EGLE Michigan Department of Environment, Great Lakes, and Energy Materials Management Division SOLID WASTE DISPOSAL AREA OPERATING LICENSE

Effective April 22, 2019, the Michigan Department of Environmental Quality, by Executive Order Number 2019-06, became the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Effective April 22, 2019, the Waste Management and Radiological Protection Division became the Materials Management Division (MMD).

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 <u>et seq</u>., 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: DTE Electric Company, Range Road Ash Disposal

LICENSEE/OPERATOR: DTE Electric Company

FACILITY OWNER: DTE Electric Company

PROPERTY OWNER: DTE Electric Company

FACILITY TYPE(S): Coal Ash Landfill

FACILITY ID NUMBER: 392562

COUNTY: St. Clair

LICENSE NUMBER: 9603

ISSUE DATE: May 15, 2020

EXPIRATION DATE: May 15, 2025

FACILITY DESCRIPTION: The DTE Electric Company, Range Road Ash Disposal, a Coal Ash Landfill, consists of 514 acres located at 3600 Range Road, China Township, St. Clair County, Michigan, as identified in Attachment A and fully described in this license.

AREA AUTHORIZED FOR DISPOSAL OF SOLID WASTE: Identified in Item 2 of this license and in Attachment A titled "2020 Site Plan".

RESPONSIBLE PARTY: Mr. Christopher Scieszka

DTE Electric Company, Staff Engineer One Energy Plaza, 410 G.O. Detroit, Michigan 48226 313-235-0153

RENEWAL OPERATING LICENSE: This License Number 9603 supersedes and replaces Solid Waste Disposal Area Operating License Number 9395 issued to DTE Electric Company on June 26, 2014.

This license is subject to revocation by the Director of the Michigan Department of Environment, Great Lakes, and Energy, 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.

Rhonda S. Klyen

Rhonda S. Oyer, Manager, Solid Waste Section Materials Management Division

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:

ACTIVE PORTIONS NOT AT FINAL GRADE: The area(s) identified as D3 (3 acres), F3/D3 (5 acres), and G2 Phase I (22 acres) were authorized to receive waste by the previous license. This area's total acreage is 30 acres.

3. The following portions of the Facility **WILL BE** authorized to receive solid waste by this license following approval by EGLE of construction certification:

UNCONSTRUCTED AREA(S) WITH FINANCIAL ASSURANCE: The area(s) identified as Area G2 Phase II (13 acres), G2 Phase III (19 acres), G1/G3, (56 acres), and E (117 acres), totaling 205 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 EGLE, as required by Section 11516(5) of Part 115, and determined by EGLE 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:

CLOSED UNIT(S) OR A PORTION OF A UNIT WHERE THE FINAL COVER HAS BEEN CERTIFIED CLOSED AND ACCEPTED BY EGLE: The following unit(s) and/or portion(s) are closed:

EXISTING UNIT(S): The unit(s) or portion(s) of unit(s) identified as had final Area B (102 acres) and Area B1 (9 acres) had reached final grade and received final cover by September 2, 1999, and are, therefore, considered to be closed in accordance with the Proposal for Decision for Range Road and Sibley Quarry dated October 17, 2001, issued by Mr. Chris A. Shafer, Administrative Law Judge. In addition, the portions of the unit identified as Area A (7 acres, certified May 17, 2002), Area C (16 acres, certified August 25, 2009), Area D1 (21 acres, Certified August 25, 2009), Area F1 (17 acres, certified January 4, 2010), Area F2 (12 acres, certified February 28, 2013), and area F3 (17 acres, certified May 22, 2018). This area's total acreage is 211 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 EGLE on April 26, 2019, 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 EGLE's MMD Warren District Supervisor, of any inaccuracies in the information in the Application upon discovery.
- 7. This license is issued based on EGLE's review of the Application, submitted by DTE Electric Company, for the DTE Electric Company, Range Road Ash Disposal, dated April 26, 2019, and amended on April 30, 2020. The Application consists of the following:
 - a. Application Form EQP 5507.
 - b. Application fee in the amount of \$13,000.00.
 - c. Certification of construction by N/A.

- d. Waste Characterization: See paragraph 20b below.
- e. Restrictive Covenant:

The DTE Electric Company, Range Road Ash Disposal restrictive covenant on 456.475 acres is on file at the St. Clair County Register of Deeds recorded on February 27, 1989, as Liber 1214 pages 168-171. A copy is on file with EGLE.

- f. Perpetual Care Fund Agreement, established as a standby trust agreement, signed by Mr. David Murphy, Assistant Treasurer, Detroit Edison Company on December 10, 2014, was executed by EGLE on January 6, 2015.
- 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 includes a Surety Bond of \$20,000.00 per acre of licensed landfill, and the Perpetual Care Fund requirement.

