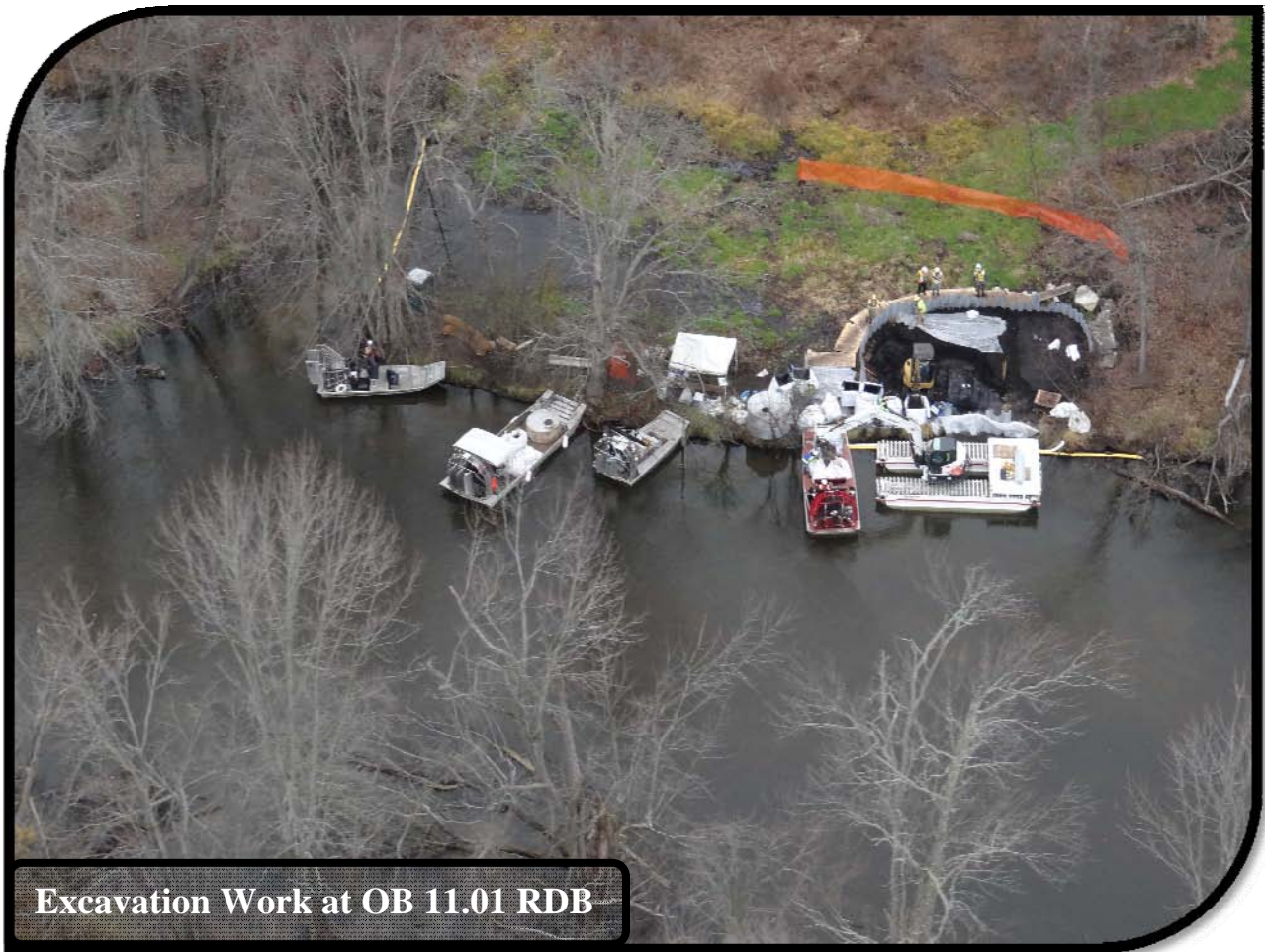


US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #125**



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



Excavation Work at OB 11.01 RDB

US EPA ARCHIVE DOCUMENT

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

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

Date: 12/02/2011

Reporting Period: 0700 hours 11/14/2011 through 0700 hours 11/28/2011

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 #124.
- 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 as follows:
 - 0700 hours on 11/14/2011 through 0700 hours on 11/17/2011, and
 - 0700 hours on 11/17/2011 through 0700 hours on 11/28/2011.

