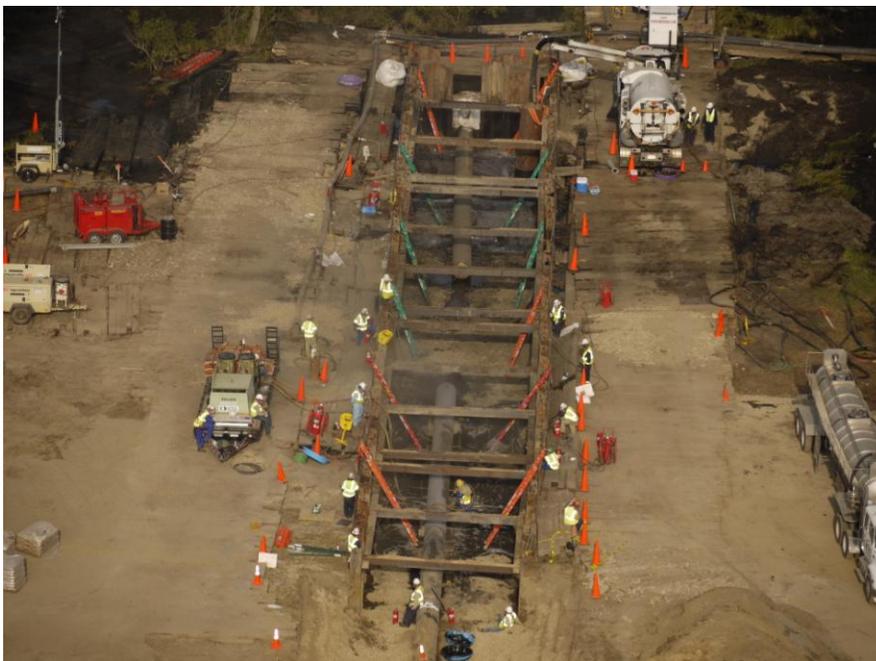


US EPA ARCHIVE DOCUMENT

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V



**Subject:** SITREP #13  
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  
James Rutherford, Calhoun County Health Department

Leon Zupan, Enbridge  
 Susan Hedman, U.S. EPA Regional Administrator  
 Rebecca Humphries, MDNRE  
 Jim Sygo, MDNRE  
 Connie Gibson, Calhoun County Sheriffs Office  
 Cheryl Vosburg, City of Marshall  
 David Chung, U.S. EPA  
 Jason El-Zein, U.S. EPA  
 Duty Officer, NRC  
 Michael Chezik, U.S. Department of Interior  
 Linda Nachowicz, U.S. EPA  
 OSLTF USCG, USCG  
 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  
 Mark Durno, U.S. EPA Deputy Incident Commander

**Date:** 08/07/10

**Reporting Period:** 1900 hours 08/06/10 to 1900 hours 08/07/10 1900

**1. Introduction**

**1.1 Background**

**1.1.1 Site History**

**Background Information**

<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>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b> E10527	<b>Reimbursable Account #:</b>

### **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 centers in Marshall.
- 9) Complete an outline for contingency plans.
- 10) Continue to operate a Joint Information Center.
- 11) Establish a process to collect, coordinate, manage and communicate environmental and public health data.
- 12) Obtain input from DNRE to help establish protocols to guide cleanup of environmentally impacted areas.

### **Command Emphasis**

- 1) Continue efforts to remove oil from pipeline break zone.
- 2) Emphasize efforts for shore cleanup including Ceresco Dam.
- 3) Maintain continuous comprehensive on-water/analytical sheen monitoring, investigation, reporting and recovery at Morrow Lake.
- 4) Evaluate, identify, and implement relocation options for residents outside the evacuation zone with emphasis on Baker Estates work zone.
- 5) Complete and implement operating procedures for epidemiology investigations.
- 6) Finalize and implement Unified Command operating procedures.
- 7) Resolve issues with hotline implementation.
- 8) Develop an interagency protocol to ensure that all agencies requiring involvement in the investigation and removal of the pipeline break section are advised of the timing and progression of that activity.

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

### **River Branch East Divisions A and B**

#### **EPA**

In Division A, EPA conducted oversight of pipe cutting and soil removal. EPA provided photo documentation of cutting and removal activities and provided air monitoring support. Air sampling for VOCs, LEL and benzene in the area surrounding the pipeline excavation confirmed that respiratory protection was no longer needed in that area.

