

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



Division C, test pit

Subject: **SITREP # 57**
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
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Date: 09/27/2010

Reporting Period: 0700 hours 9/25/2010 to 0700 hours 9/27/2010

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 September 24, 2010, at 0700 to September 27, 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. Continue recovery of submerged oil and sediment in the Kalamazoo River and Morrow Lake with prioritization of the Mill Pond area.
2. Emphasize the completion of sign-off packages, submittal and EPA review for Divisions A5/A6, B and C.
3. Complete necessary grade restoration and stabilization work along Talmadge Creek in accordance with approved plans.
4. Planning for transition to long-term operation and maintenance of containment and submerged oil recovery.
5. Implement systematic DECON/demobilization of project resources.
6. Finalize messaging and tactics on project status and next steps for public awareness.

2 Current Activities

2.1 Operations Section

2.1.1 Narrative

See SITREP #51 for a comprehensive description of the operational area.

The current operational phases of the response consist of: 1) Talmadge Creek Restoration; 2) Shoreline and Overbank Cleanup; 3) Decontamination and Disposal; 4) Submerged Oil Cleanup; and 5) Operations and Maintenance (O&M).

2.1.2 Talmadge Creek Restoration

The restoration phase of the response 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.

Division A and B

- EPA night crews observed and documented areas of pooled oil. Enbridge has been informed.
- Installation of vertical culverts to prevent test pits from collapsing.
- Removal of contaminated sediments from the creek bed at Location A6.
- Continued ongoing backfilling of test pits.
- Conducted pump around operations of A6 and vacuum truck operations of creek bed.
- Continued restoration activities and installation of erosion control matting.
- Focused on corrective actions identified by MDNRE.

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

Restoration Step		Percent Complete
1. Prepped		100%
2. Cleared		100%
3. Backfilled		100%
4. Restored		44%

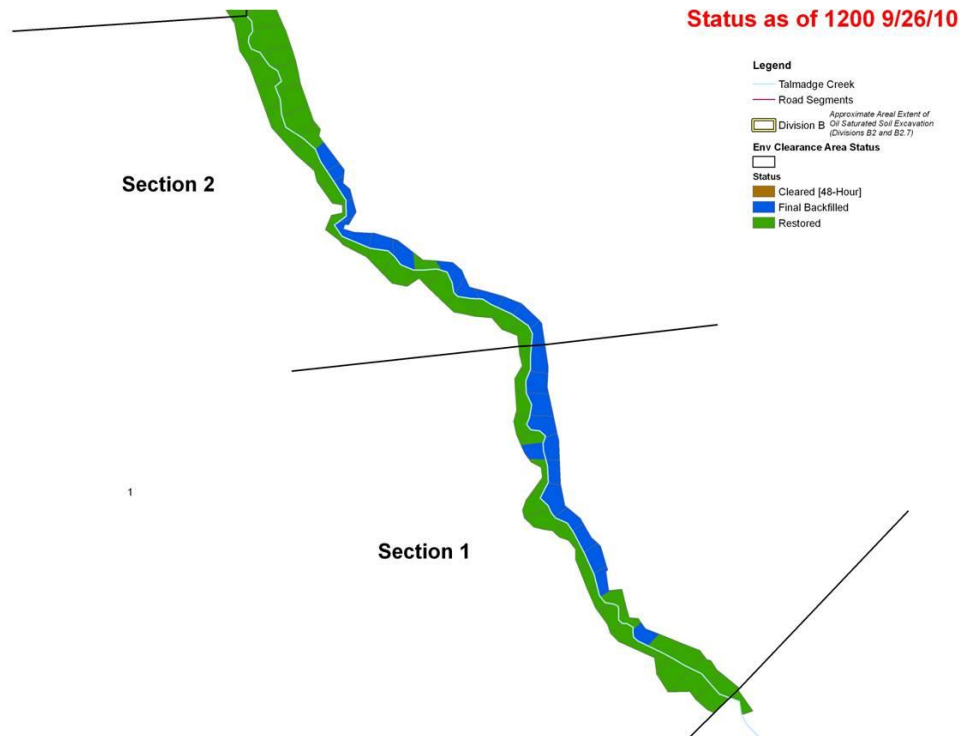


Figure 1 - Division A, Sections 1 and 2 (Locations A5 to A6)

