

**FOUR CORNERS POWER PLANT  
CLOSURE PLAN §257.102(b)  
UPPER RETENTION SUMP  
FC\_ClosPlan\_011\_20180724**

**Closure Plan Contents §257.102(b)(1)**

*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 good engineering practices. The written closure plan must include, at a minimum, the information specified in paragraphs (b)(1)(i) through (vi) of this section.*

<b>CLOSURE PLAN AMENDMENTS</b>	
Initial	August 30, 2016
Amendment 1	July 24, 2018 Updated Scope and Schedule for Closure
<b>SITE INFORMATION</b>	
Site Name / Address	Four Corners Power Plant / 691 CR-6100, Fruitland, NM 85416
Owner Name / Address	Arizona Public Service / 400 North 5 <sup>th</sup> Street, Phoenix, AZ 85004
CCR Unit	Upper Retention Sump
Location	36° 41' 14" N, 108° 28' 37.8" W
Reason for Initiating Closure	Replacement with a tank.
Final Cover Type	N/A
Closure Method	Closure by Removal and replacement with a tank.
<b>CLOSURE PLAN DESCRIPTION</b>	
(b)(1)(i) – A narrative description of how the CCR unit will be closed in accordance with this section.	<p>The Upper Retention Sump is an approximately 1-acre surge pond associated with operation of the flue gas desulfurization (FGD) systems for treatment of flue gas from Units 4 and 5. The pond has a soil-cement liner (“operations layer”) on the bottom and side slopes but is classified as “unlined” in accordance with §257.71(a)(3)(i).</p> <p>Following regular clean-out of accumulated coal combustion residuals (CCR) solids, the Upper Retention Sump will be closed by excavating and removing any remaining CCR and the existing soil cement operations layer from the pond bottom and side slopes.</p> <p>A reinforced concrete tank will be constructed at</p>

	<p>the former location, and to replace the function, of the Upper Retention Sump.</p> <p>Figure 1 shows a plan view of the Upper Retention Sump.</p> <p>Closure, CCR removal, and tank construction operations will involve:</p> <ol style="list-style-type: none"> <li>1) Temporarily diverting the current Upper Retention Sump inflows to the Lined Ash Impoundment,</li> <li>2) Demolishing and removing the existing soil cement operations layer, along with any remaining CCR sediments, and placing in the Dry Fly Ash Disposal Area, and</li> <li>3) Constructing a new reinforced concrete tank.</li> </ol> <p>The initial written closure plan was dated August 30, 2016. In accordance with §257.102(b)(3), this amendment to the initial written closure plan provides updated details that reflect the final plan for closure.</p>
<p>(b)(1)(ii) – If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with paragraph (c) of this section.</p>	<p>Applicable. The Upper Retention Sump will be closed by removing the existing CCR in accordance with §257.102(c) and replacing the facility with a reinforced concrete tank.</p> <p>The majority of impounded CCR solids will be removed through regular clean-out activities. Closure-by-removal will commence with demolition and removal of remaining CCR material and the soil cement operations layer using conventional excavators and loaders. The CCR material and operations layer will be removed and transported to the Dry Fly Ash Disposal Area.</p>
<p>(b)(1)(iii) – If closure of the CCR unit will be accomplished by leaving CCR in place, a description of the final cover system, designed in accordance with paragraph (d) of this section, and the methods and procedures to be used to install</p>	<p>Not applicable. The Upper Retention Sump will be closed by removing the existing CCR in accordance with §257.102(c) and replacing the facility with a reinforced concrete tank.</p>

the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in paragraph (d) of this section.	
(c) – 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 standard established pursuant to §257.95(h) for constituents listed in appendix IV to this part.	The Upper Retention Sump will be dewatered and existing CCR will be removed. The existing soil cement operations layer at the base of the pond will serve as the boundary for identification of the extent of CCR wastes. The Upper Retention Sump groundwater monitoring well network will be monitored until groundwater concentrations do not exceed groundwater protection standards for any constituents listed in appendix IV to Part 257.
<b>INVENTORY AND AREA ESTIMATES</b>	
(b)(1)(iv) – An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit.	1.07 acre-feet
(b)(1)(v) – An estimate of the largest area of the CCR unit ever requiring a final cover as required by paragraph (d) of this section at any time during the CCR unit’s active life.	Not applicable. The Upper Retention Sump will be closed by removing the existing CCR in accordance with §257.102(c). A reinforced concrete tank will be constructed in place of the Upper Retention Sump.
<b>CLOSURE SCHEDULE</b>	
(b)(1)(vi) – A schedule for completing all activities necessary to satisfy the closure criteria in this section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps/milestones that will be taken to close the CCR unit, and the estimated timeframes to complete each step or phase of CCR unit closure. If closure timeframe is anticipated to exceed the timeframes specified in paragraph §257.102(f)(1) of this section, the written closure plan must include the site-specific information, factors and considerations that would support any time extension sought under paragraph §257.102(f)(2).	
The milestone and the associated timeframes are based on the current construction schedule. Some of the activities associated with the milestones will overlap.	
Initial Written Closure Plan Completed	August 30, 2016
Permits and Approvals from Agencies	None applicable or required.
Complete Dewatering and Sludge Removal	June 22, 2018
Closure Activities Initiated	June 25, 2018
Begin Construction of Reinforced Concrete Tank	July 2018
Estimated Completion of Closure Construction Activities	October 2018

**Certification Statement 40 CFR § 257.102(b)(4) – Amended Written Closure Plan for a CCR Surface Impoundment**

**CCR Unit: Arizona Public Service; Four Corners Power Plant; Upper Retention Sump**

I, Alexander W. Gourlay, being a Registered Professional Engineer in good standing in the State of New Mexico, do hereby certify, to the best of my knowledge, information, and belief, that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above-referenced CCR Unit, that the information contained in Amendment 1 to the written closure plan, dated July 24, 2018 meets the requirements of 40 CFR § 257.102.

Alexander W. Gourlay

*Printed Name*

July 24, 2018

*Date*



