

Memorandum

To: Basin Electric Power Cooperative – Antelope Valley Station – CCR Operating Record
From: Seth W. Hueckman, P.E.
Subject: Cell 5 Liner Construction Certification
Date: December 19, 2022
Project: 34/29-1096.01
c: Peter Moch, Kevin Solie

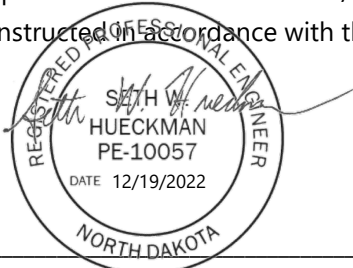
This memorandum certifies construction of the composite liner system at Basin Electric Power Cooperative's Antelope Valley Station's new coal combustion residuals (CCR) landfill Cell 5 in accordance with 40 CFR Part 257 Subpart D and NDAC 33.1-20.

Cell 5 is a new CCR landfill constructed in two phases in 2022. Phase 1 construction included site stripping, embankment construction, and clay liner installation. Phase 2 construction included geomembrane liner installation, piping systems installation, and drainage layer construction. Cell 5 is a composite-lined facility with a compacted clay liner overlain by a 60-mil high density polyethylene (HDPE) geomembrane liner.

The Cell 5 composite liner was substantially completed in October 2022 in accordance with the liner design criteria certified in the "Coal Combustion Residuals – Liner Documentation for Landfill Expansion" document prepared by Barr Engineering (Barr) in May 2022. Cell 5 construction was performed in accordance with the "Construction Quality Assurance Manual," prepared by Barr in April 2021 as required by North Dakota Department of Environmental Quality (NDDEQ) solid waste management facility Permit No. 0160.

Certification:

I hereby certify that I, or my agent, have examined the facility and, being familiar with the provisions of 40 CFR 257 Subpart D and NDAC 33.1-20, attest that this new CCR landfill composite liner was constructed in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR §257.70/NDAC 33.1-20-08-04. I certify that the Cell 5 composite liner system has been constructed in accordance with the requirements of 40 CFR §257.70/NDAC 33.1-20-08-04.



Seth W. Hueckman, P.E.
Barr Engineering Co.
ND Registration Number: PE-10057

Dated this 19th day of December, 2022