

RESPONSIVENESS SUMMARY

**Hazardous Waste Management Facility Operating License
Major Modifications
The Dow Chemical Company
Midland, Michigan**

**Michigan Operations, Midland Plant
MID 000 724 724
and
Salzburg Landfill
MID 980 617 435**

November 3, 2010



**Michigan Department of Natural Resources and Environment
Environmental Resource Management Division**

The Dow Chemical Company
Hazardous Waste Management Facility Operating License Major Modifications
Michigan Operations, Midland Plant
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On August 12, 2010, the Michigan Department of Natural Resources and Environment (DNRE), Environmental Resource Management Division (ERMD), held a public hearing to receive comments concerning major modifications of the hazardous waste management facility operating licenses (Licenses) issued in 2003 to The Dow Chemical Company (Dow) for the Michigan Operations, Midland Plant, located at 1790 Building, Midland, Michigan 48674, and in 2009 to the Dow Salzburg Landfill, located at 2314 West Salzburg Road, Midland, Michigan 48640, pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and Title 42 of the United States Code, Section 6901 *et seq.*, the federal Resource Conservation and Recovery Act of 1976, as amended (RCRA).

The public hearing and public comment period were announced in the Midland Daily News on July 13, 2010, and on radio station WSGW on August 11, 2010. The public comment period extended from July 13, 2010, to September 13, 2010. On July 19, 2010, and August 2, 2010, notice regarding the proposed Part 111 License major modifications appeared in the DNRE Environmental Calendar, which is published every two weeks to provide public notice of pending public hearings, DNRE decisions, etc.

In accordance with R 299.9515 of the Part 111 administrative rules, this document was prepared to respond to significant comments submitted during the public comment period and to describe any significant changes made to the draft License major modifications. Oral comments were received from one individual during the formal, recorded portion of the public hearing. Written comments were received from one individual during the public comment period. The DNRE has not made any modifications to the draft License major modifications as a result of the comments received. A summary of the comments received and the DNRE response to the comments are presented in Attachment 1, Summary of Comments.

Administrative changes made to the draft License major modifications by the DNRE and the reasons for each change are presented in Attachment 2, Summary of Changes. The DNRE had indicated that a number of License minor modifications that did not require public review and comment were in progress and were expected to be incorporated into the Licenses at the time a final decision was made on the License major modifications. Some of these License minor modifications were generally described in the Fact Sheet or shown in the draft Licenses or License attachments for informational purposes. The License minor modifications that have been made to the draft Licenses since the public notice are also summarized in Attachment 2, Summary of Changes.

ATTACHMENT 1
Summary of Comments

The Dow Chemical Company
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COMMENT 1: A commenter who lived in Midland for many years stated that with all the scares about what Dow puts in the air, water, and soils in and around its Midland Operations plant that it's long overdue that Dow be "held to the fire" to stop polluting. The commenter referred to coal fired plants dust emissions and foul odors that were released and times when residents had to stay inside or evacuate because of releases in the air. The commenter expressed concern that releases of contaminants, including dioxins, still continue. The commenter stated that they were surprised that the Dow site hasn't become another Love Canal where everyone was forced out and that they hope something is done before that happens.

DNRE RESPONSE: In consultation with the DNRE, Air Quality Division (AQD), and based upon a review of ambient air monitoring data and operations, it has been determined that Dow has maintained satisfactory compliance with air emission requirements. As an example, when an incinerator emergency vent opening recently occurred, Dow took immediate actions as required under permits issued by the AQD and ERMD to shut down the incinerator until it was able to be determined that no off-site releases occurred, emissions on-site were cleaned up, operational procedures were adjusted, and all required reports were submitted. Emissions of pollutants, including dioxins, to the air, water, and soil are not expected to increase beyond currently licensed levels as a result of approval of the License modifications. On-site and off-site corrective action activities have been and continue to be implemented under the Michigan Operations, Midland Plant License and an administrative order on consent that was entered into by the U.S. Environmental Protection Agency, the Michigan Department of Environmental Quality (now the DNRE), and Dow to address releases of contamination.

No changes were made to the draft License major modifications as a result of this comment.

COMMENT 2: A commenter from Midland Tomorrow made comments supporting Styron LLC's move into Midland and the opportunity for the Dow, Michigan Operations, Midland Plant to expand. The commenter mentioned the new Dow Kokam battery plant construction and Dow Powerhouse Solar Shingles project and stated that issuance of the License modifications would provide the ability for Michigan to leverage assets and develop the infrastructure necessary to attract other suppliers to the area. The commenter also expressed his support for Dow's redevelopment of critical Michigan assets and trailblazing the industrial park concept. The commenter requested that the DNRE approve the License modifications.

DNRE RESPONSE: The DNRE acknowledges these comments and has approved the License major modifications. No changes were made to the draft License major modifications as a result of this comment.

ATTACHMENT 2
Summary of Changes

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THROUGHOUT BOTH LICENSES

Since the draft License major modifications were made available for public review, minor typographical changes were made as a result of final proofreading that have not been summarized in this document. Such changes include corrections to punctuation, pagination, and inserting dates to reflect the actual dates of approval. These changes may be viewed in the "track changes" versions of the Licenses.

