

# **Coal Combustion Residual Landfill Post-Closure Plan**

**Basin Electric Power Cooperative  
Leland Olds Station**

**Revision 1  
December 2017**

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## Revision History

Revision Number	Description of Revision	Reviser's Name	Revision Date
1	<ul style="list-style-type: none"><li>• Section entitled "CCR Landfill Lateral Expansion" was added to describe recent construction activities associated with CCR landfill.</li><li>• Updated "Inspection, Maintenance and Monitoring Activities" section to include details of leachate collection system associated with landfill lateral expansion.</li></ul>	Kevin L. Solie	December 5, 2017

## Purpose

The purpose of this document is to demonstrate compliance with 40 CFR §257.104 (Post-closure care requirements) which requires the owner or operator of a Coal Combustion Residual (CCR) unit to prepare a written post-closure care plan that describes among other things, post-closure maintenance and monitoring activities, contact information for the CCR facility during the post-closure care period, and the planned uses of the closed CCR unit during the post-closure period.

## Introduction

Leland Olds Station (LOS) is a lignite coal-fired power plant consisting of two units that generate about 669 megawatts (MW) combined. The power plant, owned and operated by Basin Electric Power Cooperative (Basin Electric), is located approximately four miles southeast of Stanton in Mercer County, North Dakota. CCRs from LOS are disposed at the Glenharold Mine Landfill, regulated as special waste landfill 0143 by the North Dakota Department of Health (NDDoH).

## CCR Landfill Lateral Expansion

A lateral expansion of the CCR landfill was approved by the NDDoH and was constructed in 2017. The lateral expansion includes eight future disposal cells encompassing approximately 80.7 acres of lined landfill footprint. The design of the bottom liner, leachate collection system and final cover system for the lateral expansion meets the requirements set forth in 40 CFR Part 257 (CCR Rule). The expansion area is bounded by the existing landfill to the east and perimeter berms on the north, west and south sides. Ancillary features include perimeter ditches, three stormwater ponds, a leachate evaporation pond, soil stockpiles and access roads.

The initial phase of development for the expansion area (constructed in 2017) included Cell 1, which contains approximately 14.9 acres of composite landfill liner. Since the lateral expansion area is underlain by a composite liner system and includes a leachate collection system (LCS), the post-closure care plan must be updated to include inspection, maintenance and monitoring of the LCS.

## Inspection, Maintenance and Monitoring Activities

Following final closure of the CCR unit, post-closure inspection, maintenance and monitoring activities will be conducted for a period of 30 years in accordance with the requirements set forth in 40 CFR §257.104. Inspections of the integrity and function of the final cover system will be carried out at least semi-annually, typically coinciding with semi-annual groundwater monitoring events (discussed below). Additional inspections may be conducted following major storms or other significant events potentially affecting the integrity of the final cover system. Inspections will focus on the overall condition of the final cover, including vegetation, erosion, drainage features, and other site infrastructure as appropriate. Any deficiencies identified during the inspections will be corrected as soon as practicable. Routine post-closure maintenance activities will be completed as needed. These routine activities include, but are not limited to, mowing, noxious weed control, and maintaining access control.

The leachate collection system will be maintained and operated in accordance with the requirements set forth in 40 CFR §257.70 throughout the post-closure care period. Consistent with NDDoH rules and guidance, periodic inspection and maintenance activities for the LCS include semiannual monitoring of leachate elevation and annual flushing of the leachate collection lines to remove dirt and scale.

The groundwater monitoring system will be operated in accordance with 40 CFR §257.90 through 257.98, including semi-annual sampling and analysis for Appendix III and/or Appendix IV parameters as appropriate. Sampling events would typically occur during spring and fall each year. The spring/fall sampling schedule coincides with the beginning and end of the growing season, conveniently linking groundwater sampling to the semi-annual visual inspection of cover system vegetation.

## Post-closure Care Contact Information

The CCR unit is owned and operated by Basin Electric Power Cooperative. The facility contact during the post-closure care period is:

Environmental Director  
Basin Electric Power Cooperative  
1717 East Interstate Avenue  
Bismarck, ND 58503

Phone number: 701.223.0441

## Post-closure Property Use

The CCR unit will be closed with relatively gentle slopes and seeded with shallow-rooted native vegetation, two important factors that help minimize the need for future maintenance. The closed landfill will not be used for cultivated crops, heavy grazing or any other use which might disturb the protective vegetative and soil cover. In addition, post-closure property use will not include activities or developments that could be detrimental to surface water management features, groundwater monitoring systems, or other facility infrastructure.

## Recordkeeping and Reporting

A copy of this document will be placed into the facility's operating record in accordance with 40 CFR §257.105 (Recordkeeping Requirements) and will be posted to Basin Electric Power Cooperative's CCR Web site in accordance with 40 CFR §257.107 (Publicly accessible internet site requirements). Notification will be sent to the relevant State Director in accordance with 40 CFR §257.106 (Notification Requirements).

## Certification Statement

I certify that the revised post-closure care plan meets the requirements of 40 CFR §257.104 as specified in the *Standards for the Disposal of Coal Combustion Residuals in Landfills and Impoundments*.



Kevin L. Solie, North Dakota PE-9488

December 5, 2017