

FACT SHEET

**Draft Major Operating License Modification for
The Dow Chemical Company
Michigan Operations, Midland Plant
Hazardous Waste Management Facility**

Midland, Michigan

MID 000 724 724

February 4, 2010

**Michigan Department of Natural Resources and Environment
Waste and Hazardous Materials Division**

BASIS FOR PROPOSED APPROVAL OF MAJOR OPERATING LICENSE MODIFICATION

The Michigan Department of Natural Resources and Environment (MDNRE, formerly the Michigan Department of Environmental Quality [MDEQ]) proposes to approve a major modification of the Hazardous Waste Management Facility Operating License (License) issued to The Dow Chemical Company (Dow), Michigan Operations, 1790 Building, Midland, Michigan 48674, on June 12, 2003, pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), for the operation of the hazardous waste treatment, storage, and disposal units at its facility located in Midland, Michigan. The License modification is being proposed to fulfill the requirements of paragraph 47 of the Administrative Settlement Agreement and Order on Consent for Remedial Investigation, Feasibility Study and/or Engineering Evaluation and Cost Analysis, and Response Design, CERCLA Docket No. V-W-10-C-942 (AOC) for the Tittabawassee River/Saginaw River and Bay "Site." See paragraph 47 of the AOC. The AOC was entered into by Dow, the U.S. Environmental Protection Agency, (U.S. EPA), and the MDEQ ("Parties") on January 14, 2010, with an effective date of January 21, 2010.

Rule 299.9519 of the administrative rules promulgated pursuant to Part 111 of Act 451 provides for determinations on major modifications of operating licenses issued to hazardous waste treatment, storage, or disposal facilities during their terms and that if an operating license is modified, only the conditions subject to modification are reopened. The MDNRE has determined that the submittal of a major modification request and an updated application by Dow pursuant to R 299.9519(10) and R 299.9520 was not necessary because the "Parties" agreed under the Settlement Agreement that the MDNRE would initiate the major modification of the License using the proposed language set forth in Appendix E to the AOC.

Although the MDNRE believes it has done a thorough job of drafting the major License modification, the agency is seeking public input on the approval of this major License modification. Section II of this Fact Sheet describes in more detail the major modification proposed to the License. Section III of this Fact Sheet describes the public participation process.

I. INTRODUCTION

This section of the Fact Sheet describes the state and federal programs established to regulate hazardous waste and to permit hazardous waste treatment, storage, and disposal facilities. Part 111 of Act 451 was passed by the Michigan Legislature to regulate the management of hazardous waste from generation to disposal. Likewise, Subtitle C of the Solid Waste Disposal Act, as amended, Title 42 of the United States Code, Section 6901, *et seq.* (commonly known as the Resource Conservation and Recovery Act of 1976, as amended [RCRA]), was passed by the U.S. Congress to regulate hazardous waste nationwide. The RCRA was amended substantially by the Hazardous and Solid Waste Amendments of 1984, as amended (HSWA).

Both the RCRA and Part 111 of Act 451 establish a permit system governing the treatment, storage, and disposal of hazardous wastes. The RCRA allows the states to obtain authorization to issue a state hazardous waste management facility operating license in lieu of a federal permit. Effective December 27, 1985, the state of Michigan amended its hazardous waste management administrative rules to be equivalent to those under the RCRA and applied to the U.S. EPA for authorization. In October 1986, Michigan was granted authorization to administer all portions of the RCRA Program, except those under the HSWA. Subsequently, Michigan received authorization for all of the HSWA provisions promulgated through July 28, 2006, including the corrective action program that was initially authorized on April 8, 1996.

I. DESCRIPTION OF THE FACILITY AND PROPOSED MAJOR LICENSE MODIFICATION

A. Facility Description and Prior State Licensing

The Dow Michigan Operations, Midland Plant Site is an industrial manufacturing and research site comprising approximately 1,900 acres, part of which is used for the operation of hazardous waste treatment, storage, and disposal facilities. The company manages on-site a wide variety of hazardous wastes and compatible non-hazardous wastes generated from the manufacturing of plastics, agricultural chemicals, organic chemicals, inorganic chemicals, and the associated research and development activities for the manufacture of these products.

Wastes are stored in containers and tanks prior to incineration on-site or transportation off-site for treatment or disposal. The container storage areas, tank storage/treatment areas, closed surface impoundments, and incinerator are located on a portion of the Midland Plant Site where wastes were historically disposed prior to the enactment of the hazardous waste program. Hazardous wastes are also treated on-site at Dow's wastewater treatment plant, which is not required to be licensed under RCRA or Part 111 of Act 451. However, the final (tertiary) stage of wastewater treatment that is conducted in a series of surface impoundments, collectively known as the Tertiary Pond, is subject to regulation under the hazardous waste program.

