

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 #16
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.
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Mike McKenzie, City of Battle Creek
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 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: 08/10/10

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

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 (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) Maintain Joint Information Center function.
- 9) Continue to collect, coordinate, manage and communicate environmental and public health data.
- 10) Obtain input from DNRE, NOAA, USGS, USFWS, 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 and contaminated soil from pipeline release zone.
- 2) Concentrate resources for river, shore, and floodplain cleanup and sheen management in Division C.
- 3) Maintain continuous comprehensive on-water/analytical sheen monitoring, investigation, reporting and recovery at Morrow Lake.
- 4) Finalize integration of hotline into the community outreach centers.
- 5) Monitor 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 and 205 development from EPA to Enbridge.
- 9) Review SCAT recommendations with Science Team, with emphasis on Talmadge Creek and Division C, 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.
- 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 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 control points that are denoted by division letter then control point number (i.e. C3 refers to control point three within Division C).

Division A

EPA

EPA observed continued work around the pipeline including: dewatering operations, excavation of contaminated soil and chipping of oiled trees. EPA observed an inspection of the pipeline for possible defects. This effort will determine how much of the pipeline will be replaced.

EPA ERT and START conducted air monitoring for VOCs, LEL, H₂S, and benzene. EPA ERT and START conducted turbidity monitoring in Talmadge Creek.

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 in Division A and working downstream, scraping oily vegetation and surface soils with an excavator in accordance with SCAT recommendations. Enbridge continued chipping and clearing activities.

Division B

EPA

EPA observed skimming, vacuuming and boom maintenance operations at locations B2, B3, B4, and B5. At location B1, EPA conducted oversight during the placement of wooden swamp mats along both sides of Talmadge Creek. Soil excavation occurred on both sides of the creek bank. Scraping and excavation activities removed soil where no roots were visible in the excavated areas. Oil collection continued at collection points and excavated oil-contaminated soil was transported to the staging area prior to off-site disposal. Greater amounts of oil were observed in the water downstream during bank excavation.

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

Enbridge

Enbridge continued oil collection at boom containment sites and replaced contaminated boom as required. Enbridge placed swamp mat roads along Talmadge Creek upstream and downstream of Division Road. Crews worked on scraping oiled bank vegetation and

soil on Talmadge Creek, and placed material in a containment site, in accordance with SCAT recommendations.

Division C

EPA

EPA conducted oversight activities in Division C. EPA observed the installation and removal of booms, collecting of lily pads, the washing of lily pads at the Ceresco Dam and the collection of oil with vacuum trucks.

USCG conducted observations at all C locations and observed vacuum trucks, skimming operations, boom maintenance and shoreline cleanup. USCG observed improper boating practices and recommends operators be given additional direction on safe operations on the river.

EPA contractors continued boom maintenance, and removed and replaced sorbent booms. EPA contractors expanded the boat launch area.

Enbridge

Crews collected and removed 75 bags of oiled debris and 5,000 gallons of oily water between locations C5 and C1. Crews completed work in the Baker Estate Trailer Park this morning and have begun clearing vegetation to provide access to the site on the opposite side of the river.

At location C0.5, crews collected 68 bags of oily water and successfully deployed the amphibious vegetation cutter.

Shoreline Branch crews deployed 1,200 feet of snare and sweep boom, 200 feet of hard boom, and collected 10 bags of oiled debris at location C6.

Division D

EPA

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

EPA contractors collected 30 bags of oiled debris and 70 gallons of oily water between locations D0.5 through D1. EPA contractors re-positioned & maintained containment boom and replaced contaminated sorbent boom near location D2.5.

EPA conducted air monitoring at boom locations D0.5, D1, D2, D2.5, D3, and D5. Air monitoring results (benzene, H₂S, VOC, CO, O₂ and LEL) at each location were non-detect or at low concentrations.

EPA 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.

Enbridge

Enbridge crews collected 30 bags of oiled debris and 70 gallons of oily water in locations D0.5 to D1.

SCAT

A SCAT team assessed the reach from location D4 to location E0.5 on both banks of the river.

Division E

EPA

EPA observed aeration at locations E1 and E3 and the installation of a new aerator at Location E4. In the afternoon sheen was observed on Morrow Lake in the cove, now being referred to as Lily Pad Cove. Crews began skimming operation.

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

The GLNPO MV MUD PUPPY sampled stations 1-5 in Morrow Lake for water and sediment. The sediment samples showed significant sheen and a thick oily material was observed coming out of the sediments. The samples were sent to the lab for analysis.

Enbridge

Shoreline Branch crews replaced 320 feet of sorbent boom at location E2. In locations E1 and E3, Enbridge operated underwater aerators.

