

US EPA ARCHIVE DOCUMENT

**U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION V
POLLUTION/SITUATION REPORT #201**



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

US EPA ARCHIVE DOCUMENT



Morrow Lake Delta Overview (03/13/2014)

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From: Jeffrey Kimble, U.S. EPA, Federal On-Scene Coordinator

Date: 04/01/2014

Operational/Reporting Period: 0700 hours 03/03/2014 through 0700 hours 03/17/2014

1. Site Data

| | | | |
|----------------------------|-----------|---------------------------|----------------|
| Site Number: | Z5JS | Response Type: | Emergency |
| Response Authority: | OPA | Incident Category: | Removal Action |
| Response Lead: | RP | NPL Status: | Non-NPL |
| Mobilization Date: | 7/26/2010 | Start Date: | 7/26/2010 |
| FPN#: | E10527 | | |

2. Operations Section

- The organizational response structure consisted of the following Branches: 1) Environmental Field Teams; and 2) Dredge Operations.

2.1 Environmental Field Teams Branch

2.1.1 Science Division

- No activities were performed during this reporting period.

2.1.2 Water Operations Division

- No sheen responses were conducted during this reporting period.

2.1.3 Compliance Division

- No activities were performed during this reporting period.

2.2 Dredge Operations Branch

2.2.1 Ceresco, Mill Ponds, Morrow Lake and Sediment Trap Divisions

- Dredging operations at the Mill Ponds impoundment and the MP 36.1 sediment trap remained suspended throughout the reporting period due to icing conditions.
- Enbridge continued planning and preparations for construction of the dredge pad for continued sediment removal actions at Morrow Lake and the Morrow Lake Delta, as required by the March 14, 2013 Order. Construction is scheduled to begin during the last week in March.
- On March 13, 2014, Enbridge submitted their “Morrow Lake Dredge, Benteler Site Specific Air Monitoring and Sampling Supplement to the 2011 Air Monitoring and Sampling Addendum to the Sampling and Analysis Plan.” The plan is currently in review with U.S. EPA.
- During the reporting period, Enbridge completed decommissioning and repurposing the Ceresco dredge pad. Waste disposal activities associated with the dredge pad decommissioning were completed on March 7, 2014. Equipment demobilization was also completed.

2.2.2 Waste Management Division

- Cumulative quantities of soil, debris, and liquid shipped off-site during the response are presented in Tables 1 and 2.
- The cumulative quantity of recovered oil 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 3.

3. Planning Section

3.1 Situation Unit

- During the reporting period, an overflight was conducted on March 13, 2014 to document all operational areas and river icing/melting conditions. Photographs were taken and distributed to project participants in a Situation Update photograph log and during the Consolidated ICS Meeting.

3.2 Environmental Unit

- U.S. EPA, USGS, and the U.S. Army Corps of Engineers held weekly meetings to discuss Hydrodynamic Model (HDM) activities. Development of the HDM and sediment transport model continued throughout the reporting period.

3.3 Documentation Unit

- The Documentation Unit continued organizing and archiving electronic and paper files for post-incident use.

3.4 Resource Unit

- The Resources Unit continued to support production of the Incident Action Plan (IAP), supported the planning efforts of operations, and provided information to Logistics personnel in order to properly prepare and procure resources.

4. *Command*

4.1 Safety Officers

- Enbridge safety personnel continued conducting work-site safety inspections and implementing the plan for integration of public safety and worker safety on the Kalamazoo River.
- The USCG is providing the U.S. EPA with on-site support by monitoring safety throughout all active work areas.

4.2 Public Information

- The number of public inquires reported by Enbridge for this period is presented in Table 5.
- The EPA webpage for the Enbridge Oil Spill Response was updated to reflect 2013 activities and plans for 2014.

5. *Finance*

- The current National Pollution Funds Center (NPFC) ceiling is \$69.25 million. Approximately 87.0% of the ceiling has been spent through March 16, 2014. The latest average 14-day burn rate was \$14,877 per day. These cost summaries reflect only U.S. EPA-funded expenditures for the incident. A summary of these expenses is presented in Table 6.

6. *Scientific Support Coordination Group (SSCG)*

- No activities were conducted during this operational period.

