

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



Subject: SITREP # 65
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
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 Durk Dunham, Calhoun County Emergency Management
 Brian Whitsett, Michigan State Police, Emergency Mgt.
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 Mike McKenzie, City of Battle Creek
 Leon Zupan, Enbridge
 Susan Hedman, U.S. EPA Regional Administrator
 Rebecca Humphries, MDNRE

From: Ralph Dollhopf, U.S. EPA Incident Commander
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 Mark Durno, U.S. EPA Deputy Incident Commander

Date: 10/11/2010

Reporting Period: 0700 hours 10/11/2010 to 0700 hours 10/13/2010

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 IAP for the Operational Period October 12, 2010, at 0700 to October 16, 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 up-gradient source area.
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. Maintain systematic and adequate DECON/demobilization of project resources.
2. Continue recovery of submerged oil and sediment in the Kalamazoo River with prioritization of the Ceresco Dam and Millpond areas.
3. Complete necessary grade restoration and stabilization work along Talmadge Creek in accordance with the approved plans.
4. Continue implementation of transition to long-term operation and maintenance of containment and submerged oil recovery.

2 Current Activities

2.1 Operations Section

2.1.1 Narrative

This operational phase of the response consists of: 1) Talmadge Creek Restoration; 2) Submerged Oil Recovery; 3) Long Term operations and Maintenance (O&M); 4) Drinking and Groundwater Studies; and 5) Decontamination.

2.1.2 Talmadge Creek Restoration

- Prepared to remove berm that separates Locations A3 and A4.
- Continued mat road removal and maintenance of sorbent booms and coconut logs.
- Began pump-around operations at Location B4.5.
- Restoration progress is outlined in Table 1 and is depicted in Figure 1 through Figure 5.

Table 1 - Division A and B Restoration Progress, Sections 1-10

Restoration Step		Percent Complete
1. Prepped		100%
2. Cleared		100%
3. Backfilled		100%
4. Restored		94%

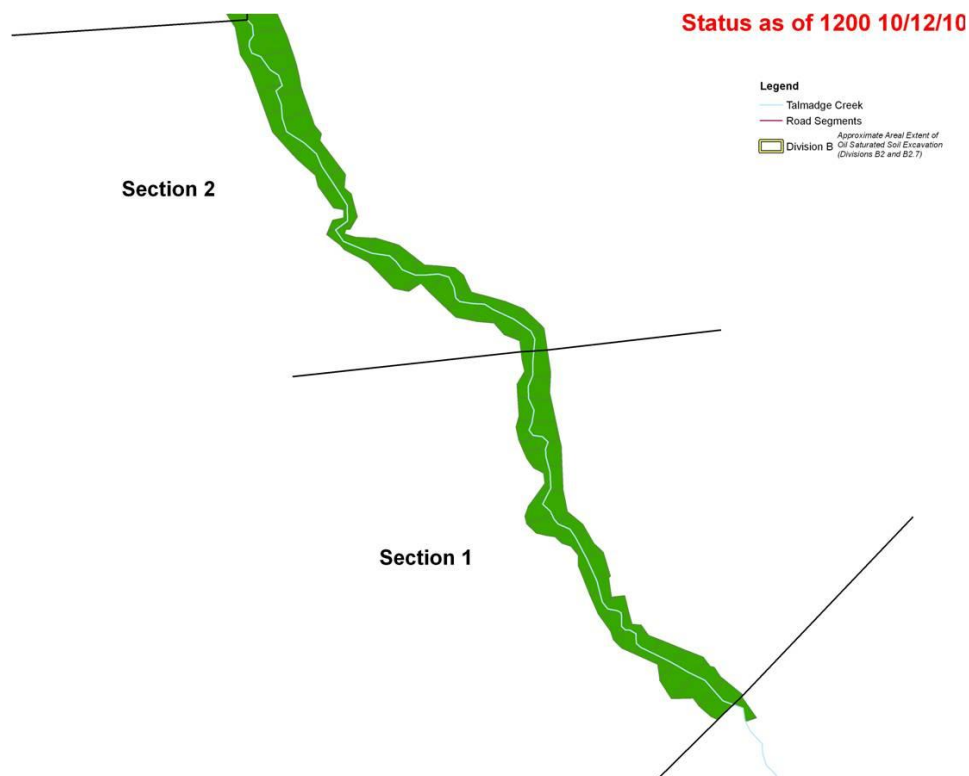


Figure 1 – Division A, Sections 1 and 2 (Locations A4 to B2)

