April 25, 2024

Mr. Brad Davison, Environmental Specialist
IDNR – Land Quality Bureau
Wallace State Office Building
502 E. 9th Street
Des Moines, Iowa 50319

HLW Engineering Group
Engineering Management

RE: SEMI-ANNUAL INSPECTION – SPRING, 2024
US GYPSUM SANITARY LANDFILL - CLOSED
PERMIT NO. 94-SDP-08-89C

Dear Mr. Davison:

In accordance with the provisions of the Closure Permit, an inspection of the closed US Gypsum Sanitary Landfill was conducted on April 15, 2024. The inspection was discussed with Mr. Jim Clabaugh, Environmental Coordinator, United States Gypsum of Fort Dodge, prior to submission to IDNR. Weather conditions on this day were sunny and breezy with temperatures climbing from 45 to 60 degrees.

Status of the Closure Permit

The Closure Permit for the US Gypsum SLF expires on November 1, 2034. The facility has received the following amendments to the Permit to date:

- Unnumbered Permit Amendment, May 22, 2013, eliminated the requirement to submit a Semiannual Water Quality Report.
- Permit Amendment #1, February 15, 2016, revised the sampling requirements in the HMSP – revised Special Provision #4e of the Closure Permit.
- Permit Amendment #2, December 29, 2016, revised the frequency of the landfill inspections from monthly to semi-annually – revised Special Provision #6 of the Closure Permit
- Permit Amendment #3, May 30, 2017, revised the frequency of the landfill water sampling to annually and revised the parameter list for laboratory analyses of water.
- Permit Amendment #4, November 18, 2020, revised the Hydrologic Monitoring System Plan (HMSP) by changing the use of MW-11A to a background well and the use of MW-14 as a water elevation monitoring point.

Annual Water Quality Report

The IDNR Letter dated July 5, 2023 (Doc #107118) temporarily modified the sampling of site monitoring wells and limits sampling to MW-3B through 2024.

The 2023 Annual Water Quality Report (AWQR) was submitted on December 22, 2023 (Doc #108515). IDNR comments on the 2023 AWQR have not been received to date.

General Conditions

The site was closed during the fall of 2003 with a 4-foot soil cap (2-foot infiltration layer and 2-foot erosion layer) as per the approved Closure/Post Closure Plan. A Construction Certification Report was submitted to IDNR on November 26, 2003 (Doc #45115). Record Drawings of the closure project were submitted to IDNR on August 30, 2004 (Doc #45112). These documents were approved in Special Provision X.2 of the Closure Permit dated November 1, 2004.

A terrace system was constructed on the erosion layer to control surface water, aid in the establishment of vegetation, and protect the erosion layer as well as the infiltration layer from erosion. The terrace system has limited erosion on the slopes. The terraces are graded to direct run-off water to intakes, at which the water enters buried tile lines to outlet outside of the waste boundary. The terrace, intake, and tile locations were included on the Record Drawings.

The inlets of the terrace system were observed. Terrace inlets were free of debris and functioning as intended.

A small rill was noted on the downslope side of the terrace near the center of the site on the south slope. Good vegetation is established within and on either side of the rill and it appears to be stable. No changes were noted in the rill or the vegetation within the rill.

A small rill was noted in the northwest corner of the site in the transition area from a north facing slope to a west facing slope between the upper and lower terrace. Good vegetation is established on either side of the rill. This rill was initially noted during the October 29, 2012 inspection report and has shown little, if any, change since it was first noted.

A small erosion channel was observed in the flowline of the terrace channel in the northeast corner of the site near LW-2. The erosion channel occurs both east and west of the intake. This erosion feature appears to be from a historic event and has good vegetation established on all sides and does not appear to have changed since the last inspection. Gravel (approximately 1" diameter limestone) has been used to fill the upper section of the rill. Mr. Clabaugh stated that he plans to continue to fill the rill over time as he has access to the gravel.

