

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



Aeration for submerged oil removal in Division E, MP 26.25

Subject: **SITREP # 54**
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 Sheriffs 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: 09/21/2010

Reporting Period: 0700 hours 9/19/2010 to 0700 hours 9/21/2010

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 18, 2010, at 0700 to September 21, 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. Implementation of tactics for recovery of submerged oil and sediment in the Kalamazoo River and Morrow Lake.
2. Implement plan to ensure thorough assessment of overbank and areas of concern with focus on Division C.
3. Complete necessary grade restoration and stabilization work plans along Talmadge Creek in accordance with approved plans.
4. Continue timely submittal to EPA of all required documentation for clean-up performed to date.

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; 4) Submerged Oil Cleanup; and 5) Long-Term 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

- Most sites are in the backfill step with EPA observing test pits for free product when applicable.
- Erosion control matting is being installed over backfilled areas.
- Location B3 is being isolated to allow for dewatering prior to contaminated sediment removal. Heavy sheen and free product was observed at location B3 during bypass pumping and dewatering.

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

Restoration Step		Percent Complete
1. Prepped		88%
2. Cleared		64%
3. Backfilled		34%
4. Restored		9%

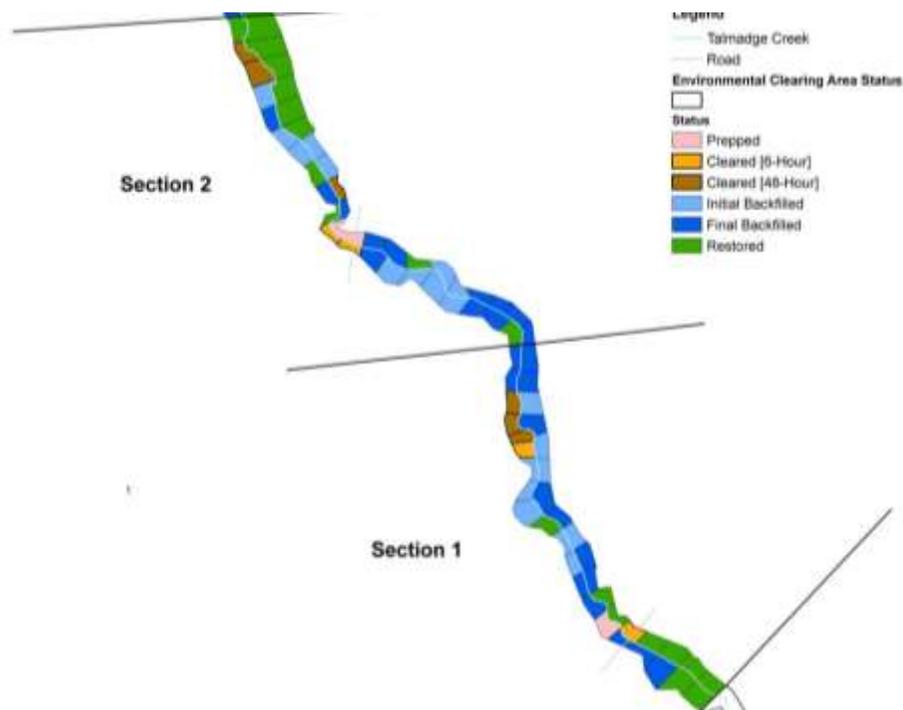


Figure 1. Division A, Sections 1 and 2 (Locations A5 to A6)

