

June 13, 2024

JOHN FOSTER SOLID WASTE ADMINISTRATOR
BLACK HAWK COUNTY SOLID WASTE MANAGEMENT COMMISSION
P.O. BOX 208
WATERLOO IA 50704

**RE: Black Hawk County Sanitary Landfill
Quality Assurance/Quality Control Report (Doc [#110230](#))
Permit No. 07-SDP-01-75P
Revised Permit – Amendment #8**

Dear Mr. Foster:

Enclosed is the revised permit for the Black Hawk County Sanitary Landfill. The permit and the approved plans must be kept at the sanitary disposal project in accordance with Iowa Administrative Code 567 subparagraph [567 IAC 113.11\(1\)"a"](#). Please review the permit in its entirety with your operators, as they must become familiar with it.

The permit revision approves the Gas System Documentation Report, dated June 7, 2024, as submitted by Weaver Consultants Group.

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.

For any questions, please contact me at [\(515\) 587-7638](tel:515-587-7638) or geoffrey.spain@dnr.iowa.gov.

Sincerely,

Geoffrey Spain
Environmental Engineer
Land Quality Bureau

cc: Dustin Thoenen, P.E.
Weaver Consultants Group
6301 E Hwy AB
Columbia, MO 65201

DNR Field Office #1, Manchester

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

- I. Permit Number:** 07-SDP-01-75P
- II. Permitted Agency:** Black Hawk County Solid Waste Management Commission
- III. Project Location:** E ½, SW ¼, and SE ¼, Sec. 23, T88N, R13W Black Hawk County, Iowa
- IV. Responsible Official**
Name: John Foster, Solid Waste Administrator
Address: Black Hawk County Solid Waste Management Commission
229 East Park Avenue
P.O. Box 208
Waterloo, Iowa 50704
Phone: (319) 234-8115
Email: jfoster@wastetrac.org
- V. Licensed Design Engineer**
Name: Christopher G. Oelkers, P.E.
Address: AECOM
501 Sycamore Street, Suite 222
P.O. Box 1497
Waterloo, Iowa 50704-1497
Phone: (319) 232-6531
Email: Christopher.Oelkers@aecom.com
Iowa License Number: 22053
- VI. Date Permit Issued:** **03/09/2023**
Date Permit Revised: **03/30/2023**
06/13/2024 **Amendment #8**
- VII. Permit Expiration Date:** **3/9/2028**

VIII. Issued by: _____
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, or file this report electronically through the DNR Solid Waste Permitting Database. 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 approved Iowa Northland Regional Council of Governments (INRCOG) Comprehensive Plan. The Comprehensive Plan as approved by the DNR on October 25, 2022; 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 Black Hawk County; all cities and the unincorporated area in Bremer County; all cities and the unincorporated area in Fayette County; all cities and the unincorporated area in Buchanan County; and the cities of Dike, Grundy Center, Morrison, Reinbeck and Stout in Grundy 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 or as a designated Environmental Management System, submit an Annual Report pursuant to Iowa Code section 455J.7.

2. The permit holder shall develop and operate the site in accordance with the Development and Operations Plan, dated November 11, 2022, as submitted by AECOM and hereby approved, and the following:
 - a. Waste disposal is limited to Phases I, II, III and IV of Cell W-1, Cell W-2, and Phase I of Cell W-3. The site vertical height shall not exceed a maximum waste elevation of 1000 feet in Cell W-1. Any further expansion beyond Cells W-1, W-2, W-3, and W-4 shall require prior DNR approval.
 - b. The permit holder is authorized to dispose of only construction and demolition (C&D) wastes in the Asbestos Cell No. II that was constructed in accordance with IAC 567 Chapter 114. The Asbestos Cell No. II vertical height shall not exceed a maximum waste elevation of 969 feet. The C&D wastes shall be covered weekly with a minimum of one foot of compacted soil at the end of each workweek. Any further expansion beyond Asbestos Cell No. II shall require prior DNR approval.
 - 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 Waterloo 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. In accordance with the variance granted November 28, 2007, the permit holder is exempted from providing on-site leachate storage since the leachate collection system will directly discharge into the sanitary sewer system. However, the permit holder shall install an on-site leachate storage system should any complications arise with the contingency plan or the City of Waterloo can no longer accommodate direct discharge from the landfill.
- f. The review comments, dated September 11, 1996 from the Department's Conservation and Recreation Division relative to the comprehensive listing of plant and animal species, in accordance with 567 IAC 101.13(1)"j"(4)1 for all development and soil borrow areas, is incorporated as part of the permit documents.
- g. The review comments, dated May 30, 1997 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 soil borrow areas on the proposed site, in accordance with 567 IAC 101.13(1)"j"(4)2, is incorporated as part of the permit documents.

