

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



Long stick operations in Division B

Subject: SITREP # 41
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

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Date: 9/4/10

Reporting Period: 1900 hours 9/3/10 to 1900 hours 9/4/10

1. Introduction

1.1. Background

1.1.1. Site History

Background Information

Site Number: Z5JS

D.O. Number:

Response Authority: OPA

Response Lead: PRP

NPL Status: Non NPL

Mobilization Date: 7/26/2010

Demob Date:

CERCLIS ID:

ERNS No.:

FPN#: E10527

Contract Number:

Action Memo Date:

Response Type: Emergency

Incident Category: Removal Action

Operable Unit:

Start Date: 7/26/2010

Completion Date:

RCRIS ID:

State Notification:

Reimbursable Account

1.1.2. 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 2, 2010, 0700 to September 4, 2010, 0700.

Incident Objectives

1. Ensure health and safety of the public and response and recovery personnel.
2. Maintain the isolation of Talmadge Creek and Kalamazoo River from the 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.
10. Obtain input from multi-agency Science Team to help establish protocols to guide cleanup of environmentally impacted areas.

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. Complete final assessment and evaluation of Division A and continue consideration of final assessment process in Division B.
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.

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 3, 2010 to 1900 hours on September 4, 2010:

Division A

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

Enbridge reported the following:

- Continuation of minor scraping at Location A6.
- Removal of filter basket and Geotech from Location A5.
- Began site demobilization of tent city at Location A and B2 at division road.
- Continuation of removal of hotspots upstream of Location A6.

EPA observed the following:

- Presence of contaminated soil and sheen 100 feet upstream of culvert crossing on Talmadge Creek at Location A5. Instance has been photo-documented.
- Presence of contaminated soil and sheen 100 feet downstream of culvert at Location A6.
- Presence of free product between 200 and 400 feet downstream of culvert crossing at Location A6.
- Presence of free product and sheen 150 feet upstream of Division Road.
- Soil excavation and removal along east and west banks of Talmadge Creek at Location A6.

- Operation of two vacuum trucks along west bank of Talmadge Creek at Location A6.
- Suspension of tandem dump truck operations at Location A6.
- Staging of peat filling material near source area.
- Continuation of mat road chipping activities. Chipper was operating intermittently as needed.
- Repair of silt fence along east creek bed at Location A5.
- Disrepair of silt fence along west creek bed at Location A5.
- Screening of soils by Barr Engineering during night shift.
- Dewatering of west side of Talmadge Creek by two vacuum trucks.
- Absence of MDNRE representatives at Locations A5 and A6.

Division B

Enbridge reported the following:

- Maintenance and replacement of booms at Locations B3, B4, and B5.
- Replacement of absorbent pads as needed at Location B3.
- Cleanup of hotspots in soil during removal of mats at Location B2.5.

EPA observed the following:

- Identification of hot spots between Locations B2 and B2.7 during night shift.
- Presence of medium sheen between Division Road and Gravel Drive to House at Location B2.
- Presence of heavy sheen in areas between mat and silt fence at Location B2.
- Presence of medium to heavy sheen and free product in puddles along both sides of Talmadge Creek from Location B2.5 to B2.7.
- Presence of medium sheen and multiple pockets of product in wetlands at Location B3.
- Presence of contaminated soil and free product along a 400 foot long stretch downstream of 15½ Mile Road at Location B4.
- Presence of medium sheen in Talmadge Creek in areas of slow moving water at Location B5.
- Night excavation of hot spots from Locations B1.5 to B2 during the night shift. Multiple hot spots were identified.
- Active use of DECON pad and mixing cells by night crews during night shift.
- Absence of work crews or activity from Location B2 through B3 during night shift.
- Excavation of contaminated soil and removal of pooled oil at the farm road culvert at Location B2.5 during night shift.
- Vacuum removal operations at Location B5 during night shift.
- Absence of work force at Location B4 during night shift.
- Removal of silt screen to facilitate soil scraping at Location B2.7.
- Silt fence at Locations B2 and B3 in good condition.
- Repair and maintenance of silt fence at Locations B2 and B2.5.
- Removal of silt fence to expedite excavation at Location B4.
- Disrepair of silt fence 130 feet upstream of culvert crossing at Location B4.7. Silt fence was below water level.
- Removal of sorbent log booms between Locations B2 and B2.5.
- Continued deployment of sorbent log booms at Locations B5 and B6.
- Absence of MDNRE representatives at Locations B2, B3, B4, and B5.

- Discontinuation of excavation at Locations B2 and B3.
- Staging of excavators at location B2.5.
- Excavation 400 feet downstream of 15½ Mile Road.
- Lack of sampling, grade restoration, or stabilization activities at Locations B2 and B3.
- Soil staging and processing near Location B4.

USCG observed the following:

- Removal of soil by vacuum truck at Location B2
- Presence of rainbow sheen at Location B4.5. Crews were actively addressing the sheen.
- Removal of tree branches and debris at Location B5.

