

March 19, 2026

Michael W. Smith, P.E.
Environmental Engineer Senior
IDNR – Land Quality Bureau
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321



**RE: SEMI-ANNUAL INSPECTION REPORT – SPRING, 2026
CLARKE COUNTY SANITARY LANDFILL – SOUTH SITE (CLOSED)
IDNR PERMIT NO. 20-SDP-04-94C**

Dear Mr. Smith,

In accordance with the General Provisions of the SDP Closure Permit dated January 17, 2012, a semi-annual inspection of the Clarke County Sanitary Landfill was conducted the morning of March 9, 2026. Conditions at the time of the inspection were clear with moderate winds and temperatures in the 50's.

The front gate of the landfill was locked. A sign has been posted at the front gate stating that the landfill is closed; however, the sign containing the remaining information required by IDNR (name of facility, SDP Permit Number, and emergency contact number) was previously damaged and has not been replaced to date.

Status of the Permit

The Closure Permit for the South Site was issued on January 17, 2012. The facility has received the following revisions/amendments to the Permit to date:

- Permit Revision #1, February 18, 2012 (Doc #68507), issued to "correct some errors listed in the original document."
- Permit Amendment #1, September 5, 2012 (Doc #74006), required the installation of a supplemental leachate collection system in Cells 3 and 4 and approved repair of a persistent leachate seep on the east side of Cell 3A.
- Permit Amendment #2, December 27, 2012 (Doc #75411), approved the Landfill Gas Well Installation Report (May 22, 2012 – Doc #71922) for gas monitoring well LFGW-W2.
- Permit Amendment #3, December 28, 2012 (Doc #75476), approved the Closure Documents (June 4, 2012 – Doc #72542), the Deed Notifications and Survey Documentation (October 18, 2012 – Doc #74540), and the Deed Notification and Survey Documentation – Amendment (October 24, 2012 – Doc #74755).
- Permit Amendment #4, December 28, 2012 (Doc #75480), approved the 2012 Supplemental Leachate Collection System Construction Observation Report (December 19, 2012 - Doc #75379).
- Unnumbered Permit Amendment, May 22, 2013 (Doc #77301), eliminated the requirement to submit a Semiannual Water Quality Report.



- Permit Amendment #5, April 29, 2014 (Doc #80143), approved the Request for Reduction of Monthly Site Inspections (March 5, 2014 - Doc #79671).
- Permit Amendment #6, July 7, 2014 (Doc #80639), approved the Construction Documentation for the Methane Remediation Plan (June 23, 2014 - Doc #80559) and the Geoprobe results and boring logs (July 3, 2014 - 80638).
- Unnumbered Permit Amendment, July 10, 2014 (Doc #80708), required a review of total suspended solids (TSS) and turbidity testing. Sampling procedures have been modified to address this amendment, and a letter discussing TSS and field turbidity measurements was submitted on March 24, 2015 (Doc #82834). IDNR concurred with the TSS/field turbidity correlation in the letter dated July 30, 2015.
- Permit Amendment #7, July 30, 2015 (Doc #83971), approved sampling for the full Appendix II list once every five years at monitoring points that are in assessment monitoring and have had at least two rounds of analysis using the entire Appendix II list.
- Permit Amendment #8, November 28, 2016 (Doc #87760), modified the HMSP in accordance with the Proposed HMSP Monitoring Point Revisions (September 25, 2014 - Doc #81493) and the Revisions to the HMSP & Justifications - Response to IDNR Letter dated July 30, 2015 (January 21, 2016 - Doc #83897).
- Permit Amendment #9, June 2, 2017 (Doc #89616), modified the frequency of leachate level measurements to quarterly (previously monthly)
- Permit Amendment #10, June 20, 2017 (Doc #89728), modified the Gas Monitoring System Plan (GMSP) in Special Provision X.7 of the SDP Permit.
- Permit Amendment #11, December 1, 2017 (Doc #91013), allows for the disposal of leachate at the Des Moines Metropolitan Wastewater Reclamation Facility.
- Permit Amendment #12, March 28, 2018 (Doc #91926), requires the Annual Water Quality Report (AWQR) to be submitted in the new IDNR format starting with the 2018 AWQR.
- Permit Amendment #13, April 1, 2020 (#97364), changes the frequency of leachate level measurements from quarterly to semi-annually.
- Permit Amendment #14, May 12, 2020 (#97700), approved the construction documentation for Gas Probe GP-3 and modified the GMSP in Special Provision X.7 of the SDP Permit.
- Permit Amendment #15, September 22, 2020 (Doc #98492), approved the construction documentation of Monitoring Well MW-37 and modified the Hydrologic Monitoring System Plan.
- Permit Amendment #16, September 2, 2021 (Doc #101159), approved the construction documentation of Monitoring Well MW-38 and modified the Hydrologic Monitoring System Plan.
- Permit Amendment #17, March 8, 2023 (Doc #106027), modified the Hydrologic Monitoring System Plan by reducing the frequency of monitoring well sample collection to annually with the exception of MW-33 which will still be sampled semi-annually.

