

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 #30
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
James Rutherford, Calhoun County Public Health Department
Durk Dunham, Calhoun County Emergency Management
F/LT Bonnie Kanicki-Wilson, Michigan State Police, Emergency Mgt.
Michael Masterson, MDNRE
Mike McKenzie, City of Battle Creek
Leon Zupan, Enbridge
Susan Hedman, U.S. EPA Regional Administrator
Rebecca Humphries, MDNRE
Jim Sygo, MDNRE
Connie Gibson, Calhoun County Sheriffs Office
Cheryl Vosburg, City of Marshall
David Chung, U.S. EPA
Jason El-Zein, U.S. EPA
Duty Officer, NRC
Michael Chezik, U.S. Department of Interior
Linda Nachowicz, U.S. EPA
OSLTF USCG, USCG
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Brian Pierzina, PHMSA Central Region
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Ronna Beckmann, U.S. EPA
Scott Corbin, Allegan County EMA Director

From: Ralph Dollhopf, U.S. EPA Incident Commander
Stephen Wolfe, U.S. EPA On-Scene Coordinator
Jeff Kimble, U.S. EPA Deputy Incident Commander
Mark Durno, U.S. EPA Deputy Incident Commander

Date: 08/24/10

Reporting Period: 1900 hours 08/23/10 to 1900 hours 08/24/10

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 Objectives and Command Emphasis

Incident Objectives

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

Command Emphasis

- 1) Establish a separate Task Force to re-evaluate and enhance subsurface oil monitoring in the Kalamazoo River and at Morrow Lake, including a bottom survey and development of capture and management options.
- 2) Review SCAT recommendations with Science Team, with emphasis on Division C, to coordinate near-term cleanup efforts.
- 3) Concentrate resources for river, shore, and floodplain cleanup and sheen management in Division C, with emphasis on increased overall work efficiencies.
- 4) SCAT update on entire river system.
- 5) Implement operations metrics display in all situations and operations updates to UC.
- 6) Enbridge to maintain primary responsibility for planning cycle and IAP development:
 - Monitor effectiveness of IAP briefing and use by Operations; and
 - Continue transition of IAP development from EPA to Enbridge.

1.3 Strategic Considerations

- 1) Implement characterization of submerged oil contamination in the Kalamazoo River System above Morrow Lake Dam.
- 2) Complete characterization of pooled oil in flood plain and upland areas in Division C and Division D.

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 August 23 to 1900 hours on August 24, 2010:

Division A

Division A has extended into the upstream portion of Division B (to the upstream side of location B2) since the operations required there are more similar to those in Division A than Division B.

Enbridge

Enbridge reported that it continued skimming oil as well as excavating, backfilling, and dewatering the oil containment within Division A. Enbridge continued installation of silt fence along Talmadge Creek. Enbridge reported installing silt booming across Talmadge Creek at strategic locations with subsurface oil.

EPA

EPA observed Enbridge continuing backfilling operations. EPA observed Enbridge's continuing dewatering and excavation efforts. Excavation of hotspots continues. EPA observed sheet piling being removed around the pipe.

Persistent odors were observed in portions of Division A. Air samples were collected from several locations. Benzene was not reported in any of the samples submitted for analysis.

Division B**Enbridge**

Enbridge reported that it continued oil collection at boom containment sites and replaced contaminated boom as required. Crews worked on chipping and scraping of oiled bank vegetation and soil along Talmadge Creek. Enbridge reported assessing and installation of a new flume design at Location B4.7.

Enbridge reported finding a potential archeological site located next to Talmadge Creek. An Archeological consultant was contacted to determine the significance. No scraping or removal of vegetation or soil will be allowed until approval is obtained.

EPA

EPA and START continued collection of turbidity data during bank excavation along Talmadge Creek. EPA observed ongoing oil collection operations. Silt fence placement was to approximately 20 feet downstream of Location B4.7. Bank excavation west of I-69 progressed to Location B5.0.

Odor persisted in portions of Division B. Air samples were collected from several locations. Benzene was not reported in any of the samples submitted for analysis.

Submerged Oil Task Force (Division C, D, and E)

EPA reported techniques being evaluated to determine if submerged oil is present at various locations in Division D and Division E.

Division C**Enbridge**

Enbridge reported EPA shutting down operation at Location C0.3 due to wetland disturbance. Enbridge reported that crews and equipment are being utilized effectively. Enbridge reported one boat needing replacement which has been ordered.