The Facility has provided financial assurance totaling \$2,071,000.00 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, and the bonding requirements of Section 11523 (1)(a) of Part 115. 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:

The Perpetual Care Fund Agreement statement showed a balance of \$1,071,000.00 in the Facility's Perpetual Care Fund as of October 31, 2019

iii. Financial Assurance Provided Via Bond:

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

Irrevocable Letters of Credit	\$1,000,000.00
Total Amount Received:	\$1,000,000.00

- iv. Financial Assurance Provided Via a Financial Test for a Type II Landfill: N/A.
- v. Financial Assurance Updates Required: N/A.
- vi. Other Required Financial Assurance: N/A.
- 8. This previously "grandfathered" facility did not have a construction permit, but the following documents are incorporated in this license by reference:
 - a. Engineering drawing 6C 664-2, dated May 1975.
 - b. Engineering drawing 6C 664-8, dated March 21, 1986.
 - c. Engineering drawing 6C 664-2, dated August 25, 1988.
 - d. Engineering drawing 6C 664-6, dated January 20, 1986.

- e. "Detroit Edison Response and Commitment, Re: November 6, 2001, meeting," submitted November 30, 2001.
- f. "Alternative Clay Cover Construction Demonstration Report" not dated and received January 22, 2002, and subsequently revised with the submission of a document titled "Area A Clay Cover Documentation" dated April 19, 2002, and received by EGLE on April 22, 2002.
- g. "Slope and Slurry Wall Stability Analysis, Slurry Wall Installation and Storm Water Run-Off Enhancement Project" dated April 17, 2002, and received April 19, 2002.
- h. "Quality Control/Quality Assurance Plan, Range Road Landfill" revised April 12, 2002, and received May 8, 2002.
- i. "Storm Water Run-Off and Retention Volume Assessment, Slurry Wall Installation and Storm Water Run-Off Enhancement Project" dated April 19, 2002, and received April 22, 2002.
- j. "The Detroit Edison Company Range Road Landfill Ash Disposal Facility, Slurry Wall Installation, and Storm Water Run-Off Enhancement" (engineering plans, 11 sheets) dated May 2002, and received May 9, 2002.
- k. "Slurry Wall Installation and Storm Water Run-Off Enhancement, Construction Quality Assurance Plan, The Detroit Edison Company Range Road Landfill Ash Disposal Facility," revised May 2002, and received May 9, 2002.
- I. "The Detroit Edison Company Range Road Landfill Ash Disposal Facility, Landfill Closure Plan" (engineering plans, four sheets) dated May 2002, and received May 9, 2002.
- m. "Remedial Investigation Summary and Feasibility Study for Off-Site Groundwater" dated February 2003, and revised April 17, 2003.
- n. Interim Response Work Plan for Eastern Off-Site Groundwater at the Range Road Ash Landfill Site (IRWP) dated January 31, 2007, revised April 27, 2007, and May 10, 2007.
- o. Engineering plan set titled "The Detroit Edison Company, Range Road Landfill, Storm Water Detention Pond and Pump Station Installation" prepared by RMT, Inc., dated June 2007, received by MMD on June 11, 2007, and engineering report prepared by RMT, Inc., dated June 20, 2007, and received by MMD on June 21, 2007, providing calculations supporting the size of the proposed storm water detention pond and the adequacy of the pond's discharge pipe.
- p. Engineering plan set (Sheets 1 through 17) titled "The Detroit Edison Company Range Road Landfill, Slurry Wall Installation, China Township Michigan," prepared by RMT, Inc., dated March 2008, and received by MMD on March 17, 2008.
- q. Document titled "Slurry Wall Installation, Construction Quality Assurance Plan Issued for Construction, Range Road Landfill Ash Disposal Facility, China Township, Michigan," prepared by RMT, Inc., dated May 2008, and received by MMD via e-mail on May 22, 2008.
- r. Document titled "Remedial Investigation Summary and Feasibility Study for Northwestern Section Off-site Groundwater, Range Road Ash Landfill Site, Belle River Power Plant, China Township, Michigan," prepared by RMT, Inc., dated March 2008, and revised on May 15 and 21, 2008, via submittal of the following documents: A letter with Attachments A through E having the subject "Remedial Investigation Summary and Feasibility Study for Northwestern Section Off-Site Groundwater – Response to EGLE Review," prepared by RMT, Inc., dated May 15, 2008, and an electronic mail submittal from DTE Energy having the subject "Range Road Landfill RI/FS Response to Comments," dated May 21, 2008, including Attachment A, "Groundwater Velocity From 06-W-01/06-W-02 To Bree Road French Drain Calculations," prepared by RMT, Inc., dated May 21, 2008.
- s. "The Detroit Edison Company Range Road Landfill, As-Built for Detention Pond and Pump Station Installation" prepared by RMT, Inc., dated June 2008.