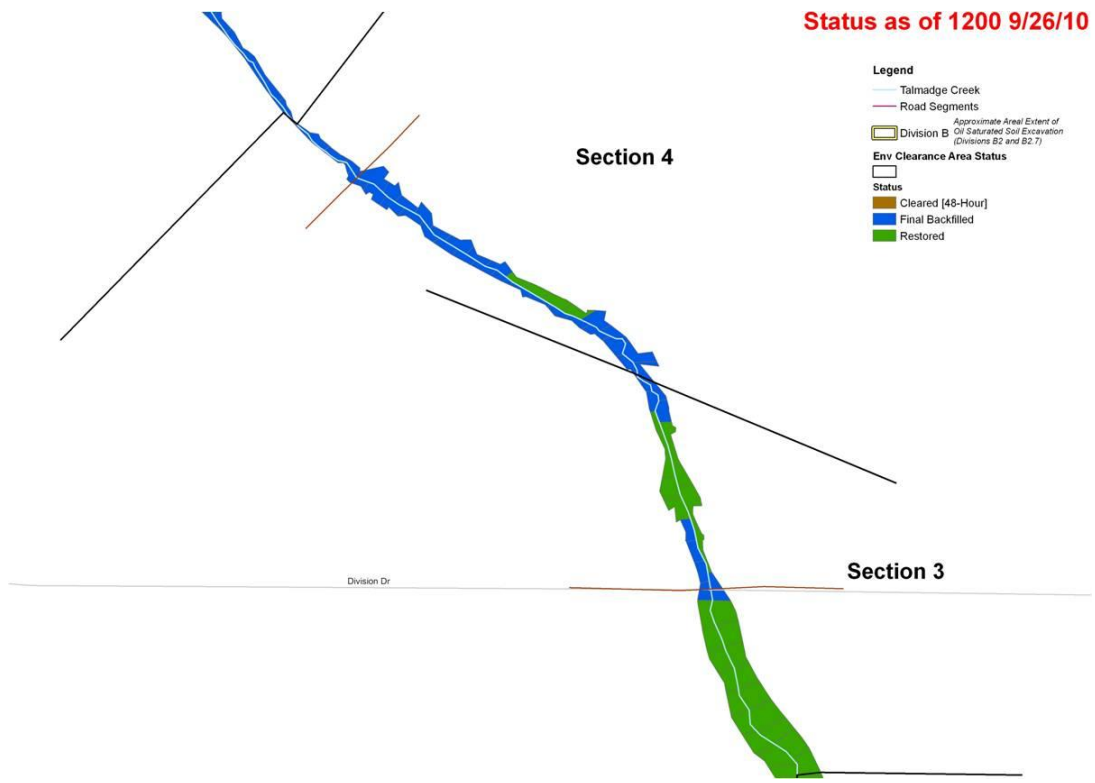


Figure 2 - Division B, Section 3 and 4 (Locations B2 to B2.5)

