

April 15, 2024

Mr. Brian Rath, P.E.
Environmental Engineer Senior
IDNR – Land Quality Bureau
Wallace State Office Building
502 E. 9th Street
Des Moines, Iowa 50319



**RE: ANNUAL INSPECTION – 2024
BREMER COUNTY SANITARY LANDFILL
IDNR PERMIT #09-SDP-01-75C – CLOSED
HLW PN 6035**

Dear Mr. Rath:

In accordance with the IDNR comment letter dated April 2, 2024 (Doc #109724) the Annual Inspection of the Bremer County Sanitary Landfill was completed on April 9, 2024. Note that an amendment to Special Provision X.6 of the SDP Permit dated September 5, 2008, is pending. The amendment will change the frequency of inspections from semi-annual to annual.

Conditions at the time of the inspection were sunny and windy with temperatures in the 60's.

Status of the Permit

The Closure Permit was issued on September 5, 2008. The facility has received the following amendments to the Permit to date:

- Permit Amendment #1, November 18, 2011, approved the Landfill Closure Compliance Report (December 29, 2008 – Doc #35356) and the Landfill Closure Report Comments (November 3, 2011 – Doc #67466).
- Permit Amendment #2, August 28, 2012, approved changes to the Hydrologic Monitoring System Plan (HMSP) to conduct groundwater monitoring in accordance with IAC 567-113.10(4) and 113.10(5).
- Permit Amendment #3, July 14, 2014, approved the construction of MW-2A and abandonment of MW-2.
- Unnumbered Permit Amendment, May 22, 2013, eliminated the requirement to submit a Semiannual Water Quality Report.
- Unnumbered Permit Amendment, July 10, 2014, 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 2, 2015 (Doc #82594) and approved by IDNR on July 14, 2015.
- Permit Amendment #4, July 14, 2015, approved the five (5) year frequency of full Appendix II Assessment Monitoring at wells where two (2) consecutive annual episodes have been completed.
- Permit Amendment #5, April 18, 2016, amends the HMSP regarding the resampling/retesting scheme upon initial indication of a statistically significant increase (SSI).

- Permit Amendment #6, April 2, 2018, requires that the format of the Annual Water Quality Report (AWQR) be revised to meet the new IDNR AWQR format. Requires that the AWQR be submitted by November 30th of each year.
- Permit Amendment #7, April 18, 2018, requires that the AWQR be submitted by January 31 of each year.
- Permit Amendment #8, July 31, 2018, approved the construction documentation for subsurface gas probes GP-1 through GP-5 and modified the Gas Monitoring System Plan (GMSP).
- Permit Amendment #9, July 22, 2020, approved the semi-annual frequency of gas monitoring from site structures and from subsurface gas probes GP-1 through GP-5 thereby modifying the GMSP.

Special Provisions

1. The thirty-year post closure period started September 5, 2008.
2. The closed landfill is being maintained in general accordance with the approved Closure and Post Closure Plan.
3. All waste disposal ceased prior to October 1, 2007. There are no activities on the closed landfill.
4. The closure documentation required by this Special Provision was submitted and approved by IDNR in Permit Amendment #1 dated November 18, 2011.
5. The annual sampling was completed on April 9, 2024. Monitoring was performed in accordance with the IDNR comment letter dated April 2, 2024 (Doc #109724, Permit Amendment is pending).

All monitoring wells viewed during the inspection were locked.

6. Formal inspections of the closed area are now completed annually, with a report submitted to IDNR.
7. The diversion and drainage systems are maintained and are in generally good condition. Review of the area of the former terrace washout near the intake of the second terrace (from the toe of slope) on the north slope was inspected. The washout and the intake were repaired in 2023. Improvements were also made to the terraces above and the terrace below the repaired washout. Areas repaired in 2023 were seeded and the vegetation is emerging. The locations of the repairs are shown on the attached figure.

Observation of the bottom terrace on the south side near the east end indicates the presence of historic damage. An eroded depression and disturbance in the terrace grade exists, but is fairly well vegetated. Tim Meeker, Landfill Manager, was notified of the damage and reported that it would be repaired.