Morrow Lake Task Force

Enbridge crews observed a light sheen over a 500 foot by 20 foot area on the lake and took a surface water sample. Crews observed the installation of hard boom between location E4 and the hydro dam.

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 64 air samples and 7 surface water samples were reported as being collected during the August 9, 2010 sampling period and sent to the laboratory for analysis.

Enbridge

Enbridge forecasted to collect 37 surface water samples, 25 potable water samples, 16 24-hour grab air samples, 5 air mini-summa samples, 2 air grab samples and 48 passive dosimeter samples. Additionally, 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 172 animals in live care, the majority of which are Canada Geese and turtles. Twenty-one turtles were released.

Air Ops Branch

Three overflights were conducted, no observations to report.

Special Operations

EPA START reviewed the scope of work for T&D oversight. The team toured the staging area for multiple frac tanks where some contaminated water is treated via carbon and discharged to the City of Marshall POTW.

Boom Report

	Enbridge	EPA	TOTALS
Number of Locations	32	5	37
Boom Deployed (feet)	69,146	88,485	157,631

2.2 Planning Section

The EU prepared draft cleanup recommendations based upon habitat type and Phase 1 cleanup objectives for Operations.

The EU worked with the Public Health Workgroup to determine sampling locations for Summa cans within the proposed reoccupation areas.

The EU worked with Entrix (Enbridge contractor) to develop a joint database for combined SCAT evaluations.

Critical areas in Divisions A, B, and C have been identified by SCAT in preparation for operations to remove oiled vegetation. The critical habitat areas identified have been determined to be either minnow habitat or upland plants. SCAT will coordinate with Operations to ensure that access road construction does not impact the upland plant areas and that operations are minimized in the river in the minnow habitat areas.

GIS digitized archaeological data received from the MI Office of Archaeologists and created maps to provide guidance to Operations in establishing no-go zones.

The DMU continued compiling SCAT data and coordinated database updates with CTEH (Enbridge contractor).

The Resource Unit completed the IAP for the Operational Period from August 11-12, 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

Air sampling was conducted in exposure units 10 and 13, as designated in the Re-Occupancy Strategy, to confirm that benzene concentrations are below the re-occupancy level of 6 ppb. Air samples collected in two tedlar bags from exposure unit 7 on August 9, 2010 showed benzene levels greater than 6 ppb, resulting in the need for additional monitoring.

2.3 Logistics Section

Logistics from both EPA and Enbridge met to finalize draft trailer positions at the new ICP location at the State Farm Site.

2.4 Finance Section

The current NPFC issued ceiling (based on EPA requests) is \$11 million. Approximately 59 % of the ceiling has been spent through August 09, 2010; with a burn rate of \$501,528 per day. These cost summaries only reflect EPA expenditures for the incident

	Est Expended (\$)	Est Burn Rate (\$)
EQM	1,042,541	20,280
LATA	1,031,201	153,308
ER LLC	635,318	26,208
ERRS Contractors	2,709,060	199,796
WESTON START	1,338,813	145,105
Federal & Other Agencies	1,715,459	100,506
Sub-Totals	5,763,332	445,407
Indirect Costs (12.6%)	726,180	56,121
Est Total Oil Spill	6,489,512	501,528

2.5 Safety Officer

There were two minor motor vehicle incidents with no injuries reported. Several field vehicles slid off the track matting due to fog and more spotters are required as a prevention measure.

Operations has proposed to conduct electrofishing activities for the next operational period and the SO provided recommendations for safe operations and maintaining a safe distance for boats and personnel.

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

2.6 Liaison Officer

The LNO coordinated with Calhoun County Sheriff and determined that the County Fair traffic plans will not impact staging areas traffic plans.

The Liaison Officer established protocol for the treatment of any Native American artifacts encountered during the response and provided maps showing designated no-go zones with the assistance of the SHPO.

2.7 Information Officer

2.7.1 Public Information Officer

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

TOTAL CALLS:	9
EPA	3
Enbridge	1
USFWS	1
Gen Info	4

There was minimal call activity. The press inquired about the rehabilitated bird release occurring on August 11, 2010, what the contractors were working on and their costs and what DNRE and EPA had to say regarding the pipeline reopening.

PIO Activities

PIO and JIC's main focus was on the community meeting held in Battle Creek on August 10, 2010. Three fact sheets were posted to www.epa.gov/enbridgespill.gov regarding water, air and FAQs. A joint MDNRE - USFWS media advisory on the August 11, 2010, wildlife release went out.

