

US EPA ARCHIVE DOCUMENT

U.S. ENVIRONMENTAL PROTECTION AGENCY  
 POLLUTION/SITUATION REPORT  
 Kalamazoo River/Enbridge Spill - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 Region V

**Subject:** POLREP #7  
 Kalamazoo River/Enbridge Spill  
 Z5JS  
 Marshall, MI  
 Latitude: 42.2395273 Longitude: -84.9662018

**To:** David Chung, U.S. EPA  
 Jason El-Zein, U.S. EPA  
 Duty Officer, NRC  
 Michael Chezik, US Department of Interior  
 Linda Nachowicz, US EPA  
 OSLTF USCG, USCG  
 James Rutherford, Calhoun County Health Department  
 Connie Gibson, Calhoun County Sheriffs office  
 Cheryl Vosburg, City of Marshall  
 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, On-Scene Coordinator  
 Stephen Wolfe, On-Scene Coordinator  
 Jeffrey Kimble, On-Scene Coordinator

**Date:** 8/1/2010

**Reporting Period:**

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	Z5JS	<b>Contract Number:</b>	
<b>D.O. Number:</b>		<b>Action Memo Date:</b>	
<b>Response Authority:</b>	OPA	<b>Response Type:</b>	Emergency
<b>Response Lead:</b>	PRP	<b>Incident Category:</b>	Removal Assessment
<b>NPL Status:</b>	Non NPL	<b>Operable Unit:</b>	
<b>Mobilization Date:</b>	7/26/2010	<b>Start Date:</b>	7/26/2010
<b>Demob Date:</b>		<b>Completion Date:</b>	

**CERCLIS ID:**  
**ERNS No.:**  
**FPN#:** E10527

**RCRIS ID:**  
**State Notification:**  
**Reimbursable Account #:**

### 1.1.1 Incident Category

Emergency Response -- Pipeline Rupture

### 1.1.2 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 the Kalamazoo River. The response site is along the River running from Marshall, Michigan to Battle Creek, Michigan. The River is bordered by marshland, residential properties, farm land, and commercial properties for the approximate 30 mile stretch of the affected river.

#### 1.1.2.1 Location

Spill location origin is in Marshall, Michigan, in a wetland adjacent to Talmadge Creek and extends 30 miles down the Kalamazoo River.

#### 1.1.2.2 Description of Threat

Western Canadian crude oil was released from the pipeline and has entered a navigable waterway.

### 1.1.3 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 are continuing to fall in some areas stranding oil in backwater and wetland areas. Talmadge Creek has been boomed at the confluence to the Kalamazoo River. Containment boom has been placed in thirty five locations along the Kalamazoo River and Talmadge Creek. Precautionary boom has also been deployed in Morrow Lake.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

The spill protection area, considered the source area to the dam at the end of Morrow Lake, has been geographically divided into Divisions. There are 5 divisions with Division A being the source area and Division E being the westernmost area with active protection points and monitoring.

Also, the Divisions are split into two Branches, with the East Branch housing Divisions A and B. Divisions A and B were the most severely impacted.

#### River Branch East

In Division A, U.S. EPA and MDNRE Office of Criminal Investigations (OCI) entered the Hot Zones in Division A and conducted air monitoring for VOCs, LEL and benzene. All levels within the Hot Zone were under 5.0 ppm. All levels outside the Hot Zone were below 0.5 ppm. The RP is putting in sheet piling around the pipeline leak site and has initiated the installation of a new collection point east of the pipeline.

In Division B, U.S.EPA personnel accompanied MDNRE OCI on an entry into the Hot Zone within Division B locations to observe RP oil collection activities. Air monitoring was conducted with an Ultra RAE. All levels within the Hot Zone were under 5.0 ppm and all levels outside the Hot Zone below 0.5 ppm for benzene.

#### River Branch West - U.S. EPA

U.S.EPA provided oversight and air monitoring activities at Boom Locations ranging from 5.5 miles to 8.9 miles downstream of the first protective structure near the spill origination point. During these activities, active air monitoring was conducted with multiple instruments for health and safety verification. No health and safety-related issues were observed, and no actionable air monitoring results were seen from any of the air monitoring locations.

In Division C at location C0, additional boom was deployed downstream near Easterly Dibble Drive. A heavy

sheen was noted bank to bank in this area during reconnaissance on 31 Jul 2010. Boom change out was conducted at the 15 Mile Road bridge.

