

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 #17
Kalamazoo River/Enbridge Spill
Z5JS
Marshall, MI
Latitude: 42.2395273 Longitude: -84.9662018

To: Richard Fuller, Kalamazoo County Sheriff's Office
James Rutherford, Calhoun County Public Health
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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 Connie Gibson, Calhoun County Sheriffs Office
 Cheryl Vosburg, City of Marshall
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 Linda Nachowicz, U.S. EPA
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 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
 Mark Durno, U.S. EPA Deputy Incident Commander

Date: 08/11/10

Reporting Period: 1900 hours 08/10/10 to 1900 hours 08/11/10

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 Assessment
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 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

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) 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) Concentrate resources for river, shore, and floodplain cleanup and sheen management in Division C.
- 2) Review SCAT recommendations with Science Team, with emphasis on Talmadge Creek and Division C, to coordinate near term cleanup effort.
- 3) Continue efforts to remove oil and contaminated soil from pipeline release zone.
- 4) Monitor effectiveness of IAP briefing and use by Operations.
- 5) Maintain continuous comprehensive on-water/analytical sheen monitoring, sediment investigation, reporting and recovery at Morrow Lake.
- 6) Continue to monitor overall effectiveness of community outreach.
- 7) Monitor effectiveness of IAP briefing and use by Operations personnel.
- 8) Continue transition of EPA logistics/procurement functions to Enbridge.
- 9) Continue transition of IAP 204 and 205 development from EPA to Enbridge.

1.3 Strategic Considerations

- 1) The Science Team and SCAT will work with Operations to ensure a satisfactory progression of clean up recommendations for operational planning of bank and floodplain cleanup activities.
- 2) Safety Officers will continue to elevate site-wide Health and Safety practices in accordance with the approved HASP.
- 3) Operations will emphasize the importance of review of the IAP by field staff to ensure that operational objectives are achieved.

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. It has been geographically divided into five Divisions, A through E, with Division A starting at the pipeline break and ending at Morrow Lake in Division E (see attached figure). 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 control points that are denoted by division letter then control point number (i.e. C3 refers to control point three within Division C).

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

Division A

EPA

EPA observed continued work around the pipeline including dewatering, oil collection, excavation of contaminated soil, and chipping and clearing of oiled vegetation. EPA observed the installation of silt fence along Talmadge Creek.

ERT and START conducted air monitoring for VOCs, LEL, H₂S, and benzene. Turbidity monitoring in Talmadge Creek was also conducted. START conducted air monitoring on the haul road and recorded a level of 0.4 ppm benzene. Another monitoring result further north was 0.35 ppm benzene. START conducted air monitoring near the pipe dig and recorded a level of 1.25 ppm benzene. Based on the results, workers were required to wear half-face respirators while working. A follow-up survey was conducted on both sides of the haul road between locations B1.5 and B2 and recorded a benzene level of 0.2 ppm on the west side and 0.3 to 0.45 ppm on the east side. Workers were required to wear respiratory protection while working. Tedlar bag air samples were collected for confirmation.

Enbridge

Enbridge conducted oil collection at the release site with vacuum tankers and removed contaminated soil to the containment and disposal site. Enbridge continued implementation of the pipe cut-out and repair plan. Cleanup activities were conducted starting at Talmadge Creek and working downstream, scraping oily vegetation and surface soils with an excavator in accordance with SCAT recommendations. Enbridge continued chipping and clearing activities and installed silt fence along Talmadge Creek.

Division B

EPA

EPA observed skimming, vacuuming and boom maintenance operations at locations B1.5, B2, B3, B4, and B4.7. EPA observed Enbridge clearing brush between locations B1 and B2. EPA observed completion of bank scraping up to location B2.

USCG observed operations at locations B5, B4, B2 and B4.7 and observed flushing operations and skimmer maintenance.

Enbridge

Enbridge continued oil collection at boom containment sites and replaced contaminated boom as required. Enbridge placed swamp mat roads along Talmadge Creek downstream of US Highway 69. Crews worked on scraping oiled bank vegetation and soil on Talmadge Creek up to the Kalamazoo River and placed material in a containment site, in accordance with SCAT recommendations. Enbridge installed silt fence along Talmadge Creek as required.

