



**Closure Plan**  
**Temporary Storage Area**  
**Otter Tail Power Company - Big Stone Plant**

**INTRODUCTION**

This Closure Plan (Plan) has been written for the Big Stone Plant Temporary Storage Area (TSA) in accordance with 40 CFR 257. This Plan outlines the requirements, procedure and schedule for closure by removal of the TSA.

Temporary storage of Big Stone Plant's boiler slag has been ongoing since the plant first came into operation in 1975. The slag is sluiced to the Slag Pond (SP), then removed and temporarily stockpiled in the TSA to dewater. The TSA is graded to drain back to the SP. Once the dewatering process is complete the slag is either beneficially used or is disposed of in the on-site Ash Disposal Area (ADA).

Boiler slag has traditionally been viewed as an inert material. It is beneficially used in many applications including blasting media (a substitute for sand in sandblasting applications), shingle grit on asphalt shingles and as winter traction control.

To comply with the CCR rule, monitoring wells have been installed around both the TSA and the adjacent SP to establish a shared groundwater monitoring network. This plan details closure of the TSA only. Please see the Slag Pond Closure Plan for details related to SP closure.

**CLOSURE PROCEDURES § 257.102(b)(1)(i)-(ii)**

The TSA will be closed in accordance with §257.102(c). CCR and any CCR-affected liner materials will be removed from the TSA using common earthmoving equipment and will be beneficially used or disposed in the ADA.

A qualified third-party will visually inspect the TSA to ensure all CCR has been removed. Groundwater monitoring will continue until constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit are below the groundwater protection standard established pursuant to §257.95(h) for constituents listed in appendix IV to Part 257. At that point closure of the TSA will be deemed complete. The clean-closed TSA will be restored with topsoil and vegetation or used for new plant facilities.

**QUANTITY OF ASH § 257.102(b)(1)(iv)-(v)**

Temporary storage of slag takes place at this facility. Approximately 80,000 cubic yards of slag is produced per year. This is estimated to be the largest volume of CCR present at any one time.

The TSA is approximately 5.8 acres in size and the entire area will be subject to closure requirements.

**CLOSURE SCHEDULE § 257.102(b)(1)(vi)**

Modifications to plant operations in 2018 create a change of use at the Slag Pond and TSA. Due to the change, CCR sluicing to the Slag Pond will cease after the modifications are complete.

The owner or operator will commence closure activities no later than 30 days after the last known receipt of waste or removing the last amount of CCR from the unit for beneficial use in accordance with §257.102(e)(1)(i). The TSA will be closed by removal of CCR in accordance with §257.102(c) *Closure by removal of CCR*. Completion of closure activities will occur as specified in §257.102(f)(i). See Figure 1 for more details of closure.

**NOTIFICATION OF CLOSURE § 257.102(g)**

A notification of intent (NOI) will be placed in the facility's operating record and CCR website as required by § 257.107(i). The estimated timeframe for closure of the TSA is presented in Figure 1 and is subject to change.

**CERTIFICATION OF FINAL CLOSURE § 257.102(h)**

Upon completion of closure activities, a documentation report will be prepared that stated the unit has been closed in accordance with §257.102(c) and §257.107(i). The report will be signed by an authorized officer of Otter Tail Power Company and a professional engineer licensed in South Dakota, then submitted to the South Dakota Department of Environment and Natural Resources, placed in the facilities operating record and posted on the CCR website within 30 days of completion of closure. The report will contain record drawings, testing data and a description of the construction process with photographs.

**DEED NOTATION § 257.102(i)(4)**

A deed notation is not required as the unit will be closed by removal.

**AMENDMENT OF CLOSURE PLAN § 257.102(b)(3)**

If any event or change affects the plan, an amended Closure Plan will be prepared and submitted to the DENR, will be included in the facility's operating record and posted on the CCR website. This applies to any change in the Operations and Maintenance Plan, facility design, or estimated year of closure. At a minimum, the Closure Plan will be reviewed and updated, if necessary, every two years beginning with this version of the Closure Plan.

**CERTIFICATION § 257.102(b)(4)**

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.



*D. Riggs*  
*July 13, 2018*

**FIGURE 1 – TEMPORARY STORAGE AREA CLOSURE SCHEDULE**

