

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 # 53
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.
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 Mike McKenzie, City of Battle Creek
 Leon Zupan, Enbridge
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 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
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From: Ralph Dollhopf, U.S. EPA Incident Commander
 Stephen Wolfe, U.S. EPA On-Scene Coordinator
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Date: 09/19/2010

Reporting Period: 0700 hours 9/17/2010 to 0700 hours 9/19/2010

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.
- Enbridge addressed hot spot cleanup areas identified by EPA.

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

Restoration Step		Percent Complete
1. Prepped		86%
2. Cleared		60%
3. Backfilled		33%
4. Restored		9%

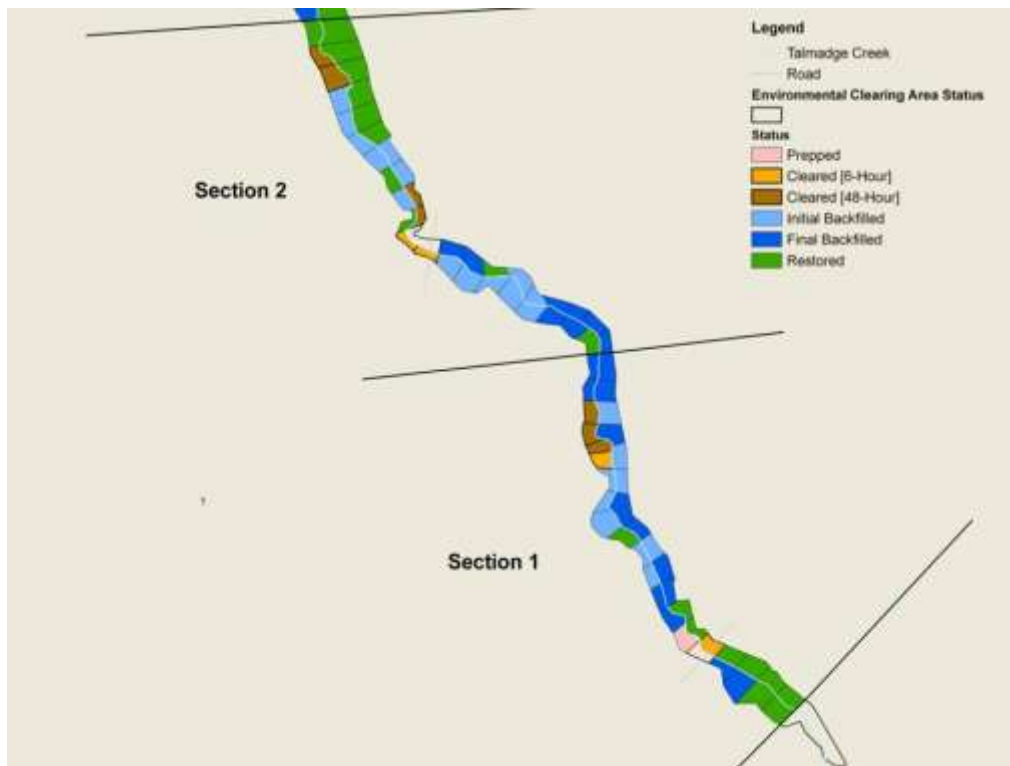


Figure 1. Division A, Sections 1 and 2 (Locations A5 to A6)



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)