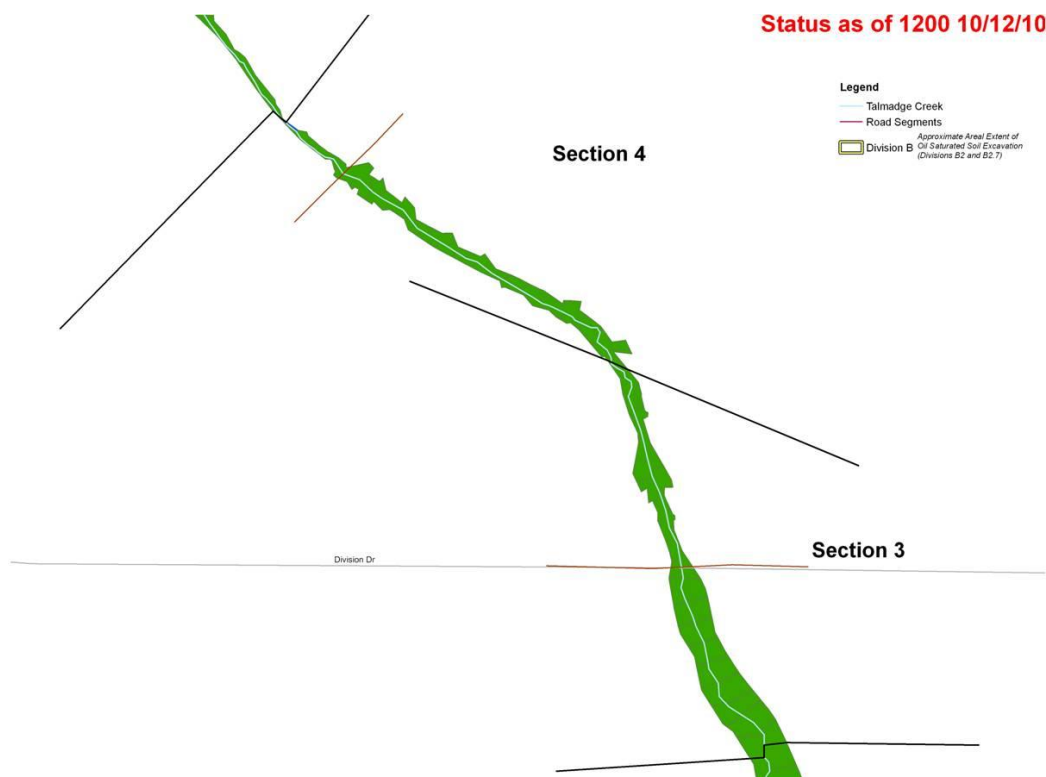


Figure 2 - Division B, Sections 3 and 4 (Locations B2 to B2.5)

