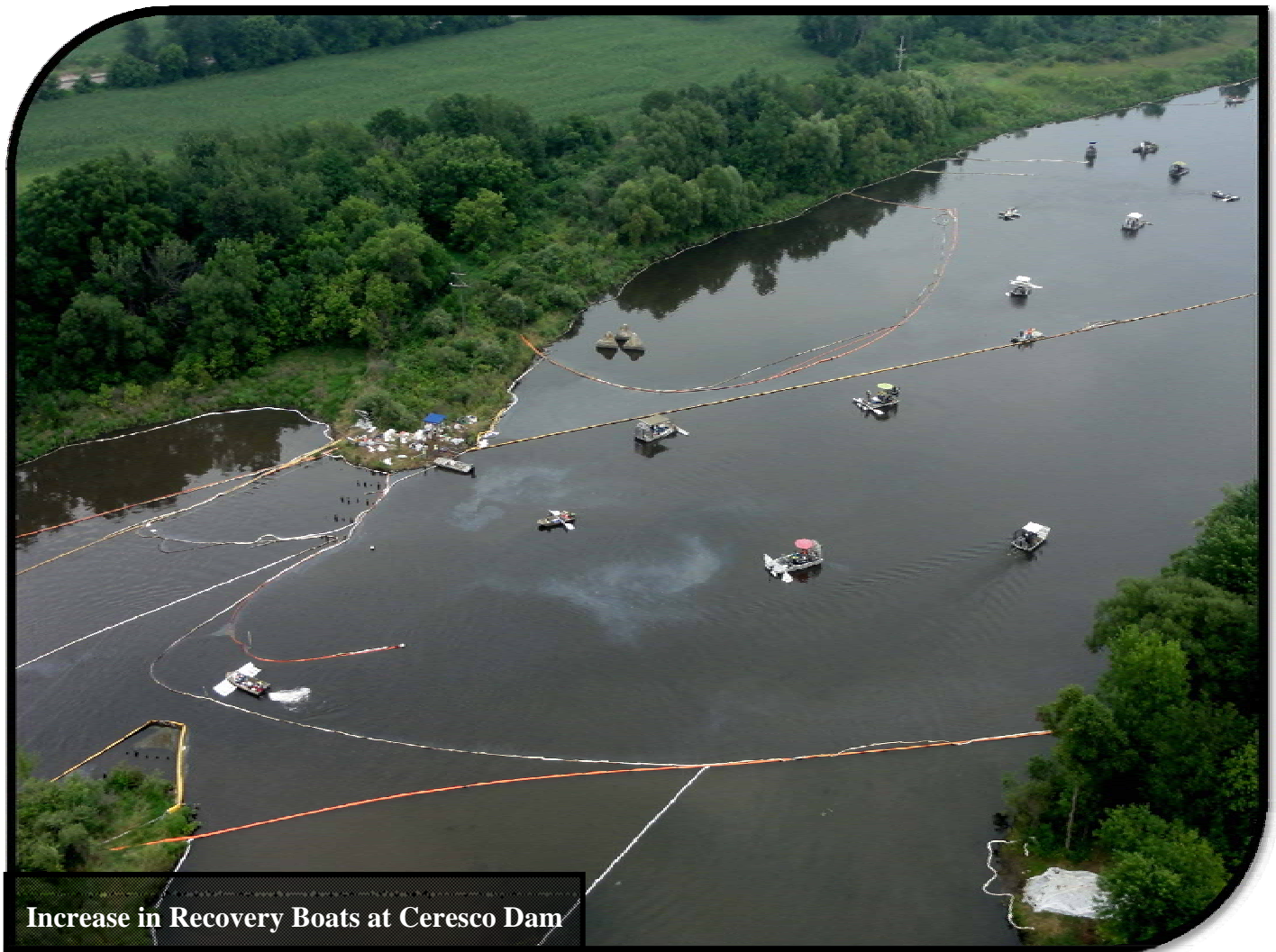


US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #111**



**KALAMAZOO RIVER/ENBRIDGE SPILL – REMOVAL
SITE # Z5JS
MARSHALL, MICHIGAN
LATITUDE: 42.2395273; LONGITUDE: -84.9662018**



Increase in Recovery Boats at Ceresco Dam

To: Lt. Paul Baker, Kalamazoo County Sheriff's Office
James Rutherford, Calhoun County Public Health Department
Durk Dunham, Calhoun County Emergency Management
Lt. Barry Reber, Michigan State Police, Emergency Management.
Mark DuCharme, MDEQ
Mike Alexander, MDEQ
Mike McKenzie, City of Battle Creek
Susan Hedman, U.S. EPA Regional Administrator
James Sygo, MDEQ
Cheryl Vosburg, City of Marshall
Christine Kosmowski, City of Battle Creek
Linda Buzas, Kalamazoo County

From: Ralph Dollhopf, U.S. EPA, Federal On-Scene Coordinator

Date: 8/10/2011

Reporting Period: 0700 hours 8/1/2011 through 0700 hours 8/8/2011

1. Site Data

Site Number:	Z5JS	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Emergency
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non-NPL	Operable Unit:	
Mobilization Date:	7/26/2010	Start Date:	7/26/2010
Demobilization Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E10527	Reimbursable Account:	

2. Previous Response Actions and Current Response Governance

- Previous response actions performed to date may be found in SITREPs #1 through #110.
- Governance for the project is provided by the U.S. Environmental Protection Agency (U.S. EPA) Federal On-Scene Coordinator (FOSC) and the Michigan Department of Environmental Quality (MDEQ). The structure of the response is the Incident Command System (ICS), with the FOSC serving as the Incident Commander (IC).
- The Operational Periods covered in this report are: 0700 hours on 8/1/2011 through 0700 hours on 8/4/2011 and 0700 hours on 8/4/2011 through 0700 hours on 8/8/2011.

3. Operations

