

**Run-on and Run-off Control System Plan**  
**Ash Disposal Facility**  
**Otter Tail Power Company - Big Stone Plant**

**Introduction**

This document presents the Run-on and Run-off Control System Plan for the Ash Disposal Facility (ADA) at the Big Stone Plant located near Big Stone City, South Dakota. The ADA is considered an existing coal combustion residual (CCR) landfill. This document addresses the requirements of 40 CFR §257.81.

**Run-on and Run-off Control System Plan § 257.81(c)**

The ADA is located in a region that has a type II rainfall distribution. According to the National Oceanic and Atmospheric Administration, a 24-hour, 25-year storm event yields 4.5 inches of rainfall for the geographic location of the ADA.

**Run-on**

Run-on is diverted away from the active fill area by perimeter berms on the east and west sides and a dike along the north side. The area south of the landfill is closed and sheds stormwater away from the active area.

**Run-off**

The current open area of the landfill is approximately 28 acres. Stormwater falling within this footprint is captured and contained by a 9-acre ash reclaim pond located on the north side of the active area. A 24-hour, 25-year storm event of 4.5 inches will generate 10.5 acre-feet of stormwater over the footprint of the open landfill area as detailed in the calculation below:

$$(4.5 \text{ inches}) / (12 \text{ inches per foot}) * (28 \text{ acres}) = 10.5 \text{ acre-feet.}$$

A minimum five-foot freeboard is maintained in the ash reclaim pond to ensure ash contact water is retained, for a total storage volume of 45 acre-feet. This volume is adequate to collect and control stormwater from the prescribed storm event.

**Amendment of Run-off and Run-off Control Plan § 257.81(c)(2) and (4)**

If any event or change affects the plan, a modified Run-on Run-off Control Plan will be prepared and included in the facility's operating record and posted on the CCR website. At a minimum, the Run-on Run-off Control Plan will be reviewed and updated every five years beginning with this version of the Run-on Run-off Control Plan.

**Certification § 257.81(c)(5)**

I hereby certify under penalty of law that this report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



John McCain, PE  
License No. 8991

Date: October 17<sup>th</sup>, 2016