3. Operations Section

- The organizational response structure consisted of the following Branches: 1) Overbank; 2) Submerged Oil; 3) Containment; 4) OSCAR; 5) Kalamazoo River; 6) Talmadge Creek; 7) Air Operations; and 8) Waste Management.
- The Operations Section focused on strategy development and tactics for containment of submerged oil in the Delta and the Fan of Morrow Lake and continued to implement staffing plans for project transition to winter operations.

3.1 Overbank Branch

3.1.1 Overbank Science Group

- The Overbank Science Group developed plans for addressing Outstanding Sites Characterization and Reconciliation (OSCAR) sites.
- Teams conducted a visual assessment of 8.75 R1.

3.1.2 Overbank Compliance Group

- The Overbank Compliance Group prepared permits for response actions at expedited Remedial Investigation (RI) sites.
- Implementation of river bank erosion restoration and stabilization continued.
- Grading, seeding, and stabilization of access and staging locations continued.

3.1.3 Overbank Recovery Group

- Teams completed excavation activities at OB 11.01 RDB, continued restoration activities, removed sheet piling, and began demobilization from the site.
- Removal of sheet piling, restoration, and demobilization activities were conducted at OB 14.98 I.
- Teams conducted pre-planning for excavation activities at OB 5.92 RDB and OB 6.75 I.
- Overbank surface cleanup sites are included in the OSCAR Branch evaluations. Additional information is provided in Section 3.4.

3.1.4 Overbank Monitoring Group

- The overbank monitoring Group conducted site inspections and recommended site maintenance or site transfer to MDEQ.
- Teams continued to collect water quality readings in the Kalamazoo River near excavation sites.
- Enbridge continued to conduct real time air monitoring activities at active work sites, including, OB 11.01 RDB, and OB 14.98 I. No detections were noted during this reporting period.
- Enbridge continued to maintain an odor response team; however, no odor complaints were received during this reporting period.
- Air sampling and monitoring information is provided in Tables 1 and 2.

3.2 Submerged Oil Branch

3.2.1 Submerged Oil Science Group

- The Submerged Oil Science Group continued to support the OSCAR Branch during review of Late Summer 2011 Reassessment (LSR) sites.
- Teams continued to implement the hydrodynamic assessment activities and the generation of the hydrodynamic model to characterize the movement of submerged oil.

3.2.2 Submerged Oil Compliance Group

- Large woody debris management continued in accordance with applicable work plan requirements.

3.2.3 Submerged Oil Recovery Group

- On October 28, 2011, all submerged oil recovery efforts and poling efforts were suspended for the year due to low water temperatures and sediment temperatures. As of October 28, 2011, submerged oil recovery work was completed and completeness check forms were signed for 191 of 225 sites (84.9%) identified during the Spring 2011 Reassessment and for 4 of 176 sites (2.3%) identified during the Late Summer 2011 Reassessment (LSR). As of October 28, 2011, LSR poling was completed at 71% of focus areas identified during the Spring 2011 Reassessment.
- Teams completed demobilization of personnel and equipment associated with submerged oil activities from the Kalamazoo River, Morrow Lake Delta, and Morrow Lake. Temporary decommissioning of boat launches for the winter continued throughout the reporting period.

3.2.4 Submerged Oil Monitoring Group

- No activities were conducted during the reporting period.

3.3 Containment Branch

3.3.1 Containment Science Group

- The Containment Science Group refined the hydrodynamic model concepts and continued developing the Plan for Preventing Migration of Oil Past the Morrow Lake Dam during Winter 2011-2012.

