

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 #39
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

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Date: 09/02/10

Reporting Period: 1900 hours 09/01/10 to 1900 hours 09/02/10

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 August 31, 2010, 0700 to September 2, 2010, 0700.

Incident Objectives

- Ensure health and safety of the public and response and recovery personnel.
- Maintain the isolation of Talmadge Creek and Kalamazoo River from the source area.
- Ensure effective transition of regulatory oversight of the oil impacted areas from EPA to MDNRE jurisdiction as appropriate.
- Contain and recover oil and contaminated vegetation in Talmadge Creek and Kalamazoo River.
- Maintain effective unified communications with cooperating and assisting agencies and the public.
- Perform remediation and restoration of all affected public and private areas of river and river systems.
- Provide protection of environmentally and culturally sensitive areas including wildlife and historic properties.
- Protect threatened and endangered species and continue to recover and rehabilitate injured wildlife.
- Continue to collect, coordinate, manage and communicate environmental and public health data including maintenance of Joint Information Center function.
- Obtain input from multi-agency Science Team to help establish protocols to guide cleanup of environmentally impacted areas.

Command Emphasis

- 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.
- Complete final assessment and evaluation of Division A and continue consideration of final assessment process in Division B.
- Complete final clean up, grade restoration, and stabilization work along Talmadge creek.

1.3. Strategic Considerations

- 1) Emphasize need for awareness of local traffic and back-to-school safety considerations across all site work locations.
- 2) Perform safety program audit.

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 1 to 1900 hours on September 2, 2010:

Division A

Division A has extended into the upstream portion of Division B (to the upstream side of Location A2) since the operations required there are more similar to those in Division A than Division B.

Enbridge reported the following:

- Removal of standing water in A6 with vacuum truck.
- Cleaning of hot spots in Locations A4, A5, and A6.
- Reinforcement of bank wall at Location A6 with sandbags due to rainfall.
- Commencement of hot spot cleaning at Location A6.

EPA observed the following:

- Presence of absorbent pads along southwest side of former repair trench.
- Presence of heavy sheen along both shorelines of Location A5 and A6.
- At Location A6:
 - Excavation of hot spots along bank of Talmadge Creek.
 - Removal of silt fences for excavation.
 - Presence of free product along west side of the creek.

- Use of native soil in Talmadge Creek to control water flow.
- Collection of post-response soil for on site analysis.

Division B

Enbridge reported the following:

- Rotation and replacement of booms deployed in Location B2 and B5.
- Cleanup of hot spots at Location B2.4 and B2.5.
- Continuation of sedi-vac operations in B2.7.
- Replacement of absorbent pads in B3 and B4.
- Cleanup of hot spots at Locations B4, B4.5, and B5.
- Installation of speed bump at Location B5.

EPA observed the following:

- Removal of an oak tree root ball to expose a pool of heavy product at Location B2.
- Continuation of oil and oiled soil removal from Talmadge Creek at Locations B2.4 and B5.
- Removal of sheen at Location B4.5 by vacuum extraction.
- Flagging of hot spots along Talmadge Creek at Location B5.
- Use of containment and absorbent booms to corral sheen into a vacuum truck at Location B5.
- Erosion of sediments due to missing section of sediment fence and rain fall at Location B5.
- Presence of sheen east of Interstate 69.
- No sheen entering the Kalamazoo River from Talmadge Creek.

USCG observed the following:

- Silt fence and boom between Location B4 and B5.
- Removal of almost 100% water by vacuum truck at Location B4.5. No oil or sheen was visible from the water being removed. Supervisor has been advised.

Division C

Enbridge reported the following:

- Continuation of island cleaning operations in Locations C0.3 and C4.85.
- Maintenance of booms in Location C0.4.
- Continuation of shoreline cleaning in Locations C0.5, C1, C1.5, C3, and C4.85.
- Continuation of skimmer operations upstream of Ceresco Dam at Location C1.
- Replacement of 400 feet of absorbent boom and 200 feet of sweep boom.
- Multiple sites were shut down, delayed, or impeded due to inclement weather.

EPA observed the following:

- From MP 2.25 to MP6 (Group 1):
 - Suspension of morning boat operations due to inclement weather.
 - No activity on Island B.
 - Washing operations conducted by an eight man crew at Island C.
 - Flushing of soiled vegetation and soil on Islands E and F.
 - Maintenance of booms at Island E.

- Effective containment of sheen coming off Island E by booms deployed around the perimeter of the Island.
- From MP6.5 to MP9 (Group 2):
 - Emanation of sheen from sediment 200 yards upriver of MP6.5 when a boat hit the river bottom.
 - Discovery of pools of free product on two islands approximately 150 yards upstream of MP6.75. Pools were immediately addressed and referred to SCAT for cleanup completion inspection.
 - Cleanup crew activity between MP7 and MP9.
- From MP11 to MP15 (Group 3 and 4):
 - Removal of oiled vegetation with proper boom deployment to capture any sheen released from these cleanup activities from MP11 to oxbow.
 - Oiled ducks at MP15. One duck appeared unable to fly. Ducks have not changed location for the past 3 days. Another call was placed to the wildlife group.
 - Removal of oil and scraping of soil at island located between MP13.5 and MP13.75 with no boom in place to capture releases from cleaning operations.
 - Presence of sheen between MP14.25 and Location A5.

EPA took the following actions:

- Conducted cleanup oversight on Island A.
- Met with MDNRE to conduct pre-screening of MP6.5 to MP6.75.

USCG observed the following:

- Scraping of oil at MP12.25.
- Presence of spent absorbent materials and plywood plank at the demobilized C1 work site.
- Areas of oiled boom at C1.
- Pockets of sheen at the Ceresco Dam.
- Recovery of oil and sheen at Location C1. This location appears to have the most oil and sheen in Division C.
- Maintenance of booms and shoreline clearing of oiled vegetation at MP11.25, MP12.25 and Locations C1.5 to C3, C3.2, C4, and C5.
- Decontamination of personnel and equipment at MP7.5.