The area of the 2012 intake repair in the north terrace in the northeast corner of the site was also observed. The repair has been successful and the vegetation in this area is fully reestablished and in excellent condition. The intake was replaced during the summer of 2022. A small depression was historically present adjacent to the letdown pipe below this intake, midway between the intake and the outlet. The depression was caused by a broken letdown pipe – the pipe was repaired in September, 2022 and additional soil added in this area to restore the erosive layer. Observations in this area indicate that the repairs are successful and vegetation is established on the restored erosive layer.

There was no ponded water in the terrace channels during this inspection. Terrace channels will continue to be monitored during future inspections.

The area on the top of the cap where ponding (15 feet in diameter) was noted in April, 2015 was identified in the field during the inspection. Ponding was not noted in this area during this inspection. Vegetation on the cap is well established and did not show signs of frequent surface water ponding. This area will continue to be monitored during future inspections.

Vegetation on the cap is in excellent condition. Much of the site was mowed in the summer of 2023. Tree saplings are routinely removed from the cap as needed.

The chain link perimeter fencing previously noted as damaged was replaced with new fencing and a new gate in September, 2022. The gate was locked upon arrival. There was no evidence of trespasser activity noted at the landfill during this inspection.

Leachate Collection and Treatment

Based on a completed and certified site risk assessment meeting the requirements in Iowa Code section 455B.305(6), the facility was conditionally exempted from providing and implementing a leachate control plan for those portions of the SLF that received wastes prior to July 1, 1992 (Special Provision X.11 of the Closure Permit dated November 1, 2004).

No leachate seeps were noted during this inspection.

Monitoring Well Maintenance Performance Reevaluation Plan

The most recent Monitoring Well Maintenance Performance Reevaluation Plan (MWMPRP) was completed in April, 2020 in accordance with IAC 567-115.21(2)"d". The report was submitted to IDNR on April 22, 2020 (Doc #97581). The report recommended no modifications to the Hydrologic Monitoring System wells. As per IDNR Regulations, the MWMPRP is required every 5 years and the next MWMPRP is due in 2025.

All monitoring wells observed during the inspection were locked.

Environmental Covenant Process

A request was submitted to IDNR with the AWQR on December 23, 2022 to end regulation under IAC 567, Chapter 115, rescind the Closure Permit, and enter into an Environmental Covenant. Based on the IDNR Letter dated July 5, 2023 (Doc #107118), it appears that monitoring of MW-3B through 2024 is required by IDNR before the Environmental Covenant process will be reassessed.

Recommendations

1. Continue to monitor the rills on the south side terrace, in the northwest corner, and in the flowline of the terrace near LW-2.

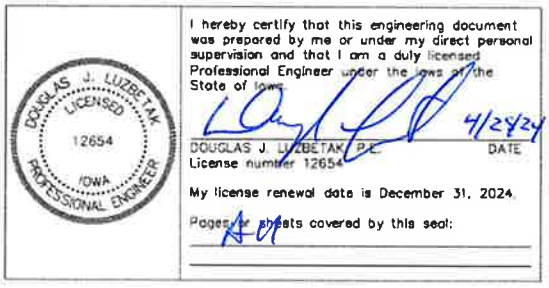
2. Continue to monitor the area where ponding was previously noted (2015) on the top central portion of the cap for signs of ponding or vegetation changes.

3. Continue to monitor the terrace channels for evidence of ponding or overtopping. Regrade terrace channels to eliminate ponding as necessary.

4. Continue to monitor the vegetation on the landfill cap and mow the cap as necessary to maintain the vegetation. Continue to remove tree saplings as necessary.

5. Continue to monitor any erosion on the landfill cap and repair as necessary.

6. Reassess the Environmental Covenant process following completion of the 2024 Annual Water Quality Report.



cc: *Michael Ensminger, Plant Manager, United States Gypsum – Fort Dodge (electronic copy)*
Chris Kendall, Mill Manager, United States Gypsum – Fort Dodge (electronic copy)
Jim Clabaugh, Environmental Coordinator, United States Gypsum – Fort Dodge (electronic copy)