EPA

EPA observed Enbridge performing boom maintenance, vegetation removal, snare boom and pad replacement and shoreline and vegetation washing. EPA observed sheen at MP6.75, MP 13.25, and MP 14.75. EPA observed tar balls at MP 6.75. EPA noted that Enbridge crews placed hard boom around all islands in Group 1, (MP 2.25 to MP 6). Plywood planks will be used where necessary to minimize foot impact. EPA reported that small strike teams will work to absorb pocketed oil on island where found. EPA requested Enbridge to place boom between MP3.2 to Location C6. The boom was in place by 12:00. EPA updated maps of cleared and un-cleared areas in Group 2 (MP 6.25 to MP 9.75). EPA requested additional cleaning from MP 6.75 to MP 6.5 due to sheen.

EPA called wildlife hotline and reported six oiled Mallard ducks. EPA observed a CMC air boat running without a crew on the boat and contacted a supervisor. EPA observed Enbridge conducting sediment testing. EPA observed flexi float testing at Location C0.5.

Division D**Enbridge**

Enbridge reported that boom maintenance, vegetation removal, and skimming operations continued.

EPA

EPA observed boom maintenance activities and the collection of oiled debris and vegetation. EPA START observed visible sheen on north bank at Location D5 (Custer Street Bridge) which is getting past the barriers. EPA discussed SCAT surveys and Site restoration with Enbridge operations. EPA observed the installation of river mile post markers throughout Division D. EPA observed the construction of 10 new gabion boxes near Location D2.5. EPA reported that MDNR raised the issue of permits for the gabion boxes.

Division E**Enbridge**

Enbridge reported vegetation and debris removal today. Enbridge reported Location E2 being used exclusively for boat launching. Enbridge reported deploying more silt fence in Location E4 and investigating Morrow Lake for sheen and tar balls.

EPA

EPA observed oil collection operations and gabion box maintenance operations conducted in Division E.

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.

Environmental Compliance and Oversight Branch

Enbridge reported they provided oversight for cleanup activities within Divisions A and B.

EPA observed sampling of contaminated soil, air monitoring, surface water, and debris.

DECON Branch

Enbridge

Enbridge submitted a revised decontamination plan.

EPA

EPA reviewed the revised decontamination plan and provided additional comments. EPA is expecting a newly revised plan on 8/25/10. EPA reported Enbridge submitted a site plan to the land owner and contractor for construction of the decontamination pad at Location C0.5

Monitoring Branch

Enbridge

The air sampling program continues to collect 24-hour grab samples, summa mini-can samples, grab samples, and passive dosimeter samples in addition to the real-time air monitoring samples. Enbridge reported that its air sampling program continued to focus around Baker Estates mobile home park, the Ceresco Dam, and the leak site, with a new focused monitoring program at Morrow Lake.

Enbridge reported collecting the following samples:

Sample Type	Number collected*
Surface Water	16
Private Well Samples	3
Sediment Samples	16
Other	0
Soil Samples	0
Vertical Water Column Samples	8

*Reflects samples collected 08/24/10

EPA

EPA conducted continued air monitoring in all divisions. Tedlar bag air samples were collected in the 11 grid areas of Division B exposure units and in the five focus areas (Daycare Center, Baker Estates, Frac Tank Storage Area, Squaw Creek and Ceresco Dam). EPA shadowed one Enbridge air monitoring crew in Divisions B and C. EPA conducted sampling at four locations and collected 2 split samples from Division C and downstream of Morrow Lake. EPA discontinued oversight of potable water sampling. All Tedlar bag samples submitted for analysis were below 6 ppbv for benzene.

EPA collected the following monitoring samples:

Media	Sample Type	Number collected*
Air	Summa Canister	0
Air	Tedlar Bags	18
Air	Monitoring Samples	496
Surface Water	Grab	0
Sediment	Grab	0

*Reflects samples documented in SCRIBE 08/24/10 19:00

During this operational period, SCAT teams received training on Tablet Notebook documentation procedures.

Wildlife Damage Assessment Branch

USFWS worked with the Wildlife Branch to address oil-impacted wildlife. The wildlife center continued to receive oiled animals collected along the Kalamazoo River. There are 252 animals in live care, the majority of which are Canada Geese and turtles. A total of 246 animals have been rehabilitated and released. USFWS crews reported heavy, rainbow swirling sheen and tar flakes when stepping out of boats. MDNRE is preparing for sampling of mussels and collocated sediments.

Air Ops Branch

Enbridge

Enbridge reported conducting 7 over-flights. No visible sheen was reported on Morrow Lake; however, broken sheen was observed in the wetland area at the delta of the lake. Enbridge also amended the number of flights reported for the previous day to reflect 10 rather than 8 over-flights for the 19:00 hours 8/22/10 to 19:00 hours 8/23/10 reporting period.