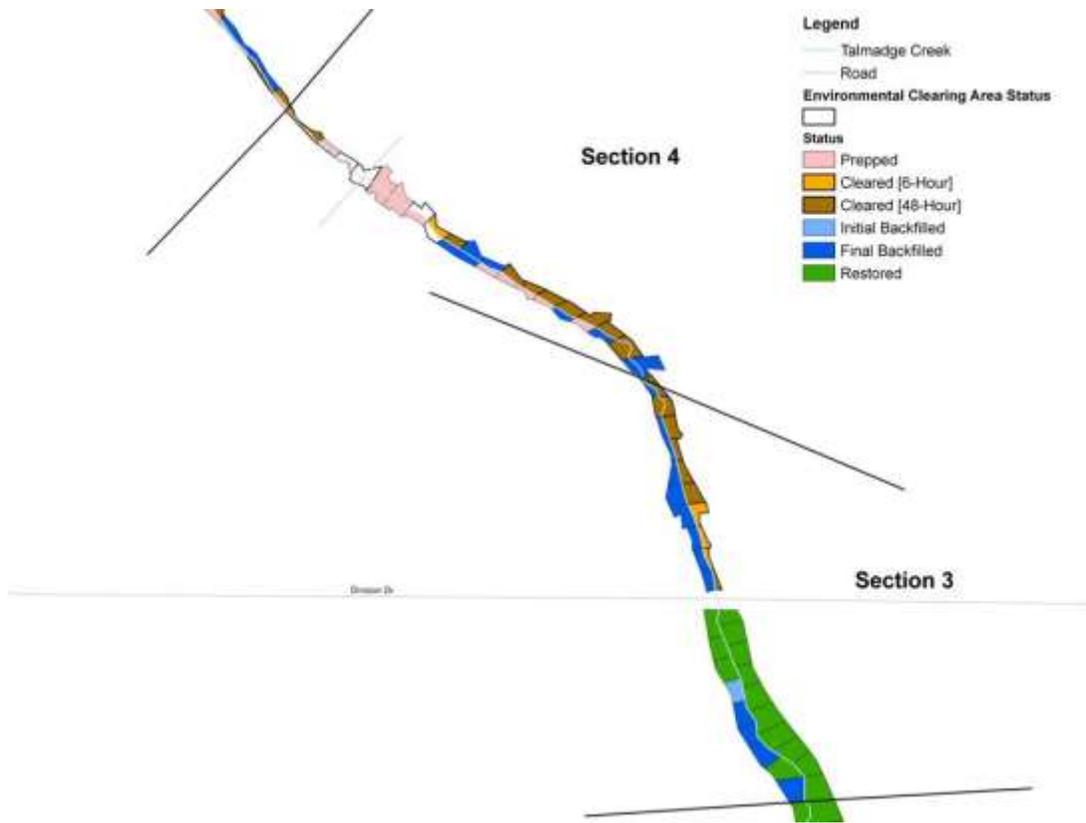


Figure 2. Division B, Sections 3 and 4 (Locations B2 to B2.5)

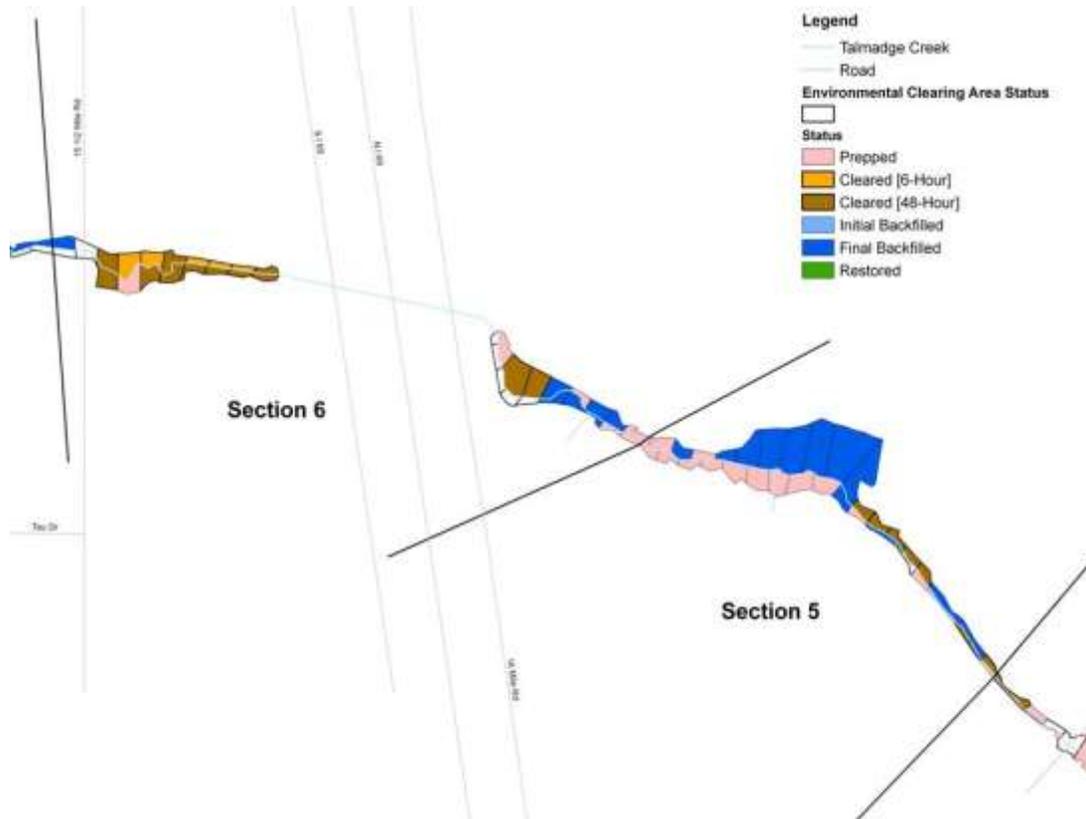


Figure 3. Division B, Sections 5 and 6 (Locations B2.7 to B4)

