



August 2, 2022

MARK LEEDS
CHAIRMAN
CHEROKEE COUNTY SOLID WASTE COMMISSION
1805 LINDEN STREET
CHEROKEE, IA 51012

**RE: Cherokee County Sanitary Landfill
18-SDP-01-75P
Permit Renewal**

Dear Mr. Leeds:

Enclosed is the renewed permit for the Cherokee County Sanitary Landfill. The permit and the approved plans must be kept at the sanitary disposal project in accordance with the recordkeeping and reporting requirements of subparagraph 113.11(1)"a". Please review the permit with your operators, as they must become familiar with it.

Note that the permit contains special provisions that may require a response or action by you which, if not properly complied with, may prompt enforcement action by this department.

If you have any questions, please contact me at (515) 587-7638 or geoffrey.spain@dnr.iowa.gov.

Sincerely,

Geoffrey Spain Digitally signed by Geoffrey Spain
Date: 2022.08.02 16:16:25 -05'00'

Geoffrey Spain
Environmental Engineer
Land Quality Bureau

Enclosure

cc: Matthew Corry, P.E.
EVORA Consulting
1690 All State Court, Suite 100
West Des Moines, IA 50265

Iowa DNR Field Office #3, Spencer

**IOWA DEPARTMENT OF NATURAL RESOURCES
SANITARY DISPOSAL PROJECT PERMIT**

I. Permit Number: 18-SDP-01-75P

II. Permitted Agency: Cherokee County Solid Waste Commission

III. Project Location: W ½ of the SW ¼, Section 36, T92N, R40W,
Cherokee County

IV. Responsible Official
Name: Don Parrott, Chairman
Address: Cherokee County Solid Waste Commission
1805 Linden Street
Cherokee, IA 51012

Phone: 712-225-3749
FAX: 712-225-2373

V. Licensed Design Engineer
Name: Matthew Corry, P.E.
Address: EVORA Consulting
1690 All State Court, Suite 100
West Des Moines, Iowa 50265

Phone: 515-256-8814
FAX: 515-256-0152
Iowa License Number: 25067

VI. Date Permit Issued: **August 2, 2022**

VII. Permit Expiration Date: **August 2, 2027**

VIII. Issued by: Geoffrey Spain Digitally signed by Geoffrey Spain
Date: 2022.08.02 16:10:17 -05'00'
Iowa Department of Natural Resources

IX. General Provisions

The above named permitted agency is hereby authorized to operate a sanitary disposal project at the described location in conformance with Iowa Code section 455B, the rules pursuant thereto existing at the time of issuance, and any subsequent new rules which may be duly adopted, and any provisions contained in Section X of this permit.

The issuance of this permit in no way relieves the applicant of the responsibility for complying with all other local, state, and federal statutes, ordinances, and rules or other requirements applicable to the establishment and operation of this sanitary disposal project.

No legal or financial responsibility arising from the construction or operation of the approved project shall attach to the State of Iowa or the Department of Natural Resources (DNR) due to the issuance of this permit.

If title to this project is transferred, the new owner must apply to the DNR for a transfer of this permit within thirty days of the date of title transfer pursuant to subrule 113.4(3). This permit is void sixty days after the date of title transfer unless the DNR has transferred the permit.

The permit holder shall file a Quarterly Solid Waste Fee Schedule and Retained Fee Report utilizing the DNR's Form 542-3276 and remit tonnage fee payment, as applicable, for all wastes disposed at the sanitary disposal project in accordance with Iowa Code section 455B.310. The Reports will be due January 1, April 1, July 1 and October 1 for the quarters ending September 30, December 31, March 31 and June 30, respectively. The permit holder shall mail the completed report to the Solid Waste Section, Wallace State Office Building, 502 East Ninth Street, Des Moines, Iowa 50319. This reporting procedure supersedes any previous conflicting permit provisions.