USCG reported the following:

- Oil and sheen extraction activities at Location C1 do not appear effective.
- The crew at MP9.25 appears to have been downsized from 157 workers to 130 workers.
- Workers at MP9.0 were discovered hiding and not working. Incident was reported to supervisors.

Division D

Enbridge reported the following:

- Continuation of Division D site consolidation.
- Deployment of absorbent boom on both banks of oxbow island in Location D5.
- Maintenance of booms throughout Division D.
- Construction of gabion baskets at Location D3.

EPA observed the following:

- Operation and maintenance of both lines of gabion baskets.
- Consolidation of work force and collection points throughout Division D.
- Maintenance of booms in all areas.
- Continuation of cleanup and boom deployment in oxbow area at Location D5.
 - Deployment of absorbent boom along each side of shoreline.
 - Deployment of hard boom to redirect flow.
 - Presence of heavy oily sheen and brown film emanating as a result of cleaning operations.
 - Presence of tarry balls ranging in size from miniscule to dollar size.
- Cleanup of oiled shoreline from MP16.5 to 16.75.

EPA reported the following

- Submerged oil is suspected at Location D5, specifically around the bridge pilings of the Custer Street Bridge where sheen was noted yesterday. Sheen was noted today and additional sheen was mobilized when a watercraft passed under the bridge. Submerged Oil Task Force (SOTF) has been notified.

Division E

Enbridge reported the following:

- Operation of DECON station at Location E0.5.
- Construction of gabion baskets at Location E0.5.
- Removal of shoreline vegetation at Location E1.
- Completion of the consolidation of Locations E1, E2, and E3. Crews from Location E3 now service all three sites.
- Removal of aeration system at E3.
- Vacuum truck extraction of bio/product at Location E4.5.
- Patrol and cleanup of sheen on Morrow Lake.

EPA observed the following:

- Presence of moderate to widespread sheen in the estuary adjacent to MP37.5.
- Continued presence of moderate sheen at MP33.0 and intermittent sheen in the delta area.
- Discovery of submerged oil at Morrow Lake. SOTF has been notified.
- Removal of aeration lines in Division E.

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:

- Check of completed boom operations in Division C.

- Coordination of resources for submerged oil recovery test at Ceresco Dam.
- Maintenance of booms as required.

Environmental Compliance and Oversight Branch

Enbridge reported the following:

- Continuation of seeding and mulching from Locations A1 to A4.
- Completion of soil scraping and documentation at Locations B2 and B5.
- Development of Restoration Plan.

EPA reported the following:

- Two START teams continued oversight of CTEH air monitoring crews.

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 Kalamazoo River/Enbridge Spill Response.
- Assembled internal EPA solid and liquid projections for IC and OPS chief
- Conducted ongoing manifest and contractor report auditing.
- Provided oversight of Frac Tank City operations.
- Audited waste manifested soil volumes.
- Approved Enbridge/Safety Kleen Draft Soil Pile Management Plan.
- Confirmed waste characterization results in Cell 4 and approved soil for disposal.
- Initiated audit of Tank#1605 reported volumes.

DECON Branch

Enbridge reported the following:

- Continuation of construction of central DECON area at Location C0.5 is 25% complete.
- Establishment of new central cleaning area for large equipment in Division A.

EPA reported the following:

- Construction of central decontamination location continued at Location C0.5.
- Cleaning of frac tanks at Frac Tank City.

Monitoring Branch

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

Enbridge reported the following:

- Continuation of focused air sampling programs around the Baker Estates Trailer Park, Ceresco Dam, and the source area.
- Continuation of real time monitoring for benzene and VOC's.
- 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.

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

Table 1 - Samples Collected as of 09/02/10

Sample Type	Number collected
Surface Water	19
Vertical Water Column Samples	0
Private Well Samples	0
Sediment Samples	3
Sheen Samples	0
Other	0
Soil Samples	0

EPA reported the following actions or observation:

- Discussion of laboratory start up, methodologies, and required detection limits with Enbridge.
- Duplicate sampling at 26 locations. No benzene or other air contaminants detected.
- Collection of samples as indicated in Table 2.

Table 2 - Samples Documented in SCRIBE as of 09/02/10

Media	Sample Type	Number collected
Air	Summa Canister	0
Air	Tedlar Bags	0
Air	Monitoring Samples	22
Surface Water	Grab	0
Sediment	Grab	0

Six SCAT teams are reported the following:

- Collection of SCAT data in Division E.

Submerged Oil Task Force reported the following activities:

- By Team A:
 - Collection of 9 sediment core samples for qualitative (visual) analysis.
 - Polling of 4 transects.
- By Team B:

- Collection of 4 sediment core samples for qualitative (visual) analysis.
 - Polling of 11 transects.
- Oversight of Enbridge sediment core collection activities in Division C by two START teams.
- Postponement of silt curtain sediment sampling due to inclement weather.

Oil recovery and Cleanup (East and West Branches)

The Overbank group reported the following observations:

- Absence of shoreline oiled vegetation between MP34 and the RR bridge downstream in Division E.
- Presence of excess cut logs in Division C in need of transport to a disposal facility.

Wildlife Environmental Damage Assessment Branch

USFWS reported the following actions:

- Provided technical assistance to EPA and Enbridge through the Science Team.
- Assessed implementation of floodplain cleanup recommendations.
- Assessed the removal of oil residuals in sediment.
- Evaluated shoreline currently implemented and potential shoreline cleaning, fertilizing and controlled burning techniques.
- Informed Situation Unit and Operations Section of missing wildlife deterrence fencing that may have been removed.
- Publicized FAQ's for goose hunters.
- Briefed MDNRE management on Wildlife Branch activities and future outlook.
- Prepared for fish survey scheduled for September 8 that will require boat traffic closure in Division C for several hours.
- Captured 40 turtles and released 39 turtles.