3.3.2 Containment Compliance Group

- No activities were conducted during the reporting period.

3.3.3 Containment Recovery Group

- During this reporting period, the Containment Recovery Group focused on boom removal throughout the Kalamazoo River, Morrow Lake Delta, and Morrow Lake.
- Teams continued to enhance surface and subsurface containment, conduct debris removal, and perform sheen sweeps along the Kalamazoo River, the Morrow Lake Delta, and Morrow Lake.
- Deployed control point and O&M containment hard boom information is presented in Table 3.

3.3.4 Containment Monitoring Group

- Teams 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 at various locations.
- Teams conducted inspections of O&M sites to recommend sites for maintenance or closeout and continued assessment of OSCAR sites.
- Water quality monitoring was conducted near the E4 boat launch.

- Refer to Section 3.4.1 for air monitoring and sampling information.

3.4 OSCAR Branch

- The OSCAR Branch continued to consolidate and prioritize outstanding overbank ponded sites, O&M sites, sheening bank sites, and tar patty sites. The Branch participated in data review, quality control, and site closure processes to ensure that all pending issues are addressed.
- The OSCAR Branch recommended field evaluations of sites, requested information for site determination, and oversaw the transfer of sites between the various Branches.
- OSCAR sites status information is presented in Table 4.

3.5 Kalamazoo River Branch

3.5.1 Kalamazoo River Remedial Investigation Group

- Teams continued implementation and evaluation of the Kalamazoo River RI continued from MP 2.25 to MP 3.14.
- Prioritization of RI sites continued.
- Expedited RI work was conducted at various sites between OB 6.75 I and OB 26.23.

3.5.2 Kalamazoo River Compliance Group

- No activities were conducted during this reporting period.

3.5.3 Kalamazoo River Remedial Action Group

- Post-excavation sampling was conducted at OB 11.01 RDB.

3.5.4 Kalamazoo River Monitoring Group

- Quarterly potable water sampling was conducted. Refer to Table 2 for samples collected by Enbridge during this reporting period.

3.6 Talmadge Creek Branch

3.6.1 Talmadge Creek Remedial Investigation Group

- The Talmadge Creek RI Group conducted the bulk sediment toxicity study and coordinated with the Talmadge Creek Compliance Group to develop a permit for MP 1.0 to MP 2.25.

3.6.2 Talmadge Creek Compliance Group

- The Talmadge Creek Compliance Group continued the development of the permit for response actions at MP 1.0 to MP 2.25.
- Evaluation of RI data continued.

3.6.3 Talmadge Creek Remedial Action Group

- Teams continued to install and maintain temporary road mats, operate and maintain the pump-around and GAC dewatering systems, and maintain soil erosion controls.
- Excavation and restoration of disturbed excavation areas continued from MP 0.3 through MP 0.5.
- Teams remobilized infrastructure from MP 0.0 – MP 0.5 to MP 0.5 – MP 1.0.
- Post-excavation verification sampling was conducted.

3.6.4 Talmadge Creek Monitoring Group

- Monitoring of erosion control devices continued.
- Teams conducted water and air quality monitoring for excavation activities along Talmadge Creek.

3.7 Air Operations Branch

- During the reporting periods, five overflights were conducted for situational awareness.
- Photographs were taken during overflights for presentation during various meetings.

3.8 Waste Management Branch

3.8.1 Decontamination Group

- A summary of equipment and boom decontaminated during the operational periods is presented in Table 5.

3.8.2 Transportation and Disposal Group

- Teams continued to haul contaminated soil, water, and debris to staging areas for waste characterization and oil recovery sampling prior to off-site disposal.
- Quantities of oil and debris shipped off-site during the reporting period are presented in Tables 6 through 9.
- The total amount of recovered oil since the inception of the response has been estimated using actual waste stream volumes, analytical data, and physical parameters of oil-containing media. A summary of the estimated volume of recovered oil is presented in Table 10.

