



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: Riverview Land Preserve

LICENSEE/OPERATOR: City of Riverview

FACILITY OWNER: City of Riverview

PROPERTY OWNER: City of Riverview

FACILITY TYPE(S): Municipal Solid Waste Landfill

FACILITY ID NUMBER: 399054

COUNTY: Wayne

LICENSE NUMBER: 9463

ISSUE DATE: January 15, 2016

EXPIRATION DATE: January 15, 2021

FACILITY DESCRIPTION: The Riverview Land Preserve, a municipal solid waste landfill, consists of 403.11 acres located at 20863 Grange Road, City of Riverview, Wayne County, Michigan, as identified in Attachment A and fully described in this license.

AREA AUTHORIZED FOR DISPOSAL OF SOLID WASTE: As described in Attachment A and Item 2 of this license.

RESPONSIBLE PARTY: Mr. Robert Bobeck, Director of Solid Waste
City of Riverview
14100 Civic Park Drive
Riverview, Michigan 48193-7600
734-281-4263

RENEWAL OPERATING LICENSE: This License Number 9463 supersedes and replaces Solid Waste Disposal Area Operating License Number 9307 issued to City of Riverview on March 30, 2011.

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.

Rhonda Oyer, Acting Chief, Solid Waste Section
Office of Waste Management and Radiological Protection

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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 Cell 1 (4.94 acres), Cell 2 (11.49 acres), Cell 3 (14.12 acres), Cell 4 (10.74 acres), Cell 4 Slope Cap (3.63 acres), Cell 4 Slope Cap Extension (3.97 acres), Cell 5 (10.47 acres), Cell 5 Slope Cap (6.15 acres), Cell 6 (12.37 acres), Cell 6 Slope Cap (3.50 acres), Cell A North (21.76 acres), and "Interim Cover Area without Future Vertical Expansion" (4.39 acres) were authorized to receive waste by the previous license. This area's total acreage is 107.53 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 Cell 7, including 28.64 acres of "Interim Cover Area with Future Vertical Expansion" and 16.49 acres of "Closed North Area," totaling 43.33 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:

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

EXISTING UNIT(S): The unit(s) or portion(s) of unit(s) identified as The portions of the unit identified as Closed North Area (51.5 acres - originally 67.99 acres, but reduced by 16.49 acres now included in Cell 7 area) and 2001 North Slope Closure (8.92 acres) had final closure certified on December 15, 1992, and February 12, 2002, respectively. This certification was reviewed and approved by the MDEQ on April 8, 1993, and February 23, 2005, respectively. This area's total acreage is 60.42 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 September 30, 2015, 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), Southeast Michigan District Supervisor, of any inaccuracies in the information in the Application upon discovery.

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7. This license is issued based on the MDEQ's review of the Application, submitted by Cornerstone Environmental Group, LLC on behalf of the City of Riverview, for the Riverview Land Preserve, dated September 29, 2015. The Application consists of the following:

- a. Application Form EQP 5507.
- b. Application fee in the amount of \$15,000.00.
- c. Certification of construction by NA.
- d. Waste Characterization: N/A.

e. Restrictive Covenant:

The Riverview Land Preserve restrictive covenant on 289.888 acres is on file at the Wayne County Register of Deeds recorded on May 24, 2012, as Liber 49853 pages 1336. A copy is on file with the MDEQ.

f. Perpetual Care Fund Agreement, established as an escrow account, signed by Mr. Robert Elliot, City Manager, City of Riverview on January 27, 1997, was executed by the MDEQ on March 10, 1997.

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 \$15,941,111.36.

The Facility has provided financial assurance totaling \$16,073,320.00, 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, iii, and iv, respectively.

ii. Financial Assurance Provided Via a Perpetual Care Fund:

The Perpetual Care Fund Agreement statement showed a balance of \$3,747,834.00 in the Facility's Perpetual Care Fund as of September 25, 2015. Of this amount, the MDEQ has granted the request to use \$3,747,834.00 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:

Escrow Account	\$12,325,486.00
Total Amount Received:	\$12,325,486.00

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 January 15, 2017, and each year thereafter.