EPA

EPA START accompanied Enbridge on one over-flight for observation in preparation of the daily situational briefing. Starting August 23, 2010, both the EPA START SitRep contractor and Enbridge will use the Enbridge funded helicopter for their daily over-flights. The EPA helicopter will be available, as needed, for IC and other federal needs. Observations are reported at the daily situational briefings.

2.1.2 Progress Metrics

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

Waste Tracking

Waste Stream	Quantity Shipped (8/23/2010)	Cumulative Quantity Shipped*	Quantity On-Site Awaiting Disposal*
Soil ¹	827 yd ³	13,774 yd ³	15,725 yd ³
Debris ²	700 yd ³	9,725 yd ³	NA
Treated Non Haz Water ³	128,400 gallons	3,027,400 gallons	NA
Haz Water ⁴	70,324 gallons		
Oily Water (Griffith, IN)	7,841,064 gallons**		

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

** Data previously reported was barrels incorrectly labeled as gallons. Data will be reported in gallons.

NA – Not provided by Enbridge

1. Benzene-impacted soil is being sent to EnviroSAFE.
2. Roll-off boxes containing waste sorbents, boom, pads, plastic, PPE, and oiled vegetation and biomass are being sent to Michigan Disposal.
3. Treated Water Non-hazardous is being sent to Liquid Industrial Waste Services, Inc, to Dynecol, and discharged through A-1 NPDES discharge point, and was previously sent to the Battle Creek POTW.
4. Untreated water (hazardous waste) is being sent to Dynecol.

Oily 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.

Oily Water Collected by Location	
Location	Cumulative Total Collected (gallons) (8/24/10)
Division A	4,159,581
Division B	2,751,875
Division C	740,700
Division D	117,825
Division E	43,750
Undetermined	109,200
TOTAL	7,922,931

Oily Water Shipped Off-Site (8/23/10)		
Oily Water Leaving Site	Destination	Cumulative Quantity Shipped (gallons)
Haz Water	Dynecol, Detroit, MI	1,702,758
Treated Non Haz Water	Dynecol, Detroit, MI	115,700
Treated Non Haz Water	Battle Creek POTW	1,968,700
Treated Non Haz Water	Liquid Industrial Waste Services, Holland, MI	332,700
Oily Water	RP facility, Griffith IN	2,078,000
TOTAL		6,197,858

Oily Water Volume Summary (gallons)	
Oily Water Collected	7,922,931
Oily Water Shipped Off-site	6,197,858
OILY WATER REMAINING ON-SITE	1,725,073

Oil-Water Separation at Griffith IN Facility (gallons) (8/23/10)	
Oil	642,000
Water	1,436,000
TOTAL	2,078,000

Boom Report

Number of Locations	32
Boom Deployed (feet)	163,544*

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

*as of 8/23/10 07:00

2.2 Planning Section

ENVL participated in Submerged Oil Task Force meeting and met with the PIO to discuss data transfer transparency issues.

2.2.1 Anticipated Activities for Next Reporting Period

In the next operational period, Operations anticipates performing the same or similar activities as in the previous operational period, with a focus on activities in Division C.

2.2.2 Issues

There was no Public Health Unit meeting. Public Health reviewed August 24 air results. Tedlar bags submitted for analysis showed no detections for benzene.

2.3 Logistics Section

EPA Logistics continued support of the move to the new ICP location and closed out of Walters Elementary School.

2.4 Finance Section

The current NPFC issued ceiling is \$13 million. Approximately 91.6% of the ceiling has been spent through August 23, 2010, with a burn rate of \$314,296 per day. These cost summaries reflect only EPA-funded expenditures for the incident.

FPN E10527 - Enbridge Pipeline Oil Spill 8/23/2010

ERRS Contractors		Est. Expended	Est Burn Rate (Lastest Daily)
EQM (EPS50802)	T057	\$1,258,770	\$0
	T060	106,938	14,000
LATA (EPS50804)		1,451,396	0
ER LLC (EPS50905)		723,669	0
ERRS Contractors		\$3,540,773	\$14,000
<u>START Contractor</u>			
WESTON (EPS50604)		3,367,572	127,869
Response Contractor Sub-Totals		\$6,908,345	\$141,869
<u>EPA Funded Costs:</u>			
Total EPA Costs		2,357,449	95,450
Pollution Removal Funding			
<u>Agreements:</u>			
US			
FWS		271,320	8,560
Total Other Agencies		\$1,166,032	\$38,017
Sub-Totals		\$10,431,826	\$275,336
Indirect Cost (14.15%)		1,476,103	38,960
Total Est. Oil Spill Cost		\$11,907,930	\$314,296

2.5 Safety Officer

Four minor first aid injuries were reported. The Enbridge Safety Officer reported one first aid injury. No other incidents were reported.

