

April 15, 2024

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



**RE: SEMI-ANNUAL INSPECTION – SPRING 2024
FLOYD-MITCHELL-CHICKASAW COUNTIES SANITARY LANDFILL
IDNR PERMIT #66-SDP-01-73P
ORIGINAL LANDFILL AREA - CLOSED
HORIZONTAL EXPANSION AREA - ACTIVE**

Dear Mr. Rath:

In accordance with Special Provision XI.5 of the SDP Permit, a semi-annual inspection of the Floyd-Mitchell-Chickasaw Counties SLF was conducted on April 11, 2024. The results of the inspection were discussed with Christian Fox, Director, upon completion. Conditions at the time of the inspection were overcast, windy with occasional rain, and temperatures in the 40's.

Status of the Permit

The SDP Permit was renewed on December 10, 2021. The facility has received the following revisions to the Permit to date:

- Revised Permit, Amendment No. 1, May 25, 2023, removed the words “soil conditioner” from the permit to conform with the Iowa Administrative Code.
- Revised Permit, Amendment No. 2, July 6, 2023, approved the request to discontinue ambient air monitoring at the “A” points.

Annual Water Quality Report

The 2023 Annual Water Quality Report (AWQR) for the active and closed areas was submitted to IDNR on January 25, 2024 (Doc #109006). IDNR comments on the 2023 AWQR have not been received to date.

Financial Assurance

A request was emailed to the IDNR on March 22, 2024 (Doc #105984) to extend the 2024 Financial Assurance submission deadline to May 31, 2024. IDNR approved the extension on March 25, 2024. The 2024 Financial Assurance documentation was submitted on April 12, 2024 (Doc #109806).

Permit General Provisions

1. Quarterly tonnage reports are submitted as required.
2. Asbestos wastes, petroleum contaminated soils and grit and bar screenings are accepted in accordance with the landfill's SWAC. Note that Special Provision X.14 of the SDP Permit authorizes the direct disposal of petroleum contaminated soil at the landfill working face.
3. Special Waste Authorizations are obtained as necessary.

Special Provisions (Phase 1,2 & 3 – Active Landfilling Area)

1. The landfill is accepting waste for disposal in accordance with the Floyd-Mitchell-Chickasaw County Comprehensive Plan. The latest update of the Comprehensive Plan was approved by IDNR on October 8, 2020.
2. The landfill is being operated in general accordance with the information in the 2021 Municipal Solid Waste Permit Renewal dated May 10, 2021 (Doc #100449). Phases 1, 2, and 3 are the active disposal areas.
3. Leachate is stored in a Subtitle D composite lined lagoon. Leachate is recirculated within Phases 1, 2, and 3 in accordance with the SDP Permit or is hauled to a POTW for treatment and disposal in accordance with an applicable leachate treatment agreement. The landfill has leachate treatment agreements with Osage and Mason City; however, leachate is typically hauled to the Mason City POTW for treatment and disposal. The leachate storage lagoon has a storage capacity of approximately one million gallons and at the time of the inspection had approximately 4' of storage available to the top of the lagoon.

The Pit Boss leachate evaporator was not operating during the inspection. The evaporator will be installed soon now that freezing conditions no longer exist. The diffusers (3) were operating and typically operate throughout the year.

Leachate piezometers in Phases 1, 2, and 3 are measured monthly when leachate is not being recirculated. When leachate recirculation is ongoing levels are measured daily in accordance with the Leachate Recirculation Operation Plan (Doc #85606). A Leachate Control System Performance Evaluation Report will be included in the AWQR.

4. The sampling points for Phases 1, 2, and 3 include:
 - Background: MW-4, MW-5, MW-9, and MW-14
 - Downgradient: MW-11, MW-12, MW-15, and MW-16

All monitoring wells viewed during the inspection were locked.

