



The Dow Chemical Company
Midland, Michigan 48667

Michigan Operations
October 27, 2003

Cheryl Howe
Waste and Hazardous Materials Division
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, MI 48909-7741

RE: Interim Response Activities for West Michigan Park

Dear Ms Howe:

Based upon the information provided in the Michigan Department of Environmental Quality, Final Report, Phase II Tittabawassee/Saginaw River, Dioxin Flood Plan Sampling Study, June 2003 and several discussions with Saginaw Township Park officials the attached Interim Response Activities were agreed to be implemented by park officials to reduce potential exposure of park visitors.

Some of these interim activities are underway with plans to complete all of them before Memorial Day 2004.

Please contact Ben Baker at 989-636-0787 if you have questions regarding this submittal.

Sincerely,

A handwritten signature in black ink that reads "Susan Carrington". The signature is written in a cursive style and is positioned above the typed name and title.

Susan Carrington
Vice President and Director
Michigan Dioxin Initiative
The Dow Chemical Company
47 Building
Midland, MI 48667

WORK PLAN

**INTERIM RESPONSE ACTIVITIES
WORK PLAN**

WEST MICHIGAN PARK

*The Dow Chemical Company—Midland
Operations
MIDLAND, MICHIGAN*

For:

**The Dow Chemical Company
47 Building
Midland, Michigan 48667**

October 24, 2003

TABLE OF CONTENTS

1.0	Introduction	1
2.0	Site Location and Description.....	1
2.1	Physical Description	1
2.2	Recreational and Other Uses of Parks	2
3.0	Current Conditions in the Parks.....	2
4.0	Description of Completed Interim Response Activities (Hand Wash Stations).....	3
5.0	Description of Planned Interim Measures.....	3
6.0	Report and Schedule.....	4
7.0	References	4

FIGURES

- Figure 1 Location of West Michigan Park
Figure 2 Site Features - West Michigan Park

1.0 Introduction

On June 12, 2003, The Dow Chemical Company’s Midland Plant (Dow) was issued a Resource Conservation and Recovery Act (RCRA) Operating License (the “License”) by the Michigan Department of Environmental Quality (MDEQ). The License governs Dow’s hazardous waste management activities at the Midland Plant, and also contains requirements for RCRA Corrective Action both onsite and offsite. The off-site provisions contained in Sections XI.B. and XI.G. of the License are the basis for this Work Plan. This Work Plan describes the Interim Response Actions (IRAs) that will be implemented in West Michigan Park.

West Michigan Park is located on the Tittabawassee River in Saginaw Township (Figure 1). The results of recent studies by MDEQ, *FINAL REPORT, Phase II Tittabawassee/Saginaw River, Dioxin Flood Plain Sampling Study, June 2003* were the basis of MDEQ’s recommendation for the elimination of potential exposure in public areas in the floodplain such as may exist at parks and boat launches. As a result of these preliminary data, Dow has worked with park officials to develop this Work Plan to address potential exposure of park visitors to soils and sediments.

2.0 Site Location and Description

West Michigan Park is located in Saginaw County (Figure 1). Table 1 below summarizes some of the key features of West Michigan Park including size, facilities present, potential for seasonal flooding, and several other characteristics. The following sections further describe the park.

TABLE 1
Summary of Park Features

Park Name	Size (acres)	Playgrounds	Ball fields	Other Ball Courts	Boat Launches	Fishing dock	Hiking Trails	Wooded areas	Restroom facilities	Portable Toilet
West Michigan	18.5	Y	Y	N	Y	Y	N	N	N	Y

2.1 Physical Description

This section includes a physical description of the park emphasizing environmental and other features. Figure 2, associated with the description, is a recent aerial photo with overlays that identify park features such as playgrounds, ball fields, facilities, roads, boat launch areas, etc.

West Michigan Park is in Saginaw Township between Michigan Avenue and the Tittabawassee River. The park is operated by the Saginaw Township Parks and Recreation Department and is

approximately 18 acres in size. The park is equipped with a fishing dock platform, river access, play equipment, soccer field, picnic areas, and open space.

The park is essentially a level field with an open expanse of grass for ball sports. Willow trees are along the riverbank and some also occupy a central portion of the site. Picnic tables are situated under these trees and a playground is to the northeast. A small boat access is available from the parking lot. A gravel path leads to the water's edge. The riverbank is relatively steep and vegetated with a sparse cover of herbaceous vegetation. Some evidence of foot traffic to the river exists.