As of September 2, 2010 at 0700, the wildlife center reported 299 animals in captivity and 537 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:

- Original flights and report postponed due to inclement weather.
- Changes in Sheen:
 - Presence of sheen at Location B3, C0, C1, and pond upstream of Ceresco Dam.
 - Containment of sheen in oxbow area appeared effective.
 - Presence of intermittent sheen on Morrow Lake delta.
- Operational Observations:
 - Source area has been seeded.
 - Presence of vacuum truck at source area.

- Backfilling and scraping operations were underway in Division B.
- Construction of Frac Tank City platform structure.
- Scraping of soils at Locations B4.7, and B5.
- Deployment of boom appeared effective in containing sheen in all areas.
- Deployment of absorbent pads downstream of Location B5.
- Heavy boat and manpower activity continues in Division C.
- Continuation of cleanup activities in Locations C0 and C1.
- Continuation of cleanup and booming operations around Ceresco Dam.
- Construction of Decon/roll off staging area at C0.5.
- Cleanup of oxbow area at Location D21.50.
- Aerators at Locations E1 and E3 were not operating.

EPA observed the following during one over flight:

- Changes in sheen:
 - Significant sheen was noted along the shorelines of the Talmadge Creek through Locations A5, A6, and Division B.
 - Heavy sheen noted along the shorelines on both sides of Talmadge Creek from Locations A5 to A6. Some sheen noted in Talmadge Creek stream as well.
 - Visible sheen was observed in the pool north of the creek and in the Talmadge Creek at Location A2.7.
 - Observed significant sheen in spots along shorelines of Talmadge Creek through Division B.
 - Observed sheen on Talmadge Creek in Division B east of Interstate 69.
 - Observed intermittent visible sheen in Division C at MP14.25 just east of Interstate 194.
 - Observed heavy sheen in the oxbow area at MP21.5 (D4.25) just west of Custer Road. Sheen was seen coming off the support piers for the bridge at Custer Drive. Absorbent boom and pads had been placed through the oxbow.
 - Observed intermittent sheen on the Kalamazoo River at MP33.0 in Division E, and intermittent sheen (more than in past days) in the delta area of Morrow Lake.
- Operational Observations:
 - The area of liquid and absorbent pads on the southwest side of the former repair trench is still present in Division A.
 - Swamp mat road installed in Division A yesterday south of the pipeline release point was removed.
 - The ground through all of Division A to Talmadge Creek had been covered by hay / straw.
 - A vacuum truck was seen operating at Location A5.
 - Observed decon, soil staging areas, and Frac Tank City. Active decontamination of several frac tanks was observed.
 - Observed the stream liner (bladder) in place at Location A2. Water discharged to the culvert downstream from B2.
 - Observed the scraping area on Talmadge Creek in Division B (B2.7).
 - Observed confluence of Talmadge Creek with Kalamazoo River (B5). Booming operations appeared similar to yesterday, but a significant amount of absorbent pads were covering the confluence point.

- Observed heavy cleanup activity at the second of the twin islands upstream of Ceresco Dam. No sheen was observed on the downstream side of the twin islands.
- Conditions at the peninsula upstream from Ceresco Dam and at the dam were similar to yesterday. Some sheen was absorbed along the shorelines, but no sheen was seen going over the dam.
- Observed intermittent visible sheen in Division C at MP14.25 just east of Interstate 194. Observed containment booms located just downstream from sheen identified at MP14.25.

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 (09/02/10 1900)

Number of Locations	36
Boom Deployed (feet)	112,511

Note: Since the transition of EPA's contractor's to Enbridge at 1900 hrs on 08/12/10, all booms are now controlled by Enbridge.

Soil and Debris Waste Tracking

Table 4 - Soil and Debris Waste Tracking (09/02/10)

Waste Stream	Quantity Shipped (yd3)	Cumulative Quantity Shipped (yd3)
Haz Soil ^a	0	15,344
Non Haz Soil ^b	2439	10480
Haz Debris ^c	0	12,075
Non Haz Debris ^c	174	461

* 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 (9/01/10 0700)

Location	Cumulative Total Collected (gallons)
Division A	4729190
Division B	3,241,475
Division C	783,350
Division D	117,825
Division E	51,750
Other Locations*	141,000
TOTAL	9,064,590

* Includes Frac, DECON, and Wildlife Center.

Table 6 - Oil water Separation (09/01/10 0000)

Oil-Water Separation at Tank 1605, Enbridge Facility in Griffith, IN Facility (gallons)	
Oil	750,000
Other	1,516,000
TOTAL	2,266,000

Table 7 – Liquid Shipped Off-site (09/01/10 0000)

Oil/Water leaving Site	Destination	Daily Quantity Shipped (Gallons)	Cumulative Quantity Shipped (Gallons)
Haz Water	Dynecol, Detroit, MI	19,510	1,975,960
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	0	332,700
Treated Non Haz Water	Plummer, Kentwood, MI	219,000	1,330,500
Oil/Water	Tank 1605, Enbridge Facility, Griffith, IN	29,000	2,266,000
Totals		267,510	8,008,060

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

Table 8 - Oil/Water Volume Summary (Gallons)

Oil/Water Collected ^a	9,064,590
Oil/Water Shipped Off-site ^b	8,008,060
OIL/WATER REMAINING ON-SITE	1,370,227

a. As of 09/02/10 0700

b. As of 09/01/10

2.2. Planning Section

The DMU began a new staffing plan and schedule. Effective on 08/29/10, the DMU will operate from 0700 to 2000. The DMU continued importing preliminary and validated data into SCRIBE. EPA GIS continued the map processing, as requested.

