



Michigan Department of Environmental Quality
Office of Waste Management and Radiological Protection

SOLID WASTE DISPOSAL AREA OPERATING LICENSE

This license is issued under the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.11501 et seq., and authorizes the operation of this solid waste disposal area (Facility) in the state of Michigan. This license does not obviate the need to obtain other authorizations as may be required by state law.

FACILITY NAME: Northern Oaks Recycling and Disposal Facility

LICENSEE/OPERATOR: Waste Management of Michigan, Inc.

FACILITY OWNER: Waste Management of Michigan, Inc.

PROPERTY OWNER: Waste Management of Michigan, Inc.

FACILITY TYPE(S): Municipal Solid Waste Landfill

FACILITY ID NUMBER: 409210

COUNTY: Clare

LICENSE NUMBER: 9372

ISSUE DATE: March 21, 2014

EXPIRATION DATE: March 21, 2019

FACILITY DESCRIPTION: The Northern Oaks Recycling and Disposal Facility, a municipal solid waste landfill, consists of 160 acres located in the NE 1/4 of Section 32, T19N, R4W, Hayes Township, Clare County, Michigan, as identified in Attachment A and fully described in this license.

AREA AUTHORIZED FOR DISPOSAL OF SOLID WASTE: Cells 1,2,3,4, 5a, 5b, and 8.

RESPONSIBLE PARTY: Mr. Terry Nichols
Northern Oaks Recycling and Disposal Facility
513 County Farm Road
Harrison, Michigan 48625
989-539-6111

RENEWAL OPERATING LICENSE: This License Number 9372 supersedes and replaces Solid Waste Disposal Area Operating License Number 9194 issued to Waste Management of Michigan, Inc. on January 26, 2009.

This license is subject to revocation by the Director of the Michigan Department of Environmental Quality, if the Director finds that this Facility is not being constructed or operated in accordance with the approved plans, the conditions of a permit or license, Part 115, or the rules promulgated under Part 115. Failure to comply with the terms and provisions of this license may result in legal action leading to civil and/or criminal penalties pursuant to Part 115. This license shall be available through the licensee during its term and remains the property of the Director.

THIS LICENSE IS NOT TRANSFERABLE.

Steven R. Sliver, Chief, Solid Waste Section
Office of Waste Management and Radiological Protection

Licensee: Waste Management of Michigan, Inc.
Facility Name: Northern Oaks Recycling and Disposal Facility
Operating License Number: 9372
Issue Date: March 21, 2014

The licensee shall comply with all terms of this license and the provisions of Part 115 and the administrative rules implementing Part 115 (Part 115 Rules). This license includes the license application and any attachments to this license.

1. The licensee shall operate the Facility in a manner that will prevent violations of any state or federal law.
2. The following portions of the Facility are authorized to receive solid waste by this license:
 - a. **ACTIVE PORTIONS NOT AT FINAL GRADE:** The area(s) identified as Cells 1 (9.2 acres), 2 (5.2 acres), 3 (3.0 acres), 4 (14.3 acres), 5a (6.0 acres), 5b (4.2 acres), and 8 (8.5 acres) were authorized to receive waste by the previous license. This area's total acreage is 50.4 acres.
3. The following portions of the Facility **WILL BE** authorized to receive solid waste by this license following approval by the Michigan Department of Environmental Quality (MDEQ) of construction certification:

UNCONSTRUCTED AREA(S) WITH FINANCIAL ASSURANCE: The area(s) identified as 5c, totaling 3.8 acres, are included in the calculation of financial assurance as required by Section 11523 of Part 115. This portion(s) of the Facility shall be authorized to receive waste, as part of this license, when acceptable certification is submitted to the MDEQ, as required by Section 11516(5) of Part 115, and determined by the MDEQ to be consistent with Part 115 and the Part 115 Rules. The certification shall verify that construction of this area(s) was in accordance with the Construction Permit(s) listed in Item 8 of this license, Part 115, and the Part 115 Rules.
4. The following portions of the Facility are **NOT** authorized to receive solid waste by this license:

