

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 # 59  
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 Mgt.  
Greg Danneffel, MDNRE  
Mike McKenzie, City of Battle Creek  
Leon Zupan, Enbridge  
Susan Hedman, U.S. EPA Regional Administrator  
Rebecca Humphries, MDNRE  
Jim Sygo, MDNRE  
Connie Gibson, Calhoun County Sheriff's Office  
Cheryl Vosburg, City of Marshall  
David Chung, U.S. EPA  
Jason El-Zein, U.S. EPA  
Michael Chezik, U.S. Department of Interior  
Linda Nachowicz, U.S. EPA  
OSLTF USCG, USCG  
Bruce Vanotteren, MDNRE  
Brian Pierzina, PHMSA Central Region

**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:** 10/01/2010

**Reporting Period:** 0700 hours 9/29/2010 to 0700 hours 10/01/2010

## **1 Introduction**

### **1.1 Background**

#### **1.1.1 Site History**

##### **Background Information**

**Site Number:** Z5JS

**D.O. Number:**

**Response Authority:** OPA

**Response Lead:** PRP

**NPL Status:** Non NPL

**Mobilization Date:** 7/26/2010

**Demob Date:**

**CERCLIS ID:**

**ERNS No.:**

**FPN#:** E10527

**Contract Number:**

**Action Memo Date:**

**Response Type:** Emergency

**Incident Category:** Removal Action

**Operable Unit:**

**Start Date:** 7/26/2010

**Completion Date:**

**RCRIS ID:**

**State Notification:**

**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 September 30, 2010, at 0700 to October 04, 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. Implement systematic DECON/demobilization of project resources.
2. Continue recovery of submerged oil and sediment in the Kalamazoo River with prioritization of the Millpond area and re-evaluation of Morrow Lake delta.
3. Complete necessary grade restoration and stabilization work along Talmadge Creek in accordance with the approved plans.
4. Implementation of transition to long-term operation and maintenance of containment and submerged oil recovery.
5. Continue messaging and tactics on project status and next steps for public awareness.

## 2 Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

As described in SITREP #58, Command Emphasis has been realigned to match the progress of the cleanup. Operations are now focused on Operations and Maintenance, DECON/demobilization, and recovery of submerged oil. In addition, as noted in SITREP #58, the Operations Section was restructured during the previous operations period. Figure 7 is a depiction of the current Operations Section Organization Chart and is included at the end of this SITREP. Important focus areas, as noted by Task Forces established within the Branches include: dredging (Ceresco Dam); submerged oil recovery from hot spots; hydrogeological investigation; decontamination of equipment; removal of booms, mat roads, silt fences; and the continued recovery, care, and support of wildlife. Unified Command has also extended the Operational Period for this response to four days.

### 2.1.2 Oil Recovery and Cleanup Operations and Maintenance Branch

- The Morrow Lake Task Force, the Containment and Recovery group, and the Shoreline and Overbank Group all continued operations as normal.
- EPA conducted O&M inspections from MP2.25 to 5.5 and from 8.25 to 14.75. Heavy sheen was identified along the LDB between MP4.25 and MP4.5. Sorbent materials were deployed immediately.
- Performed O&M activities in accordance with the O&M List of Identified Areas.
- Continued ongoing sampling at Morrow Lake.

#### Ceresco Dam Task Force

- Continued preparation of treatment and staging area.
- Ongoing aeration at MP5.55, 5.63, 5.75, and 5.81.
- Identified additional priority areas at MP4.53 and MP5.63.
- Identified moderate sheen and beaded oil along LDB between MP12.5 and MP13.25. Product appears to be released from submerged oil. SOTF has been notified. Conducted skimming operations
- Successful “bump test” of dredge system to check integrity.

#### Source Area and Talmadge Creek Operations and Maintenance

- Conducted ongoing O&M throughout the Kalamazoo River.
- Continuing backfilling, restoration, and installation of erosion control matting throughout Divisions A and B.
- Ongoing mat road maintenance.
- Dewatering and backfilling/restoration at Location A5.
- Ongoing bypass pumping and backfilling/restoration at Location B2.5.
- Free product visible during excavation of stream bed sediments and bank sediments at Location B4.
- Setup for dewatering of the pond at Location B4.5 where sheen has been present.
- Ongoing boom and silt fence maintenance.