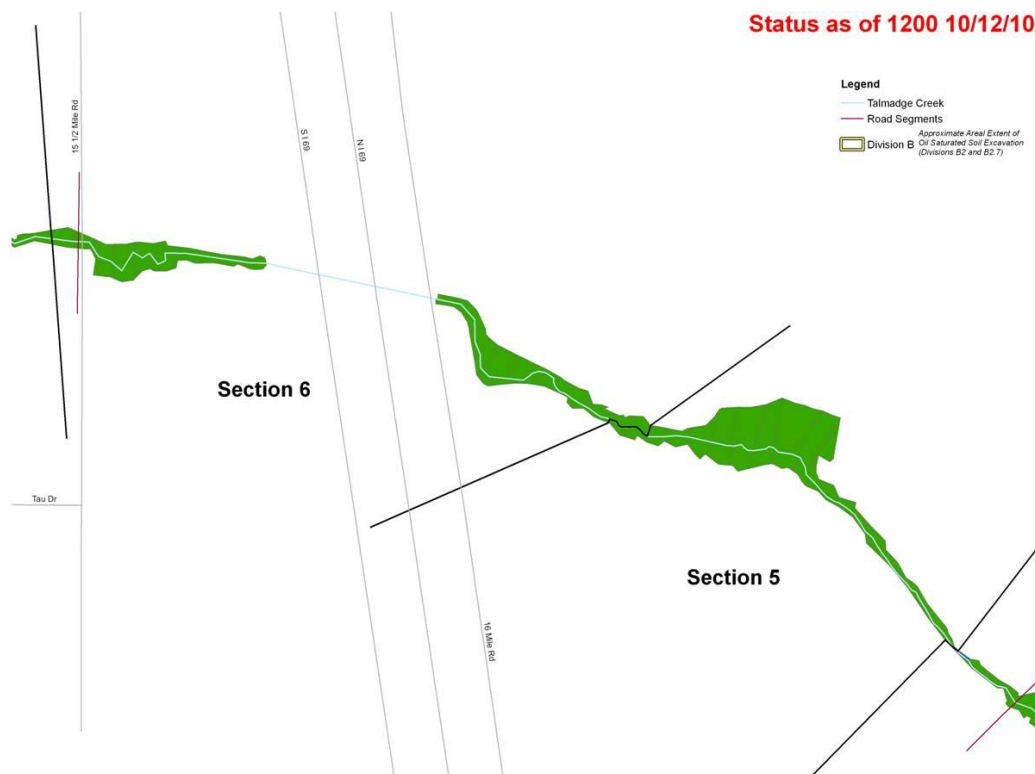


Figure 3 - Division B, Sections 5 and 6 (Locations B2.5 to B4)

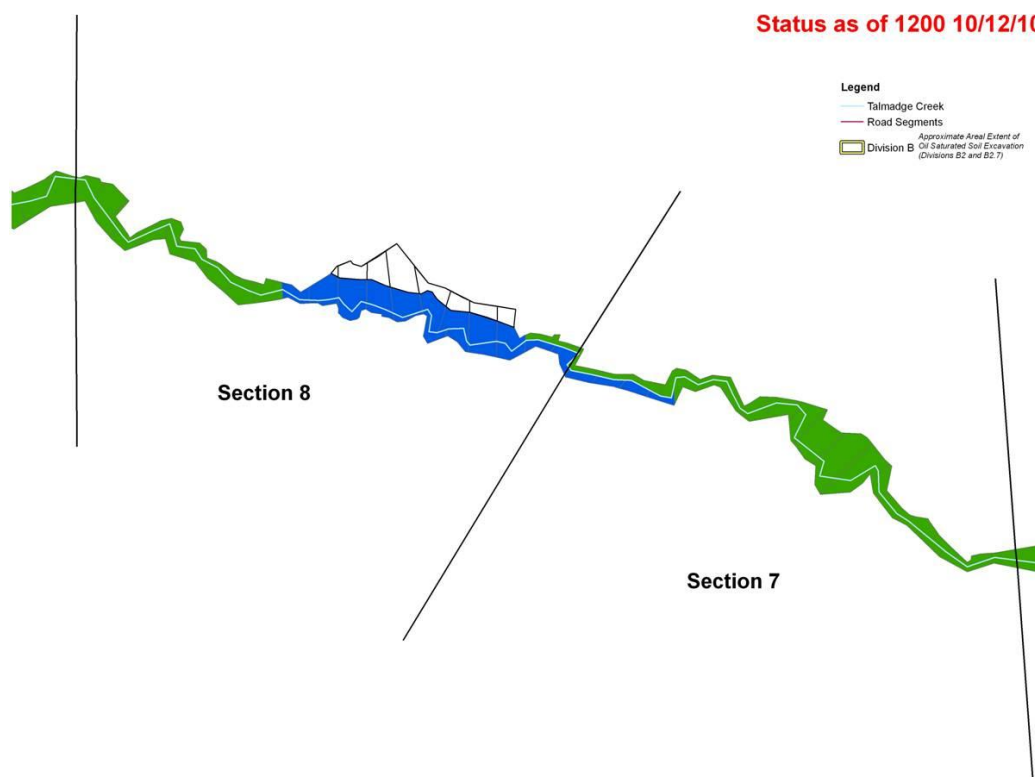


Figure 4 - Division B, Sections 7 and 8 (Locations B4 to B4.8)

