U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Kalamazoo River/Enbridge Spill - Removal POLREP-SITREP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

USFWS fish survey at Eleven Mile Road.

Subject: **SITREP # 45**
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

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Date: 9/8/10

Reporting Period: 1900 hours 9/7/10 to 1900 hours 9/8/10

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 Incident Category

Emergency Response - Pipeline Rupture

1.1.3 Site Description

A 30-inch pipeline ruptured, releasing crude oil (NRC report of 19,500 barrels) into a culvert leading to Talmadge Creek. Talmadge Creek is a tributary to the Kalamazoo River. The response site is along Talmadge Creek and the Kalamazoo River running from Marshall, Michigan, to downstream of Battle Creek, Michigan. The Kalamazoo River is bordered by marshland and developed properties for the approximate 30-mile stretch of the response site.

1.1.4 Preliminary Removal Assessment/Removal Site Inspection Results

Approximately 30 miles of the Kalamazoo River have been impacted. The Kalamazoo River experienced flooding before and after the spill. The river levels later fell and stranded oil in some backwaters, wetlands and floodplains. Talmadge Creek was boomed off at the confluence to the Kalamazoo River. Containment and absorbent boom were deployed along the Kalamazoo River and Talmadge Creek. Containment and absorbent boom also were deployed in Morrow Lake.

1.1.5 Enforcement Activities, Identity of Potentially Responsible Parties

Enbridge is the RP.

On July 27, 2010, EPA issued an Administrative Order under section 311(c) of the Clean Water Act to Enbridge. Enbridge has submitted and EPA has approved the following deliverables required by the Order including but not limited to: *Operational Health and Safety Plan*; *Pipeline Repair Workplan*; *Sampling and Analysis Plan*; *Quality Assurance Project Plan*; *Oil Containment and Recovery Plan*; *Source Area Remediation Plan*; *Remediation Plan for Downstream Impacted Areas*; and *Waste Treatment, Transportation, and Disposal Plan*.

1.2 Incident Objective and Command Emphasis

The following incident objectives and command emphasis are taken from the IAP for the Operational Period September 6, 2010, 0700 to September 8, 2010, 0700.

Incident Objectives

1. Ensure health and safety of the public and response and recovery personnel.
2. Maintain the isolation of the Kalamazoo River from up-gradient source area.
3. Ensure effective transition of regulatory oversight of the oil impacted areas from EPA to MDNRE jurisdiction as appropriate.
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 to evaluate and enhance submerged oil monitoring in the Kalamazoo River and at Morrow Lake, including assessment, mapping and development of near and long-term capture and management options.
2. Determine final assessment approach for evaluation of clean-up effectiveness along Talmadge Creek.
3. Complete necessary sampling, grade restoration and stabilization work along Talmadge Creek as appropriate in accordance with MDNRE guidance.

1.3 Strategic Considerations

1) Emphasize need for awareness of local traffic and back-to-school safety considerations across all site work locations.
2) Emphasis with Enbridge to get submerged oil recovery going at Ceresco Dam.

3) Develop and implement plans to augment the identification and documentation of overbank areas of concern.

2 Current Activities

2.1 Operations Section

2.1.1 Narrative

The response site extends from the pipeline break to the dam at the end of Morrow Lake. Operationally, the response has been divided into two Oil Recovery and Cleanup Branches: East and West. These branches have been geographically divided into five Divisions, A through E, with Division A starting at the pipeline break and Division E ending at the western edge of Morrow Lake (see attached map). The East Branch includes Divisions A and B and the West Branch includes Divisions C, D and E. Division C is currently an area of command emphasis and has been further subdivided into four groups performing similar response activities in order to accelerate cleanup progress in that Division. Certain control points are denoted by division letter then control point number (i.e., C3 refers to control point three within Division C). Additionally the entire length of the site is now divided into one-quarter mile sections.

The Unified Command organizational charts (ICS 207 forms) are presented in Figures 1- 4. The ICS 207 Forms describe in detail the work breakdown structure for the response action.

The following activities occurred during the reporting period from 1900 hours on September 7, 2010 to 1900 hours on September 8, 2010:

Division A

Division A has been extended to incorporate the portion of Talmadge Creek from Location A4 to Division Drive.

<u>Enbridge reported the following:</u>

- Confirmed that there was no product at Location A4.
- Scraping at Location A5 under the guidance of AECOM.
- Assignment of crew to walk the creek and address hot spots per EPA map and visual inspection.

<u>EPA observed the following:</u>

- Hand excavation at Location A6. Soil was disposed of in plastic bags.
- Modification of excavation operations per "Approach for Source Contamination Removal, Verification, and Backfill" addendum to the work plan.
    - Commencement of small scale excavation and hauling
    - Mobilization of equipment and crew to A5.
- Continuing ongoing repair and maintenance of silt fences.
- Re-initiation of grade restoration activities. Work activity is anticipated to increase over the next two days.
- Vacuum truck operations at Location A5 on the south side of Talmadge Creek.
- Continuation of postponement of excavation, hauling, and vacuum truck activities pending the completion of field soil screening through most of Division A.

- Continuing as needed operation of wood chipper depending on quantity of mats and trees delivered at any given time.
- Continuing staging of peat fill material near source in preparation for future back filling operations.

Division B

Enbridge reported the following:

- Inspection by Barr Engineering Co. of final scraping at Location B2.5. Site passed inspection.
- Removal of pump around dam at Location B2.5.
- Completion of hot spot removal at location B3.0 on the east side of Talmadge Creek.
- Opening of road with two lanes and no restrictions at Location B3.
- Opening of road with two lanes with flagging present at Location B5.
- Storage tents blew down at Yard #4 due to 40 MPH plus wind gusts. Con X box is expected to be on-site as replacement today.
- Inspection of newly identified sites for sheen and contaminated soil at Location B4.
- Maintenance of boom and silt fence as necessary at Locations B4 and B4.5.

EPA observed the following:

- Damage to silt fence at Location B2 resulting from standing water along creek bank. RP has been advised.
- Removal of sandbags at Location B.6.
- Replacement of swamp mats across Talmadge Creek at Locations B2.5 and B2.7.
- Removal of 20 foot section of swamp mat along east side of Talmadge creek in preparation of vacuum operations between Locations B2.5 and B2.7.
- Continuing ongoing as-needed repair and replacement of log boom throughout Division B as recommended by START and EPA.
- Continuing suspension of excavation operations in Locations B2, B3, B4, and B5.
- Continuing suspension of grade restoration and stabilization activities along Talmadge Creek pending receipt and review of soil screening results by EPA.
- Continuing soil staging and processing at staging area next to Location B4.

