Written Closure Plan

Valmont Station - Active CCR Impoundments 3A and 3B

Public Service Company of Colorado

October 17, 2016

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1.0 General Information

Valmont Station is located at 1800 North 63rd Street, Boulder, Colorado, approximately 4 miles east of downtown Boulder. Ash Impoundments 3A and 3B are located directly northeast of the Valmont Station Power Plant between three reservoirs. Valmont Station currently operates one coal-fired steam generation unit. The 184-megawatt generator was installed in 1964 and is scheduled to be retired in 2017. Bottom ash is sluiced directly from the boiler bottom to the ash impoundments, which are used to settle the solids and for dewatering. Once dewatered, the bottom ash is excavated from the impoundments and hauled to the on-site Ash Disposal Facility (ADF).

Figure 1 displays a Site Location Map.

Two impoundments are currently in service and are the subject of this Closure Plan. Valmont Station is expected to close in 2017 and closure of the impoundments will be completed within the timeframes described in this plan.

In accordance with 40 Code of Federal Regulations (CFR) 257.102 - Criteria for conducting the closure or retrofit of CCR units - §102(b) *"The owner or operator of a CCR unit must prepare a written closure plan that describes the steps necessary to close the CCR unit at any point during the active life of the CCR unit consistent with recognized and generally accepted engineering practices."*

Specific to closure by removal of coal combustion residuals (CCR), 40 CFR 257.102(C) states, *"An owner or operator may elect to close a CCR unit by removing and decontaminating all areas affected by releases from the CCR unit. CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standards."*

Public Service Company of Colorado intends to close Valmont CCR Impoundments 3A and 3B via removal of CCR, and this Closure Plan fulfills the requirements of the Federal CCR Rule.

2.0 Description of Closure Plan - 257.102(b)(1)(i-iii)

Impoundments 3A and 3B are each approximately 680 feet long, 65 feet wide, and 25 feet deep. The impoundments are located in close proximity to Leggett Reservoir, and are influenced by the local groundwater. Both impoundments have internal outfalls to Leggett Reservoir under Colorado Discharge Permit No.: CO0001112, with effluent limitations for pH, total suspended solids, and oil and grease. The impoundments were constructed using driven steel sheet piling to a depth of approximately 30 feet below surface grade (bsg). The sheet pilings were driven into the native weathered bedrock material, which is the Pierre Shale formation. During construction, fill material was installed in the bottom of each impoundment to help control the stability of the sheet piles against the hydraulic pressure of the nearby reservoir. Based on soil borings, native weathered bedrock is present at 20-25 feet bsg.