- This operational phase of the response consisted of: 1) Air Operations; 2) Waste Management; 3) Environmental Compliance including Control Point Management; 4) Response Action including Overbank Excavation, Overbank Surface Cleanup, and Submerged Oil Recovery in the Kalamazoo River; 5) Monitoring; and 6) Wildlife Operations.

3.1 Air Operations Branch

- During the operational periods, six overflights were conducted for situational awareness.

3.2 Waste Management Branch

3.2.1 Decontamination Unit

- Equipment and boom decontaminated during the operational periods are presented in Table 1.

3.2.2 Transportation and Disposal Unit

- Waste management, characterization, and coordination of transportation and disposal continued according to approved plans. Quantities of oil and debris shipped off site during the reporting period are presented in Tables 2 through 5.
- EPA continued oversight of waste characterization, transportation, and disposal activities including composite sampling during live loading operations at the Mile Post (MP) 11.25 R2 and MP 4.5 excavation sites.

3.3 Environmental Compliance Branch

3.3.1 Operations and Maintenance (O&M)

- During the operational periods, Enbridge continued inspections of control points, containment boom locations, and protective boom locations. Teams evaluated boom placement, boom effectiveness, and presence of accumulated visible oil or oil-saturated soils. Daily O&M activity and progress tracking information is presented in Table 6.
- O&M personnel continued to install and enhance surface and subsurface containment as necessary. Hard boom, X-Tex curtain, absorbent boom, t-posts, and cinder block anchors were installed at existing and new locations throughout the Kalamazoo River from MP 5.55 N to MP 37.25 SO, the Morrow Lake Delta, and Morrow Lake.
- Teams continued to perform sheen sweeps along the Kalamazoo River at from MP 9.5 to MP 14.35 and between Control Points E4 and E6.
- On August 6, 2010, Control Point C0.5 was removed from above Ceresco Dam to increase the effectiveness of submerged oil recovery activities in the area.