Division C

EPA

EPA observed skimming operations and vacuuming of oil and cut lily pads into vacuum boxes at locations C1.1, C1 and C3. At C1, EPA observed vegetation removal/washing and the flushing of backwater pockets on the north and south sides of the river. EPA observed vegetation removal/washing at location C0.5.

USCG conducted observations at all C locations. At location C6, hard boom and sorbent had been changed/replaced. At location C4, tarballs and sheen were observed. At location C1, skimming and shoreline cleanup were observed.

EPA contractors continued boom maintenance and decontamination of equipment at location C0.

Enbridge

Crews collected and removed 50 bags of oiled debris and 7,350 gallons of oily water in locations C1, C3, C4 and C6. Crews deployed 300 feet of snare boom and deployed/replaced 160 feet of sorbent boom.

Division D

EPA

START conducted oversight duties related to boom operations at locations D0.5, D1, D2, D2.5 and D5. START conducted air monitoring at boom locations D1, D2, D2.5, D3, and D5. Air monitoring results (benzene, H₂S, VOC, CO, O₂ and LEL) at each location were non-detect or below the established action level. EPA START inspected ponds along Fort Custer Road to determine if the oil spill impacted ponds on residential properties. There was no indication of oil impact in ponds or areas between the ponds and the river.

EPA contractors continued boom maintenance, decontamination of equipment, and vacuum & skimmer maintenance operations at location D2.5.

Enbridge

Enbridge crews deployed 1,000 feet of silt skirt and twelve gabion absorbent baskets at location D1.

Division E**EPA**

EPA observed operations at Division E, including the air curtain at location E3. EPA contractors continued boom maintenance at location E3.

Enbridge

Enbridge collected 35 bags of oiled debris and deployed/replaced 540 feet of sorbent boom at location E3.

Morrow Lake Task Force

Due to inclement weather no operations were conducted at Morrow Lake.

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**

A total of 56 air samples and 1 surface water sample were reported as being collected and sent to the laboratory for analysis.

Enbridge

Enbridge planned to collect 34 surface water samples, 4 potable water samples, 16 24-hour grab air samples, 5 air mini-summa samples, 2 air grab samples and 48 passive dosimeter samples. Real-time monitoring for benzene and VOCs continued.

Wildlife Branch

USFWS worked with the Wildlife Branch to address impacted wildlife. The wildlife center continued to receive many animals collected along the Kalamazoo River. To date there are 205 animals in live care, the majority of which are Canada Geese and turtles. Twenty-one turtles have been released. A number of birds were released today, although

their numbers are not included in today's report; the numbers will be included upon confirmation.

Air Ops Branch

Two overflights were conducted; additional boom needs were identified between River Mile 31 and River Mile 33.

Special Operations

EPA START visited the Griffith, IN, oil/water receiving location.

Boom Report

	Enbridge	EPA	TOTALS
Number of Locations	32	5	37
Boom Deployed (feet)	87,176	88,325	175,501

2.2 Planning Section

The EU explained EPA's surface water and sediment sampling methodology and results to the UC. The SCAT Leader met with the State Archaeologist and confirmed that no planned cleanup operations will impact archaeological resources. The SCAT Leader also explained to the Division Supervisors the specifics of the Phase 1 removal methods for oiled vegetation and oiled debris.

The DMU continued compiling SCAT data, processed field & analytical data in the Scribe database and implemented QA/QC procedures. The DMU met with CTEH (Enbridge contractor) and discussed receipt of sediment and surface water sampling data.

The Resource Unit completed the IAP for the Operational Period from August 12-13, 2010.

2.2.1 Anticipated Activities for Next Reporting Period

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

2.2.2 Issues

On August 9, 2010, air samples collected in two tedlar bags from exposure unit 7 showed benzene levels greater than 6 ppb, resulting in the need for additional monitoring.

Additional tedlar bag air samples were collected near the locations in exposure unit 7 where two benzene hits > 6 ppb were found on August 9, 2010. The additional tedlar

samples confirmed that the source of benzene was within a barn with open cans of paint and a large tractor. Eleven summa canisters were deployed to exposure unit 7 on August, 10, 2010; however, three regulators failed and those summas had to be replaced. Weather events during this reporting period may affect the summa canisters. Tedlar bags were deployed to collect air samples in exposure units east of I-69.

The MDCH Field Epidemiology Team formed a surveillance program (including a call center and a field team) in response to significant citizen complaints about health symptoms and odor from the oil. The Team completed special door-to-door symptom surveys in two areas to date: Baker Estates and the daycare center (workers only). The surveillance team has targeted door-to-door symptom surveys for three additional areas: Squaw Creek, the Red Zone, and Ceresco Dam.