Dow's operating and closed hazardous waste treatment, storage, and disposal facilities are regulated under the License that was issued on June 12, 2003. The expiration date of the License is June 12, 2013. Please refer to Parts III through IX of the License for additional information pertaining to the licensed hazardous waste management units. The License has been modified through a series of minor modifications on September 30, 2003, September 2, 2004, September 30, 2005, March 10, 2006, September 27, 2007, March 6, 2009, and September 30, 2009.

In addition to containing conditions related to operation of the hazardous waste management units, the License also includes environmental monitoring programs (e.g., groundwater, air, soil, and surface water) and requirements for corrective action for on-site and off-site releases of contamination. The types and quantities of wastes that can be stored, treated, and disposed at the facility will not be changed if the License is modified as proposed. The proposed major modification will not extend the expiration date of the License. At this time, references to the MDEQ throughout the license are not being changed to the MDNRE. That will be done in a future modification or at the time of relicensing.

Proposed Major License Modification

Paragraph 47 of the AOC requires that within 14 days after the effective date of the AOC, by February 4, 2010, the MDNRE shall initiate a major modification of the License pursuant to Part 111 of Act 451 by providing a draft modified License consistent with Appendix E to the AOC to the facility mailing list and appropriate units of State and local government for comment. AOC Appendix E is attached to this Fact Sheet as Attachment 1.

Pursuant to the AOC, the MDNRE is required to "diligently pursue" the Part 111 of Act 451 License modification in accordance with the procedures as provided in the Part 111 of Act 451 Administrative Rules, including consideration of and response to public comment. Further, the MDNRE must make reasonable efforts to issue a final decision that approves the License

modification set forth in Appendix E to the AOC, unless alternative language is agreed to by the Parties or if public comment received and considered by MDNRE on the proposed major modification demonstrates that the proposed modification set forth in Appendix E is inconsistent with applicable law. The MDNRE has agreed to notify Dow prior to making any change(s) to the language in AOC Appendix E as a result of such public comment, and Dow has agreed not to contest the major modification unless the language differs from that in AOC Appendix E.

The draft License modification sets up the process in which specific corrective action obligations in the License that pertain to the "Site" can be satisfied by work conducted in compliance with the AOC. The MDNRE would retain the ability to review the plans, reports, and other items submitted or determinations made under the AOC in conjunction with the U.S. EPA and to determine whether they satisfy the corresponding obligations of the License. If not, the MDNRE may invoke the dispute resolution process specified in the AOC and require corrective action under the License. Some corrective action obligations will be transitioned to work under the AOC. In addition, the License modification would reserve certain rights of the MDNRE, including the right to require corrective action for the "Site" beyond that required under the AOC and pursue cost recovery or take enforcement action under certain circumstances. The draft License modification also provides for the withdrawal of the MDEQ's February 1, 2008, approval with modifications of the Dow Remedial Investigation Scope of Work for the Saginaw River and Bay and Floodplain, as this work would be addressed under the AOC Statement of Work.

Modifications to the following portions of the License are proposed in order to incorporate the AOC Appendix E language. For context purposes, these modifications are also shown in "track changes" format in the Draft License Amendment 8, which is attached to this Fact Sheet as Attachment 2. New Attachments 31 and 32 to the License are also included as part of Draft License Amendment 8. Three changes were made to the language in AOC Appendix E and are included in this proposed modification. The reference to Condition XI.B.10.(d) was corrected in Condition XI.B.10.(a); a cross reference in Condition XI.B.10.(g) was corrected; and a title was added to Condition XI.T.

License Cover Page

- Revised to indicate that the major modification would be Amendment 8.
- Added reference to new Attachments 31 (AOC Appendix H, Corresponding Obligations of the License and Settlement Agreement) and 32 (Exhibit A of Dow AOC Appendix A, RCRA-CERCLA Transition Schedule and Triggers).
- Added reference to the approval date of September 30, 2009, for Amendment 7 and approval date for Amendment 8.
- Updated the number of pages in the License from 82 to 83 to account for the text added due to the major modification.

Table of Contents

- Updated page numbering to account for the text added due to the major modification.
- Added title for newly added Condition XI.T., Reservation of Rights Related to the AOC Site. As part of Amendment 7, this condition was designated as being "Reserved" at the

time that the AOC was being negotiated.