The permit holder shall weigh all solid waste collection vehicles and solid waste transport vehicles on a scale certified by the Iowa Department of Agriculture and Land Stewardship. If conditions are such that make it impractical to provide an on-site scale, then off-site scale facilities may be used if justified and approved by the DNR. The permit holder shall comply with the waste weighing, record keeping and tonnage fee reporting requirements defined in rule 101.14(455B,455D). The scale weighing facilities shall comply with the certification and licensing requirements of the Iowa Department of Agriculture and Land Stewardship at all times. The permit holder shall maintain a current copy of the weighing scale facility licensing certificate issued by the Iowa Department of Agriculture and Land Stewardship at all times.

The permit holder shall ensure that the sanitary disposal project does not (1) cause a discharge of pollutants into waters of the United States, including wetlands, that violates any requirements of the Clean Water Act, including, but not limited to, the National Pollutant Discharge Elimination System (NPDES) requirements, pursuant to Section 402 of the Clean Water Act, and (2) cause the discharge of a nonpoint source of pollution into waters of the United States, including wetlands, that violates any requirement of an areawide or statewide water quality management plan that has been approved under Section 208 or 319 of the Clean Water Act.

The permit holder shall submit an updated Municipal Solid Waste Sanitary Landfill Financial Assurance Report Form no later than April 1st, annually, pursuant to rule 113.14(455B). Use of this form provides permit holders a uniform means of submitting all required documentation to ensure that closure and postclosure cost estimates and applicable financial assurance instruments are updated as required.

Failure to comply with Iowa Code section 455B, or any rule of order promulgated pursuant thereto, or any provisions of this permit may result in 1) a civil penalty of up to \$5000 for each

day of violation, pursuant to Iowa Code section 455B.307, or 2) the suspension or revocation of this permit, pursuant to Iowa Code section 455B.305.

X. Special Provisions

1. The permit holder is authorized to accept solid waste for disposal in accordance with the Cherokee/Ida Planning Area Comprehensive Plan, as approved by the DNR on August 5, 2015; any approved amendments to the plan; and the latest plan update, are hereby incorporated as permit plan documents.

The permitted service area includes: All cities and the unincorporated area in Cherokee County and all cities and the unincorporated area in Ida County.

In accordance with subrule 101.13(2), the permit holder shall submit an updated Comprehensive Solid Waste Management Plan compliant with the DNR's schedule.

2. The permit holder shall develop and operate the site in accordance with the Development and Operational Plans and Specifications, dated April 14, 2022, as submitted by EVORA Consulting, and hereby approved, and the following:
 - a. Waste disposal is limited to Cell A-1, Cell A-2, Cell A-3, Cell A-4, Cell A-5, and Cell A-6. The site vertical height shall not exceed a maximum waste elevation of 228 feet. Any further expansion beyond these Cells shall require prior DNR approval.
 - b. The first lift of municipal solid waste placed in a newly constructed unit or portion of a unit must be placed in accordance with paragraph 113.8(2)"b" in such a manner to minimize damage to the leachate collection system and liner.
 - c. The permit holder shall collect leachate from the leachate control system and properly dispose of the leachate either by treatment in an on-site facility, discharge with an NPDES permit; or by discharge to the City of Cherokee publicly owned treatment works (POTW). If the discharge is to a POTW with a pretreatment program approved by the DNR, the discharge must comply with the terms and conditions of a local permit issued for the discharge by the POTW. If the discharge is to a POTW without an approved pretreatment program a completed treatment agreement form shall be submitted to the DNR's Wastewater Section. Copies of the local permit or treatment agreement shall be provided to the DNR's Solid Waste Section and the local Field office. The treatment agreement must be on DNR Form 31 (542-3221) and must comply with the requirements of subrule 64.3(5).

In addition, the permit holder shall monthly measure leachate head levels and elevations at all piezometers and record the volume of leachate collected and transported to the treatment works. Records of leachate contaminants testing required by the treatment works and any NPDES permit for on-site treated leachate discharges shall be maintained.

The permit holder shall annually submit a Leachate Control System Performance Evaluation (LCSPE) Report pursuant to subparagraph 113.7(5)“b”(14) as a supplement to the facility Annual Water Quality Report, as defined in subrule 113.10(10).