2.3 Logistics Section

EPA Logistics met with Enbridge’s new Logistics Chief at the daily ICP relocation/ transition meeting.

2.4 Finance Section

The current NPFC issued ceiling (based on EPA requests) is \$11 million. Approximately 65 % of the ceiling has been spent through August 10, 2010, with a burn rate of \$532,580 per day. These cost summaries reflect only EPA expenditures for the incident.

	Est Expended (\$)	Est Burn Rate (\$)
EQM	1,118,280	75,739
LATA	1,148,052	122,877
ER LLC	655,480	22,252
ERRS Contractors	2,921,812	220,868
WESTON START	1,485,376	144,579
Federal & Other Agencies	1,996,216	107,537
Sub-Totals	6,403,404	472,984
Indirect Costs (12.6%)	806,829	59,596
Est Total Oil Spill	7,210,233	532,580

2.5 Safety Officer

The SO reported that on August 10, 2010, a contract employee experienced a medical emergency that required an evaluation at a local hospital. The employee was evaluated and released. There also was one minor vehicle incident with no injuries reported, and one minor first aid incident.

No safety incidents were reported for this operational period.

2.6 Liaison Officer

The LNO briefed the UC on resolution and implementation of Native American artifact protocol, confirmed the final determination of impacted historical or culturally sensitive sites within the response area, and disseminated that information to Operations and SCAT. At the request of the Nottaweseppi Huron Band of Potawatomi, the LNO arranged for a tribal spiritual leader to conduct a blessing of the response area.

2.7 Information Officer

2.7.1 Public Information Officer

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

TOTAL CALLS:	26
EPA	3
Enbridge	3
DNRE	3
USFW	1
Gen Info	16

The majority of the calls were inquiries about the scheduled bird release. Sudden storm conditions resulted in a decision to release the birds one-half hour before the media arrived for the scheduled release.

PIO Activities

JIC posted disapproval letters for the *Source Release Area Remediation Plan* and *CERCLA Remediation Plan for Downstream Impacted Areas*.

A public meeting was held in Battle Creek the evening of August 10, 2010. Approximately 450 people attended the meeting and 79 question cards were addressed. Four television stations and three print media outlets attended.

2.9 Response Actions to Date

Recovery of oil and contaminated soils continues in Divisions 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 materials are being handled on-site and prepared for off-site transport. Tanker trucks are transporting the recovered oil to a facility owned by the RP with available storage in Griffith, Indiana. Oil-contaminated soils and other materials are being transported off-site for disposal.

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, followed the cut out/repair plan, and completed a pipe investigation (50 feet upstream and downstream of the cut points) on August 7, 2010. The affected length of pipe has been repaired but is not yet operational.

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 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. Air monitoring and sampling of the affected area is being conducted to determine when re-occupancy can occur, in accordance with the re-occupancy strategy approved by the Unified Command.

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

EPA has disapproved the following plans submitted by Enbridge: *Remediation Plan for Downstream Impacted Areas* and *Source Area Remediation Plan*. Enbridge's *Quality Assurance Project Plan* and *Sampling and Analysis Plan* are still under review.

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
 Oakland County HAZMAT
 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

Personnel	Numbers reported for 8/10/2010
EPA	61
MDNRE	27
Michigan State Police	50
City of Battle Creek	2
CCPH	6
CC Sheriff	16
Kalamazoo Sheriff	2
USCG	15
USFWS	13
ERRS	108
START	92
Enbridge	40
Enbridge Contractors	886
Total	1318

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
LNO	Liaison Officer
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
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/ Quality Control
RP	Responsible Party
SAP	Sampling and Analysis Plan
SCAT	Shoreline Contamination Assessment Team
SHPO	State Historic Preservation Office
START	Superfund Technical Assessment and Response Team
T&D	Transfer and Disposal
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>