Oversight Monitoring Group

River Branch Task Force 1 observed the following:

- Air monitoring team at Location B2.5.
- Excavation activities at Location A5.
- Continuing removal of silt fence and sorbent log at Location A6.
- Continuing suspension of excavation activities at Location B2, B2.7 and B5.
- Suspension of excavation activities at Location B4.
- Hand excavation at Location B2.7.
- Continuing boom repair and maintenance at Location B3.
- Vacuum truck operations at Location B5.

START GIS will continue to provide hot spot maps for Locations A5, A6, B2, B3, B4, and B5.

Division C

<u>Enbridge reported the following:</u>

- Collection of debris throughout Division C.
- Cleanup of shoreline and boom maintenance at Location C0.5.
- Arrival of dredger at Location C1.
- Collection of 497 bags of debris from Location C1.5.
- Collection of 94 bags of debris from Location C3.
- Collection of 897 bags of debris from Location C3.9.
- Continuing cleanup of shorelines and islands at the north bank from MP4.75 to MP5 and south bank from MP4.5 to MP4.75.
- Continuing skimming operations at Location C1.

<u>EPA observed or reported the following:</u>

- From MP2.25 to MP6 (Group 1):
    - At MP2.5:
        - Cleanup of 800 square feet of heavily oiled area on left descending bank utilizing flushing, pom-poms, and sorbent boom.
        - Vegetation removal on right descending bank.
        - Identification of heavily oiled area approximately 3 feet in diameter. Enbridge was informed and assigned crew to respond.
    - Cleanup of private residence identified in yesterday's report at MP2.75 utilizing pom-poms.
    - Flushing of Island D at MP3.75. Pom-poms and sorbent boom have been deployed to supplement the flushing operations.
    - Replacement of sorbent boom from MP3.75 to MP4.
    - Completion of vegetation removal on Island E at MP4.0.
    - Installation of turtle traps and signs on left descending bank from MP4.25 to MP4.75. Signs are posted on orange deterrent fencing and state "DO NOT REMOVE" and "WILDLIFE AREA".
    - Sediment Sampling at MP5.75.
- MP6.5 to MP10 (Group 2):
    - Closure of MP7.25 to MP7.75 in the morning due to wildlife work. No work was scheduled in this area during this time.
    - Identification of a large pool of oil on right descending bank at MP9.75. Enbridge was informed and responded with deployment of boom.
- From MP10 to MP15 (Group 3 and 4):
    - Oversight of IAP briefing for small crew of six contractors. Supervisor read through 204 work assignments and special instructions including safety instructions.
    - Removal of shoreline vegetation on left and right descending banks at MP10.25.
    - Deployment of sorbent booms and pom-poms at culvert outlet at MP10.5. Infrequent light sheen observed escaping the containment.
    - Continuing presence of two large oil pools on an island at MP10.75. One pool extended to the shoreline producing sheen. No booms were deployed. Enbridge again directed crews to address the sheen. Later, workers were in the pooled areas preparing to deploy boom.

- Identification of oil in dry creek bed 600 yards inland of left descending bank at MP11.0.
- Identification of two large pools of oil in dry creek bed 15 yards inland of shoreline at MP11.0. High probability of mobilization to river during heavy rain event.
- Removal of bagged pom-poms from the oxbow area by 50-60 contractors at MP11.25.
- Presence of air monitoring crews observed prior to worker entry at MP11.75.
- Identification of a side stream extending several hundred yards inland from the left descending bank at MP11.75. Boom present on outfall of stream. Sheen and pooled oil observed along the stream course inland. High probability of mobilization to river during heavy rain event.
- Presence of ten contractors at the staging area at MP12.25 in Location C3.9.
- Cleanup of near-shore and overbank pools of oil by ten contractors at MP12.5.

<u>USCG observed the following:</u>

- Oversight of IAP briefing:
  - Presentation of information regarding meth lab advisory, DNR advisory, hazards getting stuck in mud and instruction to notify supervisor immediately if situation occurs.
  - Meeting with all company reps conducted for about five minutes post IAP briefing.
- Presence of sorbent booms and felt walkways as advised the previous day at MP12.25.
- Periodic air monitoring at MP12.5 in area with 25 workers along right descending bank at MP12.5.
- Replacement of sorbent boom 150 feet downstream of MP12.5.
- Vegetation removal along right descending bank by 17 contractors. Sporadic oil observed at MP13.50.
- Boom in need or replacement between MP14 and 15.25. Informed Enbridge.
- DECON of boats at Location C0.
- Oversight of arrival and application of Terra-Vac as a means for testing for submerged oil.
- Closure of Location C3 with no plans for remobilization. Crews are in the process of demobilizing equipment.
- USCG advised site supervisor at Location C11.25 that this location is unfavorable for equipment and super sack helicopter drops due to heavy forestry in the area.
- Hot spot cleanup in Location C3.9.

<u>Overbank group reported the following:</u>

- Referred ten areas for reSCAT in Divisions C and D.
- Investigated overbank oil pools and notified Enbridge on new locations.

Division D

<u>Enbridge reported the following:</u>

- Ongoing maintenance of booms and debris collection as needed.

<u>EPA observed the following:</u>

- Continuing cleanup of shoreline at MP16.5 to MP16.75.
- Removal of upper two inches of soil from Location D2.5.
- Scraping and collection of soiled vegetation from beneath the Angell Street Bridge.

- Installation of boom along the oxbow at Location D5.
- Discussion of general safety issues as well as IAP tasks specific to Division D at the IAP/Safety tailgate at Location D3.
- Investigation of oxbows within Divisions D and E.
    - Eleven oxbows/marshy areas merit additional attention were identified at the following:
        - MP20.25, MP27.5, MP27.75, MP26.25, MP26.0, MP25.5, MP22.75, MP22.75, MP21.5, and MP20.5.
    - Development of a tier system to address most serious issues first.
        - Location D5, Location E0.5, and from MP27.5 to MP26.5 are in the first tier to be addressed.
- Continuing operation and maintenance of both lines of gabion baskets.
- Continuing presence of heavy oiling on booms throughout Division D. As reported in previous two reports, booms need decontamination and/or replacement.

Division E

<u>Enbridge reported the following:</u>

- Sample collection at Location E4.
- Continuing demobilization in Locations E1, E2, and E3.

<u>EPA observed the following:</u>

- Discussion of OSHA safety issues and general safety, but no mention of IAP tasks specific to Division E, though the IAP was mentioned at the IAP/Safety tailgate at Location D3.
- Mobilization of CTEH to conduct air monitoring in oxbows noted near Location E0.5 from MP27.5 to MP26.5.
- Continuation of skimmer operations on Morrow Lake.

2.1.2 Branch Operations

In addition to the East and West Recovery Branches, EPA, USCG and Enbridge Operations have five Branches that conduct activities in all Divisions: DECON, Environmental Compliance and Oversight; Monitoring; Wildlife Environmental/Damage Assessment; and Air Ops.

Technical Services Group

<u>EPA reported the following:</u>

- Survey of Division D suspected submerged oil locations.
- Determination of booming strategies.