2.6 Liaison Officer

The LNO communicated with the Calhoun county commissioner to dispel rumors regarding the Marshall water supply being impacted by the spill as well as additional leaks to line B. The Calhoun County Road commission contacted the LNO about scheduling a flyover and the LNO informed the commission that Enbridge is now the entity conducting flyovers. A citizen contacted the LNO concerning numerous issues with work in Staging Area 3. The LNO has left messages with Enbridge to discuss resolution of the issues.

2.7 Information Officer

PIO/Community Involvement staff began development of a near-term and future PIO/JIC staffing and action plan to be presented to the Unified Command for review. PIO arranged photo opportunities for photographers from Michigan Department of Natural Resources and Environment and EPA Region 5.

JIC staff operated the media inquiry line and performed media monitoring.

Media Inquiry Line (888-363-8632)

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: 160

Community Center Visits: 80

Visits by location during reporting period:

Battle Creek 62

Marshall 18

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

2.8 Response Actions to Date

Response Actions to date may be found in Situation Reports 1 through 29.

3. Participating Entities

3.1 Unified Command

U.S. EPA

MDNRE

Michigan State Police Emergency Management Division

City of Battle Creek

Calhoun County Public Health Department

Calhoun County Emergency Management

Kalamazoo County Sheriff

Enbridge (Responsible Party)

Cooperating and Assisting Agencies

Cooperating Agencies

51st Civil Support Team Michigan National Guard

ATSDR

Allegan County Emergency Management

American Red Cross

Calhoun Conservation District

Calhoun County Commission

City of Kalamazoo

City of Marshall

Emmett Township

Federal Energy Regulatory Commission

Fredonia Township

Kalamazoo County Office of Emergency Management

Kalamazoo River Watershed Council

Marshall Area Firefighters Ambulance Authority

Marshall Police Department

Marshall Township Government and Fire Department

Michigan Department of Agriculture

MDCH

MIOSHA

National Transportation Safety Board

Natural Resource Group

NOAA

Oakland County HAZMAT

OSHA

PHMSA

USCG

U.S. Department of the Interior/USGS

USFWS

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

4.0 Personnel On Site

Agency/Entity	Numbers Reported
EPA	57
START	72
Calhoun County Public Health Dept. (CCPH)	3
Calhoun County (CC) Sheriff	7
City of Battle Creek	3
Kalamazoo Sheriff	2
MDA	0
MDCH	0
MDNRE	18
Michigan State Police (MSP)	5
NOAA - National Weather Service	2
NOAA- NRDA	2
USCG	10
USDA	2
USFWS	13
USFWS Contractors	2
Enbridge	18
Enbridge Contractors	1451
Total	1667

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
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
ppm	Parts Per Million
POTW	Publicly Owned Treatment Works
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
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

6.0 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>.

