

**DIRECTOR KAYLA LYON** 

March 4, 2021

BRANDI MERICLE
CASS COUNTY ENVIRONMENTAL CONTROL AGENCY
65928 JACKSON RD
ATLANTIC, IA 50022

RE: Cass County Sanitary Landfill 15-SDP-01-75P Revised Permit

Dear Ms. Mericle:

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

This revision includes the Selection of Remedy for the ACM dated June 30, 2020.

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 the DNR.

For any questions please contact me at (515) 725-8358 or geoffrey.spain@dnr.iowa.gov.

Sincerely,

Geoffrey Spain Environmental Engineer Land Quality Bureau

cc: Jamie Lane
EVORA Consulting
1801 Industrial Circle
West Des Moines, IA 50265

DNR Field Office #4, Atlantic

## IOWA DEPARTMENT OF NATURAL RESOURCES SANITARY DISPOSAL PROJECT PERMIT

l.	Permit Number:	15-SDP-01-75P
II.	Permitted Agency:	Cass County Environmental Control Agency
III.	Project Location:	The NE ¼, SE ¼, SE ¼, and Lot 4 in SE ¼, SE ¼, NE ¼ SE ¼, and all that part E ½, SE ¼; NE ¼ lying South of the creek, also that part of Lot 1 of Lot 5 lying North and East of the public highway in SE ¼ Section 13, Township 76 North, Range 36 West and N ½, SW FR ¼, Section 18, Township 76 North Range 35 West in Cass County, Iowa.
IV.	Responsible Official	
	Name:	Brandi Hansen, Manager
	Address:	65928 Jackson Road
		Atlantic, Iowa 50022
	Phone:	712-243-1991
	FAX:	712-243-6671
٧.	Licensed Design Engineer	
	Name:	David G. Phillips, P.E.
	Address:	Barker Lemar Engineering Consultants
		1801 Industrial Circle
		West Des Moines, Iowa 50265
	Phone:	515-256-8814
	FAX:	515-256-0152
	Iowa License Number:	15541
VI.	Date Permit Issued:	December 5, 2016
VII.	Permit Expiration Date:	December 5, 2021
VIII.	Issued	by
De	That you	
	lowa 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 lowa 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 lowa 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 comply with the gas control provisions of IAC 567 Chapters 20 through 31, including paragraph 23.1(2)"rrr" for the New Source Performance Standards and paragraph 23.1(5)"a" for the Emission Guidelines.

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 1<sup>st</sup>, 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 approved Cass County Environmental Control Agency Comprehensive Plan. The Comprehensive Plan as approved by the DNR on March 10, 2014; 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 Cass 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 hereby approved Development and Operations Plan, as contained in Appendix 5 of the Permit Renewal Application; dated March 21, 2016 and revised on August 8, 2016 and October 12, 2016; as submitted by Barker Lemar Engineering Consultants, and the following:
  - a. Waste disposal is limited to the Phase 0 Cell, Phase 1 Cell and Phase 2 Cell. The site vertical height shall not exceed a maximum waste elevation of 185 ft in the vicinity of N6150 and E16013. 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 Atlantic 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.
- 3. The permit holder is authorized to construct the liner and leachate collection system in accordance with the hereby approved Request for Permit Amendment and Approval to Construct Proposed Phase 2A Cell, as contained in Appendix 3 of the Permit Renewal Application; and the Quality Control and Assurance (QC&A) Program for New Cell Construction, as contained in Appendix 4A of the Permit Renewal Application; dated March 21, 2016 and revised on August 8, 2016 and October 12, 2016; as submitted by Barker Lemar Engineering Consultants; and the following:
  - a. 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.
  - b. The Wash Water As-Built drawings; dated May 2, 2007; as submitted by Barker Lemar Engineering Consultants; and approved on May 11, 2007; documenting the new wash water collection system for the baling building is incorporated into the permit.