- Permit Amendment #18, November 6, 2023 (Doc #108154), approved the Quality Control and Assurance Report-FML Repair, Leachate Storage Lagoon.

The site appeared to be in general conformance with the Closure Permit during this inspection.

Site Observations

Vegetation on the landfill cap is dormant, but unchanged since the Fall of 2025 inspection. Vegetation is in generally good condition with fewer areas with thin vegetation noted during this inspection than during previous inspections. Areas with thin vegetation noted during this inspection are shown on the attached figure. Those areas that were previously noted as bare had soil added in 2017 and vegetation has been established on the majority of areas of soil addition. The largest area of repair in 2017 was on the top of the cap. Additional black topsoil was added in 2022 on top of the landfill cap at the highest crest on the north end in the bare area noted during the Spring, 2022 inspection. This area is now well vegetated.

The majority of the site was last mowed in 2024. The majority of the trees previously noted were removed during the mowing although there were a few cedar trees noted on the cap in the silt fence on the north facing slope above MW-33 and in the perimeter fence of the leachate storage lagoon. Mowing improves site aesthetics and aids in the establishment of desirable vegetation by controlling weeds and tree growth on the cap. Mowing also makes potential problem areas, such as leachate seeps and erosion rills, easier to identify. Regular mowing should continue - annual mowing may not be necessary if a longer mowing interval can still control tree growth.

Silt fence post removal is ongoing and should be performed on the north facing slope to facilitate mowing and tree removal.

There were three (3) rills noted on the west facing slope above the southeast corner of the lagoon during the Spring 2021 inspection. These areas were visited during this inspection. The rills have been successfully repaired, and vegetation is established in the repair areas.

The terrace bench on the toe of the west slope is functioning as intended. No ponding was noted in the terrace channel during the inspection and vegetation in this area does not show evidence of long-term ponding. The erosion rill near the ditch check at the north end of the terrace bench on the west slope noted during previous inspections was repaired in 2022 with improvements being made to the ditch check and the rock surface enlarged at the terrace letdown. In the Spring of 2025, smaller partially vegetated gullies were also noted in the lower terrace channel on the west side of the waste between LPZ-3 and LPZ-4, and also in the terrace channel south of LPZ-2. The vegetation in the terrace channel is still well established during this inspection.

No leachate seeps or ponded water were noted during this inspection.

Annual Water Quality Report

The 2025 Annual Water Quality Report (AWQR) was submitted to IDNR on January 30, 2026 (Doc #115960). IDNR comments on the 2025 AWQR have not been received to date.

Leachate lines on site were cleaned March 26 and 27, 2025.

Leachate Testing & Leachate Storage Lagoon

A leachate sample was collected on March 9, 2026 and submitted for analysis in accordance with the requirements in the Hauled Leachate Permit issued by the Des Moines Wastewater Reclamation Agency (WRA). The results of the analysis will be included in the 2026 AWQR.