UNCONSTRUCTED AREA(S) WITHOUT FINANCIAL ASSURANCE: The area(s) identified as Cell 6 (11.7 acres), and Cell 7 (9.2 acres) are not constructed and are not included in the calculation of financial assurance as required by Section 11523 of Part 115. This area's total acreage is 20.9 acres.
5. The attached map (Attachment A) shows the Facility, the area permitted for construction, monitoring points, leachate storage units, site roads, other disposal areas, and related appurtenances.
6. Issuance of this license is conditioned on the accuracy of the information submitted by the Applicant in the Application for License to Operate a Solid Waste Disposal Area (Application) received by the MDEQ on January 10, 2014, and any subsequent amendments. Any material or intentional inaccuracies found in that information is grounds for the revocation or modification of this license and may be grounds for enforcement action. The licensee shall inform the MDEQ's Office of Waste Management and Radiological Protection (OWMRP), Saginaw Bay District Supervisor, of any inaccuracies in the information in the Application upon discovery.
7. This license is issued based on the MDEQ's review of the Application, submitted by Debora Johnston, for the Waste Management of Michigan, Inc., and dated January 9, 2014. The Application consists of the following:
 - a. Application Form EQP 5507.
 - b. Application fee in the amount of \$5,000.00.
 - c. Certification of construction by NA.
 - d. Waste Characterization: N/A.

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e. Restrictive Covenant:

The September 11, 1992, restrictive covenant on 161.43 acres is on file at the Clare County Register of Deeds recorded on December 17, 1992, as Liber 279 pages 72 and 73. A copy is on file with the MDEQ.

f. Perpetual Care Fund Agreement, established as a trust account, signed by Ronald H. Jones, Vice President and Treasurer, Waste Management of Michigan, Inc. on April 23, 2002, was executed by the MDEQ on June 26, 2002.

g. Financial Assurance.

i. Financial Assurance Required:

The amount of financial assurance required for this Facility was calculated based on the calculation worksheet form EQP 5507A entitled, "Form A, Financial Assurance Required," and is \$9,135,278.00.

The Facility has provided financial assurance totaling \$9,298,000.00, based on the requirements of Section 11523 of Part 115, consisting of a combination of the Perpetual Care Fund established under Section 11525 of Part 115, bonds, and the financial capability of the Applicant as evidenced by a financial test. The financial assurance mechanisms used by the Facility are summarized below in Items ii and iii, respectively.

ii. Financial Assurance Provided Via a Perpetual Care Fund:

- (1) The amount of the required financial assurance can be reduced pursuant to Section 11524 of Part 115, if the amount of money in the Perpetual Care Fund plus the amount of the reduced financial assurance equals the amount of financial assurance required in Section 11523 of Part 115 and is approved by the MDEQ.
- (2) The Perpetual Care Fund Agreement statement showed a balance of \$2,078,000.00 in the Facility's Perpetual Care Fund as of December 31, 2013. Of this amount, the MDEQ has granted the request to use \$2,078,000.00 toward the total amount of financial assurance required.

iii. Financial Assurance Provided Via Bond:

The following financial assurance has been received from the Applicant to meet the amount of financial assurance required:

Surety Bond	\$7,220,000.00
Total Amount Received:	\$7,220,000.00

iv. Financial Assurance Updates Required:

For Type II landfills, the financial assurance cost estimates of closure and postclosure activities must be updated annually and the corresponding requisite amount of financial assurance must be adjusted annually for the costs of inflation. The corresponding financial assurance, as adjusted for inflation and other factors, is due on March 21, 2015, and each year thereafter.

8. The following documents approved with Construction Permit Number(s) 0258 and 0387 issued to the Waste Management of Michigan, Inc. on March 2, 1992 and March 21, 2001 respectively, are incorporated in this license by reference:

- a. Environmental Assessment entitled "Engineering Assessment Report, Northern Oaks Recycling and Disposal Facility, Clare County, Michigan," prepared by GZA Geo Environmental, Inc., dated August 1991.