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8. A portion of the current facility was initially licensed in 1968 with the issuance of Solid Waste Disposal Area Operating License Number 4212 under the repealed Garbage and Refuse Disposal Act, 1965 PA 87. The facility was "grandfathered" until 1990 when a construction permit for a lateral and vertical expansion of the existing facility was issued by the MDEQ under the Solid Waste Management Act, 1978 PA 641. The following documents approved with Construction Permit Number(s) 0216, 0365, and 4060 issued to the Riverview Land Preserve on March 28, 1990, September 30, 1998, and April 8, 2004, respectively, are incorporated in this license by reference:
 - a. Environmental Assessment received by the DEQ on March 8, 1989.
 - b. Engineering Report prepared by Hennessey Engineers Incorporated dated January 1990 and revised in March 1990.
 - c. Engineering plan set (30 sheets) titled "Riverview Land Preserve Proposed Expansion," prepared by Hennessey Engineers Incorporated, dated 1990.
 - d. Engineering report titled "Stormwater Drainage Plan, Riverview Land Preserve," Riverview, Michigan, dated May 1998 prepared by EMCON.
 - e. Engineering plans, sheets 1-13 titled "Permit Modification Plans for Riverview Land Preserve, Final Grading, and Stormwater Management Plan," prepared by EMCON and dated May 1998, revised September 21, 1998, March 28, 2001, and June 14, 2001.
 - f. "Application for Vertical Expansion," Riverview Land Preserve, prepared by Shaw EMCON/OWT, Inc., dated December 12, 2003, and revised on March 30, 2004.
 - g. Engineering plans titled "Riverview Land Preserve Vertical Expansion," prepared by Shaw EMCON/OWT, Inc., dated December 2003, and revised on March 5, 2004, March 18, 2004, and March 26, 2004.
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. Work Plan for groundwater monitoring report prepared by Hennessey Engineers, Inc., dated February 6, 1991.
 - b. Monitor Well Installation/Hydrogeological report, prepared by Hennessey Engineers, Inc., dated August 1992.
 - c. Engineering Plans for Cell II of Phase I and Cell III of the Phase II Design and Construction Quality Assurance Plans, dated 1992 and 1993, respectively.
 - d. Hydrogeological Report Addendum, prepared by Hennessey Engineers, Inc., dated July 1993.
 - e. Closure report for the "Closed North Area," approved April 8, 1993.
 - f. Monitoring Wells, Abandonment Work Plan, dated May 1994.
 - g. Hydrogeological Monitoring Plan, submitted October 1995, and revised November 1997, April 1998, July 2000, September 2000, and February 2007.
 - h. Groundwater Monitoring Parameter Waiver Request, prepared by EMCON, dated December 1997.
 - i. Monitoring Well Repair and Well Abandonment Summary Report, prepared by EMCON, dated May 1997.
 - j. Work Plan for Monitoring Well Replacement and Abandonment, prepared by EMCON, dated March 13, 1998.
 - l. Engineering report titled "Final Cap Design Changes," dated April 2, 2001, and revised June 14, 2001.
 - m. Engineering report titled "Construction Documentation Report, 2001 North Slope Closure," prepared by EMCON/OWT, Inc., dated November 2001.

