

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 #15  
Kalamazoo River/Enbridge Spill  
Z5JS  
Marshall, MI  
Latitude: 42.2395273 Longitude: -84.9662018

**To:** Richard Fuller, Kalamazoo County Sheriff's Office  
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Durk Dunham, Calhoun County Emergency Management  
F/LT Bonnie Kanicki Wilson, Michigan State Police, Emergency Mgt.  
Gregory Danneffel, Michigan Department of Natural Resources

Mike McKenzie, City of Battle Creek  
Leon Zupan, Enbridge  
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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  
Jill Slaght, 7th District of Michigan  
Ken Brock, 7th District of Michigan  
Bruce Vanotteren, MDNRE  
Brian Pierzina, PHMSA Central Region  
Thomas Hemminger, USCG Grand Haven  
Ronna Beckmann, U.S. EPA  
CAPT Stephen Torpey, USCG  
Scott Corbin, Allegan County EMA Director

**From:** Ralph Dollhopf, U.S. EPA Incident Commander  
Stephen Wolfe, U.S. EPA On-Scene Coordinator  
Jeffrey Kimble, U.S. EPA Deputy Incident Commander  
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**Date:** 08/09/10

**Reporting Period:** 1900 hours 08/08/10 to 1900 hours 08/09/10

## **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 Assessment

**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 the Kalamazoo River running from Marshall, Michigan to 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 have fallen and stranded oil in some backwaters and wetlands. Talmadge Creek has been boomed off at the confluence to the Kalamazoo River. Containment and absorbent boom has been deployed along the Kalamazoo River and Talmadge Creek. Containment and absorbent boom have also been deployed in Morrow Lake.

### **1.1.5 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

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 is actively addressing all the deliverables of the Order including but not limited to: drafting an overall site work plan; health and safety plan; and sampling and analysis 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) Identify threatened species & continue to recover & rehabilitate injured wildlife.
- 8) Set up an effective claims process and information center in Marshall.
- 9) Maintain Joint Information Center function.
- 10) Establish a process to collect, coordinate, manage and communicate environmental and public health data.
- 11) Obtain input from DNRE, NOAA, USGS, Calhoun County Health Dept. and local agencies to help establish protocols to guide cleanup of environmentally impacted areas.

### **Command Emphasis**

- 1) Continue efforts to remove oil from pipeline release zone.
- 2) Enhance efforts for shore cleanup and sheen management including Ceresco Dam.
- 3) Maintain continuous comprehensive on-water/analytical sheen monitoring, investigation, reporting and recovery at Morrow Lake.
- 4) Monitor hotline and community outreach effectiveness.
- 5) Increase effectiveness of IAP briefing and use by Operations personnel.
- 6) Continue transition of EPA logistics/procurement functions to Enbridge.
- 7) Maintain Documentation Unit procedures.
- 8) Continue transition of IAP 204 development from EPA to Enbridge.
- 9) Review cleanup procedures sensitivities with MDNRE, with emphasis on Talmadge Creek, to coordinate near term cleanup efforts.

### **1.3 Strategic Considerations**

- 1) The Science Team and SCAT will work with Operations to ensure a good progression of clean up recommendations for operational planning of bank and floodplain cleanup activities in Division B and C.
- 2) Safety Officers will intensify oversight of Health and Safety practices in accordance with the UC's desire to increase operations in Division C.

## **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 and has been geographically divided into five Divisions, A to E, with Division A starting at the pipeline break and ending at Morrow Lake in Division E. The Divisions are split into two Branches, with the East Branch covering Divisions A and B and The West Branch covering Divisions C, D and E. The Divisions are further broken down into

collection points that are denoted by division letter then collection point number (i.e. C3 refers to collection point three within Division C).

Rain and thunder/lightning caused safety stand downs and delays to all Operations today.

### **River Branch East- Divisions A**

#### **EPA**

EPA ERT and START conducted air monitoring for VOCs, LEL and benzene all results were within acceptable ranges. EPA ERT and START conducted turbidity monitoring in Talmadge Creek. EPA observed continued work around the pipeline including: dewatering operations, excavation of contaminated soil and chipping of oiled trees.