MICHIGAN OPERATIONS, MIDLAND PLANT

Part II - General Operating Conditions

CHANGE - Minor Modification to Condition II.O.1., Cost Estimate for Facility Closure and Post-Closure: This condition was updated by adding the language shown in bold font below in order to reflect the current closure and post-closure cost estimates that were adjusted for inflation:

At the time of issuance of this License, the closure cost estimate is \$79,342,049 and the post-closure cost estimate is \$2,566,200. Effective September 30, 2005, the closure cost estimate is modified to \$94,330,179. Effective September 27, 2007, the closure cost estimate is modified to \$98,651,100 to reflect the closure of the 703 and 830 Incinerators and the retention of Storage Spots 5E, 6E, 7E, and 8E, and the post-closure cost estimate is modified to \$2,360,300 (2007 cost basis). **Effective November 3, 2010, the closure cost estimate is modified to \$105,656,112, and the post-closure estimate is modified to \$2,527,900.**

Part X - Environmental Monitoring Conditions

CHANGE - Minor Modification to Condition X.K. - Ambient Air Monitoring Program: This condition was revised by adding the language shown in bold font below in order to reflect the updated ambient air monitoring program that incorporates the new location of a co-located monitoring station, adds monitoring of toluene and acetonitrile, and eliminates monitoring of carbon tetrachloride based on recent air emissions data, replaces metals monitoring with total suspended particulate monitoring, and other minor updates:

The licensee shall conduct ambient air monitoring and reporting of monitoring results in accordance with the program specified in Attachment 26 of this license, effective September 30, 2005. **The ambient air monitoring program was revised and incorporated into Attachment 26 of this license as a minor modification effective November 3, 2010.**
{R 299.9611(2)(c)}

Attachment 2 - Inspection Schedule

CHANGE - Minor Modifications to Attachment 2: In Attachment 2, the Daily Lift Station/Well/Piezometer/Manhole/Cleanout Inspection Sheet - RGIS West form was updated as a form change (9/22/10) to incorporate the addition of new manholes 9A and 9B and replacement of piezometers 6170 and 6171 with piezometers 8356 and 8357, respectively.

Attachment 26 - Ambient Air Monitoring Program

CHANGE - Minor Modification to Attachment 26: The Ambient Air Monitoring Program in Attachment 26 was replaced with a revised version. Refer to the summary of changes to Condition X.K. described above.

Attachment 27- Soil and Groundwater Exposure Control Program

CHANGE - Minor Modification to Attachment 27: The Fugitive Dust Control Program maps in Attachment 27 were replaced with revised versions (March 2010 maps were replaced with September 2010 maps).

SALZBURG LANDFILL

Part II - General Operating Conditions

CHANGE - Minor Modification to Condition II.L.1., Financial Assurance for Closure: This condition was updated by adding the language shown in bold font below in order to reflect the current closure cost estimate that was adjusted for inflation: On the effective date of this license, the facility closure cost estimate is \$2,532,750. **Effective November 3, 2010, the closure cost estimate is modified to \$2,585,938.** The licensee shall keep this estimate current as required under R 299.9702 and 40 CFR §264.142.

CHANGE - Minor Modification to Condition II.M.1., Financial Assurance for Postclosure: This condition was updated by adding the language shown in bold font below in order to reflect the post-closure cost estimate that was adjusted for inflation: On the effective date of this license, the facility postclosure cost estimate is \$10,179,480. **Effective November 3, 2010, the postclosure estimate is modified to \$10,393,249.** The licensee shall keep this estimate current as required under R 299.9702 and 40 CFR §264.144.

Part III - Landfill Disposal Conditions

CHANGE - Minor Modification to Condition III.B.1.(a), Waste Identification and Quantity: This condition was revised to correct an oversight in the draft license modification in order to allow Dow to accept certain wastes generated off-site or from non-Dow generators in support of Dow operations or strategic business relationships as provided for under the revised Waste Analysis Plan, Attachment 1 of the license. The strikethrough text below shows the language that was deleted and the bold text below shows the language that was added:

1. The licensee may, subject to the terms of this license and except to the extent prohibited under Condition III.B.2. below, dispose a total volume of 3,090,000 cubic yards of:
 - (a) Hazardous waste generated ~~by the licensee and subsidiaries, Dow-related remediation activities, small quantities of hazardous waste as a "public service" (e.g., household hazardous waste, waste from local educational and not-for-profit~~

~~institutions)~~ **on-site and certain hazardous wastes generated off-site or by non-Dow generators in support of Dow operations or strategic business relationships as described in Section A of the Waste Analysis Plan, Attachment 1 of this license;** and

CHANGE - Minor Modification to Condition III.C.5., Design and Run-on, Runoff, and Contaminant Control: A typographical error in the regulatory citation in this condition was corrected as shown below. The strikethrough text shows the portion of the citation that was deleted and the bold text below shows the portion of the citation that was added:

The licensee shall cover or otherwise manage the landfill to control dispersal of particulate matter. {R 299.9619 and 40 CFR §264.301(ij)}

Attachment 2 - Inspection Schedule

CHANGE - Minor Modifications to Attachment 2: Inspection forms were revised pursuant to License Condition II.I.7. and incorporated into Attachment 2 to make simple formatting changes on all of the landfill inspection forms and to delete two lift station flow meters that were inadvertently put into the weekly/monthly/after storm inspection program for Lift Stations 51 and 52 and the safety shower in the 3600/wash building that did not exist at that location.

Attachment 6 - Postclosure Plan

CHANGE - Minor Modifications to Attachment 6: The Cap Elevation Survey Plan, Appendix 1 to Attachment 6, was revised to reflect revisions to the survey schedule and locations.