2025 Annual Surface Impoundment Inspection

Cell 3

Prepared for
Minnkota Power Cooperative, Inc.
Milton R. Young Station

Prepared by
Barr Engineering Co.

January 2026

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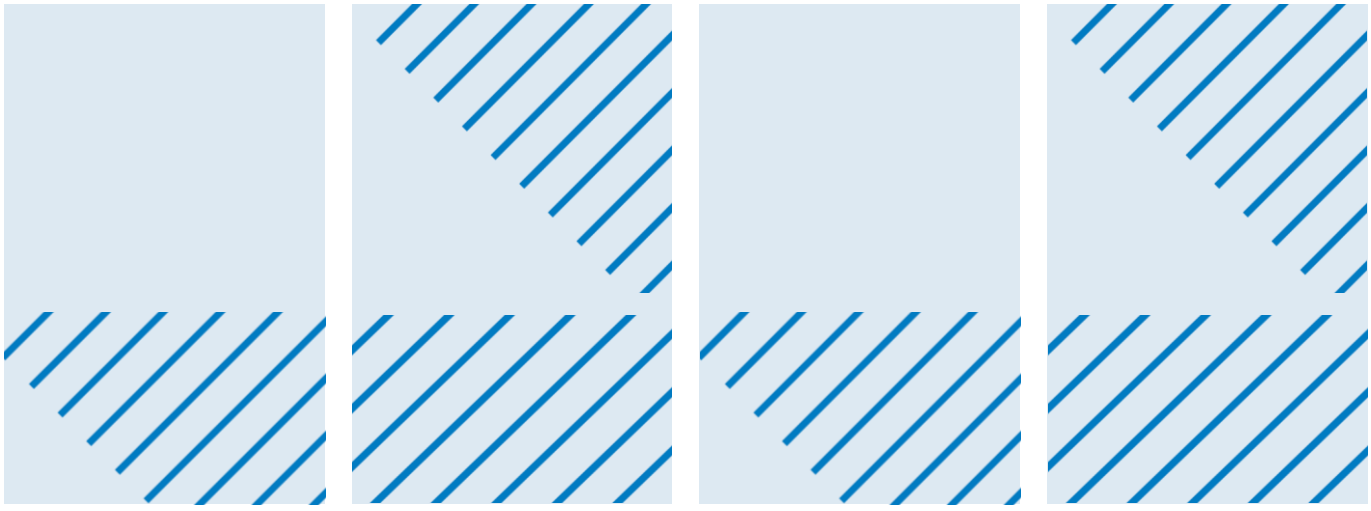
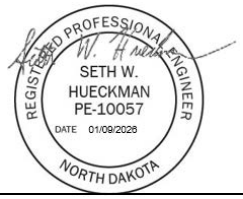


Certification

I hereby certify that I have examined the facility and, being familiar with the provisions of NDAC Title 33.1, Article 20, Chapter 08, attest that this Annual Surface Impoundment Inspection report has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of NDAC 33.1-20-08-05.4.



Seth W. Hueckman
North Dakota Registration Number PE-10057

January 9, 2026
Date

Seth Hueckman

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January 2026

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1 Introduction

Minnkota Power Cooperative, Inc. (MPC) operates the Milton R. Young Station (MRY), near Center, North Dakota. MRY operates two lignite-fired cyclone boilers, resulting in production of coal combustion residuals (CCR). MPC manages CCR generated at MRY in its Coal Combustion Waste Disposal Facility (CCWDF), which is regulated by the North Dakota Department of Environmental Quality (NDDEQ) division of waste management, Permit Number 0159. CCR management is subject to the provisions of North Dakota Administrative Code (NDAC) Title 33.1, Article 20, Chapter 8, these standards will be referred to herein as the CCR Rule. Cell 3 of the CCWDF is considered a CCR surface impoundment. Under NDAC 33.1-20-08-05.4, CCR surface impoundments are subject to annual inspections by a qualified professional engineer (QPE). This report documents the annual inspection performed by Seth W. Hueckman, P.E. on September 22, 2025, as required by the CCR Rule. Other annual inspection duties, including a review of the available information regarding the status and condition of the CCR unit and storage capacity evaluations, were performed prior and following the on-site inspection.

2 Review of Existing Information

A review of existing information was performed to ensure that the design, construction, operation and maintenance of the surface impoundment is consistent with recognized and generally accepted good engineering standards. The existing information reviewed is described in the following subsections.

2.1 Design and Construction

Cell 3 was designed by Barr Engineering Co. (Barr) and was constructed in four phases. Below is a summary of construction events for Cell 3:

- Phase IA (2011)
- Phase IB (2012)
- Phase 2 (2013)
- Phase 3 (initiated in 2015 and completed in 2016)

The following construction documentation reports were reviewed in conjunction with the annual inspection:

- Construction Documentation Report – Cell 3 – Phase IA, Barr Engineering, December 2011
- Construction Documentation Report – Cell 3 – Phase IB, Barr Engineering, December 2012
- Construction Documentation Report – Cell 3 – Phase 2, Barr Engineering, December 2013
- Construction Documentation Report – Cell 3 – Phase 3, Barr Engineering, September 2016

No deficiencies were found.

