



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 Freeland Festival 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 Freeland Festival 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,

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**

FREELAND FESTIVAL PARK

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

For:

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

October 24, 2003

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FIGURES

- Figure 1 Location of Freeland Festival Park
Figure 2 Site Features - Freeland Festival 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 Activities (IRAs) that will be implemented in Freeland Festival Park.

Freeland Festival Park is located on the Tittabawassee River in Tittabawassee Township (Figure 1). The results of recent studies by MDEQ, *FINAL REPORT, Phase II Tittabawassee/Saginaw River, Dioxin Flood Plain Sampling Study, June 2003* was the basis of MDEQ’s recommendations 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

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

TABLE 1
Summary of Park Features

	Size (acres)	Playgrounds	Ball fields	Other Ball Courts	Boat Launches	Fishing dock	Hiking Trails	Wooded areas	Restroom facilities	Portable Toilet
Park Name										
Freeland Festival	12	N	N	N	Y	Y	N	Y	N	Y

2.1 Physical Description

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

Freeland Festival Park is located on the northwest side of the Tittabawassee River near the intersection of Freeland Road and M-47 in Freeland, Michigan. The park is managed by

Tittabawassee Township and is approximately 12 acres in size. It has approximately 980' of river frontage and is the central site for the annual Freeland Walleye Festival, an event that draws many visitors to the region.

Freeland Festival Park is equipped with a fishing dock, picnic pavilions, and a paved walkway. An unimproved foot trail extends from the northern extent of the open grass area along a ridge adjacent to the river. This ridge is approximately 15' above the riverbank. Another foot trail exists at the southeastern end of the park. This trail provides access to a sandy riverbank. With the exception of this southernmost area, the banks of the river at this park are relatively steep and heavily vegetated. Large willow trees overhang the banks.

The entire park lies within the estimated 100-year flood plain of the Tittabawassee River. The United States Department of Agriculture (USDA) Soil Conservation Service (USDA 1994) has identified soils within the park as Sloan silt loam. These soils are located on nearly level areas of alluvial planes and are very poorly drained and are periodically flooded. The westernmost section of the park contains a large undeveloped forested area. This area immediately adjacent to the park contains a dense understory with raspberry, staghorn sumac and goldenrod observed. No marked trails exist through the woodlands. A low-lying swale area extends through the woods to the south under West Freeland Road.

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. The following provides a description of the available photos. In 1937, the photo shows trees growing along the banks and a distinct roadway extending north to a clearing that appears to be a baseball diamond. Small structures exist north of the baseball diamond. The swale is also partially vegetated. Property to the north and west does not appear to be cultivated. In 1941, the road is still visible, however the baseball diamond is not. One of the structures may also have been removed in the intervening years. Vegetation is still present along the riverbanks and in the swale. By 1950 the road into the park is becoming less prominent, but the vegetation along the banks and in the swale is still present. In addition, the surrounding property appears to be used for farming. In an aerial photo taken in 1963, the vegetation along the banks and in the swale has clearly grown since the early photos. In addition, traces of a circular path are visible, as is more vegetation on the western portion of the property. Adjacent property appears to be used for agricultural purposes. A photo taken in 1970 shows the location of the present window blind shop along W. Freeland Road (west of the park) and a heavily vegetated park parcel. The photograph from 1980 shows a small entrance to the parcel, but the rest of the parcel appears vegetated.

Currently, land use west of the park is mostly agricultural and undeveloped with the exception of Tri-City Blinds, located west of the park at 10976 Freeland Road. A hunting blind was observed in the forest along the northwestern border of the property. Across the river, many businesses, restaurants and homes overlook Freeland Festival Park. In particular, Carol's Carriage Hill Apartments, Riverside Restaurant and Riverview Condominiums are prominent features along this stretch of the Tittabawassee River.

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.

Because of its location, this park is available to people from nearby downtown Freeland who may use the park to eat lunch or fish along the banks of the river. According to township officials, Freeland Festival Park is operated from 7:30 AM to sunset. The only required park maintenance activity that occurs here is lawn mowing.

3.0 Current Conditions in the Park

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 Freeland Festival 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 Response Activities

Following discussions with Tittabawassee Township officials responsible for Freeland Festival Park the following additional IRAs were identified for implementation in the park to reduce potential exposure to soil and sediment.

