	1
U.S. EPA	4	4	5	5	4	4	5	5	0	0
START	14	10	11	13	13	14	11	8	1	1
Calhoun County Public Health	0	0	0	0	1	0	0	0	0	0
Calhoun County (CC) EM	0	0	0	0	1	0	0	0	0	0
City of Battle Creek	0	0	0	0	1	0	0	0	0	0
City of Marshall	0	0	0	0	0	0	0	0	0	0
Kalamazoo Sheriff	0	0	0	0	1	0	0	0	0	0
MDNRE	4	1	1	5	6	9	3	3	1	1
Michigan State Police EMD	0	0	0	0	1	0	0	0	0	0
NOAA – National Weather	0	0	0	0	0	0	0	0	0	0
USFWS	0	0	0	0	0	0	0	0	0	0
Enbridge – Operations*	18	7	10	20	20	19	15	15	0	0
Enbridge – Operations Contractor*	91	31	52	103	102	106	109	92	0	0
Enbridge – Field*	0	0	0	0	0	0	0	0	0	0
Enbridge – Field Contractors*	91	69	92	108	109	99	83	84	10	10
Total	222	122	171	254	259	251	226	207	12	12

Table 14 (b) - Personnel On-Site (December 20-31, 2010)

Agency/Entity	December 2010											
	31	30	29	28	27	26	25	24	23	22	21	20
U.S. EPA	0	0	0	0	0	0	0	0	3	3	5	5
START	1	1	1	1	1	1	1	1	3	13	14	14
Calhoun County Public Health	0	0	0	0	0	0	0	0	0	0	0	0
Calhoun County (CC) EM	0	0	0	0	0	0	0	0	0	0	0	0
City of Battle Creek	0	0	0	0	0	0	0	0	0	0	0	0
City of Marshall	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo Sheriff	0	0	0	0	0	0	0	0	0	0	0	0
MDNRE	1	1	1	1	1	1	1	1	1	2	4	4
Michigan State Police EMD	0	0	0	0	0	0	0	0		0	0	0
NOAA – National Weather	0	0	0	0	0	0	0	0	0	0	0	0
USFWS	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Operations*	0	0	0	0	0	0	0	0	0	9	9	4
Enbridge – Operations Contractor*	0	0	8	5	5	1	0	0	10	126	144	62
Enbridge – Field*	0	0	0	0	0	0	0	0	0	1	1	1
Enbridge – Field Contractors*	11	12	12	12	12	9	9	9	9	66	81	75
Total	13	14	22	19	19	12	11	11	26	220	258	165

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>.