- d. The following shall be recorded by the permit holder and reported in the LCSPER for each leachate thickness measurement that equals or exceeds 12 inches:
 - 1) Date of original and any verification measurement.
 - 2) If 12 inch or greater leachate column is verified, specific actions taken by the certified operator to lower leachate thickness, or an explanation why specific actions were not necessary.
 - 3) Date and results of follow-up measurement.
 - 4) Repeat steps 2 and 3 as necessary until a compliant measurement is collected.
 - e. The permit holder shall follow the approved Emergency Response and Remedial Action Plan (ERRAP) procedures during all emergencies pursuant to subrule 113.8(5). An updated ERRAP shall be submitted at the time of each permit renewal application. An updated ERRAP shall be included with any request for permit modification to incorporate a facility expansion or significant changes in facility operation that require modification of the currently approved ERRAP, dated May 6, 2022.
3. The permit holder is authorized to construct the liner and leachate collection system in accordance with the Development and Operational Plans and Specifications, dated April 14, 2022, as submitted by EVORA Consulting, and hereby approved, and the following:
- a. The permit holder is authorized to construct Cell A-5.
 - b. The permit holder shall notify the DNR and have the site inspected when the construction of a new Municipal Solid Waste Landfill Unit (MSWLF) unit or significant components thereof has been completed, in accordance with subrule 113.4(6). Prior to the inspection, the Quality Control & Assurance officer shall submit a final report to the DNR that verifies compliance with the requirements of rule 113.7 and the approved plans and specifications. No waste disposal shall commence in any newly constructed unit or portion thereof until it has been inspected and approved by the DNR.
 - c. The Construction Certification Report for the Construction of Cell A-5, dated October 6, 2016, as submitted by I+S Group and approved on October 10, 2016 is incorporated into the permit documents.
 - d. The Cell A1 & A2 Leachate Containment Berm Construction Certification Report, dated September 2, 2014, as submitted by I&S Group is hereby approved and incorporated into the permit documents.
 - e. The East Expansion Master Plan, dated April 15, 2020, as submitted by Barker Lemar Engineering Consultants, is approved and included in the permit documents.

- f. The Request For Approval to Construct Cell A-6, dated April 15, 2020, as submitted by Barker Lemar Engineering Consultants, is approved and included in the permit documents.
 - g. The request to remove the groundwater underdrain designed for Cell A-6, dated January 18, 2021, as submitted by EVORA Consulting, is approved.
 - h. The QC&A report for the construction of Cell A-6, dated October 20, 2021 is approved and included in the permit documents. Cell A-6 may now be used for waste disposal.
4. Hydrologic monitoring at the site shall be conducted in accordance with the revised Hydrologic Monitoring System Plan (HMSP) dated April 15, 2020, as submitted by Barker Lemar Engineering Consultants, and approved on July 9, 2020; and the following:
- a. The HMSP shall include groundwater monitoring points (Closed Site): Upgradient wells MW-1, MW-4, MW-11, MW-21, and MW-23. Downgradient wells MW-7, MW-9R, MW-10R, MW-12, MW-13R, MW-14R, MW-15R, and MW-39. (Open Site): MW-16, MW-27, MW-29, MW-35, MW-42R, MW-40A, MW-43, MW44, and GWD-2.
 - b. Groundwater monitoring points MW-1, MW-4, MW-11, MW-7, MW-9R, MW-10R, MW-12, MW-13R, MW-14R, MW-15R, MW-39, MW-21, MW-23, MW-16, MW-35, MW-40, and MW-41 may be retained as water level measuring points.
 - d. DNR construction documentation form 542-1277 and boring logs for all monitoring wells and piezometers shall be submitted within 30 days of installation. DNR construction documentation form 542-1323 shall be submitted within 30 days of establishing surface water monitoring points.
 - i. The permit holder shall conduct background and routine semiannual groundwater sampling and analysis; as well as perform statistical tests for the approved monitoring points for Appendix I and total suspended solids (TSS) in accordance with rule 113.10(455B). Groundwater samples shall **not** be field-filtered prior to laboratory analysis and total suspended solids shall be analyzed using Method 1376585, with a reporting limit goal of ≤ 2 mg/l). Turbidity measurement may be approved by the DNR in lieu of TSS, provided a correlation between the two is established.
 - j. The permit holder shall include in each AWQR an evaluation of TSS/turbidity data and other pertinent sampling and analytical results, to determine if representative samples of groundwater have been collected. If samples are not representative, the permit holder may be required to utilize low flow or no-purge sampling methods, consider new well construction with an optimized filter pack design, and/or additional well development. If sample quality does not improve with improved well construction, well development, and/or sampling methods, the DNR will consider higher TSS/turbidity levels as representative of site groundwater conditions.