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- b. Engineering Report entitled "Engineering Report for Northern Oaks Recycling and Disposal Facility, Clare County Michigan Construction Permit Application," prepared by Waste Management of Michigan, Inc., dated October 1991.
 - c. Engineering Plans titled "Design Plans for Northern Oaks Recycling and Disposal Facility Construction Permit, Clare County, Michigan," prepared by Mr. James Walker, P.E., Waste Management of Michigan, Inc., dated October 1991, and engineering plan revisions described in Waste Management of Michigan, Inc., letter and attachments, dated December 9, 1991.
 - d. Hydrogeological Report entitled "Hydrogeological Investigation Report, Volumes I, II, and III," prepared by GZA Geo Environmental, Inc., dated October 1991.
 - e. Closure Plan titled "Subtitle D Closure Plan for Northern Oaks Recycling and Disposal Facility, Clare County, Harrison, Michigan," prepared by Waste Management of North America, Inc., dated September 1993.
 - f. Post Closure titled "Subtitle D Post Closure Plan for Northern Oaks Recycling and Disposal Facility, Clare County, Harrison, Michigan," prepared by Waste Management of North America, Inc., dated September 1993.
 - g. Explosive Gas Control and Monitoring Plan entitled "Site-Specific Gas Monitoring Plan, Northern Oaks Recycling and Disposal Facility, Clare County, Michigan," prepared by GZA Geo Environmental Inc., dated December 1993.
 - h. Leachate Recirculation Plan for Northern Oaks Recycling and Disposal Facility dated May 25, 1995.
 - i. Hydrogeological Monitoring Plan prepared by Waste Management, Inc., dated September of 1996, amended November 6, 1996, April 4, 1997, and September 22, 2000.
 - j. Construction Permit Application for the Vertical Expansion of Northern Oaks Recycling and Disposal Facility, dated November 2000, revised January 2001, as prepared by Earth Tech, Inc.
 - k. Hydrogeological Report Addendum, dated November 2000, revised January 2001, as prepared by Eagon and Associates, Inc.
 - l. Vertical Expansion Design Drawings, Sheets 1-19, dated November 2000, revised January 2001, as prepared by Earth Tech, Inc.
 - m. Hydrogeological Report Addendum Plan Drawings, dated November 2000, revised January 2001, as prepared by Eagon and Associates, Inc. and Earth Tech, Inc.
 - n. Operations Plan, dated November 2000, revised April 2011.
9. The following additional documents, approved since the issuance of the construction permit(s) referenced in Item 8, are incorporated in this license by reference:
- a. Construction Certification Documentation Report of Cell 8C, prepared by Rust Environment & Infrastructure of Michigan, Inc., dated July 1997.
 - b. Construction Certification Documentation Report of Cell 8D, prepared by Rust Environment & Infrastructure of Michigan, Inc., dated July 1998.
 - c. Construction Quality Assurance Documentation Report for Cell 2, prepared by Earth Tech, dated July 1999.
 - d. Site Specific Construction Quality Assurance Plan for Cell 3A Construction, prepared by Earth Tech, dated August 2000.
 - e. Cell 4a Construction Documentation Report, prepared by Earth Tech, dated August 2001.
 - f. Engineering Modifications Report for Cell 4b, prepared by Earth Tech, dated July 2002.

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- g. Hydrogeological Report Addendum No. 2 for Cell 4b, prepared by Earth Tech, dated July, 2002.
 - h. Cell 4b Construction Documentation Report, prepared by STS Consultants, dated June 2003.
 - i. Work Plan titled "Work Plan for Well Installation, Northern Oaks RDF, Harrison, Michigan," prepared by NTH Consultants, dated September 8, 2004.
 - j. Proposed Leachate Management Modifications, prepared by Midwestern Consulting, dated June 2006.
 - k. Cell 2/3 and Cell 4 Liquids Management Plan, prepared by WMI, dated January 25, 2008.
 - l. Cell 2/3 and Cell 4 Rule 437(5) Response Action Plan, prepared by WMI, dated January 25, 2008.
 - m. Leachate Evaporator Approval prepared by Midwestern Consulting and Shaw LFG Specialties, LLC, dated March 26, 2008.
 - n. Management Plan titled, "Compost Facility Site Management Plan," dated April 30, 2008.
 - o. Plan modifications titled "Cell 5 & 6 Modifications," prepared by Midwestern Consulting, dated June 6, 2008.
 - p. Plans titled "Malfunction Abatement Plan" and "Odor Management Plan," dated August 2008.
 - q. Plan titled "Interim Gas Management Plan" prepared by Environmental Information Logistics, dated August 2008.
 - r. Cell 5A Construction Certification Report, prepared by Weaver Boos Consultants, dated October 24, 2008.
 - s. Plan titled "Landfill Gas Monitoring Plan," dated July 2009.
 - t. Plan titled "Hydrogeologic Monitoring Plan," prepared by NTH Consultants, dated March 2011, revised February 21, 2014.
 - u. Plan titled "Construction Quality Assurance Plan for the Installation of Lining Systems," dated November 2000, revised June 2008, and May 2011.
 - v. Cell 5b Construction Documentation Report, prepared by CTI and Associates, dated August 2011, revised February 21, 2014.
 - w. Plan titled "Solidification Plan," dated January 2013.
10. Consent Order/Judgment Number: N/A.
11. The licensee shall repair any portion of the certified liner or leachate collection system that is found to be deficient or damaged during the term of this license unless determined otherwise by the MDEQ.
12. The licensee shall have repairs to any portion of the certified liner or leachate collection system recertified by a registered professional engineer in accordance with R 299.4921 of the Part 115 Rules and approved by the MDEQ before receiving waste in that portion of the certified liner or leachate collection system. The licensee shall submit the recertification to the MDEQ's OWMRP, Saginaw Bay District Office Supervisor, for review and approval.
13. The licensee shall conduct hydrogeological monitoring in accordance with the approved hydrogeological monitoring plan, dated March 2011 and revised February 21, 2014. The sampling analytical results shall be submitted to the MDEQ's OWMRP, Saginaw Bay District Office.
14. Modifications to the approved hydrogeological monitoring plan referenced in Item 13 may be approved, in writing, by the OWMRP, Saginaw Bay District Supervisor. Proposed revisions must be submitted in a format specified by the MDEQ.