Division C

Enbridge reported the following:

- Reorganization of resources to respond to SCAT focus areas between MP2.25 and MP14.
- At Cell 2/Yard 4:
 - Mixing of excavated soil in containment cell.
 - Lining trucks to prepare for soil transport.
 - Import of backfill to improve Yard 4.
 - Creek bank scraping at area west of 15½ Mile Road.
- At Location C0:
 - Decontamination of equipment by Kemron in preparation of demobilization from site.
 - Continuation of shoreline cleaning operations on the south side of the Kalamazoo River.
- Transition of contractors and equipment at Location C0.3.
- No activity at Location C0.4.
- Continuation of shoreline cleaning by Garner and Garner subcontractors at Location C0.5.
- Continuation of shoreline cleaning and skimmer operations upstream of Ceresco Dam at Location C1.
- Preparation by ER to resume working on September 4th at Location C1.5.
- Collection of bagged debris from boats at Location C2.
- Termination of activities at Location C6. Site has been demobilized.

EPA observed the following:

- Assignment of new contractor to Division C. CMC continues demobilization activities.
- From MP2.25 to MP6 (Group 1):
 - Installation of silt fence at Ceresco Dam.
 - Flushing operations at Island C.
 - Reassignment of Enbridge contractor ER to Location C5.
 - Inspection of Island A. It was determined that additional vegetation removal is necessary.
 - Flushing through muskrat burrow.
- From MP6.5 to MP10 (Group 2):
 - Reassignment of Enbridge contractor Clean Harbors.
 - Assignment of Enbridge contractor ER to Location C5.

- Discovery of oiled areas beneath cut brush during inspection at Location MP6.75. NRG has been contacted and has commenced cleanup operations.
- Assignment of NRG to MP6.75 for cleanup operations.
- Re-inspection of MP8.5 by Safety pending fourth reported illness in this area.
- Identification of areas where cut brush was laid over oiled vegetation.
- From MP10 to MP15 (Group 3 and 4):
 - Presence of light sheen from MP10.5 to MP11.25.
 - Investigation of complaint regarding pooled oil and air quality issues at 9875 D Drive North. Air monitoring personnel were deployed. All readings were below action levels.
 - Presence of light sheen from MP10.5 to MP11.25 and at MP13.0.
 - Spent boom still in need of replacement between MP11.0 and MP11.25 as noted in Situation Report 40.
 - Continuation of shore cleanup, vegetation removal, and soil scraping activities.
 - Absorption of oil using snare booms.
 - Pooling of oil in previously scraped areas after rain event at MP13.25.
 - Continued presence of oiled ducks at MP15 as noted in Situation Reports 40 and 39.

USCG observed the following:

- At Location C1:
 - Removal of oil continues for second day. No decrease in amount of oil present.
 - Coverage of hard boom in oil.
 - Improper deployment of silt fence. Silt fence is installed, however, curtain remains rolled up.
 - Winds have blown oil to the far side of the Talmadge Creek away from the vacuum trucks preventing collection of oil.
- At Location C2:
 - Completion of shoreline cleanup.
 - Cleanup of hot spots.
 - Replacement of sorbent boom as needed.
- At Location C3.2:
 - Collection and transportation of spent sorbent material to MP11.25 for disposal.
 - Continuation of shoreline cleanup activities.
- At Location C5:
 - Maintenance of booms.
 - Removal and replacement of sorbent materials.
 - DECON of boats as they were removed from the water.
 - Oil staining on bridge.
 - Coverage by crews as far down as C6.

Division D

Enbridge reported the following:

- Maintenance and construction of gabion baskets at Location D1.
- No activity at Location D0.5.
- Continuing consolidation of all sites to Location D2.

EPA observed the following:

- Operation and maintenance of both lines of gabion baskets.
- Ongoing maintenance of booms in all areas.
- Consolidation of work force and collection points throughout Division D. All Division D activities will be conducted at Location D3.
- Suspension of cleanup activities from MP16.5 to MP16.75 pending contractor reassignment.
- Cleanup operations at the oxbow area near the Custer Street Bridge at Location D5. Boom has been deployed from upstream of the bridge piling to the oxbow opening.

Division E

Enbridge reported the following:

- At Location E0.5:
 - DECON of gabion baskets only. Boat and boom DECON are no longer conducted at Location E0.5.
 - Presence of three roll off boxes.
 - Construction and maintenance of gabion baskets.
- Demobilization of work crews at Location E3.
- Sample collection by ERS at Location E4.
- Deployment of skimmer boat for lake patrol at Location E4.5.
- Water and sediment sampling at Location E4.5.

EPA observed the following:

- No work operations at Location E5.
- Consolidation of Locations in Division E to Locations E4 and E4.5.
- Designation of Location E4.5 as launch point for river ops.
- Designation of Location E0.5 as a construction and DECON site for gabion baskets only.
- Continuing demobilization and relocation of personnel and equipment.
- Construction and decontamination of gabion baskets.
- Continued demobilization of Location E4 in response to soccer tournament this weekend.
- Brief postponement of skimmer operations during contractor realignment.

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

EPA reported the following:

- No update provided.

EPA recommends the following:

- It is recommended that a 100' hard boom lined with sorbent boom be deployed just downstream of the washing operations at MP4.5 to capture the mobilized oil and sheen.

Environmental Compliance and Oversight Branch

Enbridge reported the following:

- Soil scraping and documentation collection in Locations B2 and B5.
- Implementation of MDNRE approved Restoration Plan in Locations A5 and A6.
- Ongoing cleanup of hot spots in Divisions A and B.
- Oversight of SCAT inspection teams.

EPA reported the following:

- 2 START teams continued oversight of CTEH air monitoring crews.
- 1 START team provided oversight of surface water sampling teams.