In Division D at location D2.5, additional absorbent boom was deployed. U.S. EPA continued to adjust deployment positions of containment and absorbent boom to maximize natural collection areas; and continued oil/water collection in areas of accumulation.

In Division E at location E3, U.S. EPA deployed containment boom at East Michigan Street bridge and continued with reconnaissance activities and additional boom deployment as needed. An alternative type of absorbent boom is being tested at 35<sup>th</sup> Street bridge.

### **Shoreline Branch**

At multiple locations in Division C, RP personnel and contractors repositioned existing boom, deployed additional absorbent booms and pads, and conducted shoreline water flushing and removed oil contaminated debris. This Branch is initiating SCAT team deployment on 3 Aug 2010.

### **Monitoring Branch**

A total of 36 surface water samples, 8 sediment samples, 14 potable water samples were collected. Air quality samples to be analyzed for H<sub>2</sub>S, VOC's and benzene were also collected today.

### **Enbridge**

#### **River Branch East**

In Division A, the RP installed sheet piling to isolate and protect the pipeline break area to allow for removal of damaged section and repair of the line and to protect an adjacent undamaged pipeline. Other work conducted in Division A included activities and mobilization of equipment and resources to continue and expand source material removal.

In Division B, RP personnel conducted shoreline cleanup in the vicinity of deployed oil skimmers, installed 50' of absorbent boom at B1.5, and replaced saturated absorbent boom throughout Division B. Continuous oil recovery and skimming operations occurred throughout Division B today.

#### **River Branch West**

In Division C, there was oil collection at all active sites and boom was repositioned at location C3 to improve effectiveness.

In Division D, absorbent boom deployment, oily debris collection, and sheen/oil recovery were conducted.

In Division E, adjustments to boom deployed at E2.2 were made to improve its effectiveness, and sheen/oil collection occurred at Location E.5. Absorbent boom was also removed and replaced at this location.

Note: Due to resident concerns, additional absorbent boom was added near the town of Augusta.

**Air Ops Branch** – Five over flights were conducted to detect stranded oil, to document collection points, and to review boom deployed to evaluate if adjustments are needed.

#### **2.1.2 Response Actions to Date**

Approximately 70,000 feet of boom, skimming equipment, and other equipment to support oil collection and removal have been deployed at thirty five locations along Talmadge Creek and the Kalamazoo River. Recovered material is being temporarily stored in frac tanks on site. Tanker trucks are transporting the material to a facility owned by the RP with available storage in Griffith, Indiana. To date, approximately 13,500 barrels of oil/water have been transported to the Enbridge facility in Griffith, Indiana, from the approximate 43,000 barrels that have been collected.

U.S. EPA and RP contractors, with the support of the U.S. ARMY 51st Civil Support Team, are monitoring and sampling air quality along the river and throughout multiple residential areas. Monitoring equipment being utilized includes UltraRAE, PPB RAE, Multi RAE, Draeger CMS Chip Reader, AreaRAE and Hapsite portable GC/MS. A

heavy emphasis is being placed on specific monitoring for benzene as it is a recognized contaminant of concern for this response.

Samples were collected for analysis at an off site laboratory from surface water, river and lake water columns and private drinking wells along the length of the impacted areas of the Kalamazoo River and areas downstream of the Morrow Lake Dam. The Mud Puppy boat (U.S. EPA owned asset) also collected samples at five sites. Three types of samples are being collected by the Mud Puppy at each location, and are; 1) sediment, 2) water column, and 3) surface water.

US Fish and Wildlife Service is working with the Wildlife Branch to address wildlife impacts. A rehabilitation center for oiled wildlife has been established. A total of 47 geese, 4 ducks, 6 muskrats, 30 turtles, 2 swans, and 2 domestic geese have been recovered and are being cleaned and rehabilitated.

The USCG Atlantic Strike Team is on scene to provide assistance with RP and contractor oversight. USCG District 9 staff are also on site and have been integrated into the response effort by U.S. EPA.

NTSB and USDOT-PHMSA are on site conducting an investigation of the pipeline incident and are working with the appropriate State, Local, and Federal agencies. Enbridge has been given permission from NTSB to excavate the pipeline break. Due to high water tables and saturated conditions, excavation collapses have hindered progress. U.S. EPA will coordinate with USDOT-PHMSA and NTSB to ensure pipeline repair activities and the environmental and health and safety considerations are accounted for.