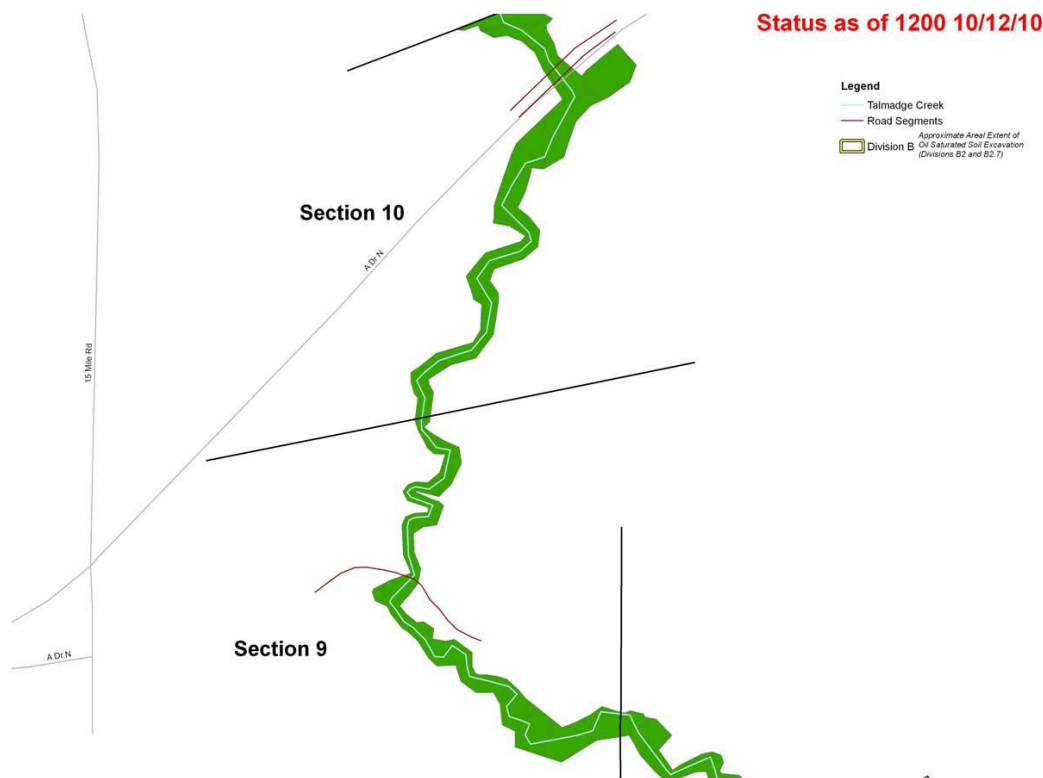


Figure 5 - Division B, Sections 9 and 10 (Locations B4.9 to B5)

2.1.3 Submerged Oil Recovery

- Inspected areas of sheen reported by EPA Air Ops and identified an area of heavy submerged oil at MP26.25.
- Delineated submerged oil areas in the oxbow at MP12.5, the Morrow Lake Delta, and in Division D.

Submerged Oil Task Force (SOTF)

- Ongoing aeration and shallow recovery operations are being conducted in the Ceresco Dam area, Mill Pond area, and in the Morrow Lake Delta.
- The SOTF progress is outlined in Table 2.

Table 2 - Submerged Oil Task Force Progress

Submerged Oil Recovery Process	Percent Complete	Cumulative Sections Completed	
		10/12	10/11
Assessment	100%	20	20
Containment	100%	18	18
Work Plan	100%	18	18
Clean-up	57%	13	13
Inspection/Sign-Off	52%	12	12

Ceresco Dam Dredging Task Force

- Completed power washing/cleaning operations in the 5.8S area. Area has been isolated using hard boom.

- Continued noise, air, and turbidity monitoring. No exceedances of noise or turbidity action levels were reported during this operational period.
- One exceedance of the benzene action level was reported on October 11 near the recovery and dredging operations.
- One exceedance of the benzene background level was reported on October 12 near the recovery and dredging operations. Detection was below action levels.
- Conducted significant boom maintenance as a result of an exceedance of the turbidity action levels on October 10.
- The 5.75S area is being dredged by the Amphibex machine and the 5.63 area is being dredged by the Mud Cat. A third dredging machine is being prepared to dredge the 5.75N area.
- Dredging is progressing slower than anticipated in the 5.63 area due to the weight of the sediment.
- The dredging progress is depicted in Figure 6.