#### **Enbridge**

Enbridge conducted oil collection at the release site with vacuum tankers and removed contaminated soil to containment and disposal site. Enbridge continued implementation of the cut-out and repair plan and completed pipe investigation 50 feet upstream and downstream of the cut points. Cleanup activities were conducted starting at Talmadge Creek in Division A and working downstream, scraping oily vegetation and surface soils with an excavator in accordance with SCAT recommendations. Enbridge began using a wood chipper to chip oiled trees.

### **River Branch East- Divisions B**

#### **EPA**

EPA conducted oversight on excavation of the banks of Talmadge Creek and transport of contaminated soil to the staging area. Greater amounts of oil were observed in the water downstream during bank excavation. EPA also observed skimming activities and made recommendations to improve operations.

USCG conducted observations at all locations in Division B. Excavation continued along the banks of Talmadge Creek. Sorbent boom was deployed in the river near the excavated areas.

#### **Enbridge**

Enbridge continued oil collection at boom containment sites and replaced contaminated boom as required. Crews worked on scraping oiled bank vegetation and soil on Talmadge Creek in accordance with the SCAT recommendations. Enbridge met with landowners to develop a process to allow work to continue on property downstream of 15 ½ Mile Road.

The Shoreline Branch operations collected 7,510 gallons of oily water, 35 bags of debris, and replaced sorbent boom.

**River Branch West- Division C****EPA**

EPA conducted oversight activities at location C1.

USCG conducted observations at all C locations and observed vacuum trucks, skimming operations and boom maintenance. In location C0, oil was bypassing the hard boom and absorbent boom was deployed. Two oiled ducks were reported at location C5.

EPA contractors collected oil with vacuum trucks, replaced sorbent boom, and maintained & decontaminated boom. In location C1, lily pads were cut in the river just upstream of Ceresco Dam and vacuum trucks were used to remove both the lily pads and oil.

EPA conducted a bathymetric survey of the Kalamazoo River between locations C2 and C2.75.

**Enbridge**

Enbridge crews collected lily pads and pulled oiled vegetation and shoreline washing with 16 boats in location C1.

Shoreline Branch crews collected and removed 185 bags of oiled debris and 1,300 gallons of oily water in location C1. In location C3, crews collected 2,800 gallons of oily water. In location C4, 37 bags of oiled debris were collected, 80 feet of sorbent boom were replaced and 300 feet of snare boom was deployed. In location C6, crews deployed 180 feet of sorbent boom and collected 16 bags of oily debris. Shoreline Branch crews continued to make significant progress in the Baker Estate Trailer Park.

Enbridge adjusted boom near Ceresco Dam to create boom crossing points to eliminate boom jumping in this area in anticipation of the increased boat operations.

**SCAT**

A SCAT Team completed assessment work on Area C5 and followed up to complete cleanup recommendations on areas in Division C.

**River Branch West- Division D****EPA**

EPA contractors collected oil with vacuum trucks, replaced sorbent boom, and maintained & decontaminated boom.



EPA conducted oversight duties related to the boom operations taking place at boom locations D.5, D1, D2, D2.5, D3, and D5.

EPA conducted air monitoring at boom locations D0.5, D1, D2, D2.5, D3, and D5. Air monitoring results (benzene, H<sub>2</sub>S, VOC, CO, O<sub>2</sub> and LEL) at each location were non-detect or at low concentrations.

### **Enbridge**

Enbridge adjusted booms to get better deflection near location D1. The skimmer was collecting approximately 90% water. Horseshoe booms were removed at location D2. Approximately 120 bags of oiled debris were collected from Division D during operations. The Shoreline Branch operations collected 200 gallons of oily water, 10 bags of debris, replaced sorbent boom and removed hard boom.

### **SCAT**

A SCAT team assessed the reach from location D3 to location D0.5 on both banks of the river.

### **River Branch West- Division E**

#### **EPA**

EPA observed aeration at locations E1 and E3 and the installation of a new aerator at Location E4.

EPA contractors re-positioned & maintained containment boom and replaced contaminated sorbent boom near location E3.

### **Enbridge**

In locations E1 and E3, Enbridge operated underwater aerators. Enbridge started to build a new aerator at Location E4.