- k. The frequency for full Appendix II analysis at monitoring points that are in assessment monitoring and have had at least two (2) rounds of analysis using the entire Appendix II list may be decreased to once every (5) five years. If monitoring points exit assessment monitoring and later return to assessment monitoring an additional two (2) rounds of analysis using the entire Appendix II list is required.
 - l. The permit holder shall semiannual measure groundwater elevations within 1/100 of a foot in each well and immediately prior to purging, each time groundwater is sampled.
 - m. The permit holder shall collect semiannual groundwater elevation measurements from the monitoring wells in order to measure the separation of the base of the MSWLF unit from the groundwater table as required in paragraph 113.6(2)"i". This data shall be included in the facilities' AWQR.
 - n. The monitoring well installation documentation for MW-40A and MW-42, dated June 6, 2019, as submitted by Barker Lemar Engineering Consultants, is hereby approved and included in the permit documents.
 - o. The boring logs and construction information for monitoring wells MW-43 and MW-44, dated September 16, 2020, as submitted by Evora Consulting, are approved and included in the permit documents.
 - p. The Assessment of Corrective Measures (ACM), dated December 21, 2020, and the Schedule for Response to IDNR comments, dated March 10, 2021, both as submitted by EVORA Consulting, are approved and included in the permit documents.
 - q. The monitoring well abandonment documentation for MW-24 and MW-25, dated April 30, 2021, as submitted by EVORA Consulting, are approved and included in the permit documents.
 - r. The Selection of Remedy and Corrective Action Groundwater Monitoring Program, in response to the December 21, 2020 ACM, dated May 6, 2022, as submitted by EVORA Consulting, is approved and included in the permit documents.
 - s. An Annual Water Quality Report (AWQR) summarizing the effects the facility is having on groundwater quality shall be submitted to the DNR's Solid Waste Section by January 31 each year. This report shall be prepared in accordance with subrule 113.10(10) by a qualified groundwater scientist pursuant to paragraph 113.10(1)"d" and by using the DNR AWQR Format.
5. The permit holder is authorized to recirculate leachate in accordance with the Plans and Specifications for the Construction of Cell A-6, dated April 15, 2020, as submitted by Barker Lemar Engineering Consultants and hereby approved; and the following:

- a. Leachate application is restricted to only those MSWLF units with a composite liner constructed in accordance with paragraph 113.7(5)“a”.
 - b. The leachate recirculation system shall not contaminate waters of the state, contribute to erosion, damage cover material, harm vegetation, or spray persons at the MSWLF facility, pursuant to paragraph 113.8(2)“h”.
 - c. Leachate shall not be applied on user vehicle access areas.
 - d. Leachate shall not be applied to vegetated areas or frozen waste cover. A means of frost protection must be provided for all leachate control elements.
 - e. Leachate shall be applied evenly on the working area.
 - f. Leachate recirculation shall be conducted only during hours of operation and when an operator is on duty.
 - g. Leachate shall be applied in a manner such that ponding or runoff will not occur.
 - h. Leachate recirculation shall be controlled such that not more than one foot of leachate head will be allowed to accumulate above the MSWLF unit liner.
 - i. Records shall be maintained as to the time and quantities of leachate application and be submitted with the facility Annual Leachate Control System Performance Evaluation Report (LCSPER).
 - j. Leachate recirculation shall be immediately terminated if it causes ponding, runoff, excessive odor, vector control problems, vapor drift, ice formation, or operational problems. The DNR’s local Field office shall be immediately notified if any of the above events occur.
6. The permit holder shall conduct subsurface gas monitoring in accordance with the Revised Landfill Gas Monitoring Plan, dated April 15, 2020, approved on July 9, 2020, as submitted by Barker Lemar Engineering consultants, and the following:
- a. The permit holder shall quarterly monitor and annually report site methane concentrations in accordance with rule 113.9(455B). Specific actions, as defined in the rules, shall be taken in the event of methane gas level limit exceedances.
 - b. The permit holder shall annually submit a report by January 31 summarizing the methane gas monitoring results and any action taken resulting from gas levels exceeding the specified limits during the previous 12 months as a supplement to the facility Annual Water Quality Report, as defined in subrule 113.10(10).