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
 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 Geuctk
 State Representative Tanya Schuitmaker
 State Senator Mike Nofs

4. Personnel On Site

Personnel	Numbers reported for 8/9/2010
Enbridge	62
Enbridge Contractors	912
EPA	61
ERRS	108
MDNRE	27
CC Sheriff	13
Calhoun County Public Health	6
Kalamazoo Sheriff	2
MI State Police	25
USCG	15
USFWS	12
START	60
Total	1297

* = 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
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
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
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

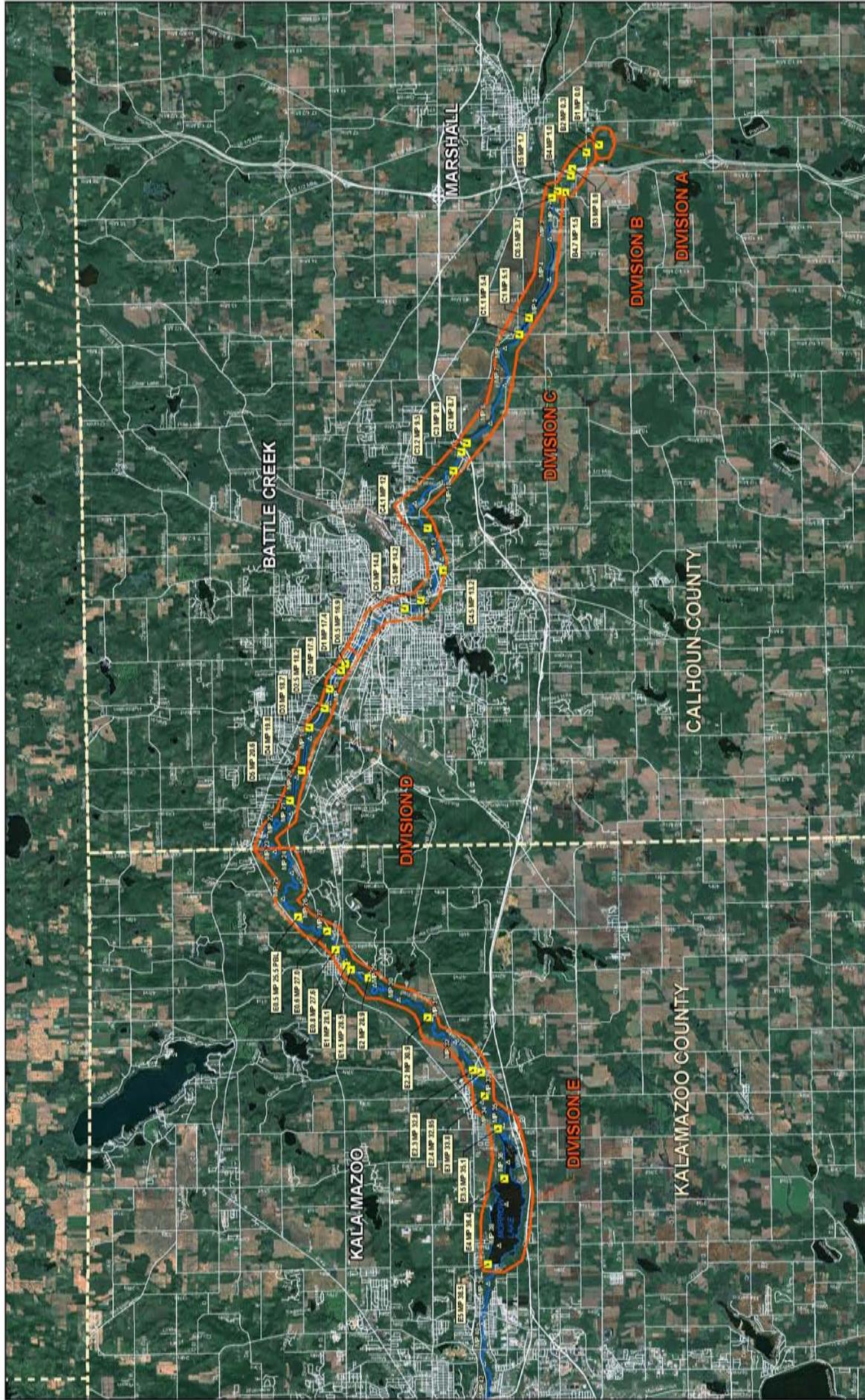
For additional information please refer to <http://www.epa.gov/enbridgespill.html>. For sampling analysis data, please see <http://www.epa.gov/enbridgespill/data/datawater.html>

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.



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U.S. EPA REGION V
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DCR: 1154-4D-AHNS

Prepared by:
WESTON SOLUTIONS, INC.
MARSHALL OIL RIVER
MARSHALL, KALAMAZOO AND CALHOUN COUNTIES, MICHIGAN
CREATED: AUGUST 9, 2010