Transportation and Disposal took the following actions:

- Conducted QA/QC on data presented in the 0830 Command and General Staff Meeting.
- Conducted QA/QC on data presented on the EPA website for the Marshall Oil Spill Response.
- Assembled internal EPA solid and liquid projections for IC and OPS Chief
- Conducted ongoing manifest and contractor report auditing.
- Provided oversight on Frac Tank City operations.
- Discussion with Barr Environmental about methods of measurement of oil/water.
- Discussion with SOTF lead and Terra pertaining to capture of submerged oil in the Kalamazoo River.

DECON Branch

Enbridge reported the following:

- Continuing construction of central DECON area in Location C0.5 is 25% complete. Completion is anticipated by 9/9/10.
- Establishment of new central cleaning area for large equipment in Division A. Completion is anticipated by 9/5/10.

EPA reported the following:

- Construction of central decontamination location continued at Location C0.5.
- Awaiting revised DECON plan from Enbridge to address frac tank cleaning.
- Consolidation of DECON locations.

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 trailer park, the day care, Ceresco Dam, and the source area.
- Ongoing real time monitoring for benzene and VOC's is continuing.

- 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.
- Ongoing oversight and deployment of SCAT teams.
- Collection of samples as indicated in Table 1:

Table 1 - Samples Collected as of 9/4/10 1515

Sample Type	Number collected
Surface Water	25
Vertical Water Column Samples	0
Private Well Samples	6
Sediment Samples	12
Sheen Samples	0
Other	0
Soil Samples	0

EPA reported the following actions or observations:

- Meetings are ongoing to advise Enbridge on laboratory start up, methodologies, and required detection limits.
- Took duplicate air samples at 29 locations with no benzene or other air contaminants detected.
- Collection of 32 samples by Enbridge.
- Collection of samples as indicated in Table 2.

Table 2 - Samples Documented in SCRIBE as of 9/4/10

Media	Sample Type	Number collected
Air	Summa Canister	0
Air	Tedlar Bags	0
Air	Monitoring Samples	24
Surface Water	Grab	0
Sediment	Grab	0

Six SCAT teams reported the following:

- Collection of SCAT data in Division E and small portions of Division C.
- Conducted training for re-assessment operations.

Three Submerged Oil Task Force reported the following activities:

- Deployment of three teams to Division C:
 - Collection of 9 core samples in vicinity of Ceresco Dam by Team A.
 - Collection of 8 core samples from Location C3.2 for qualitative analysis by Team B.
 - Completion of 15 polling transects from MP10.5 to MP11.75 by Team B.
 - Oversight of sediment core logging by Team C.
- FOSC Stressed evaluation of contaminated sediments by large volume sediment removal contractors as a priority.

Oil recovery and Cleanup (East and West Branches)

The Overbank group reported the following observations:

- Tour of Division C from MP2.75 to MP14.75.
- Presence of oiled vegetation from MP7 to MP7.25.
- Identification of two areas referred for SCAT review.
- Continuation of work at oxbow area in Division C. 150 people identified working the overbank in groups 3 and 4.

Wildlife Environmental Damage Assessment Branch

USFWS reported the following:

- Distribution of business card sized handout with hotline number for workers.
- Inquiry of SCAT pertaining to the effectiveness of soil turning with pitchforks.
- Preparation for fish survey next Wednesday that will require closure of all boat traffic in Division C for several hours.
- Discussion of methods of erosion measurement.
- Capture of the oiled heron at Location MP4.25.
- Response to wildlife center hotline calls.
- Baiting for capture of oiled ducks reported at MP15.

As of September 3, 2010 at 0700, the wildlife center reported 272 animals in captivity and 625 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.

Enbridge reported observing the following during two over flights:

- Changes in Sheen:
 - Presence of minor sheen at Locations A5 and A6.
 - Absence of sheen reported yesterday upstream of Locations B3 and B5.
 - Presence of few scattered sheen areas, all upstream of containment of absorbent boom at Location C.

- Emanation of sheen from islands. Sheen appears contained by boom.
- Presence diminished amounts of sheen at the oxbow at MP21.50 in Division D. Sheen appears to be adequately contained by boom. No sheen observed at the main river way.
- Absence of sheen observed yesterday at MP26.
- Absence of sheen at the Morrow Lake delta, upstream of E4 at the mouth of Morrow Lake, and on Morrow Lake and its shore.
- Absence of sheen flowing over Ceresco Dam.
- Operational Observations:
 - Standing water at seeded source area.
 - Installation of bladder at Location A6 to allow creek water to flow past the Division Road Bridge and culvert.
 - Termination of soil scraping activities at Locations B4.7 and B5.
 - No sorbent pads downstream of Location B5 at the confluence of Talmadge Creek and the Kalamazoo River.
 - Construction of scaffolding area at Frac Tank City.
 - Removal of one soil cell from Yard 2.
 - Continuing boat and shore operations in Division C.
 - Continuing boom activity at the peninsula above Ceresco Dam and at Ceresco Dam.
 - Installation of sediment curtain at Ceresco Dam.
 - Presence of sorbent pads upstream of Location E0.5 near MP26 where sheen was visible yesterday.