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- n. Engineering plans titled "City of Riverview, Riverview Land Preserve, Cell 4 Construction Plans" (6 sheets), dated February 2002.
- o. A letter with the subject "Construction Upgrade Cell 4 Riverview Land Preserve" dated June 5, 2002.
- p. Engineering report titled "Construction Documentation Report Cell 4 Construction," dated October 2002.
- q. Leachate Storage Tank Improvement Documentation, dated December 16 and 17, 2002, and approved by DEQ on February 24, 2003.
- r. Engineering report titled "Construction Documentation Report, Cell 4 Slope Cap Extension Construction," dated December 2004.
- s. Document titled "Request to Use Contaminated Soil as Alternate Daily Cover at the Riverview Land Preserve," dated March 21, 2005, with supplemental soil analytical data forwarded via electronic mail on May 23, 2005.
- t. The engineering document titled "Landfill Gas Collection and Control System Design Plan," dated July 2004 including Drawings numbered 1 through 6 of the Engineering Plan Set titled "Plans for Gas Collection and Control System Design," dated June 2004, with revisions to Drawing No. 3, dated February 2, 2006, and Drawing Number 7 titled "Isopach for Remaining Permitted Airspace," dated October 26, 2004, and received by the DEQ on February 13, 2006.
- u. Section 9.0, "Leachate Recirculation" of the Comprehensive Operating Plan, dated May 24, 2005, received by the DEQ on June 9, 2005.
- v. Drawings numbered 1 through 6 of the Engineering Plan Set titled "Leachate System Upgrades," dated October 2005 and received by the DEQ on February 2, 2006.
- x. Drawing No. 2 titled "Cell 5 Construction Project, Cell 5 Soil Boring Locations," dated May 18, 2006, and received by the DEQ via e-mail on June 14, 2006.
- y. Engineering drawing titled "Addendum 1, City of Riverview, Riverview Land Preserve, Wayne County, Michigan, Cell 5 Construction Project, In-Line Flow Meter Detail," dated June 12, 2006, and received by the DEQ via e-mail on June 14, 2006.
- z. Engineering document titled "Cell 5 Construction Documentation Report," prepared by Cornerstone Environmental Group, LLC, dated February 2007 and revised June 18, 2007.
- aa. Certification document titled "Cell 5 Geomembrane Liner Repair Report" prepared by Cornerstone Environmental Group, LLC, dated August 10, 2007, and revised on September 10, 2007, via an electronic mail submittal.
- bb. Procedural document titled "Riverview Land Preserve, Special Waste Management Program," dated August 2007, and submitted with a transmittal letter dated August 23, 2007.
- cc. Engineering plan set (consisting of a title sheet and sheets numbered 1 through 6) titled "Plans for the 2008 Leachate System Upgrades at City of Riverview, Riverview Land Preserve, Wayne County Michigan," dated October 2008, and submitted with a transmittal letter dated November 7, 2008, and received by the DEQ on November 12, 2008.
- dd. Engineering document titled "Cell 6 Construction Documentation Report" prepared by Cornerstone Environmental Group, LLC, dated November 2010, and revised February 2011.
- ee. A revised "Construction Quality Assurance Plan," prepared by Cornerstone Environmental Group, LLC, dated February 18, 2011, and revised February 25, 2011.