Situation Unit FOB observed the following:

- At Division B1.5 to B2
 - Removal of sediment on left descending bank by excavator. Sampling crews were also present for surface soil qualitative spray-sampling.
 - Presence of oily sheen on most pools in bank area, ranging from slight to heavy.
 - Removal of product by using rakes to tamp down sorbent pads on right descending bank.
 - Geolocation and marking of surface soil sampling by GPS-equipped sampling crew
 - Collection of grab samples on left descending bank for laboratory analysis.
- At Division B5
 - Referral of a resident to the Enbridge public affairs non-emergency number. Resident had briefly entered his evacuated home and was concerned that the unusual smell may have been due to chemical contaminants absorbed by furniture and carpeting.
 - Reconstruction of bank by excavators. No dump trucks were present.
 - Collection of oil and sheen by vacuum truck extraction at three boom locations.
 - Increased erosion of sediment due to steady rainfall and a missing section of silt fence.
 - Increased turbidity in Talmadge Creek.
 - Sediment plume in Kalamazoo River leading from Talmadge Creek.
 - Presence of sheen on the surface of Talmadge Creek upstream of the A Drive North Bridge.
 - Replacement of sorbent material at Talmadge Creek outlet.
 - Despite increased creek flow due to the rain, the extensive array of containment booms, sorbent booms, silt fence, and sorbent material placed on Talmadge Creek down gradient of the A Drive North Bridge remained intact. This array appeared effective for surface oil removal. Oil sheen was not visible on the surface of the Kalamazoo River immediately down gradient of the Talmadge Creek outlet.
- At Division C1 Ceresco Dam
 - Traffic access across Ceresco Dam was open in both directions.
 - Sheen coverage of water surface up gradient of the Ceresco Dam. Sheen was contained by booms up gradient of the dam along the left descending bank.

- Skimming of oil and sheen at collection points by vacuum trucks along left descending bank. Surface oil collection was being aided by leaf blower (right descending bank).
- Large snapping turtle was seen swimming down gradient of the bridge. A large fish was also seen in this area.
- Rising of small discrete packets of amorphous white liquid rising to the river surface down gradient of the bridge. Substance dispersed and dissolved when it reached the water surface.
- At Division E4 near MP 38, Wenke Park boat launch
 - Preparation by Enbridge contractors for grab sample collection. Samples were to be analyzed for VOCs, SVOCs, PCBs, gas range organics, diesel range organics, oil range organics, and metals.
 - Silt fence was not yet replaced; replacement silt fence remained at same location as yesterday.
 - Presence of slight amounts of sheen at the quiescent area outside the silt fence. Tarballs seen in this area yesterday when workers were wading in the area were no longer present.
- At Division E3.5
 - Ineffective deployment of oil snares spanning the Kalamazoo River down gradient of the 35th Street Bridge. Snares were brown and below the water surface.
 - Containment of slight amounts of sheen by containment booms near right descending bank.
 - Absence of sheen visible up gradient of the 35th Street Bridge.
- At Division D5 from Custer Drive bridge at oxbow lake
 - Diminished presence of work crew. Two air boats were located in the area. No worker crews were observed in the oxbow.
 - Flow of the Kalamazoo River had increased due to rainfall.
 - Containment of moderate to heavy sheen by absorbent booms located along right descending bank. Booms closed off the oxbow and caused the sheen to rotate within an eddy naturally formed by the river in this area.
 - Modification of containment and absorbent boom placement. Sorbent pads were not present.

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 activities:

- There was no Public Health Workgroup meeting today.
- CTEH is developing a refined protocol for water testing that would more clearly match the possible risks.

- A letter is being prepared by CCPHD to notify residents who had water well samples taken that further information concerning interpretation of their test results is available by contacting the local health department.
- EPA mobile lab demobilized.

2.3. Logistics Section

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

2.4. Safety Officer

Enbridge reported the following:

- Reiterated the need to ensure all employees are receiving and understanding the instructions given to them.
- Emphasized adhering to decontamination procedures for personnel, equipment, and tools is a critical component to managing the health and safety of all workers.
- Raised awareness of being aware of symptoms of heat stress. Focused on continuously monitoring signs and symptoms of heat injuries and planning ahead to prevent them.

EPA reported the following actions:

- Four workers in Division C were hospitalized for nausea and vomiting (no specific location given).
 - It is unclear how or if the workers were exposed to product.
 - No air sampling was performed.
 - No air monitors were on site.
 - The site was roped off and will be inspected tomorrow.
- Consulted with Enbridge to develop policy for water operations shut down due to weather.

2.5. Liaison Officer

The Liaison Officer reported the following actions:

- Provided status report to representatives from the City of Marshall and the City of Battle Creek.
- Completed ground verification related to information provided by the Michigan Office of the State Archeologist.
- Orientated and provided David Bidwell with background information.

2.6. Finance Section

The current NPFC issued ceiling is \$16 million. Approximately 86.2% of the ceiling has been spent through September 1, 2010, with a burn rate of \$222,108 per day. These cost summaries reflect only EPA-funded expenditures for the incident.

Table 9 - FPN E10527 - Enbridge Pipeline Oil Spill (9/01/10)

ERRS Contractors		Est. Expended	Est Burn Rate (Lastest Daily)
EQM (EPS50802)	T057	\$1,251,054	\$0
	T060	213,890	1,600
LATA (EPS50804)		1,451,396	0
ER LLC (EPS50905)		723,669	0
ERRS Contractors		\$3,640,0098	\$1,600
START Contractor			
WESTON (EPS50604)		4,400,302	85,352
Response Contractor Sub-Totals		8,040,311	86,952
EPA Funded Costs:			
Total EPA Costs		3,028,774	81,200
Pollution Removal Funding			
US FWS		272,760	2,500
Total Other Agencies		1,015,472	\$26,424
Sub-Totals		\$12,084,557	194,576
Indirect Cost (14.15%)		1,709,965	27,532
Total Est. Oil Spill Cost		\$13,794,552	\$222,108

2.7. Information Officer

The Public Information Office reported the following activities:

- Continued to work with Liason Officer to respond to requests for speakers for two local community events for late September.
- Arranged and monitored Michigan NPR interview with Deputy IC.
- Added link to NOAA’s webpage describing the natural resource damage assessment.