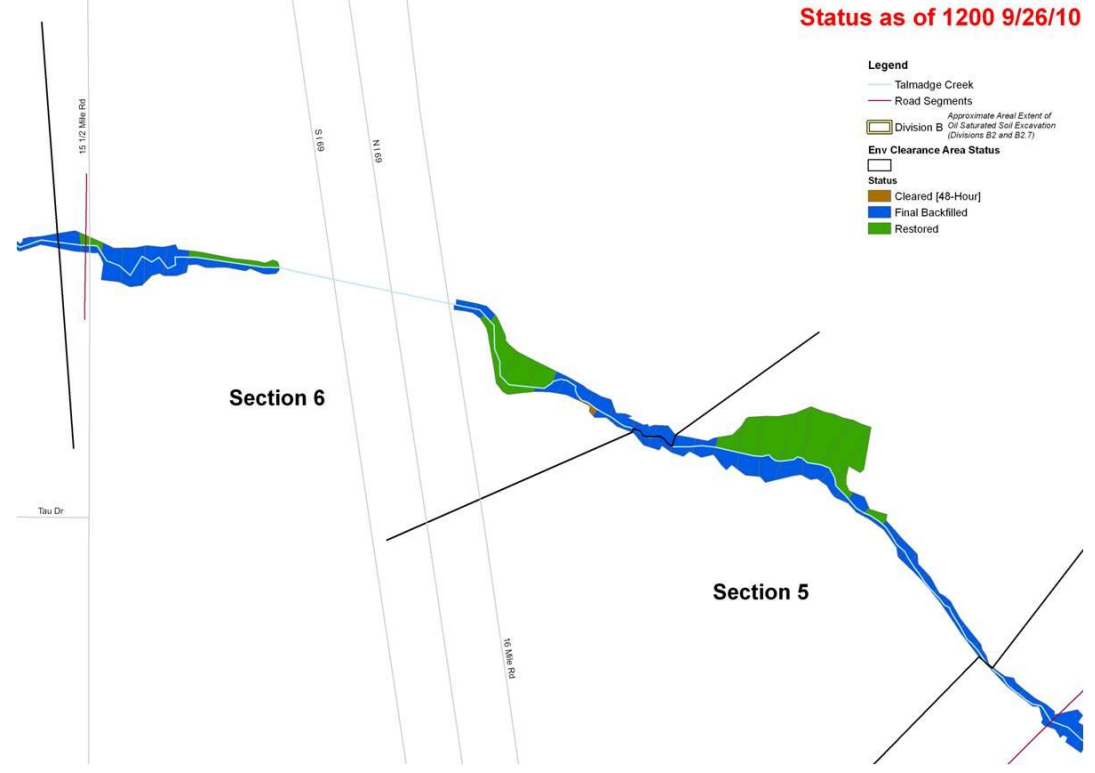


Figure 3 - Division B, Sections 5 and 6 (Locations B2.7 to B4)

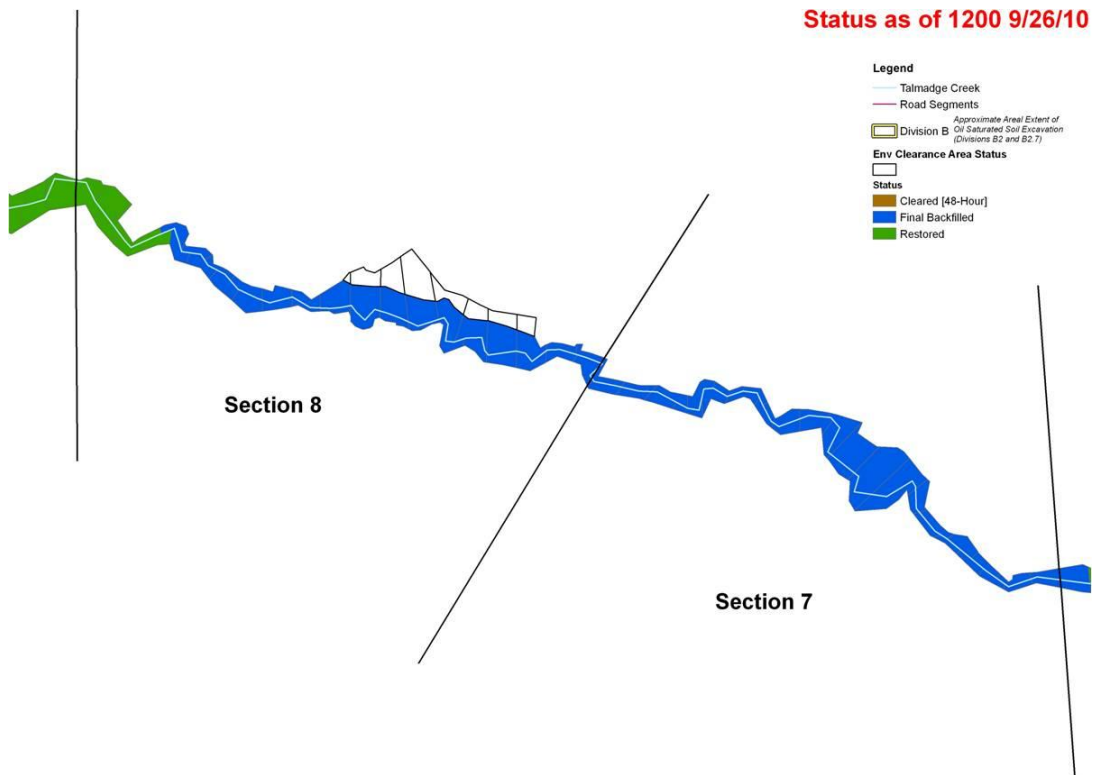


Figure 4 - Division B, Sections 7 and 8 (Locations B4 to B4.5)