3.4 Response Action Branch

3.4.1 Overbank Surface Cleanup Unit

- During the operational periods, overbank surface cleanup work was conducted along the Kalamazoo River and islands within the Kalamazoo River from MP 3.0 to MP 32.75. Enbridge teams focused on oil recovery in overbank ponded areas using stingers and tillers. Teams also removed tar patties using approved techniques to eliminate visible surface contamination. Overbank surface cleanup progress information is presented in Table 7.

3.4.2 Overbank Excavation Unit

- During the operational periods, teams completed demobilization and continued stabilization and erosion control at 11.25 R2. Teams also continued to set up the work area, mobilize mats, install sheet piling, and continued the dewatering process at 4.50 L1 and 21.50 Oxbow. Teams began excavation activities and maintained temporary restoration at 4.50 L1.

3.4.3 Submerged Oil Recovery and Cleanup Unit

- Submerged oil recovery operations continued on the Kalamazoo River, Morrow Lake Delta, and in areas surrounding the islands adjacent to Morrow Lake. Recovery operations followed the approved submerged oil recovery tool box techniques including flushing and other mechanical agitation techniques.
- During the operational periods, teams conducted site preparation and recovery operations along the Kalamazoo River from MP 5.25 to MP 23.15. Teams also continued submerged oil recovery, site preparation, woody debris removal, and vegetation removal activities using aquatic vegetation cutters in the Morrow Lake Delta. Submerged oil recovery and cleanup progress information is presented in Table 8.

3.5 Monitoring Branch

3.5.1 Surface Water and Sediment Sampling

- Enbridge continued soil, sediment and surface water sampling were performed in accordance with the existing Sampling and Analysis Plan (SAP). Samples collected as reported by Enbridge are provided in Table 9.
- Enbridge continued to conduct turbidity and dissolved oxygen monitoring throughout the Kalamazoo River, focusing on active submerged oil recovery work locations.
- An unknown substance was found near MP 15.05 and MP 15.65. Samples of the substance were collected from both locations. As of the close of the operational period, sample results were pending.

3.5.2 Air Monitoring and Sampling

- The 2011 Community Air Monitoring and Sampling Plan was re-implemented.
- Enbridge continued to conduct air monitoring at work area locations for worker safety and to maintain an odor response team. Air sampling information is provided in Table 9.

3.6 Wildlife Branch

- The Wildlife Branch continued to provide medical health assessment, treatment, and release of rehabilitated wildlife under US Fish and Wildlife Service (USFWS) direction.
- Throughout the operational period, the Wildlife Branch conducted turtle trapping and release along the Kalamazoo River. Trapping information is presented in Table 10.
- The Wildlife Branch conducted relocation of fish from the excavation site at 4.50 as necessary based on dissolved oxygen and turbidity monitoring results.

4. Planning

4.1 Situation Unit

- Situation Unit personnel observed and documented progress in all operational areas and continued to assess areas of interest such as observations of oil sheen, oil removal, and decontamination activities. Significant observations during the operational periods are as follows:
 - Remedial Investigation work began along the Talmadge Creek.
 - Submerged oil recovery work continued upstream of Ceresco Dam. Significant quantities of surface sheen resulted in the mobilization of additional boats to increase recovery.
 - Enbridge continued Legacy Projects at 15 Mile Road, Wheatfield Road, and McCormick Street.
 - Vegetation removal and submerged oil recovery work continued at the Morrow Lake Delta and Morrow Lake. Enbridge mobilized and began assembly of large pontoon mounted excavators for work in the area.
- EPA Field Observers conducted investigations of tar patty locations for evaluation of transition of these sites to MDEQ jurisdiction.

4.2 Environmental Unit

- The Recovery Task Force conducted coordination of oil recovery activities including overbank surface recovery and submerged oil recovery activities.