List of Attachments

- Added new Attachments 31 and 32 to the List of Attachments.

Page Numbering Throughout the License

- Revised page numbering in headers throughout the License to reflect the increase from 82 to 83 pages to account for the text added due to the major modification.

Condition XI.B.10.

- Added new Condition XI.B.10. to the License as follows:

10. *The licensee, the MDEQ and the U.S. EPA are parties to an Administrative Settlement Agreement and Order on Consent for Remedial Investigation, Feasibility Study and/or Engineering Evaluation and Cost Analysis, and Response Design, CERCLA Docket No. V-W-10-C-942 effective January 21, 2010 (AOC). Among other things, the AOC requires the licensee to conduct a Remedial Investigation and Feasibility Study (RI/FS) pursuant to the requirements of CERCLA for areas defined as the "Site" under the AOC (AOC Site).*
 - (a) *As they pertain to the AOC Site, the license corrective action obligations set forth in Attachment 31 to this license (Attachment 31 is also Appendix H to the AOC) are held in abeyance and may be satisfied by compliance with the AOC as provided by Condition XI.B.10.(d) of this license, below.*
 - (b) *"Site" shall mean the area located in and along the Tittabawassee River and its floodplains, beginning at and including Reach A, starting upstream of the Midland Plant, and extending downstream to, and including, the Saginaw River and its floodplains, and Saginaw Bay, and any other areas in or proximate to the Tittabawassee River and its floodplains, the Saginaw River and its floodplains, and Saginaw Bay, where hazardous substances, pollutants, or contaminants from the Midland Plant have or may have come to be located, all depicted generally on the map attached as Appendix C to the AOC. Areas that are not part of the Site include but are not limited to the city of Midland, Michigan, generally, and the Midland Plant. Limited areas of the Tittabawassee River floodplain are located within the city limits of the city of Midland and are part of the Site as depicted in Appendix C to the AOC. The Midland Plant is depicted in Appendix D to the AOC.*
 - (c) *"Saginaw Bay" means the area encompassed by an imaginary line drawn between Au Sable Point and Point Aux Barques as depicted in Appendix G of the AOC. Saginaw Bay is operationally considered to have an inner and outer Bay. The inner Bay consists of the area encompassed by an imaginary line drawn between Au Gres and Fish Point, also depicted in Appendix G of the AOC.*

- (d) *The MDEQ will review the plans, reports, and other items submitted or determinations made under the AOC. Each plan, report, or other item or determination, once approved or made by the U.S. EPA, after opportunity for review and comment by the MDEQ, will be considered to be consistent with, and to satisfy, the corresponding obligation of the licensee as set forth in Attachment 31 to this license and Appendix H of the AOC unless within no more than 10 business days after the U.S. EPA approval of a plan, report, or other item or U.S. EPA determination, the MDEQ invokes the dispute resolution process set forth in Section XVII of the AOC with respect to that approval or determination.*
- (e) *If after the dispute resolution process in Section XVII of the AOC is completed, and the MDEQ has determined, consistent with the standards set forth in paragraph 69 of the AOC, that the licensee must undertake additional response activities/corrective actions to fulfill the requirement under this license that was the subject of the dispute resolution process, then the MDEQ will provide the licensee with a written notice directing the licensee to conduct such work as necessary to meet the substantive corrective action requirements of Part 111 and this license. The notice will include a description of the corrective action that is necessary, identify the provision of this license that requires the corrective action, and provide a reasonable time schedule for undertaking the corrective action. The notice will also set forth the reasons why:*
- (i) *Such work is necessary to meet the substantive corrective action requirements of this license; and*
- (ii) *Compliance with such substantive corrective action requirements under this license will not be achieved by the implementation of the Work taken or to be taken by licensee pursuant to the AOC. The licensee shall promptly comply with the required corrective action on the identified schedule, subject to all of licensee's rights under this license and applicable law, including any rights the licensee may have to seek judicial review of the MDEQ's decision under Section 600.631 of the Michigan Compiled Laws or any other applicable provision of law.*
- (f) *The MDEQ's February 1, 2008, approval with modifications of the Remedial Investigation Scope of Work for the Saginaw River and Bay and Floodplain is withdrawn.*
- (g) *The obligations listed in Attachment 32 to this license (Attachment 32 is also Exhibit A to the Statement of Work and the Statement of Work is Appendix A to the AOC) will be removed as current obligations under this license according to the schedule set forth in Attachment 32, and the work will be undertaken in accordance with the AOC.*
- (h) *Condition XI.S. of this license does not apply to the AOC Site.*

Condition XI.T.