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

Media Inquiry Line (877-440-7157)

Calls received during reporting period: None

Enbridge reported the following call volume and community center visits:

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

Calls received during reporting period: 55

Community Center Visits: 24

Visits by Location Auring reporting period:

Battle Creek	19
Marshall	05

Enbridge reported that it received 2 inquiries from its www.response.enbridgeUS.com website bringing the total to 537 comments.

2.8. Response Actions to Date

Response Actions to date may be found in Situation Reports 1 through 38.

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
Cooperating and Assisting Agencies	Enbridge (Responsible Party)

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 Management	PHMSA
Marshall Area Firefighters Ambulance Authority	USCG
	U.S. Department of the Interior/USGS
	USFW

3.3. Congressional Presence

State Representative Jase Bolger
State Representative Kate Segal
State Representative Ken Kurtz
State Representative Phil Browne
State Representative Phyllis Browne
State Representative Bob Geuck
State Representative Tanya Schuitmaker
State Senator Mike Nofs
U.S. Congressman Mark Schauer
U.S. Senator Carl Levin
U.S. Senator Debbie Stabenow

4. Personnel On Site

Table 10. Personnel On Site 09/2/10

Agency/Entity	Numbers Reported
EPA	48
START	40
Calhoun County Public Health Dept. (CCPH)	1 ^a
Calhoun County (CC) Sheriff	7
City of Battle Creek	3
Kalamazoo Sheriff	2
MDNRE	8
Michigan State Police (MSP)	1
NOAA - National Weather Service	3
NOAA- NRDA	2
USCG	8
USDA	0 ^b
USFWS	9
USFWS Contractors	2
Enbridge	16
Enbridge Contractors	1,541
Total	1,602

^a Last reported 08/31/2010

^b Last reported 09/01/2010

5. Definition of Terms

ATSDR	Agency for Toxic Substances and Disease Registry
CCPH	Calhoun County Public Health
CIC	Community Involvement Coordinator
DMU	Data Management Unit
EMT	Emergency Medical Technician
ENVL	Environmental Unit Leader
EPA	Environmental Protection Agency
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
NRC	National Response Center
NOAA	National Oceanic and Atmospheric Administration
NPFC	National Pollution Fund Center
OSHA	Occupational Safety and Health Administration
PHMSA	Pipeline and Hazardous Materials Administration
PIO	Public Information Officer
PPE	Personal Protective Equipment
Ppbv	Parts Per Billion Volume
ppm	Parts Per Million
POTW	Publicly Owned Treatment Works
QA/QC	Quality Assurance/Quality Control
RP	Responsible Party
SCAT	Shoreline Contamination Assessment Team
SOTF	Submerged Oil Task Force
START	Superfund Technical Assessment and Response Team
T&D	Transfer and Disposal
UC	Unified Command
USDA	United States Department of Agriculture
USCG	United States Coast Guard
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
yd ³	Cubic Yards
VOCs	Volatile Organic Compounds

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://www.epa.gov/enbridgespill/data/datawater.html>.