EPA observed the following during one over flight:

- Changes in sheen:
 - Absence of oil and sheen in Division A1 through A4.
 - Presence of sheen along the shoreline of Talmadge Creek through Locations A5.
 - Absence of sheen reported yesterday at ponds adjacent to Talmadge Creek west of Interstate 69 at Location A6.
 - Greatly diminished presence of intermittent sheen along shoreline of Talmadge Creek throughout Location A6.
 - Absence of sheen emanating or downstream from scraping operations in Location B2.7.
 - Absence of sheen at confluence of Kalamazoo River and Talmadge Creek at Location B5.
 - Absence of sheen emanating from heavy cleanup activities on Island B in Division C.
 - Presence of isolated spot of sheen in the center of the Kalamazoo River at Location C0.5.
 - Presence of minor or no sheen on either side of peninsula upstream of Ceresco Dam.
 - Presence of heavy sheen at oxbow area at MP21.5 in Division D. No sheen observed downstream of the oxbow.
 - Absence of sheen along northern shoreline near MP26 at Location E0.5.
 - Absence of sheen on the Morrow Lake delta and on Morrow Lake.
- Operational Observations:
 - Some standing water was observed on the ground cover in Locations A1 through Location A4.

- Observed soil staging areas, DECON area and frac tank city. Five soil cells in the eastern staging area were covered with plastic. One cell in the western staging area was being cleaned out. Active decontamination of several frac tanks was observed at the south end of Frac Tank City. Observed construction of the scaffolding next to the DECON area.
- Observed confluence of Talmadge Creek with Kalamazoo River (B5). Booming operations appeared similar to yesterday. Absorbent pads have been removed.
- Installation of the silt screen upstream of Ceresco Dam.
- Presence of absorbent 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 (9/4/101900)

Number of Locations	25
Boom Deployed (feet)	142,592

Soil and Debris Waste Tracking

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

Waste Stream*	Quantity Shipped (yd3)	Cumulative Quantity Shipped (yd3)
Haz Soil ^a	0	15,369
Non Haz Soil ^b	1,611	13,920
Haz Debris ^c	0	12,075
Non Haz Debris ^c	37	578

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

- Haz (Benzene)-impacted soil is being sent to EnviroSAFE (Oregon, OH).
- Non Haz soil is being sent to Westside Recycling (Three Rivers, MI) and EQ/Republic (Marshall, MI).
- 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 (9/3/10, 0700)

Location	Cumulative Total Collected (gallons)
Division A	4,783,658
Division B	3,363,075
Division C	794,850
Division D	117,825
Division E	56,950
Other Locations*	169,138
TOTAL	9,285,496

* Includes Frac, DECON, and Wildlife Center.

Table 6 - Oil water Separation (09/03/10, 0000)

Oil-Water Separation at Tank 1605, Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	774,000
Other Material	1,531,000
TOTAL	2,305,000

Table 7 – Liquid Shipped Off-site (9/3/10, 0000)

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)	Cumulative Quantity Shipped (Gallons)
Haz Water	Dynecol, Detroit, MI	10,475	2,019,037
Treated Non Haz Water *	Dynecol, Detroit, MI	0	134,200
Treated Non Haz Water *	Battle Creek POTW	0	1,968,700
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	28,500	361,200
Treated Non Haz Water	Plummer, Kentwood, MI	98,500	1,556,800
Oil/Water	Tank 1605, Enbridge Facility, Griffith, IN	26,000	2,305,000
Haz Water	Safety Kleen ^a	0	550
Totals		163,475	8,345,487

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

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

Table 8 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected ^a	9,285,496
Oil/Water Shipped Off-site ^b	8,345,487
OIL/WATER REMAINING ON-SITE	940,009

a. As of 9/4/10, 0700

b. As of 9/3/10

2.2. Planning Section

The Data Management Unit reported the following:

- Updated field maps showing ‘hot spots’ in Division A and B based on field data collected.

The DMU continued processing surface water sampling data, importing preliminary and validated analytical results into SCRIBE. EPA GIS received post-spill imagery from Enbridge, and is evaluating it for use on future map request.

Situation Unit FOB observed the following:

- At Division A1-A4
 - Absence of sheen on water pooled in the straw-mulched area.
 - Absence of sorbent material and boom.
 - Absence of sheen in creek channel.
 - Presence of sheen on pooled water in un-excavated area south of Talmadge Creek near Location A4. Water appears related to drainage.
 - Presence of slight sheen in small puddle beneath tarp at earthen berm on straw-mulched area near Talmadge Creek. Observation has been photo documented
 - GPS surveyor on site. Surveyor reported that Areas A and B are being marked at 1/8 mile intervals.
 - Removal of a portion of silt fence by excavator.
- At Division A5-A6
 - Appearance of sheen on several puddles outside silt fence at right and left descending banks at the intersection of Locations A4 and A5. Appears to be related to run off from filled area. Observation has been photo documented.
 - Removal of soil from left descending bank by excavator and dump truck.
 - Leaf blower directing airflow in scraped bank area of left descending bank.
 - Presence of water sleeve on Talmadge Creek to MP0.5.
 - Presence of excavation equipment and work crews at about MP0.35.
- At Division B2
 - No visible sheen on Talmadge Creek main channel.
 - Presence of oily sheen on many puddles and on top of damp soil along both sides of Talmadge Creek along Division B, especially in area between the crane mat (mat road) and silt fence.
 - Presence of work crews replacing and removing sorbent booms.
 - Placement of sorbent pads outside the silt fence in one small area.
 - Removal of silt fence in one area.