4.3 Documentation Unit

- Documentation Unit personnel continued organization and archiving of electronic and paper files.

4.4 GIS Support

- During the operational periods, EPA GIS personnel continued to support operations with the generation of site maps.

5. Command

5.1 Safety

- Safety personnel continued to conduct work site visits along the Kalamazoo River, focusing on activities at MP 4.5 and MP 21.50 Oxbow excavation sites. No major safety issues were observed.
- Throughout the operational periods, minor first aid incidents occurred, including 2 insect bites, a pinched finger, 3 instances of poison ivy exposure, a small fire caused by an electrical cord, a slight chemical burn, and blisters caused by wet waders. All the affected personnel were able to return to work.

5.2 Public Information

- During these two operational periods, the Public Information Officer (PIO) coordinated media interviews and prepared for public meetings.
- The quantity of public inquires reported by Enbridge for this period is presented in Table 11.

6. Landowner Environmental Issues

- Landowner environmental issues, as reported by Enbridge for this period are presented in Table 12.

7. Finance

- The current National Pollution Funds Center (NPFC) issued ceiling is \$35.7 Million. Approximately 87.6% of the ceiling has been spent through August 7, 2011. As of July 31, 2011, the latest average 7-day burn rate was \$81,225 per day. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 13.

8. Participating Entities

- A Multi-Agency Coordination (MAC) Group continues to meet weekly regarding the progress of the response. Entities participating in the MAC include:
 - U.S. Environmental Protection Agency
 - Michigan Department of Environmental Quality
 - Michigan State Police Emergency Management Division
 - City of Battle Creek
 - City of Marshall
 - Calhoun County Public Health Department
 - Calhoun County Emergency Management
 - Kalamazoo County Public Health Department
 - Kalamazoo County Sheriff
 - Enbridge (Responsible Party)
- For a list of cooperating and assisting agencies and the congressional presence, see SITREP #51 (Sections 3.2 and 3.3).

9. Personnel On-Site

- Staffing numbers for the entities and agencies active in the response are presented in Table 14.

10. Source of Additional Information

- For additional information, refer to <http://www.epa.gov/enbridgespill>. For sampling analysis data, see <http://response.enbridge.com/response/main.aspx?id=13168>.

11. Clean-up Progress Metrics

Table 1 - Equipment Decontamination

Location/Media	Total	August 2011						
		7	6	5	4	3	2	1
Frac Tanks	0	0	0	0	0	0	0	0
Vac Trucks-Tankers	2	0	0	0	1	0	0	1
Roll-Off Boxes	0	0	0	0	0	0	0	0
Yellow Iron (light)	0	0	0	0	0	0	0	0
Yellow Iron (heavy)	0	0	0	0	0	0	0	0
Boats	12	0	0	0	1	1	0	10
Vehicles	14	9	0	0	0	2	0	3
Boom (feet)	3700	100	750	600	500	1000	600	150
Miscellaneous Items	448	0	0	0	15	212	211	10

Table 2 - Soil and Debris Shipped Off Site (as of 8/7/2011)

Waste Stream	Cumulative	Disposal Facility
<i>Haz Soil (yd³)</i>	19,644	<i>Envirosafe (Oregon, OH)</i>
Non-Haz Soil & Debris (yd ³) (Excluding Ceresco Dredge)	20,613	Terra/C&C
<i>Non-Haz Soil & Debris (yd³) (Excluding Ceresco Dredge)</i>	64,815	<i>Westside Recycling (Three Rivers, MI)</i>
<i>Non-Haz Soil (yd³) (Ceresco Dredge Only)</i>	5,562	<i>EQ/Republic (Marshall, MI)</i>
<i>Haz Debris (yd³)</i>	12,075	<i>EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)</i>
Non-Haz Household Debris (ton)	928	EQ/Republic (Marshall, MI); C&C
Non-Haz Impacted Debris (ton)	3,425	

Shaded and italicized items are discontinued waste streams.