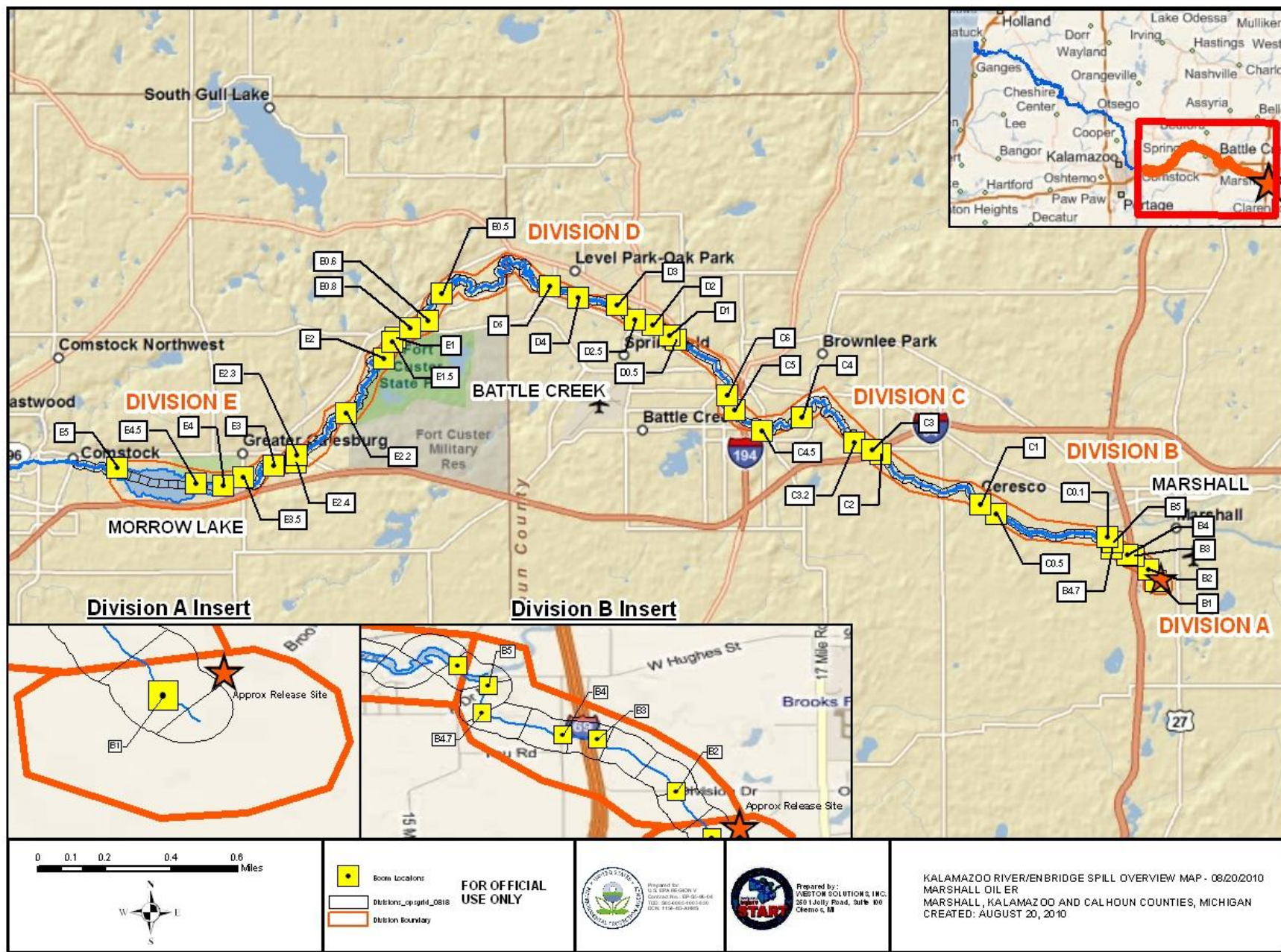
6.2. Reporting Schedule

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