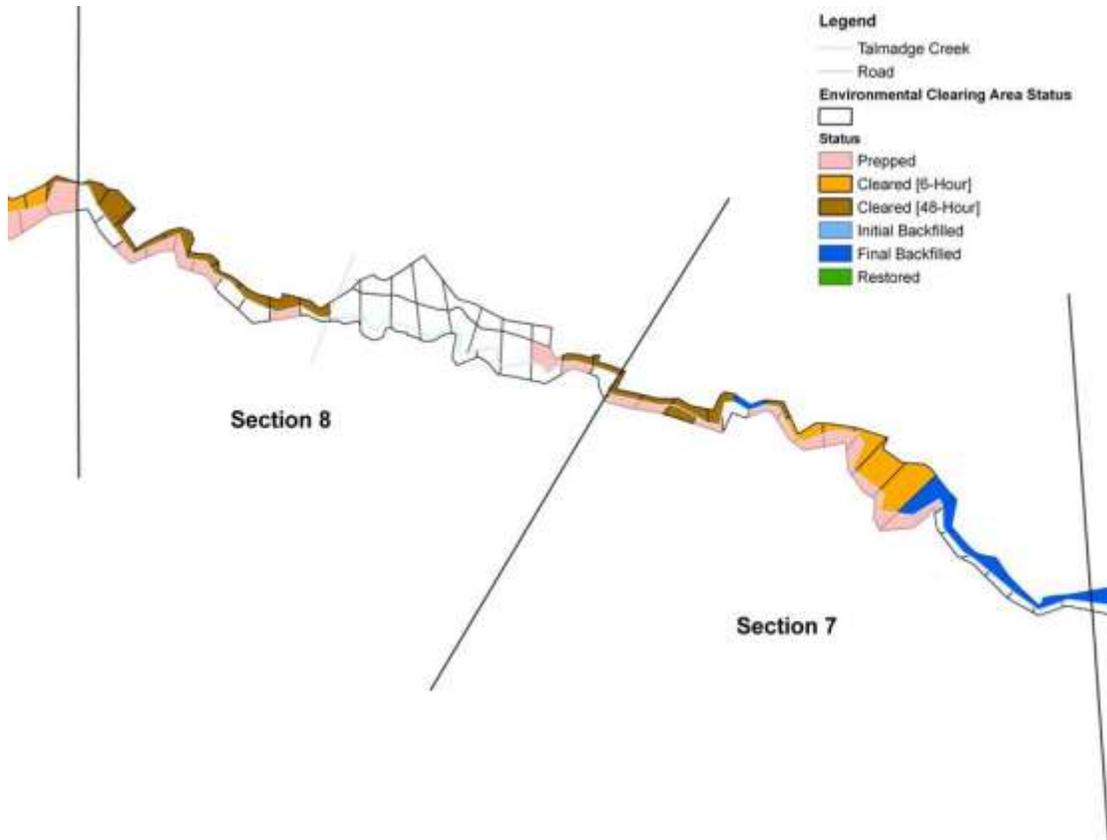


Figure 4.Division B, Sections 7 and 8 (Locations B4 to B4.5)