As per Permit Amendment #13, a representative of the Clarke County Engineering Department or their agent will visit the site monthly at a minimum to review the level in the leachate storage lagoon to determine if leachate hauling is needed. Dates of lagoon level reviews since the Fall, 2025 inspection (September 5, 2025) and estimated remaining storage available in the lagoon at the respective dates are as follows:

<u>Date</u>	<u>Available Storage in the Lagoon</u>
October 17, 2025	1.34 feet
November 11, 2025	1.31 feet
December 20, 2025	1.28 feet
January 21, 2026	1.26 feet
February 12, 2026	1.28 feet
March 9, 2026	1.15 feet

The September, 2025 reading was recorded as having 1.03 feet of storage remaining in the lagoon. Based on the results reported above, as well as the measurements in 2025 preceding the September reading, it is apparent that an error was made during the September, 2025 measurement and that result should be considered to be an anomaly.

Approximately 44,489 gallons of leachate were removed from the lagoon and hauled to the Des Moines Metropolitan Wastewater Reclamation Facility during the summer of 2023 to provide adequate capacity for leachate storage. No leachate was removed from the lagoon in 2024, 2025, or thus far in 2026.

Explosive Gas Monitoring

Explosive gas monitoring for the landfill is performed in accordance with Permit Amendment #14 and the revised Gas Monitoring System Plan (GMSP) dated March 3, 2020 (Doc #97172). The results will be reported to IDNR in the AWQR.

Financial Assurance

The Financial Assurance documentation for 2025 was submitted to IDNR on July 21, 2025 (Doc #113483) with additional information provided to IDNR on July 25, 2025 (Doc #113563). IDNR approved the 2025 Financial Assurance documentation on July 28, 2025 (Doc #113564). The FY 25 audit for the Commission has not been completed, as a result the 2026 Financial Assurance documentation has not been submitted to date.

Additional Comments

No signs of trespassing were noted during this inspection.

Two large erosion gullies are forming near MW-17 and MW-34. The approximate locations of the gullies are shown on the attached figure. These gullies are well outside of the facility waste boundary but should be stabilized.