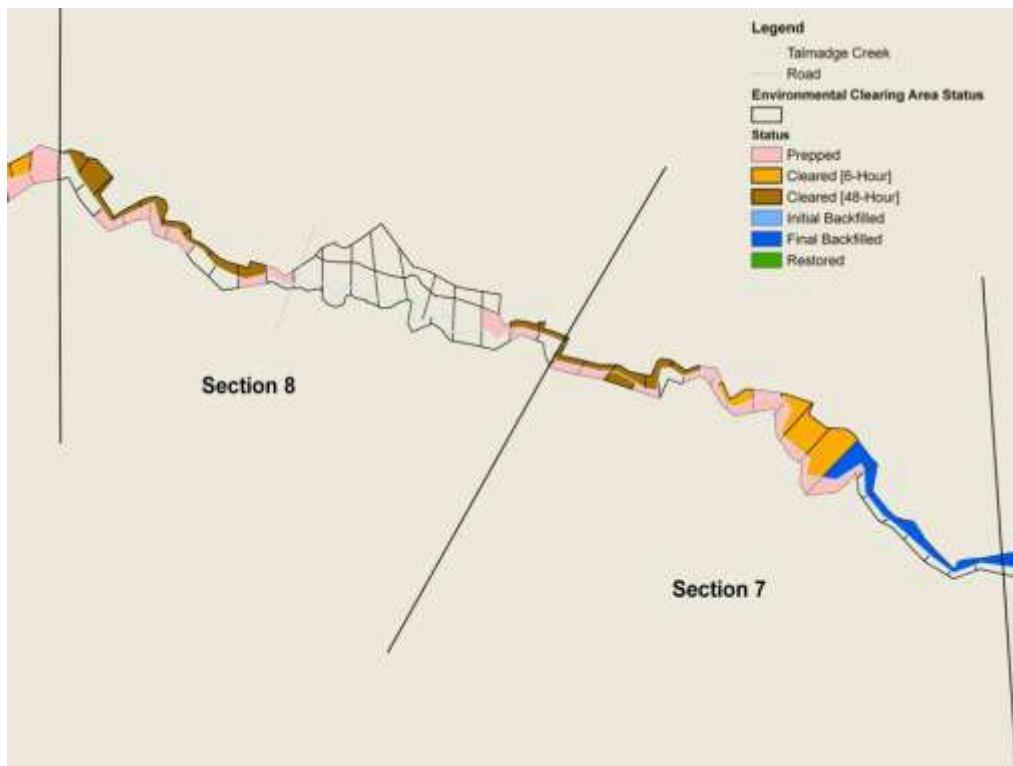


Figure 4. Division B, Sections 7 and 8 (Locations B4 to B4.5)

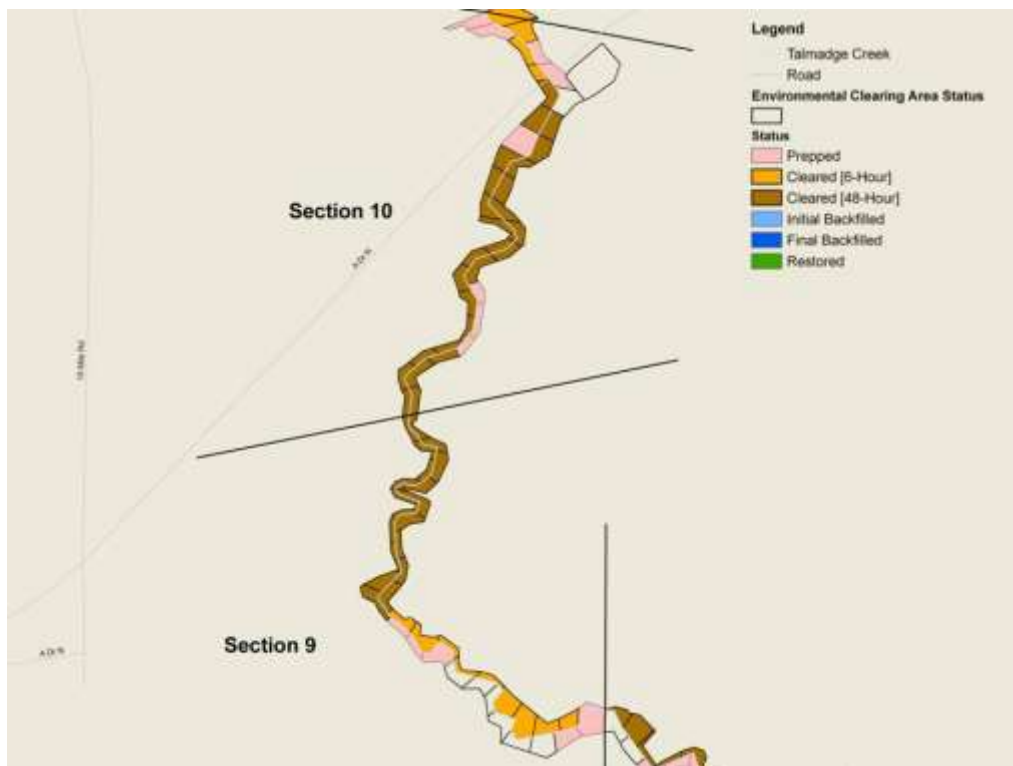


Figure 5. Division B, Sections 9 and 10 (Locations B4.5 to B5)

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.