### **Morrow Lake Task Force**

One area of sheen was observed at location E4 and pads were used to clean up the sheen.

### **SCAT**

A SCAT team assessed the reach from location E4.5 upstream to location D5.

### **Branch Operations**



EPA, USCG and Enbridge Operations have a Monitoring Branch, Wildlife Branch and Air Ops Branch that conduct activities in all the Divisions.

### **Monitoring Branch**

#### **EPA**

The GLNPO MV MUD PUPPY has been non-operational since the morning of August 7, but will resume operations on August 10, 2010.

A total of 64 air samples and 7 surface water samples were reported as being collected during the August 8, 2010 sampling period and sent to the laboratory for analysis.

#### **Enbridge**

Focused programs have been implemented around the Baker Estates trailer park, the Ceresco dam, Morrow Lake and the leak site. Enbridge forecasted to collect 37 surface water samples, 25 potable water samples, 0 sediment samples, 16 24-hour grab air samples, 5 air mini-summa samples, 2 air grab samples and 49 passive dosimeter samples. Additionally, real-time monitoring for benzene and VOCs continued.

#### **Wildlife Branch**

USFWS worked with the Wildlife Branch to address wildlife impacts. The wildlife center continued to receive many animals collected along the Kalamazoo River. To date there are 171 animals in live care, the majority of which are Canada Geese and turtles. Twenty-one turtles were released.

#### **Air Ops Branch**

One over flight was conducted, no observations to report. Flights were grounded for most of the day due to the weather.

#### **Boom Report**

|                      | Enbridge | EPA    | TOTALS  |
|----------------------|----------|--------|---------|
| Number of Locations  | 32       | 5      | 37      |
| Boom Deployed (feet) | 73, 328  | 88,085 | 161,413 |

### **2.2 Planning Section**

The EU attended the Science Team meeting and compiled comments from the Team on the "Source Area Remediation Plan" and the "Remediation Plan for Downstream Impacted Areas". The compiled comments were submitted to the EPA IC.

The SCAT Leader worked with Enbridge to generate draft guidance for vegetation cutting and oiled debris removal from Division C. The guidance was shared with the Science Team. Photos of the river showing examples of types of contamination were provided by NOAA for use in preparation of Shoreline Treatment Recommendations papers for Operations.

The SCAT Leader went on a boat tour of Division C with the Operations Planner, Division C EPA OSC and EPA Oil Spill Response Expert to gain initial agreement on the appropriate shoreline cleanup approach.

The DMU continued compiling data for SCAT operations and implementing QA/QC procedures. The Data Management Team showcased the EPA Google Earth application for public data dissemination at the Cooperating Agencies meeting.

GIS made cleanup grid maps for Operations working in Division C. GIS worked with EPA DIC on presentation for public meeting in Battle Creek. GIS created maps that identified SCAT data and sensitive areas that were provided by MDNRE as well as provided maps to MDNRE to assist in their assessment of sensitive areas and oiled wildlife.

The Resource Unit completed the IAP for the Operational Period from August 10-11, 2010.

### **2.2.1 Anticipated Activities for Next Reporting Period**

In the next operational period, EPA anticipates performing the same activities as in the previous operational period.

### **2.2.2 Issues**

Three exposure units (4, 7, and 10) as designated in the Re-Occupancy Strategy were identified within the evacuation zone that contain the majority of residences. Air monitoring and sampling will focus on these areas following the Re-occupancy Decision Tree approved by Unified Command on August 9, 2010. On August 8, 2010 air sample results in exposure unit 7 exceeded the re-occupancy benzene criteria (6 ppb). Summa 24 hr samples were delayed by unfavorable weather conditions on August 9, 2010.

## **2.3 Logistics Section**

Logistics presented the proposed Enbridge/EPA site layout plan for the new UCP location at the old State Farm Site located at 820 Mann Road in Marshall, MI at the Unified Command Objectives Meeting.

Logistics and Finance visited with Fort Custer and arranged for supplemental room availability, the lodging is approximately 20 to 30 minutes from Marshall, MI. FACL developed a private web site for responding personnel to obtain updates on hotel availability.

