

March 26, 2024

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



**RE: SEMI-ANNUAL INSPECTION – SPRING, 2024
AMES/STORY ENVIRONMENTAL LANDFILL
IDNR PERMIT NO. 85-SDP-13-91
HLW P.N. 6004-24A.750**

Dear Mr. Rath:

In accordance with Special Provision X.11.a of the Closure Permit, a semi-annual inspection of the Ames/Story Environmental Landfill (ASEL) was personally conducted the afternoon of March 12, 2024. The results were discussed with Bill Fedeler, ASEL, on March 25, 2024. Weather conditions at the time of the inspection were overcast with light winds and temperatures in the 60's.

The site stopped receiving waste on June 30, 2011. Waste is directed to the Ames Resource Recovery Plant or the Boone County Sanitary Landfill for disposal. A sign has been posted on the front gate listing the phone numbers for each of these facilities.

Status of the Permit

Closure of the site in accordance with the Closure/Postclosure Plan was completed in 2011. The Closure Permit for the Ames/Story Environmental Landfill was issued on April 25, 2012 and expires on April 25, 2042. The site has received the following permit amendments to date:

- Permit Amendment #1, July 8, 2014, authorized the use of historical data from MW-22 and MW-27 in the calculation of control limits.
- Permit Amendment #2, February 26, 2015, revised the HMSP and included a revised Special Provision #5a of the closure permit. Permit Amendment #2 also incorporated the construction documentation for LPZ-5R into the permit.
- Permit Amendment #3, August 4, 2015, revised the HMSP and included a revised Special Provision #5a of the closure permit.
- Permit Amendment #4, September 14, 2015, revised the sampling requirements by adding parameters for each well in the HMSP during one 2015 sampling event. The fall 2015 sampling event occurred prior to this amendment so the requirements were carried over into Permit Amendment #5.
- Permit Amendment #5, October 12, 2015, revised the sampling requirements by adding parameters for each well in the HMSP during one 2016 sampling event. This sampling was completed on March 11, 2016.

- Permit Amendment #6, January 6, 2016, incorporated the construction documentation for LPZ-T4-1 into the permit.
- Permit Amendment #7, February 18, 2019, approved the following:
 - Removal of MW-38, MW-41, and MW-42 from the HMSP.
 - Removal of the supplemental analytic parameters barium, cobalt, lithium, manganese, strontium, and vanadium from the monitored constituent list.
- Permit Revision #1, June 30, 2023. Incorporated Permit Amendments #1-#7 into the permit and also included the following:
 - Incorporated construction documentation for LPZ-T6-1R (Doc #107015).
 - Renamed the leachate piezometers.
 - Incorporated the waiver for reducing the sampling frequency of background wells.
 - Reduced the sampling frequency of TOX and phenols.

Annual Water Quality Report

The 2023 Annual Water Quality Report (AWQR) was submitted to IDNR on November 28, 2023 (Doc #108279). Comments on the 2023 AWQR have not been received to date.

Monthly Inspections

As required in Special Provision X.11.a of the Closure Permit, monthly inspections of the site were completed from January, 2012 (prior to the issuance of the Closure Permit) through the Fall, 2013 inspection. IDNR eliminated the monthly inspection requirement in the letter dated October 9, 2013.

General Conditions

The front gate was locked. No litter or debris associated with historic landfilling activities was noted at the front gate or anywhere on the site.

Fencing, concrete barriers, drainage ditches, and a creek exist on the perimeter of the landfill to help control access. The south end of the landfill property borders a private drive which is used to access the closed City of Ames Landfill and a police shooting range. A 4' chain link fence borders this drive to restrict site access. There were no signs of trespassing noted anywhere on the site during this inspection.

The closure cap was seeded and had silt fence installed upon completion. These activities are documented in the Quality Control and Assurance Report for the 2011 Closure submitted December 6, 2011 (Doc #67824).

The seeding on the south half of the site developed excellent coverage relatively quickly. As a result of the vegetation, there was minimal erosion noted on the south half of the site and the silt fence was removed prior to the Fall, 2017 inspection. One small bare area in the center of the south slope had topsoil added and was seeded in 2021 and vegetation is established on the majority of this area.

The original seeding on the north half had poor survival; however, vegetation on the north half of the site continues to improve. The improvements are the result of numerous maintenance activities that were completed on the north half of the site. The following repairs on the north half of the site have been documented in past inspection reports:

- August, 2012. Removed accumulated sediment from the silt fence and repaired erosion.
- May, 2013. Removed accumulated sediment from the silt fence and repaired erosion, repaired silt fence, installed additional silt fence, reseeded majority of the north half of the site.
- September, 2013. Removed accumulated sediment from the silt fence and repaired erosion.
- September, 2014. Removed accumulated sediment from the silt fence and repaired erosion, repaired silt fence, installed additional silt fence.
- October, 2014. Reseeded disturbed areas on the north half of the site.
- Spring, 2015. Removed accumulated sediment from the silt fence and repaired erosion, repaired silt fence, installed additional silt fence, reseeded disturbed areas on the north half of the site.
- April, 2016. Removed accumulated sediment from the silt fence and repaired erosion, repaired silt fence, installed additional silt fence, reseeded disturbed areas on the north half of the site. Also reseeded a bare area on the south half of the site.
- Summer, 2018. Removed silt fence.
- Summer, 2021. Reseeded bare areas on the north half of the site (2 areas).