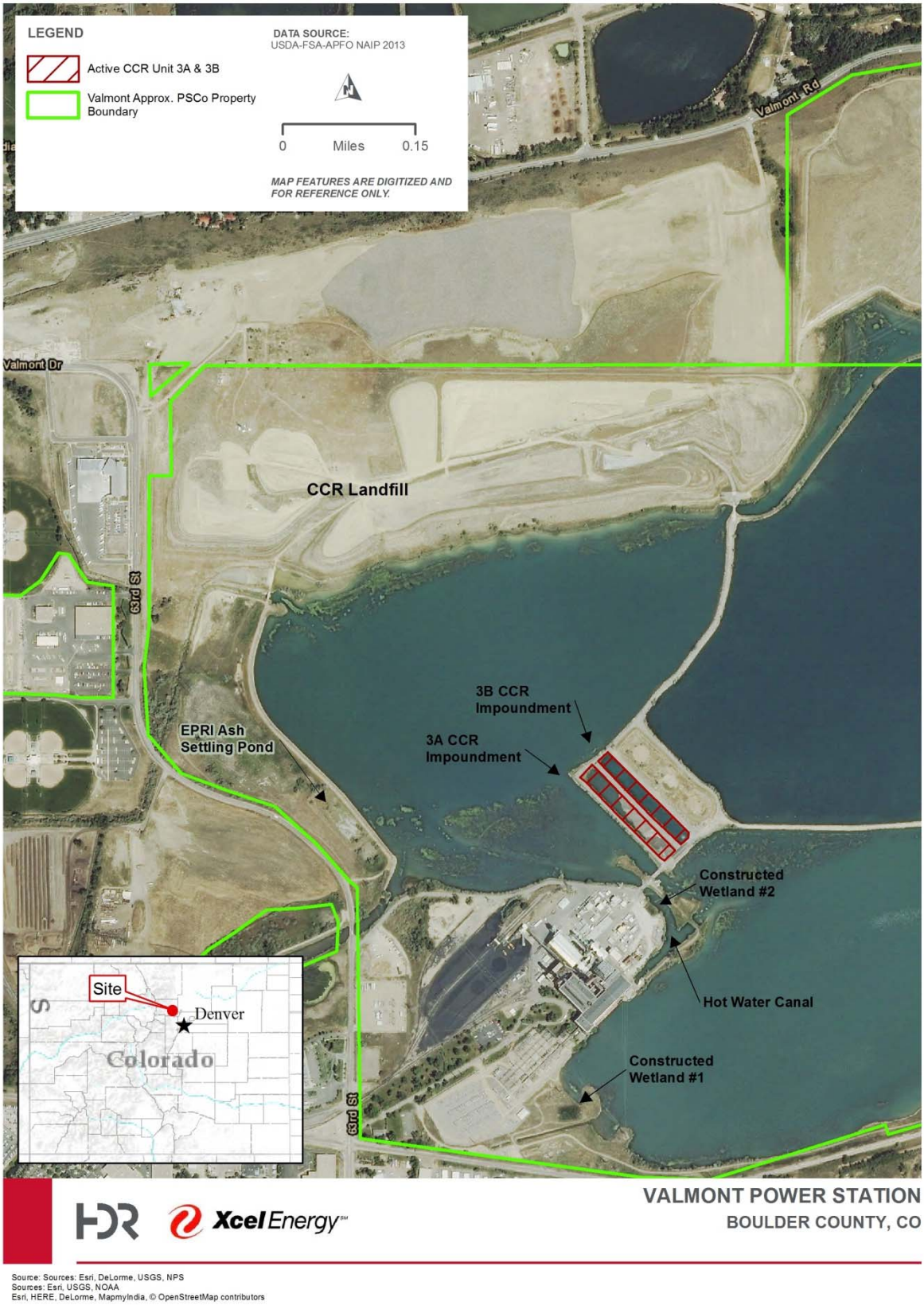

Figure 1. Valmont Power Station

Section 257.102(c) of the CCR rule describes the criteria for closure of a CCR surface impoundment by removal of CCR. The Valmont CCR Impoundments 3A and 3B will be closed pursuant to Section 257.102(c), by removal of the CCR and decontaminating affected media, typically called a “clean closure.”

Prior to removal of CCR, the impoundments will be dewatered, and the water pumped from the impoundments may require additional retention time prior to discharge to Leggett Reservoir. Water from the first impoundment to be closed will be pumped into the other impoundment to allow for settlement of any remaining CCR. Once dewatered, CCR will be excavated from the impoundment and hauled to the on-site ADF for disposal.

Water in the second impoundment to be closed will require an alternate method(s) to provide additional settling/retention time prior to discharge. Methods could include pumping the water into a temporarily lined basin to a filtration system, or other methods to capture the remaining CCR prior to discharging the water to the reservoir. All discharges to Leggett Reservoir will be conducted under Colorado Discharge Permit No. CO0001112 and will comply with all applicable permit limits.

The impoundment sheet piling will remain in place. However, the outfall structures at the northern end of both impoundments will be removed or modified such that both impoundments will be hydraulically connected to the Leggett Reservoir.

Pipelines that are above ground will be removed from around the impoundments. Underground pipelines entering the impoundments will be excavated and removed to 10 feet beyond the exterior limits of each impoundment.

Upon completion of closure activities, a notification of completion of closure will be completed per 257.102(h) and 257.105(i)(8). The notification will document that all requirements and conditions of the Closure Plan were achieved. The report will be signed and sealed by a Colorado registered Professional Engineer.

3.0 Inventory Estimate - 257.102(b)(1)(iv)

In accordance with 40 CFR 257.102(b)(1)(iv), an estimate of the maximum inventory of CCR ever on-site over the active life of the CCR units must be provided.

Historically, the CCR units have accepted approximately 18,000 tons of bottom ash annually or about 18,000 cubic yards (CY). Each impoundment has a maximum volume of approximately 30,000 CY. When one impoundment is full, the facility begins to pump ash slurry to the other impoundment and the full impoundment is dewatered, excavated, and the CCR hauled to the on-site ADF. The maximum amount of bottom ash within the two active impoundments is estimated to be 45,000 CY.

4.0 Area Requiring Final Cover - 257.102(b)1(v)

The need for a final cover is eliminated when the owner closes the CCR unit via the clean closure option and all CCR is removed and confirmed with analytical testing results.

5.0 Schedule of Closure Activities - 257.102(b)1(vi)

Table 1. Schedule of Closure Activities		
Task	**Start Date**	**Finish Date**
Written Closure Plan	October 17, 2016	October 17, 2016
Last Receipt of CCR	On-going	March 31, 2017
Impoundment Closure	April 30, 2017	April 30, 2022

6.0 Certification - 257.102(b)(4)

In accordance with §257.102(b(4), the owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post closure plan meets the requirements of this section.

I, Christopher M. Koehler, being a registered Professional Engineer, in accordance with the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors, do hereby certify to the best of my knowledge, information and belief, that the information contained in this written Closure Plan dated October 17, 2016, was conducted in accordance with the requirements of 40 CFR. § 257.102(b), is true and correct and was prepared in accordance with recognized and generally accepted good engineering practices.

SIGNATURE

Colorado PE 0051359

DATE October 14, 2016