

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



MP17.00 (RockTenn) – On-going Oil Recovery and Sediment Remediation

Subject: SITREP # 80
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: 12/21/2010

Reporting Period: 0700 hours 12/13/2010 to 0700 hours 12/20/2010

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 (FOOSC) and the Michigan Department of Natural Resources and the Environment (MDNRE). The Operational Period covered in this report is: 12/13/2010 07:00 to 12/20/2010 07:00.

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. 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	5	2.25 L2; 2.75 I1; 7.00 R1; 11.00 R1; 17.00 (RockTenn and entering RockTenn from upstream)
Flushing	0	None
New Work Plans Prepared or Pending	15	2.50 L1; 2.75 I1; 3.25 R1; 3.75 LIC; 3.75 RIC; 7.00 R1; 8.50 L1; 8.50 L2; 9.00I1; 10.5 L2; 11.25 R1; 11.25 R2; 11.50 R1; 12.00 R1; 17.00 (RockTenn)1
Boom Removal	7	5.55N; 15.50; C0.5; E2.0; E3.5; E4
Hydro Vacuuming	1	2.75 I1; 17.00(RockTenn)
Vegetation Removal	1	13.00 R1
Additional Excavation	3	2.75 I1; 11.00; 13.00 R1
Submerged Oil Recovery	1	17.00 (RockTenn)
Off-Site Cleaning	1	17.00 (RockTenn)

The O&M process is documented in Table 2.

Table 2 – O&M Maintenance and Monitoring Areas

O&M Process	Area Status
	12/19
Active	1
Monitoring	42
Cleared	8
Signed Off	50

1.3.2 Drinking and Groundwater Studies

Drinking water well sampling of 29 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	Totals	12/19	12/18	12/17	12/16	12/15	12/14	12/13
Frac Tanks	0	0	0	0	0	0	0	0
Vac Trucks-Tankers	2	0	1	1	0	0	0	0
Roll-Off Boxes	0	0	0	0	0	0	0	0
Yellow Iron - Light	0	0	0	0	0	0	0	0
Yellow Iron - Heavy	0	0	0	0	0	0	0	0
Marine Vessels	4	0	2	1	1	0	0	0
Vehicles	3	0	0	0	0	0	3	0
Daily Total	9	0	3	2	1	0	3	0

Boom (feet)	2250	500	200	300	400	600	250	0
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1.3.4 Additional Operations

Air Operations

- During this operational period, there were 5 over-flights for situational awareness.
- 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	Number Collected							
	Totals	12/19	12/18	12/17	12/16	12/15	12/14	12/13
Surface Water	10	0	0	2	4	4	0	0
Private Well	29	0	0	7	8	7	7	0
Groundwater	2	0	0	0	0	0	2	0
Sediment	5	0	0	2	2	1	0	0
Soil Samples	117	0	0	19	31	29	38	0

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

1.3.5 Progress Metrics

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

Table 6 - Boom Report

Metric	12/19	12/18	12/17	12/16	12/15	12/14	12/13
Number of Locations	27	28	29	29	29	29	NR
Boom Deployed (feet)	8,330	10,030	10,430	11,030	11,630	12,230	NR

NR = Per Enbridge, data not recorded

Table 7 - Soil and Debris Shipped Off Site as of 12/19

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)	200
Non Haz Impacted Debris (ton) ^c	1,496

* 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 12/18)

Location	Cumulative (gallons)
Division A	5,338,315
Division B	4,843,782
Division C	1,530,980
Division D	114,906
Division E	47,438
Decontamination	954,346
Other Locations*	982,440
Total	13,812,208

* 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 12/18 (Enbridge Facility in Griffith, IN) (Gallons)

Item	Cumulative (gallons)
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	13,812,208
Oil/Water Shipped Off-Site	13,786,087
Oil/Water Remaining On-Site	26,121

Table 11 - Liquid Shipped Off-site as of 12/18

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
Hazardous Water	Dynecol	Detroit, MI	3,487,829
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			13,786,087

* 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. A weather related safety stand-down occurred for river operations on December 13th.

Two safety incidents occurred during the operational period. 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	Inquiries Received							
	Total	12/19	12/18	12/17	12/16	12/15	12/14	12/13
Battle Creek Community Center	22	0	0	0	2	8	7	5
Marshall Community Center	18	0	1	5	4	2	3	3
Oil Spill Public Information Hotline	28	2	0	5	4	9	4	4
Enbridge Response Website (www.response.enbridgeUS.com)	1	0	1	0	0	0	0	0
Total Public Inquiries	69	2	2	10	10	19	14	12

1.8 Finance Section

The current NPFC issued ceiling is \$27.6 Million. Approximately 86.0% of the ceiling has been spent through December 18, 2010, with the latest average burn rate of \$28,563 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in 13.

Table 13 - Financial Summary

Item	Expended (Cumulative) as of 12/18
ERRS Contractors	
EQM (EPA 50802) T057	\$ 1,250,065
T060	\$ 204,905
LATA (EPA 50804)	\$ 1,451,396
ER LLC (EPS 50905)	\$ 723,669
Total ERRS Contractors	\$ 3,630,035
Lockheed Martin (EPW 09031) – TAGA Support	\$ 150,000
T&T Bisso (EPA:HS 800008 USCG:HS CG8410A 800008)	\$ 1,255,000
START Contractor – WESTON (EPS 50604) T030-Response	\$ 8,631,363
T032-Sampling	\$ 180,214
T037-Doc Support	\$ 414,024
Response Contractor Sub-Totals	\$ 14,260,636
EPA Funded Costs: Total EPA Costs	\$ 4,785,190
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,426,909
Sub-Totals	\$ 20,472,735
Indirect Cost (16.00%)	\$ 3,275,638
Total Est. Oil Spill Cost	\$ 23,748,373
Oil Spill Ceiling Authorized by USCG	\$ 27,600,000
Oil Spill Ceiling Available Balance	\$ 3,851,627

1.9 Response Actions to Date

Response Actions to date may be found in SITREPs #1 through #79.

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	Personnel Count						
	12/19	12/18	12/17	12/16	12/15	12/14	12/13
U.S. EPA	4	4	4	7	9	7	7
START	16	19	19	19	23	23	21
Calhoun County Public Health	0	0	0	1	0	0	0
Calhoun Count (CC) EM	0	0	0	1	0	0	0
City of Battle Creek	0	0	0	1	0	0	0
City of Marshall	0	0	0	0	0	0	0
Kalamazoo Sheriff	0	0	0	1	0	0	0
MDNRE	0	0	6	6	4	4	4
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*	4	6	9	12	11	11	9
Enbridge – Operations Contractor*	62	95	148	148	150	153	128
Enbridge – Field*	1	1	1	1	1	1	0
Enbridge – Field Contractors*	75	95	108	141	140	128	16
Total	162	220	295	338	338	327	185

* Enbridge personnel counts are from 07:00 on the day shown.

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>.