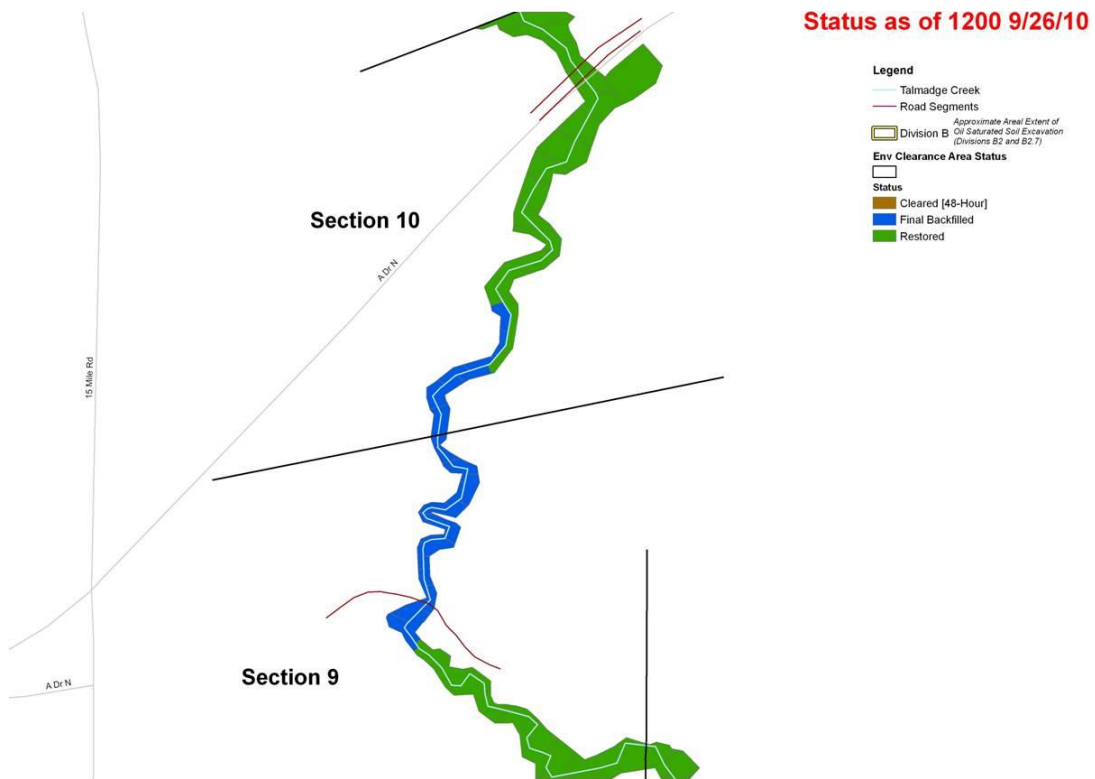


Figure 5 - Division B, Sections 9 and 10 (Locations B4.5 to B5)

2.1.3 Shoreline and Overbank Cleanup

The shoreline and overbank cleanup actions for this response are guided by a five step process:

1. Shoreline Cleanup and Assessment Techniques (SCAT) assessments completed.
2. Operations cleanup completed.
3. Enbridge/EPA inspection completed.
4. SCAT re-assessment.
5. EPA Division Supervisor sign-off.

Division C

- Removed temporary bridge from Island E.
- Hotshot team operations occurred at multiple locations (MP2.25, MP2.50, MP2.75, MP3.0, MP3.25, MP4.25, MP4.5, MP7.75, and between MP10.0 and MP13.0).
- Construction of staging area and preparation for the hydraulic cutter-head dredging is underway at Ceresco Dam and is expected to be completed by the end of the next operational period (the next operational period runs from September 27 to September 30, 2010).
- Received information pertaining to a landowner’s complaints of odor, residual oil, and oil in trees near MP8.25; Enbridge working with landowner, EPA, and MDNRE to resolve the issues.
- Identified and cleaned a small oily spot in the river at MP5.75.