Vegetation is in excellent condition on the majority of the north half with the exception of a few areas where thin vegetation was noted during this inspection. The approximate location of these areas are shown on the attached figure. The areas do not appear to have changed appreciably over those noted during past inspections and may possibly start to fill back in if normal precipitation patterns return in 2024.

No erosion was noted on cap with the exception of near LPZ-T2-1 (note the location of the erosion was inadvertently referred to as adjacent to LPZ-T1-1 in the Fall, 2023 inspection report). A rill has formed near LPZ-T2-1; however, the rill is well vegetated and based on the condition of vegetation in this area, the rill does not appear to be active. No waste is exposed in the rill. The approximate location of the vegetated rill is shown on the attached figure.

An access road was constructed along the northeast perimeter of the landfill to improve the efficiency of the leachate pipe cleaning. Surfacing has been added to the access road – erosion of the surfacing was noted during the Fall, 2023 inspection and was repaired last fall. Documentation of the repair was submitted to IDNR in an email dated November 7, 2023 (Doc #108189). No erosion was noted on the access road during this inspection.

Regular tree removal from the cap continues. Small trees were removed from the east, north, and west slopes on the north half of the landfill during this inspection; however, additional small trees remain, primarily on the west slope of the north half of the site, that require removal. Mr. Fedeler indicated that the trees would be removed by the end of June.

No leachate seeps were noted during this inspection.

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No ponded water was noted during this inspection.

The groundwater diversion system outlet was observed. There was minimal flow (less than 1 gpm) noted at the outlet at the northeast corner of Trench 4 during this inspection. The stream bank in this area was stabilized to protect the groundwater diversion outlet in 2012, 2016, and 2020. No additional erosion has been noted in this location since the last repair and the stabilization continues to protect the groundwater diversion system outlet. The groundwater diversion outlet for Trenches 5 and 6 (formerly SW-6) was connected to the leachate collection system on January 31, 2012. The Construction Certification Report dated February 7, 2012 (Doc #68508) documenting the connection is referenced in Special Provision X.4 of the Closure Permit.

Financial Assurance

A request was emailed to the IDNR on March 22, 2024 (Doc #105980) to extend the 2024 Financial Assurance submission deadline to May 31, 2024. IDNR approved the extension on March 25, 2024.

Monitoring Well Maintenance Performance Reevaluation Plan

The most recent Monitoring Well Maintenance Performance Reevaluation Plan (MWMPPR) was submitted to IDNR for review on March 31, 2020 (Doc #97357). The report recommended bentonite removal from MW-34 – the bentonite removal was completed on June 16, 2020. As per IDNR Regulations, the MWMPPR is required every 5 years.

Streambank erosion was previously noted near MW-35. The monitoring well was visited during this inspection - the erosion is not threatening the integrity of the well at this time but should continue to be monitored during future inspections and groundwater sampling events.

All monitoring wells observed during the inspection were locked.

Other Topics

In response to elevated leachate measurements in LPZ-T5-1R leachate piping was cleaned in January/February, 2020, November, 2020, May, 2021, November, 2021, November, 2022, and October, 2023. The IDNR letter dated January 12, 2022 (Doc #102010) recommended annual leachate line cleaning “for the next two years in Trench 5”. Due to the consistency of the measurements in the leachate piezometers the 2023 AWQR contained the following recommendation:

“The accelerated frequency of leachate line cleaning (in accordance with 114.26(11)“a”(8)) has not improved leachate thickness conditions over the past four (4) years and should return to the standard three (3) year frequency required by rule (114.26(11)“a”(8)).”

The last IDNR Field Office #5 inspection recorded on Document DNA was on April 20, 2020.

Based on observations during the inspection the landfill facility appears to be in general conformance with the Closure Permit.