Table 3 – Oil/Water Collected by Location (as of 8/7/2011)

Location	Cumulative (gallons)
Division A	5,356,315
Division B	4,868,279
Division C	1,891,406
Division D	121,106
Division E	47,438
Decontamination	1,890,140
Site A	316,464
Other Locations*	1,329,594
Subtotal	15,820,742
Sludge**	474,215
Total Oil/Water	15,346,527

* Wildlife Center Operations, Sediment Trap Cleaning, Hydro-Vacuuming.

** Sludge collected is tracked as a liquid waste inbound; however, after stabilization, the sludge is disposed of as solid waste. Therefore, the volume of sludge is not included within the cumulative oil/water totals. Stabilized sludge is included in the solid waste disposal metrics.

Table 4 - Liquid Shipped Off-Site (as of 8/7/2011)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
Hazardous Water	Dynecol	Detroit, MI	3,594,579
Non-Haz Water	Battle Creek POTW	Battle Creek, MI	893,980
Non-Haz Water	Dynecol	Detroit, MI	913,642
Non-Haz Water	Liquid Industrial Waste	Holland, MI	231,601
Non-Haz Water	Plummer	Kentwood, MI	70,000
<i>Oil</i>	<i>Enbridge Facility</i>	<i>Griffith, IN</i>	<i>766,288</i>
<i>Other Material</i>			<i>1,405,525</i>
<i>Treated Non-Haz Water</i>	<i>Liquid Industrial Waste</i>	<i>Holland, MI</i>	<i>370,200</i>
<i>Treated Non-Haz Water</i>	<i>Plummer</i>	<i>Kentwood, MI</i>	<i>4,976,140</i>
<i>Hazardous Water</i>	<i>Safety Kleen ^a</i>		<i>825</i>
<i>Treated Non-Haz Water*</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	<i>150,700</i>
<i>Treated Non-Haz Water*</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	<i>1,968,700</i>
Total			15,342,180

Shaded and italicized items are discontinued waste streams.

† Cumulative quantities may not reconcile with previous reports (due to auditing).

^a New Age lab water and methanol mix generated by mobile laboratory.

* Treated Non-Haz Water no longer sent to this location.

Table 5 - Oil/Water Remaining On-Site (as of 8/7/2011)

Item	Cumulative (gallons)
Oil/Water Collected	15,346,527
Oil/Water Shipped Off-Site	15,342,180
Total Oil/Water Remaining On-Site	4,347

Table 6 – Daily Activity/Progress

	August 2011						
	7	6	5	4	3	2	1
Parks Assessment Sites	3	3	3	3	3	3	3
Bridge Assessment Sites	21	21	21	21	21	21	21
High Use Access Points Assessment Sites	9	9	9	9	9	9	9
Operations & Maintenance Site	108	108	108	108	108	108	107
Boom Locations							
Control Points	10	10	11	11	11	11	11
Protective Containment Sites	35	35	36	36	36	36	36
River Erosion Sites	26	26	26	26	26	26	26
Total Surface Hard Boom (ft)	42,125	42,625	42,325	42,725	43,825	43,825	43,725
[Control Point Surface Hard Boom]	[26,050]	[26,050]	[26,050]	[26,450]	[27,450]	[27,450]	[27,450]

Table 7 – Overbank Surface Cleanup Progress (as of 8/7/2011)

Quarter – mile Segments Identified for Cleanup	237
Cleanup Complete and Completeness Check Form Signed	172
Percent Complete	72.6%

Table 8 – Submerged Oil Recovery and Cleanup Progress (as of 8/7/2011)

Quarter – mile Segments Identified for Cleanup	208
Cleanup Complete and Completeness Check Form Signed	46
Percent Complete	22.1%