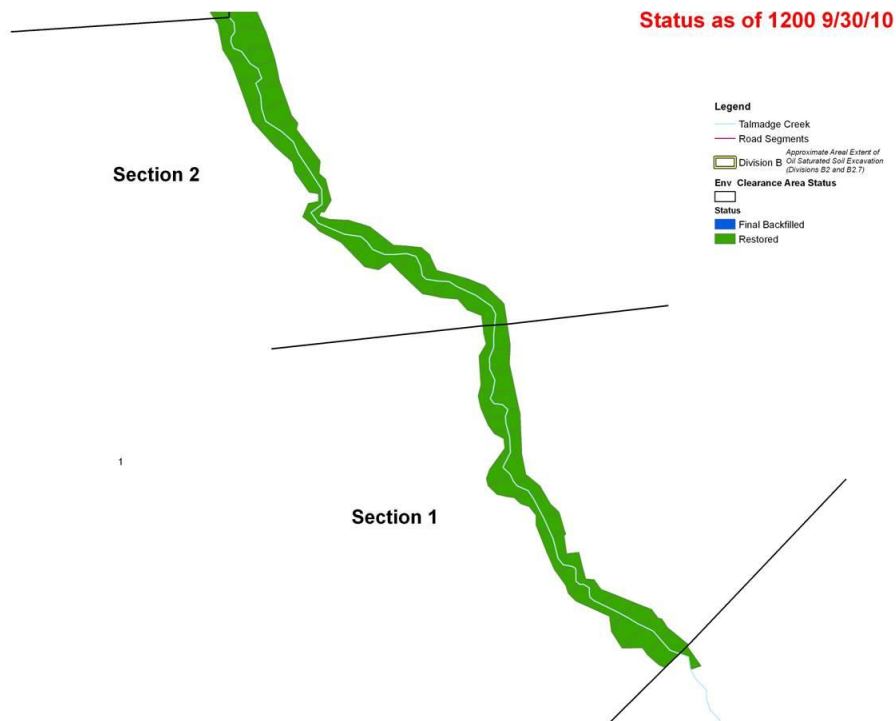
The clean up and restoration phase for Talmadge Creek is being tracked using a four step process:

1. Prepped - Six hour trench /pit observation and EPA evaluation of trench/pit and preparation in progress. Forty-eight hour observation trench/pit where applicable.
2. Cleared - EPA evaluation completed and section ready for backfill.
3. Backfilled - Initial backfill/stabilization completed. Forty-eight hour observation trench/pit where applicable.
4. Restored - Section complete.

The progress of the restoration is outlined in Table 1 and is depicted in Figure 1 through Figure 5.

**Table 1 - Division A and B, Sections 1-10**

Restoration Step		Percent Complete
1. Prepped		100%
2. Cleared		100%
3. Backfilled		100%
4. Restored		86%