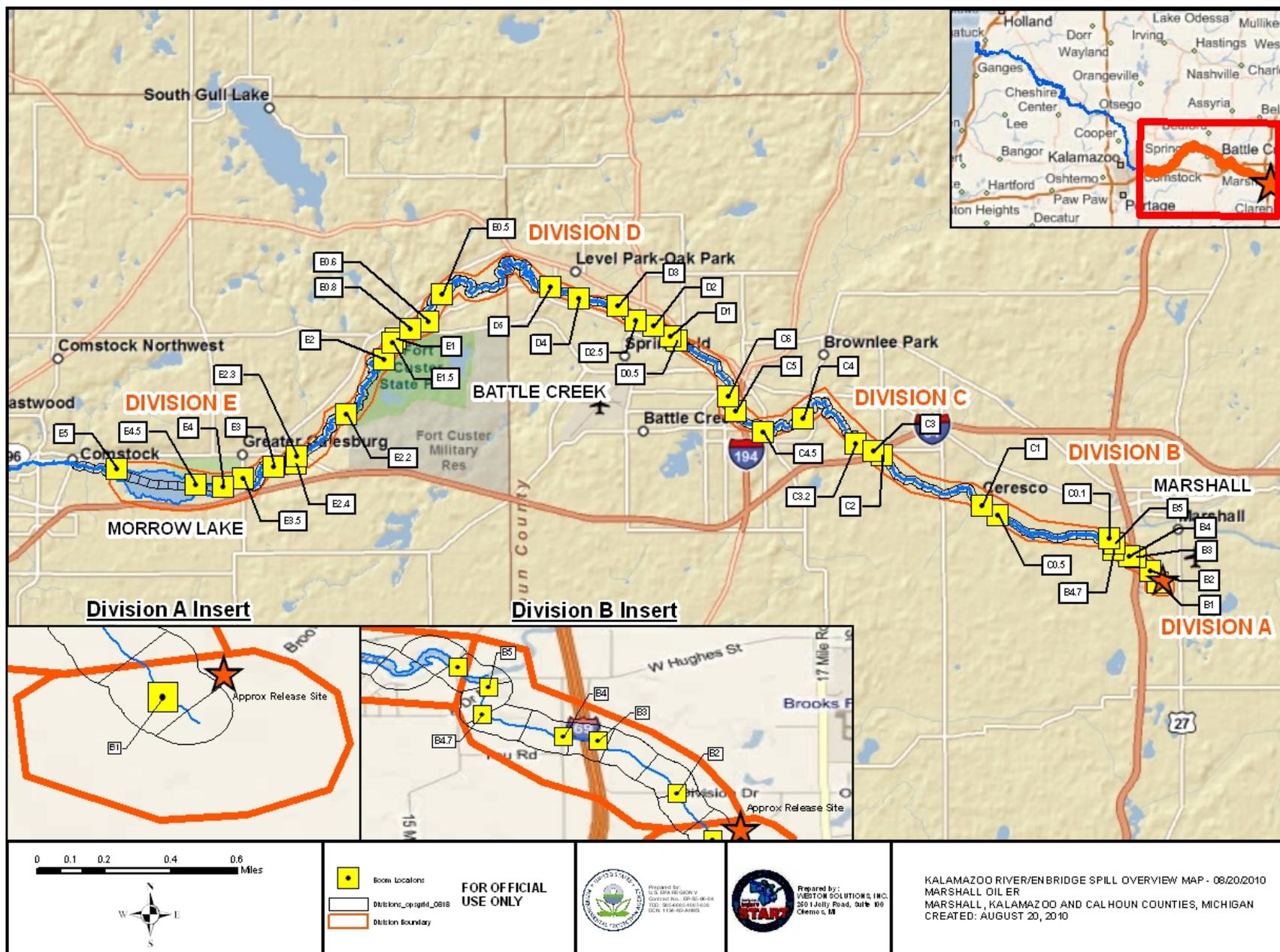
6.2 Reporting Schedule

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

7.0 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