The entire park lies within the estimated 100-year flood plain of the Tittabawassee River. The USDA SCS (USDA 1994) has identified soils within the park as Sloan-Ceresco complex. These soils are located on nearly level areas of alluvial planes and are very poorly drained.

An examination of historical aerial photos collected from Michigan State University (MSU) Remote Sensing and Geographic Information Science (RSGIS) did not identify significant construction activities or other soil disturbances from 1937 to 1980. Based on the aerial photos it appears that the property was used primarily for agricultural purposes. The exception was a stand of trees on the river's edge and along the eastern portion of the property. These trees and agricultural use remained until sometime between 1963 and 1970. At that time it appears that a driveway was constructed and many of the trees were removed. In addition, there appears to be a bare spot adjacent to the road in 1970. In the 1980 photo some areas of the ground surface appears to be bare.

Currently land use surrounding this park is largely residential. A CSX railroad track forms the western edge of the property. Across the railroad tracks are apartment units and residential houses. In addition, a Saginaw Township wastewater treatment plant operates north of the park across the street. Residences also are located northeast of the property.

2.2 Recreational and Other Uses of Parks

This section describes the typical users of the park and the primary activities that occur. The information collection process is ongoing and includes a search for relevant maps, drawings, flood patterns and depositional areas, any flood mitigation activities implemented (i.e., levees, channelizing drainage, etc.), relationship of seasonally flooded areas to park facilities, typical facility uses, visitor frequency, seasonal variations, boat launching, park worker maintenance activities, mitigation actions already implemented, dredging history, historic property use in general, any planned future park modifications or improvements, construction details on playgrounds and other sandbox-type areas, and any historical dredging and flood control records.

3.0 Current Conditions in the Parks

During the MDEQ study, soil samples were collected at three sample locations and are reported in MDEQ Phase II Report (MDEQ 2003).

4.0 Description of Completed Interim Response Activities (Hand Wash Stations)

Dow has already consulted with park management to evaluate the number and location for the installation and use of portable hand washing stations in West Michigan Park as a means of reducing the potential for exposure to contaminated soils and sediments. Dow has contracted, procured and had a hand washing station installed at the location suggested and approved by park officials.

Servicing of Hand Washing Stations:

Wash stations were contracted through Johnnie-On-The-Spot of Freeland and Saginaw. All hand washing stations are being serviced by Johnnie-On-The-Spot once per week. The wash stations are filled with fresh water sourced from the City of Saginaw water supply and carted to the stations by Johnnie-On-The-Spot. Gray water is removed and discarded at the Saginaw County water treatment facility. Based on suggestions from park managers, the hand washing stations will be removed from the parks in November and reinstalled in April.

Wash Station Signage

The signs at each wash station explaining the use of the station will be revised to read as follows:

*For hand washing only
Not for drinking
Not for fish cleaning
Hand washing is recommended to remove soil and sediment*

5.0 Description of Planned Interim Measures

Following discussions with Saginaw Township officials responsible for West Michigan Park, the following IRAs have been identified for implementation in the park to reduce potential exposure to soils and sediments:

- Small canoe and/or boat launch area will have additional stone placed to minimize erosion and cover any exposed soils.
- Access into park near wash station/rest room will have stone place over exposed soils.
- Trees sloping toward river along bank will be trimmed or removed to prevent bank damage caused by weight of trees.
- Application of fertilizer to grassy areas will be done in late fall or early spring to enhance grass cover throughout park.
- Sand under children's play areas will be supplemented to insure good coverage in these areas.

Park officials have agreed to have these items completed as soon as possible and before winter if possible. Dow will reimburse the township for costs incurred as a result of implementing these IRAs.

6.0 Report and Schedule

A brief report summarizing these IRAs will be submitted to MDEQ once they are completed. Implementation of these IRAs will commence in 2003 and be completed in the spring of 2004 when use of the park will increase for the summer season. The schedule is subject to change based on flooding or other conditions that may directly affect implementation of the planned IRAs.