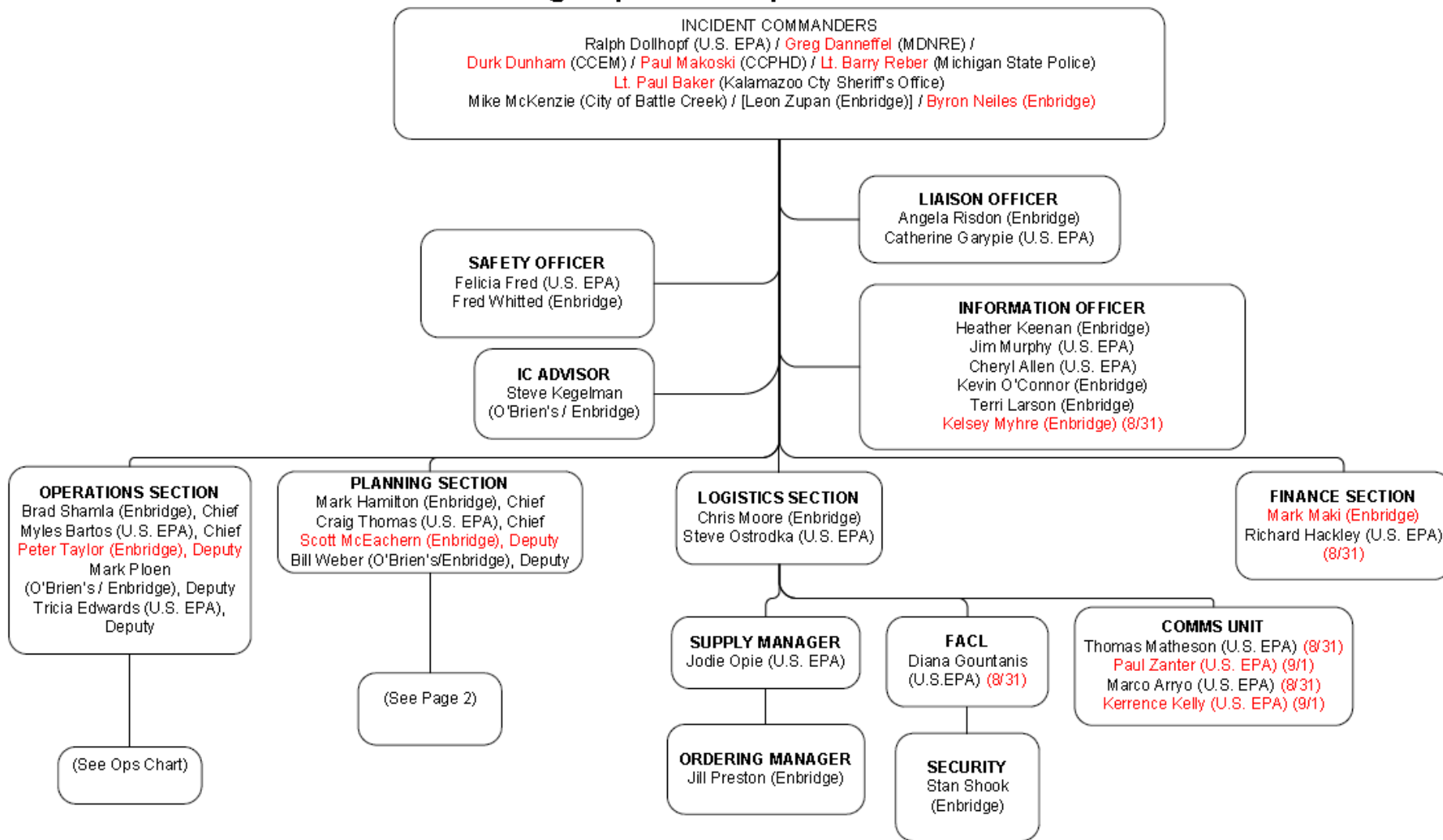


Figure 1 Unified Command

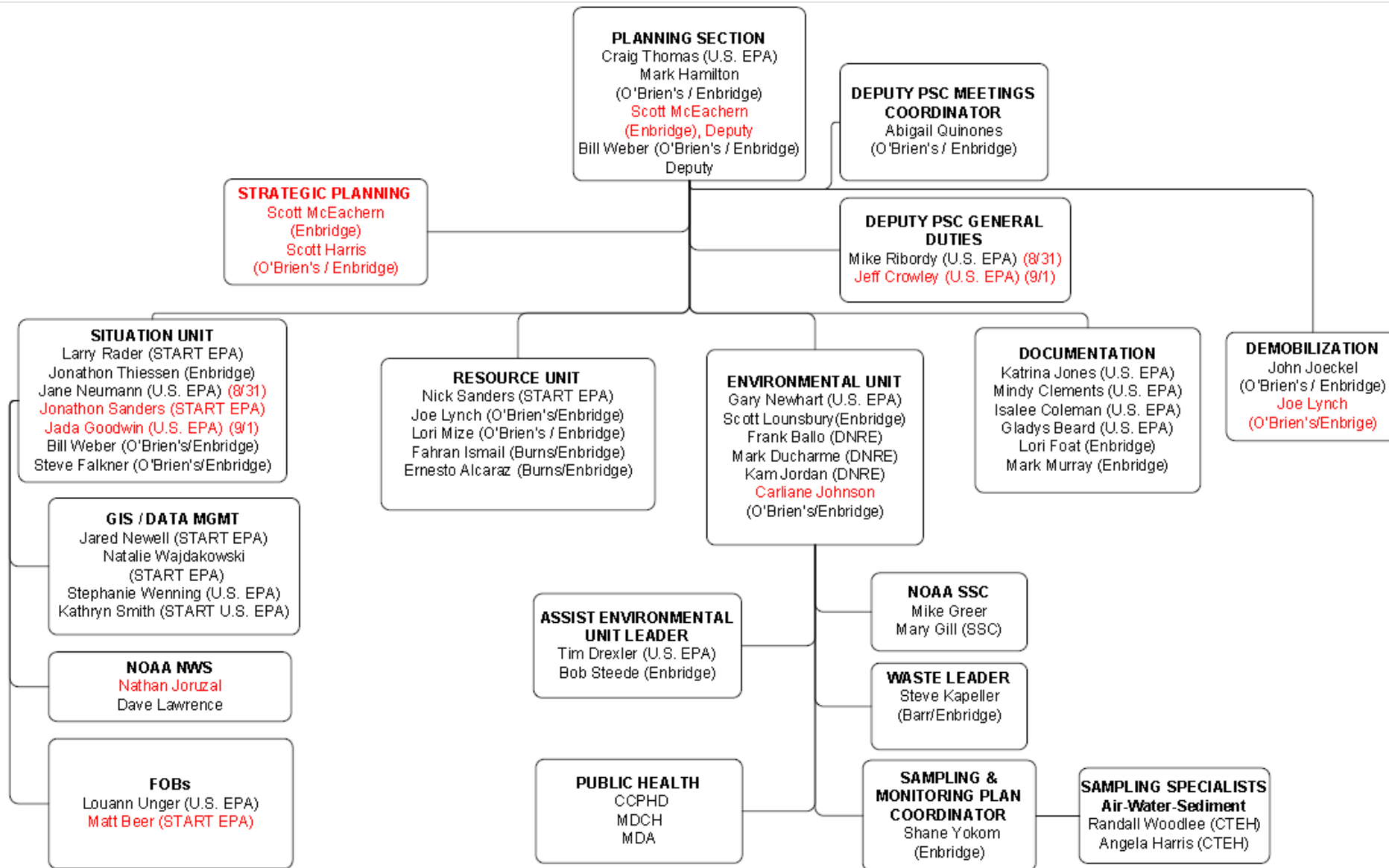


Figure 2 Planning

Operations