Environmental Compliance and Oversight Branch

<u>Enbridge reported the following:</u>

- Continuing collection of soil scraping and documentation collection in Locations A6, B2 and B5.
- Continuing collection of soil samples and documentation at Location A6 and B2.
- Continuing implementation of MDNRE and EPA approved Source Contamination Removal, Verification, and Backfill Plan.
- Continuing oversight of SCAT inspection teams.

EPA reported the following:

- Two START teams continued oversight of CTEH air monitoring crews in Divisions A through E.
- One START team provided oversight of surface water sampling teams and collected one split samples on Morrow Lake.

Transportation and Disposal took the following actions:

- Ongoing daily QA/QC of data.
- Visual assessment of debris grinding operations within the soil staging area (Division A) to observe degree of fugitive plastic generated during the process. Findings indicated the process was successful in not generating wind-blown plastic and debris, including: PPE, boom, sorbent pads, and materials generated as per the clean-up.

DECON Branch

Enbridge reported the following:

- No change in the progress of the central DECON area in Location C0.5 (25% complete).
- No change in the status of the central roll off staging in Location C0.5. Site can handle 40 roll off boxes.
- Cleaning area for large equipment in Division A is operational.

EPA reported the following:

- Assessment of DECON operations within Frac City, confirming adherence to the Enbridge Decontamination of Equipment and Personnel Work Plan and documenting activities using the DECON checklist.
- Assessment of confined space entries today and the processes of frac tank decontamination and vacuum truck decontamination
- Observed the approximately 90 x 160-foot DECON area established in Division A for use in decontamination of large equipment
- Continuing reconnaissance of DECON sites within Divisional locations.
- Continuing follow-up on tracking the DECON water generated during CTEH operations at Morrow Lake for inclusion into waste streams.

As of September 7, 2010, T&D and DECON are combined under the same division supervisor.

Monitoring Branch

Primary responsibility for sampling air sampling activities was turned over to Enbridge personnel on 08/28/10.

Enbridge reported the following:

- Focused air sampling programs are continuing around the Baker Estates Mobile Home Park, the Day Care, Ceresco Dam, and the source area.
- Ongoing real time monitoring for benzene and VOCs.
- Continuation of air sampling program to collect 24-hour summa mini-can samples, grab samples, and passive dosimeter samples in addition to the real-time air monitoring samples.
- Collection of samples as indicated in Table 1:

Table 1 - Samples Collected as of 9/8/10 1515

Sample Type	Number collected
Surface Water	33
Vertical Water Column Samples	0
Private Well Samples	21
Sediment Samples	13
Sheen Samples	0
Other	0
Soil Samples	0

EPA reported the following actions or observations:

- Duplicate air monitoring conducted at 25 locations with no benzene or other air contaminants detected.
- Collection of samples as indicated in Table 2.

Table 2 - Samples Documented in SCRIBE as of 9/8/10

Media	Sample Type	Number collected
Air	Summa Canister	0
Air	Tedlar Bags	0
Air	Monitoring Events	11
Surface Water	Grab	0
Sediment	Grab	0

Four SCAT teams reported the following:

- Conducted ReSCAT evaluations and cleared 6 segments.

Three Submerged Oil Task Force teams reported the following activities:

- Deployment of three teams to Division C:
    - Collection of 3cores from the silt curtain above Ceresco Dam by Team A:
        - Bathymetry completed along 6 transects above Ceresco Dam.
            - Top of H_2O.
            - Top of Sediment.
            - Thickness of Sediment.

        - Continuing presence of high volume of sheen/tar flecks in ponded area behind the Ceresco Dam. Anchor and boat fan caused submerged oil to surface and dissipate into sheen .
        - Observed pilot testing conducted at silt fence.
    - Oversight of sediment coring and qualitative/quantitative analysis of sediment impact by Team B at Location C3.2:
        - 3 core samples from potential submerged oil areas.
        - 22 polling transects completed from MP14.85 to 18.75.
        - Johnboat needed to access MP15.5 to MP15.75.
    - Oversight of sediment coring collection for qualitative/quantitative analysis of sediment impact by Team C.
        - 7 transects were completed working upstream from the Morrow Lake Delta from MP3.75 to MP37. One sediment core collected at MP3.7.
        - No significant submerged oil observed.
        - Extremely windy day on the river had a significant effect on operations.
- Medium oil at base of vegetation but not in the sediments at MP12.5. Area is boomed and contained.
- Presence of sheen on vegetation at ponded area before the bridge at MP15.25. No evidence of submerged oil. Area is boomed and contained.
- Ineffective or spent booms at the following locations:
    - MP14.5,
    - MP11.75,
    - MP10.5,
    - MP10.25
    - Latitude 42.29/Longitude 85.126.
    - Latitude 42.29/Longitude 85.124.

Wildlife Environmental Damage Assessment Branch

<u>USFWS reported the following:</u>

- Planning for deer hunter education and outreach.
- Distribution of business card sized handout with hotline number for workers.
- Successful completion of fish survey at 11 Mile Road Bridge.
- Capture and release of un-oiled beaver.
- Review of water quality data to determine if/when another collection should be done.
- Operation of approximately 80 traps.
- Delay of turtle reconnaissance in Morrow Lake due to heavy winds.
- Search for turtle release sites.
- Baiting for herons by heron team.
- Preparation of written statement for USFWS for September 15 congressional testimony.
- Turtle, heron, and beaver trapping continue.

As of September 7, 2010 at 0700, the wildlife center reported 279 animals in captivity and 749 released to date.

Air Ops Branch

Since August 23, 2010, both the EPA START Situation Unit FOB and Enbridge have been using the Enbridge funded helicopter for their daily over-flights. The EPA helicopter will be available, as needed, for IC and other federal needs.