7. The permit holder is authorized to collect grass clippings, leaves and garden wastes for the purposes of land application reuse as mulch, soil conditioner or for other beneficial reuses.
 - a. Non-composted yard waste shall not be stored for more than two (2) weeks before land application.
 - b. All non-biodegradable bags and containers shall be removed prior to land application.
 - c. The wastes may be used as mulch or soil conditioner for off-site purposes and on landfill areas with intermediate and final cover and on soil borrow areas.
 - d. Yard waste shall be land applied at a rate not to exceed 2 tons per year per acre.
 - e. Mulch or soil conditioner applied to existing vegetated landfill areas shall be applied at a rate such that established vegetation is not adversely impacted by its use.
8. The permit holder is authorized to compost yard waste in an area designated for composting activities. All composting activities shall be in accordance with IAC 567 Chapter 105.
9. The permit holder is authorized to use an alternative daily cover by the trade name Topcoat and Concover, as a substitute for the six-inch daily soil cover requirement. Use of this material is subject to the following:
 - a. This product shall not be used as a substitute for intermediate or final soil cover.
 - b. All landfill operations personnel shall be trained by the alternative cover material manufacturer, or by an operator that has been trained by the manufacturer. The operator shall ensure that the product slurry is prepared according to the manufacturer's nominal slurry mix specifications.
 - c. The waste shall be compacted, before this product is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. This product shall be applied to the active waste face at the end of each day of operations and more frequently if necessary to control fire or fire hazards, blowing litter, scavenging, odors, insects, rodents, birds and other vectors. This product shall be cross applied when necessary to provide effective cover.
 - e. If this product does not set within **one hour** of application, the workface shall be covered with six inches of compacted soil or a fresh application of this product. The term set means form a cohesive barrier layer that adheres to the waste and resists washing off by precipitation. This product shall not be exposed for more than **five (5) days**. After five days, any area exposed with this product shall be either covered with a new lift of waste, a fresh application of this product, or six inches of compacted soil.

- f. The operator shall inspect each application of this product for thorough coverage and cover integrity. If operational problems arise from the use of this product or its method of application, the use of this product shall be suspended until proper corrections are made by the operator, with six inches of compacted daily cover being utilized during this interim period.
 - g. If, at any time, the DNR or permit holder deems this product to be ineffective or otherwise unsatisfactory, the permit holder shall immediately revert to soil or another previously approved alternative daily cover. The permit holder shall immediately notify the DNR's Main and local Field office through both written and verbal notification of this action. This notification is not necessary if use of this product ceases only on a temporary basis, such as during adverse operational or weather conditions.
 - h. Nothing in this provision shall be construed to authorize any waiver from the requirements of any other applicable state solid waste laws or regulations, or any deviations from permit provisions.
 - i. This provision shall not be interpreted to release the permit holder from responsibility under the Groundwater Protection Act for remedying conditions resulting from any release of contaminants to the environment.
10. The permit holder is authorized to accept and temporarily store a maximum of 1500 waste tire equivalents for the purpose of reclamation processing or disposal. Tire storage and processing shall be conducted at approved plan locations. The tires shall be removed at least once every 120 days and transported to the appropriate reclaimer/processor, or disposed of at the site. All operations shall be in accordance with subrule 109.10(3), IAC 567 Chapter 117 and the current local fire code.
11. The permit holder is authorized to temporarily store white goods and scrap metal in an area designated by the operator. No discarded appliance may be stored for more than 270 days without being demanufactured. No scrap metal or discarded appliance may be stored for more than a total of twelve (12) months, including demanufacturing processing, prior to being recycled/salvaged. The operator and salvaging contractor shall comply with applicable provisions of IAC 567 Chapter 118 and the General Provisions of this permit. No scavenging shall be allowed.
12. The permit holder is authorized to collect and temporarily store plastic farm pesticide containers for recycling. The storage area shall be located at a readily accessible area to the facility. The following conditions and procedures shall apply:
- a. Pesticide containers containing any product or free liquids shall not be accepted for recycling or disposal.

