



# Amended Written Closure Plan

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Valmont Station - Active CCR Impoundments 3A  
and 3B

*Public Service Company of Colorado*

October 17, 2016  
Amended January 5, 2018







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## 1.0 General Information

Valmont Station is located at 1800 North 63<sup>rd</sup> 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. The Valmont Station operated one coal-fired steam generation unit. The 166-megawatt coal-fired generator was installed in 1964 and was retired in October of 2017. Bottom ash from the generator was historically sluiced directly from the boiler bottom to the ash impoundments, which were used to settle the solids and for dewatering. Once dewatered, the bottom ash was excavated from the impoundments and hauled to the on-site Ash Disposal Facility (ADF).

**Figure 1** displays a Site Location Map.

Two impoundments that ceased operation in October 2017 along with the coal-fired unit are the subject of this Closure Plan. The closure of these impoundments will be completed within the timeframes described in this amended 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 by 65 feet wide and 20 feet deep. The impoundments are located in close proximity to Leggett Reservoir, and are influenced by adjacent reservoir levels. Both impoundments have 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 25 feet below surface grade (bsg). The sheet pilings were driven to 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 pile walls against the hydraulic pressure of the abutting reservoir. Based on soil borings, native weathered bedrock is present at 20-25 feet bsg.

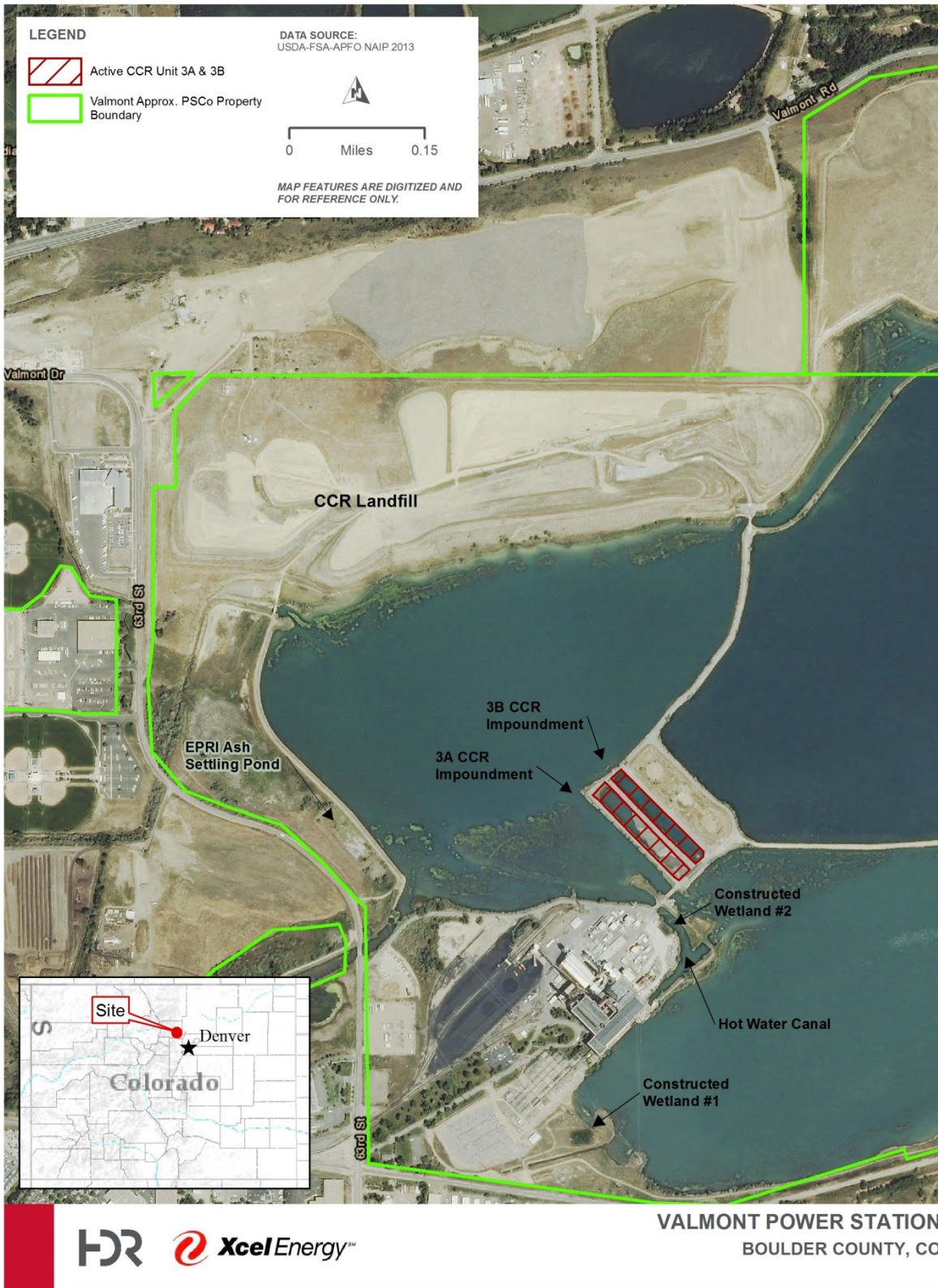


Figure 1. Valmont Power Station



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 surrounding reservoirs water levels will be drawn down. Lowering the reservoir water levels will also result in lowering water levels within Ponds 3A and 3B. Once dewatered and stabilized, CCR will be excavated from the impoundments and hauled to the on-site ADF for disposal.

Any remaining water in the ponds after reservoir draw down will be treated prior to discharge. All discharges to Leggett Reservoir will be conducted under Colorado Discharge Permit No. CO0001112 and will comply with all applicable permit limits.

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
Original Written Closure Plan	October 17, 2016	October 17, 2016
Amended Written Closure	January 5, 2018	January 5, 2018



Plan		
Last Receipt of CCR	On-going	October 2017
Dewatering/Sheet Pile Removal	January 2018	June 2018 (estimated)
Impoundment Closure	July 2018 (estimated)	January 2019 (estimated)

Due to an expected 6-month dewatering schedule, the alternate schedule above was developed.

Colorado Department of Public Health and Environment will be notified a minimum of 30 days prior to initiating reservoir draw down and sheet pile removal. It is estimated that the reservoir draw down and sheet pile removal activities will take 6-months (through June 2018). CCR removal activities will commence once reservoir draw down is complete (July 2018). Closure will be completed within five years following commencement of dewatering and sheet pile removal, which are the first steps in the closure plan.

## 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 and amended January 5, 2018, 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

Amended January 5, 2018