

**Coal Combustion Residual
Landfill
Run-On and Run-off Control Plan**

**Basin Electric Power Cooperative
Leland Olds Station
Stanton, ND**

October 2016

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Purpose and Definitions

In accordance with 40 CFR §257.81, the purpose of this Run-on and Run-off Control Plan is to fulfill the requirement for a written plan to document how the run-on and run-off control systems have been designed and constructed at the Basin Electric Power Cooperative (Basin Electric) Leland Olds Station (LOS) Landfill. CCRs generated at LOS (and thus regulated under 40 CFR §257) include bottom ash, flue gas desulfurization (FGD) materials and fly ash.

Leland Olds Station consists of 2 coal fired units generating 669 megawatts (MW) combined. The power plant, owned and operated by Basin Electric Power Cooperative (BEPC), is approximately 4 miles southeast of Stanton, North Dakota. Unit 1 went online in 1966 and Unit 2 in 1975. CCRs from LOS are disposed at the Glenharold Mine Landfill, which is regulated as a special waste disposal landfill by the North Dakota Department of Health (NDDoH).

Landfill Description

The Glenharold Mine Landfill was first permitted for the disposal of CCRs in 1992, with disposal beginning at the facility in late 1992. The landfill is located in an upland area, approximately four miles south and west of the LOS plant site. The landfill was developed in spoils left by the surface mining of the Hagel Lignite Bed in the late 1960s and early 1970s. Partial sequential closure of the landfill has been conducted as areas of the landfill are filled and brought to final grade. To date, approximately 34.44 acres of the 68.09 acre CCR landfill footprint have been closed using an engineered cover system approved by the NDDoH.

The LOS Landfill contains bottom ash, gypsum, and fly ash, which are byproducts of the coal burning process. On a daily average, approximately 1,400 tons of ash and gypsum are generated at LOS. Not all CCRs generated at LOS are managed in the landfill, significant amounts are sold for beneficial use. The moisture-conditioned ash and gypsum are transported by haul truck to the landfill, where they are dumped, spread, and compacted.

Run-On Control Description

No run-on flow onto the active portion of the CCR unit during the peak discharge from a 25-year, 24-hour storm will come in contact with CCRs. All open areas of the landfill are constructed above the surrounding area. As sequential closure of the landfill is completed, the clean water flow is directed away from the landfill and down the slopes to the surrounding landscape.

Run-Off Control Description

The run-off flow from the active portion of the CCR unit collected during a 25-year, 24-hour storm is directed to the landfill sump by sloping the ash in that direction.

The National Oceanic and Atmospheric Administration (NOAA) Atlas shows that a 25-year, 24-hour rainfall event is approximately 3.5 inches. Based on this rainfall event, the size of the sump needs to be a minimum of 10,974 cubic yards to store the run-off captured from the 33.3 acres of captured area. The existing sump was constructed in 2015 with a capacity of approximately 11,098 cubic yards, and is therefore adequate.

Runoff is not discharged into Waters of the United States (WUS) and is thus in compliance with the provisions of §257.81(b).

Certification Statement

I certify that this Run-on and Run-off Control Plan meets the requirements of 40 CFR §257.81 specifying Run-on and Run-off Controls for CCR Landfills in the *Standards of Coal Combustion Residuals in Landfills and Impoundments*.



Maria Tomac, ND PE 5939
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