- b. The storage area shall be used only for recyclable plastic farm pesticide containers that have been properly rinsed and drained. Contact the Iowa Department of Agriculture and Land Stewardship (IDALS) Pesticide Bureau at (515) 281-8506 for container rinsing and recycling information.
 - c. The storage area shall be either fenced or provided with a recycle bin to keep the containers segregated from other wastes and to prevent them from leaving the storage area during windy conditions.
 - d. The storage area base shall be graded to divert surface water run-on. An all-weather access to the area shall be provided.
 - e. The base of the storage area that does not utilize a recycle bin should be provided with either an impervious surfacing, or rock or anchored plastic membrane surfacing over a compacted soil base to keep the containers free of dirt to maximize material recovery and minimize damage to recycle grinding equipment.
 - f. All stored containers shall be removed from the temporary storage area and granulated on-site for recycling purposes by April 1st annually. Contact the Agribusiness Association of Iowa at (515) 262-8323 to schedule container recycle granulation and site removal.
 - g. The storage area shall be monitored frequently by the operator to confirm proper usage and to visually check for the presence of any product or rinsate releases to the environment or storage area.
 - h. Any containers found in the storage area with free product or product rinsate liquids shall be promptly removed from the storage area and either returned to the disposer or properly rinsed, drained and the liquids discharged to the on-site leachate storage system or land applied on the landfill site at the allowable labeled application rate for the product. Care should be taken to apply the product liquids to the appropriate area.
 - i. If any apparent releases to the storage area are observed by the operator or DNR personnel, the operator shall promptly report the event to the IDALS Pesticide Bureau by telephone at (515) 281-8506 with a follow-up written report of the event to IDALS. Report copies shall be provided to the DNR's Main and local Field office. IDALS representatives will conduct a site visit, sample the appropriate areas, complete the necessary contaminant(s) testing and notify the DNR of any recommended actions to be taken. The DNR will inform the permit holder of required actions to remedy the release.
13. The permit holder is authorized to allow direct burial of untreated petroleum contaminated soil (PCS) into the working face, per the variance dated April 26, 2021 as prepared by EVORA Consulting, for a period to coincide with the solid waste permit and the following:
- a. The PCS must be determined to be not hazardous (via federal exemption and/or analytical testing) and immediately buried at the working face.

- b. The untreated PCS must not contain free liquids as determined by the paint filter liquids test (EPA Method 9095), nor exhibit one of the four characteristics of a hazardous waste defined in 40 CFR Part 261 Subpart C for ignitability (D001), corrosivity (D002), reactivity (D003) and toxicity (D004-D0043).
 - c. PCS resulting from the cleanup of petroleum underground storage tanks are exempt from RCRA hazardous waste management if the media and debris 1) exhibit the TC for D018-D043, and 2) are subject to the corrective action requirements in 40 CFR Part 280 of the UST regulations. This exemption does not apply to petroleum contaminated media resulting from spills or releases from aboveground storage tanks, other surface spills, or if the PCS become contaminated with a listed hazardous waste.
 - d. PCS meeting the above-referenced criteria is deemed a "solid waste" and therefore applicable waste flow and tonnage fee requirements will need to be adhered. PCS may continue to be received for remediation pursuant to subrule 109.11(2), or accepted from outside the planning area for disposal as long as the provisions of IAC 567 Chapter 101.4 are followed (i.e. maintain written approvals).
14. The permit holder shall close the landfill site in accordance with The Closure and Postclosure Plan dated April 15, 2020, as submitted by Barker Lemar Engineering Consultants, and approved on July 9, 2020.