Figure 6 - Ceresco Dam Dredging Progress

2.1.4 Long Term Operations and Maintenance (O&M)

- Began removal of berms in Division A.
- Installed pump around and began excavation at Location B4.5 in Talmadge Creek.
- Deployed sorbent materials to recover surface oil observed at MP2.50L1.
- Observed thick oil in test pit at MP3.25IA and in water and mud at MP4.5L1. Excavation of these sites is being considered.

- Dispatched hot-shot teams to clean up sheen and product along the back side of the island at MP12.60.
- Inspected areas of sheen reported by EPA Air Ops between MP17.5 and 32.75.
- EPA recommended several areas for removal from O&M Sites list.
- EPA inspected O&M locations and relayed observations and recommendations to the RP.

Table 3 – O&M Maintenance and Monitoring Areas

O&M Process	Cumulative Sections Completed	
	10/12	10/11
Active Site	52	53
Monitoring	39	45
Cleared	9	9
Signed Off	6	5

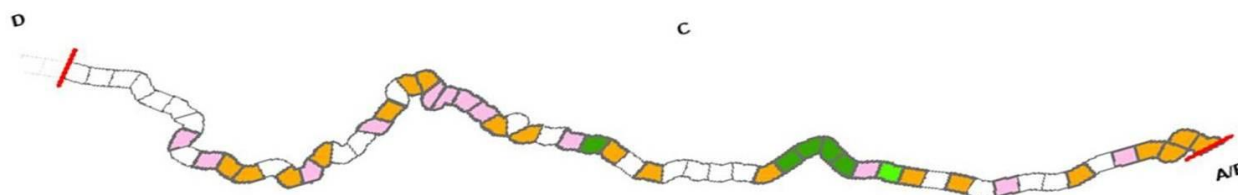


Figure 7 - Division C O&M Areas

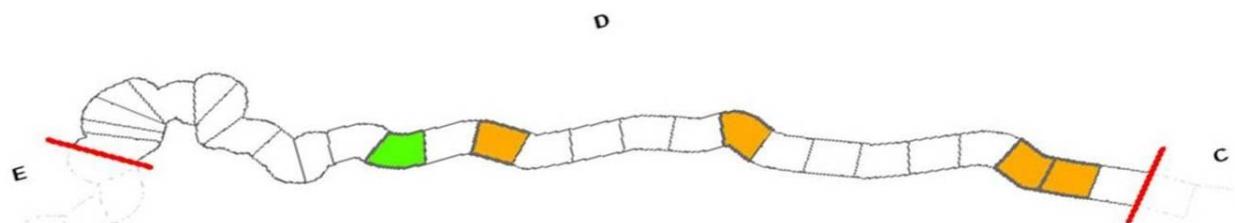


Figure 8 - Division D O&M Areas

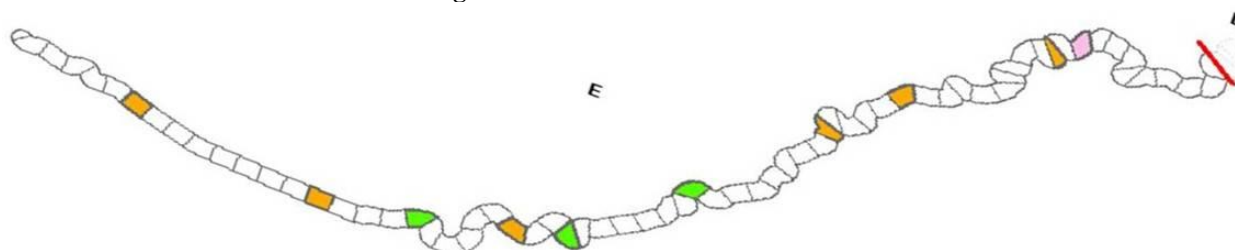


Figure 9 - Division E O&M Areas

2.1.5 Drinking and Groundwater Studies

- Drilling and monitoring well installation in target areas 3 and 4.
- Monitoring well development in target area 2.
- On October 10, EPA reported that purge water was inadvertently discharged down a well from a Vac Truck during monitoring well development. It is believed that the vac truck was not properly Deconned and EPA now reports sheen and petroleum odor emanate from this well.

- A shallow confined aquifer was reported at TA4. Monitoring wells in this area are now screened at 5 feet.

2.1.6 Decontamination

- Equipment and boom that was Deconned during this operational period is outlined in Table 4.