3.8.3 Waste Management Characterization Group

- Waste management characterization, manifesting, and coordination of transportation and disposal continued according to approved plans.

4. Planning

4.1 Situation Unit

- Situation Unit personnel observed and documented progress in operational areas, and continued to assess areas of interest including locations of oil sheen, boom removal, and decontamination activities.

4.1.1 GIS Specialists

- GIS personnel continued to support operations with the generation of site maps.

4.2 Environmental Unit

- The EPA revision of the “Consolidated Work Plan for Activities through 2012” was transmitted to Enbridge on November 18, 2011.
- EPA personnel continued directing Enbridge efforts to estimate the quantity of submerged oil remaining as of Spring 2011.
- EPA continued coordination with USGS regarding the Kalamazoo River geomorphology evaluation and the impact on strategy and tactics for future oil recovery efforts.

4.3 Documentation Unit

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

4.4 Resource Unit

- Personnel continued to produce Incident Action Plans (IAPs), support the planning efforts of operations, and provide information to logistics in order to properly prepare and procure resources.

5. Command

5.1 Safety Officers

- Safety personnel continued to conduct work-site safety inspections, with a focus on promoting safe practices during decontamination and demobilization of personnel and equipment, safety awareness for hunting season, seasonal weather changes, and travel safety.
- Minor safety incidents occurred throughout the reporting period, including a cut, a back injury, a slip and fall into the Kalamazoo River, and exposure to decontamination water. All affected personnel were able to return to work.

5.2 Public Information

- No activity was conducted during this reporting period.
- The number of public inquires reported by Enbridge for this period is presented in Table 11.

6. Landowner Environmental Issues

- Landowner environmental issues reported by Enbridge for the operational periods are presented in Table 12.

7. Finance

- The current National Pollution Funds Center (NPFC) ceiling is \$43.7 Million. Approximately 85.5% of the ceiling has been spent through November 27, 2011. The latest average 7-day burn rate was \$12,392 per day, which reflects reduced staffing during the Thanksgiving Holiday. These cost summaries reflect only EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 13.

8. Participating Entities

- The Multi-Agency Coordination (MAC) Group continues meeting twice per month to discuss the progress of the response. Entities participating in the MAC include:
 - U.S. Environmental Protection Agency
 - Michigan Department of Environmental Quality
 - City of Battle Creek
 - City of Marshall
 - Calhoun County Public Health Department
 - Calhoun County Emergency Management
 - Kalamazoo County Health and Community Services 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/>.

11. Clean-up Progress Metrics

Table 1 – Real Time Air Monitoring Counts Performed by Enbridge

Monitoring Location	Total	November 2011													
		27	26	25	24	23	22	21	20	19	18	17	16	15	14
Odor Response	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Work Area	139	0	0	0	0	0	10	10	0	9	16	31	21	21	21

Table 2 – Samples Collected By Enbridge

Sample Type	Total	November 2011													
		27	26	25	24	23	22	21	20	19	18	17	16	15	14
Surface Water	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Private Well	46	0	0	0	0	0	0	0	0	0	3	8	17	9	9
Groundwater	18	0	0	0	0	0	0	0	0	1	1	6	5	5	0
Sediment	21	0	0	0	0	0	0	0	0	0	18	1	0	2	0
Soil	336	0	0	0	0	0	7	0	0	25	59	64	82	60	39
Air (Odor Complaint)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 3 – Deployed Containment Hard Boom Information

	November 2011						
	27	26	25	24	23	22	21
Total Surface Hard Boom (ft)	4,300	4,300	4,300	4,100	4,100	4,100	10,550
[Control Point Surface Hard Boom (ft)]	[400]	[400]	[400]	[400]	[400]	[400]	[6,700]

	November 2011						
	20	19	18	17	16	15	14
Total Surface Hard Boom (ft)	11,450	11,450	11,550	11,550	11,525	13,075	14,075
[Control Point Surface Hard Boom (ft)]	[6,700]	[6,700]	[6,700]	[6,700]	[6,650]	[7,800]	[8,100]