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15. Leachate may be recirculated if a leachate recirculation plan has been approved, in writing, by the OWMRP, Saginaw Bay District Supervisor.
16. Modifications to approved engineering plans that constitute an upgrading, as defined in R 299.4106a(l) of the Part 115 Rules, may be approved, in writing, by the OWMRP, Saginaw Bay District Supervisor.
17. Requests for alternate daily cover may be approved, in writing, by the OWMRP, Saginaw Bay District Supervisor.
18. Leakage Control Criteria:

The active portions of the unit(s) authorized to receive waste by this license is an unmonitorable unit(s) designed with a double-liner systems that is in compliance with the provisions of R 299.4422(3) of the Part 115 Rules and that is capable of detecting and collecting leakage through the primary composite liner. The action flow rate for each unit containing a leak detection system is 5 gallons/acre/day. The response flow rate for each unit containing a leak detection system is 25 gallons/acre/day.

19. **VARIANCES:** None.

20. **SPECIAL CONDITIONS:**

The licensee shall place a compacted layer of not less than six inches of earthen material, unless an exemption is granted, of suitable cover material on all exposed solid waste by the end of each working day, as required by R 299.4429(1) of the Part 115 Rules. Suitable cover shall be either uncontaminated soil or an alternate cover approved by the OWMRP, listed in Item i, below. Alternate cover shall be restricted as indicated in Item ii and applied as per the approved operational plan submitted by the licensee.

i. Approved alternate cover shall be any of the following:

<u>Product/Waste Material</u>	<u>Source</u>	<u>Monthly Volume</u>
Fabrisoil	NA	Per manufactures specifications
Sanifoam	NA	Per manufactures specifications
Concover	NA	Per manufactures specifications
Untreated wood chips	NA	As needed
Tire Chips	NA	As needed
Ground/shredded shingles	NA	As needed
Petroleum contaminated soils	NA	As needed

ii. The above materials are approved for daily cover when used in the following manner:

- (1) The licensee shall use the material as daily cover only. The material cannot be used for road building or fill in other areas of the Facility's operation.
- (2) The licensee shall maintain copies of the testing performed on Class B and Class C materials in the facility operating record.
- (3) The licensee shall only stockpile material in a secure manner within the active cell.
- (4) This approval does not preclude the licensee from disposing of the material as waste in the active fill area instead of using the material as daily cover.
- (5) This approval shall immediately become void upon documentation by the MDEQ that the alternative cover is not being used in accordance with listed conditions, that the alternative cover is not providing the necessary protection, that the material no longer meets the alternative daily cover guidelines, or that the process producing the waste material has changed.