<u>Enbridge reported observing the following during two over flights:</u>

- Changes in Sheen:
    - No sheen upstream of culvert crossings in Locations A5 and A6 where minor sheen was reported yesterday.
    - Minor sheen at pond area before Interstate 69 in Division B where no sheen was reported yesterday.
    - Some sheen on the north shore across from Control Point C0.5.
    - Contained sheen at scattered spots downstream of Location C0.5.
    - Diminished sheen upstream and downstream of Location C6.
    - Scattered sheen from upstream of Location D1 to Location D3.
    - Light sheen between Location E3 and E3.5.
    - Contained sheen downstream of Location E3.5.
    - Boom contained sheen at the mouth of Morrow Lake at Location E4.
    - Diminished sheen upstream of E0.5 at border between MP26.25 and MP26.5 relative to yesterday.
    - Continuing absence of sheen on banks at Locations B5 and downstream of B5.
    - Scattered areas of boom contained sheen still present throughout Division C.
    - Continuing absence of sheen downstream of containment booms surrounding islands in Division C.
    - Continuing presence of sheen upstream and downstream of peninsula at Ceresco Dam.
    - Continuing containment of sheen at both north and south areas upstream of the Ceresco Dam.
    - Continuing presence of sheen south of a small island at Location C10.75.
    - Continuing containment of sheen by boom at island upstream of Location C5.
    - Continuing absence of sheen at the confluence, Baker Estates, and downstream of Ceresco Dam.
    - Continuing absence of sheen discharging from a culvert downstream of Kendall.
    - Continuing absence of sheen upstream of boat launch at Location D2.
    - Continuing containment of sheen on water at the oxbow at MP21.5. Still no sheen on main waterway.
    - Continuing absence of sheen on Morrow Lake and its shores.
- Operational Observations:
    - Significant activity at Frac Tank City.
    - Addition of a lined area for soil storage at the yard at Location B5.
    - Continuing work on cells at yard next to Location B5.
    - Continuation of heavy boat and manpower activity in Location C.
    - Continuing accumulation of floating matter and sheen at boom downstream of Location C0.3.
    - Sediment curtain and experimental submerged oil treatment cells upstream of Ceresco Dam at Location C5.
    - Boat activity on Morrow Lake included seven manned boats.

EPA observed the following during one over flight:

- Changes in sheen:
    - Significant sheen on the pond north of Talmadge Creek at Location B4.
    - Significantly diminished sheen along the south shoreline of the peninsula upstream of Ceresco Dam.
    - Diminished sheen along southern shoreline of Talmadge Creek at Location A5.
    - Intermittent presence of sheen along shoreline of Talmadge Creek throughout Locations A5 and A6.
    - Minimal sheen in Talmadge Creek at the intersection of Interstate 69 and Talmadge Creek.
    - Notably diminished sheen in the Mill Pond near Location C6. Sheen was effectively contained.
    - Significantly increased sheen on the Morrow Lake Delta. No sheen was observed on the delta yesterday.
    - Absence of oil and sheen in Division A1 through A4.
    - Absence of sheen at or downstream of the scraping activities in Location B2.7.
    - Absence of sheen at confluence of Kalamazoo River and Talmadge Creek at Location B5.
    - Absence of sheen emanating from culvert on the north side of the Kalamazoo River just west of the Angell Street Bridge.
    - Significant sheen in the oxbow area at MP21.5 in Location D4.25. Amount of sheen is similar to yesterday.
    - Continuing presence of sheen along the northern shoreline of the Kalamazoo River near Location E0.5 north of Shady Oaks Campgrounds.
    - Continuing absence of oil and sheen on Morrow Lake.

Overall, less sheen was visible in Divisions A, B, and C than yesterday.

- Operational Observations:
    - Approximately 50% coverage of Island E in sorbent pads.
    - Standing water on the ground cover throughout Division A.
    - Grading of topsoil that was added to the area immediately southwest of the release Site yesterday.
    - Relocation of several pieces of heavy equipment to Location A5.
    - Deployment of sorbent pads along the southern shoreline between Locations A5 and A6.2.
    - Active DECON of several frac tanks at the south end of Frac Tank City. No loading of trucks were observed.
    - Staging of on excavator and one truck east of the scraping area at Location B2.7.
    - Booming strategy at the confluence of Talmadge Creek and the Kalamazoo River appeared unchanged.
    - Absence of sorbent pads at the confluence.
    - Continuing heavy cleanup activities on Islands A, B, E, and F in Division C.
    - One sampling boat and three submerged oil test cells along the southern shoreline above Ceresco Dam.
    - Island has been cordoned off due to health and safety concerns.
    - Heavy cleanup between MP11 and MP12.25 in Division C.
    - Sorbent boom throughout the oxbow at MP21.5 in Division D.

2.1.3 Progress Metrics

All progress metrics in Section 2.1.2 are as reported by Enbridge unless otherwise indicated.

Boom Report

Table 3 - Boom Report (9/8/10 1900)

Number of Locations	25
Boom Deployed (feet)	137,738

Soil and Debris Waste Tracking

Table 4 - Soil and Debris Waste Tracking (9/8/10)

Waste Stream*	Quantity Shipped	Cumulative Quantity Shipped
Haz Soil (yd^3) [a]	0	15,344
Non Haz Soil (yd^3) [b]	882	16,170
Haz Debris (yd^3) [c]	0	12,075
Non Haz Debris (ton) [c]	132	783

* 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 5 –Oil water collected by location (9/7/10, 0700)

Location	Cumulative Total Collected (gallons)
Division A	4,811,618
Division B	3,404,675
Division C	811,750
Division D	117,825
Division E	49,950
DECON	100,240
Other Locations*	169,138
TOTAL	**9,465,196**

* Includes Frac, DECON, and Wildlife Center.

Table 6 - Oil water Separation (9/7/10, 0000)

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

Table 7 – Liquid Shipped Off-site (9/7/10, 0000)

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)	Cumulative Quantity Shipped (Gallons)
Haz Water	Dynecol, Detroit, MI	28561	2047598
Oil/Water	Enbridge Facility, Griffith, IN	0	2082806
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	0	370,200
Treated Non Haz Water	Plummer, Kentwood, MI	0	1,625,800
Haz Water	Safety Kleen [a]	0	550
Treated Non Haz Water *	Dynecol, Detroit, MI	0	134,200
Treated Non Haz Water *	Battle Creek POTW	0	1,968,700
	Totals	**28,561**	**8,229,854**

* 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 8 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected [a]	9,465,196
Oil/Water Shipped Off-site [b]	8,229,854
OIL/WATER REMAINING ON-SITE	**1,235,342**

a. As of 9/8/10, 0700
b. As of 9/7/10

2.2 Planning Section

Data Management Unit

The Data Management Unit reported the following:

The DMU continued processing surface water sampling data, importing preliminary and validated analytical results into SCRIBE.

Situation Unit Field Observers

Situation Unit FOB observed the following:

- At Division C:
  - Annual electro fishing assessment by MDNR crew of 9.
    - Incident command implements a "no go" zone between Mile Post 7.25 through 7.75 between 0700 and 0900 while electrofishing takes place. To accomplish, Enbridge safety contractor notified site managers at water access points C1.5 and C3.2.
    - Enbridge safety personnel on overpass as a precaution but report no boaters in the area.
    - MDNR crews notice white or rainbow sheen in areas where their walking agitates soft sediment
    - Site supervisor at Location C3 said he was informed of the "no go" zone yesterday and this morning directed all boat traffic from Area C1.5 to go in the direction opposite the electrofishing.
  - Excavator equipped with Terra-Vac in the parking area awaiting removal from Location C1.
  - Lack of boat traffic downstream or upstream of the Ceresco Dam.
  - Several workers seated in a contained area decontaminating tools at Location C3.
  - Collection of summa minican by Enbridge.
- At Frac Tank City:
  - Demobilization of frac tanks continues with tanks in various stages of cleaning.
  - One decontaminated frac tank was observed leaving the site.
  - No pumping into frac tank was observed , however one vacuum truck was in position for hook up to frac tank
  - Workers in PPE in confined space areas to perform decontamination of the frac tanks and equipment.
  - Vacuum box on site contains sediment material collected during Terra Vac pilot test at Ceresco Dam.