**Figure 1 - Division A, Sections 1 and 2 (Locations A5 to A6)**

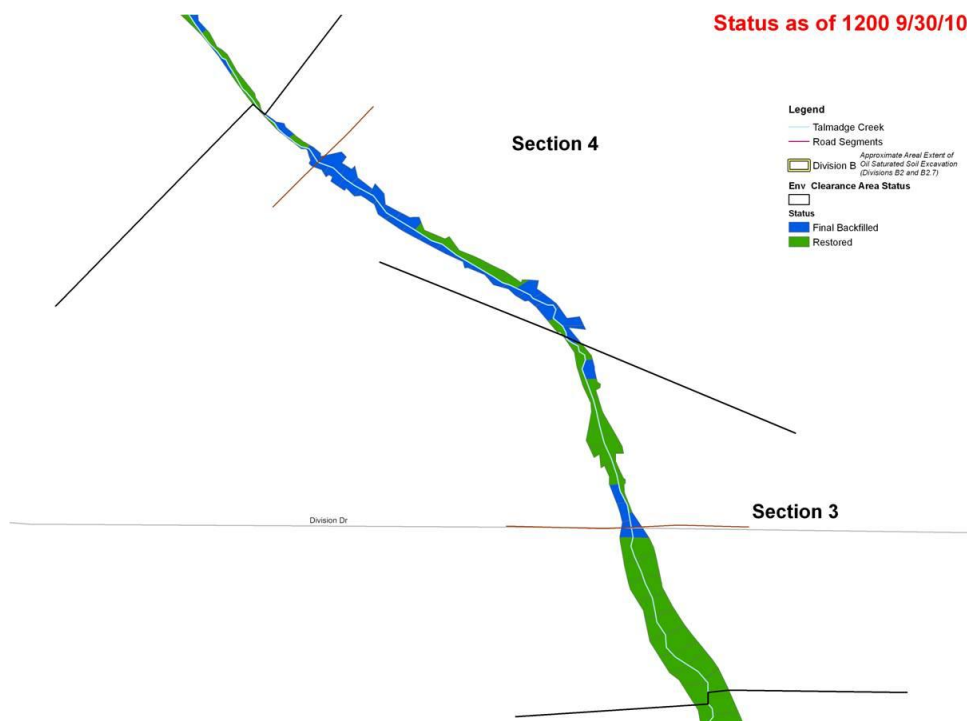


Figure 2 - Division B, Section 3 and 4 (Locations B2 to B2.5)



Figure 3 - Division B, Sections 5 and 6 (Locations B2.7 to B4)



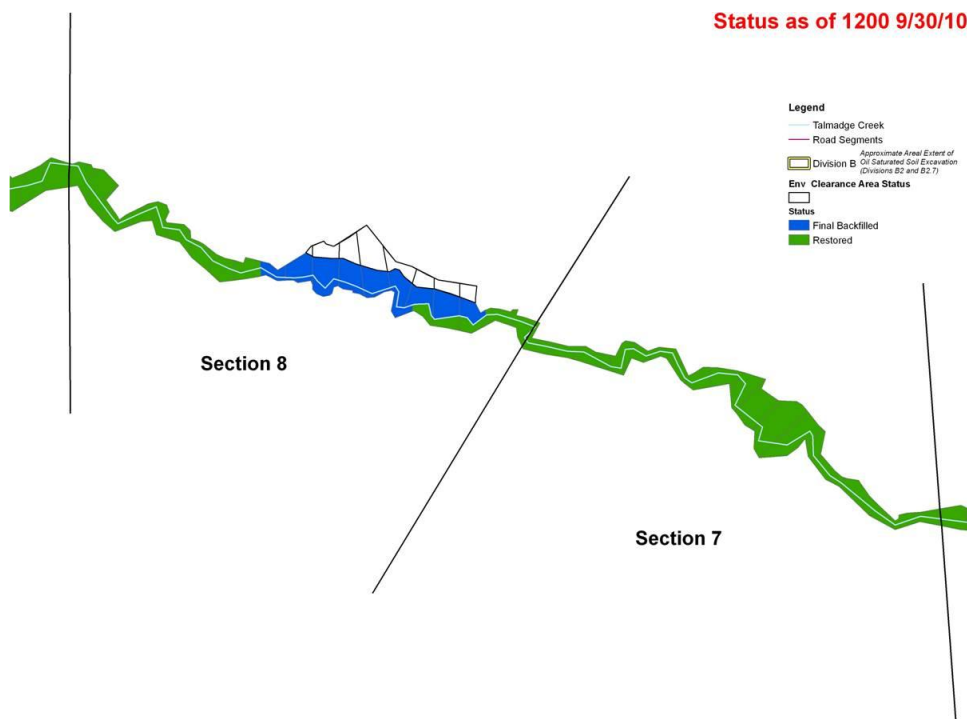


Figure 4 - Division B, Sections 7 and 8 (Locations B4 to B4.5)