2.2 Previous Periodic Structural Assessments

The following structural assessments, as required by NDAC 33.1-20-04.3, were prepared by Barr and reviewed as part of this annual inspection:

- Periodic Hazard Potential Classification for Cell 3, Barr Engineering, September 2021
- Periodic Structural Stability Assessment for Milton R. Young Station CCR Surface Impoundment Cell 3, Barr Engineering, September 2021
- Periodic Safety Factor Assessment for Cell 3, Barr Engineering, September 2021

No deficiencies were found.

2.3 Results of Weekly Inspections

Weekly inspection reports from January 6, 2025 through December 29, 2025 were reviewed as part of this annual inspection. No deficiencies were found.

2.4 Results of Monthly Instrumentation Monitoring

The surface impoundment is a clay and geomembrane lined surface impoundment with relatively flat 4.5 horizontal-to-1.0 vertical (4.5h:1.0v) exterior slopes and 2.5h:1.0v interior slopes and, per previously performed slope stability evaluations, acceptable slope stability factors of safety. As a result, the surface impoundment does not have any instrumentation installed in the perimeter embankments and therefore, no results of monthly monitoring were reviewed.

2.5 Results of Previous Annual Inspections

The annual inspection performed in September 2024 documented the following observations:

- No burrows of significance observed. A few burrows were observed near the toe of the Cell 3 west embankment. MPC to monitor and repair, if necessary, in 2025.

3 Structural Integrity Review

An on-site inspection was performed to visually identify signs of distress or malfunction of the CCR unit and appurtenant structures. The results of the inspection are included in the following subsections.

3.1 Visual Inspection of CCR Unit

The surface impoundment was visually inspected for structural weakness. Inspection consisted of on-foot inspection of impoundment embankments, including toe-of-slope, mid-slope, and crest-of-slope of embankments. Visual inspection items and results are summarized in the following table:

Table 1 Summary of Visual Inspection

Item	Structural Weakness Description	Visibly Present/Deficient (Yes/No)	Notes
1	Excessive, turbid, or sediment-laden seepage	No	No seepage present.
2	Signs of piping and other internal erosion	No	No piping present.
3	Transverse, longitudinal, and desiccation cracking	No	No significant cracking present.
4	Slides, bulges, boils, sloughs, scarps, sinkholes, or depressions	No	No structural weaknesses identified.
5	Changes in geometry of impounding structure	No	No geometry changes observed.
6	Damage to liner systems	No	No liner system damage or defects observed at time of inspection.
7	Abnormally high or low pool levels	No	Cell currently being dewatered with minimal surface water present.
8	Animal burrows	No – Except as Noted	No burrows of significance observed. A few burrows were observed near the toe of the Cell 3 west embankment. MPC repaired in 2025.
9	Excessive or lacking vegetative cover	No	Vegetation appeared well established and well maintained. Outer embankments were mowed in 2025 to maintain woody vegetation. Barr recommends this to be continued in 2026.
10	Slope erosion	No	No significant erosion present.
11	Debris	No	No debris of significance present.

3.2 Visual Inspection of Hydraulic Structures

The surface impoundment includes subsurface drainage features to prevent hydraulic pressure build-up in a nearby Hagel coal bed seam wherein if such pressure build-up had occurred and went unchecked during initial liner construction, it potentially could have interfered with liner and embankment construction activities. One drainage feature on the interior slope of the impoundment, consisting of a 6-inch diameter HDPE pipe embedded in drainage aggregate, is of small enough diameter that, even if it failed, would not be expected to have a detrimental impact on performance of the overlying 8-foot thick clay liner and geomembrane liner. An additional drainage feature, consisting of a minimum 4-foot wide by 4-foot tall granular finger drain, was constructed through the embankment and day-lighted at the toe of the exterior slope in areas where the Hagel coal bed seam outcropped within the embankment fill. These drainage features were not designed to be inspected and inspection is not warranted. The surface impoundment does not have any other hydraulic structures underlying the base or passing through the dike and therefore, no visual inspection of hydraulic structures was performed.

3.3 Other Changes

MPC began placing dry CCR on the north side of Cell 3 in 2021 and have continued placing dry CCR through 2025. A portion of the western side of Cell 3 has reached top of waste grades and temporary cover was placed in 2023. No other changes to the surface impoundment design, maintenance, or operations were observed that could affect the stability or operation of the impounding structure.

4 Impoundment Storage Capacity

Cell 3 dewatering was initiated in 2020 and is ongoing. A survey of the impoundment was performed on September 12, 2025, which was used to calculate volumes of CCR contained in the CCR unit and capacity remaining. The following table summarizes the storage capacity of Cell 3 over the last year.

Table 2 Approximate Minimum, Maximum, and Present Depth and Elevation of Impounded Water and CCR

Water Level	Approx. Elevation	Approx. Depth of Impounded CCR and Water	Approx. Volume of Impounded CCR and Water	Approx. Volume of CCR	Design Volume of Cell 3 (To Closure Grades)	Approx. Percentage of Storage Capacity Remaining
Minimum	2080	60 ft	2.76[1] MCY	2.76 MCY	3.40 MCY	19%
Maximum	2080	60 ft	2.76[1] MCY	2.76 MCY	3.40 MCY	19%
Inspection	2080	60 ft	2.76[1] MCY	2.76 MCY	3.40 MCY	19%

Notes:
1) Cell 3 was being dewatered at the time of inspection and little surface water was observed. As a result, water levels are no longer recorded, and the elevations displayed in Table 2 represent the approximate lowest elevation of sluiced CCR in the cell.