The voluntary evacuation issued by Calhoun County Health Department in consultation with Michigan Department of Community Health and Agency for Toxic Substances and Disease Registry 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. Sixty one residences were given notices. Twelve residences evacuated, twenty seven chose to stay and twenty two did not answer. An additional five families from outside the evacuation zone chose to evacuate.

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

Enbridge is the RP.

On 27 July 2010, USEPA 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.

## **2.2 Planning Section**

A second planning cycle was conducted on 01 Aug 2010 and an Incident Action Plan (IAP) was completed. The Environmental Unit (EU) has completed a Decision Tree for evaluating real-time air monitoring data of benzene concentrations for determining if evacuation of residents should be recommended. A parallel Decision Tree has been prepared to guide field staff for specific notifications that should occur based on the sampling results. Both documents have been submitted for review and approval by Unified Command. Decision criteria for re-occupancy of evacuated areas have been drafted and will be finalized by 08 Aug 2010.

The TAGA field laboratory bus arrived at the EPA Incident Command Post. The EPA EU will meet with ERT staff and the TAGA chemist to extend the Sampling and Analysis Plan for the use of this asset. EU provided information to ERT to facilitate entry of all available data into the Scribe database. All private wells that have been sampled are non-detect for contamination. MDCH is leading the collection of health complaints and health surveillance data covering the impacted areas. The EU is preparing presentation materials for the public meeting to be held Monday evening at the Marshall High School.

### 2.2.2 Issues

The RP has been informed that a Superfund site (PCB cleanup) is occurring on the Kalamazoo River Downstream of Morrow Lake (approximately 35 river miles downstream). The RP has been advised to make all efforts necessary to ensure the oil does not reach the Superfund Site. The City of Plainwell, Michigan, has proposed a strategy involving boom diversion and oil collection as a contingency in the event oil impacts the Superfund Site.

U.S. EPA is supporting twenty four hour operations.

The U.S. EPA EOC in Region 5 Chicago Headquarters was activated and staff assisted with ordering personnel and making small purchases.

## 2.3 Logistics Section

Below is the response equipment deployed as reported by Enbridge.

	Control point count	32	32
<b>Length of Boom Deployed in River</b>	Containment Boom (ft)	36,705	37,495
	Absorbent (ft)	31,730	32,330
	Total boom deployed	68,435	69,825
<b>Length of Boom in Yard</b>	Containment Boom (ft)	98,000	98,000
	Absorbent (ft)	76,760	76,760
<b>Total Recovery</b>	Marshall (bbls)	39,828	43,257
	Griffith (bbls)	13,325	13,325

## 2.4 Finance Section

### 2.4.1 Narrative

An interagency agreement (IA) between U.S. EPA and USCG has been established for the incident to transfer \$13 million of Oil Spill Liability Trust Fund dollars to Region 5 U.S. EPA for availability to this response effort. This funding is what is actually available to U.S. EPA at this time for covering response costs, and the ceiling amount is the portion of these funds with USCG National Pollution Fund Center (NPFC) agreement for expenditure in support of the response. The current NPFC issued ceiling (based on U.S. EPA requests) approved towards that funding amount is \$6 million. The current estimated burn rate is approximately \$5 million every 14 days. The original request that was made for the IA fund was for \$20-25 million for the project, which means it currently stands at one half of the identified and estimated amount which may be needed for this project. Additional funds beyond the \$13 million in place will be required if in fact the project ceiling needs to be raised above the IA established fund amount. U.S. EPA estimates that a ceiling increase will be required in the seven days from the current \$6 million allotment.

Additional U.S. EPA assets mobilized to site include a dedicated contracting officer to assist with purchasing and asset acquisitions and tracking.

US Fish and Wildlife, ATSDR and the USCG have each received a PRFA to cover their activities.

The RP is currently financing the cleanup operations.

## 2.5 Safety Officer

U.S. EPA has mobilized a full time safety officer (SO) to the site for this incident. The SO is in charge of, and is conducting, review of the Site HASPs. The safety officer worked with the RP and U.S. EPA contractors towards the completion of a unified HASP.

USCG provided additional safety personnel. U.S. EPA continues to work with and direct Enbridge on-site safety officer and serves as assistant safety officers for Divisions A and B, reporting daily to the IMT SO.

## 2.6 Liaison Officer

The Liaison Officer was dispatched to work in the State Emergency Operations Center in Lansing. An additional Liaison Officer will arrive in Marshall, MI on 02Aug2010.

