

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



Soil Staging/New Decon Pad

**Subject: SITREP # 74
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 Mgt.
 Mark Ducharme, MDNRE
 Mike McKenzie, City of Battle Creek
 Susan Hedman, U.S. EPA Regional Administrator
 Rebecca Humphries, MDNRE

From: Ralph Dollhopf, U.S. EPA Incident Commander
 Stephen Wolfe, U.S. EPA On-Scene Coordinator
 Jeff Kimble, U.S. EPA Deputy Incident Commander
 Mark Durno, U.S. EPA Deputy Incident Commander

Date: 11/8/2010

Reporting Period: 0700 hours 11/1/2010 to 0700 hours 11/8/2010

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 Incident Objective and Command Emphasis

The following incident objectives and command emphasis are taken from the Incident Action Plan (IAP) for the Operational Period of November 1 at 0700 to November 8, 2010, at 0700.

Incident Objectives

1. Ensure health and safety of the public and response and recovery personnel.
2. Ensure effective transition of regulatory oversight of the oil impacted areas from EPA to MDNRE jurisdiction as appropriate.

3. Maintain the isolation of the Kalamazoo River from all the up-gradient source areas.
4. Contain and recover oil and contaminated vegetation in Talmadge Creek and Kalamazoo River.
5. Maintain effective unified communications with cooperating and assisting agencies and the public.
6. Perform remediation and restoration of all affected public and private areas of river and river systems.
7. Provide protection of environmentally and culturally sensitive areas including wildlife and historic properties.
8. Protect threatened and endangered species and continue to recover and rehabilitate injured wildlife.
9. Continue to collect, coordinate, manage, and communicate environmental and public health data including maintenance of Joint Information Center function.

Command Emphasis

1. Complete the implementation of long-term booming configuration.
2. Confirm agency approval of transition from ICS to project management/Multi Agency Coordination Group (MAC).
3. Continue work in all active Operations & Maintenance (O&M) sites.
4. Continue systematic decontamination/demobilization of project resources.

2 Current Activities

2.1 Operations Section

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

2.1.1 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, as well as visual inspection for readily visible contamination .

- A summary of significant actions/findings is presented below.
 - Observed sheen at various locations. Sorbent pads placed and maintained.
 - Bank flushing performed at three locations; sheen captured and collected.
 - New work plans submitted and approved for 2 locations.
 - Observed hydro vacuuming activities at two locations, monitoring will continue.
 - Additional excavation and scraping performed.
 - Work plans for additional work were prepared.
 - Implement riverbank soil erosion restoration.
 - Maintained gabion baskets.
 - Inspected 4 submerged oil locations on Talmadge Creek and no visible sheen or product was observed.

- The O&M process is documented in Table 1 and Figures 1-3.

Table 1 – O&M Maintenance and Monitoring Areas

O&M Process	Area Status
	11/7
Active	17
Monitoring	24
Cleared	1
Signed Off	50

Figure 1 - Division C O&M Areas

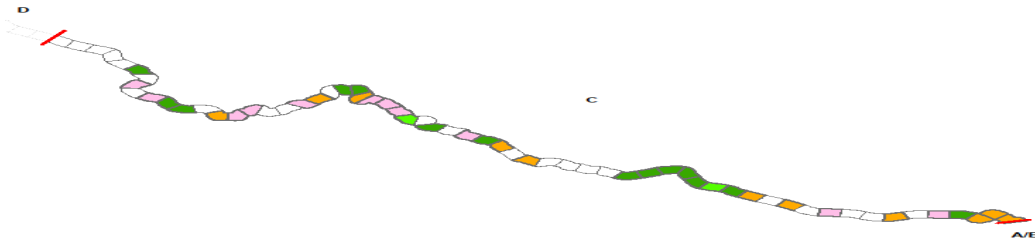


Figure 2 - Division D O&M Areas

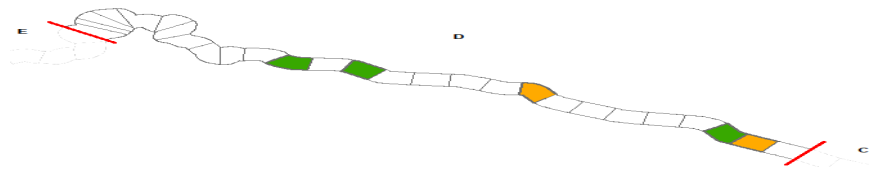
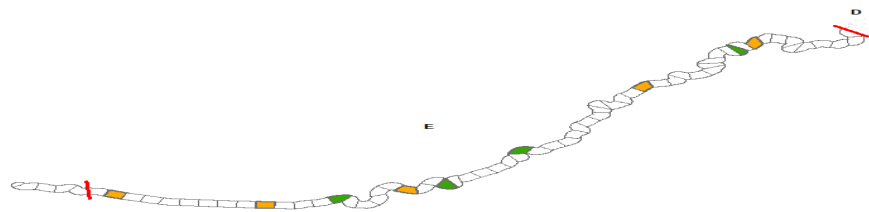


Figure 3 - Division E O&M Areas



2.1.2 Drinking and Groundwater Studies

The hydrogeologic investigation report was reviewed by the U.S. EPA. A summary of the significant findings from the report is presented below.