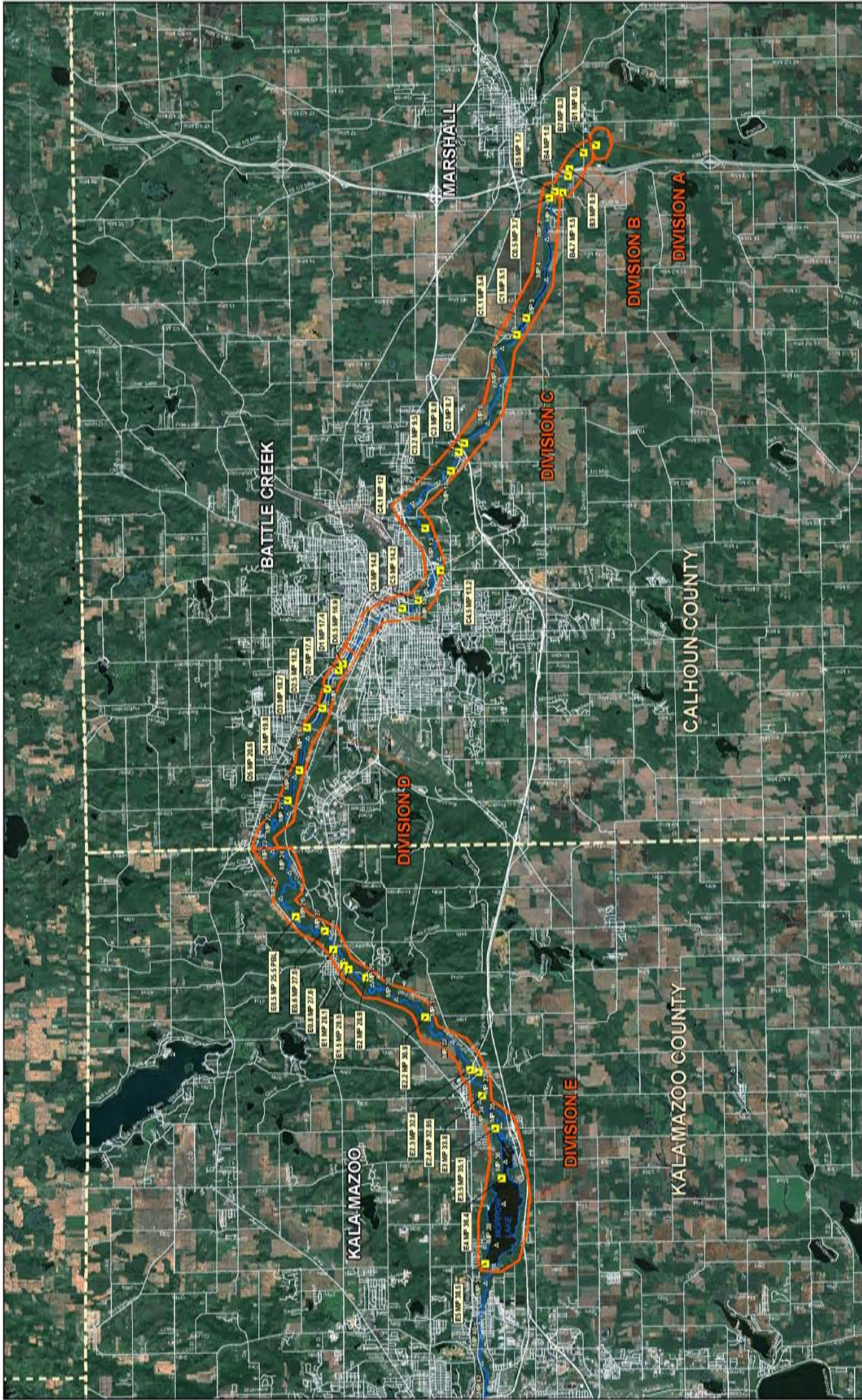
6.2 Reporting Schedule

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.

US EPA ARCHIVE DOCUMENT



BOOM LOCATIONS WITH ROAD DETAILS
 MARSHALL OIL RIVER
 MARSHALL, KALAMAZOO AND CALHOUN COUNTIES, MICHIGAN
 CREATED: AUGUST 9, 2010

Prepared by:
 WESTON SOLUTIONS, INC.
 2501 Jolly Road, Suite 100
 Okemos, MI



Prepared for:
 U.S. EPA REGION V
 Contract No.: EP-S5-06-04
 TDD: 505-0005-1007-030
 DCN: 1154-4D-AHMS



FOR OFFICIAL USE ONLY

Scale: 1:50000
 River Miles as provided by EsriMapX - 8/9/2010
 County Line
 County Name
 Administrative Boundary