8. The vegetation on the cap is generally in good condition. Saplings were cut, mowed, and sprayed in 2023. Saplings were not noted on the cap during the inspection. The 2023 tree removal activities are discussed later in this report.
9. The final cover over the closed area is generally in good condition.
10. Explosive gas monitoring is performed annually in accordance with the IDNR comment letter dated April 2, 2024 (Doc #109724, Permit Amendment is pending). Explosive gas monitoring results will be included in the AWQR. The vents installed in 2022 during the gas venting project (discussed later in this report) are included in the GSMP.
11. Based on a risk assessment, the closed landfill does not require a leachate control plan.
12. The site has closed since the Emergency Response and Remedial Action Plan (ERRAP) was completed; however, the majority of the ERRAP is still applicable to the closed landfill. The Citizens Convenience Center, which is located on the closed landfill property, also has an ERRAP.

Annual Water Quality Report

The 2023 AWQR for the Bremer County Sanitary Landfill was submitted to IDNR on January 29, 2023 (Doc #108993). IDNR comments on the 2023 AWQR were received on April 2, 2024 (Doc #109724).

Financial Assurance

The 2024 Financial Assurance documentation was submitted on March 4, 2024 (Doc #109413). IDNR approved the financial assurance on March 4, 2024 (Doc #109414).

Additional Comments

A project to install gas vents through the cap in areas where stressed vegetation was noted during past inspections was completed in May, 2022. Sixteen gas vents were drilled through the cap into the waste mass. Each vent was backfilled with clean river rock and a perforated pipe with wind turbine vent on top was installed in the rock to aid in gas removal from the waste mass. A Construction Certification Report was submitted to IDNR on July 15, 2022 (Doc #103616). Erosion was also repaired during this project. The locations of the vents and the erosion repairs are shown on the attached figure.

Observation of the erosion repairs indicates that the repairs appear to be successful. Areas disturbed during the gas venting project were seeded upon completion. The vegetation over the majority of the disturbed areas is established.

The saplings and trees previously noted (on north side slope and in the southwest corner) were eradicated by the Bremer County Roadside Vegetation Manager. Additionally, the larger diameter saplings and trees on the northside terraces were cut and removed. The entire cap including the north slope was mowed during the summer of 2023 to further control saplings.

Observation indicates that the tree/sapling removal is successful and will allow routine maintenance and removal to keep pace with tree growth. It is noted that mowing in 2024 will again eliminate the small willow saplings in the southwest corner.

Ditches, culverts, and terrace intakes and outlets were free of debris and appeared to be draining as designed.

Based on observations during the inspection the facility appears to be in general conformance with the closure permit.

The SDP Permit for the Citizens Convenience Center expires on October 11, 2025.

This report is based on observations made at the site at the time of the inspection and the information sources referenced in the report. This report 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