- Based on measurements of water elevations, the Kalamazoo River was confirmed to be a gaining river, except locally at Ceresco Dam.
- The Kalamazoo River is a losing water body in the immediate vicinity of Ceresco Dam.

- Groundwater samples collected from the new monitoring wells associated with the hydrogeologic evaluation indicate that groundwater at the 33 discrete sample locations did not contain constituents suspected to be associated with the release.

Drinking water well sampling continued. A total of 154 wells are in the drinking water sampling program and a summary of the wells is presented below.

- 107 wells sampled at least twice
- 28 wells sampled once
- 19 wells not sampled yet due to access limitations

2.1.3 Decontamination

Decontamination operation hours were extended on 11/1 and included a second shift from 1800 to 0200 between 11/1 and 11/5 . All boom previously removed from the waterways has been decontaminated. Equipment and boom that was decontaminated during this operational period is summarized in Table 2.

Table 2 - Equipment Decontamination

Location/Media	11/7	11/6	11/5	11/4	11/3	11/2	11/1
Frac Tanks	1	1	1	2	2	1	2
Vac Trucks-Tankers	4	0	2	0	2	0	0
Roll-Off Boxes	5	10	0	0	0	0	0
Yellow Iron - Light	0	0	0	0	0	0	0
Yellow Iron - Heavy	0	0	0	0	0	0	0
Marine Vessels	0	0	3	0	0	0	0
Vehicles	0	0	1	0	0	0	0
Daily Total	10	11	7	2	4	1	2

Boom (feet)	1200	5900	8300	6600	6750	4550	1000
--------------------	------	------	------	------	------	------	------

2.1.4 Additional Operations

Air Operations

- During this operational period, there were 7 over-flights.
- Air Ops observed and documented operations and maintenance progress in all operational areas.
- Air Ops continued to investigate areas of interest and report on hot spots, oil mobilization, O&M, and Decontamination.

Environmental Compliance and Oversight

- Continued waste management characterization, documentation, and coordination.

Monitoring Branch

- Performed residential air monitoring and air sampling (10 locations). No readings above background were recorded.
- Performed sediment and surface water sampling at Lake Morrow.
- Samples reported by Enbridge are provided in Table 3.

Table 3 – Samples Collected By Enbridge

Sample Type	Number Collected						
	11/7	11/6	11/5	11/4	11/3	11/2	11/1
Mini SUMMA	10	10	10	10	10	10	10
Surface Water	0	3	0	6	7	8	8
Private Well	20	18	0	4	10	3	6
Groundwater	0	0	0	2	0	0	4
Sediment	0	3	0	6	0	2	1
Ceresco	7	7	7	7	7	7	7
Soil Samples	4	0	0	2	0	0	0
Sheen Samples	0	0	0	0	0	0	0
Submerged Oil	0	0	0	0	0	0	0
Other	0	0	0	0	4	4	8

† Estimated value.

- EPA personnel did not perform any sampling and monitoring events during this operational period, and is only sampling when requested.

Landowner Environmental Issues

Landowner environmental issues (cumulative) as of November 7, 2010 are represented in Table 4.

Table 4 – Landowner Environmental Issues

Issues to Date	Issues Undergoing Evaluation	Issues Considered Addressed
98	71	27

2.1.5 Progress Metrics

All progress metrics in Section 2.1.5 are as reported by Enbridge unless otherwise indicated.

Table 5 - Boom Report

Metric	11/7	11/6	11/5	11/4	11/3	11/2	11/1
Number of Locations (L) and Islands (I)	8L; 4I	8L; 4I	8L; 4I	8L; 4I	8L; 4I	8L; 4I	8L; 4I
Boom Deployed (feet)	33,296	33,216	32,086	37,566	44,116	50,965	51,915

Table 6 - Soil and Debris Shipped Off Site as of 11/7

Waste Stream*	Cumulative [†]
Haz Soil (yd ³) ^a	19,644
Non Haz Soil (yd ³) ^{b, d}	57,231
Non Haz Soil (yd ³) ^{b, e}	4,608
Haz Debris (yd ³) ^c	12,075
Non Haz Household Debris (ton)	110
Non Haz Impacted Debris (ton) ^c	1,332

* 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 7 – Oil/Water Collected by Location (as of 11/7)

Location	Cumulative (gallons)
Division A	5,332,599
Division B	4,814,642
Division C	1,442,067
Division D	114,832
Division E	47,408
Decon	704,446
Other Locations*	711,181
Total	13,167,175

* Includes Fractionation, Decontamination, and Wildlife Center.