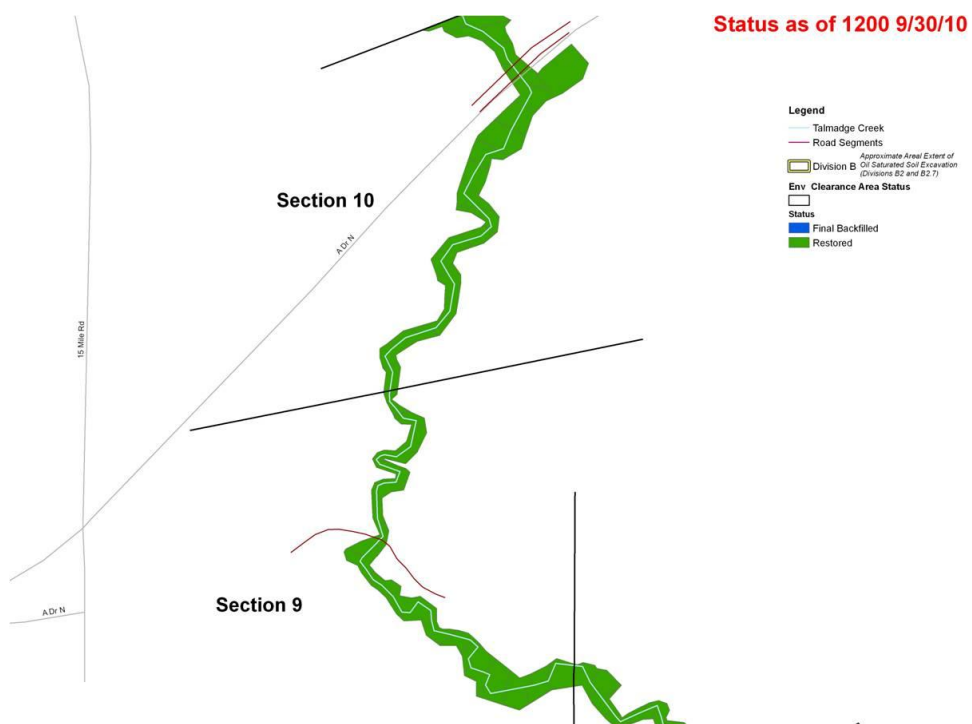


Figure 5 - Division B, Sections 9 and 10 (Locations B4.5 to B5)

### 2.1.3 Oil Recovery and Cleanup Submerged Oil Branch

#### Ceresco Dam Dredging Task Force

- Continued site prep for treatment portion of project.



- Static dredge extraction/suction line test was completed and successful.
- Completed water treatment facility installation.
- Dredging operations began at 1000 on September 30th.

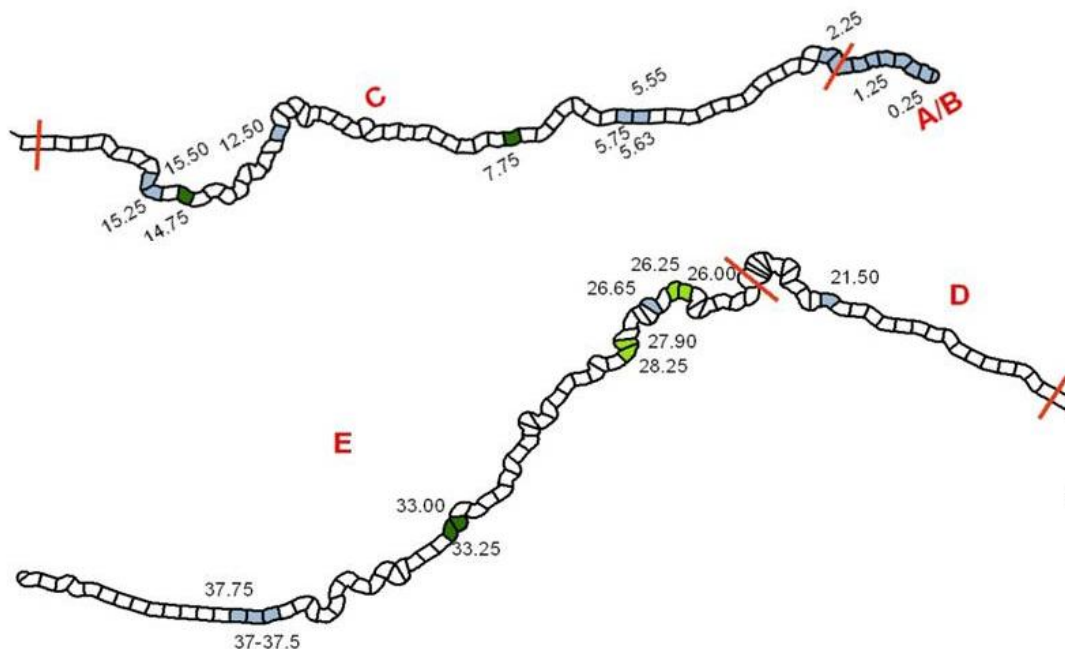
#### Submerged Oil Recovery Group

- Crews performed activities on the IAW SOTF prioritization list. Activities included:
  - Prep work at MP5.55, 5.63, and 5.75N.
  - Flushing operations at MP26.25.
  - Sheen collection at MP28.25.
  - Shallow recovery and raking operations at MP26.25.
- Multiple priority areas are awaiting final inspection and approval.
- Discovery of new areas of submerged oil at MP4.53, MP5.31, and MP5.81. Areas are currently being evaluated.