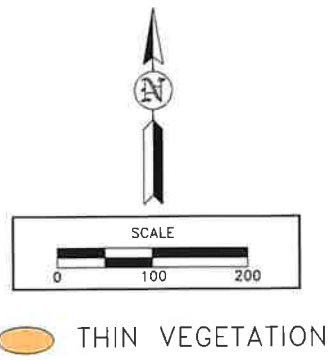
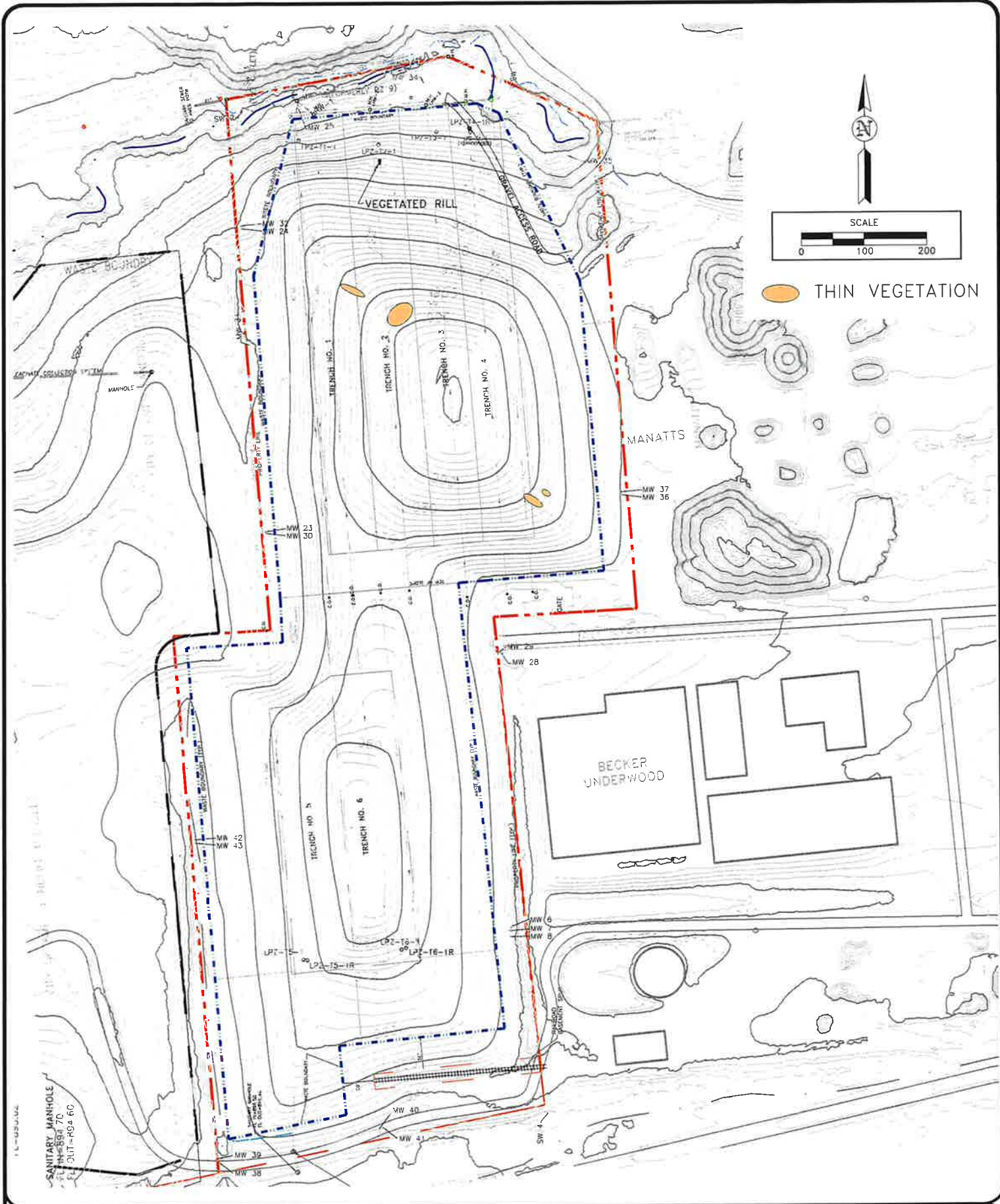
This report is based on observations made at the site at the time of the inspection and the information sources referenced in the report. This report does not reflect typical variations experienced at the site throughout the year or variations in conditions that may be observed at the site at other times.

Recommendations

1. Continue to monitor condition of vegetation, focusing on the areas with thin vegetation noted during this inspection, and reseed and control weeds as necessary.
2. Continue to monitor leachate levels in LPZ-T5-1R and discuss in the 2024 Annual Water Quality Report (AWQR).
3. Monitor the vegetated rill near LPZ-T2-1. Continue to monitor the remainder of the cap for erosion rills and repair as needed.
4. Continue to monitor bank erosion near MW-35 – if erosion appears to threaten the integrity of the well install bank stabilization to protect the MW.
5. Continue to remove trees from landfill cap as needed.



cc: Bill Fedeler, Ames/Story Environmental Landfill



SITE PLAN
 SPRING 2024 INSPECTION
 AMES/STORY ENVIRONMENTAL LANDFILL
 AMES, IOWA

FIGURE:		1
REVISION	NO.	DATE
DRAWN JGH	PROJECT NO. 6004-10A	DATE 3/25/24