Table 2 - Division C

Shoreline and Overbank Cleanup Step	Percent Complete	Number of Sites
SCAT Assessment Completed (Step 1)	100%	61
Operations Cleanup Completed (Step2)	100%	61
Enbridge/EPA Inspection Completed (Step 3)	100%	61
SCAT Re-Assessment Completed (Step4)	100%	61
EPA Division Supervisor Sign-Off (Step 5)	100%	61

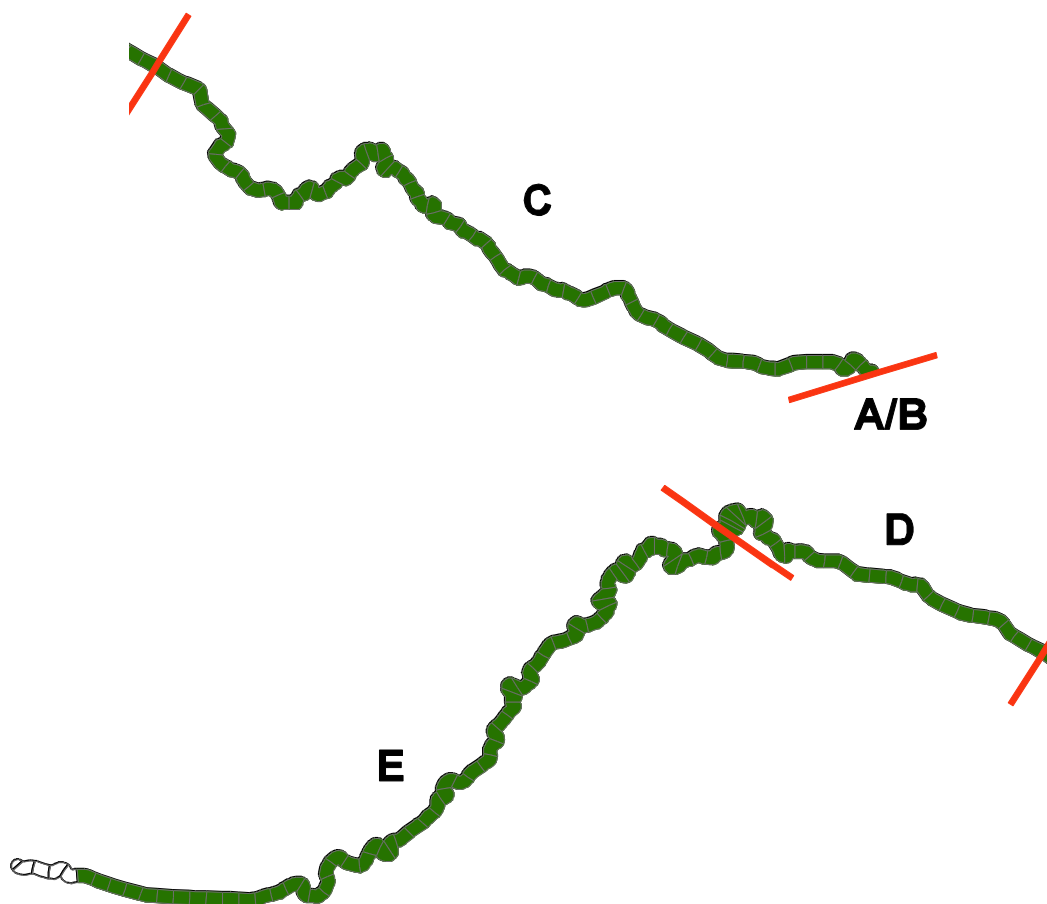


Figure 6 - Divisions A through E

Divisions D and E

- Continued maintenance of Gabion baskets and boom.
- Continued skimmer boat operations and sheen patrolling.

2.1.4 Decontamination and Disposal

DECON Branch

- DECON Branch is now receiving a regular update of the water volume collected each day.
- Visited decontamination sites in Divisions B and C to observe decontamination at each location; due to high winds during this reporting period, the work in decon area at C0.5 was interrupted since a fence/poly sheet barrier was knocked down.

Transportation and Disposal Group

- Reformatted the impacted soil, water, and debris data spread sheets.
- Observed field activities in Divisions A and B including soil staging and soil mixing operations.
- Observed soil mixing, containment, excavation and mat chipping at Cell 4. Also observed debris and soil loading at this location.
- Observed operations at Frac City.
- Reviewed, commented on, and approved the Enbridge Dredging Waste Management Plan.

2.1.5 Submerged Oil Cleanup

Submerged Oil Task Force (Talmadge Creek and Divisions C, D, and E)

- Aeration and raking operations occurred at many priority locations; MDNRE prioritizing locations (MP7.75, MP14.75, and between MP26 and MP26.25).
 - Aeration techniques appear effective at releasing oil from sediments at depths between one to four feet of water.
 - Medium to heavy sheen generated by aerations and raking.
 - Sheen collected using sweeps, booms, pads, and skimmers.
 - Oiled vegetation was collected during the raking of the test pits.
- Heavy product was present at the muddy island between MP26 and MP26.25. Extensive flushing was conducted to release product from the soil.