SCAT is a straightforward and comprehensive way to perform a survey of an affected shoreline. This systematic approach uses standardized definitions and terminology to collect data on shoreline oiling conditions and supports decision-making for shoreline cleanup. The SCAT process ensures that the data collected are consistent, comparable, and useful.

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.
- SCAT Re-Assessment completion reports have been submitted for 45 of the 61 sites and EPA has signed off on 5 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)	90%	55
Enbridge/EPA Inspection Completed (Step 3)	87%	53
SCAT Re-Assessment Completed (Step4)	74%	45
EPA Division Supervisor Sign-Off (Step 5)	8%	5

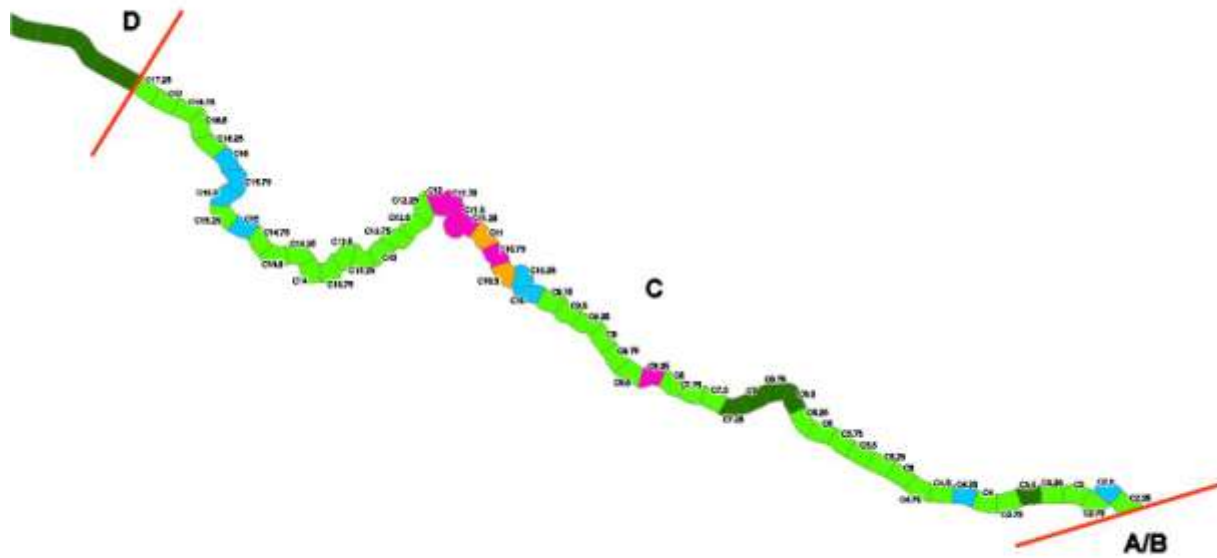


Figure 6. Division C

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

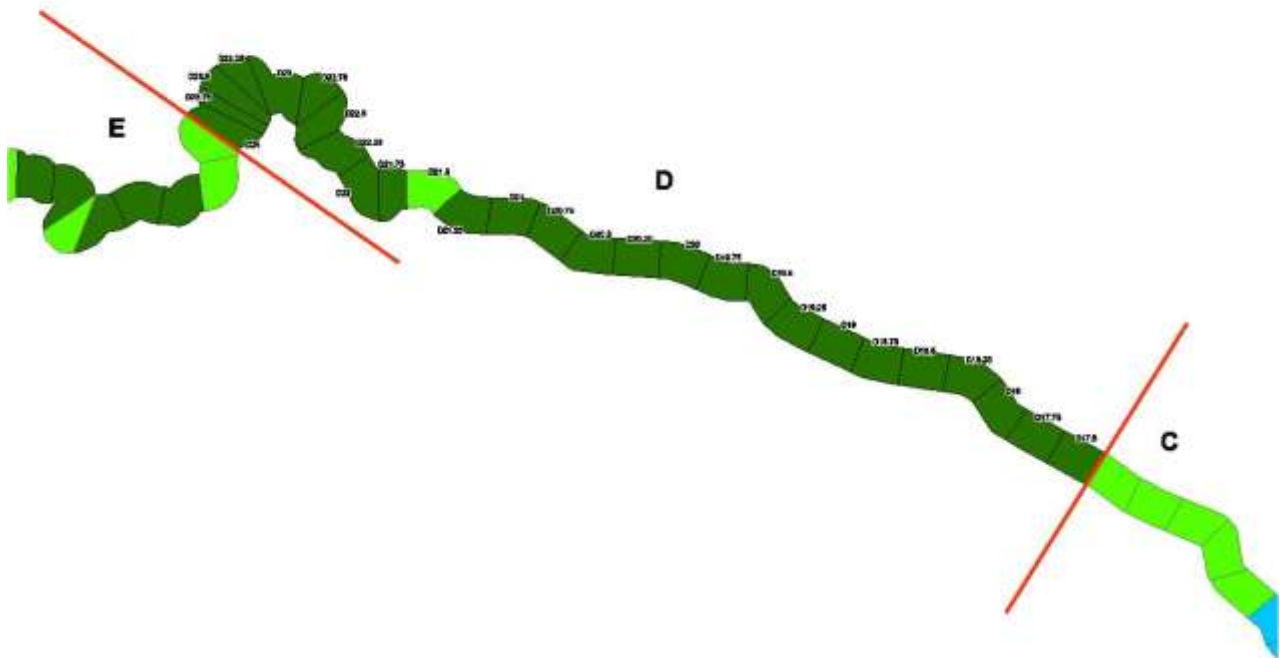


Figure 7. Division D

Division E

- Continued maintenance of Gabion baskets and boom. Inclement weather caused intermittent work stoppages.
- SCAT Re-Assessment completion reports have been submitted for all 64 sites and EPA has signed off on 46 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)	72%	46