- c. The Construction Certification Report for the construction of Phase 0 Cell and Leachate Storage Lagoon; dated August 6, 2007; as submitted by Barker Lemar Engineering Consultants; and approved on August 16, 2007; is incorporated into the permit documents.
- d. The Settlement and Slope Stability Calculations, dated October 29, 2008, as submitted by Barker Lemar Engineering Consultants and approved January 9, 2009, are incorporated into the permit documents.
- e. The Leachate Piezometer Installation documentation for piezometers PZ-1R and PZ-5R, dated February 25, 2009, as submitted by Barker Lemar Engineering Consultants and approved May 22, 2009, is incorporated into the permit documents.
- f. The Construction Certification Report for the construction of Phase 1 Cell; dated June 26, 2009; as submitted by Barker Lemar Engineering Consultants; and approved on July 7, 2009; is incorporated into the permit documents.
- g. The Construction Observation Report Phase 2 Construction; dated June 11, 2012; as submitted by Barker Lemar Engineering Consultants; and approved on June 15, 2012; is incorporated into the permit documents.
- h. The 2014 Construction Documentation Leachate Recirculation Force Main and Recirculation Trench; dated August 13, 2014; as submitted by Barker Lemar Engineering Consultants; and approved on September 8, 2014; is incorporated into the permit documents. The report documents construction of a leachate force main between the leachate lagoon and leachate injection trenches in the Phase 0 and Phase 1 cells.
- i. The review comments, dated January 24, 2005, from the DNR's Conservation and Recreation Division relative to the comprehensive listing of plant and animal species for all development and borrow areas is incorporated into the permit documents.
- j. The review comments, dated March 3, 2006 from the State Historical Society relative to the determination of the presence of and assessment of the impact on any archaeological, historical, or architecturally significant properties for all development and borrow areas on the proposed site is incorporated into the permit documents.
- k. The Phase 2A Construction Observation Report (QC&A), dated June 22, 2018, as submitted by Barker Lemar Engineering Consultants, is hereby approved. Phase 2A can now be used for waste disposal.
- 4. Hydrologic monitoring at the site shall be conducted in accordance with the hereby approved Hydrologic Monitoring System Plan (HMSP), as contained in Appendix 9 of the Permit Renewal Application, dated March 21, 2016 and revised on August 8, 2016 and October 12, 2016; as submitted by Barker Lemar Engineering Consultants; and the following:

- a. The HMSP shall include background monitoring points MW-15R (water table) and MW-22 (sandstone); compliance monitoring points MW-11, MW-12, MW-19, MW-20, MW-21, MW-23, MW-36, MW-37, MW-38 and MW-39; and groundwater underdrain outlets UD-0 and UD-1.
- b. Groundwater monitoring points not used for compliance monitoring may be retained as water level measuring points.
- c. 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.
- d. 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.
- e. 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.
- f. 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.
- g. The permit holder shall semiannually measure groundwater elevations within 1/100 of a foot in each well and immediately prior to purging, each time groundwater is sampled.
- h. The permit holder shall collect semiannual groundwater elevation measurements from GWPZ-1 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". These data shall be included in the facilities' AWQR.

- i. 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".
- j. The monitoring well installation and abandonment documentation, dated September 25, 2018, as submitted by Barker Lemar Engineering Consultants, is hereby approved and included in the permit documents. This consists of the installation of monitoring wells MW-37R, MW-38R, and MW-48 along with the abandonment of monitoring wells MW-37 and MW-38.
- k. The Assessment of Corrective Measures Report, dated June 30, 2020, as submitted by Barker Lemar Engineering Consultants, is approved and included in the permit documents.
- The Selection of Remedy and Corrective Action Groundwater Monitoring Program, dated January 12, 2021, as submitted by EVORA Consulting, is approved and included in the permit documents.
- 5. The permit holder is authorized to recirculate leachate at the working face and in trenches within the waste in accordance with the Leachate Recirculation permit amendment request, dated January 27, 2012, as submitted by Barker Lemar Engineering Consultants and approved on May 1, 2012; 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.