Table 3 - Submerged Oil Cleanup Status

Submerged Oil Cleanup	Percent Complete	Number of Sites	Total at Completion
Assessment	100%	20	20 ^a
Containment	100%	18	18
Work Plan	100%	18	18
Cleanup	28%	5	18
EPA Division Supervisor Sign-Off (Step 5)	0%	0	18

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

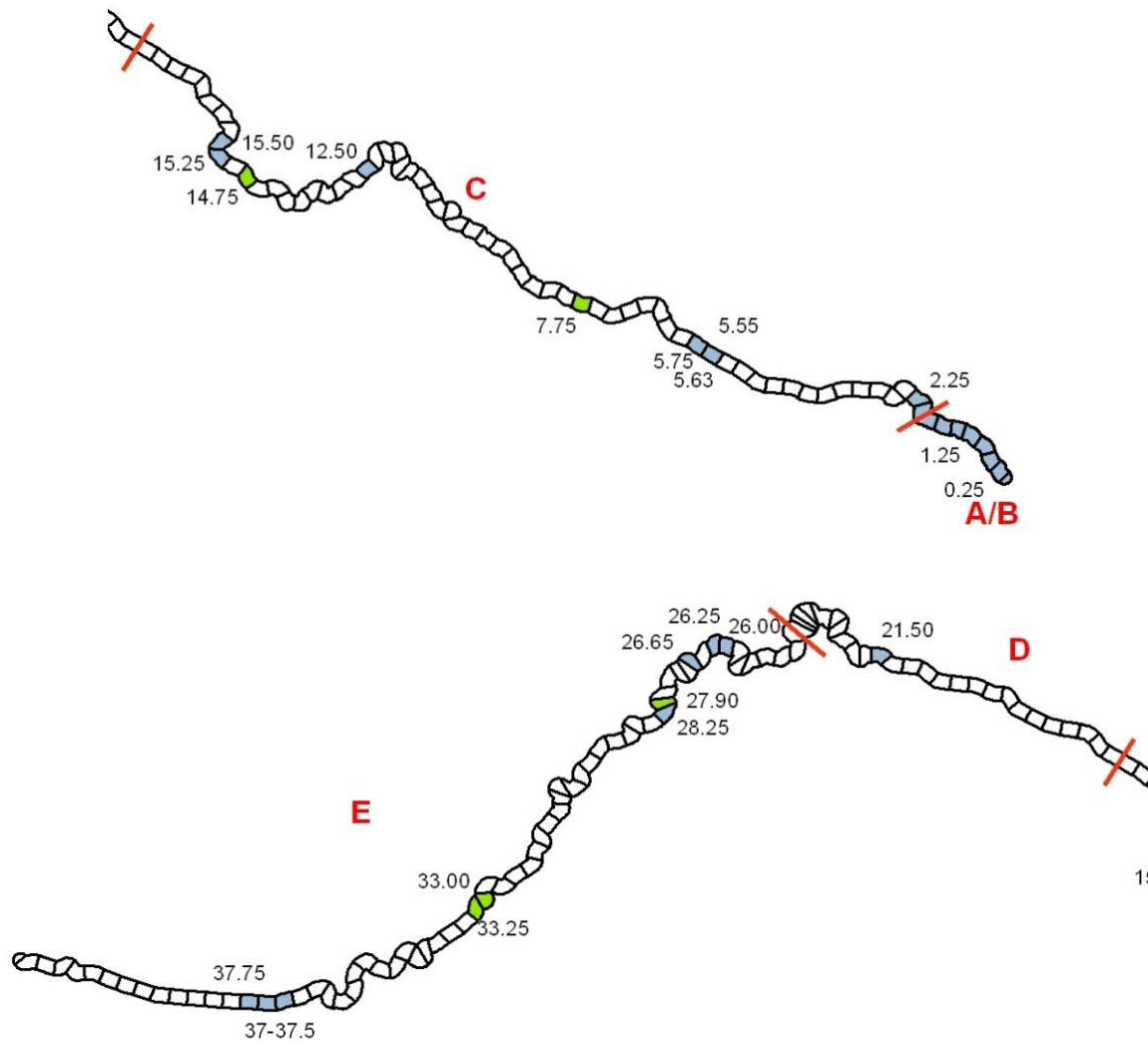


Figure 7 - Submerged Oil Cleanup Sites

2.1.6 Operation and Maintenance

Division C

At MP8.25 Enbridge, in consultation with EPA and MDNRE, is resolving an issue with a landowner concerning trees on his property with oily roots.