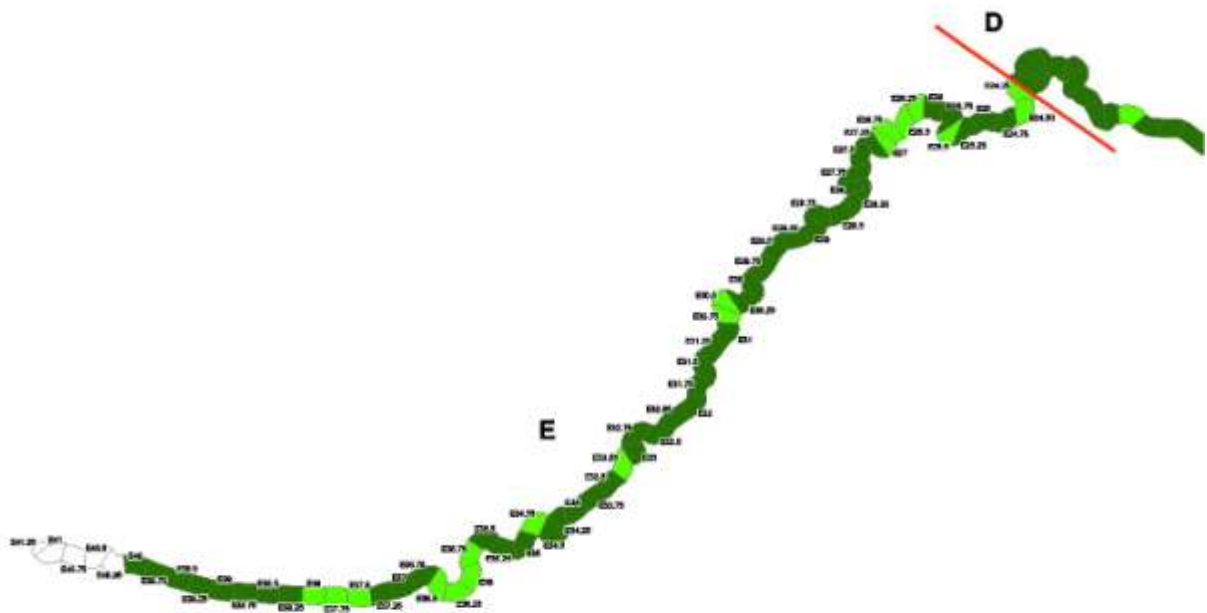


Figure 8. Division E

2.1.4 Decontamination

DECON Branch

- Conducted reconnaissance of potential decontamination sites across the divisions.
- Second field test of a new degreasing agent manufactured by Green Earth Technologies was conducted this reporting period.

Division A

- EPA continues regular assessment of decontamination activities in Frac City to confirm adherence to the Enbridge Decontamination of Equipment and Personnel Work Plan.
- EPA observed a small boat decontamination area for proper PPE, wastewater practices and containment conditions.

Division C

- EPA visited decontamination site at C0.5 to observe boom and equipment decontamination.

2.1.5 Submerged Oil Cleanup

The Submerged Oil Task Force (SOTF) provided further evaluation of submerged oil areas identified during cleanup or restoration operations. Nineteen sites were designated for work plan development for cleanup activities (adjacent sites were consolidated in some cases).

Divisions C, D, and E

- The SOTF continued assessing the locations with poling (202) and core sampling (7) techniques as well as continued ecological assessments.
- Containment has been placed at 14 of the 19 identified submerged oil locations.
- The SOTF continued performing a hydrographic survey of Morrow Lake.
- Technical Services Group evaluated Amphibex dredge for operations at Ceresco Dam.
- Technical Services Group conducted inspections to determine impacts of heavy rainfall and associated release of sheen.

Table 5. Submerged Oil Cleanup Status

Submerged Oil Cleanup	Percent Complete	Number of Sites
Assessment	95%	19
Containment	78%	14
Work Plan	0%	0
Cleanup	0%	0
EPA Division Supervisor Sign-Off (Step 5)	0%	0