**Table 2 - Submerged Oil Cleanup Status**

Submerged Oil Cleanup	Percent Complete	Number of Sites	Total at Completion
Assessment	100%	20	20 <sup>a</sup>
Containment	100%	18	18
Work Plan	100%	18	18
Cleanup	44%	8	18
EPA Division Supervisor Sign-Off (Step 5)	22%	4	18

<sup>a</sup> - After assessment, it may be determined that submerged oil is not present and no further activity is required.



**Figure 6 - Submerged Oil Cleanup Sites**

## 2.1.4 Environmental Compliance and Oversight Branch

### Source Area/Talmadge Creek

- Oversight of restoration and excavation activities.
- Planning of and transitioning toward operation and maintenance activities.

### Transportation and Disposal Group

- Approved disposal of material from soil cell 7, fill 3.
- Performed assessment concerning the co-mingling of oily and non oily debris at access and operation demobilization areas.
- Continued to perform audits of manifests, weight tickets, and bills of lading.

## 2.1.5 Monitoring Branch

- Collected multiple sediment and surface water samples.
- Conducted air monitoring near oil collection sites, excavation operations, and community areas.
- Oversight included 16 duplicate UltraRAE and MultiRAE samples. No readings in excess of the background were reported. In addition, two split samples were collected from Division C (refer to Table 3).

### Submerged Oil Task Force

- Several SOTF teams were unable to conduct regular operations due to a lack of boats but the issue was raised and addressed at the 1800 Operations Meeting.
- Continued documentation of aeration at MP5.55, MP5.63, and MP5.75.
- Conducted excavation and dewatering operations on ponds along Talmadge creek at MP4.5.
- Poling of multiple locations within Mill Pond. Free product and heavy sheen were released after agitation. Booming and skimming operations are being conducted.
- Logging and collection of sediment cores.

**Table 3 – Samples Collected (as reported by Enbridge)**

<b>Sample Type</b>	<b>Number Collected 9/29</b>	<b>Number Collected 9/30</b>
Air Monitoring	Not Reported by Enbridge	Not Reported by Enbridge
Surface Water	29	28
Vertical Water Column Samples	0	0
Private Well Samples	4	7
Sediment Samples	13	13
Sheen Samples	0	0
Other	0	0
Soil Samples	0	0

**Table 4 – Samples Documented in SCRIBE (as reported by EPA)**

Media	Sample Type	Number Collected 9/29	Number collected 9/30
Air	Summa Canister	0	0
Air	Tedlar Bags	0	0
Air	Monitoring Locations	30	62
Surface Water	Grab	1	0
Sediment	Grab	0	1

### 2.1.6 Air Ops Branch

- During this operational period, there were 5 overflights.
- Air Ops observed and documented cleanup and restoration progress in all operational areas.
- Air Ops continued to investigate areas of interest and report on hot spots, oil mobilization, O&M, and DECON.
- On September 30, Enbridge reported the following:
  - Operations as usual throughout Division B, the Decon areas and at Frac Tank City.
  - No sheen on the ponds along Talmadge creek at Location B4.5, upstream of D3, or on Morrow Lake.
  - Turbid water at the confluence of the Kalamazoo River and Talmadge Creek.
  - Continuing aeration and agitation operations above Ceresco Dam.
  - Light to medium sheen was observed within containment at the following locations:
    - At MP14.75,
    - At MP10.75,
    - Near MP13.25 (Lonely Tree),
    - At MP26.0,
    - At MP26.65, and
    - Around the central area and northern shore of the Morrow Lake delta.
- On September 30, EPA reported the following:
  - Restoration operations appear nearly complete throughout Division B.
  - Free product was visible in the ponds adjacent to Talmadge Creek at Location B4.5. Observation has been documented in the daily photo log and Enbridge has been informed.
  - Light to medium sheen was observed at the following locations:
    - Along both shorelines of Ceresco Dam,
    - Within the boomed area at MP10.75,
    - Breaching the containment at the MP13.25 (Lonely Tree).
    - Within containment near Baker Estates (MP13.5),
    - Off the northwest tip of the island at MP14.75,
    - Along the RDB between D3 (MP20) and D4 (MP20.75),
    - Within the oxbow area at MP21.25,
    - At MP26.0,
    - Along RDB at MP26.25,
    - In the backwater area of MP28.25, and
    - At Morrow Lake delta (spotty sheen).
  - Turbid water at the confluence of the Kalamazoo River and Talmadge Creek.