2.1.7 Additional Operations

EPA, USCG and Enbridge Operations have Branches that conduct activities in all Divisions: Technical Services Group, Environmental Compliance and Oversight, Wildlife Environmental/Damage Assessment, Air Operations and Monitoring.

Technical Services Group

Assessed area of heavy sheen at MP12.5. Oil is potentially trapped beneath a deadfall tree.

Environmental Compliance and Oversight Branch

Installation of test holes at MP13.25 (along the left bank) to delineate the buried oil at that location. Based on observations over the next 24 hours, remediation options will be proposed and then selected, in consultation with EPA.

Wildlife Environmental Damage Assessment Branch

The wildlife center reported approximately 284 animals in care and 1529 animals released.

Air Ops Branch

- During this operational period there were 4 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.

Monitoring Branch

Enbridge reported the following:

- Focused air sampling programs continued around the Baker Estates Mobile Home Park, Daycare, Ceresco Dam, and the work areas. Tedlar bag air samples, 24-hour Summa mini-can samples, grab samples, and passive dosimeter samples were collected as well as real-time air monitoring samples.
- Ongoing real time monitoring for benzene and VOCs in work areas.

Table 4 – Samples Collected

Sample Type	Number Collected 9/25	Number Collected 9/26
Air Monitoring	Not Reported by Enbridge	Not Reported by Enbridge
Surface Water	33	16
Vertical Water Column Samples	0	0
Private Well Samples	2	0
Sediment Samples	10	2
Sheen Samples	0	0
Other	0	0
Soil Samples	0	0

EPA reported the following actions or observations:

- Oversight consisted of duplicating 29 monitoring locations with UltraRAE and MultiRAE, totaling 241 readings. No readings in excess of the background were reported.
- Collection of one surface water split sample from Division C.

Table 5 – Samples Documented in SCRIBE

Media	Sample Type	Number Collected 9/25	Number collected 9/26
Air	Summa Canister	0	0
Air	Tedlar Bags	0	0
Air	Monitoring Locations	17	17
Surface Water	Grab	1	1
Sediment	Grab	0	0

2.1.8 Progress Metrics

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

Boom Report

Table 6 - Boom Report

Date	9/24	9/25
Number of Locations	26	26
Boom Deployed (feet)	128,920	128,997

Soil and Debris Waste Tracking

Table 7 - Soil and Debris Waste Tracking

Waste Stream*	Quantity Shipped On 9/24	Quantity Shipped On 9/25	Cumulative Quantity Shipped [†]
Haz Soil (yd ³) ^a	0	0	15,344
Non Haz Soil (yd ³)	1,170	648	30,082
Haz Debris (yd ³) ^c	0	0	12,075
Non Haz Debris (ton) ^c	1	2	1,344

* 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 8 –Oil water collected by location 9/26/10 0700

Location	Cumulative Total Collected (gallons)
Division A	5,394,493
Division B	4,378,855
Division C	942,900
Division D	119,850
Division E	50,030
DECON	230,310
Other Locations*	229,683
TOTAL	11,346,121

* Includes Frac, DECON, and Wildlife Center.

Table 9 - Oil water Separation 9/26/10

Oil-Water - Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	757,722
Other Material	1,401,078
TOTAL	2,158,800

Table 10 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected	11,346,121
Oil/Water Shipped Off-site	9,981,454
OIL/WATER REMAINING ON-SITE	1,364,667

Table 11 – Liquid Shipped Off-site

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)9/24	Daily Quantity Shipped (Gallons)9/25	Cumulative Quantity Shipped (Gallons)†
Haz Water	Dynecol, Detroit, MI	26,000	20,600	2,394,198
Oil/Water	Enbridge Facility, Griffith, IN	25,701	5,200	2,158,800
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	0	0	370,200
Treated Non Haz Water	Plummer, Kentwood, MI	217,000	141,900	2,954,525
Haz Water	Safety Kleen ^a	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
Totals		161,200	175,518	9,981,448

* 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.
- Continued to complete hot spot mapping.
- Currently awaiting data Scribe data from Tetrtech and CTEH. No updates have been posted for the CTEH surface water analytical data since September 8.