- Deployment of silt fencing by johnboat at Location D5.

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 Issues

Calhoun County public health reported the following:

- Discussion of the following at the September 8th Public Health Group Meeting:
    - The plan for reduced frequency of air monitoring presented by CTEH/Enbridge.
    - The plan for a reduced analyte list and frequency of ground/well water testing.
    - What is needed to lift the drinking water advisory.
    - Bottled water distribution and is Enbridge providing filters in lieu of bottled water.
    - Indoor air sampling currently taking place at Baker Estates.
    - Status of Day Care letter.

2.3 Logistics Section

No report filed.

2.4 Safety Officer

Enbridge reported the following Health and Safety issues:

1. Right to know
    - Reiterated the need to ensure all employees are receiving and understanding the instructions given to them. If there is a language barrier it must be overcome.
2. Site transitioning:
    - Reminder to workers on respecting personal property and to conduct themselves appropriately.
3. Back to School:
    - Back to school means more children walking and biking on the roads. All motorists need to take special care while driving.

EPA reported the following Health and Safety issues:

- Tour of the Frac Tank City DECON procedure.
- Review of the current Decontamination and Personnel work plan.
- Issued recommendations for improving site safety.
- Scheduled inspection to follow up with implementation of recommended changes.
- Continuing work on the Severe Weather Plan.
- Informed Enbridge of possible safety concerns pertaining to broken limbs from recent wind storms.

- Completed decision memo for medical unit leader position establishment.
- An airboat driver was reported speeding through MP20 in Division D. Corrective action for removal in progress.

2.5 Liaison Officer

The Liaison Officer reported the following actions:

- The LNO coordinated with assisting and coordinating agencies and local stakeholders addressing methodology of ongoing situation updates.

2.6 Finance Section

The current NPFC issued ceiling was $18 million. Approximately 83.3% of the ceiling had been spent through September 7, 2010, with a burn rate of $186,466 per day. These cost summaries reflect only EPA-funded expenditures for the incident.

Table 9 - FPN E10527 - Enbridge Pipeline Oil Spill (09/07/2010)

ERRS Contractors		**Est. Expended**	**Est Burn Rate (Lastest Daily)**
EQM (EPS50802)	T057	$1,251,054	$0
	T060	223,490	1,600
LATA (EPS50804)		1,451,396	0
ER LLC (EPS50905)		723,669	0
ERRS Contractors		**$3,649,609**	**$1,600**
TNT Bisso		737,000	27,000
START Contractor			
WESTON (EPS50604)		4,850,511	69,230
Response Contractor Sub-Totals		**$9,237,120**	**$97,830**
EPA Funded Costs:			
Total EPA Costs		2,721,874	46,250
Pollution Removal Funding			
Total Other Agencies		**$971,720**	**$16,667**
Sub-Totals		$12,930,714	$160,747
Indirect Cost (14.15%)		2,068,914	25,719
Total Est. Oil Spill Cost		**$14,999,629**	**$186,466**

2.7 Information Officer

The Public Information Office reported the following activities:

The PIO staff operated the media inquiry line and performed media monitoring.

Media Inquiry Line (877-440-7157)[a]

Calls received during reporting period: 0

Enbridge reported the following call volume and community center visits:

Oil Spill Public Information Hotline (800-306-6837)[b]

Calls received during reporting period: 13

Community Center Visits[c]**: 4**

Visits by location during reporting period:

Battle Creek	3
Marshall	1

Enbridge reported that it received 2 inquiries from its www.response.enbridgeUS.com website bringing the total to 554 comments.

2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports 1 through 44.

[a] No update provided for the Media Inquiry Line
[b] No update provided for the Oil Spill Public Information Hotline
[c] No update provided for the Community Center Visits

3 Participating Entities

3.1 Unified Command

U.S. EPA
MDNRE
Michigan State Police Emergency Management Division
City of Battle Creek
Cooperating and Assisting Agencies
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 Geuctk
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 10. Personnel On Site 9/8/10

Agency/Entity	Numbers Reported
EPA	45
START	37
Calhoun County Public Health Dept. (CCPH)	8
Calhoun County (CC) Sheriff	6
City of Battle Creek	3
Kalamazoo Sheriff	2
MDNRE	6[d]
Michigan State Police (MSP)	1
NOAA - National Weather Service	2
NOAA- NRDA	2
USCG	10
USFWS	2
USFWS Contractors	0
Enbridge	10
Enbridge Contractors	1114
Total	**1,248**

[d] No new personnel report filed, Staffing number is pulled from previous reporting period

5 Definition of Terms

ATSDR	Agency for Toxic Substances and Disease Registry
CCPH	Calhoun County Public Health
CIC	Community Involvement Coordinator
CTEH	Center for Toxicology and Environmental Health
DMU	Data Management Unit
EMT	Emergency Medical Technician
ENVL	Environmental Unit Leader
EPA	Environmental Protection Agency
EQM	Environmental Quality Management
ER	Environmental Restoration
ERRS	Emergency and Rapid Response Services
ERT	Emergency Response Team
EU	Environmental Unit
FOB	Field Observer
GLNPO	Great Lakes National Program Office
H_2S	Hydrogen Sulfide
HASP	Health and Safety Plan
IAP	Incident Action Plan
IC	Incident Commander
ICP	Incident Command Post
IN	Indiana
JIC	Joint Information Center
LEL	Lower Explosive Limit
LNO	Liaison Officer
LSC	Logistics Section Chief
MDA	Michigan Department of Agriculture
MDCH	Michigan Department of Community Health
MDMB	Michigan Department of Management and Budget
MDNRE	Michigan Department of Natural Resources and Environment
MI	Michigan
MIOSHA	Michigan Occupational Safety and Health Administration
MP	Mile Post
NOAA	National Oceanic and Atmospheric Administration
NPFC	National Pollution Fund Center
NRC	National Response Center
NRG	National Response Group
OSHA	Occupational Safety and Health Administration
PHMSA	Pipeline and Hazardous Materials Administration
PIO	Public Information Officer
POTW	Publicly Owned Treatment Works
Ppbv	Parts Per Billion Volume
PPE	Personal Protective Equipment
ppm	Parts Per Million
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
RP	Responsible Party
SCAT	Shoreline Contamination Assessment Team
START	Superfund Technical Assessment and Response Team
T&D	Transfer and Disposal
UC	Unified Command
USCG	United States Coast Guard

USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
U.S. EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
yd^3	Cubic Yards

6 Source of Additional Information

6.1 Additional Information

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

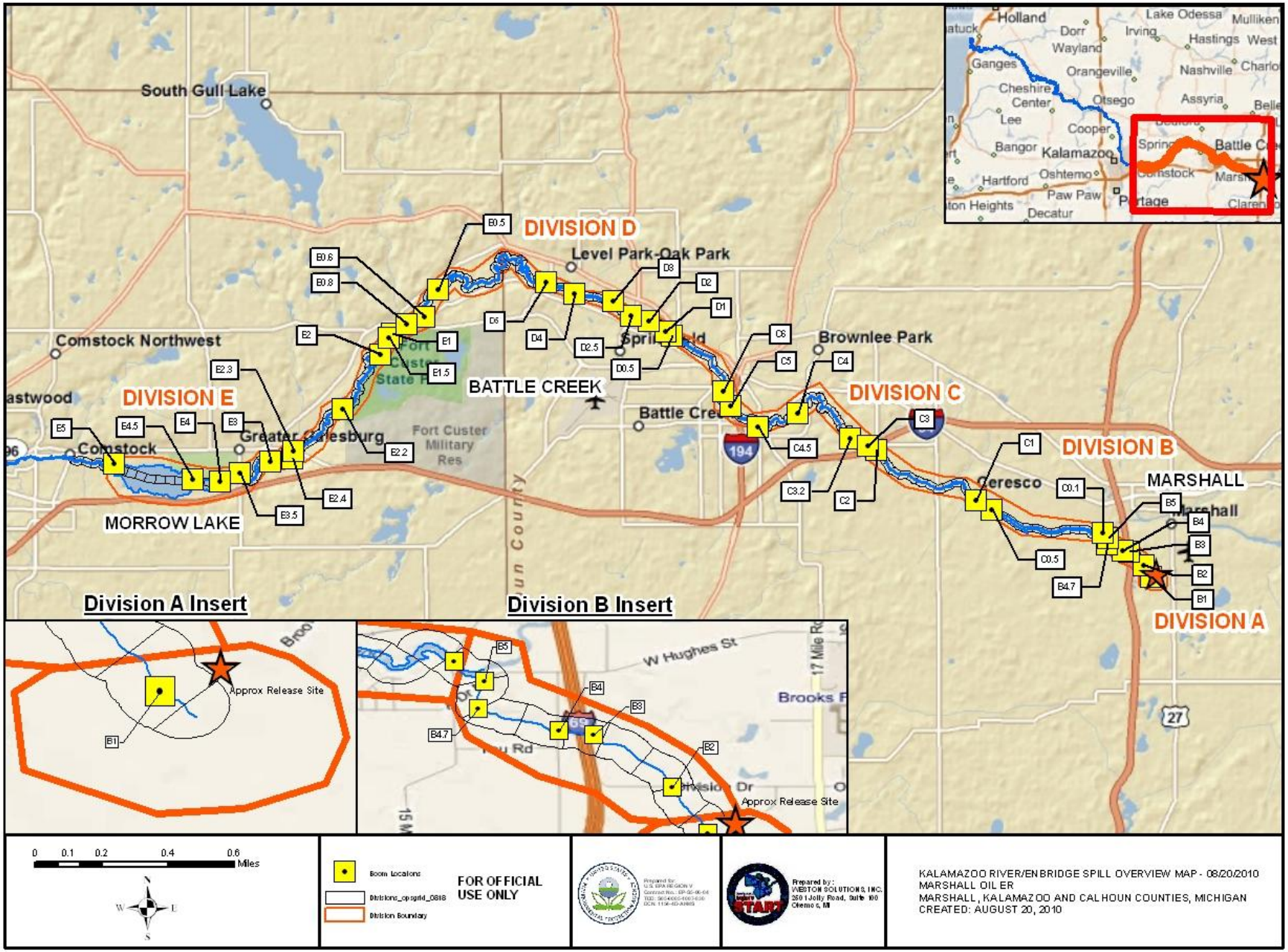
6.2 Reporting Schedule

SITREPs have been created daily and will continue until the UC establishes a different reporting schedule, in conjunction with the planning cycle.

7 Situational Reference Materials

See attached Map, entitled "Kalamazoo River/Enbridge Spill Overview Map," for more information.

See attached Unified Command Organizational Charts (ICS 207) entitled, "Enbridge Pipelines Response Unified Command", "Planning Section", "Operations", and "Division C."



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Enbridge Pipelines Response Unified Command

INCIDENT COMMANDERS
Ralph Dollhopf (US EPA) / Greg Danneffel (MDNRE) /
Durk Dunham (CCEM) / Paul Makoski (CCPHD) / Lt. Barry Reber (Michigan State Police)
Lt. Paul Baker (Kalamazoo Cty Sheriff's Office)
Mike McKenzie (City of Battle Creek) /Leon Zupan (Enbridge)

LIAISON OFFICER
Catherine Garypie (US EPA)
Angela Risdon (Enbridge)

SAFETY OFFICER
Felicia Fred (US EPA)
Brian Kovak (US EPA)
Melissa Linden (US EPA)
TJ Waldo (START EPA)
Sean Evans (Enbridge)

INFORMATION OFFICER
Jim Murphy (US EPA)
Cheryl Allen (US EPA)
Kevin O'Connor (Enbridge)
Terri Larson (Enbridge)
Kelsey Myhre (Enbridge)
Heather Keenan (Enbridge)

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Brian Kelly (U.S. EPA), Chief
Rich Adams (Enbridge), Chief
Theresa Holz (U.S. EPA), Deputy
Peter Taylor (Enbridge), Deputy
Mark Ploen
(O'Brien's / Enbridge), Deputy

(See Ops Chart)

PLANNING SECTION
Craig Thomas (US EPA), Chief
Bill Weber (O'Brien's/Enbridge), Chief
Scott McEachern (Enbridge), Deputy
Gary Gregory (O'Brien's/Enbridge), Deputy

(See Page 2)

LOGISTICS SECTION
George Hamper (US EPA)
Chris Moore (Enbridge)

SUPPLY MANAGER
Jeff Borseth (US EPA)

ORDERING MANAGER
Jill Preston (Enbridge)
Nathan Graen (Enbridge)

FACL
Greg Dearden
(Enbridge)