In Division B, EPA conducted oversight of the operations including excavation of the banks of Talmadge Creek near location B1, shoreline cleanup and boom maintenance. EPA observed that skimmers were being operated at high speeds and oil was bypassing or were clogged and needed cleaning (locations B3, B4 and B5). Workers were observed without appropriate PPE and track matting was fouled with oil (locations B4 and B4.7).

#### **Enbridge**

In Division A, Enbridge conducted oil collection at the release site by use of vacuum tankers and removed contaminated soil to containment site 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). Enbridge continued work on the connection, fit-up, and welding of the repair section. Cleanup activities were conducted starting at Talmadge Creek in Division A and working downstream towards location B1, scraping oily vegetation and surface soils with a hoe. All cleanup activities were conducted in accordance with SCAT recommendations.

In Division B, Enbridge continued oil collection at the boom containment sites with a vacuum truck and replaced contaminated boom as required. Enbridge continued laying swamp mat road along Talmadge Creek downstream of Division Road. Enbridge conducted cleanup activities starting at B2 and working downstream, scraping oily creek bank vegetation and surface soil on Talmadge Creek. A trash pump was utilized in B3 to pump river water onto oiled banks for washing. Absorbent boom was removed from the banks to release oil trapped at location B4. All cleanup activities were conducted in accordance with SCAT recommendations.

## River Branch West

### EPA

In Division C, EPA observed skimming, vacuum truck operations, and boom monitoring at locations C1, C2, C3, and C6.

EPA contractors re-positioned and maintained containment boom and replaced contaminated sorbent boom at location C0. EPA conducted oversight of its contractors during boom maintenance, removal, and staging for decontamination.

The USCG team conducted observations at locations C6, C5, C4, C3, C2, C1, C0.5, and C0. Decontamination areas were observed for proper placement and operation (locations C0.5, C3, and C5). Crews at the dam prepared to set buoys at 100 feet from the dam to ensure boats maintain a safe distance while working (C1).

In Division D, EPA observed skimming operations, monitoring and decontamination of boom at locations D1, D2, D2.5, D3. EPA observed skimming operations, changing of boom and debris removal at location D0.5.

EPA contractors reconfigured boom to improve diversion and removed excess boom. Crews continued bagging oiled vegetation and debris collected in the diversion areas near location D2.5. EPA conducted oversight of the containment boom maintenance, removal, and staging for decontamination.

START conducted air monitoring at boom locations D0.5, D1, D2, D2.5, D3, and D5. Air monitoring results ( $H_2S$ , VOC, CO, and LEL) at each location were non-detect and  $O_2$  levels were within acceptable range.

In Division E, EPA observed skimming, oil aeration, and boom monitoring at locations E2 and E3. EPA oversaw deployment of containment boom west of the existing boom at location E4. EPA assessed aeration and screening methods at locations E1, E3 and E0.5. The aeration methods are effective at location E1, but less effective at E3 because the water is too shallow. Location E4 may be a better use of the aeration resource.

EPA contractors re-positioned and maintained containment boom and replaced contaminated sorbent boom (E3). EPA conducted oversight of continued containment boom maintenance, removal, and staging for decontamination.

### Enbridge

In Division C, Enbridge used three boats to collect oiled lily pads. Fourteen (14) boats were used for boom maintenance and cleanup. Crews started shoreline cleanup on area past dam including use of snare boom.

In Division D, Enbridge readjusted booms to get better deflection near location D1. The skimmer was collecting approximately 90% water.

Enbridge continued decontamination of boom and collected 15 gallons of oil. Five hundred feet of sweep were pulled in and added 120 ft of snare boom at location D2.

Enbridge maintained absorbent boom and deployed additional absorbent boom at locations D3, D4 and D5.

In locations E1 and E3 an underwater aerator was installed and working well. Booms maintenance is also being performed.

### **Morrow Lake Task Force**

Two boat crews surveyed the lake, no areas of sheen observed.

### **Branch Operations**

Enbridge Operations has a Shoreline Branch, Monitoring Branch, Wildlife Branch and Air Ops Branch that conduct activities in all the Divisions. EPA also conducts Monitoring Branch operations.