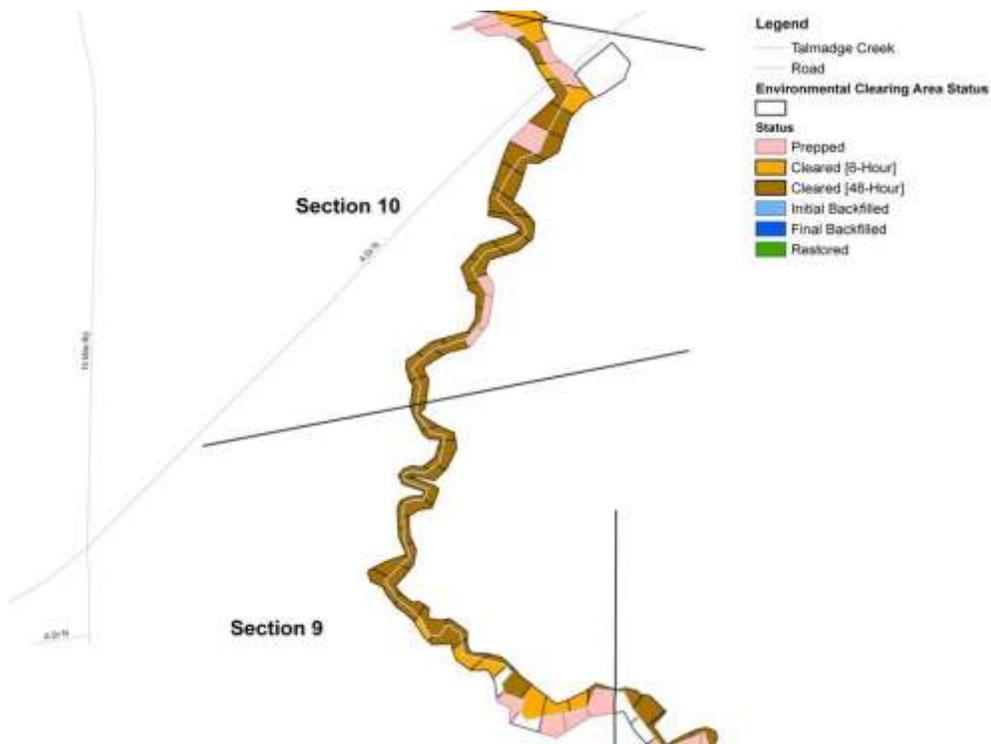


Figure 5. Division B, Sections 9 and 10 (Locations B4.5 to B5)

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

- Enbridge continues to address overbank cleanup, SCAT points, hot spots and boom maintenance. Inclement weather caused intermittent work stoppages.
- Cleanup on islands is limited due to investigations for potential hazardous substances. Workers with supplied air began cleanup operations on the Island at MP 8.25.
- Excavation and airlifting of contaminated soil continued at MP 11.25.
- SCAT Re-Assessment completion reports have been submitted for 51 of the 61 sites and EPA has signed off on 15 sites.

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)	97%	59
Enbridge/EPA Inspection Completed (Step 3)	92%	56
SCAT Re-Assessment Completed (Step4)	84%	51
EPA Division Supervisor Sign-Off (Step 5)	25%	15

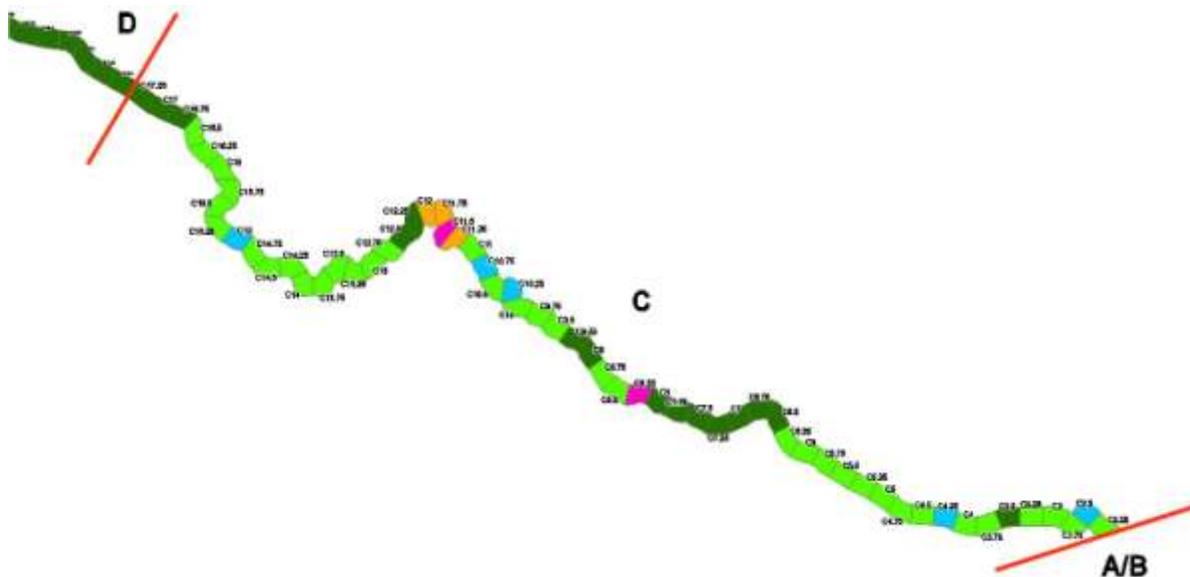


Figure 6. Division C

Division D

- Continued maintenance of Gabion baskets and boom. Inclement weather caused intermittent work stoppages.
- SCAT Re-Assessment completion reports have been submitted for 27 of 27 sites and EPA has signed off on 26 sites.