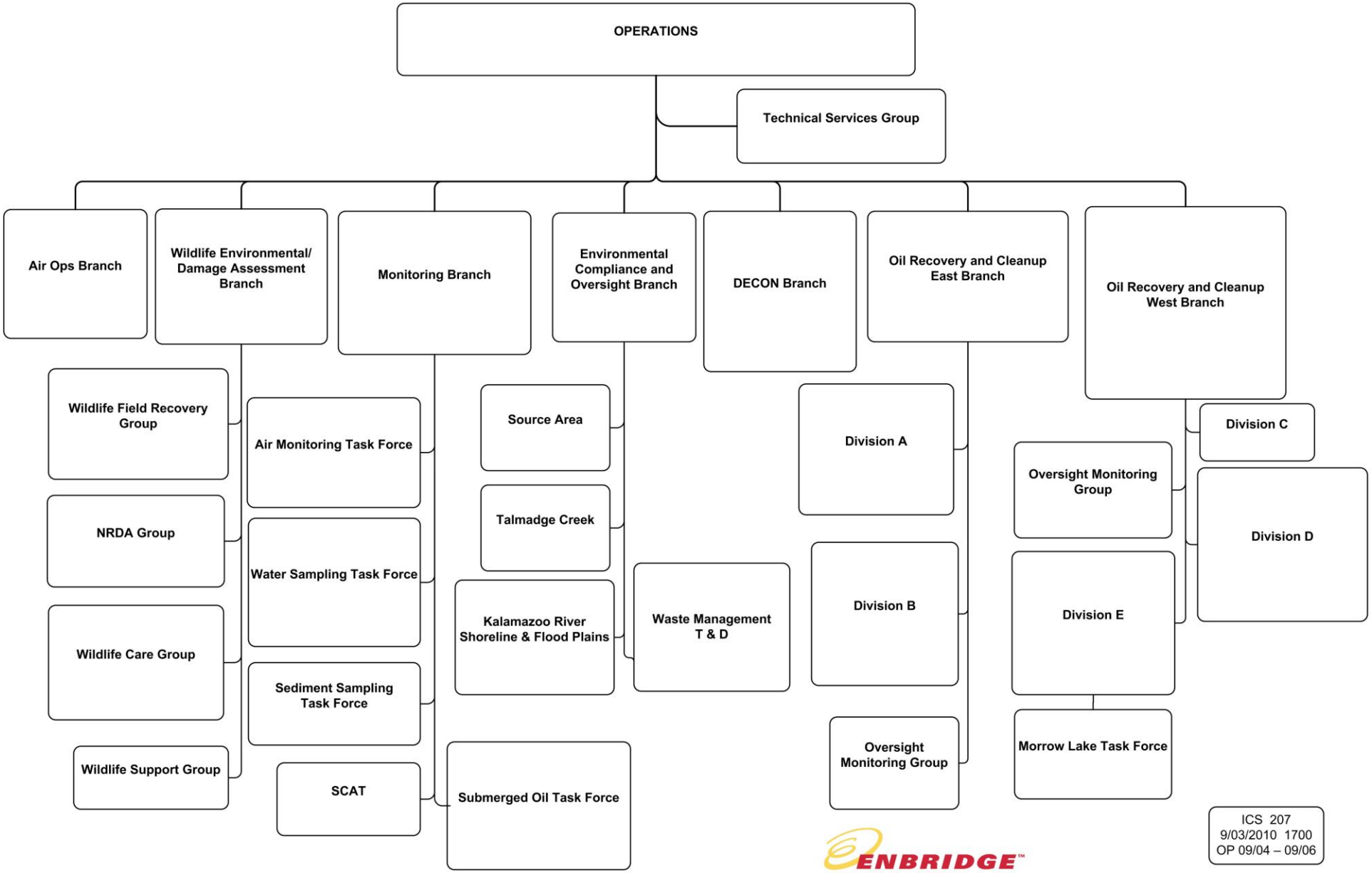
SECURITY
Stan Shook
(Enbridge)

COMMS UNIT
Paul Zanter (US EPA)
Kerrence Kelly (US EPA) (9/4)

FINANCE SECTION
Mark Maki (Enbridge)

ICS 207
9/03/2010 1700
OP 9/04 – 9/06

Operations


OPERATIONS
Technical Services Group
Air Ops Branch
Wildlife Environmental/ Damage Assessment Branch
Monitoring Branch
Environmental Compliance and Oversight Branch
DECON Branch
Oil Recovery and Cleanup East Branch
Oil Recovery and Cleanup West Branch
Wildlife Field Recovery Group
NRDA Group
Wildlife Care Group
Wildlife Support Group
Air Monitoring Task Force
Water Sampling Task Force
Sediment Sampling Task Force
SCAT
Source Area
Talmadge Creek
Kalamazoo River Shoreline & Flood Plains
Submerged Oil Task Force
Waste Management T & D
Division A
Division B
Oversight Monitoring Group
Division C
Oversight Monitoring Group
Division D
Division E
Morrow Lake Task Force
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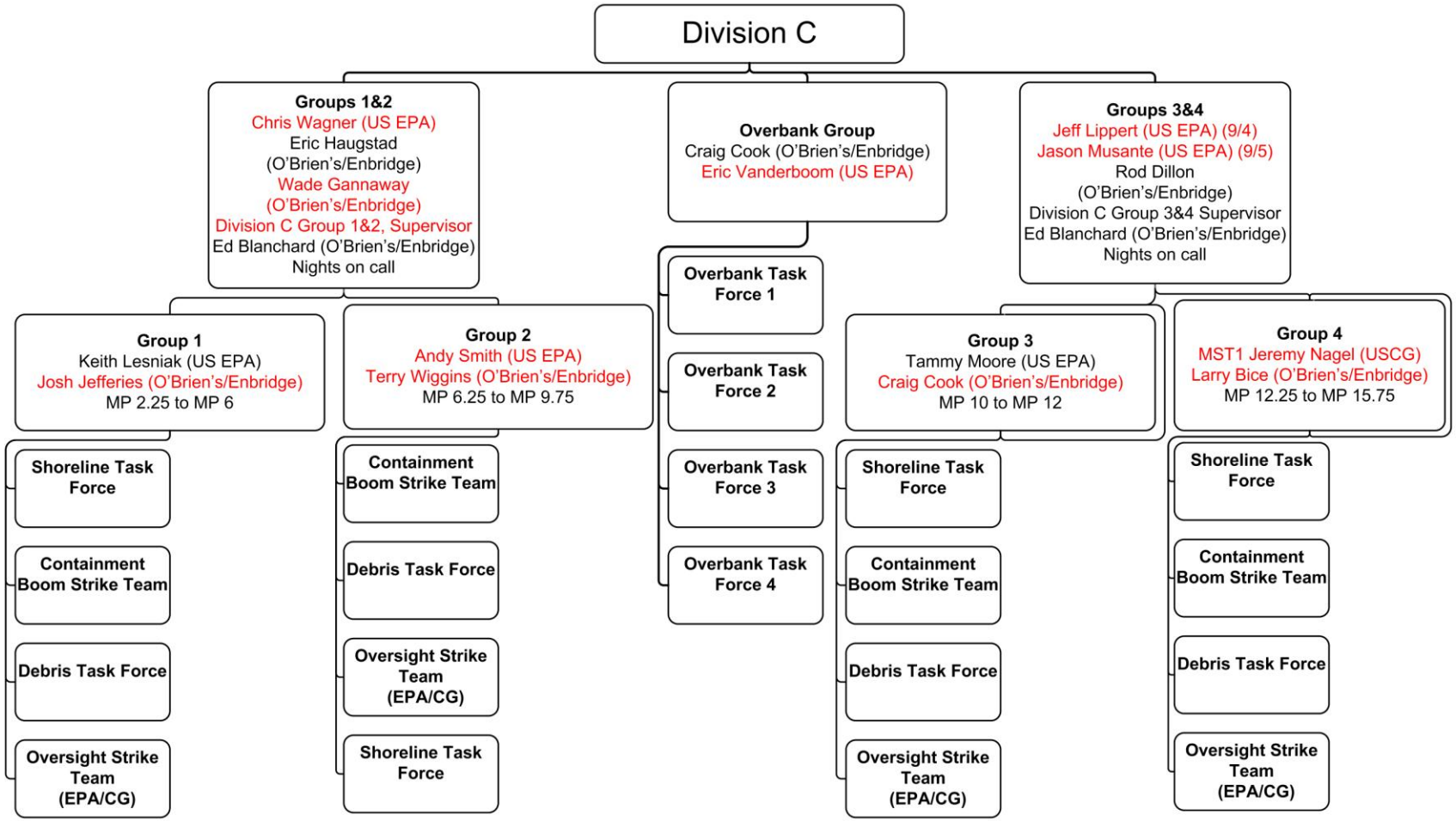