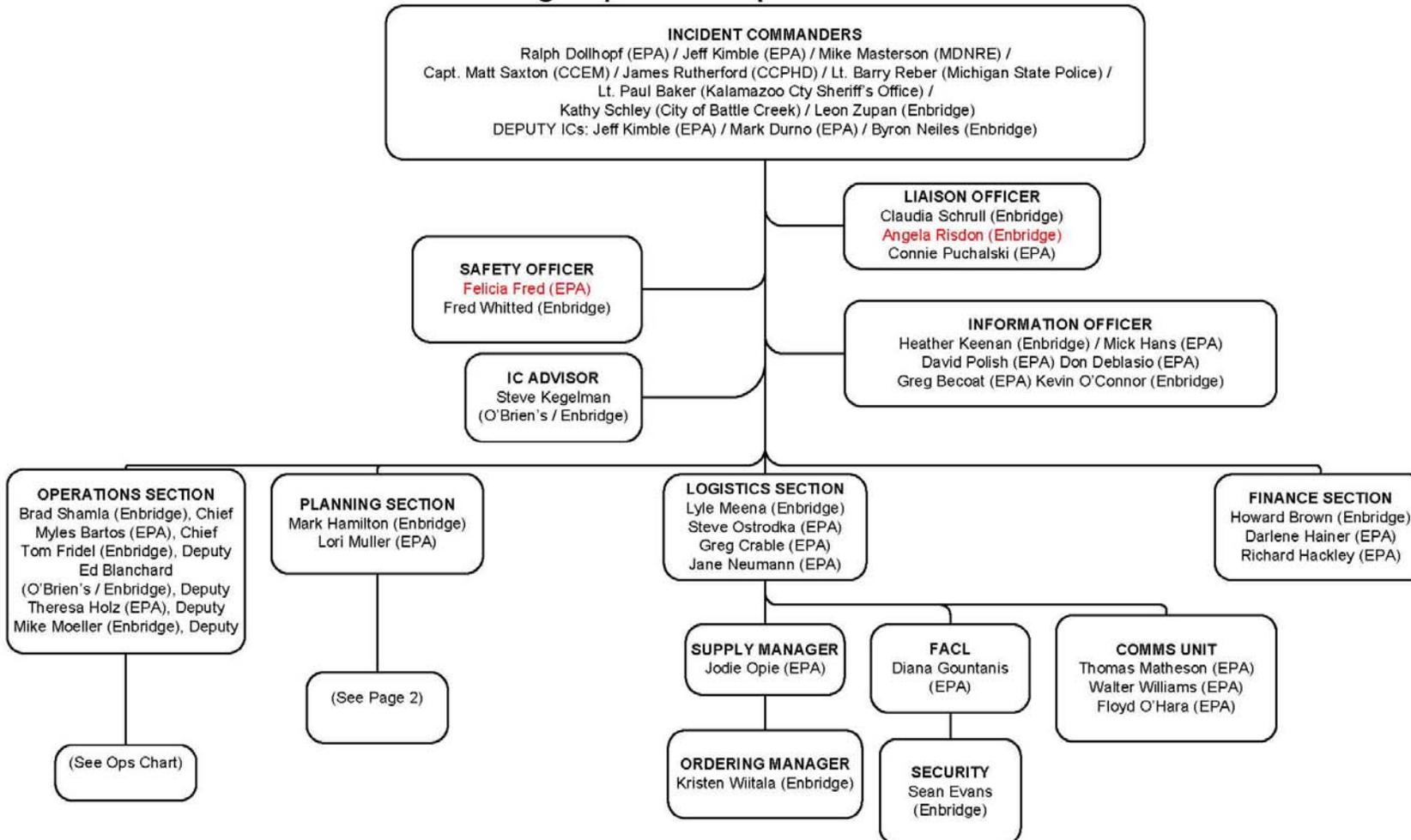


Figure 1 Unified Command



ICS 207
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OP 8/25 - 8/26