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- ff. A revised "Alternate Daily Cover Operations Plan," prepared by Cornerstone Environmental Group, LLC, dated February 2011 and revised February 25, 2011. This plan revises the previously approved "Alternate Daily Cover Materials Operations Plan" dated August 2000.
 - gg. Letter request from the City of Riverview (with 3 supporting attachments) dated June 15, 2011 and supplemented July 12, 2011, requesting approval to construct/operate a 100 yard, Riverview Police Department Firing range on the 113 acre soil borrow area adjacent to the landfill.
 - hh. Letter report titled "Riverview Land Preserve – Sand Protective/Drainage Layer – Cell 6, Erosion Corrective Measures" prepared by Cornerstone Environmental Group, LLC, dated March 6, 2012.
 - ii. Letter report titled "Riverview Land Preserve – Sand Protective/Drainage Layer – Cell 6; Erosion Corrective Measures" prepared by Cornerstone Environmental Group, LLC, dated April 6, 2012 and received by the DEQ on April 9, 2012.
 - jj. Engineering plan set titled "Plans for the CNG Fueling Station at City of Riverview, Riverview Land Preserve, Wayne County, Michigan", prepared by Cornerstone Environmental Group, LLC, dated November 2012 and submitted with an explanatory transmittal letter dated November 28, 2012 and a revised operational document titled H2S Media Change Out Procedure, submitted via electronic mail by Cornerstone Environmental Group, LLC on January 3, 2013.
 - kk. Engineering plan set (drawings numbered 1 through 4) titled "Bid Plans for the 2014 GCCS Construction at City of Riverview, Riverview Land Preserve, Wayne County, Michigan," prepared by Cornerstone Environmental Group, LLC, dated June 2014 and received by the DEQ on June 16, 2014 via electronic mail submittal.
 - ll. Letter request (with attached laboratory analytical data) with the subject "Request for Approval of Class C Soil for Alternate Daily Cover (ADC)," prepared by Cornerstone Environmental Group, LLC, dated June 19, 2014, and received via electronic mail submittal on June 20, 2014.
 - mm. Engineering plan set titled "Construction Plans for the Leachate Pretreatment System Pre-Engineered Metal Building and Process Systems at City of Riverview, Riverview Land Preserve, Wayne County, Michigan," prepared by Cornerstone Environmental Group, LLC, dated December 2014 and revised March 2015.
 - nn. Letter report (with 8 attachments) titled "Riverview Land Preserve, Final Cover Geomembrane Repairs," prepared by Cornerstone Environmental Group, LLC, dated March 10, 2015.
 - oo. Engineering plan set (Drawings numbered 1 through 7) titled "Plans for the 2015 GCCS Construction & North Slope Repair at City of Riverview, Riverview Land Preserve, Wayne County, Michigan," prepared by Cornerstone Environmental Group, LLC, dated March 2015 and received by the OWMRP via e-mail on April 10, 2015.
 - pp. Letter report (including Attachments A through E) titled "Riverview Land Preserve, Horizontal Collection Trench and Final Cover Repairs," prepared by Cornerstone Environmental Group, LLC, dated November 2, 2015..
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, Southeast Michigan District Office Supervisor, for review and approval.

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- 13. The licensee shall conduct hydrogeological monitoring in accordance with the approved hydrogeological monitoring plan, dated October 1995 and revised November 1997, April 1998, July 2000, September 2000, and February 2007. The sampling analytical results shall be submitted to the MDEQ's OWMRP, Southeast Michigan District Office.
- 14. Modifications to the approved hydrogeological monitoring plan referenced in Item 13 may be approved, in writing, by the OWMRP, Southeast Michigan District Supervisor. Proposed revisions must be submitted in a format specified by the MDEQ.
- 15. Leachate may be recirculated if a leachate recirculation plan has been approved, in writing, by the OWMRP, Southeast Michigan 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, Southeast Michigan District Supervisor.

17. Requests for alternate daily cover may be approved, in writing, by the OWMRP, Southeast Michigan District Supervisor.

18. Leakage Control Criteria:

The active portions of the unit(s) authorized to receive waste by this license is a monitorable unit(s) which is located over a natural soil barrier and that is in compliance with the provisions of R 299.4422(2) of the Part 115 Rules.

19. **VARIANCES:** None.

20. **SPECIAL CONDITIONS:**

a. 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>
(1) Classes A and B Alternate Daily Cover Materials as specified in the approved Alternate Daily Cover Materials Operations Plan dated August 2000 and revised February 2011	Various	Varies
(2) Contaminated Soils	23800 Allen Road Woodhaven, MI (former refinery tank farm)	N/A (single receipt of ~ 85,000 tons)
(3) Contaminated Soils	Goodwill Store Development 20080 West Road Woodhaven, MI	N/A (single receipt of ~4,000 cy)

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.

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- (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.
 - (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.
- b. The Facility may recirculate leachate in accordance with Section 9.0, Leachate Recirculation of the Comprehensive Operating Plan, dated May 24, 2005, received by the DEQ on June 9, 2005.
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