- Continuing aeration and agitation operations above Ceresco Dam.
- Heavily saturated and debris laden booms at the oxbow at MP 21.25.
- Dried oil area along west side of mill race at MP16.

### 2.1.7 Additional Operations

The Technical Services Group, DECON Branch, Wildlife Environmental Damage Branch, and Air Operations conducted activities in all Divisions.

#### Technical Services Group

- No report filed.

#### DECON Branch

- Performed reconnaissance of all division DECON locations.

#### Wildlife Environmental Damage Branch

- The wildlife center reported approximately 367 animals in care and 1730 animals released.

### 2.1.8 Progress Metrics

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

#### Boom Report

**Table 5 - Boom Report**

<b>Date</b>	<b>9/29</b>	<b>9/30</b>
Number of Locations	24	24
Boom Deployed (feet)	120,710	124,230

#### Soil and Debris Waste Tracking

**Table 6 - Soil and Debris Waste Tracking**

<b>Waste Stream*</b>	<b>Quantity Shipped On 9/28</b>	<b>Quantity Shipped On 9/29</b>	<b>Cumulative Quantity Shipped<sup>†</sup></b>
Haz Soil (yd <sup>3</sup> ) <sup>a</sup>	0	0	15,344
Non Haz Soil (yd <sup>3</sup> ) <sup>b</sup>	756	1,048	33,106
Haz Debris (yd <sup>3</sup> ) <sup>c</sup>	0	0	12,075
Non Haz Debris (ton) <sup>c</sup>	1	8	1,362

\* 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 7 –Oil water collected by location 9/29/10 0700**

Location	Cumulative Total Collected (gallons)
Division A	5,453,393
Division B	4,463,865
Division C	958,700
Division D	119,850
Division E	50,030
DECON	247,510
Other Locations*	229,683
<b>TOTAL</b>	<b>11,523,031</b>

\* Includes Frac, DECON, and Wildlife Center.

**Table 8 - Oil water Separation 9/30/10**

Oil-Water - Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	757,741
Other Material	1,401,065
<b>TOTAL</b>	<b>2,158,806</b>

**Table 9 - Oil/Water Volume Summary (Gallons)**

Oil/Water Collected	11,523,031
Oil/Water Shipped Off-site	10,369,154
<b>OIL/WATER REMAINING ON-SITE</b>	<b>1,153,877</b>

**Table 10 – Liquid Shipped Off-site**

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)9/28	Daily Quantity Shipped (Gallons)9/29	Cumulative Quantity Shipped (Gallons)†
Haz Water	Dynecol, Detroit, MI	0	0	2,410,198
Oil/Water	Enbridge Facility, Griffith, IN	0	0	2,158,806
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	0	0	370,200
Treated Non Haz Water	Plummer, Kentwood, MI	39,500	35,200	3,326,225
Haz Water	Safety Kleen <sup>a</sup>	0	0	825
Treated Non Haz Water *	Dynecol, Detroit, MI	0	0	134,200
Treated Non Haz Water *	Battle Creek POTW	0	0	1,968,700
<b>Totals</b>		<b>39,500</b>	<b>35,200</b>	<b>10,369,154</b>

\* Treated Non Haz Water no longer sent to this location.

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

a. New Age lab water and methanol mix generated by mobile laboratory.

## **2.2 Planning Section**

### Data Management Unit/GIS Unit

- Continued to process surface water data, importing preliminary and validated analytical results into Scribe, and continued to process maps as requested.
- Assisted with data organization and mapping of benzene monitoring results at Ceresco Dam.