- 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 is authorized to apply leachate from the leachate storage lagoon over disposal areas with daily or intermediate cover in accordance with the following:
  - a. Leachate application is restricted to between May 1 and November 1 of each year and shall not be made within 24 hours of a measurable rainfall or a previous application event, or when rain is forecasted within 24 hours.
  - b. Leachate application is restricted to only those MSWLF units with a composite liner constructed in accordance with paragraph 113.7(5)"a". Additionally, the permit holder must maintain a 2: 1 (horizontal:vertical) separation from the recirculation points and the unlined waste area.
  - c. Leachate shall be applied evenly at a rate determined by the operator but not exceeding 1 inch per application.
  - d. Leachate shall be applied in a manner such that ponding or runoff will not occur.
  - e. Leachate applications shall not be made to areas with alternative daily cover.
  - f. Leachate application 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".
  - g. Leachate shall not be applied on user vehicle access areas.
  - h. Leachate application shall only be conducted when an operator is on duty.
  - i. Leachate application shall be immediately terminated if it causes ponding, runoff, excess 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.
  - j. The permit holder shall retain in the operating record daily logs containing the following documentation <u>for each application event</u>:
    - 1) Date of application and weather conditions,
    - 2) Cover soil conditions before application,
    - 3) Leachate application rate and total volume applied,

- 4) A description of the application process and application area, including equipment used,
- 5) Rainfall data for previous 24 hours and rainfall forecast for next 24 hours,
- 6) Descriptions of any permit or rule noncompliance regarding ponding, runoff, odors, vectors, or vapor drift resulting from leachate application and actions taken to return to compliance.
- k. The permit holder shall report the effectiveness of the application process, including leachate volumes applied, and any noncompliance with this permit amendment within the LCSPER required in subparagraph 113.7(5)"b"(14).
- 7. The permit holder shall conduct subsurface gas monitoring in accordance with the Revised Landfill Gas Monitoring Plan, dated September 4, 2008, as submitted by Barker Lemar Engineering Consultants; and approved on December 31, 2008; and the Revised Landfill Gas Monitoring Plan Replacement Pages, dated April 30, 2009; as submitted by Barker Lemar Engineering Consultants; and approved on July 24, 2009; 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).
- 8. Based on a completed and certified site risk assessment meeting the requirements outlined in Iowa Code section 455B.305(6), the permit holder was conditionally exempted under the DNR letter dated September 21, 1995 from providing and implementing a leachate control plan for the unlined area that received wastes prior to July 1, 1992.
  - Continued exemption is subject to control of leachate at the site and compliance with the groundwater sampling and analysis requirements pursuant to subrule 113.10(4). In the event that these conditions are violated, the permit holder shall be required to comply with the environmental corrective action requirements pursuant to rule 113.10(455B).
- 9. The permit holder is authorized to use geotextiles by the trade names FABRISOIL, TYPAR ™ (Exxon Chemical Company), AIRSPACE SAVER ™ (FABRENE ®), WOVEN POLYOLEFIN FABRIC (L257) ™ (FABRENE ®), 315-ST WOVEN GEOTEXTILE (Brawler Industrial Fabrics) or BELTON INDUSTRIES STYLE 1104 and 2159 as an alternative cover material for the active MSWLF unit, subject to the following:
  - a. The use and installation of this product shall be in conformance with the manufacturer's recommendations.