- Added new Condition XI.T. to the License as shown below:

T. RESERVATION OF RIGHTS RELATED TO THE AOC SITE

Except as specifically provided in the AOC, for the area included in the AOC Site, the MDEQ reserves all of its rights to:

1. *Require additional remedial investigation and feasibility study activities pursuant to the procedures set forth in Sections XI and XVII of the AOC and Condition XI.B.10.(a) - (h) of this license;*
2. *Require IRAs pursuant to the procedures set forth in Section XI, paragraph 29(e) and Section XVII of the AOC;*
3. *Require corrective action for currently unknown releases or potential future releases to the AOC Site from areas outside of the AOC Site that may require actions to be taken in the area defined as the AOC Site as provided in AOC Section XI, paragraph 46;*
4. *Require submission and implementation of a RAP for the AOC Site;*
5. *Undertake corrective action or response activities and seek cost recovery from the licensee or any other person; and*
6. *Take enforcement action against the licensee or any other person with respect to any release of contaminants or hazardous substances into the environment.*

III. PUBLIC PARTICIPATION PROCESS

A. Public Comment Procedures

The purpose of public participation is to ensure that the interested public has knowledge of the MDNRE proposed actions, and that the public has the opportunity to comment on those actions. In addition, the process ensures that the MDNRE has the opportunity to benefit from any information the public might present, relevant to the proposed actions. The public notice for this proposed licensing action was published in the Midland Daily News, The Saginaw News, and The Bay City Times on February 4, 2010. Comments may be submitted in writing to the addressee listed in Subsection C between February 4, 2010 and April 5, 2010, or comments may be presented at the public hearing. The public comment and public hearing procedures that will be followed are stated in R 299.9514 and R 299.9515 and in 40 Code of Federal Regulations Sections 124.11 and 124.12.

The public hearing on the major License modification is scheduled for 7:00 to 9:00 p.m. on Thursday, March 11, 2010, at Saginaw Valley State University, Curtiss Hall, Seminar Room G, 7400 Bay Road, Saginaw, Michigan.

The location for the public information is accessible to disabled persons. Any person requiring specialized accommodations or assistance, such as an interpreter for the deaf, meeting materials in Braille, large print, or on audio tape, should contact Ms. Cheryl Howe (see Subsection C for contact information) a week in advance of the hearing.

After the public hearing and the close of the public comment period, the MDNRE will decide whether to approve the major License modification. Written comments submitted during the

public comment period and statements provided at the public hearing will be considered by the Chief of the Waste and Hazardous Materials Division (WHMD) in the formulation of the final decision. Responses to significant written comments and statements will be included in the record supporting the final decision of the agency. The MDNRE's final decision on the major License modification will be communicated to the applicant, each person who submitted a written comment during the public comment period, persons providing statements at the public hearing, and all persons on the facility mailing list.

B. Locations of Available Information

The administrative record for the draft major License modification is on file at the MDNRE, WHMD Office located on the North Atrium of Constitution Hall, 525 West Allegan Street in Lansing, Michigan (contact Ms. Cheryl Howe at 517-373-9881). In addition, copies of the draft major License modification and Fact Sheet are available for review at the Reference Desk of the Grace A. Dow Memorial Library, 1710 West St. Andrews Street, Midland, Michigan; the Hoyt Main Library, 505 Janes Avenue, Saginaw, Michigan; the Alice and Jack Wirt Public Library, 500 Center Avenue, Bay City, Michigan; the MDNRE, Saginaw Bay District Office, 401 Ketchum Street, Suite B, Bay City, Michigan (contact Ms. Trisha Confer at 989-894-6296); or at <http://www.michigan.gov/deqdioxin> (scroll down and click on the "Dow Part 111 Operating License Information" Quick Link in the right navigation bar).

C. Due Date for Public Comment and Information Contact

Written comments concerning the draft major License modification should include the name and address of the writer, a concise statement of the basis for the comments, and the supporting relevant facts upon which the comments are based. Comments regarding the draft major License modification should be addressed to: Ms. Cheryl Howe, Waste and Hazardous Materials Division, Michigan Department of Natural Resources and Environment, P.O. Box 30241, Lansing, Michigan 48909-7741 (e-mail: howec@michigan.gov). Written comments must be postmarked or e-mailed no later than April 5, 2010.