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CCPHD
MDCH
MDA

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Harold Stark (9/5)
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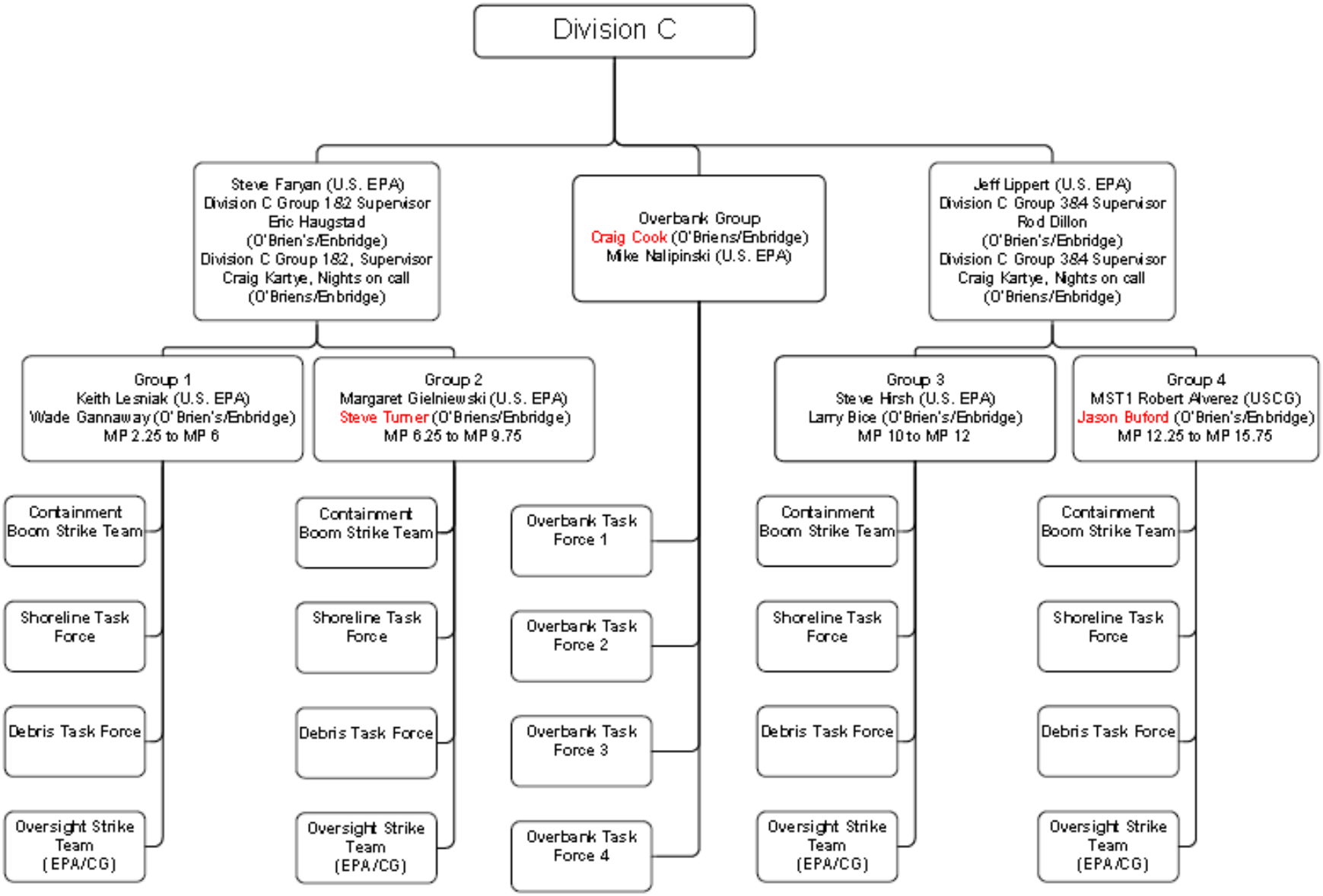
Division C
Steve Fanyan (U.S. EPA)
Division C Group 1&2 Supervisor
Eric Haugstad
(O'Brien's/Enbridge)
Division C Group 1&2, Supervisor
Craig Kartye, Nights on call
(O'Briens/Enbridge)
Overbank Group
Craig Cook (O'Briens/Enbridge)
Mike Nalipinski (U.S. EPA)
Jeff Lippert (U.S. EPA)
Division C Group 3&4 Supervisor
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Division C Group 3&4 Supervisor
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Wade Gannaway (O'Brien's/Enbridge)
MP 2.25 to MP 6
Group 2
Margaret Gielniewski (U.S. EPA)
Steve Turner (O'Briens/Enbridge)
MP 6.25 to MP 9.75
Group 3
Steve Hirsh (U.S. EPA)
Larry Bice (O'Brien's/Enbridge)
MP 10 to MP 12
Group 4
MST1 Robert Alverez (USCG)
Jason Buford (O'Brien's/Enbridge)
MP 12.25 to MP 15.75
Containment Boom Strike Team
Shoreline Task Force
Debris Task Force
Oversight Strike Team (EPA/CG)
Containment Boom Strike Team
Shoreline Task Force
Debris Task Force
Oversight Strike Team (EPA/CG)
Overbank Task Force 1
Overbank Task Force 2
Overbank Task Force 3
Overbank Task Force 4
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