7. *Participating Entities*

- U.S. EPA and MDEQ continued to meet bi-weekly with a group of stakeholders to discuss how to continue to effectively communicate, share information about site progress, and receive feedback about the communication needs of the local communities. During this reporting period, the Stakeholder group met on March 6, 2014.
- For a list of cooperating and assisting agencies, see SITREP #51 (Sections 3.2 and 3.3).

8. *Personnel On-Site*

- Staffing numbers for the entities and agencies active in the response are presented in Table 7.

9. *Source of Additional Information*

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

10. Clean-up Progress Metrics

Table 1 - Soil and Debris Shipped Off Site (as of 03/16/2014)

| Waste Stream | Cumulative | Disposal Facility |
|---------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------|
| <i>Haz Soil (yd³)</i> | 19,644 | <i>Envirosafe (Oregon, OH)</i> |
| Non-Haz Soil (yd ³) | 239,630 | SET/C&C |
| Non-Haz Soil (yd ³) | 4,476 | SET/Ottawa County Farms |
| Non-Haz Soil (yd ³) | 14,673 | SET/WM Westside |
| <i>Non-Haz Soil & Debris (yd³) (Excluding 2010 Ceresco Dredge)</i> | 64,815 | <i>Westside Recycling (Three Rivers, MI)</i> |
| <i>Non-Haz Soil (yd³) (2010 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) | 2,259 | SET/C&C |
| Non-Haz Impacted Debris (ton) | 14,562 | |

Shaded and italicized items are discontinued waste streams.

Table 2 - Liquid Shipped Off-Site (as of 03/16/2014)

| Stream | Destination Company | Destination Location | Cumulative Volume (gallons)† |
|------------------------------|---------------------------------|-------------------------|------------------------------|
| Non-Haz Water | Liquid Industrial Waste | Holland, MI | 1,557,407 |
| Non-Haz Water | Plummer | Kentwood, MI | 866,009 |
| <i>Non-Haz Water</i> | <i>Dynecol</i> | <i>Detroit, MI</i> | <i>981,792</i> |
| <i>Non-Haz Water</i> | <i>Battle Creek POTW</i> | <i>Battle Creek, MI</i> | <i>1,143,280</i> |
| <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 | | | 17,781,445 |

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.

Table 3 – Estimated Recovered Oil (as of 03/17/2014)

| 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 | 25,504* |
| | Envirosafe/ Westside RDF | Oregon, OH | 278,665 |
| <i>Geotube Sediment - (Impacted Sediment)</i> | <i>Envirosafe/ Westside RDF</i> | <i>Oregon, OH</i> | <i>1,298</i> |
| Debris - (Roll Off Boxes with Impacted Sorbents, boom, pads, plastic, PPE, vegetation, and biomass) | EQ Michigan | Belleville, MI | 57,091 |
| <i>Frac Tank City - Influent to Carbon Filtration System</i> | <i>C&C Landfill</i> | <i>Marshall, MI</i> | <i>8,109</i> |
| Frac Tank City - Water | Dynecol | Detroit, MI | 46,183 |
| | Liquid Industrial Waste Services, Inc. | Kentwood, MI | |
| | Plummers Env. Inc. | Holland, MI | |
| | BC POTW | Battle Creek, MI | |
| <i>Ceresco Pretreatment System</i> | <i>C&C Landfill</i> | <i>Marshall, MI</i> | <i>90</i> |
| <i>A-1 Pretreatment System</i> | <i>C&C Landfill</i> | <i>Marshall, MI</i> | <i>9</i> |
| Oily Water - RPP | Enbridge Facility | Griffith, IN | 766,288 |
| Total | | | 1,183,238 |

Shaded and *italicized* items represent discontinued waste streams.
 *Total updated for analytical received after report generation.

Table 4 – Samples Collected By Enbridge

| Sample Type | Total | March 2014 | | | | | | | | | | | | | |
|---------------|-------|------------|----|----|----|----|----|---|---|---|---|---|----|---|---|
| | | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| Surface Water | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Private Well | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Groundwater | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 2 | 0 | 0 | 0 |
| Sediment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Soil | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 6 | 4 | 10 | 5 | 0 |
| Product | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Dewatering | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sheen | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5 – Public Inquiries Received by Enbridge

| Location/Med | March 2014 | | | | | | | | | | | | | | | |
|--------------------------------------|------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | | |
| Marshall Community Center | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Oil Spill Public Information Hotline | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Website | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Total Public Inquiries | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Table 6 - Financial Summary (as of 03/16/2014)