### Environmental Unit

- No new activities were reported.

#### **2.2.1 Anticipated Activities for Next Reporting Period**

The next reporting period (SITREP #60) will cover October 1, 2010 0700 to October 3, 2010 0700. This will be Day 2 and Day 3 of the current Operational Period (which is four days, September 30, 2010 0700 to October 4, 2010 0700). Operations are focused on the submerged oil cleanup (hotspots are being identified and addressed through a punch list process). Additionally, the focus remains on DECON/demobilization and restoration.

#### **2.2.2 Public Health**

- No new activities were reported.

## **2.3 Logistics Section**

- Coordinated with various other units within the ICS on multiple projects.

## **2.4 Safety Reports**

- EPA and Enbridge safety reported no major injuries and only minor PPE infractions.
- A vacuum truck ruptured a water discharge hose at Frac Tank City. Enbridge repaired the hose immediately. No injuries were caused by this incident.
- A contractor was observed sleeping while on fire watch at Frac Tank City. Site supervisor and safety corrected immediately.
- EPA and Enbridge coordinated with contractors to update and revise the DECON plan.

## **2.5 Liaison Officer**

- The LNO engaged in ongoing coordination with assisting and cooperating agencies, the UC, Enbridge, and the PIO.

## **2.6 Information Officer**

- Completed door-to-door distribution of the Ceresco meeting flyer on 9/29
- Confirmed the availability of EPA's Regional Administrator and MDNRE's Director for a public meeting in October 2010
- Arranged the press conference (which will occur on October 1, 2010)
- Participated in the Ceresco public availability session occurred the evening of September 30<sup>th</sup>. Approximately 40 residents attended over a 4 hour period. No media were present.

Enbridge reported the following public inquiries/claims:

	<b>September 29, 2010</b>
Battle Creek Community Center	6/1
Marshall Community Center	4/0
Oil Spill Public Information Hotline	20
Enbridge Response Website	1
Total Public Inquiries/Claims	31/1

## 2.7 Finance Section

The current NPFC issued ceiling was \$21.6 million. Approximately 88.0% of the ceiling had been spent through September 29, 2010 (see burn rates below). These cost summaries reflect only EPA-funded expenditures for the incident.

**Table 11 - FPN E10527 - Enbridge Pipeline Oil Spill**

<b>ERRS Contractors</b>		<b>Est. Expended</b>	<b>Est Burn Rate (9/28/10)</b>	<b>Est Burn Rate (9/29/10)</b>
EQM (EPS50802)	T057	\$1,250,065	0	0
	T060	204,905	0	0
LATA (EPS50804)		1,451,396	0	0
ER LLC (EPS50905)		723,669	0	0
<b>ERRS Contractors</b>		<b>\$3,630,035</b>	<b>0</b>	<b>0</b>
Lockheed Martin (EPW09031)		150,000	0	0
T&T Bisso		1,255,000	0	0
<b><u>START Contractor</u></b>				
WESTON (EPS50604)		6,335,705	59,613	60,843
Response Contractor Sub-Totals		\$11,370,740	\$59,613	\$60,843
<b><u>EPA Funded Costs:</u></b>				
Total EPA Costs		3,676,603	34,900	34,900
<b><u>Pollution Removal Funding Agreements:</u></b>				
<b>Total Other Agencies</b>		<b>\$1,334,989</b>	<b>\$7,620</b>	<b>\$3,840</b>
Sub-Totals		\$16,382,332	\$102,133	\$99,583
Indirect Cost (16.00%)		2,621,173	16,341	15,933
<b>Total Est. Oil Spill Cost</b>		<b>\$19,003,505</b>	<b>\$118,474</b>	<b>\$115,516</b>

## 2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports #1 through #58.



### **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

**Table 12 - Personnel On Site**

Agency/Entity	Numbers Reported 9/29	Numbers Reported 9/30
EPA	34	29
START	39	38
Calhoun County Public Health	1	4
Calhoun County (CC) Sheriff	6	6
City of Battle Creek	3	3
Kalamazoo Sheriff	2	2
MDNRE	7*	7*
Michigan State Police (MSP)	1	1
NOAA - National Weather	2	1
USFWS	4	1
Enbridge ICP	83	83
Enbridge ICP Contractor	353	342
Enbridge	17	12
Enbridge Contractors	860	852
<b>Total</b>	<b>1405</b>	<b>1381</b>

\* Staffing numbers do not included water ops

## 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>.

### 5.2 Reporting Schedule

SITREPs are now being created every other day and will continue until the UC establishes a different reporting schedule.