- h. 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 Siting Criteria – Chapter 113.6, received via email February 24, 2014, as submitted by AECOM and approved on May 15, 2014; and the following:
 - a. Prior to construction of any additional MSWLF units, the permit holder shall submit updated plans and specifications prepared in accordance with rule 113.7.
 - 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 letter dated July 14, 1997 and the included as-built drawings of the leachate sump at Area A, as submitted by Rust Environment & Infrastructure, Inc. (now d.b.a. AECOM) and approved on October 9, 1997, are incorporated as part of the permit documents.
 - d. The Area 'A' Regrading and Gas Venting Program construction as-built drawings, dated March 11, 1998, as submitted by Rust Environment and Infrastructure (now d.b.a. AECOM) and approved on March 24, 1998, are incorporated as part of the permit documents.
 - e. The Cell X, Phase I Construction Drawings, dated December 2, 1998, as submitted by RUST (now d.b.a. AECOM); and the correspondence, dated February 22, 1999, as submitted by Earth Tech (now d.b.a. AECOM), both as approved on March 1, 1999, are incorporated as part of the permit documents.
 - f. The Construction Documentation Report for Cell X, Phase I, dated December 3, 1999, as submitted by Earth Tech (now d.b.a. AECOM) and approved on December 16, 1999, is incorporated as part of the permit documents.
 - g. The Construction Documentation Report for Cell X, Phase II, dated October 2000, as submitted by Earth Tech (now d.b.a. AECOM) and approved on October 20, 2000, is incorporated as part of the permit documents.

- h. The Cell X, Phase 3 Construction Drawings, dated December 4, 2003; and the correspondence, dated March 1, 2004, both as submitted by Earth Tech (now d.b.a. AECOM) and approved on April 7, 2004, are incorporated as part of the permit documents.
- i. The Construction Documentation Report for Cell X- Phase 3, dated December 2004, as submitted by Earth Tech (now d.b.a. AECOM) and approved on September 15, 2004, is incorporated as part of the permit documents.
- j. The Construction Documentation Report for Cell W1- Phase 1, dated October 2007; as submitted by Earth Tech (now d.b.a. AECOM) and approved on December 7, 2007; is incorporated as part of the permit documents.
- k. The Cell W-1, Phase II Construction Documentation, dated September 29, 2008; and the supplemental construction documentation, dated October 7, 2008; both as submitted by Earth Tech AECOM and approved on October 10, 2008; are incorporated as part of the permit documents.
- l. The Asbestos Cell No. II Construction Documentation Report, dated April 16, 2009; and the supplemental construction documentation submitted via email on June 24, 2009, June 30, 2009, July 16, 2009, July 21, 2009 and July 22, 2009; all as submitted by AECOM and approved on July 29, 2009; are incorporated into the permit documents.
- m. The Cell W-1, Phase 3 Quality Assurance/Quality Control Report, dated October 7, 2010; and the Clay Liner figures, received via email October 12, 2010; both as submitted by AECOM and approved on October 14, 2010; are incorporated into the permit documents.
- n. The Cell W-1, Phase 3 Supplemental Quality Assurance/Quality Control report, dated October 22, 2010; as submitted by AECOM and approved on November 1, 2010; is incorporated into the permit documents.
- o. The Cell W-1, Phase IV Quality Assurance/Quality Control Report, dated September 10, 2012; as submitted by AECOM and approved on September 13, 2012; is incorporated into the permit documents.
- p. The Asbestos Cell II Expansion Quality Assurance/Quality Control Report; dated October 18, 2013; as submitted by AECOM; and approved November 1, 2013; is incorporated into the permit documents.
- q. The Cell W-2 Quality Assurance/Quality Control Report, dated November 7, 2014; and the Cell W-2 – QAQC Report response to comments, received via email November 17, 2014; both as submitted by AECOM and approved on November 24, 2014, are incorporated into the permit documents.

