FOUR CORNERS POWER PLANT
CLOSURE PLAN §257.102(b)
COMBINED WASTE TREATMENT POND (CWTP)
FC_ClosPlan_012_20161017

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.

SITE INFORMATION	
Site Name / Address	Four Corners Power Plant / 691 CR-6100, Fruitland, NM 85416
Owner Name / Address	Arizona Public Service / 400 North 5th Street, Phoenix, AZ 85004
CCR Unit	Combined Waste Treatment Pond (CWTP)
Location	36° 41' 30" N, 108° 28' 28.22" W
Reason for Initiating Closure	Closure as CCR impoundment. Re-purpose as Low Volume Waste Water Pond consistent with expected requirements of Clean Water Act Effluent Limitation Guidelines
Final Cover Type	Not Applicable – Clean Closure
Closure Method	Clean Closure
CLOSURE PLAN DESCRIPTION	
(b)(1)(i) – A narrative description of how the CCR unit will be closed in accordance with this section.	The CWTP is an approximately 13-acre detention pond located adjacent to Morgan Lake. The pond is used as a settling basin for ash-impacted waste water prior to discharge to Morgan Lake through a monitored National Pollutant Discharge Elimination System (NPDES) Internal Outfall 01E permitted discharge point. The major closure construction activities will be: 1) Two stages of CCR removal and decontamination: Stage 1: Mechanical excavation of the bottom ash decant cells located within the CWTP. Stage 2: Hydraulic dredging throughout the CWTP. 2) Re-purpose the CWTP as a low volume

	wastewater pond. The four coal combustion residual (CCR) groundwater monitoring wells surrounding the CWTP will continue to be monitored in accordance with post-closure requirements of the CCR Rule. The CWTP will be clean-closed by hydraulic dredging of CCR material impounded in the pond. Clean closure will facilitate re-purposing the CWTP as a low volume wastewater pond. The hydraulic dredging activities will not utilize a cutter head because the impounded CCR is looser than the underlying consolidated sediment and rock. When the CCR is removed to a level assessed to be equivalent to original ground, the CWTP will be re-purposed to continue receiving waste water from the Plant. The pond will no longer impound significant volumes of CCR. Figure 1 shows a plan view area of the CWTP and the general closure concept for the CWTP. In accordance with §257.102(b)(3), this initial written closure plan will be amended to provide additional details after the final engineering design for the dredging and clean closure of the CWTP is completed. The initial version of the closure plan reflects the information and planning available at the time of issuance.
(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.	Applicable. The CWTP will be closed by removing the existing CCR in accordance with §257.102(c). CCR removal and decontamination will consist of two stages: 1) Mechanical excavation of bottom ash decant cells within the pond. The bottom ash will be removed using conventional excavators and loaders and transported to the Dry Fly Ash Disposal Area. 2) Hydraulic dredging throughout the CWTP. The hydraulic dredge will be operated in a manner to remove existing CCR to *de*

	minimus amounts of CCR. The existing CCR was hydraulically deposited on top of consolidated sediments and therefore successful ash removal would be evidenced by the noticeable change in the visible characteristics of the removed dredged material. The flowrate into the dredge and solids percentage will be monitored to calibrate the rate of dredging for optimum CCR removal and to ensure removal to *de minimus* amounts of CCR.
(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 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.	Not applicable. The CWTP will be closed by removing the existing CCR in accordance with §257.102(c).
(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 CWTP will be clean closed by removing the existing CCR to *de minimus* amounts using dredging techniques. The CWTP monitoring network will be monitored until groundwater concentrations do not exceed groundwater protection standards for any constituents listed in appendix IV to Part 257.
INVENTORY AND AREA ESTIMATES	
(b)(1)(iv) – An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit.	175.5 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 CWTP will be clean closed by removing the existing CCR in accordance with §257.102(c).
CLOSURE SCHEDULE	
(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 initial estimates. Some of the activities associated with the milestones will overlap. Amendments to the milestones and timeframes will be made as more information becomes available.	
Initial Written Closure Plan Completed	By October 17, 2016
Closure Activities Initiated	March 2018
Dredging Complete	April 2018

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

CCR Unit: Arizona Public Service; Four Corners Power Plant; Combined Waste Treatment Pond

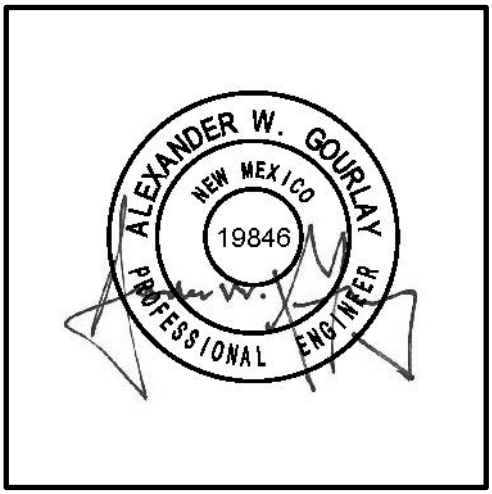
I, Alexander W. Gourlay, being a Registered Professional Engineer in good standing in the State of New Mexico, do hereby certify, to the best of my knowledge, information, and belief, that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above-referenced CCR Unit, that the information contained in the initial written closure plan dated October 17, 2016 meets the requirements of 40 CFR § 257.102.

Alexander W. Gourlay, P.E.

Printed Name

August 30, 2016

Date



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Project Management Initials: Designer: SDU Checked: JBH Approved: AWG ANSI B 11" x 17"

Four Corners Power Plant
Arizona Public Service
Four Corners Power Plant, Fruitland, NM
60492608 Date: 2016-07-15

Four Corners Power Plant
Combined Waste Treatment Pond Closure

AECOM

Figure: 1