Table 3. Division D

Shoreline and Overbank Cleanup Step	Percent Complete	Number of Sites
SCAT Assessment Completed (Step 1)	100%	27
Operations Cleanup Completed (Step2)	100%	27
Enbridge/EPA Inspection Completed (Step 3)	100%	27
SCAT Re-Assessment Completed (Step4)	100%	27
EPA Division Supervisor Sign-Off (Step 5)	96%	26

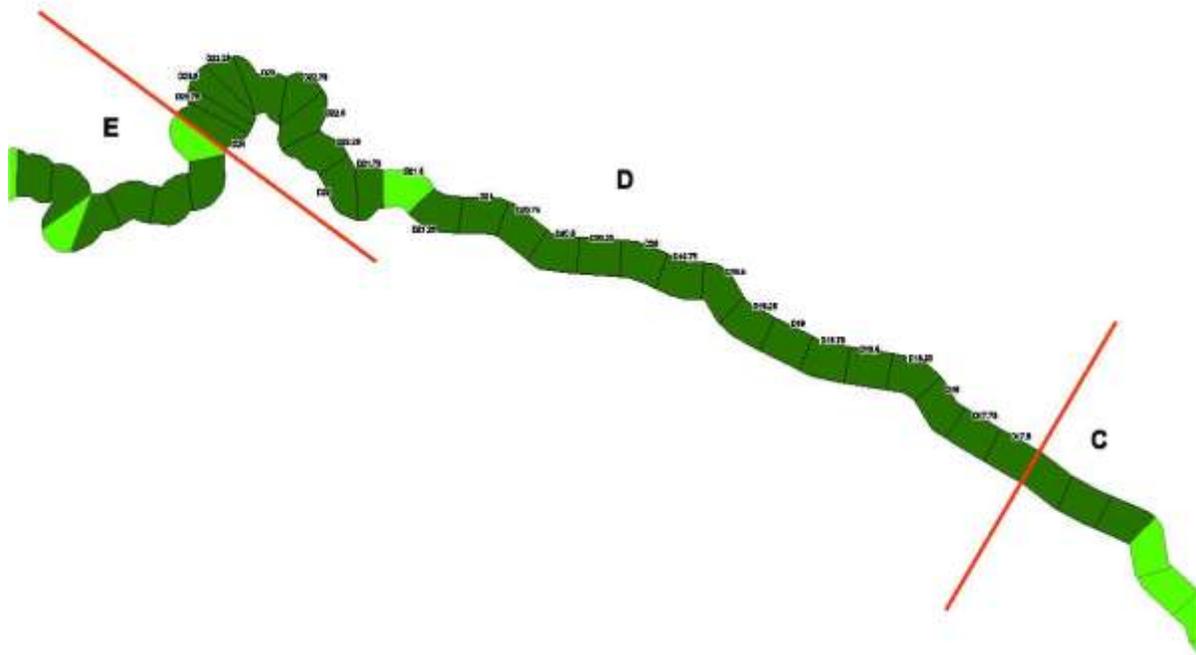


Figure 7. Division D

Division E

- Continued maintenance of Gabion baskets and boom. Inclement weather caused intermittent work stoppages.
- Completed inspection of shoreline perimeter of Morrow Lake to complete Step 5.
- SCAT Re-Assessment completion reports have been submitted for all 64 sites and EPA has signed off on 56 sites.

Table 4. Division E

Shoreline and Overbank Cleanup Step	Percent Complete	Number of Sites
SCAT Assessment Completed (Step 1)	100%	64
Operations Cleanup Completed (Step2)	100%	64
Enbridge/EPA Inspection Completed (Step 3)	100%	64
SCAT Re-Assessment Completed (Step4)	100%	64
EPA Division Supervisor Sign-Off (Step 5)	88%	56