5. Leachate recirculation is by either surface application (primary method of recirculation) or by a 4" pipe buried in the solid waste in Phase 1. All recirculation is performed in general accordance with the SDP Permit. The annual pressure testing of the leachate recirculation force main for 2023 required by this Special Provision was completed during May of 2023. Annual testing for 2024 has not been completed to date.
6. Quarterly gas monitoring is conducted by either landfill staff or HLW personnel. Gas monitoring results will be included in the AWQR.
7. Yard waste is not typically received at the site.
8. Topcoat or Concover are approved in the SDP Permit for use as alternative daily cover (ADC).
9. Tires are accepted, stored, and recycled in general accordance with the permit. The tires are stored in a building – the tire storage area was reviewed and was neat and orderly.
10. White goods are accepted, stored, and recycled in general accordance with the permit. The white goods are stored in a building. When numbers warrant the white goods are picked up by a recycler to be demanufactured. The white goods storage area was reviewed – the storage area was empty. Mr. Fox indicated that the appliances had been removed by the demanufacturer on April 10, 2024.

The small quantities of scrap metal collected are temporarily stored outside and recycled through a local scrap dealer. Mr. Fox indicated that the scrap metal had been removed by the recycler on April 10, 2024.

11. Lead acid batteries are accepted, stored, and recycled in general accordance with the permit. Batteries are stored in the HHM building.
12. Pallets received on site are currently landfilled.
13. Farm pesticide containers are accepted, stored, and recycled in general accordance with the permit. The storage area was reviewed – the storage area was empty.
14. Petroleum contaminated soil is accepted and directly buried in accordance with the permit.
15. An updated ERRAP was included in Appendix 2 of Section E of the 2021 Municipal Solid Waste Permit Renewal.
16. The landfill will be closed in general accordance with the Closure and Post Closure Plan (CPCP) included in Section I of the 2021 Municipal Solid Waste Permit Renewal.

Special Provisions (Closed Landfill – Original Landfilling Area)

1. The thirty-year post closure period began on December 29, 2008.
2. The Original Landfilling Area will be maintained in general accordance with the Closure and Post Closure Plan (CPCP) included in Section I of the 2021 Municipal Solid Waste Permit Renewal.
3. There will be no waste disposal, recycling, composting or other related landfill activities on the closed site.
4. The sampling points for the Original Landfilling Area include:
 - Background: MW-4, MW-5, MW-9, and MW-14
 - Downgradient: MW-2, MW-3, MW-6, and MW-7

All monitoring wells viewed during the inspection were locked.

5. Formal inspections of the Original Landfilling Area are completed semi-annually, with a report submitted to IDNR that includes a summary of site conditions and recommendations for corrective actions. Landfill staff also review conditions in the Original Landfilling Area as needed.
6. The diversion and drainage systems are being maintained and are in good shape. Due to recent rains there was some surface water flow associated with the terrace system during the inspection but no evidence of long term ponding was noted.
7. The vegetation on the cap is generally in good condition. Portions of the cap were mowed in 2023. Staff spot mows the Original Landfilling Area on a regular basis to control weeds and tree growth. The saplings previously noted on the northeast corner of the cap were not noted during this inspection.
8. Several areas of stressed vegetation were located on the closed landfill cap. The most significant were noted in the middle of the slope on the northwest corner and in the middle of the cap near the 4x4 GPS post. The stressed vegetation was most likely caused by a combination of landfill gas and the drought conditions the site experienced over the past two growing seasons. These areas should be monitored during future inspections.
9. The erosion rill noted during the Spring, 2022 inspection below the lowest terrace on the south side of the site midway between MW-5 and MW-6 was repaired in 2022 and appears to have been active again in early 2024. A smaller rill was noted about 30 feet west of the primary rill. There appears to be evidence of animal burrowing that may facilitate rills in the terrace. Mr. Fox reported that these areas would be repaired when conditions allow. Vegetation is established on both sides of the rills.

The final cover over the majority of the Original Landfilling Area is in good condition.

10. Quarterly gas monitoring is conducted by either landfill staff or HLW personnel. Gas monitoring includes the four passive gas vents in the Original Landfilling Area. Gas monitoring results will be included in the AWQR.
11. Based on a risk assessment, the Original Landfilling Area does not require a leachate control plan.
12. The permit holder is conditionally exempt from providing a leachate collection system for the Original Landfilling Area. However, a retrofit leachate collection system was installed in 2004 to control an intermittent leachate seep located at the east end of the landfill.
13. An updated ERRAP was included in Appendix 2 of Section E of the 2021 Municipal Solid Waste Permit Renewal.

