U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
TRSRB Site (Island MM) - Removal Polrep
Initial and Final Removal Polrep

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region V**

**Subject:** **POLREP #1**
**Initial and Final**
**TRSRB Site (Island MM)**
**MID980994354**
**Saginaw Township, MI**
**Latitude: 43.4423250 Longitude: -84.0513330**

**To:** Mary Logan, Superfund Remedial Division

**From:** Diane Russell, Remedial Project Manager
**Date:** 7/6/2012
**Reporting Period:** 8/12/2011 -- 8/31/2011

## 1. Introduction

### 1.1 Background

| | | | |
|---|---|---|---|
| **Site Number:** | MID980994354 | **Contract Number:** | N/A |
| **D.O. Number:** | N/A | **Action Memo Date:** | 7/8/2011 |
| **Response Authority:** | CERCLA | **Response Type:** | Non-Time-Critical |
| **Response Lead:** | PRP | **Incident Category:** | Removal Action |
| **NPL Status:** | Non NPL | **Operable Unit:** | OU1 (OU8 in CERCLIS) |
| **Mobilization Date:** | 8/12/2011 | **Start Date:** | 8/12/2011 |
| **Demob Date:** | 8/31/2011 | **Completion Date:** | 8/31/2011 |
| **CERCLIS ID:** | MID980994354 | **RCRIS ID:** | N/A |
| **ERNS No.:** | N/A | **State Notification:** | MDEQ Notified |
| **FPN#:** | N/A | **Reimbursable Account #:** | B5KF |

#### 1.1.1 Incident Category

CERCLA incident category: Other - legacy contamination from historical upstream releases of dioxins and furans.

#### 1.1.2 Site Description

##### 1.1.2.1 Location

Island MM is located approximately 0.10 miles to the west of the intersection of State Route 47 and Weiss Street, Saginaw, Saginaw County, Michigan. Island MM is an approximately 250-foot long by 50-foot wide island located in a moderately sinuous section of the Tittabawassee River, known as Reach MM. Reach MM is within Segment 5 of the eight segments delineated as Operable Unit 01 of the Tittabawassee River, Saginaw River & Bay site. Reach MM is about 17 miles downstream from the confluence of the Chippewa and Tittabawassee Rivers, and about 7 miles upstream from the confluence of the Shiawassee and Tittabawassee rivers. Island MM is upstream of the Greenpoint Nature Center and the Shiawassee National Wildlife Refuge.

##### 1.1.2.2 Description of Threat

Island MM likely formed in the early 1900s as a result of changes in river currents caused by stone piers from a former bridge that once existed as an extension of Hospital road. During the same time period, intensive logging and agricultural practices allowed extensive runoff. The resulting high solids loading into the Tittabawassee River caused sediment to build up downstream of the bridge, forming Island MM. The solids that formed Island MM mixed with dioxins and furans that were released historically from Dow's Midland Plant. Review of historical aerial photographs taken over the last 70 years and more recent post-flood monitoring and evaluation shows that Island MM is eroding over time. The currently visible Island MM persists above the median water surface elevation of about 580 feet and supports some vegetation.

Human access to Island MM is generally unrestricted to people approaching Island MM from the Tittabawassee River. Wildlife in the area also has unrestricted access. Island MM is also subject to flooding and erosion. This is particularly true during high flow events. This may result in the spread of dioxin contamination within the floodplain or to downstream locations. This may also result in further contamination of fish and invertebrates within the river and at downstream locations, and contamination of

animals through bioaccumulation.

Dioxin and furan are the primary constituents of interest in sediments on Island MM. Characterization sampling conducted as part of the Tittabawassee River Site Investigation under the MDEQ's IRA process in 2006, 2007 and 2008 included a maximum detected concentration for dioxins and furans of 17,500 ppt TEQ.

Additional sediment sampling conducted along the banks of Island MM in December 2010 as part of the 2010 AOC identified a representative composite sample of approximately 6,750 ppt TEQ.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Data was collected in June 2011 to delineate TEQ levels surrounding Island MM. Samples were collected in the channel surrounding the island as well as a composite sample from the emergent portion of the island, over the depth range of 0 to 7.4 feet below the top of the island. The composite sample had a TEQ level of 6,750 ppt. In total, 43 samples were collected and analyzed from the island or the area immediately surrounding the island, and delineated the extent of TEQ levels in the immediate vicinity of Island MM to provide the basis for design. The resulting area of the cap is estimated to be 6,500 square feet.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

The required response actions at Island MM includes the following:

- Develop temporary staging areas and access to the River. Also included, as necessary, removal of vegetation along the shoreline and in areas approaching the River to provide adequate equipment access to the River.
- Excavate all targeted sediment. At a minimum, the Island MM sediments above the low water line (approximately 579 foot elevation mark) shall be excavated.
- Construct an in-situ containment cap over the excavated island area and sediments in adjacent underwater areas identified through the pre-removal field sampling.
- Reconstruct the island to remain above water line during typical water flow conditions with a goal to promote natural revegetation and provide habitat.
- Remove and restore the mobilization and staging areas.
- Characterize, treate, and return to the Tittabawassee River or otherwise managed in an approved manner contaminated water generated as part of response activities.
- Transport and dispose of all sediment removed from Island MM off-site at a CERCLA approved landfill. Waste must be disposed of in compliance with the U.S. EPA Off-Site Rule 40 C.F.R. Section 300.400.
- Conduct monitoring and maintenance of the containment cap and restored island in accordance with the post-removal site control requirements of the Island MM AOC.

#### 2.1.2 Response Actions to Date

During the reporting period, all required response actions were complete, with monitoring and maintenence ongoing.

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

Dow Chemical Company is a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

#### 2.1.4 Progress Metrics

| *Waste Stream* | *Medium* | *Quantity* | *Manifest #* | *Treatment* | *Disposal* |
|---|---|---|---|---|---|
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627953 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00672952 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627954 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627955 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627956 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627957 | None | Off-site - Peoples Landfill, Birch Run, MI |

| | | | | | |
|---|---|---|---|---|---|
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627958 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627959 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Island Sediment | 15 cu yd | 00627960 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627961 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627962 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627963 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627964 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627965 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627966 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627967 | None | Off-site - Peoples Landfill, Birch Run, MI |
| dioxin/furans | Contaminated Floodplain Soils | 15 cu yd | 00627968 | None | Off-site - Peoples Landfill, Birch Run, MI |

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

##### 2.2.1.1 Planned Response Activities

None at this time.

##### 2.2.1.2 Next Steps

Conduct elevation surveys, monitoring and physical cap inspections as needed to make sure cap is operating as designed.

#### 2.2.2 Issues

None at this time.

### 2.3 Logistics Section

No information available at this time.

### 2.4 Finance Section

No information available at this time.

### 2.5 Other Command Staff

No information available at this time.

## 3. Participating Entities

### 3.1 Unified Command

### 3.2 Cooperating Agencies

Michigan Department of Environmental Quality (in a consultation role)

## 4. Personnel On Site

Dow personnel and contractors are working on site.

## 5. Definition of Terms

AOC Administrative Settlement Agreements and Orders on Consent
ppt parts per trillion
TEQ Toxic Equivalents

## 6. Additional sources of information

### 6.1 Internet location of additional information/report

For additional information, please refer to "Documents" on www.epaosc.org/TRSRBIslandMM
Information is also available at: http://www.epa.gov/region5/cleanup/dowchemical/index.htm

### 6.2 Reporting Schedule

Monitoring activities will be reported to EPA within the annual progress report required under the 2010 AOC or sooner if issues of concern are identified.

## 7. Situational Reference Materials

No information available at this time.