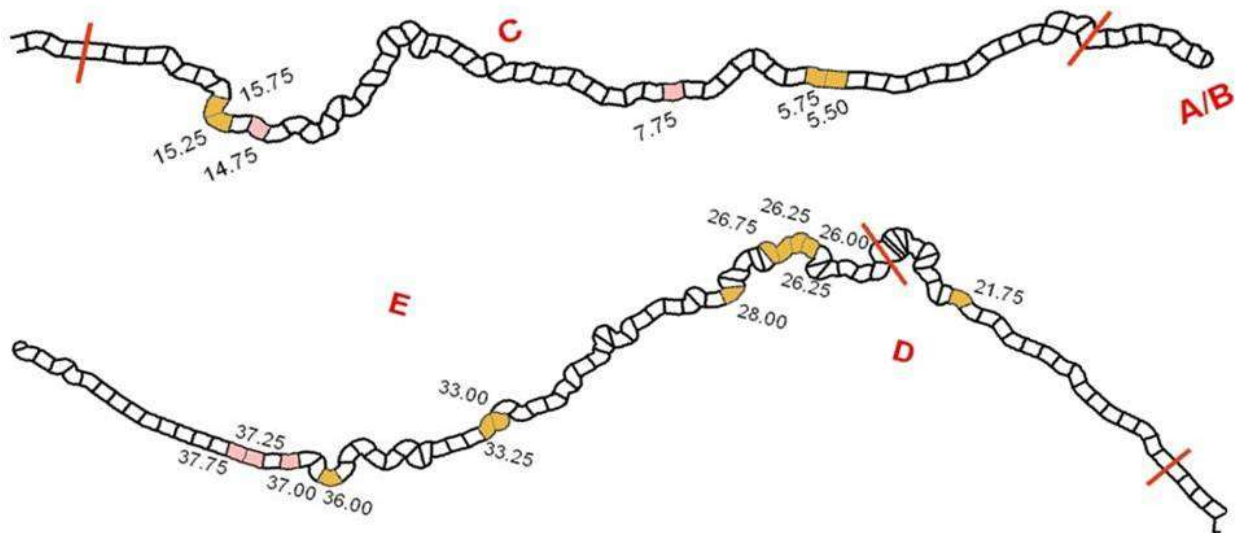


Figure 9. The Submerged Oil Cleanup Sites

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 17, 2010 at 0700, the wildlife center reported approximately 324 animals in captivity and 1225 animals released.
- During this reporting period, the USFWS reported 42 oiled turtles were brought to the Wildlife Center and the release of 48 rehabilitated turtles.
- Turtle, heron, waterfowl, and beaver trapping continued.

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, the Day Care, Ceresco Dam, and the work areas. 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 9/17	Number Collected 9/18
Air Monitoring	Not Reported	Not Reported
Surface Water	25	12
Vertical Water Column Samples	0	0
Private Well Samples	8	5
Sediment Samples	15	1
Sheen Samples	0	0
Other	0	0
Soil Samples	0	0

EPA reported the following actions or observations:

- One START team continued oversight of CTEH air monitoring crews in Divisions A through E and collected 88 split samples.
- One START oversight team shadowed the Enbridge surface water sampling team and took two split samples in Morrow Lake and one split sample in Division C.

Table 7 - Samples Documented in SCRIBE

Media	Sample Type	Number Collected 9/17	Number collected 9/18
Air	Summa Canister	0	0
Air	Tedlar Bags	0	0
Air	Monitoring Locations	38	40
Surface Water	Grab	1	0
Sediment	Grab	1	0

SCAT

SCAT teams conducted re-evaluations at 11 locations and 1 initial assessment.

Island Task Force

The Island Task Force collected monitoring readings on Island E and the island at MP 8.25 and set Summa canisters on Island E.

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	9/17	9/18
Number of Locations	22	23
Boom Deployed (feet)	106,728	105,738

Soil and Debris Waste Tracking

Table 9 - Soil and Debris Waste Tracking

Waste Stream*	Quantity Shipped On 9/16	Quantity Shipped On 9/17	Cumulative Quantity Shipped
Haz Soil (yd ³) ^a	0	0	15,344
Non Haz Soil (yd ³) ^b	954	756	24,153
Haz Debris (yd ³) ^c	0	0	12,075
Non Haz Debris (ton) ^c	5	37	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 9/17/10

Location	Cumulative Total Collected (gallons)
Division A	5,268,143
Division B	3,576,825
Division C	869,500
Division D	119,200
Division E	50,030
DECON	181,760
Other Locations*	190,751
TOTAL	10,256,209

Table 11 - Oil water Separation 9/17/10

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

* Includes Frac, DECON, and Wildlife Center.

Table 12 – Liquid Shipped Off-site

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)9/16	Daily Quantity Shipped (Gallons)9/17	Cumulative Quantity Shipped (Gallons)
Haz Water	Dynecol, Detroit, MI	27,929	22,010	2,224,670
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	70,000	79,000	2,082,622
Haz Water	Safety Kleen ^a	0	110	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		97,929	101,120	8,864,023

* 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

Table 13 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected	10,256,209
Oil/Water Shipped Off-site	8,864,023
OIL/WATER REMAINING ON-SITE	1,392,186

2.2 Planning Section

Data Management 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.

Situation Unit Field Observers

One FOB team conducted observations in Divisions A, B, E, and the Wildlife Center.

Environmental Unit

The ENVL and Tech Spec met with safety and Enbridge to review the history of the mobile laboratory emission event and toured the on-site mobile laboratory. Sample and equipment logs and data validation reports were reviewed.

ENVL and Planning Section evaluated assigning site specific identifiers in SCRIBE. These identifiers would allow data retrieval and maintain privacy for property owners if necessary.