- Installation of a stonewall along the riverbank to prevent access to the river except at selected locations.
- The flat portion of the riverbank where a walking trail exists will be replaced with a two tier deck that will allow boat and canoe access both during normal and high-water conditions and minimize contact with sediments along the riverbank. The deck will be handicap accessible. A stone breakwall will be installed in the river at the upstream edge to prevent damage to the structure from ice flows.
- Existing grassy areas with spotty vegetative cover will be augmented with topsoil and appropriate ground cover vegetation to improve ground cover and eliminate exposed soil.

Park officials have agreed to have these items completed as soon as possible and before the park usage increase around Memorial Day 2004. Dow will reimburse the township for the 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.

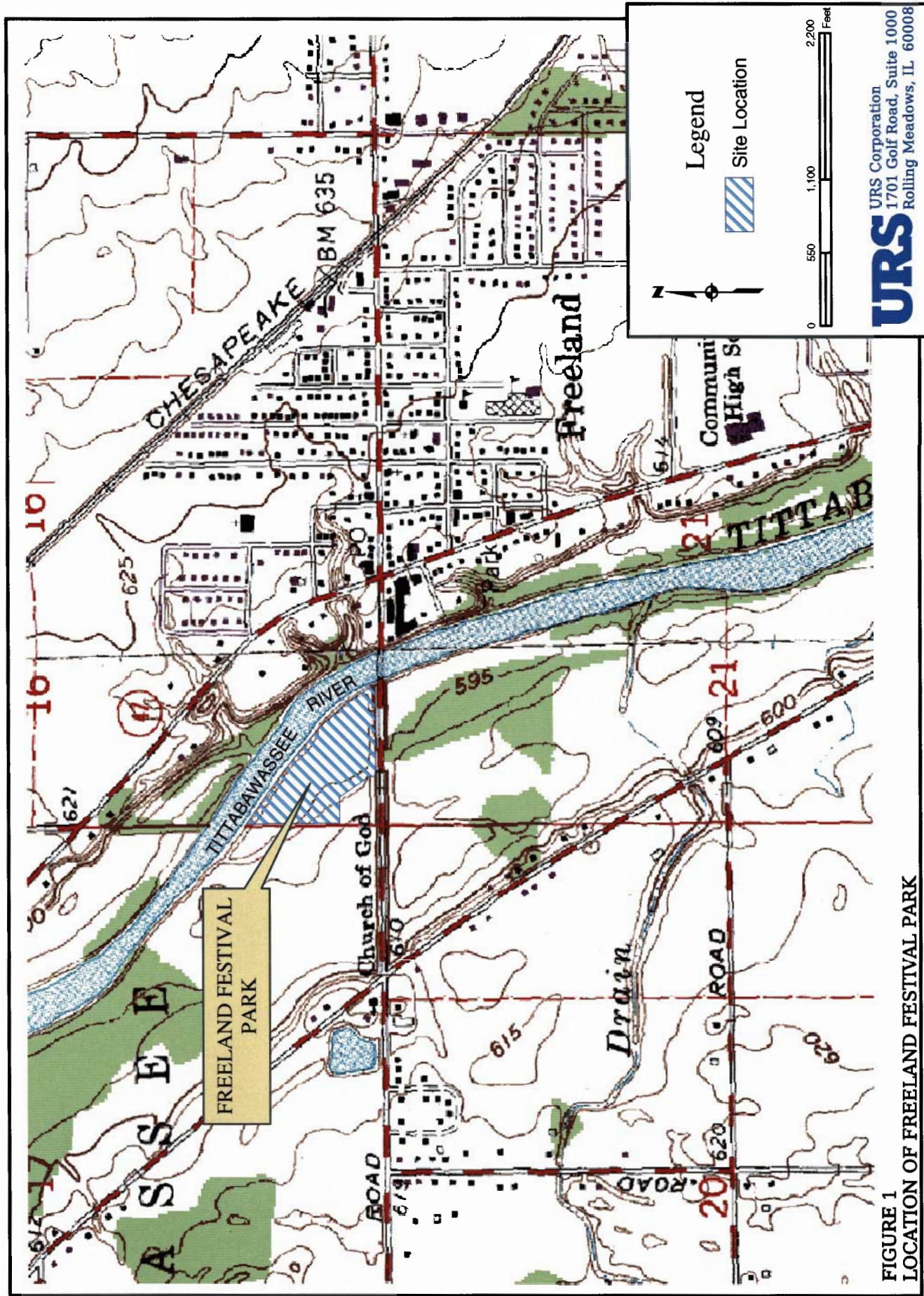


FIGURE 1
LOCATION OF FREELAND FESTIVAL PARK



FIGURE 2
FEATURES AT FREELAND FESTIVAL PARK