- t. "Performance Monitoring Plan for Off-Site Shallow Groundwater Remedial Action, The Detroit Edison Company, Range Road Landfill Ash Disposal Facility, China Township, Michigan," prepared by RMT, Inc., dated November 2008, and revised on December 11, 2008.
- u. Revision 4 of the "Remedial Action Plan for Off-Site Groundwater, The Range Road Ash Landfill Site, Belle River Power Plant," prepared by RMT, Inc., dated March 12, 2004, with revisions dated December 3, 2004, February 2, 2006, July 8, 2008, and November 26, 2008, the approval of which became effective on February 5, 2009.
- v. "Construction Documentation Report for the Perimeter Slurry Wall, Range Road Ash Landfill Site, China Township, Michigan," prepared by RMT, Inc., dated February 2009.
- w. "Hydrogeologic Monitoring Plan, Range Road Ash Disposal Facility, China Township, St. Clair County, Michigan" prepared by RMT, Inc., dated November 2019, and revised May 2020.
- x. A letter submittal with the subject "Minor Modification to the QC/QA Plan to Show Equivalent Protection for Area F, Phase 1 Final Cover." including attached drawings numbered 6, 7, and 8, prepared by RMT, Inc., dated April 17, 2009, and revised via electronic mail on April 20, 2009.
- y. Engineering Plan Set (Sheets 1, 2, 7-12, 15, and 17) titled "The Detroit Edison Company, Design Plan Set for the Eastern Cargill & Southern Range Road Legs, Range Road Landfill, Off-site Groundwater Capture & Discharge System," prepared by RMT, Inc., dated June 2009, and received by EGLE on June 4, 2009, with an explanatory transmittal letter dated June 4, 2009, which detailed the substantive proposed changes and included attached soil boring logs (used to determine the sand/clay interface).
- z. Engineering plan set (Sheet Numbers 1 through 8) titled "The Detroit Edison Company, Design Plan Set, Range Road Landfill – Off-site Groundwater Capture & Discharge System – Northwest Corner," prepared by RMT, Inc., dated July 2009, and received by EGLE on July 20, 2009, via electronic mail.
- aa. "Operation and Maintenance Plans, Off-Site Groundwater Capture and Discharge System, Northeast System (Revision 1) and Northwest Corner System," prepared by RMT, Inc., dated February 2010, and revised via e-mail submittal on May 6, 2010.
- bb. Engineering plan set titled "Southwest Ditch Slope Mitigation, Range Road Landfill, Belle River Power Plant, East China, Michigan," prepared by Geosyntec Consultants, dated June 2010, and revised September 2010.
- cc. Letter request (including Figures 1 and 2) titled "Storm Water Recirculation Plan, Detroit Edison Range Road Coal Ash Landfill, Operating License 9207, St. Clair County, Michigan," prepared by TRC Environmental Corporation, dated April 20, 2012.
- dd. "Range Road Landfill -- Area G2 Soil Verification report," prepared by NTH Consultants, Ltd., dated August 2015, and received by EGLE on August 6, 2014.
- ee. "Phased Excavation Work Plan, Range Road Ash Landfill -- Area G2, DTE Energy," prepared by NTH Consultants, Ltd., dated August 2015, and revised September 2015.
- ff. "Area G2 Base Liner Preparation and Certification," prepared by NTH Consultants, Ltd., dated July 2018, and received by EGLE on July 27, 2018.
- gg. Soil sampling documentation and laboratory analytical data prepared by EnviroSolutions, Inc. related to soil investigation and remediation activities conducted within the area G2 footprint. This documentation was submitted to MMD by NTH Consultants via e-mail on August 30, 2018.
- hh. A certification addendum letter (with attachments) titled "Area G2 Base Liner Preparation and Certification," prepared by NTH Consultants, Ltd., dated September 14, 2018, and submitted to MMD via e-mail on September 14, 2018.