## 2.4 Finance Section

The current NPFC issued ceiling (based on EPA requests) is \$6 million. Approximately 100.3% of the ceiling has been spent through August 08, 2010; with a burn rate of \$523,000 per day. These cost summaries only reflect EPA expenditures for the incident.

|                          | Est Expended (\$) | Est Burn Rate (\$) |
|--------------------------|-------------------|--------------------|
| EQM                      | 1,022,261         | 68,414             |
| LATA                     | 877,893           | 127,512            |
| ER LLC                   | 609,110           | 34,552             |
| ERRS Contractors         | 2,509,264         | 230,478            |
| WESTON START             | 1,189,073         | 129,869            |
| Federal & Other Agencies | 1,648,406         | 104,281            |
| Sub-Totals               | 5,346,743         | 464,628            |
| Indirect Costs (12.6%)   | 673,690           | 58,543             |
| Est Total Oil Spill      | 6,020,433         | 523,171            |

## 2.5 Safety Officer

There was a minor motor vehicle incident with no injuries reported. Also, a field worker was exposed to poison ivy in Division B, which resulted in a rash.

MIOSHA and Federal OSHA continued with oversight and reports to the Incident Safety Officers.

## 2.6 Liaison Officer

The Liaison coordinated the expansion of the UC to include the City of Battle Creek, effective immediately.

## 2.7 Information Officer

### 2.7.1 Public Information Officer

#### Oil Spill Response Hotline (888-363-8632)—Incoming Calls

##### TOTAL CALLS: 10

|          |   |
|----------|---|
| EPA      | 4 |
| Enbridge | 3 |
| USFWS    | 1 |
| Gen Info | 2 |

There was minimal call activity with no distinct pattern; a few calls were vendor-related and a few more were people wanting the conference call dial-in information. One caller

requested information on a USFWS wildlife center tour, the remainder of calls were “general media” related.

## **PIO Activities**

An EPA DIC recorded a 7 min. segment for WJR Detroit Drive-Time radio this morning. The JIC staff continued to answer the media hotline and monitor the media. Media briefings will be suspended tomorrow due to a public meeting in Battle Creek. Beginning Thursday, August 12, 2010 briefings will be held twice-weekly on Mondays and Thursdays.

## **2.9 Response Actions to Date**

Recovery of oil and contaminated soils continues in Division A and B. Containment boom, sorbent boom, skimming equipment, vacuum trucks and other equipment have been used to support oil collection and removal along Talmadge Creek and the Kalamazoo River. Recovered material is being temporarily stored on-site. Tanker trucks are transporting the material to a facility owned by the RP with available storage in Griffith, Indiana.

EPA, ERT, START and RP contractors, with the support of the ERT Mobile Lab and MI National Guard CST, have monitored and sampled air quality along the river and throughout multiple residential areas. A heavy emphasis was placed on specific monitoring for benzene as it is a recognized contaminant of concern for this response.

Water samples were collected for analysis from surface water, river and lake water columns, and private drinking wells along the length of the impacted areas of the Kalamazoo River. Water samples were also taken downstream of the Morrow Lake Dam. Validated analytical sampling results are now being posted to the public incident website (<http://www.epa.gov/enbridgespill/data/datawater.html>).

Enbridge removed the affected area of pipe, following the cut out/repair plan, and completed a pipe investigation (50 feet upstream and downstream of the cut points) on August 7, 2010.

The voluntary evacuation issued by CCPH in consultation with MDCH and ATSDR remains in effect for several residences located immediately downstream of the spill site along the Talmadge Creek, up to its confluence with the Kalamazoo River. This voluntary evacuation was based on review of air monitoring results for benzene around oil collection areas. A re-occupancy strategy for the evacuation zone has been drafted and was presented to the Unified Command.

A Contingency Plan for Morrow Lake has been developed in case oil moves past the lake.

EU distributed copies of Enbridge plans to the Science Team for review. Plans included: *Sampling and Analysis Plan* including figures, *Remediation Plan for Downstream Impacted Areas*, *Source Area Remediation Plan*, and the *Quality Assurance Project Plan*.