Table 9 – Samples Collected By Enbridge

Sample Type	Total	August 2011						
		7	6	5	4	3	2	1
Surface Water	59	0	12	5	21	10	11	0
Private Well	0	0	0	0	0	0	0	0
Groundwater	2	0	0	0	0	2	0	0
Sediment	12	0	0	3	6	0	3	0
Soil	100	0	1	8	2	23	30	36
Air (Community)	58	16	16	16	7	3	0	0
Air (Odor Complaint)	3	0	0	0	1	1	1	0

Table 10 – Wildlife

Location/Media	Total	August 2011						
		7	6	5	4	3	2	1
Turtles in Captivity	75	75	75	73	76	81	74	68
Turtles Captured Oiled– Field Cleaned	46	0	7	10	1	8	10	10
Turtles Captured Oiled– Admitted to Wildlife Center	22	0	2	4	1	7	6	2
Turtles Captured – Un-oiled and Field Released	116	0	15	26	18	18	30	9
Turtles Released from Captivity	20	0	0	7	6	0	0	7

Table 11 – Public Inquiries Received by EPA and Enbridge

Location/Media	Total	August 2011						
		7	6	5	4	3	2	1
Marshall Community Center	28	0	0	3	7	5	9	4
Oil Spill Public Information Hotline	15	0	0	2	0	4	5	4
Website	1	0	0	1	0	0	0	0
Total Public Inquiries	44	0	0	6	7	9	14	8

Table 12 – Landowner Environmental Issues (as of 8/7/2011)

Issues this Period	Issues Undergoing Evaluation	Issues Considered Addressed
0	12	0

Table 13 - Financial Summary

Item	Expended (Cumulative) as of 8/7/2011)
ERRS Contractors	
EQM (EPS50802) T057	\$ 1,199,522
T060	\$ 213,636
LATA (EPS50804) T019	\$ 1,161,082
ER LLC (EPS50905) T040	\$ 683,330
Total ERRS Contractors	\$ 3,257,571
Other Contractors	
Lockheed Martin (EPW09031) – TAGA Support	\$ 185,951
T&T Bisso (EPA:HS800008)	\$ 882,087
Total Other Contractors	\$ 1,068,038
START Contractor – WESTON (EPS50604)	
T030-Response	\$ 14,632,459
T032-Sampling	\$ 183,597
T037-Doc Support	\$ 920,756
Total START Contractor	\$ 15,736,812
Response Contractor Sub-Totals	\$ 20,062,421
EPA Funded Costs: Total EPA Costs	\$ 5,082,322
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,823,682
Sub-Totals	\$ 26,968,425
Indirect Cost (16.00%)	\$ 4,314,948
Total Est. Oil Spill Cost	\$ 31,283,373
Oil Spill Ceiling Authorized by USCG	\$ 35,700,000
Oil Spill Ceiling Available Balance	\$ 4,416,627

Table 14 - Personnel On-Site

Agency/Entity	August 2011						
	7	6	5	4	3	2	1
U.S. EPA	0	3	6	8	8	7	8
START	5	42	44	47	47	46	45
MDEQ	0	1	4	5	7	4	4
MDEQ Contractors	0	6	8	10	10	9	10
Calhoun County Public Health	0	0	0	2	0	0	0
Calhoun County (CC) EM	0	0	0	1	0	0	0
City of Battle Creek	0	0	0	1	0	0	0
City of Marshall	0	0	0	1	0	0	0
Village of Augusta	0	0	0	0	0	0	0
Kalamazoo County Public Health	0	0	0	1	0	0	0
Kalamazoo Sheriff	0	0	0	0	0	0	0
MDCH	0	0	0	1	0	0	0
USGS	0	0	0	0	0	0	0
Michigan State Police EMD	0	0	0	0	0	0	0
Enbridge – Operations	28	97	186	196	190	192	164
Enbridge – Field	80	484	475	537	499	476	466
Total	113	633	723	810	761	734	697

*Enbridge Operations and Field include Enbridge and contractors as reported by Enbridge