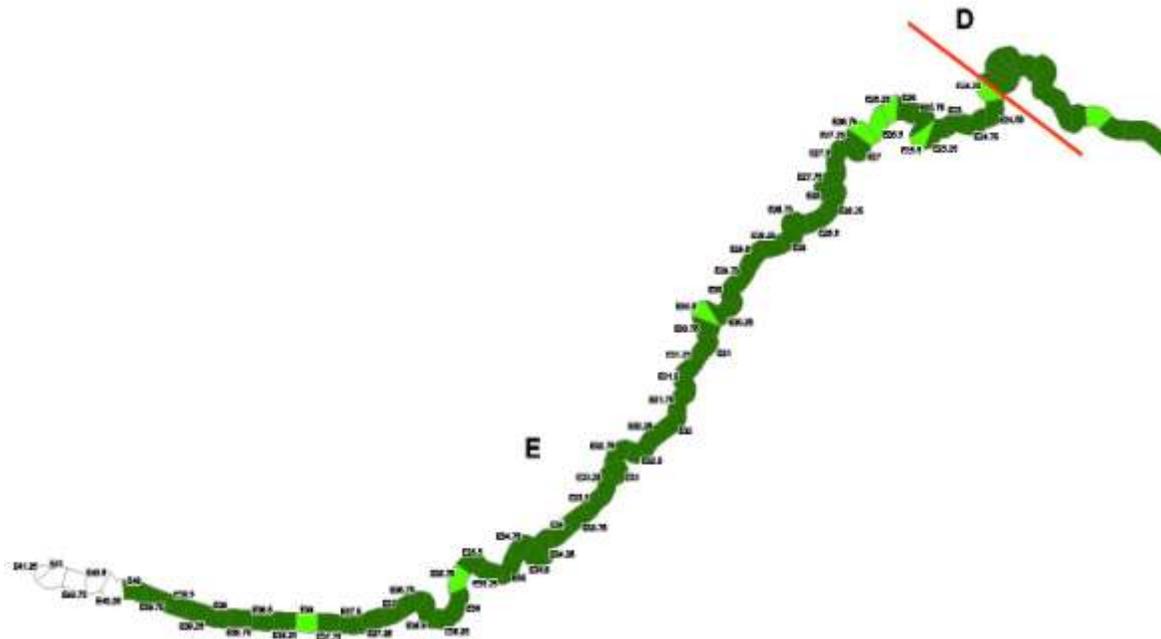


Figure 8. Division E

2.1.4 Decontamination

DECON/T&D Branch

- Conducted reconnaissance of potential decontamination sites across the divisions.
- Visited decontamination sites in Division A, B and C to observe decontamination activities and completed decontamination checklists at each location.
- T&D approved a revised soil and debris sampling plan that accounts for materials such as booms and absorbent pads.

2.1.5 Submerged Oil Cleanup

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

- The SOTF continued assessing the locations with poling (196) and core sampling (17) techniques as well as continued ecological assessments.
- Containment has been placed at 16 of the 18 identified submerged oil locations.
- The SOTF completed a hydrographic survey of Morrow Lake.
- Technical Services Group evaluated different cleanup techniques for submerged oil within the millpond area.
- SOTF conducted aeration operations to mobilize submerged oil in multiple locations.

Table 5. Submerged Oil Cleanup Status

Submerged Oil Cleanup	Percent Complete	Number of Sites	Total at Completion
Assessment	100%	20	20 ^a
Containment	89%	16	18
Work Plan	0%	0	18
Cleanup	0%	0	18
EPA Division Supervisor Sign-Off (Step 5)	0%	0	18

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

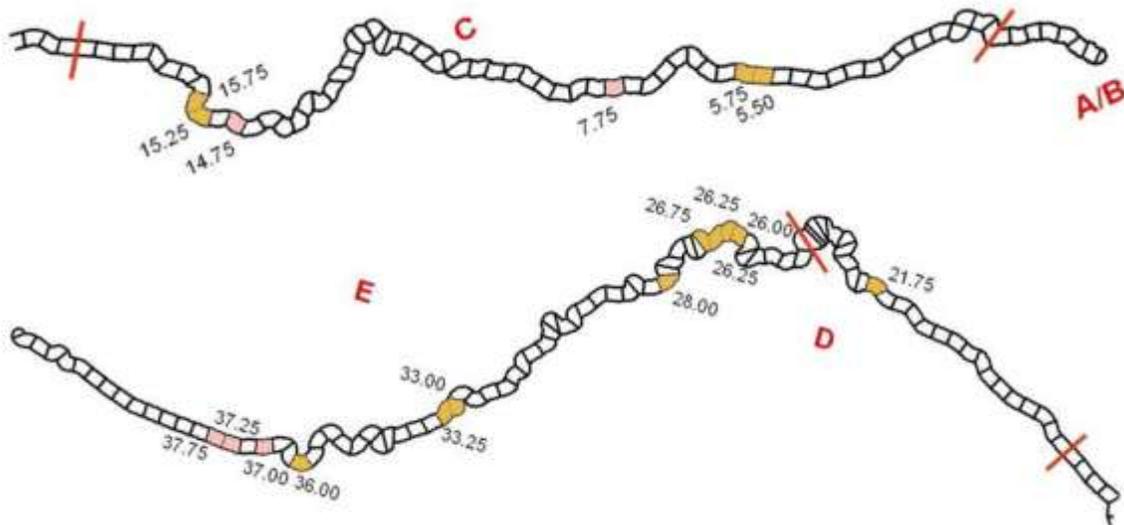


Figure 9. The Submerged Oil Cleanup Sites

2.1.6 Long-Term Operation and Maintenance

The Long-Term Operation and Maintenance Plan is being developed by Enbridge.