Based on observations during the inspection, along with discussions with Landfill personnel, it appears that the facility is operating in general conformance with the permit.

Stormwater Pollution Prevention Plan

Annual sampling of stormwater is required in accordance with the NPDES General Permit No. 1 for the FMC SLF (expires 3/10/28). The annual stormwater sample for 2023 required by the General Permit was collected on July 13, 2023. The 2024 sample has not been collected to date. Due to the completion of Phase 3, staff updated the Stormwater Pollution Prevention Plan (SWPPP) in 2019. The figures for the SWPPP were updated in 2019 as well. The annual stormwater inspection required by the SWPPP will be conducted during the Fall, 2024 semi-annual inspection.

Vegetation on the intermediate cover in Phases 1 and 2 appeared to be in good condition. Some bare areas were noted on the intermediate cover in Phase 3.

Staff has nearly completed removal of accumulated sediment/vegetation from the perimeter ditch south of Phases 1, 2, and 3 and west of Phase 3 to improve flow and eliminate stagnant water in this ditch.

Spill Prevention, Control, and Countermeasures Plan

Due to the amount of petroleum products stored on site, the FMC SLF operates under a Spill Prevention, Control, and Countermeasures Plan (SPCC). It appears that all petroleum products are being stored as designated in the SPCC. Oil dry is available on site.

The exterior of the tanks and secondary containment systems will be observed during the Fall, 2024 semi-annual inspection to meet the requirements of the SPCC. Forms documenting the visual inspections will be completed and provided to the landfill staff at that time.

Alternative Daily Cover Guidance Document

The SDP Permit for the Floyd-Mitchell-Chickasaw Counties SLF does not contain approvals to utilize any materials as Alternative Daily Cover (ADC) with the exception of spray on cover. As a result, a response to the ADC guidance document was not required.

Additional Comments

At the time of the inspection the waste disposal area was located in the northern portion of Phase 3. The landfill compactor was in use during the inspection. Daily and intermediate cover appeared adequate. Surface water ponding was not noted in the active area during the active rainfall periods.

Litter fences are present on the north, south, and west perimeter of Phase 3. Portable litter fences are also utilized where appropriate. Eleven portable litter fences were in place in the active area during the inspection. There was some litter noted away from the working face - the majority of the litter was either tracked into the cover or being contained by the litter fences or on-site vegetation. No litter was noted off site during the inspection. The Office Manager maintains the litter log.

Documentation of load inspections is maintained by the Office Manager on the scale house computer.

Construction of the customer drop-off area has been completed and customers are actively using the drop-off area. Current plans call for the approach and the customer drop-off area to be paved with concrete in 2024.

IDNR Field Office #2 inspected the landfill on October 18, 2023. The report noted that “No violations or deficiencies were documented at the time of the inspection.”

IDNR Field Office #2 conducted an NPDES General Permit #1 Storm Water inspection on October 18, 2023. The reported noted that the landfill was “in substantial compliance with National Pollution Discharge Elimination System General Permit #1 at the time of the inspection.”

Leachate lines were cleaned November 6, 2023. As per the 3 year cleaning frequency required by IDNR, the lines should be cleaned again in 2026.

Staff reviews the Emergency Response and Remedial Action Plan, the Storm Water Pollution Prevention Plan, and the Development and Operations Plan on an annual basis. Records of the staff reviews are maintained on site.

All access roads on site were in good condition, well graded and free of depressions and ruts. The primary access road from the scale to the working area was paved in 2021.

The HHM RCC license expires on November 1, 2028.

Recommendations

1. Repair the rills in the terrace on the south side of the closed landfill in 2024 as weather conditions allow.
2. Complete the annual pressure testing of the leachate force main required by the SDP Permit.
3. Collect the annual stormwater sample required by the General Permit.
4. Continue to seed bare areas of intermediate cover.
5. Continue to remove/mow tree saplings from landfill cap.
6. Continue to retrieve windblown litter as needed.
7. Continue to monitor vegetation and bare areas on the landfill cap in Original Landfilling Area and intermediate cover in the Active Area and repair any deficiencies as necessary.



cc: Christian Fox, Director FMC Landfill (electronic copy)