Steps to lifting the drinking water advisory were discussed at the Health Team meeting. Other topics of the meeting were access points for the river and the Addendum to the Sampling and Analysis Plan. Tech Spec reassigned to Island Task Force to evaluate vapor emissions at Island E.

2.2.1 Anticipated Activities for Next Reporting Period

In the next operational period, Operations anticipates final clearance of Division A and bank stabilization in Division B as well as performing the same or similar activities as in the previous operational period, with a focus on activities in Division C.

2.2.2 Public Health

No report received this reporting period.

2.3 Logistics Section

Ongoing operation of the ICP with Enbridge Logistics.

2.4 Safety Reports

- Frac City plans to use Draeger tubes to monitor benzene levels and determine whether the Core Citrus degreasing product is a potential source.
- Safety teams collected air samples on Island E and the island at MP8.25 in the ongoing investigation of the worker illness incidents. Results from the Tedlar bag air samples are pending.
- Shots were fired in the vicinity of Location E4.5. Kalamazoo County Sherriff was contacted to investigate.
- There was an incident when an air boat sank on the Kalamazoo River, however, there were no injuries. Three minor first aid incidents were reported. One minor motor vehicle incidents were reported.

2.5 Liaison Officer

The LNO is engaged in ongoing coordination with assisting and cooperating agencies, the Environmental Group, and local stakeholders.

2.6 Information Officer

The Public Information Office reported the following activities:

- Responded to seven speaker request inquires using the established procedures developed.
- Responded to two citizens inquires from EPA's Enbridge website.

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: 73

Community Center Visits:	Battle Creek	20
	Marshall	11

Enbridge reported that it received 2 inquiries from its www.response.enbridgeUS.com website.

2.7 Finance Section

The current NPFC issued ceiling was \$21.6 million. Approximately 78.7% of the ceiling had been spent through September 17, 2010 with a burn rate of \$195,290 per day. 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 (9/16/10)	Est Burn Rate (9/17/10)
EQM (EPS50802)	T057	\$1,250,065	0	0
	T060	233,234	1,600	1,600
LATA (EPS50804)		1,451,396	0	0
ER LLC (EPS50905)		723,669	0	0
ERRS Contractors		\$3,658,364	\$1,600	\$1,600
TNT Bisso		996,000	27,000	27,000
START Contractor				
WESTON (EPS50604)		5,551,128	69,852	70,920
Response Contractor Sub-Totals		\$10,205,492	\$98,452	\$99,520
EPA Funded Costs:				
Total EPA Costs		3,344,103	50,000	50,000
Pollution Removal Funding				
Total Other Agencies		\$1,107,500	\$18,833	\$18,833
Sub-Totals		\$14,657,095	\$167,285	\$168,354
Indirect Cost (16.00%)		2,345,135	26,766	26,936
Total Est. Oil Spill Cost		\$17,002,230	\$194,051	\$195,290

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	Calhoun County Public Health
MDNRE	Department
Michigan State Police Emergency Management Division	Calhoun County Emergency Management
City of Battle Creek	Kalamazoo County Sheriff
	Enbridge (Responsible Party)

3.2 Cooperating and Assisting Agencies

ATSDR	Marshall Police Department
Calhoun Conservation District	Marshall Township Government and Fire Department
Calhoun County Commission	Michigan Department of Agriculture
City of Kalamazoo	MDCH
City of Marshall	NOAA
Emmett Township	Oakland County HAZMAT/RRTN
Fredonia Township	PHMSA
Kalamazoo County Office of Emergency Management	USCG
Marshall Area Firefighters Ambulance Authority	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 9/17	Numbers Reported 9/18
EPA	50	49
START	45	40
Calhoun County Public Health	5	5
Calhoun County (CC) Sheriff	6	6
City of Battle Creek	3	3
Kalamazoo Sheriff	2	2
MDNRE	18	6
Michigan State Police (MSP)	1	1
NOAA - National Weather	2	2
USCG	4	4
USFWS	5	4
USFWS Contractors	0	0
Enbridge ICP	83	77
Enbridge ICP Contractor	413	437
Enbridge	17	21
Enbridge Contractors	1357	1346
Total	2011	2003

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.