



## 2017 Annual Inspection

### *CCR Temporary Storage Pad*

### *Lewis & Clark Station*

Prepared for  
Montana-Dakota Utilities Company

January 2018

# 2017 Annual Inspection

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## Certification

I hereby certify that I have examined the facility and, being familiar with the provisions of 40 CFR 257 Subp. D, attest that the design, construction, operation, and maintenance of the CCR Temporary Storage Pad are consistent with recognized and generally accepted good engineering standards, including consideration of applicable industry standards and the annual inspection and reporting requirements of 40 CFR §257.84.



A handwritten signature in cursive script that reads "Paul T. Swenson".

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Paul T. Swenson  
Barr Engineering Co.  
MT Registration Number 12805PE

Dated this 11<sup>th</sup> day of January 2018

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## 1.0 Introduction

Montana-Dakota Utilities Co. (MDU) operates the Lewis & Clark Station (Lewis & Clark), in Sidney, Montana. MDU operates one coal-fired boiler at Lewis & Clark, resulting in production of coal combustion residuals (CCR). CCR management is subject to Federal Standards for Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments per 40 CFR 257 Subpart D (CCR Rule).

A CCR unit known as the Temporary Storage Pad (TSP) is operated at Lewis & Clark as a temporary storage area for CCR materials. The TSP is required to meet applicable CCR Rule requirements for landfills and is therefore subject to annual inspections by a qualified professional engineer (QPE). This report documents the 2017 annual inspection performed by Paul Swenson, P.E., on August 16, 2017. 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 to and following the on-site inspection.

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## 2.0 Review of Existing Information

A review of existing information was performed to confirm that the design, construction, operation, and maintenance of the TSP is consistent with recognized and generally accepted good engineering standards. No deficiencies were found. Information that was reviewed as part of the inspection is described in following subsections.

### 2.1 Results of Weekly Inspections

MDU continued weekly inspections by a qualified person of the TSP in 2017. Weekly inspection reports from November 15, 2016 through December 31, 2017 were reviewed as part of the annual inspection. The weekly inspection reports did not identify any deficiencies in the design, construction, operation, and maintenance of the TSP.

### 2.2 Results of Previous Annual Inspections

The 2016 annual inspection report was reviewed while preparing the 2017 report. The 2016 report concluded that the design, construction, operation, and maintenance of the TSP are consistent with recognized and generally accepted good engineering standards. The 2016 report did not identify any deficiencies in operations or CCR unit integrity.

## 3.0 Structural Integrity and Operational Review

An on-site inspection was performed on August 16, 2017 to visually identify signs of distress or malfunction of the TSP. Inspection of the TSP consisted of on-foot inspection of perimeter embankments, the active storage pad, and the dedicated load-out area. During the inspection, no appearances of an actual or potential structural weakness of the TSP, or any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the TSP, were observed. Furthermore, no other changes to the design, maintenance, or operations that could affect the stability or operation of the TSP were observed as part of the annual inspection. Visual inspection items and results are summarized in the following table:

**Table 3-1 Summary of Visual Inspection**

<b>Item</b>	<b>Visual Inspection Description</b>	<b>Consistent With Good Engineering Standards (Yes/No)</b>	<b>Notes</b>
1	Proper placement of waste	Yes	No waste placement issues observed at time of inspection.
2	Adequate slope stability and erosion control	Yes	No erosion identified at time of inspection.
3	Run-on and run-off controls properly functioning	Yes	Surface water controls adequately controlled drainage at time of inspection.
4	Surface water percolation minimized	Yes	No surface water ponding observed at time of inspection.
5	Water quality monitoring systems maintained and operating	Yes	Existing monitoring wells were accessible and appeared to be in good condition.
6	Dust adequately controlled	Yes	No dust issues present at time of inspection.
7	Geometry of TSP is unchanged from previous inspection	Yes	No modifications to the geometry since the previous annual inspection.
8	Animal burrows absent or of no significance	Yes	No burrows identified at time of inspection.
9	Adequate vegetation density and vegetation maintenance	NA	Berms have rock cover in lieu of vegetation.
10	Debris controlled or absent	Yes	No debris present at time of inspection.

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## 4.0 Volume of CCR Contained in TSP

Based upon field measurements taken as part of the annual inspection, the estimated volume of CCR contained in the TSP at the time of the inspection is approximately 5,000 cubic yards. The volume of CCR stored at the TSP varies throughout the year as CCR is placed in and removed from the TSP.