- Slight sheen on standing water in areas of scraped bank.
 - Pump hosing being removed from a pick-up truck.
 - No bladder dams are in present in this area.
- At Division B5:
 - Area is largely idle with exception of a vacuum truck to aspirate the water surface.
 - Containment devices are in place and silt fence has been repaired.
 - No visible sediment plume entering the river from Talmadge Creek.
- At Division C1:
 - Various activities underway by boat crews above the spillway to collect sediment cores, remove bank vegetation, service boom and silt fence, and collect bucket sample.
 - Use of a net on a long pole to manually skim vegetation and oil at boom collection area above the spillway.
 - Presence of widespread sheen in shallow headwater pool area formerly populated with cattails after a plume of sediment was stirred up by a johnboat.
 - No activity downstream of the spillway to Ceresco Bridge.
 - Several pieces of litter (caution tape and sorbent) left behind after demobilization below the spillway, descending right bank.
 - Areas of oil sheen on the pond below the dam in boomed area.
 - Weathered oil sheen entering culvert dam on descending right bank.
 - Three johnboat crews working on descending left bank at about MP6.

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:

- No report filed.

2.3. Logistics Section

Maintenance problems with trailers at the new ICP on Pratt Avenue seem to be satisfactorily resolved. The Logistics staff continues to serve the needs for the communications technology and supplies at the ICP.

2.4. Safety Officer

Enbridge reported the following:

- Reiteration of the need to ensure all employees are receiving and understanding the instructions given to them.
- Emphasis on adhering to decontamination procedures for personnel, equipment, and tools is a critical component to managing the health and safety of all workers.

- Reminder to workers that we are visitors and that we should practice good housekeeping practices, especially during work site consolidation.

EPA reported the following actions:

- During boat training operations, a john boat operator came into the dock full throttle and hit a parked boat forcing the air boat operator to the front of the boat. No injuries reported.
- One incident report was filed:
 - 1 worker was transported to the hospital and x-rayed for an ankle injury. Worker was released with a sprained ankle.
- Coordinated with Enbridge on the traffic safety briefing and Fatigue Management Plan.
- Establishment of a medical unit leader.
- Coordinated with Enbridge on updating HASP and training for new boat operators.

2.5. Liaison Officer

The Liaison Officer reported the following actions:

- Provided safety information to Calhoun County Commissioner.
- Sent information regarding school safety and Natural Resource Damage Assessment to assisting and cooperating agencies.

2.6. Finance Section

The current NPFC issued ceiling is \$16 million. Approximately 88.6% of the ceiling has been spent through September 3, 2010, with a burn rate of \$211,590 per day. These cost summaries reflect only EPA-funded expenditures for the incident.

Table 9 - FPN E10527 - Enbridge Pipeline Oil Spill (09/04/10)

ERRS Contractors		Est. Expended	Est Burn Rate (Lastest Daily)
EQM (EPS50802)	T057	\$1,251,054	\$0
	T060	217,090	1,600
LATA (EPS50804)		1,451,396	0
ER LLC (EPS50905)		723,669	0
ERRS Contractors		\$3,643,209	\$1,600
TNT Bisso		656,000	27,000
START Contractor			
WESTON (EPS50604)		4,573,217	82,804
Response Contractor Sub-Totals		\$8,872,426	\$111,404
EPA Funded Costs:			
Total EPA Costs		2,526,274	54,200
Pollution Removal Funding			
US FWS		279,480	2,500
Total Other Agencies		\$1,022,192	\$19,757
Sub-Totals		\$12,420,892	\$185,361
Indirect Cost (14.15%)		1,757,556	26,229
Total Est. Oil Spill Cost		\$14,178,449	\$211,590

2.7. Information Officer

The Public Information Office reported the following activities:

- Provided a press statement to one media outlet.
- Received one resident inquiry from the website.

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

Media Inquiry Line (877-440-7157)

Calls received during reporting period: 2

Enbridge reported the following call volume and community center visits:

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

Calls received during reporting period: 62

Community Center Visits: 30

Visits by location during reporting period:

Battle Creek	17
Marshall	13

Enbridge reported that it received 3 inquiries from its www.response.enbridgeUS.com website bringing the total to 552 comments.

2.8. Response Actions to Date

Response Actions to date may be found in Situation Reports 1 through 40.

3. Participating Entities**3.1. Unified Command**

U.S. EPA	Calhoun County Public Health
MDNRE	Department
Michigan State Police Emergency	Calhoun County Emergency Management
Management Division	Kalamazoo County Sheriff
City of Battle Creek	Enbridge (Responsible Party)
Cooperating and Assisting Agencies	

3.2. Cooperating and Assisting Agencies

ATSDR	Marshall Police Department
Calhoun Conservation District	Marshall Township Government and Fire
Calhoun County Commission	Department
City of Kalamazoo	Michigan Department of Agriculture
City of Marshall	MDCH
Emmett Township	NOAA
Fredonia Township	Oakland County HAZMAT/RRTN
Kalamazoo County Office of Emergency	PHMSA
Management	USCG
Marshall Area Firefighters Ambulance	U.S. Department of the Interior/USGS
Authority	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. Response personnel

Table 10. Personnel On Site 9/4/10

Agency/Entity	Numbers Reported
EPA	40
START	35
Calhoun County Public Health Dept. (CCPH)	1
Calhoun County (CC) Sheriff	6
City of Battle Creek	3
Kalamazoo Sheriff	2
MDNRE	9
Michigan State Police (MSP)	1
NOAA - National Weather Service	2
NOAA- NRDA	2
USCG	8
USFWS	6
USFWS Contractors	0
Enbridge	11
Enbridge Contractors	1,213
Total	1,339

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 ₂ S	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
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>.