## 2.7 Information Officer

### 2.7.1 Public Information Officer

The PIO developed a News Release entitled *EPA Solicits Innovative Ideas and Technological solutions for Enbridge Oil Spill Press Advisory*.

U.S. EPA PIO Anne Rowan is in place at the Marshall, Michigan ICP.

A public meeting is planned for Monday evening. In preparation for the meeting, details for the following topics are being developed; spill estimates, U.S. EPA notice of deficiency, updates of the information on the size and quantities of boom deployed; and updates on the number of barrels of oil and water collected. Consideration of the anticipated questions which may be raised at the public meeting is also occurring so that U.S. EPA can properly, honestly and adequately answer the publics inquiries.

### Community Involvement Coordinator

A community meeting is scheduled and has been planned for Monday, 02Aug2010 at 7 pm. The location will be the Marshall High School.

## 3. Participating Entities

### 3.1 Unified Command

Enbridge (Responsible Party)  
 United States Environmental Protection Agency  
 Michigan Department of Natural Resources and Environment  
 Michigan State Police Emergency Management Division  
 Calhoun County Public Health Department  
 Calhoun County Sheriff  
 Kalamazoo County Sheriff

### 3.2 Cooperating and Assisting Agencies

#### Cooperating Agencies

Allegan County Emergency Managment  
American Red Cross  
Augusta Police Department  
B&B Fire Safety Emergency Response  
Calhoun Conservation District  
Calhoun County Commissioners  
Calhoun County Drain Commission

[Calhoun County Sheriff's Office](#)  
[Calhoun County Treasurers Office](#)  
[Calhoun Conservation District](#)  
[Calhoun Greenation District](#)  
[City of Battle Creek, Michigan](#)  
[City of Marshall, Michigan](#)  
[Federal Energy Regulatory Commission](#)  
[Fredonia Township Fire Department](#)  
[Huron Potawatomi](#)  
[Kalamazoo County Office of Emergency Management](#)  
[Kalamazoo Public Safety](#)  
[Kalamazoo Watershed Council](#)  
[Marshall Township Government and Fire Department](#)  
[Marshall Police Department](#)  
[Natural Resource Group](#)  
[National Transportation Safety Board](#)  
[Pipeline Hazardous Materials Safety Administration](#)  
[U.S. Department of Commerce, NOAA](#)  
[U.S. Department of Transportation](#)  
[U.S. Fish & Wildlife Service](#)  
[U.S. Department of Labor, OSHA](#)  
**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 River only for Enbridge.

Enbridge	36
Enbridge Contractors	354
EPA	34
ERRS	84
START	32
Night crew total	247
Grand Total Workers on River	787

#### 5. Definition of Terms

NRC	National Response Center
USEPA	United States Environmental Protection Agency
ERRS	Emergency and Rapid Response Contractor
RP	Responsible Party



IN	Indiana
START	Superfund Technical Assessment and Response Team
CST	Civil Support Team
CTEH	Center for Toxicology and Environmental Health
GC/MS	Gas Chromatograph/Mass Spectroscopy
USFWS	United States Fish and Wildlife Service
USCG	United States Coast Guard
NTSB	National Transportation Safety Board
USDOT	United States Department of Transportation
PHMSA	Pipeline and Hazardous Materials Administration
ATSDR	Agency for Toxic Substances and Disease Registry
CWA	Clean Water Act
OSC	On-scene Coordinator
OSHA	Occupational Safety and Health Administration
VOCs	Volatile Organic Compounds
FOB	Field Observers
PCB	Polychlorinated Biphenyls
GIS	Geographical Information System
FPN	Federal Project Number
OSLTP	Oil Spill Liability Trust Fund
HASP	Health and Safety Plan
LNO	Liaison Officer
JIC	Joint Information Center
PIO	Public Information Officer
CIC	Community Involvement Coordinator
MDNRE	Michigan Department of Natural Resources and Environment
MSPEMD	Michigan State Police Emergency Management Division
CCPH	Calhoun County Public Health
NOAA	National Oceanic and Atmospheric Administration
DOC	Department of Commerce
MI	Michigan

#### 6 Additional sources of information

### **6.1 Internet location of additional information/reports**

Information for this section will be included at the direction of the PIO.

### **6.2 Reporting Schedule**

Sitreps have been created daily and will continue until the Incident Commander establishes a different reporting schedule.

## **7. Situational Reference Materials**

US EPA ARCHIVE DOCUMENT