### 3. Participating Entities

#### 3.1 Unified Command

United States Environmental Protection Agency  
Michigan Department of Natural Resources and Environment  
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)

#### 3.2 Cooperating and Assisting Agencies

##### Cooperating Agencies

51st Civil Support Team Michigan  
National Guard  
Agency for Toxic Substances and Disease Registry  
Allegan County Emergency Management  
American Red Cross  
Augusta Police Department  
Calhoun Conservation District  
Calhoun County  
Calhoun County Treasurers Office  
Calhoun Greenation District  
City of Kalamazoo  
City of Marshall  
Federal Energy Regulatory Commission  
Fredonia Township Fire Department  
Kalamazoo County Office of Emergency Management  
Kalamazoo Public Safety

Kalamazoo Watershed Council  
Marshall Township Government and Fire Department  
Marshall Police Department  
Michigan Dept of Community Health  
Michigan Dept of Agriculture  
MIOSHA  
NOAA  
OSHA  
Natural Resource Group  
National Transportation Safety Board  
Pipeline Hazardous Materials Safety Administration  
U.S. Coast Guard  
US Department of the Interior US Geological Survey  
U.S. Department of Transportation  
US Fish & Wildlife Service

##### 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 Stabenow

#### 4. Personnel On Site

These numbers reflect all EPA numbers and On-River only for Enbridge.

| Personnel            | Numbers reported for 8/9/2010 | Numbers reported for 8/8/2010 |
|----------------------|-------------------------------|-------------------------------|
| Enbridge             | 51                            | 39                            |
| Enbridge Contractors | 922                           | 912                           |
| EPA                  | 61                            | 61                            |
| ERRS                 | 108                           | 112                           |
| MDNRE                | 27                            | *                             |
| CC Sheriff           | 13                            | 12                            |
| Kalamazoo Sheriff    | 2                             | 2                             |
| MI State Police      | 22                            | *                             |
| USCG                 | 15                            | 15                            |
| USFWS                | 11                            | 12                            |
| START                | 60                            | 54                            |
| Total                | 1292                          | 1219                          |

\* = new reporting agency

#### 5. Definition of Terms

|       |  |
|-------|--|
| ATSDR | Agency for Toxic Substances and Disease Registry         |
| CCPH  | Calhoun County Public Health                             |
| DIC   | Deputy Incident Commander                                |
| DMU   | Data Management Unit                                     |
| DNRE  | Department of Natural Resources and Environment          |
| EPA   | Environmental Protection Agency                          |
| ERT   | Emergency Response Team                                  |
| EU    | Environmental Unit                                       |
| FACL  | Facilities Unit Leader                                   |
| GLNPO | Great Lakes National Program Office                      |
| GPS   | Global Positioning System                                |
| HASP  | Health and Safety Plan                                   |
| IAP   | Incident Action Plan                                     |
| IC    | Incident Commander                                       |
| IN    | Indiana  |
| LEL   | Lower Explosive Limit                                    |
| MDCH  | Michigan Department of Community Health                  |
| MDNRE | Michigan Department of Natural Resources and Environment |

|        |  |
|--------|--|
| MI     | Michigan   |
| MIOSHA | Michigan Occupational Safety and Health Administration |
| NRC    | National Response Center                               |
| NOAA   | National Oceanic and Atmospheric Administration        |
| NPFC   | National Pollution Fund Center                         |
| NTSB   | National Transportation Safety Board                   |
| OSHA   | Occupational Safety and Health Administration          |
| OSC    | On-Scene Coordinator                                   |
| PCB    | Polychlorinated Biphenyls                              |
| PHMSA  | Pipeline and Hazardous Materials Administration        |
| PRP    | Potentially Responsible Party                          |
| QAPP   | Quality Assurance Project Plan                         |
| QA/QC  | Quality Assurance/ Quality Control                     |
| RP     | Responsible Party                                      |
| SAP    | Sampling and Analysis Plan                             |
| SCAT   | Shoreline Contamination Assessment Team                |
| START  | Superfund Technical Assessment and Response Team       |
| UCP    | Unified Command Post                                   |
| USCG   | United States Coast Guard                              |
| USDOT  | United States Department of Transportation             |
| USFWS  | United States Fish and Wildlife Service                |
| USGS   | United States Geological Survey                        |
| 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>