Table 8 – Oil/Water Separation 11/7 (Enbridge Facility in Griffith, IN) (Gallons)

Oil	766,288
Other Material	1,405,525
Total	2,171,813

Table 9 - Oil/Water Remaining On-Site (Gallons)

Oil/Water Collected	13,167,175
Oil/Water Shipped Off-Site	13,102,375
Oil/Water Remaining On-Site	64,800

Table 10 - Liquid Shipped Off-site as of 11/07

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
Hazardous Water	Dynecol	Detroit, MI	3,036,287
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	4,957,540
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
Total			12,656,065

* 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.

2.2 Planning Section

Environmental Unit

- Evaluating analytical data from groundwater and waste sampling.

Data Management Unit

- Continued importing preliminary and validated analytical results, if any, into Scribe, exporting daily briefings; and processing and printing maps as requested.
- Database management is being done in Houston.

2.3 Safety Reports

No major incidents or safety concerns were reported during this operational period.

Two after-the-fact (2 to 3 weeks post injury) reports of injury occurred during this period. Additionally, two slip and trip incidents occurred and were attributable to wet and/or ice conditions. Neither resulted in injury or lost time. Additional preventative measures/work practices have been implemented to minimize slips and falls. Safety inspections occurred throughout the operational area.

2.4 Liaison Officer

Nothing to report.

2.5 Public Information Officers

Received public inquires as outlined in 11.

Table 11 – Public Inquiries Received by EPA and Enbridge

Location/Media	Inquiries Received							
	Total	11/7	11/6	11/5	11/4	11/3	11/2	11/1
Battle Creek Community Center	18	0	2	1	6	2	5	2
Marshall Community Center	28	4	1	2	6	5	2	8
Oil Spill Public Information Hotline	49	6	1	9	6	6	17	4
Enbridge Response Website (www.response.enbridgeUS.com)	0	0	0	0	0	0	0	0
Total Public Inquiries	95	10	4	12	18	13	24	14

2.6 Finance Section

The current NPFC issued ceiling is \$24.6 Million. Approximately, 89.5% of the ceiling has been spent through November 6, 2010, with the latest average burn rate of \$41,289 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in 12.

Table 12 - Financial Summary

Item	Expended (Cumulative) as of 11/7
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)	\$ 7,975,076
Response Contractor Sub-Totals	\$ 13,010,111
EPA Funded Costs: Total EPA Costs	\$ 4,535,191
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,426,909
Sub-Totals	\$ 18,972,211
Indirect Cost (16.00%)	\$ 3,035,554
Total Est. Oil Spill Cost	\$ 22,007,765
Oil Spill Ceiling Authorized by USCG	\$ 24,600,000
Oil Spill Ceiling Available Balance	\$ 2,592,235

2.7 Response Actions to Date

Response Actions to date may be found in SITREPs #1 through #73.

3 Participating Entities

3.1 Unified Command

U.S. Environmental Protection Agency	City of Battle Creek
Michigan Department of Natural Resources and the Environment	Calhoun County Public Health Department
Michigan State Police Emergency Management Division	Calhoun County Emergency Management
	Kalamazoo County Sheriff
	Enbridge (Responsible Party)

3.2 Cooperating and Assisting Agencies and Congressional Presence

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

4 Personnel On-Site

Staffing numbers for the various entities and agencies active in the response are presented in 13.

Table 13 - Personnel On-Site

Agency/Entity	Personnel Count						
	11/7	11/6	11/5	11/4	11/3	11/2	11/1
U.S. EPA	12	9	12	14	15	18	12
START	17	19	18	18	18	18	18
Calhoun County Public Health	3	3	3	3	3	3	3
Calhoun Count (CC) EM	2	2	2	2	2	2	2
City of Battle Creek	2	2	2	2	2	2	2
Kalamazoo Sheriff	2	2	2	2	2	2	2
MDNRE	4	4	4	4	4	4	4
Michigan State Police EMD	1	1	1	1	1	1	1
NOAA – National Weather	1	1	1	2	1	1	1
USFWS	0	0	0	0	0	0	0
Enbridge – ICP	16 *	16	15	18	22	25	21
Enbridge – ICP Contractor	151 *	151	186	203	209	210	207
Enbridge	2 *	2	3	3	3	4	4
Enbridge Contractors	295 *	295	337	351	348	357	363
Total	508	507	586	623	630	647	640

* Estimated value. Actual not tabulated at time of report issuance.

5 Source of Additional Information

5.1 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>.