Table 4 - Equipment Decon Totals

	10/12	10/11
Frac Tanks	1	1
Vac Trucks-Tankers	2	2
Roll-Off Boxes	-	13
Yellow Iron - Light	-	-
Yellow Iron - Heavy	-	-
Marine Vessels	-	-
Vehicles	1	4
Daily Total	4	20

Boom (feet)	2,700	2,550
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2.1.7 Additional Operations

Air Ops

- During this operational period, there were 2 overflights.
- Air Ops observed and documented cleanup progress in all operational areas.
- Air Ops continued to investigate areas of interest and report on hot spots, oil mobilization, O&M, and Decon.

Environmental Compliance and Oversight

- Implemented remedial investigation of Divisions A1 through A4.

Monitoring Branch

- Conducted real-time air monitoring near excavation and dredging operations and in community areas. No readings in excess of background levels were reported.
- Samples reported by Enbridge are provided in Table 5.

Table 5 – Samples Collected By Enbridge

Sample Type	Number Collected	
	10/12	10/11
Tedlar Bag *	16	16
Mini SUMMA *	10	10
Surface Water	24	24
Private Well Samples	3	4
Groundwater Samples	-	-
Sediment Samples	9	12
Soil Samples	-	2
Sheen Samples	-	-
Other	-	-

* As observed by the EPA

† Estimated value.

- Sampling and monitoring events conducted by EPA personnel during this operational period are reported in Table 6.

Table 6 – Sampling and Monitoring Events by EPA as Reported in Scribe

Sample Type	Number Collected	
	10/12	10/11
Air Monitoring Results	80	90
Tedlar Bags	-	-
SUMMA canisters	-	-
Sediment	-	-
Surface Water	1	1

2.1.8 Progress Metrics

All progress metrics in Section 2.1.8 are as reported by Enbridge unless otherwise indicated.

Boom Report

Table 7 - Boom Report

	10/12	10/11
Number of Locations	19	19
Boom Deployed (feet)	109,499	116,464

Table 8 - Soil and Debris Shipped Off Site

Waste Stream*	Cumulative[†]	10/12	10/11
Haz Soil (yd ³) ^a	15,344	0	0
Non Haz Soil (yd ³) ^b	43,127	1592	0
Haz Debris (yd ³) ^c	12,075	0	0
Non Haz Household Debris (ton)	52	2	0
Non Haz Impacted Debris (ton) ^c	1332	0	0

* 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).

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 9 - Oil water collected by location 10/11 0700

Location	Cumulative (gallons)
Division A	5,546,943
Division B	4,697,265
Division C	1,154,450
Division D	119,850
Division E	50,030
Decon	375,880
Other Locations [*]	264,583
TOTAL	12,209,001

* Includes Frac, DECON, and Wildlife Center.

Table 10 - Oil water Separation 10/12

Enbridge Facility in Griffith, IN (gallons)	
Oil	758,756
Other Material	1,400,050
TOTAL	2,158,806

Table 11 - Oil/Water Remaining On-Site (Gallons)

Oil/Water Collected	12,209,001
Oil/Water Shipped Off-Site	10,999,814
OIL/WATER REMAINING ON-SITE	1,209,187

Table 12 - Liquid Shipped Off-site

Oil/Water leaving Site	Destination	Quantity Shipped		
		Cumulative†	10/11	10/10
Haz Water	Dynecol, Detroit, MI	2,525,948	17,500	-
Oil/Water	Enbridge Facility, Griffith, IN	2,158,806	-	-
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	370,200	-	-
Treated Non Haz Water	Plummer, Kentwood, MI	3,841,135	40,000	-
Haz Water	Safety Kleen ^a	825	-	-
Treated Non Haz Water *	Dynecol, Detroit, MI	134,200	-	-
Treated Non Haz Water *	Battle Creek POTW	1,968,700	-	-
Totals		10,999,814	57,500	0

* 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 Compliance and Oversight

- Began implementation of remedial investigation in Division A.

2.3 Safety Reports

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

2.4 Liaison Officer

- Engaged in ongoing coordination with cooperating and assisting agencies, the UC, Enbridge, and the PIO. Continues coordinating issues of local concern to property owners.

2.5 Public Information Officer

- Public inquiries received during this operational period are outlined in Table 13.

