

---

# **Coal Combustion Residual Surface Impoundment Liner Documentation**

**Basin Electric Power Cooperative  
Laramie River Station**

**October 2016**

## Table of Contents

Purpose .....	3
Liner Design Documentation.....	3
Recordkeeping and Reporting .....	3
Certification Statement.....	4

## Purpose

The purpose of this document is to demonstrate compliance with 40 CFR §257.71 which requires the owner or operator of an existing Coal Combustion Residual (CCR) surface impoundment to document whether or not such unit was constructed using one of the three prescriptive designs described in 40 CFR §257.71. The three prescriptive designs are: 1) a minimum of two feet of compacted soil with a hydraulic conductivity of no more than  $1 \times 10^{-7}$  cm/sec; 2) a composite liner meeting the requirements of 40 CFR §257.70(b); or 3) an alternative composite liner that meets the requirements of 40 CFR §257.70(c).

## Liner Design Documentation

Basin Electric Power Cooperative's Laramie River Station (LRS) CCR surface impoundments (Bottom Ash Pond 1, Bottom Ash Pond 2, Bottom Ash Pond 3, East Emergency Holding Pond and West Emergency Holding Pond) were designed and constructed using engineering practices current at the time of plant construction (LRS was commissioned in 1980). The interior slopes of Bottom Ash Pond 1 have a PVC liner covered with 12 inches of soil, 6 inches of bentonite, 24 inches of soil over the bentonite and concrete slope protection to protect against wave and ice damage. The interior slopes of Bottom Ash Ponds 2 and 3 have 6 inches of bedding material, 12 inches of cover material and 12 inches of rip rap over the PVC liner. The East and West Emergency Holding Ponds have a 30 mil Hypalon liner protected by 12 inches of gravel filter and 12 inches of rip rap. Accordingly, none of the five LRS CCR surface impoundments were constructed using liner system designs referenced in 40 CFR §257.71.

## 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

In accordance with the requirements of 40 CFR §257.71(b) as specified in the *Standards of Coal Combustion Residuals in Landfills and Impoundments*, I certify the documentation regarding LRS CCR surface impoundment liner design is accurate.



Kevin L. Solie, Wyoming PE-15120

October 14, 2016