2.1.7 Additional Operations

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

Environmental Compliance and Oversight Branch

- Enbridge continued waste management characterization, documentation, and coordination and implementation of source contamination removal, verification, and backfilling in Talmadge Creek.

Wildlife Environmental Damage Assessment Branch

- As of September 19, 2010 at 0700, the wildlife center reported approximately 298 animals in captivity and 1269 animals released.
- During this reporting period, the USFWS reported 40 turtles captured that ranged from well-oiled to clean. The clean turtles were weighted, measured and immediately released.
- Wildlife Recovery Group completed an assessment of the Mill Pond area and has a low concern, given observed sheen, that there is a risk of oiling of wildlife.
- Turtle, heron, waterfowl, and beaver trapping continued.
- Deterrence fencing is being evaluated for removal in areas that meet SCAT cleaning recommendations.

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 6 - Samples Collected

Sample Type	Number Collected 9/19	Number Collected 9/20
Air Monitoring	Not Reported by Enbridge	Not Reported by Enbridge
Surface Water	24	28
Vertical Water Column Samples	0	0
Private Well Samples	7	11
Sediment Samples	5	10
Sheen Samples	0	0
Other	0	0
Soil Samples	0	0

EPA reported the following actions or observations:

- One START oversight team shadowed the Enbridge surface water sampling team and took one split samples in Morrow Lake and one split sample in Division C.

Table 7 - Samples Documented in SCRIBE

Media	Sample Type	Number Collected 9/19	Number collected 9/20
Air	Summa Canister	0	0
Air	Tedlar Bags	0	0
Air	Monitoring Locations	0	0
Surface Water	Grab	1	1
Sediment	Grab	0	0

SCAT

SCAT teams conducted re-evaluations at 9 locations.

Island Task Force

The Island Task Force assessed Island E and the island at MP 8.25 and presented the findings to Health and Safety and the UC.

2.1.8 Progress Metrics

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

Boom Report

Table 8 - Boom Report

Date	9/18	9/19
Number of Locations	23	23
Boom Deployed (feet)	92,243	116,102

Soil and Debris Waste Tracking

Table 9 - Soil and Debris Waste Tracking

Waste Stream*	Quantity Shipped	Quantity Shipped	Cumulative Quantity Shipped
	On 9/18	On 9/19	
Haz Soil (yd ³) ^a	0	0	15,344
Non Haz Soil (yd ³) ^b	225	0	24,378
Haz Debris (yd ³) ^c	0	0	12,075
Non Haz Debris (ton) ^c	0	0	1,241

* Information for water (other than daily quantity shipped) is reported in other tables below. Quantity awaiting disposal is estimated.

- a. Haz (Benzene)-impacted soil is being sent 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 10 –Oil water collected by location 9/20/10 0700

Location	Cumulative Total Collected (gallons)
Division A	5,311,393
Division B	3,651,905
Division C	877,000
Division D	119,600
Division E	50,030
DECON	183,960
Other Locations*	190,751
TOTAL	10,384,639

* Includes Frac, DECON, and Wildlife Center.

Table 11 - Oil water Separation 9/19/10

Oil-Water - Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	699,823
Other Material	1,382,983
TOTAL	2,082,806

Table 12 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected	10,384,639
Oil/Water Shipped Off-site	9,053,751
OIL/WATER REMAINING ON-SITE	1,330,888

Table 13 – Liquid Shipped Off-site

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)9/18	Daily Quantity Shipped (Gallons)9/19	Cumulative Quantity Shipped (Gallons)
Haz Water	Dynecol, Detroit, MI	9,995	18,800	2,253,465
Oil/Water	Enbridge Facility, Griffith, IN	0	0	2,082,806
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	0	0	370,200
Treated Non Haz Water	Plummer, Kentwood, MI	76,500	80,000	2,243,555
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		86,495	98,800	9,053,751

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

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

† Volumes have decreased due to an EPA audit conducted 09/03 through 09/06. Results concurred with Enbridge

2.2 Planning Section

Data Management Unit/GIS Unit

Data Management Unit continues to process surface water sampling data, importing preliminary and validated analytical results into Scribe, exporting daily briefings and process maps as requested. Assisting with the ecological analysis for the submerged oil task force and analyzing sedimentation data processing hot spot maps.