Environmental Unit

No new activities to report.

2.2.1 Anticipated Activities for Next Reporting Period

In the next operational period, Operations anticipates transitioning to focused decontamination operations and cleanup activities to finalize shoreline and overbank activities in Talmadge Creek

and the Kalamazoo River as well as continuation of the submerged oil cleanup. Hot spots will continue to be addressed as identified.

2.2.2 Public Health

No new activities were reported.

2.3 Logistics Section

- Continued coordination on operation of ICP including demobilization of underutilized trailers.
- Conducted review of security checkpoints.

2.4 Safety Reports

- Supply tent at Yard 4, Cell 2 was damaged. Site Safety is investigating
- September 26th represents the last night for Enbridge night ops. Enbridge will downsize to one safety officer.
- Started UTV safety training program for all operators.
- Several workers crossing over restored areas in Divisions A and B have been stuck in mud up to their chest in areas where test pits were dug.
- Multiple test pits do not have barriers and represent a falling hazard.
- Focused inspections of vacuum trucks by Enbridge safety.
- Development of Revision 4 to HASP, hazard assessment for submerged oil operations, and long term O&M.
- Updated the decon site work plan
- The structural integrity of the mat roads has deteriorated over time causing the mats to buckle when heavy equipment moves across the mats.
- Multiple instances of equipment running with no operator.
- Multiple instances of inadequate PPE being employed by workers.
- Decon zones are in need of better delineation and demarcation to ensure that deconed equipment and personnel are not reentering a dirty area..

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

The Public Information Office reported the following activities:

- Media Inquiry Line (877-440-7157)
 Calls received between 9/24 and 9/25: 45

Enbridge reported the following call volume and community center visits:

- Oil Spill Public Information Hotline (800-306-6837)
 Calls received between 9/24 and 9/25: 16

- Community Center Visits:
 - Battle Creek 6
 - Marshall 10

Enbridge reported that it received 3 inquiries from its www.response.enbridgeUS.com website between 9/24 and 9/25.

2.7 Finance Section

The current NPFC issued ceiling was \$21.6 million. Approximately 84.9% of the ceiling had been spent through September 25, 2010 (see burn rates below). These cost summaries reflect only EPA-funded expenditures for the incident.

Table 12 - FPN E10527 - Enbridge Pipeline Oil Spill

ERRS Contractors		Est. Expended	Est Burn Rate (9/24/10)	Est Burn Rate (9/25/10)
EQM (EPS50802)	T057	\$1,250,065	0	0
	T060	244,434	1,600	0
LATA (EPS50804)		1,451,396	0	0
ER LLC (EPS50905)		723,669	0	0
ERRS Contractors		\$3,669,564	\$1,600	0
Lockheed Martin (EPW09031)		150,000	0	0
TNT Bisso		1,202,000	27,000	27,000
START Contractor				
WESTON (EPS50604)		6,097,438	71,416	58,625
Response Contractor Sub-Totals		\$11,119,002	\$100,016	\$85,625
EPA Funded Costs:				
Total EPA Costs		3,545,003	36,186	36,900
Pollution Removal Funding Agreements:				
Total Other Agencies		\$1,150,720	\$7,620	\$7,620
Sub-Totals		\$15,814,725	\$143,822	\$130,145
Indirect Cost (16.00%)		2,530,356	23,012	20,823
Total Est. Oil Spill Cost		\$18,345,081	\$166,834	\$150,968

2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports #1 through #56.

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 13 - Personnel On Site

Agency/Entity	Numbers Reported 9/25	Numbers Reported 9/26
EPA	33	32
START	41	42
Calhoun County Public Health	1	1
Calhoun County (CC) Sheriff	6	6
City of Battle Creek	3	3
Kalamazoo Sheriff	2	2
MDNRE	4	4
Michigan State Police (MSP)	3	1
NOAA - National Weather	2	1
USCG	2	2
USCG Contractor	10	9*
USFWS	0 [†]	0 [†]
Enbridge ICP	78	73
Enbridge ICP Contractor	367	317
Enbridge	27	24
Enbridge Contractors	1055	1010
Total	1634	1527

*Contract to be terminated at 1900 on September 27, 2010.

[†] No personnel counts provided for this reporting period. Personnel count represents unofficial reported staffing numbers.

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.