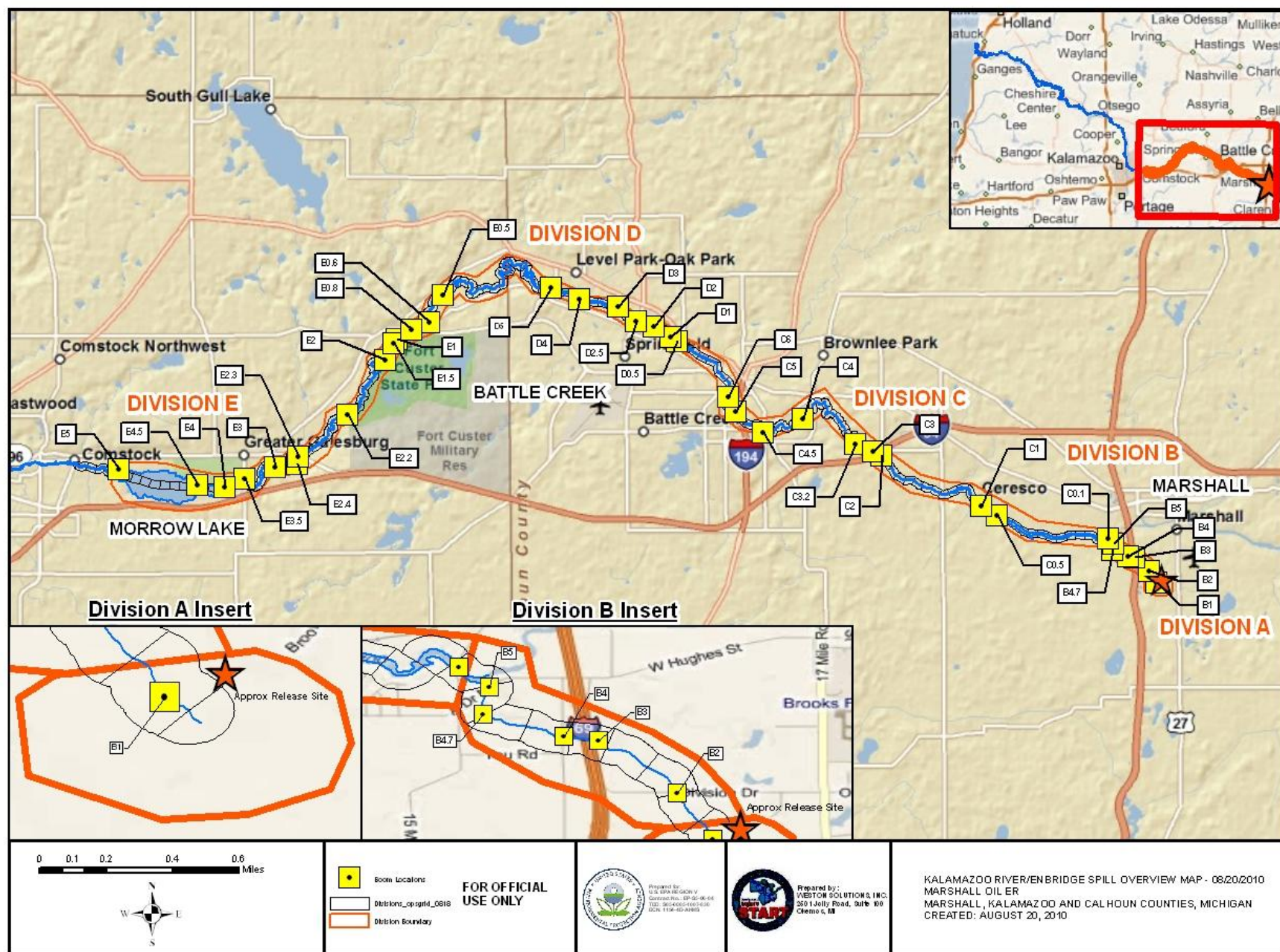
6.2. Reporting Schedule

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

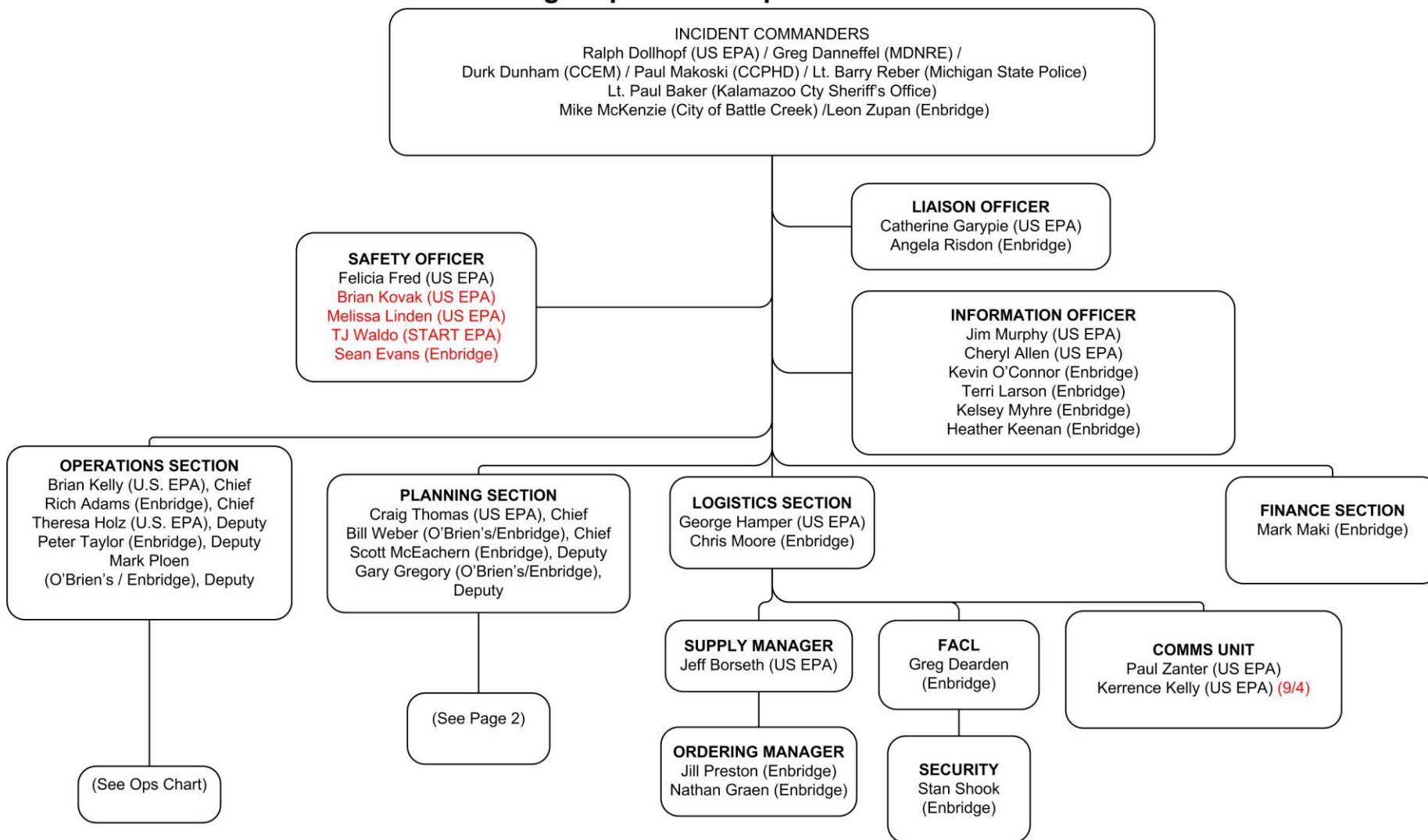
See attached Map, entitled “Kalamazoo River/Enbridge Spill Overview Map,” for more information.