XI. Special Provisions- Closed Units

- 1. The thirty-year closure and post closure for Area B and the vertical expansion of the original area began July 29, 2009. The thirty-year closure and post closure for Area A and the vertical expansion of the original area began March 8, 1994.
- 2. The units specified in item #1 shall be closed and maintained in accordance with the approved Closure and Post Closure Plan, dated December 1999 (Area B), December 1993 (Area A), and approved June 5, 2000 (Area B), March 8, 1994 (Area A), included in Appendix 9 of the Development and Operations Plan, dated May 17, 2007 as prepared by Kuehl & Payer, Ltd.
- 3. Issuance of this closure permit prohibits any additional waste disposal, recycling, composting, and other related landfill activities unless they are specifically approved through an amendment to this permit.
- 4. The Closure Documentation, dated January 7, 2005, as submitted by Kuehl & Payer certifying the closure of Area "B" in accordance with the approved Closure/Post Closure Plan and approved February 1, 2005 is incorporated as part of the permit documents.

The Closure Documentation, dated September 14 and December 6, 1995, as submitted by Kuehl & Payer certifying the closure of Area "A" in accordance with the approved

Closure/Post Closure Plan and approved February 26, 1996 is incorporated as part of the permit documents.

The Vertical Expansion Area is closed in accordance with the Vertical Expansion Closure Certification, dated December 10, 2008, and approved July 29, 2009, as submitted by Kuehl & Payer, Ltd. is incorporated into the permit documents.

5. This site shall be monitored for water quality in accordance with the approved Hydrologic Monitoring System Plan (HMSP) dated April 8, 2008 and the revisions dated July 9, 2009, as submitted by Kuehl & Payer and approved on July 29, 2009; and the following:
 - a. In accordance with the variance granted on December 2, 2009, the permit holder is authorized to implement the groundwater monitoring program for the Vertical Expansion over the unlined fill as follows:
 - 1) Conduct routine groundwater monitoring and statistical analysis in accordance with 113.10(5)¹ and 113.10(4)¹ rather than in accordance with 113.2(5)"d"¹ and 113.2(5)"e"¹. The permit holder is required to conduct detection monitoring in accordance with 113.10(5)¹ and 113.10(4)¹ unless Department authorization to change the monitoring requirements is received.
 - 2) Implement the Monitoring Well Maintenance and Performance Reevaluation Plan requirements of 113.10(2)"f" (effective 12/10/2007), rather than the requirements of 113.2(5) (effective 12/10/2007) which by reference requires implementation of 113.21(effective 01/15/2003).
 - b. The HMSP shall include background groundwater monitoring points MW-1, MW-4, MW-11, and downgradient groundwater monitoring points MW-7, MW-9R, MW-10R, MW-12, MW-13R, MW-14R, MW-15R and MW-39.
 - c. Groundwater monitoring points not included in the monitoring network may be retained as water level measuring points.
 - d. Department construction documentation form 542-1277 and boring logs for all monitoring wells and piezometers shall be submitted within 30 days of installation. Department construction documentation form 542-1323 shall be submitted within 30 days of establishing surface water monitoring points.
 - e. The permit holder shall conduct background and routine semiannual groundwater sampling and analysis; as well as perform statistical tests for the approved monitoring points for Appendix I in accordance with rule 113.10(455B). Groundwater samples shall not be field filtered prior to laboratory analysis.
 - f. An Annual Water Quality Report (AWQR) summarizing the effects the facility is having on groundwater quality shall be submitted to the Department's Solid Waste Section by

January 31 each year. This report shall be prepared in accordance with subrule 113.10(10)¹ by a qualified groundwater scientist pursuant to paragraph 113.10(1)“d”