- r. The Iowa Professional Engineer Certification of Alternative Landfill Liner System, dated September 9, 1998, and the Contaminant Fate And Transport Model for Cell X Alternative Landfill Liner System, dated August 1998, both as submitted by Rust Environment and Infrastructure (now d.b.a. AECOM); and approved on September 14, 1998; are applicable to Cell X and Phases I and II of Cell W-1. This liner consists of a four (4) foot compacted soil liner with a coefficient of permeability of 1×10^{-7} cm/sec or less.
 - s. The Plans and Specifications for Cells W-3 and W-4, dated December 20, 2019, as submitted by AECOM, are approved and included in the permit documents.
 - t. The QAQC report for Cell W-3 Phase 1, dated December 31, 2021, as submitted by AECOM, is approved and included in the permit documents. Cell W-3 Phase 1 is approved for waste disposal.
 - u. The Plans and Specifications for Cell W-3, Phase II, dated February 23, 2023, as submitted by AECOM, are approved and included in the permit document.
 - v. The Quality Assurance/Quality Control Report for Cell W-3, Phase 2 – Part 1, dated December 31, 2023, as submitted by AECOM, is approved and included in the permit documents. Cell W-3, Phase 2 is approved for waste disposal.
4. Hydrologic monitoring at the site shall be conducted in accordance with the updated Hydrologic Monitoring System Plan (HMSP); dated February 20, 2023; (Doc #105895) as submitted by AECOM and hereby approved; and the following:
- a. The HMSP shall include:

Shallow Water Table Wells East Of The Groundwater Divide (Monitoring Areas A, C, E, X, Asbestos Cell 1, Asbestos Cell 2) monitoring points, consisting of upgradient groundwater monitoring points OW-214B, OW-215B, OW-209B, OW-216B, upgradient/downgradient groundwater monitoring points OW-102D, OW-105B, MW-501B, OW-113B, MW-409B, and downgradient/sidegradient groundwater monitoring points OW-114B, OW-115B, OW-116B, OW-117B.

Underdrain Outlets East Of The Groundwater Divide monitoring points, consisting of downgradient groundwater monitoring points GUE-1, GUE-2, and GUX-1.

Underdrain Outlets West Of The Shallow Groundwater Divide monitoring points, consisting of downgradient groundwater monitoring points GUW1-1, and GUW2-1.

Shallow Water Table Wells West Of The Groundwater Divide (Monitoring Cell W1) monitoring points, consisting of upgradient groundwater monitoring points MW-319B, MW-308B, MW-312B, OW-403B, OW-405B, OW-406B, upgradient/downgradient groundwater monitoring points OW-410B, OW-411B, OW-412B, OW-413B, OW-414B, and downgradient/upgradient groundwater monitoring points OW-401B, OW-402B.

Shallow Water Table Wells West Of The Groundwater Divide (Monitoring Cell W2)

monitoring points, consisting of upgradient monitoring points OW-601B, OW-602B, OW-603B, OW-604B, OW-605B.

Deep Uppermost Bedrock Wells (Entire Facility) monitoring points, consisting of upgradient monitoring points MW-318CR, P-604C, P-213C, downgradient/upgradient monitoring points P-114C, P-104C, P-402C, and downgradient monitoring points P-105C, P-214C, P-215C, P-216C.

- b. Groundwater monitoring points not used for water quality analysis may be retained as water level measuring points.

Water Level Monitoring Only (Entire Facility)

Shallow Wells monitoring points, consisting of upgradient monitoring points OW-101B, OW-102B, OW-203B, P-402A, OW-407B, OW-408B, sidegradient/upgradient monitoring points OW-103B, OW-104B, OW-205B, OW-212B, sidegradient monitoring points OW-110B, OW-111B, OW-207B, OW-208B, MW-301B, MW-302B, MW-304B, MW-307B, MW-318BR, MW-320B, downgradient/upgradient monitoring points OW-107B, OW-109B, and downgradient monitoring points OW-106B, OW-108B.

Water Level Monitoring Only (Entire Facility)

Deep Wells monitoring points, consisting of downgradient/upgradient monitoring points P-101C, P-103C, P-106C, P-107C, downgradient monitoring wells P-102C, P-108C, P-109C, sidegradient monitoring points P-110C, P-111C, and downgradient/sidegradient/upgradient monitoring point P-113C.

- 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.