### **Shoreline Branch**

Enbridge conducted shoreline cleaning activities in Division C. Skimming operations and removal of oiled sorbents occurred throughout the day at locations C1, C5, and C6. Crews cleaned and removed oily debris from the shorelines and collected over 600 bags of debris at locations C0.5 and C4. Baker Estates clean-up was delayed but crews began the process of removing oily pads and removing vegetation and used sorbents on some free standing oil in pond area near location C7.

### **Monitoring Branch**

#### **EPA**

A total of 6 air samples were reported as being collected during the August 6, 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 collected 35 surface water samples, 25 potable water samples, 5 sediment samples, 16 24-hour grab air samples, 4 air mini-summa samples, 18 air grab samples and 21 passive dosimeter samples.

Additionally, real-time monitoring for benzene and VOCs continued. Stagnant water sampling was completed at Baker Estates.

**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. A total of 80 birds, 85 turtles and various other mammals and reptiles have been recovered and are being cleaned and/or rehabilitated. To date 14 turtles have been released.

**Air Ops Branch**

Four over flights were conducted and no sheen was observed on Morrow Lake in the delta area.

**Boom Report**

	Enbridge	EPA	TOTALS
Number of Locations	32	5	37
Boom Deployed (feet)	63,997	82,140	146, 137
Oil/Water Recovered (bls- est) cumulative	82,775	4,573	87, 348

**2.2 Planning Section**

The SCAT coordinator met with NOAA, Enbridge and MDNRE to review the cleanup plan for Talmadge Creek. SCAT members reached an agreement on form(s) that will meet the needs of all involved parties for monitoring and assessment of oiled areas during and following clean-up activities. EU determined the methodology for data transfer to the GIS unit for SCAT map preparation.

NOAA will provide MDNRE training on August 9, 2010 to allow stand-up of two full SCAT teams.

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

GIS will be holding daily calls with Enbridge to coordinate data management and to improve data sharing. The GIS department will also collaborate with Enbridge to develop a systematic grid overlay to facilitate clean-up assessment. Enbridge will deliver the GIS file tomorrow.

The DMU uploaded the Google Earth file of validated analytical data to the public incident website (<http://www.epa.gov/enbridgespill/data/datawater.html>). DMU

completed data entry of backlogged SCAT forms, began organization and management of photo documentation and developed 'Auditor Rules for Scribe' to ensure data reporting consistency.

RESL transferred development of the ICS Form 204s for Enbridge operations to Enbridge. RESL obtained documents for the IAP and combined them into the IAP for operating period of August 8, 2010 to August 9, 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**

The Public Health Workgroup presented decision trees for responses to odor complaints and private well sampling to the Unified Command for approval.

A re-occupancy strategy for the evacuation zone has been drafted and will be presented to the Unified Command on August 8, 2010. Confirmation sampling will be conducted during the August 8, 2010 and August 9, 2010 operational periods.

The RP has been informed that a Superfund site with PCB cleanup activity is located 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. Agencies in Unified Command are working with cooperating and assisting agencies and parties to develop a contingency plan to respond if oil does move past Morrow Lake into the PCB cleanup area.

### **2.3 Logistics Section**

Logistics visited a vacant facility at 820 Mann Road with the Incident Commander, the Logistics Section Chiefs from both EPA and Enbridge, the Communications Unit Leaders from both EPA and Enbridge and MI-DTMB to evaluate it as a future site location of the UCP.

Logistics developed a contingency plan after an internet connection failure that hampered nighttime operations at the UCP.

**2.4 Finance Section**

The current NPFC issued ceiling (based on EPA requests) is \$6 million. Approximately 85% of the ceiling has been spent through August 06, 2010; with a burn rate of \$543,000 per day. These cost summaries only reflect EPA expenditures for the incident.

	Est Expended (\$)	Est Burn Rate (\$)
EQM	877,598	75,723
LATA	748,352	111,443
ER LLC	516,544	58,719
ERRS Contractors	2,142,494	245,885
WESTON START	935,602	133,898
Federal & Other Agencies	1,484,396	103,281
Sub-Totals	4,562,492	483,064
Indirect Costs (12.6%)	574,874	60,866
Est Total Oil Spill	5,137,366	543,930

**2.5 Safety Officer**

There were no new accidents/injuries reported today.