7.0 References

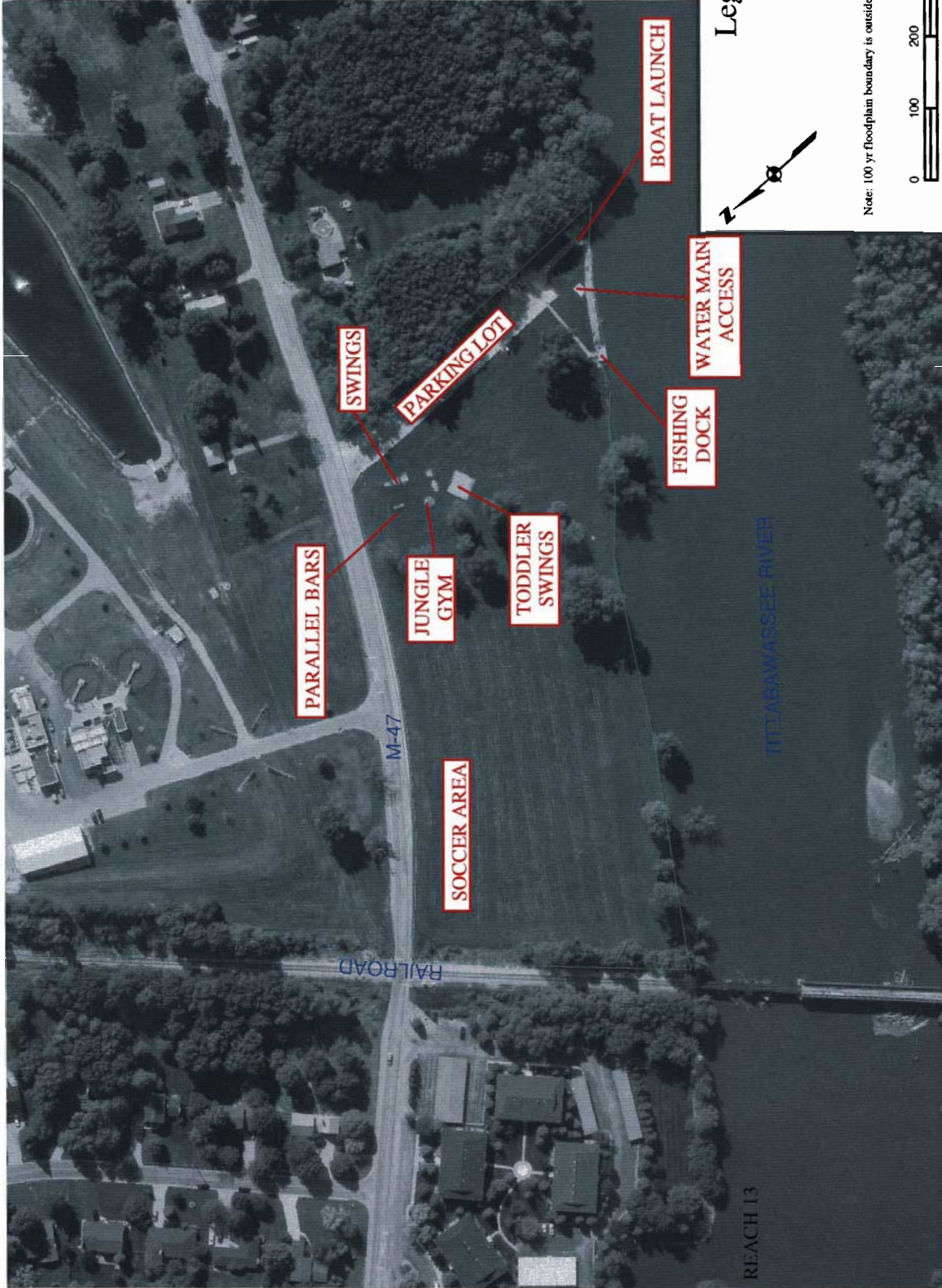
Michigan Department of Environmental Quality. 2003. Phase II Tittabawassee/Saginaw River Dioxin Flood Plain Sampling Study, June 2003.

United States Department of Agriculture Soil Conservation Service. 1994. Soil Survey of Saginaw County, Michigan.



FIGURE 1
LOCATION OF WEST MICHIGAN PARK

URS
URS Corporation
1701 Golf Road, Suite 1000
Rolling Meadows, IL 60008



Legend



Note: 100 yr floodplain boundary is outside of the view of this diagram.



URS
 URS Corporation
 1701 Golf Road, Suite 1000
 Rolling Meadows, IL 60008

**FIGURE 2
 FEATURES AT WEST MICHIGAN PARK**