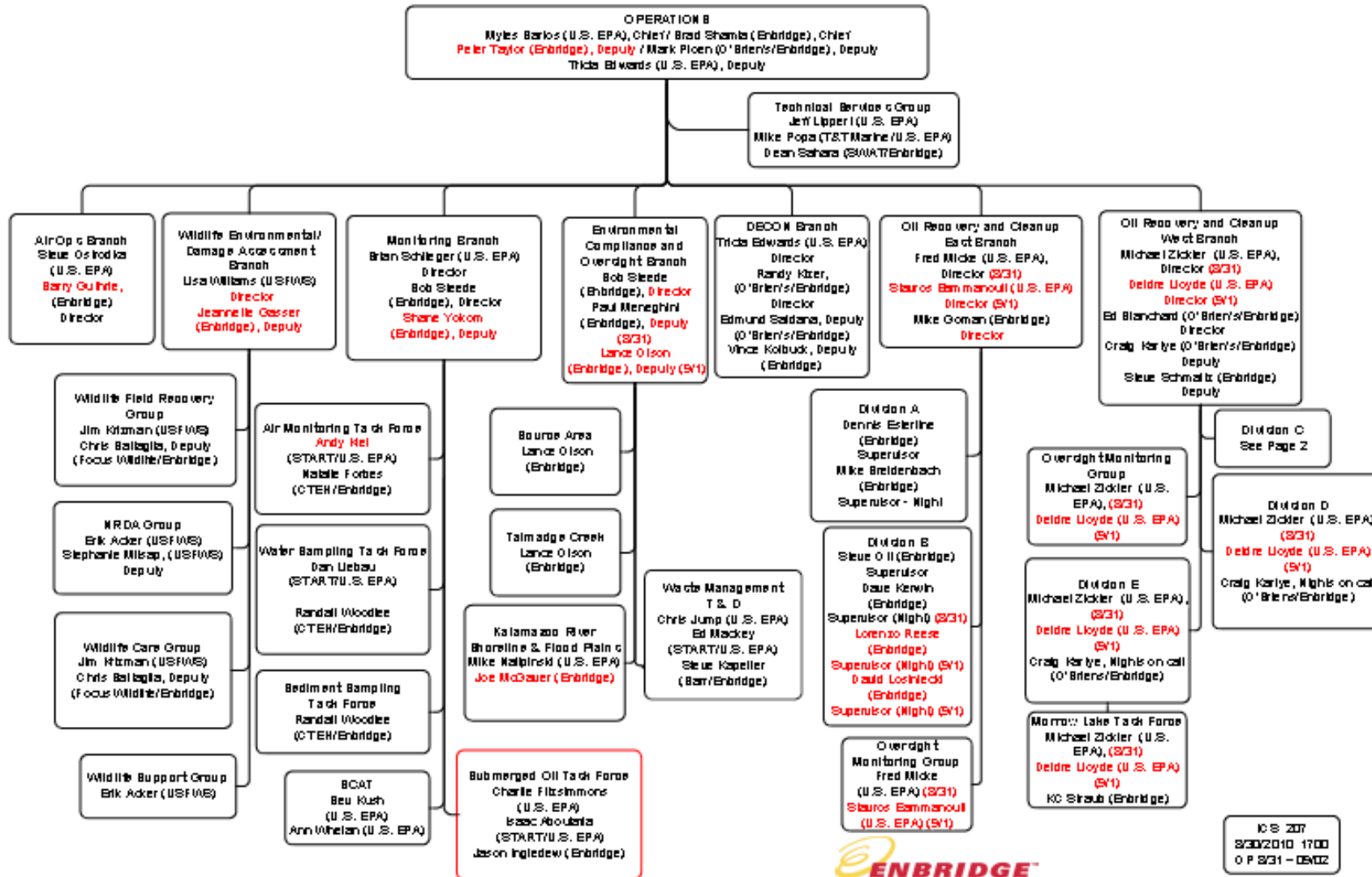


Figure 3 Operations

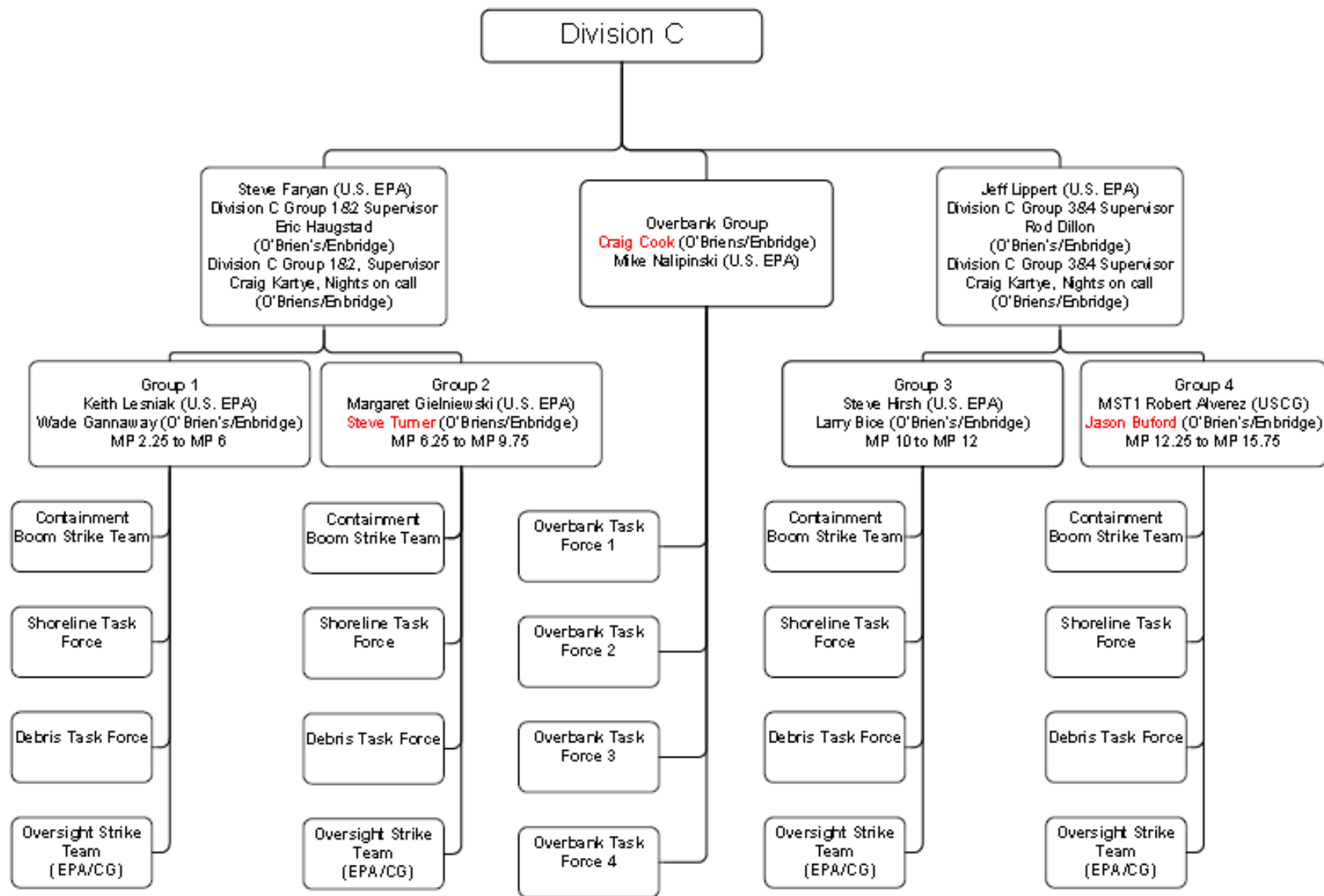


Figure 4 Division C