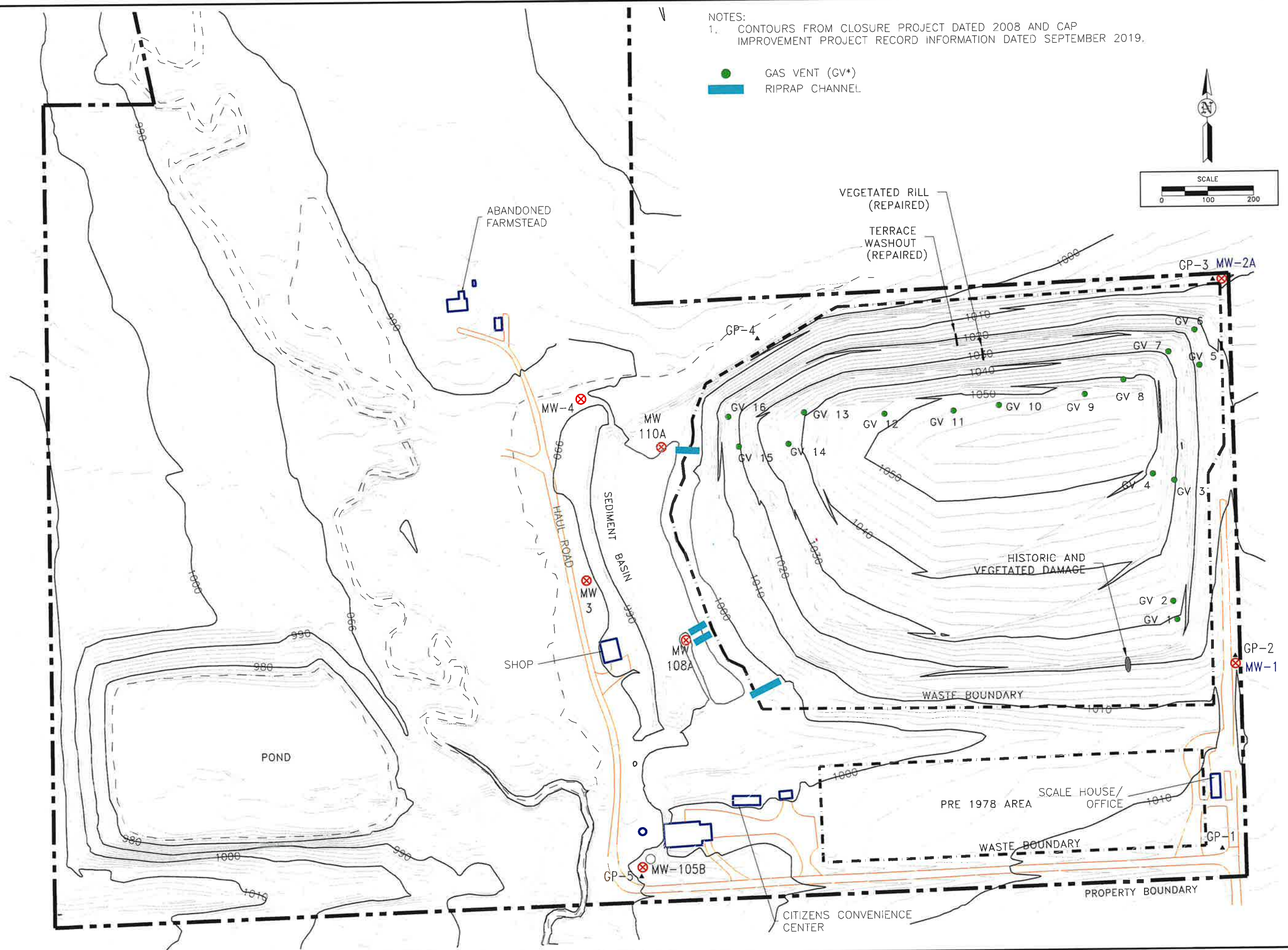
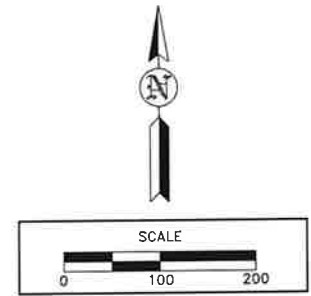
1. Repair the damage to the terrace on the south slope near the east end.
2. Continue to monitor the area of the repaired washout (second terrace) and the repaired rill (third terrace) on the north slope.
3. The cap should continue to be mowed and saplings should continue to be removed from the cap.
4. Continue to monitor vegetation and repair as necessary.
5. Continue to monitor diversion and drainage systems and repair as necessary.



cc: Tim Meeker, Landfill Manager, Bremer County Sanitary Landfill (electronic copy)
Corey Cerwinske, Chair, Bremer County Board of Supervisors (electronic copy)

NOTES:
 1. CONTOURS FROM CLOSURE PROJECT DATED 2008 AND CAP IMPROVEMENT PROJECT RECORD INFORMATION DATED SEPTEMBER 2019.

● GAS VENT (GV*)
 ■ RIPRAP CHANNEL



REVISION		NO.	1
DRAWN		PROJECT NO.	6035-24A
		DATE	4/13/24

FIGURE: 1
 SPRING 2024 INSPECTION
 BREMER COUNTY SANITARY LANDFILL
 BREMER COUNTY, IOWA

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