Operations continued investigating the boat incident that occurred on August 6, 2010 and will provide a full briefing to the Safety Office when complete.

Enbridge continued to provide continuous on-site safety officers for Divisions A and B, with a roving safety officer to cover Divisions C/D/E.

MIOSHA and Federal OSHA began continuous oversight in areas B through E.

**2.6 Liaison Officer**

The Liaison Officer reviewed maps of traffic plans for the staging areas and made an initial determination that response activities will not impact Calhoun County Fair traffic. The Liaison officer will meet with Calhoun County Sheriff's Office regarding traffic control for the Fair and finalize on August 9, 2010. The Calhoun County Fair will begin on August 14, 2010.

## 2.7 Information Officer

### 2.7.1 Public Information Officer

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

##### TOTAL CALLS: 4

##### Calls were sent to:

EPA	2
DNRE	1
State	1

There has been a lower level call activity including two calls requesting conference call information, one call offering to assist, and one call requesting fishing information.

#### PIO Activities

JIC staff answered the media hotline, performed media monitoring, and provided a media liaison for the phone media briefing (although no media were present needing access to the media center).

The MDA amended its previous irrigation and watering advisory for the Kalamazoo River advising that producers, farmers, and homeowners may now resume crop or lawn irrigation or watering from the surface water of the Kalamazoo River below Morrow Dam. This amendment is posted at [www.michigan.gov/oilspill](http://www.michigan.gov/oilspill).

The MDCH Field Epidemiology Team started their surveillance program with residents of the Baker Estates trailer park. MDCH and CCPH conducted community outreach to residents at Baker Estates; door notices were left on the doors for those residents that were not at home.

The PIO issued the first three EPA photos of excavated pipe near the spill site.

#### 2.9 Response Actions to Date

Containment boom, sorbent boom, skimming equipment, vacuum trucks and other equipment are being 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 and RP contractors, with the support of the US Army 51st Civil Support Team, 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.

The USCG Atlantic Strike Team is on-scene to provide assistance with RP and contractor oversight. USCG District 9 staff is on site working with the Incident Management Team.

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. EPA will coordinate with USDOT-PHMSA and NTSB to ensure that during pipeline repair activities the environmental and health and safety considerations are accounted for.

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. Twelve residences have been evacuated, twenty-seven chose to stay and twenty-two did not answer. The evacuation recommendation remains in effect.

**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

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 Battle Creek  
 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 River only for Enbridge.

Personnel	Numbers
Enbridge	<b>52</b>
Enbridge Contractors	<b>822</b>
EPA	<b>57</b>
ERRS	<b>108</b>
USCG	<b>18</b>
USFWS	<b>13</b>
START	<b>69</b>
Total	<b>1139</b>

**5. Definition of Terms**

ATSDR                      Agency for Toxic Substances and Disease Registry  
 CCPH                      Calhoun County Public Health  
 CHD                        County Health Department  
 CIC                         Community Involvement Coordinator  
 CST                        Civil Support Team  
 CTEH                      Center for Toxicology and Environmental Health  
 CWA                        Clean Water Act

DMU	Data Management Unit
DNRE	Department of Natural Resources and Environment
DOC	Department of Commerce
EPA	Environmental Protection Agency
ERRS	Emergency and Rapid Response Contractor
ERT	Emergency Response Team
FOB	Field Observers
FPN	Federal Project Number
GC/MS	Gas Chromatograph/Mass Spectroscopy
GIS	Geographical Information System
HASP	Health and Safety Plan
IAP	Incident Action Plan
IN	Indiana
JIC	Joint Information Center
LEL	Lower Explosive Limit
LNO	Liaison Officer
MDCH	Michigan Department of
MDNRE	Michigan Department of Natural Resources and Environment
MI	Michigan
MSPEMD	Michigan State Police Emergency Management Division
NRC	National Response Center
NOAA	National Oceanic and Atmospheric Administration
NTSB	National Transportation Safety Board
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSLTP	Oil Spill Liability Trust Fund
PCB	Polychlorinated Biphenyls
PHMSA	Pipeline and Hazardous Materials Administration
PIO	Public Information Officer
RP	Responsible Party
SOP	Standard Operating Procedure
START	Superfund Technical Assessment and Response Team
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VOCs	Volatile Organic Compounds

## 6.2 Reporting Schedule

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