



Memorandum

To: Roger Clarke
From: Jeremy Gacnik
Subject: **Disposal of Coal Combustion Residuals from Electric Utilities
Cover Design Certification**
Date: December 14, 2015
Project: Xcel Energy Black Dog Generating Station

The Environmental Protection Agency (EPA) published a final rule to regulate the disposal of coal combustion residuals (CCR) as solid waste under subtitle D of the Resource Conservation and Recovery Act (RCRA), 40 CFR Parts 257 and 261 (Rule). Three inactive CCR surface impoundments, Ash Ponds 1 through 3, are located at the Black Dog Generating Station in Burnsville, MN. Xcel Energy proposes to close the CCR surface impoundments by leaving CCR in place, per Rule section 257.100. The purpose of this document is to provide written certification to fulfill the notice requirements in 257.100(b)(4) that the design of the cover system meets the requirements defined in 40 CFR 257.100 (b)(3)(i).

The final cover design is a soil material of not less than 24 inches in thickness, or an alternative cover with better performance than a soil cover. Site investigation determined that the natural soils that underlie the impoundments have a permeability of approximately 1×10^{-5} cm/sec. The design for the cover system over the inactive surface impoundments includes at least 18 inches of a soil with a maximum permeability of 1×10^{-5} cm/sec and at least 6 inches of soil that is capable of sustaining native plant growth. The cover system will be constructed to minimize settling and subsidence.

Professional Engineer Certification:

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:  _____

Typed or Printed Name: Jeremy Gacnik

Date: 12/14/15 License Number: 49292