Table 13 – Public Inquiries

Location/Media	Inquiries Received	
	10/11	10/10
Battle Creek Community Center	5	2
Marshall Community Center	4	0
Oil Spill Public Information Hotline	17	3
Enbridge Response Website (www.response.enbridgeUS.com)	1	0
Total Public Inquiries	27	5

2.6 Finance Section

- The current NPFC issued ceiling is \$21.6 Million. Approximately, 93.5% of the ceiling has been spent through October 11, 2010, with the latest burn rate of \$103,231 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 14.

Table 14 - Financial Summary

		Est. Expended (Cumulative)		Estimated Burn Rate	
ERRS Contractors				10/12	10/11
EQM (EPS50802)	T057	\$ 1,250,065	\$ -	\$ -	-
	T060	\$ 204,905	\$ -	\$ -	-
LATA (EPS50804)		\$ 1,451,396	\$ -	\$ -	-
ER LLC (EPS50905)		\$ 723,669	\$ -	\$ -	-
Total ERRS Contractors		\$ 3,630,035	\$ -	\$ -	-
Lockheed Martin (EPW09031) -TAGA Support		\$ 150,000	\$ -	\$ -	-
T&T Bisso (EPA:HS800008 USCG:HSCG8410A8000)		\$ 1,255,000	\$ -	\$ -	-
START Contractor					
WESTON (EPS50604)		\$ 6,941,085	\$ 54,952	\$ 46,349	
Response Contractor Sub-Totals		\$ 11,976,120	\$ 54,952	\$ 46,349	
EPA Funded Costs:					
Total EPA Costs		\$ 4,041,803	\$ 30,200	\$ 30,200	
Pollution Removal Funding Agreements:					
US FWS		\$ -	\$ -	\$ 840	
Total Other Agencies		\$ 1,383,589	\$ 3,840	\$ 3,840	
Sub-Totals		\$ 17,401,512	\$ 88,992	\$ 80,389	
Indirect Cost (16.00%)		\$ 2,784,242	\$ 14,239	\$ 12,862	
Total Est. Oil Spill Cost		\$ 20,185,754	\$ 103,231	\$ 93,251	
Oil Spill Ceiling authorized by USCG		\$ 21,600,000			
Oil Spill Ceiling Available Balance		\$ 1,414,246			
		93.5%			

2.7 Response Actions to Date

- Response Actions to date may be found in Situation Reports #1 through #64.

3 Participating Entities

3.1 Unified Command

U.S. EPA
MDNRE
Michigan State Police Emergency
Management Division
City of Battle Creek

Calhoun County Public Health Department
Calhoun County Emergency Management
Kalamazoo County Sheriff
Enbridge (Responsible Party)

3.2 Cooperating and Assisting Agencies

ATSDR
Calhoun Conservation District
Calhoun County Commission
City of Kalamazoo
City of Marshall
Emmett Township
Fredonia Township
Kalamazoo County Office of Emergency
Management
Marshall Area Firefighters Ambulance
Authority
Marshall Police Department
Marshall Township Government and Fire
Department
Michigan Department of Agriculture

MDCH
NOAA
Oakland County HAZMAT/RRTN
PHMSA
USCG
U.S. Department of the Interior/USGS
USFW

3.3 Congressional Presence

State Representative Jase Bolger
State Representative Kate Segal
State Representative Ken Kurtz
State Representative Phil Browne
State Representative Phyllis Browne
State Representative Bob Geuck

State Representative Tanya Schuitmaker
State Senator Mike Nofs
U.S. Congressman Mark Schauer
U.S. Senator Carl Levin
U.S. Senator Debbie Stabenow

4 Personnel On-Site

- Staffing numbers for the various entities and agencies active in the response are presented in Table 15.

Table 15 - Personnel On-Site

Agency/Entity	Number Reported	
	10/12	10/11
EPA	30	31
START	38	36
Calhoun County Public Health	1	1
Calhoun County (CC) Sheriff	2	2
City of Battle Creek	2	2
Kalamazoo Sheriff	2	2
MDNRE	5	5
Michigan State Police (MSP)	1	1
NOAA - National Weather	1	1
USFWS	1	1
Enbridge ICP	60	53
Enbridge ICP Contractor	302	264
Enbridge	6	8
Enbridge Contractors	621	603
Total	1,072	1,010

5 Source of Additional Information

5.1 Additional Information

For additional information, please refer to <http://www.epa.gov/enbridgespill>. For sampling analysis data, please see <http://response.enbridge.com/response/main.aspx?id=13168>.