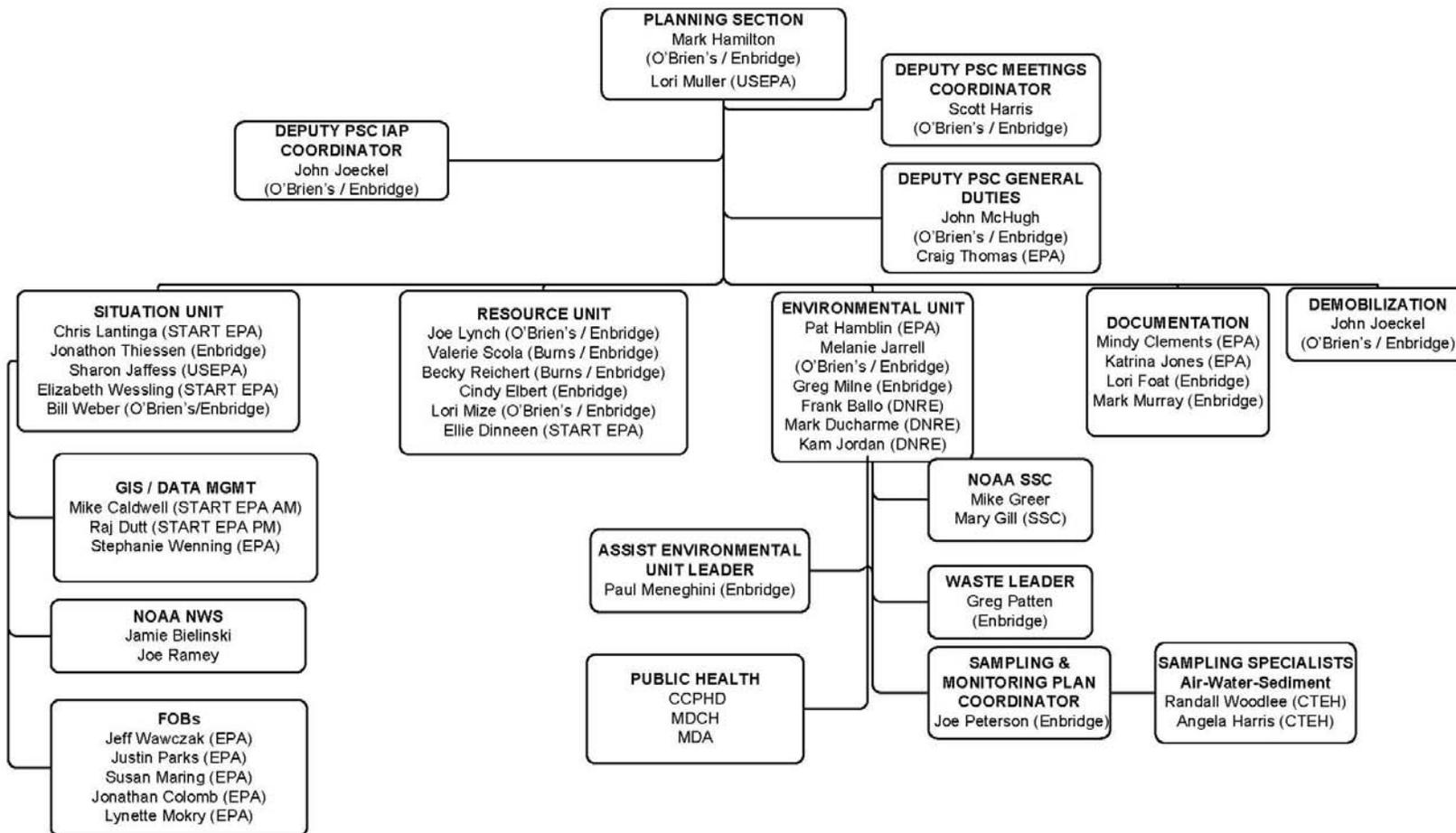


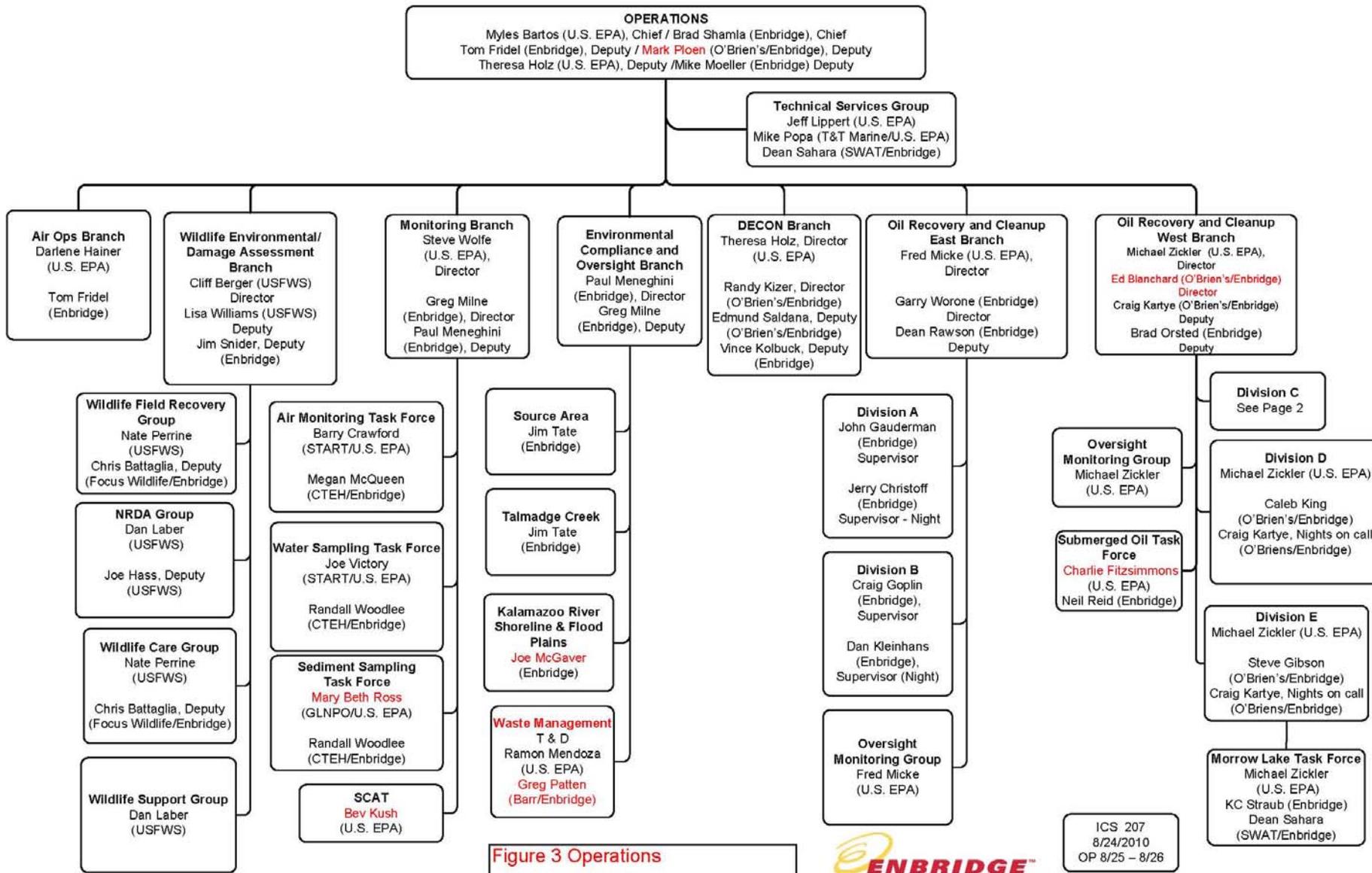
Figure 2 Planning Section



ICS 207
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