Table 4 – OSCAR Site Status (as of 11/28/2011)

Containment Branch	5
Overbank Branch	21
Submerged Oil Branch	30
Consistent with EPA Order and up for MDEQ Part 201 Program	14
Total Sites	70

Table 5 - Equipment Decontamination

Location/Media	Total	November 2011													
		27	26	25	24	23	22	21	20	19	18	17	16	15	14
Frac Tanks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vac Trucks-Tankers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Roll-Off Boxes	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Yellow Iron (light)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Iron (heavy)	5	0	0	1	0	0	0	1	0	0	1	0	2	0	0
Jon Boats	12	0	0	0	0	0	2	0	0	0	0	0	5	3	2
Air Boats	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Vehicles	9	0	0	1	0	1	0	2	0	3	2	0	0	0	0
Boom (linear ft)	42,800	0	1400	1250	0	1825	1000	0	0	2575	6400	4700	6100	8900	8650
Miscellaneous Items	31	0	0	0	0	0	3	22	0	6	0	0	0	0	0

Table 6 - Soil and Debris Shipped Off Site (as of 11/28/2011)

Waste Stream	Cumulative	Disposal Facility
Haz Soil (yd ³)	19,644	Envirosafe (Oregon, OH)
Non-Haz Soil & Debris (yd ³) (Excluding Ceresco Dredge)	57,659	Terra/C&C
Non-Haz Soil & Debris (yd ³) (Excluding Ceresco Dredge)	64,815	Westside Recycling (Three Rivers, MI)
Non-Haz Soil (yd ³) (Ceresco Dredge Only)	5,562	EQ/Republic (Marshall, MI)
Haz Debris (yd ³)	12,075	EQ/Michigan Disposal (Wayne, MI) and Republic (Marshall, MI)
Non-Haz Household Debris (ton)	1,090	EQ/Republic (Marshall, MI); C&C
Non-Haz Impacted Debris (ton)	6,422	

Shaded items are discontinued waste streams.

Table 7 – Oil/Water Collected by Location (as of 11/28/2011)

Location	Cumulative (gallons)
Division A	5,356,315
Division B	4,868,279
Division C	1,891,406
Division D	121,106
Division E	52,631
Decontamination	2,227,409
Site A	316,784
Other Locations*	1,516,241
Subtotal	16,350,171
Sludge**	474,215
Total Oil/Water	15,875,956

* 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 8 - Liquid Shipped Off-Site (as of 11/28/2011)

Stream	Destination Company	Destination Location	Cumulative Volume (gallons) †
<i>Non-Haz Water</i>	<i>Battle Creek POTW</i>	<i>Battle Creek, MI</i>	<i>905,480</i>
Non-Haz Water	Dynecol	Detroit, MI	913,642
Non-Haz Water	Liquid Industrial Waste	Holland, MI	724,007
Non-Haz Water	Plummer	Kentwood, MI	90,000
<i>Hazardous Water</i>	<i>Dynecol</i>	<i>Detroit, MI</i>	<i>3,594,579</i>
<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			15,866,086

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 9 - Oil/Water Remaining On-Site (as of 11/28/2011)

Item	Cumulative (gallons)
Oil/Water Collected	15,875,956
Oil/Water Shipped Off-Site	15,866,086
Total Oil/Water Remaining On-Site	9,870

Table 10 – Estimated Recovered Oil (as of 11/28/2011)