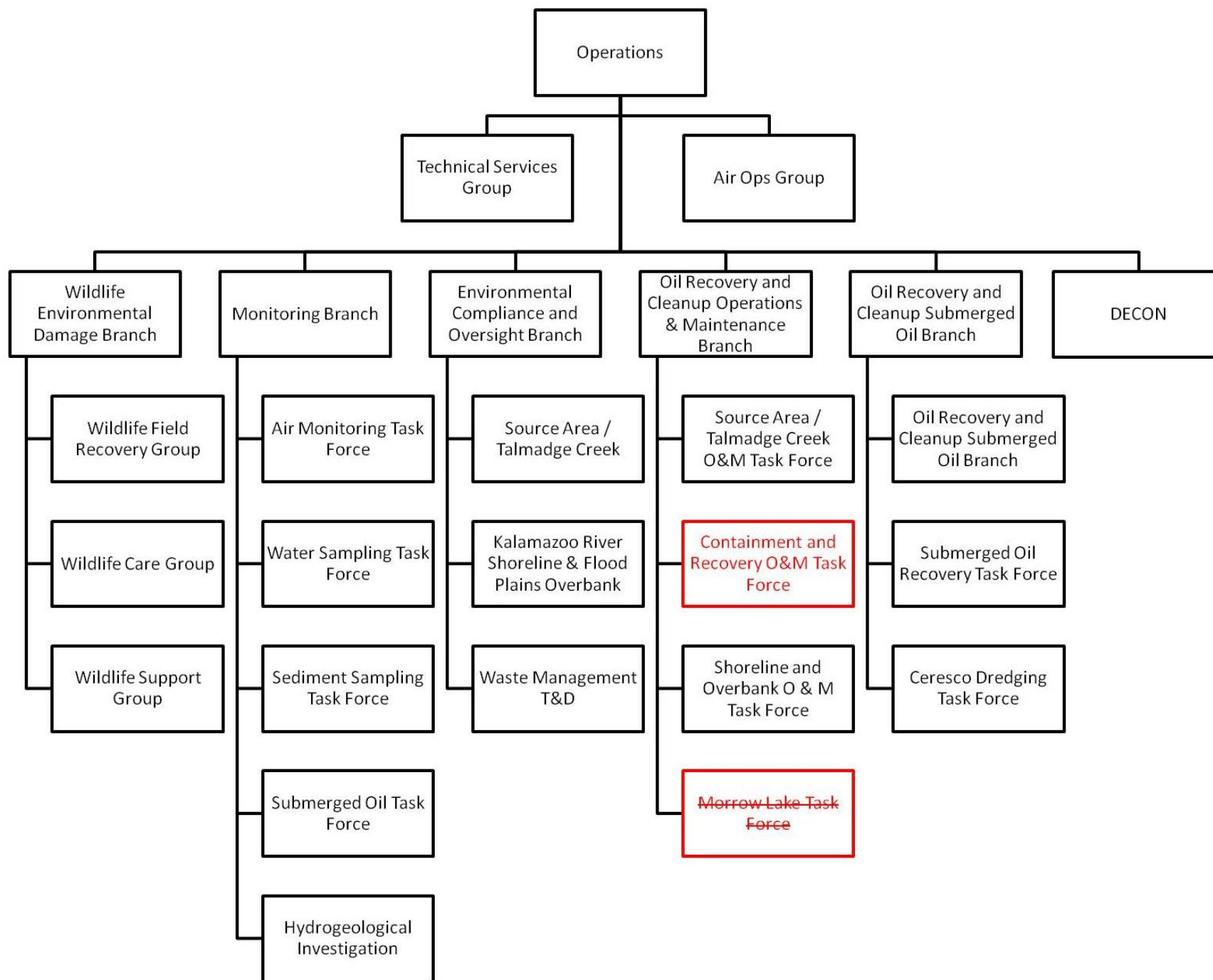


Figure 7 – Revisions to the Incident Command Structure