Operations



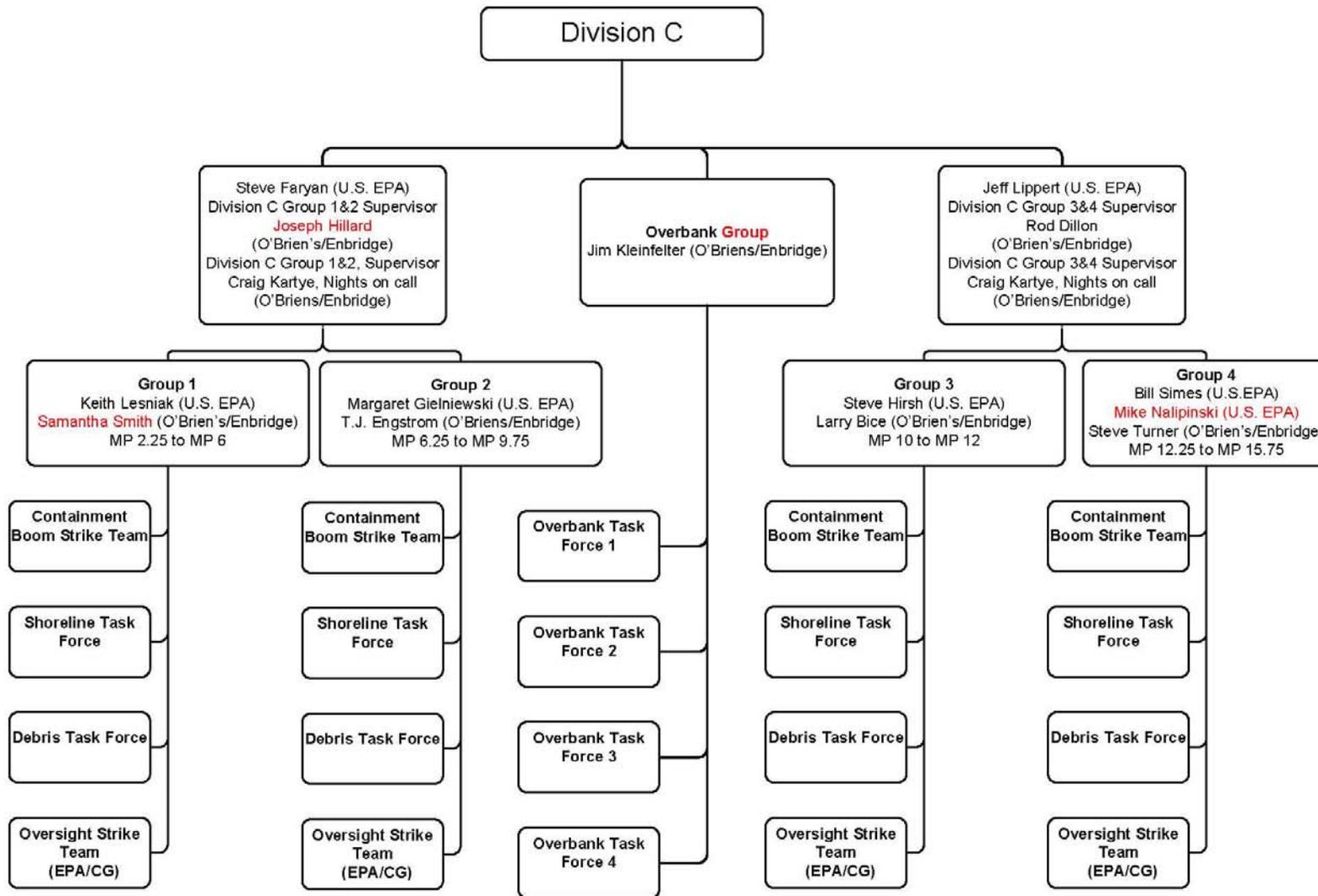


Figure 4 Division C



ICS 207
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