

2023 Annual Landfill Inspection

Hoot Lake Plant - Coal Ash Landfill

Prepared for
Otter Tail Power Company
Fergus Falls, Minnesota

December 7, 2023



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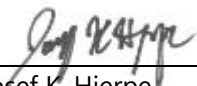
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Certification

I hereby certify that I, or someone under my direct supervision, have examined the Hoot Lake Plant Coal Ash Landfill, and, being familiar with the provisions of 40 CFR 257 Subp. D and standard practices of the industry, I have determined that the Coal Ash Landfill design, construction, operation, and maintenance are consistent with generally accepted good engineering standards.

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature	
Printed Name	<u>Josef K. Hjerpe</u>
Date	<u>12/7/2023</u> License Number <u>57751</u>

1.0 Introduction

Otter Tail Power Company (OTP) operated the Hoot Lake Plant (Hoot Lake) in Fergus Falls, Minnesota. Hoot Lake was a coal-fired electrical generating plant which ceased operation in June 2021. The operation of the facility resulted in coal combustion residuals (CCR) as a by-product, which were disposed of in the Hoot Lake Ash Landfill (landfill). The landfill is subject to Federal Standards for Disposal of Coal Combustion Residuals in Landfills under the Environmental Protection Agency's (EPA) CCR rule 40 CFR Section 257.84(b). Landfill final closure construction was done in 2023 and the Construction Certification Report (Carlson-McCain) was submitted to the Minnesota Pollution Control Agency (MPCA) on November 20, 2023.

The landfill is required to meet the CCR Rule requirements for landfills and is therefore subject to annual inspections by a qualified professional engineer (QPE). This report documents the 2023 annual inspection, as required by the CCR Rule.

2.0 Review of Existing Information

Existing information was reviewed in accordance with CCR Rule 40 CFR Section 257.84(b)(1)(i) to confirm that the design, construction, operation and maintenance of the landfill is consistent with recognized and generally accepted good engineering standards. No deficiencies were found and the existing information reviewed is described in following subsections.

2.1 Results of Weekly Inspections

Weekly landfill inspections (intervals not exceeding seven days) were conducted by a qualified person during December 2022 and January through November 2023. Inspection reports from November 29, 2022, through November 30, 2023, were reviewed as part of the QPE annual inspection. Review of the weekly inspection reports did not identify any potential issues with operation or maintenance of the ash landfill.

2.2 Results of Previous Annual Inspections

The 2022 annual inspection report was reviewed in preparing this 2023 report. The 2022 report did not identify any significant deficiencies at the facility when compared with industry practices, CCR rule requirements, and state permit and rule requirements.

3.0 Structural Integrity and Operational Review

An on-site inspection of Phase II was performed on October 4, 2023, to visually identify signs of distress or malfunction of the CCR Unit. The results of the inspection are included in the following subsections.

3.1 Visual Inspection of Landfill

Inspection consisted of on-foot inspection of the landfill perimeter slopes and final covered areas. Visual inspection items and results are summarized in the following table:

Table 3-1 Summary of Visual Inspection

Item	Visual Inspection Description	Consistent With Good Engineering Standards (Yes/No)	Comments
1	Proper placement of waste	Yes	No waste placement issues observed at time of inspection.
2	Adequate slope stability and erosion control	Yes	All slopes appear adequate for slope stability. No issues were observed at the time of inspection.
3	Run-on and Run-off controls properly functioning	Yes, as noted in the comments	Surface water controls on the slopes appeared adequate at time of inspection. A minor area on the top cap was observed having the potential to pool water. OTP should monitor this area and regrade if water begins to pool. OTP noted that no ponding has been observed on the cap.
4	Surface water percolation minimized	Yes	No surface water ponding or excessive leachate generation observed at time of inspection.
5	Liner systems properly operated and maintained	Yes	No liner systems issues observed at time of inspection.
6	Leachate collection systems properly operated and maintained	Yes	No leachate collection issues observed at time of inspection. Pipes are routinely jetted. Leachate level is maintained at less than 1-foot of head above the liner
7	Water quality monitoring systems maintained and operating	Yes	Existing monitoring wells were accessible and appeared to be in good condition at time of inspection.
8	Dust adequately controlled	Yes	No dust issues present at time of inspection.
9	Geometry of landfill is unchanged from previous inspection.	Yes	The geometry of the landfill is unchanged from 2022.
10	Animal burrows absent or of no significance	Yes	Minor rodent burrows noted at time of inspection. Not considered significant.

Item	Visual Inspection Description	Consistent With Good Engineering Standards (Yes/No)	Comments
11	Adequate vegetation density and vegetation maintenance	Yes	Vegetation appeared well established and well maintained at time of inspection. A remaining portion of the landfill was recently closed and seeded.
12	Debris controlled or absent	Yes	The landfill has now been closed.

3.2 Other Changes

No other changes to the landfill design, maintenance, or operations that could affect the stability or operation of the CCR Unit were observed as part of the annual inspection. Final closure construction of the landfill occurred in 2023.

4.0 Volume of CCR Contained

The last ash hauled to the Phase II Cell 2 landfill was approximately the end of June 2021. No CCR has been placed in the landfill since then or from demolition of the plant. Phase I was closed with final cover prior to the effective date of the rule, and is therefore excluded from the CCR volume reported below. Table 4-1 summarizes the volume of CCR contained in the landfill to-date at the time of the inspection.

Table 4-1 Volume of CCR Contained in Landfill

Phase/Cell	Current Volume of CCR Contained in Landfill (cubic yards)	Status of Phase/Cell
Phase II Cells 1 & 1A	278,796	Closed
Phase II Cell 2	325,453	Closed
Total in CCR Unit	604,249	

The approximate volume of CCR contained in the landfill at the time of the inspection was 604,249 cubic yards.