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



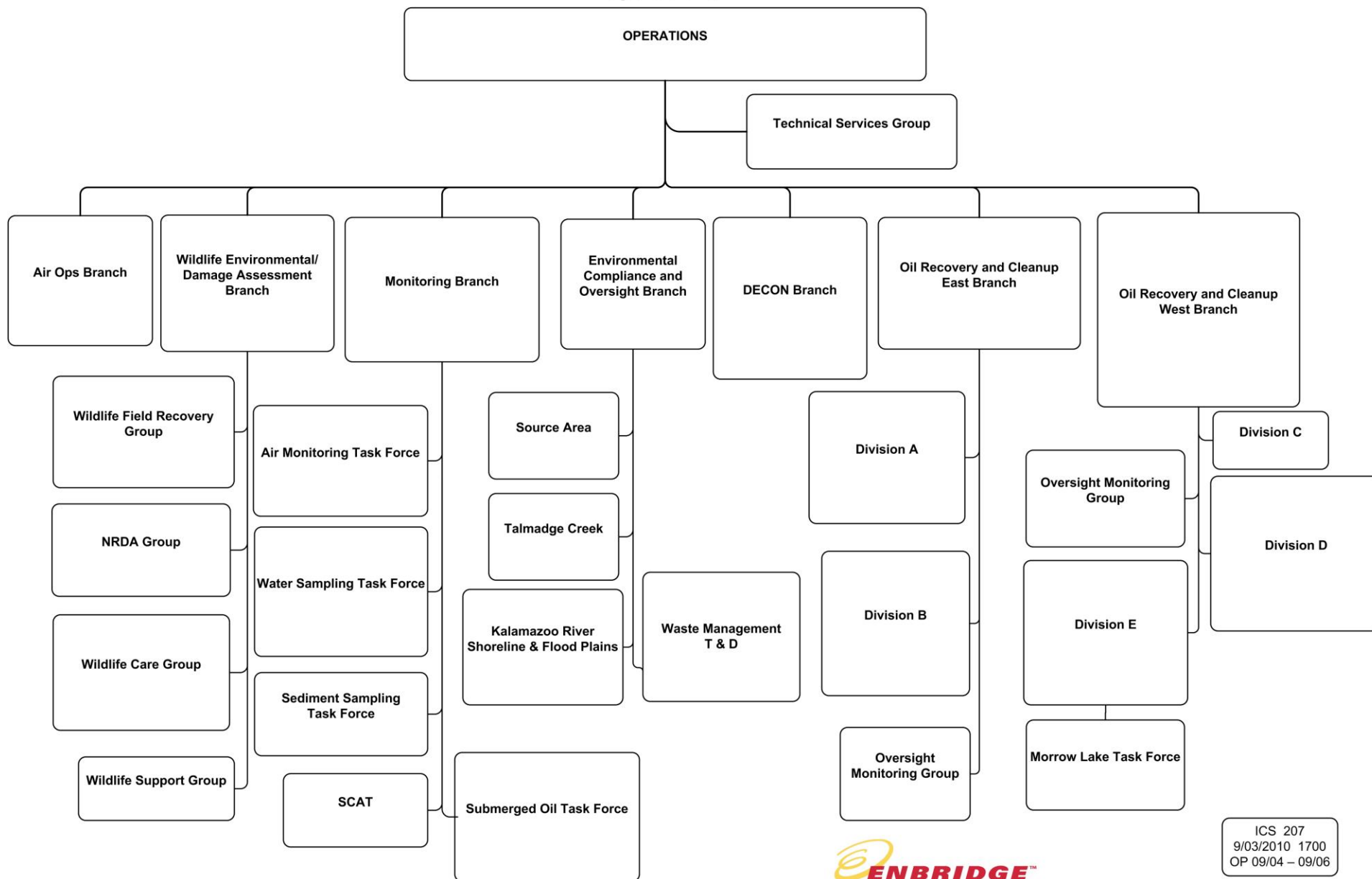


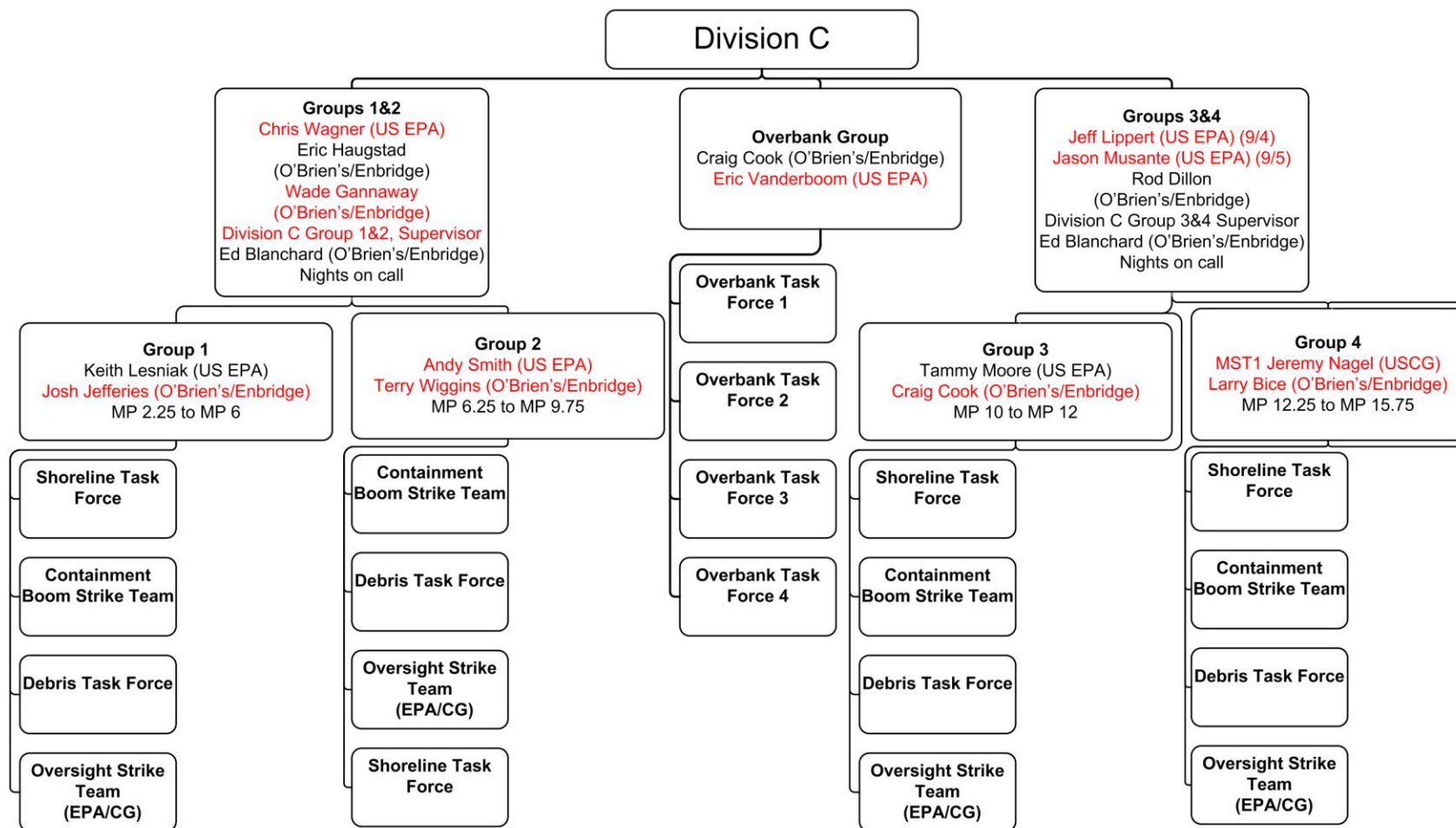
Enbridge Pipelines Response Unified Command





Operations





ICS 207
9/03/2010 1700
OP 9/04 – 9/06