In accordance with the variance granted on March 25, 2010, the permit holder is authorized to construct shallow monitoring wells at the facility with bentonite granules/chips from the filter pack to the ground surface rather than with bentonite grout and a concrete surface seal. The variance was granted based on the November 24, 2009, December 16, 2009 and January 6, 2010 requests from AECOM which demonstrated that bentonite granules/chips placed from the filter pack to the ground surface would be acceptable for use in place of the required bentonite grout and concrete surface seal.

The well abandonment forms for monitoring points P-112A, P-210A, P-213A, P-112C, OW-112B, OW-210B, OW-213B, as plugged on July 15, 2004, as submitted with the January 7, 2005 transmittal from Earth Tech and approved on January 20, 2005, are incorporated as part of the permit documents.

The monitoring well construction documentation forms for MW-601B, MW-602B, MW-603B, MW-604B, P-604C and MW-605B; received via email November 19, 2014; and the boring logs for MW-601B, MW-602B, MW-603B, P-604C and MW-605B; received via email November 24, 2014; both as submitted by AECOM and approved on November 24, 2014; are incorporated into the permit documents.

The well abandonment forms, dated September 20, 2012, as submitted by AECOM and approved on April 7, 2015, are incorporated into the permit documents. The well abandonment forms documented the abandonment of monitoring wells MW-318A, MW-318B, MW-318C and MW-318E in accordance with 567 IAC Chapter 39. These wells shall instead be abandoned in accordance with subparagraph 113.10(2)"d" prior to construction of any waste disposal units or leachate storage structures at these well locations.

- 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 the Cell W-1, W-2, and W-3 GW Sumps, 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.

- 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" and by using the DNR AWQR Format.
 - j. The Assessment of Corrective Measures (ACM), dated June 6, 2018, and the response to the IDNR comment letter, dated March 11, 2019, are hereby approved and incorporated in the permit documents.
 - k. The Monitoring Well Abandonment documentation for monitoring wells P-203A, OW-203B, MW-308A, MW-312B, OW-403B, and OW-405B, dated December 30, 2019, as submitted by AECOM, are approved and incorporated in the permit documents.
5. The permit holder shall conduct subsurface gas monitoring in accordance with the approved 2015 Methane Monitoring Program Plan, received via email September 11, 2015, as submitted by AECOM and approved on September 11, 2015, 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).
 - c. The Gas Collection and Control System Modification plans and specifications, dated May 2, 2023, as submitted by Weaver Consultants Group, is approved and incorporated in the permit documents. The permit holder is, hereby, authorized to construct the gas collection and control system.
 - d. The Gas System Documentation Report, date June 7, 2024, as submitted by Weaver Consultants Group, is approved and included in the permit documents.
6. The permit holder is conditionally exempt from providing and implementing a leachate control plan for landfill disposal areas designated as Area A and Area C at the referenced facility.

This exemption is being granted since the facility ceased to dispose of wastes in Area A and Area C prior to July 1, 1994. The exemption does not exempt the landfill from any new laws, rules, regulations, or criteria now in force or adopted at a later date. The exemption can be rescinded by the DNR if at any future date it is determined that the installation of a leachate control system is necessary to protect the environment or public health.

Additionally, 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).

7. The permit holder is authorized to operate the Small Loads Facility located east of the scale house as approved on June 16, 1995. The As-built plans for the facility, dated April 25, 1996, as submitted by Rust Environment and Infrastructure (now d.b.a. AECOM) and approved on December 31, 1996, are incorporated as part of the permit documents.
8. The permit holder is authorized to collect, process, grind, or chip trees, limbs, brush, and clean wood wastes free of coatings and preservatives, for the purposes of reuse as bedding material, mulch, soil conditioner, compost bulking material; or for other beneficial reuses, in accordance with the following:
 - a. Trees, limbs, brush, and clean wood wastes shall not be stored for a period exceeding twelve (12) months before processing.
 - b. Ground or chipped materials shall not be allowed to accumulate such that the stockpiles are not completely reused within twelve (12) months of initial stockpiling.
 - c. The processed materials 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. 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.
9. The permit holder is authorized to stockpile foundry sand, concrete, brick, and rubble at the site in an area as directed by the landfill manager. The permit holder shall maintain current TCLP tests documentation confirming compliance with nonhazardous criteria for the foundry sand. All test results must be kept at the site at all times.