- b. This product shall only be used as a daily alternative cover material and shall not be utilized as a replacement for soil cover if application performance in terms of litter, vector, odor, and precipitation entry control is not provided.
- c. This product shall be applied so as not to promote water ponding, or drainage run-on from adjacent upper and side MSWLF unit areas beneath the installed geotextile.
- d. This product shall be weighted at the close of each working day to prevent displacement by wind through the use of soil or tires.
- e. This product shall not be exposed for longer than **seven (7)** consecutive days. For any waste covered with this product beyond the stipulated time frame, the product shall be removed and the underlying waste shall be immediately covered with soil in accordance with the applicable IAC rules
- f. This product shall not be used if it becomes damaged or worn, or if the intended performance is breached. In such instances, this product shall be disposed of as a part of the waste fill.
- g. 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.
- h. 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.
- 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 use crushed glass as a sub base material on the site's access roads, subject to the following:
  - a. The crushed gradation of the glass shall be such that it will not damage vehicle tires which use the access road.

- b. Sufficient gravel shall be placed over the crushed glass for further assurance that the glass will not damage vehicle tire.
- c. If tire damage occurs, the permit holder shall immediately terminate use of the crushed glass; remove the glass to the extent necessary to prevent further damage; and revert back to currently authorized road base media (i.e. gravel, rock, earthen material, etc.).
- 12. 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.
- 13. The permit holder is authorized to collect and temporarily store rigid recyclable wastes (e.g., metal cans, glass bottles and plastic bottles) and fiber recyclable wastes (e.g., magazines, catalogs, books, envelopes and paper) in segregated recycling boxes located near the landfill entrance. The following conditions and procedures shall apply:
  - a. The recyclables shall not be stored for a period exceeding six (6) months.
  - b. The recycle boxes shall be fitted with lids to prevent precipitation entry and to control litter.
  - c. Separate boxes should be provided to segregate metals and plastics to facilitate recycling recovery.
  - d. Recycling boxes shall be labeled to facilitate public use.
  - e. Records shall be maintained to document amounts of waste recycled for quarterly Solid Waste Fee reporting and the dates that each box content is removed from the site for recycling to confirm storage time limitations.
  - f. Recycling activities shall be monitored to insure that no other disposable wastes are stored in recycle boxes.
  - g. Farm chemical containers shall not be stored in recycling boxes. Separate authorization for this purpose shall be secured by permit amendment.
- 14. The permit holder shall close the landfill site in accordance with the hereby approved Closure Plan, as contained in Appendix 11 of the Permit Renewal Application; and the Quality Control and Assurance (QC&A) Program for Final Cover Construction, as contained in Appendix 4-B of the Permit Renewal Application; dated March 21, 2016 and revised on August 8, 2016 and October 12, 2016; and the Postclosure Plan, as contained in Appendix

12 of the 2010 Permit Renewal; dated February 10, 2009; and approved on June 20, 2011; all as submitted by Barker Lemar Engineering Consultants; and the following:

- a. The Construction Certification Report for Closure Construction of the unlined North Area, dated August 6, 2007, as submitted by Barker Lemar Engineering Consultants and approved on August 16, 2007, is incorporated as part of the permit documents. Final cover on this area consists of 24 inches of clay compacted to 1x10<sup>-7</sup> cm/sec overlain by a 24 inch vegetative layer.
- b. The Construction Certification Report for the Closure Construction of the remaining 1.5 acres of the unlined North Area, dated June 26, 2009, as submitted by Barker Lemar Engineering Consultants, and approved on July 7, 2009, is incorporated as part of the permit documents. Final cover in this area consists of 24 inches of clay compacted to 1x10<sup>-7</sup> cm/sec overlain by a 24 inch vegetative layer.
- c. Effective control of leachate in unlined units shall be evaluated on a case-by-case basis to determine how to achieve the lowest possible leachate head; and by complying with the environmental monitoring and corrective action requirements for groundwater and surface water.

Date	Comment	
6/29/18	Approval of Phase 2A Construction Report (Special Provision 3 part "I")	
12/10/18	Approval of MW-37R/MW-38R/MW-48 inst. and MW-37/MW-38 abandonment	
12/17/18	Approval of waste disposal of Phase 2A (Special Provision 3 part "k")	
9/21/2020	Approval of Assessment of Corrective Measures Report	
3/4/21	A/21 Approval of Selection of Remedy	