Situation Unit Field Observers

One FOB team conducted observations in Divisions A, B, and C, and DECON Areas Division B Yard 4, Division A Cell 7, Division C C.05, and Frac Tank City.

Environmental Unit

The ENVL accompanied the Environmental Advisory Group on a tour of Division C from Location C3.2 to MP11 to observe and better understand the response progress and remaining response issues.

The Tech Spec continued to review the mobile laboratory data and data reports.

The EU collaborated with the Public Health Work Group and provided comments on the hydrogeological study and the process for lifting the drinking water advisory.

2.2.1 Anticipated Activities for Next Reporting Period

In the next operational period, Operations anticipates transitioning to focused cleanup activities to finalize shoreline and overbank activities in Talmadge Creek and the Kalamazoo River and continue submerged oil cleanup. Hot spots will continue to be addressed as identified.

2.2.2 Public Health

Public Health is working on a presentation on the status of groundwater and drinking water and the process for lifting the bottled water advisory.

2.3 Logistics Section

Logistics is developing a notification system to warn boats of impending lightning threats.

2.4 Safety Reports

- Reviewed weather alert message and consulted with NOAA on ways to provide provide weather reports to entire incident.
- Emphasized need to ensure boating safety practices and loading limitations are enforced by field supervisors given recent boating incidents.
- Follow-up on attendance at mandatory ICP Safety Plan training and scheduling final session.
- There were 2 minor and 1 major (fractured leg) first aid incidents and 5 near misses during the reporting period.

2.5 Liaison Officer

The LNO conducted a river tour of Division C for the Environmental Advisory Group.

2.6 Information Officer

The Public Information Office reported the following activities:

- Distributed outreach materials to the City of Battle Creek.
- Made phone call inquires pertaining to meeting space for future public meetings.

Media Inquiry Line (877-440-7157)

Calls received during last reporting period: 0

Enbridge reported the following call volume and community center visits:

Oil Spill Public Information Hotline (800-306-6837)

Calls received during last reporting period: 48

Community Center Visits:	Battle Creek	2
	Marshall	3

Enbridge reported that it received 3 inquiries from its www.response.enbridgeUS.com website.

2.7 Finance Section

The current NPFC issued ceiling was \$21.6 million. Approximately 80.3% of the ceiling had been spent through September 19, 2010 (see burn rates below). These cost summaries reflect only EPA-funded expenditures for the incident.

Table 14 - FPN E10527 - Enbridge Pipeline Oil Spill

ERRS Contractors		Est. Expended	Est Burn Rate (9/18/10)	Est Burn Rate (9/19/10)
EQM (EPS50802)	T057	\$1,250,065	0	0
	T060	236,434	1,600	1,600
LATA (EPS50804)		1,451,396	0	0
ER LLC (EPS50905)		723,669	0	0
ERRS Contractors		\$3,661,564	\$1,600	\$1,600
TNT Bisso		1,049,000	27,000	27,000
START Contractor				
WESTON (EPS50604)		5,686,880	63,057	57,494
Response Contractor Sub-Totals		\$10,547,444	\$91,657	\$86,094
EPA Funded Costs:				
Total EPA Costs		3,288,103	50,000	50,000
Pollution Removal Funding				
Total Other Agencies		\$1,120,120	\$18,833	\$11,500
Sub-Totals		\$14,955,667	\$160,490	\$147,594
Indirect Cost (16.00%)		2,392,907	25,678	23,615
Total Est. Oil Spill Cost		\$17,348,574	\$186,168	\$171,209

2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports #1 through #51.

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 15. Personnel On Site

Agency/Entity	Numbers Reported 9/19	Numbers Reported 9/20
EPA	48	44
START	43	42
Calhoun County Public Health	5*	5
Calhoun County (CC) Sheriff	6	6
City of Battle Creek	3	3
Kalamazoo Sheriff	2	2
MDNRE	7	7*
Michigan State Police (MSP)	1	0
NOAA - National Weather	2	2
USCG	4	4
USFWS	4	3
Enbridge ICP	77	83
Enbridge ICP Contractor	376	529
Enbridge	17	15
Enbridge Contractors	1308	1128
Total	1903	1873
* indicates that an update was not received and the number is an estimate based upon the previous reported number.		

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.