Waste Stream Containing Recovered Oil	Destination Company	Destination Location	Estimated Oil Volume in Waste Stream (gallons)
Soil - (Impacted Soil & Debris)	C&C Landfill	Marshall, MI	12,210*
Soil - (Impacted Soil & Debris)	Envirosafe/ Westside RDF	Oregon, OH	278,665
Geotube Sediment - (Impacted Sediment)	Envirosafe/ Westside RDF	Oregon, OH	1,298
Debris - (Roll Off Boxes with Impacted Sorbents, boom, pads, plastic, PPE, vegetation, and biomass)	EQ Michigan	Belleville, MI	33,533
Frac Tank City - Influent to Carbon Filtration System	C&C Landfill	Marshall, MI	8,109
Frac Tank City - Water	Dynecol	Detroit, MI	43,431
	Liquid Industrial Waste Services, Inc.	Kentwood, MI	
	Plummers Env Inc.	Holland, MI	
	BC POTW	Battle Creek, MI	
Ceresco Pretreatment System	C&C Landfill	Marshall, MI	90
A-1 Pretreatment System	C&C Landfill	Marshall, MI	9
Oily Water - RPP	Enbridge Facility	Griffith, IN	766,288
Total	-	-	1,143,633

*Not all analytical is available at the time of report generation.
Shaded items represent discontinued waste streams

Table 11 – Public Inquiries Received by EPA and Enbridge

Location/Media	Total	November 2011													
		27	26	25	24	23	22	21	20	19	18	17	16	15	14
Marshall Community Center	19	0	0	0	0	0	1	3	0	0	0	7	5	2	1
Oil Spill Public Information Hotline	16	0	0	0	0	0	2	4	0	0	3	2	4	0	1
Website	3	0	0	0	0	0	0	1	0	0	0	0	2	0	0
Total Public Inquiries	38	0	0	0	0	0	3	8	0	0	3	9	11	2	2

Table 12 – Landowner Environmental Issues (as of 11/28/2011)

Issues this Period	Issues Undergoing Evaluation	Issues Considered Addressed
1	9	0

Table 13 - Financial Summary

Item	Expended (Cumulative) (as of 11/28/2011)
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	\$ 20,360,886
T032-Sampling	\$ 183,567
T037-Doc Support	\$ 1,116,952
Total START Contractor	\$ 21,661,405
Response Contractor Sub-Totals	\$ 25,987,014
EPA Funded Costs: Total EPA Costs	\$ 5,537,187
Pollution Removal Funding Agreements – Total Other Agencies	\$ 1,508,854
Sub-Totals	\$ 33,033,055
Indirect Cost	\$ 4,348,349
Total Est. Oil Spill Cost	\$ 37,381,405
Oil Spill Ceiling Authorized by USCG	\$ 43,700,000
Oil Spill Ceiling Available Balance	\$ 6,318,595

Shaded items are discontinued

Table 14 - Personnel On-Site

Agency/Entity	November 2011													
	27	26	25	24	23	22	21	20	19	18	17	16	15	14
U.S. EPA	0	1	1	0	1	1	1	0	1	2	3	3	3	1
START	0	3	3	1	3	3	3	0	22	24	25	24	24	24
MDEQ	1	1	0	0	7	7	7	0	1	8	9	8	7	7
MDEQ Contractors	0	1	1	1	1	1	2	0	5	16	17	17	18	18
Calhoun County Public Health	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Calhoun County (CC) EM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
City of Battle Creek	0	0	0	0	0	0	0	0	0	0	1	0	0	0
City of Marshall	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Village of Augusta	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kalamazoo County Public Health	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Kalamazoo Sheriff	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MDCH	0	0	0	0	0	0	0	0	0	0	1	0	0	0
USGS	0	0	0	0	0	0	0	0	0	0	1	1	1	0
Michigan State Police EMD	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Enbridge – Operations Center	7	14	15	1	25	32	33	3	13	87	91	99	97	88
Enbridge – Talmadge Creek	0	71	71	0	83	86	92	0	96	104	104	107	104	100
Enbridge – Kalamazoo River	1	7	7	7	19	20	20	7	75	107	128	132	126	143
Enbridge – Waste Management	0	22	27	1	30	32	33	0	49	80	77	78	79	80
Enbridge – Security & Flaggers	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Enbridge – Communications Center	0	0	0	0	0	0	0	0	0	4	3	3	3	3
Total	16	127	132	18	176	189	198	17	269	439	469	479	469	471

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