All projects proposed for beneficial reuse of the material listed above must receive prior approval from the DNR before implementation of such projects.

10. The permit holder is authorized to accept Automobile Shredder Residue (ASR) from Alter Trading Corporation in Waterloo, Iowa and Clayton County Recycling in Monona, Iowa. The permit holder is authorized to use an ASR/soil combination as an alternative cover material, subject to the following:
 - a. The permit holder shall process the ASR accepted at the site in accordance with **1)** the May 6, 2002 correspondence submitted by Gary Wilcox, Administrator of the Black Hawk County Sanitary Landfill, and approved on July 1, 2002, and **2)** the August 23, 2006

correspondence by Brett Vette, Administrator of the Black Hawk County Sanitary Landfill.

- b. The permit holder shall remove all materials exceeding 1.5 inches in size before mixing with soil on a 50% by volume basis and using as an alternative daily cover material. The ratio of ASR to soil shall not exceed 50% ASR by volume. Quantities exceeding 1-week usage shall be disposed in the workspace area. Only ASR placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved ASR) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - c. The ASR/soil may be used in lieu of the 6-inch daily cover requirement. ASR/soil shall not be used as a substitute for intermediate or final soil cover.
 - d. The waste must be compacted, before the ASR/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - e. ASR/soil 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, odors, insects, and rodents.
 - f. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "d" and "e" above.
 - g. The permit holder shall scarify the ASR/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - h. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the ASR is not hazardous by TCLP metals test, contains no PCBs that equal or exceed 50 ppm, is not ignitable, and has certification from the generator that the material was processed according to the above noted specifications. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - i. The use of ASR/soil for daily cover usage by any other generators than the ones approved above shall be subject to specifications approval by the DNR.
 - j. If the ASR/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
11. The permit holder is authorized to accept Foundry Sand from John Deere Waterloo Works in Waterloo, Iowa. The permit holder is authorized to use a foundry sand/soil combination as an alternative cover material, subject to the following:

- a. The ratio of foundry sand to soil shall not exceed 50% foundry sand by volume. Quantities exceeding 1-week usage shall be disposed in the workplace area. Only foundry sand placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved foundry sand) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste. Pursuant to Iowa Code section 455B.310(9), foundry sand used by a sanitary landfill as daily cover is exempt from imposition of the tonnage fee if the foundry sand is generated by a foundry located within the state and if the foundry sand is provided to the permit holder at no cost to the permit holder.
 - b. The foundry sand/soil may be used in lieu of the 6-inch daily cover requirement. Foundry sand/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the foundry sand/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage
 - d. Foundry sand/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.
 - f. The permit holder shall scarify the foundry sand/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the foundry sand is not hazardous by TCLP metals test. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of foundry sand/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - i. If the foundry sand/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
12. The permit holder is authorized to accept sand/dust/sludge from John Deere Waterloo Works in Waterloo, Iowa. The permit holder is authorized to use a sand/dust/sludge/soil combination as an alternative cover material, subject to the following:
- a. The ratio of sand/dust/sludge to soil shall not exceed 50% sand/dust/sludge by volume. Quantities exceeding 1-week usage shall be disposed in the workplace area. Only sand/dust/sludge placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved

sand/dust/sludge) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.

- b. The sand/dust/sludge/soil may be used in lieu of the 6-inch daily cover requirement. Sand/dust/sludge/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the sand/dust/sludge/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. Sand/dust/sludge/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.
 - f. The permit holder shall scarify the sand/dust/sludge/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the sand/dust/sludge is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of sand/dust/sludge/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - i. If the sand/dust/sludge/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
13. The permit holder is authorized to accept wastewater treatment sludge from John Deere Waterloo Works in Waterloo, Iowa. The permit holder is authorized to use a sludge/soil combination as an alternative cover material, subject to the following:
- a. The ratio of sludge to soil shall not exceed 50% sludge by volume. Quantities exceeding 1-week usage shall be disposed in the workspace area. Only sludge placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved sludge) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - b. The sludge/soil may be used in lieu of the 6-inch daily cover requirement. Sludge/soil shall not be used as a substitute for intermediate or final soil cover.