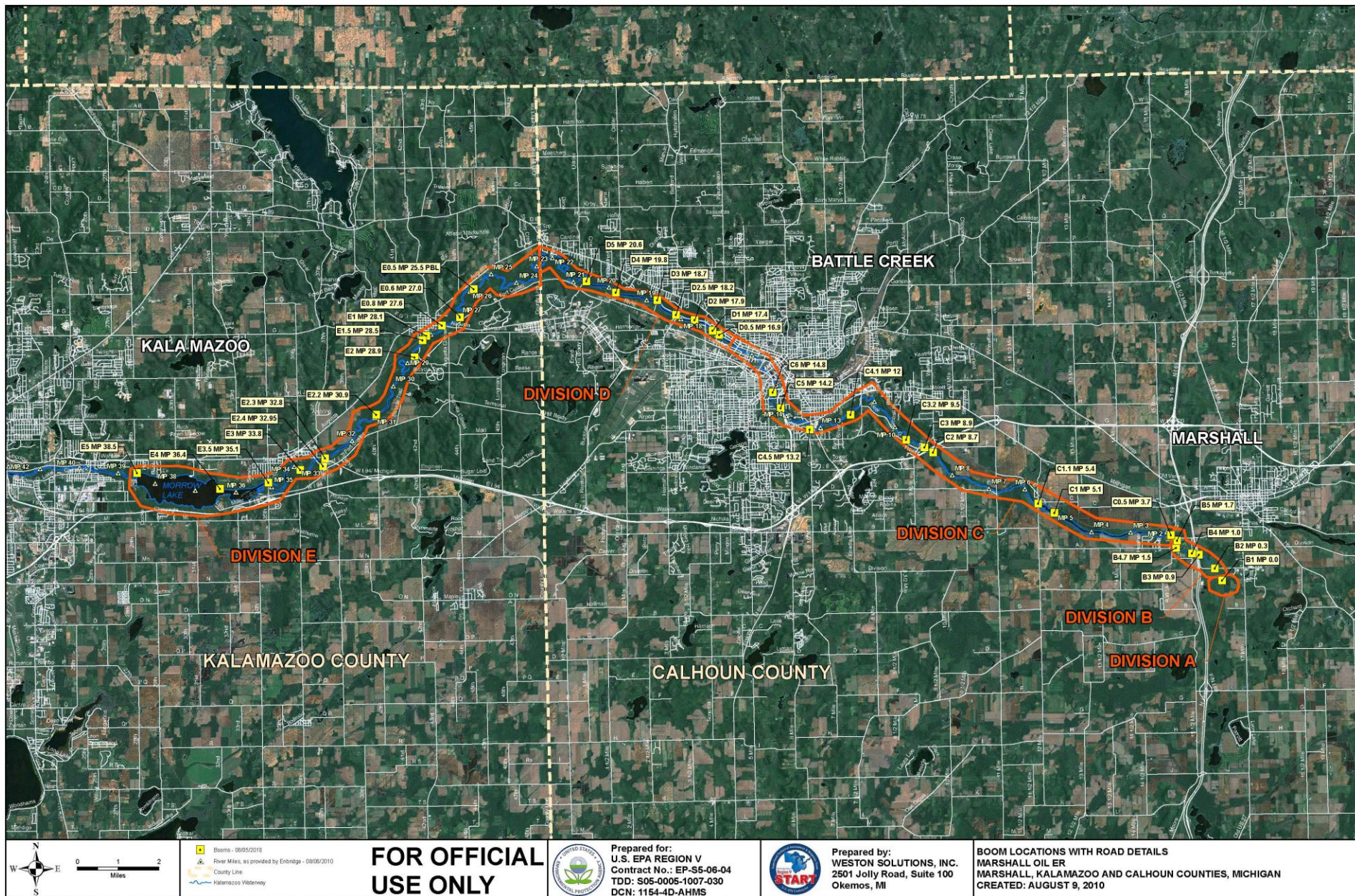
### **6.2 Reporting Schedule**

SITREPs have been created daily and will continue until the Unified Command establishes a different reporting schedule.

## **7.0 Situational Reference Materials**

See attached “Boom Locations with Road Details” map for more information.





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