| Item | Expended (Cumulative) | |
|-----------------------------------------------------------|-----------------------|----------------------|
| <i>ERRS Contractors</i> | | |
| <i>EQM (EPS50802)</i> | <i>T057</i> | \$ 1,199,522 |
| | <i>T060</i> | \$ 213,636 |
| <i>LATA (EPS50804)</i> | <i>T019</i> | \$ 1,161,082 |
| <i>ER LLC (EPS50905)</i> | <i>T040</i> | \$ 683,330 |
| <i>Total ERRS Contractors</i> | | \$ 3,257,571 |
| <i>Other Contractors</i> | | |
| <i>Lockheed Martin (EPW09031) – TAGA Support</i> | | \$ 198,379 |
| <i>Lockheed Martin (EPW09031) -Biodegradability Study</i> | | 61,917 |
| <i>T&T Bisso (EPA:HS800008)</i> | | \$ 882,087 |
| <i>Total Other Contractors</i> | | \$ 1,142,383 |
| START Contractor – WESTON (EPS50604) | | |
| | T030-Response | \$ 37,226,763 |
| | Community Relations | \$ 114,563 |
| | T032-Sampling | \$ 161,045 |
| | T037-Doc Support | 2,074,674 |
| Total START Contractor | | \$ 39,577,045 |
| Response Contractor Sub-Totals | | \$ 43,983,671 |
| U.S. EPA Funded Costs: Total U.S. EPA Costs | | \$ 6,898,330 |
| Pollution Removal Funding Agreements | | |
| Total Other Agencies | | \$ 3,637,081 |
| Indirect Cost (16.00%) | | \$ 3,520,519 |
| Indirect Cost (8.36%)-payments after 10/1/2011 | | \$ 1,310,859 |
| Indirect Cost (10.15%)-payments after 10/1/2012 | | \$ 1,294,815 |
| Cost Documentation/Billing Admin Fee (2.93%)* | | \$ 607,575 |
| Total Est. Oil Spill Cost | | \$ 60,234,257 |
| Oil Spill Ceiling Authorized by USCG | | \$ 69,250,000 |
| Oil Spill Ceiling Available Balance | | \$ 9,015,743 |

Shaded and *italicized* items are discontinued

* Effective on EPA Enbridge costs billed to USCG for bills issued after 6/5/12.

Table 7 - Personnel On-Site

| Agency/Entity | March 2014 | | | | | | | | | | | | | |
|---------------------------------------------------|------------|----------|-----------|-----------|-----------|-----------|-----------|----------|----------|-----------|-----------|------------|------------|------------|
| | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 |
| U.S. EPA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 3 | 3 |
| START | 0 | 0 | 11 | 11 | 11 | 9 | 8 | 0 | 0 | 8 | 8 | 8 | 10 | 10 |
| MDEQ | 0 | 0 | 2 | 2 | 1 | 3 | 3 | 0 | 0 | 2 | 6 | 4 | 4 | 3 |
| MDEQ Contractors | 0 | 0 | 2 | 2 | 2 | 3 | 3 | 0 | 0 | 2 | 3 | 3 | 3 | 2 |
| Other Agencies | 0 | 0 | 3 | 3 | 3 | 3 | 3 | 0 | 0 | 2 | 2 | 2 | 1 | 3 |
| Enbridge – Environmental Field Teams – Science* | 0 | 0 | 13 | 13 | 16 | 16 | 14 | 0 | 0 | 14 | 14 | 15 | 14 | 14 |
| Enbridge – Environmental Field Teams – Water Ops* | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Enbridge – Dredge Operations – Ceresco* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 24 | 26 | 27 | 24 |
| Enbridge – Dredge Operations – Mill Ponds* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enbridge – Dredge Operations – Delta/Morrow Lake* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enbridge – Dredge Operations – Sediment Traps* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enbridge – Waste Management* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 36 | 58 | 57 |
| Enbridge – Office Support* | 0 | 2 | 20 | 21 | 27 | 19 | 21 | 0 | 0 | 23 | 22 | 23 | 22 | 22 |
| Total | 0 | 2 | 51 | 52 | 61 | 55 | 54 | 0 | 0 | 58 | 89 | 120 | 142 | 138 |

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