6. Semiannual reports shall be prepared containing a brief report describing the site's conformance and nonconformance with the permit and the approved plans and specifications during the inspections. These reports shall be submitted by April 30 and October 31 each year for the preceding six-month period to both the Field and Main offices of the Department.
7. All diversion and drainage systems must be maintained to the approved specifications to prevent run-on and runoff erosion, or other damage to the final cover. These diversion and drainage structures must be designed to meet a 25-year, 24-hour rainfall event.
8. The vegetative cover shall be reseeded as necessary to maintain good vegetative growth. Any invading vegetation whose root system could damage the compacted soil layer shall be removed or destroyed immediately.
9. The integrity and effectiveness of the final cover must be maintained by making repairs as necessary to correct the effects of settling, subsidence, erosion, or other events. If damage to the final cover compacted soil layer occurs, repairs shall be made to correct the damage and return it to original specifications.
10. The permit holder shall quarterly monitor and annually report site methane concentrations pursuant to paragraph 113.26(15)“b” ². Specific actions, as defined in the rules, shall be taken in the event of methane gas level limit exceedances.

The annual report summarizing the methane gas monitoring results and any action taken resulting from gas levels exceeding the specified limits during the previous 12 months shall be submitted to the Department's Main and local Field offices by January 31 of each year.

11. The permit holder is authorized to operate the leachate control system in accordance with the Leachate Control Plan dated October 7, 1993, and approved March 8, 1994, included in Appendix 5 of the Development and Operations Plan dated May 17, 2005, as submitted by Kuehl & Payer, Ltd. and the following:
 - a. The permit holder shall collect leachate from the leachate control system and properly dispose of the leachate either by treatment in an on-site facility, discharge with an NPDES permit; or by discharge to the City of Cherokee publicly owned treatment works (POTW). If the discharge is to a POTW with a pretreatment program approved by the Department, the discharge must comply with the terms and conditions of a local permit issued for the discharge by the POTW. If the discharge is to a POTW without an approved pretreatment program a completed treatment agreement form shall be submitted to the Department's Wastewater Section. Copies of the local permit or treatment agreement shall be provided to the Department's Solid Waste Planning, Permitting & Engineering Services Section and the local Field office. The treatment

agreement must be on DNR Form 31 (542-3221) and must comply with the requirements of subrule 64.3(5).

- b. The leachate control system shall be operated and maintained in accordance with the approved permit documents. After implementation of the leachate control system, the permit holder shall routinely collect the necessary information and evaluate the effectiveness of the system in controlling the leachate. All documentation shall be summarized in a Leachate Control System Performance Evaluation (LCSPE) Report. Effective control shall be considered as maintaining the lowest possible leachate head above the MSWLF unit liner and maintaining surface and groundwater quality standards at compliance monitoring points.
 - c. Leachate head levels and elevations shall be measured monthly at all piezometers and the volume of leachate collected and transported to the treatment works recorded. Records of leachate contaminants testing required by the treatment works and any NPDES permit for on-site treated leachate discharges shall be maintained.
 - d. The permit holder shall annually submit the LCSPE Report, including record data, as a supplement to the facility Annual Water Quality Report, as required by paragraph 113.26(8)d ². The performance evaluation shall include proposed additional leachate control measures and an implementation schedule in the event that the constructed system is not performing effectively.
 - e. The Cessation of Leachate Extraction from the Closed MSWLF Unit, dated November 12, 2021, as submitted by EVORA Consulting, is approved and included in the permit documents. This temporary cessation may not continue past April 8, 2024 without INDR approval. If, at any time, the IDNR or permit holder deems the impact to groundwater due to the cessation of leachate extraction to be unsatisfactory, the permit holder shall immediately revert to leachate extraction in the closed areas. The permit holder shall immediately notify the DNR's Main and local Field office through both written and verbal notification of this action.
12. The permit holder shall follow the approved Emergency Response and Remedial Action Plan (ERRAP) procedures during all emergencies pursuant to subrule 113.30 ². An updated ERRAP shall be submitted at the time of any significant changes in facility closure operations that require modification of the currently approved ERRAP.

XI. Permit Renewal and Revision History (OPTIONAL)

[illegible]