- c. The waste must be compacted, before the sludge/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. Sludge/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.
 - f. The permit holder shall scarify the sludge/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the sludge is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of sludge/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - i. If the sludge/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
14. The permit holder is authorized to accept chrome sludge from Waterloo Processing in Waterloo, Iowa. The permit holder is authorized to use a sludge/soil combination as an alternative cover material, subject to the following:
- a. The ratio of sludge to soil shall not exceed 50% sludge by volume. Quantities exceeding 1-week usage shall be disposed in the workface area. Only sludge placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved sludge) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - b. The sludge/soil may be used in lieu of the 6-inch daily cover requirement. Sludge/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the sludge/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. Sludge/soil 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, and rodents.

- e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items “c” and “d” above.
 - f. The permit holder shall scarify the sludge/soil cover material over the working face area on which it is applied prior to each day’s use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the sludge is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR’s Main and local Field office.
 - h. The use of sludge/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - i. If the sludge/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
15. The permit holder is authorized to accept sludge press material-dewatered primary sludge from Waterloo Processing in Waterloo, Iowa. The permit holder is authorized to use a sludge/soil combination as an alternative cover material, subject to the following:
- a. The ratio of sludge to soil shall not exceed 50% sludge by volume. Quantities exceeding 1-week usage shall be disposed in the workface area. Only sludge placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved sludge) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - b. The sludge/soil may be used in lieu of the 6-inch daily cover requirement. Sludge/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the sludge/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. Sludge/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items “c” and “d” above.
 - f. The permit holder shall scarify the sludge/soil cover material over the working face area on which it is applied prior to each day’s use of that area as a working face.

- g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the sludge is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of sludge/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - i. If the sludge/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
- 16. The permit holder is authorized to accept soil and grit from the Waterloo Pollution Control Plant in Waterloo, Iowa. The permit holder is authorized to use a soil/grit/clean soil combination as an alternative cover material, subject to the following:
 - a. The grit shall consist primarily of sand and gravel and shall not exhibit putrescible properties.
 - b. The ratio of soil/grit to clean soil shall not exceed 50% soil/grit by volume. Quantities exceeding 1-week usage shall be disposed in the workface area. Only soil/grit placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved soil/grit) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - c. The soil/grit/clean soil may be used in lieu of the 6-inch daily cover requirement. Soil/grit/clean soil shall not be used as a substitute for intermediate or final soil cover.
 - d. The waste must be compacted, before the soil/grit/clean soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - e. Soil/grit/clean soil 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, and rodents.
 - f. The clean soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "d" and "e" above.
 - g. The permit holder shall scarify the soil/grit/clean soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - h. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the soil/grit is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.

- i. The use of soil/grit/clean soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
 - j. If the soil/grit/clean soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
17. The permit holder is authorized to accept grit blast material from Transco Railway Products in Oelwein, Iowa. The permit holder is authorized to use a grit blast material/soil combination as an alternative cover material, subject to the following:
- a. The ratio of grit blast material to soil shall not exceed 50% grit blast material by volume. Quantities exceeding 1-week usage shall be disposed in the workspace area. Only grit blast material placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved grit blast material) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - b. The grit blast material/soil may be used in lieu of the 6-inch daily cover requirement. Grit blast material/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the grit blast material/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage
 - d. Grit blast material/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.
 - f. The permit holder shall scarify the grit blast material/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the grit blast material is not hazardous by TCLP metals test. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of grit blast material/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.

- i. If the grit blast material/soil is found by the DNR not to be performing satisfactorily, its use shall be discontinued and the remaining materials shall be disposed in the working face.
18. The permit holder is authorized to accept CCR from the University of Northern Iowa in Cedar Falls, Iowa. The permit holder is authorized to use a CCR/soil combination as an alternative cover material, subject to the following:
- a. The ratio of CCR to soil shall not exceed 50% CCR by volume. Quantities exceeding 1-week usage shall be disposed in the workface area. Only CCR placed at a ratio of 6:1 (6 tons of waste to 1 ton of approved CCR) will be considered alternative daily cover. Any material used in excess of that ratio shall be reported as waste.
 - b. The CCR/soil may be used in lieu of the 6-inch daily cover requirement. CCR/soil shall not be used as a substitute for intermediate or final soil cover.
 - c. The waste must be compacted, before the CCR/soil is applied, to provide an even surface to minimize ponding, prevent pockets, and to maximize uniform surface drainage.
 - d. CCR/soil 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, and rodents.
 - e. The soil ratio shall be increased, if necessary, to optimize cover performance relative to the criteria stated in items "c" and "d" above.
 - f. The permit holder shall scarify the CCR/soil cover material over the working face area on which it is applied prior to each day's use of that area as a working face.
 - g. The permit holder shall maintain in the landfill files appropriate quarterly laboratory analytical documentation that demonstrates that the CCR is not hazardous by TCLP testing. Documentation reporting of such testing shall be submitted to both the DNR's Main and local Field office.
 - h. The use of CCR/soil for daily cover usage by any other generator than the one approved above shall be subject to specifications approval by the DNR.
19. 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.