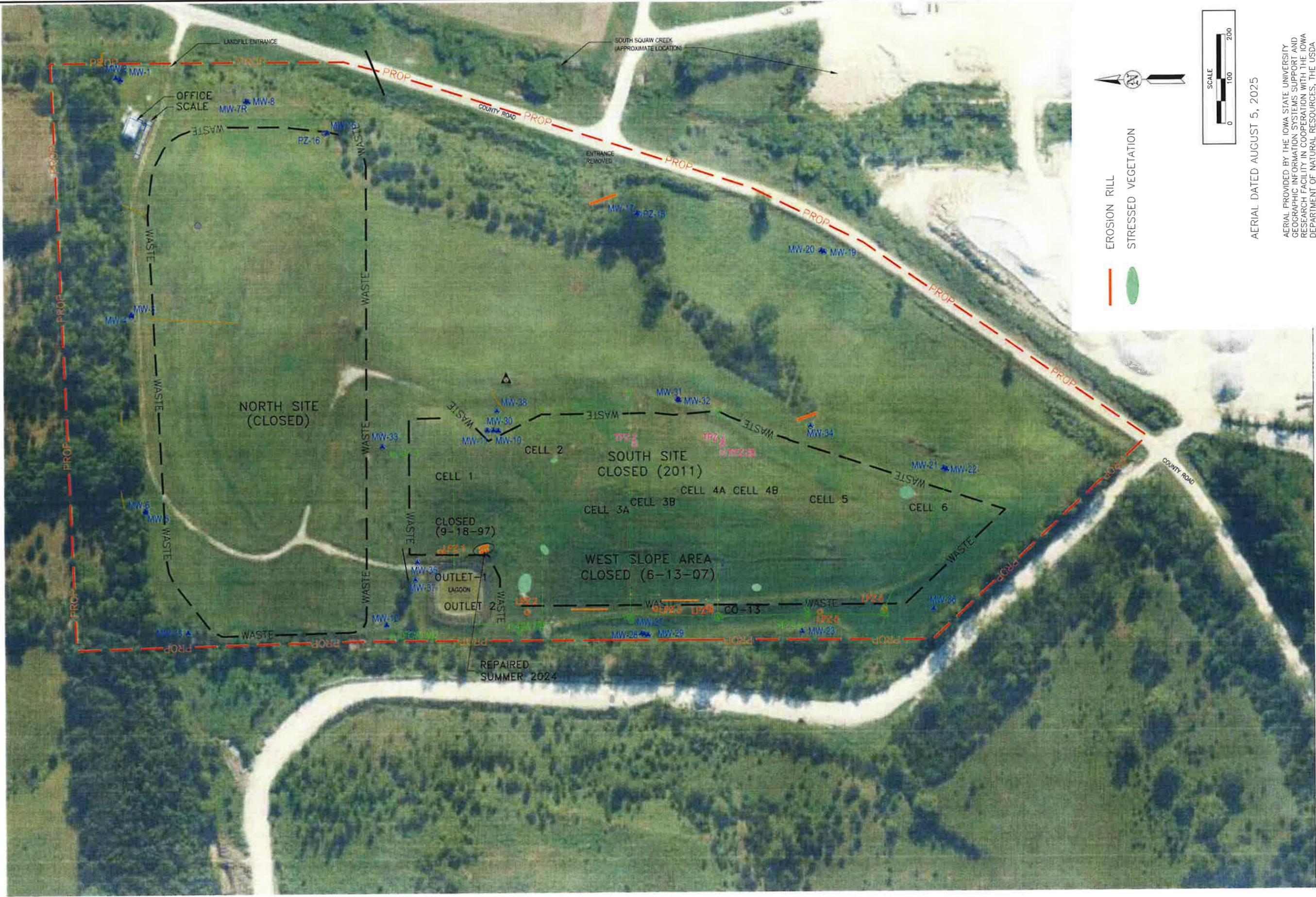
This report is based on observations made at the site at the time of the inspection and the sources referenced in the report and does not reflect typical variations experienced at the site throughout the year or variations in conditions that may be observed at the site at other times.

Recommendations

1. Haul leachate as required to maintain the lagoon storage capacity.
2. Submit 2026 Financial Assurance documentation upon completion fo the FY 25 Audit.
3. Repair/replace sign at landfill entrance.
4. Routinely observe the areas of soil placement, erosion repairs, and re-seeding and continue to repair erosion rills as necessary.
5. Continue removal of the silt fence posts where vegetation is well established.
6. Continue to remove trees and monitor vegetation growth on site and repair as necessary.
7. Continue to monitor diversion and drainage systems and repair as necessary.



cc: Dean Robins, Chair, Clarke County Board of Supervisors – *electronic submittal*
HLW Engineering Group, 204 West Broad Street, P.O. Box 314, Story City, Iowa 50248
(515) 733-4144  **(515) 733-4146 Fax**



AERIAL DATED AUGUST 5, 2025

AERIAL PROVIDED BY THE IOWA STATE UNIVERSITY
 GEOGRAPHIC INFORMATION SYSTEMS SUPPORT AND
 RESEARCH FACILITY IN COOPERATION WITH THE IOWA
 DEPARTMENT OF NATURAL RESOURCES, THE USDA
 NATURAL RESOURCES CONSERVATION SERVICES, AND
 THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

SPRING 2026 INSPECTION

SOUTH SITE
 CLARKE COUNTY SANITARY LANDFILL
 CLARKE COUNTY, IOWA

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FIGURE: 1

REVISION	NO.	DATE
DRAWN	JGH	3/12/26
PROJECT NO.	6037-26A	DATE