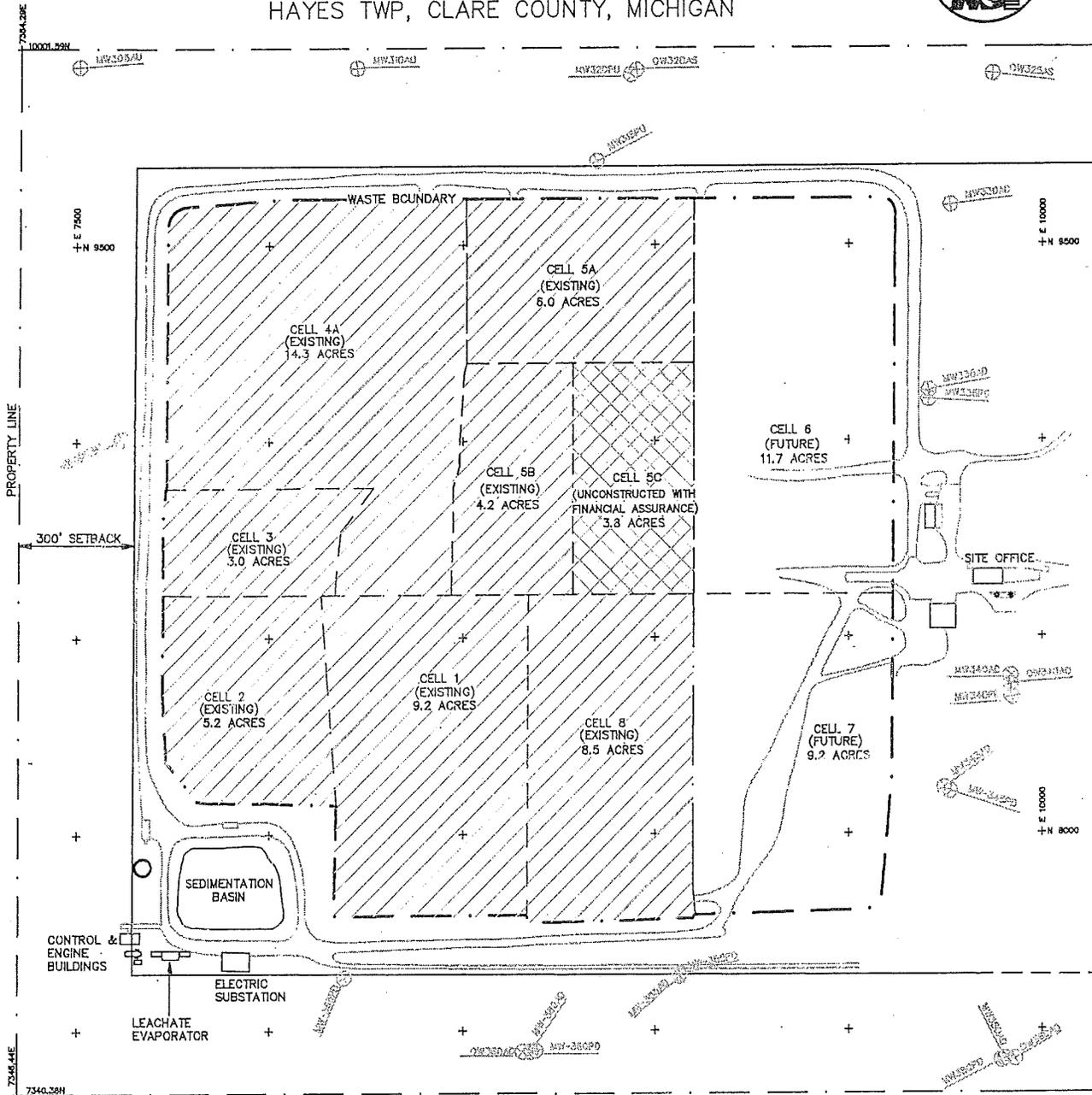
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- (6) If the material does not meet the guidelines from Attachment 2 of Policy and Procedure OWMRP-115-10, for nonvolatiles, the licensee shall ensure that fugitive dust emissions from this material do not occur. Acceptable methods to ensure fugitive emissions do not occur are:
- (a) Implement a schedule to wet down material; or
 - (b) Cover the material with a tarp; or
 - (c) Apply an approved foam or other appropriate commercial dust control product.
- (7) This approval to use alternative cover shall expire upon expiration of this operating license.

21. **TERM:** This license shall remain in effect until its expiration date, unless revoked or continued in effect, as provided by, the Administrative Procedures Act, 1969 PA 306, as amended, or unless superseded by the issuance of a subsequent license.

END OF LICENSE

NORTHERN OAKS RDF
SECTION 32, T.19N, R.4W
HAYES TWP, CLARE COUNTY, MICHIGAN



LEGEND

-  ACTIVE AREA
-  UNCONSTRUCTED WITH FINANCIAL ASSURANCE
-  UNCONSTRUCTED AREA

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MIDWESTERN CONSULTING



Civil, Environmental and
Transportation Engineers
Planners, Surveyors
Landscape Architects

7478 Gateway Park Drive
Clarkston, Michigan 48348
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NORTHERN OAKS RDF
ATTACHMENT A

DATE: 11/18/13

JOB NO.: **05280**

SCALE: 1" = 400'

SHEET 1 OF 1



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