20. 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.
21. In accordance with the disposal of untreated petroleum contaminated soils (PCS) variance request to 567.109.11(2) dated October 9, 2018, and approved October 17, 2018, as submitted by AECOM, the permit holder is authorized to directly dispose of untreated PCS at the working face under the following conditions:
- a. The PCS must be immediately buried at the working face pursuant to 567.113.8(1)"b"(3).
 - b. The untreated PCS must not contain free liquids pursuant to 567.113.8(1)"b"(1).
 - c. PCS resulting from the cleanup of petroleum underground storage tanks are exempt from RCRA hazardous waste management if the soil 1) exhibits 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 above ground storage tanks, other surface spills, or if the PCS becomes 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).
22. The permit holder shall close the landfill site in accordance with the hereby approved Closure/Post-closure Plan, dated April 29, 2013; the Supplement to Closure/Post-Closure Plan, dated May 24, 2013; and the Construction Quality Assurance Program, dated August 27, 2013; all as submitted by AECOM and the following:
- a. Disposal Areas A and C were closed and capped in 1980 and 1994, respectively.
 - b. The Cell E Quality Assurance/Quality Control Report for closure of Cell E; dated December 20, 2012; as submitted by AECOM; and approved August 23, 2013; is incorporated as part of the permit documents. The final cover was constructed over all of Cell E.

- c. The Cell X Capping (Closure) Quality Assurance/Quality Control Report; dated December 20, 2012; as submitted by AECOM; and approved August 23, 2013; is incorporated as part of the permit documents. The final cover was constructed over all of Cell X.
- d. The Asbestos Cell No. 1 – Final Closure Quality Assurance/Quality Control Report; dated December 20, 2012; as submitted by AECOM; and approved August 23, 2013; is incorporated as part of the permit documents. The final cover was constructed over all of Asbestos Cell No. 1.
- e. The Cell W-1, Phase 1 final cover construction plans, dated April 26, 2013, as submitted by AECOM, are approved and incorporated into the permit documents.
- f. The Cell W-1, Phase 1 Final Closure QA/QC Report, dated November 27, 2013, as submitted by AECOM, is approved and incorporated into the permit documents.
- g. 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.
- h. The review comments, dated April 25, 1996 from the Black Hawk County Soil & Water Conservation District relative to compliance with wind and soil loss limit regulations, in accordance with 567 IAC 113.26(1)“j” for all development areas, are incorporated as part of the permit documents.
- i. The Revised Final Closure Plans for Cell W-1, Phase II, dated December 21, 2017, as submitted by AECOM, is hereby approved. Deviations from the plans and specifications shall be approved by the DNR prior to their construction.
- j. The Cell W-1, Phase II Final Closure Quality Assurance/Quality Control Report, dated November 30, 2018, as submitted by AECOM, is hereby approved.

XI. Permit Renewal and Revision History

Date	Comment
3/30/2023	Amendment #1 - Approval of Plans and Specs for Cell W-3, Phase II (Special Provision X.3.u).
6/26/2023	Amendment #2 - Approval of Plans and Specs for Gas Collection System (Special Provision X.5.c).
6/29/2023	Amendment #3 – Approval of impacted soil for use as ADC (Special Provision X.22)
8/9/2023	Amendment #4 – Approval of plans and specs for Cell W-3, Phase II
8/17/2023	Amendment #5 – Approval of updated HMSP
9/18/2023	Amendment #6 – Rescinds the approval to use 23,500 cubic yards of impacted soil as ADC, per the amendment request dated June 29, 2023, as submitted by the Black Hawk County Solid Waste Management Commission
01/16/2024	Amendment #7 – Approval of QAQC Report for Cell W-3 Phase 2 – Part 1
06/13/2024	Amendment #8 - Approval of Gas System Documentation Report (Special Provision X.5.d)