- ii. "DTE Electric Company -- Range Road Ash Disposal Facility Residual Fugitive Dust Plan" dated and certified on September 21, 2015.
- jj. "Run-on/Run-off Control System Plan for Coal Combustion Residuals (CCR) Disposal Authority -- Range Road Ash Disposal Facility," prepared by AECOM, dated and certified on October 17, 2016.
- kk. "Closure Plan for Existing CCR Unit (Range Road Ash Disposal)," dated and certified on October 17, 2016.
- II. "Post Closure Plan for Existing CCR Unit (Range Road Ash Disposal)," dated and certified on October 17, 2016.
- mm. "Range Road Landfill Slurry Wall Pipeline Crossing and Restoration Plans," including drawing, dated April 24, 2020, and revised April 30, 2020.
- 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: None.
- 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 EGLE.
- 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 EGLE before receiving waste in that portion of the certified liner or leachate collection system. The licensee shall submit the recertification to EGLE's MMD Warren District Supervisor, for review and approval.
- 13. The licensee shall conduct hydrogeological monitoring in accordance with the approved hydrogeological monitoring plan, dated November 2019, and revised May 2020. The sampling analytical results shall be submitted to EGLE's MMD Warren District Office.
- 14. Modifications to the approved hydrogeological monitoring plan referenced in Item 13 may be approved, in writing, by EGLE's MMD Warren District Supervisor. Proposed revisions must be submitted in a format specified by EGLE.
- 15. Leachate may be recirculated if a leachate recirculation plan has been approved, in writing, by EGLE's MMD Warren District Supervisor.
- 16. Modifications to approved engineering plans that constitute an upgrading, as defined in R 299.4106a(I) of the Part 115 Rules, may be approved, in writing, by EGLE's MMD Warren District Supervisor.
- 17. Requests for alternate daily cover may be approved, in writing, by EGLE's MMD Warren District Supervisor.
- 18. Leakage Control Criteria:

This entire Coal Ash Landfill unit is monitorable with respect to the deep bedrock aquifer that is separated from the base of the landfill by at least 70 feet of low permeability glaciolacustrine clay. Groundwater monitoring requirements for the deep bedrock aquifer were waived on May 9, 1997.

This Coal Ash Landfill unit is currently unmonitorable with respect to the shallow, discontinuous, saturated sand that exists below the southeastern, eastern, northern, and northwestern areas of the landfill. The extent of the shallow, saturated sand was documented in the "Remedial Investigation Summary and Feasibility Study for Off-Site Groundwater" dated February 2003, and revised April 17, 2003, the "Landfill Perimeter Subsurface Investigation" dated December 2006, and the "Remedial Investigation Summary and Feasibility Study for Northwest Section Off-Site Groundwater" dated March 2008 and revised May 15, 2008, and May 21, 2008. Because of the limited presence of this shallow, saturated sand in the vicinity of Area F and unconstructed Area G, the uppermost aquifer in these areas is currently considered to be the bedrock aquifer, as long as the requirements of Special Condition 20.d. of this license are met.

Unconstructed Area E is subject to the leak detection standards as specified in R 299.4307(6) and R299.4319(1)(c) unless the Coal ash landfill unit is determined to be monitorable with respect to the shallow, saturated sand located east, southeast, and northeast of the Coal ash landfill unit.

19. VARIANCES: The licensee is granted the following variance(s) from Part 115 and/or the Part 115 Rules: None.

20. SPECIAL CONDITIONS:

- a. The licensee shall dispose of only the following waste at the Range Road Property.
 - 1. DTE Electric Company St. Clair/Belle River Complex coal ash.
 - 2. DTE Electric Company Harbor Beach Power Plant coal ash.
 - 3. DTE Electric Company Marysville Power Plant coal ash.
 - 4. DTE Electric Company St. Clair, Belle River and Harbor Beach Power Plants waste coal material.
- b. The licensee shall, in accordance with R 299.4311(2), representatively sample and test each of the waste stream sources disposed of at this facility annually for the following parameters using the Toxicity Characteristic Leaching Procedures or by using Method 1312 found in the U.S. EPA document entitled [Test Methods] 3rd edition and submit the data to the Warren District Supervisor of EGLE's, MMD within 90 days of the sample collection: Parameters: Arsenic, Barium, Boron, Cadmium, Chromium (Hex), Lead, Mercury, Selenium, Silver, and Zinc. A waiver from the annual waste stream testing requirements for previously approved waste streams may be requested pursuant to R 299.4302.
- c. Area E, if constructed, will require a leak detection system unless it can be determined that the landfill is a monitorable unit with respect to the shallow, saturated sand located east, southeast and northeast of the Coal ash landfill unit.
- d. A construction certification for Area G shall include verification that the entire area is underlain by adequately low permeability soils. In addition, the licensee shall ensure that leachate from Area G does migrate eastward into Area E.
- 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

Plot Data

Design FileM:\DTE\St Clair Co\370029\0000\370029.0000.01.plt TFiebroRipt Date - Tue Apr 14 14:58:28 2020

Flot File = M:\DTE\St Clair Co\370029\0000\370029.0000.01.prf

Reference Files

Logical Names

Ref. File 1 = M:\DTE\St Clair Co\370029\0000%REFmbmc 2013-04-27.dgn Ref. File 2 = M:\DTE\St Clair Co\370029\00002REFirbmrmt.dgn Ref. File 3 = M:\DTE\St Clair Co\370029\00003RpFaproposed.dgn

Levels (1) 45-50,53-56,58,59,61,63 (2) 7-10,18,29,30

Attachment A

