FOUR CORNERS POWER PLANT
CLOSURE PLAN §257.102(b)
UPPER RETENTION SUMP
FC_ClosPlan_011_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	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	Clean Closure and replacement with a tank.
CLOSURE PLAN DESCRIPTION	
(b)(1)(i) – A narrative description of how the CCR unit will be closed in accordance with this section.	The Upper Retention Sump is an approximately 1-acre, unlined surge pond associated with operation of the flue gas desulfurization (FGD) systems for treatment of flue gas from Units 4 and 5. The Upper Retention Sump will be clean-closed by excavating the coal combustion residuals (CCR) and the existing soil cement operations layer. A concrete tank will be constructed in place of the Upper Retention Sump to comply with the Rule. Figure 1 shows a plan view of the Upper Retention Sump. Closure, CCR removal, and tank construction operations will involve: 1) Dewatering, 2) Temporarily diverting the current flows from the Upper Retention Sump to the Lined Ash Impoundment, 3) Removing the CCR sediments from the Upper Retention Sump and placing them

	in the Dry Fly Ash Disposal Area, 4) Removing the existing soil cement operations layer for tank subgrade preparation, and 5) Construction of a new reinforced concrete tank. 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 clean closure and concrete tank system 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 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. CCR removal operations will consist of dewatering the existing Upper Retention Sump and removing CCR deposits using conventional excavators and loaders. The CCR material and other construction debris will be removed and transported to the Dry Fly Ash Disposal Area.
(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 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.
(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	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

§257.95(h) for constituents listed in appendix IV to this part.	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.	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.
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
Permits and Approvals from Agencies	July 2017
Closure Activities Initiated	August 2017
Complete Dewatering	October 2017
Estimated Completion of Closure Activities	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; Upper Retention Sump

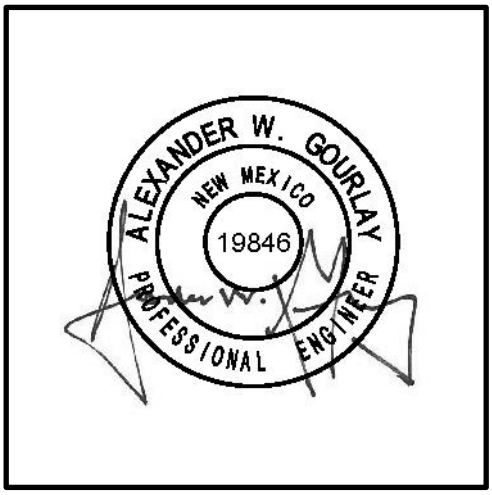
I, Alexander W. Gourlay, being a Registered Professional Engineer in good standing in the State of New Mexico, do hereby certify, to the best of my knowledge, information, and belief, that the information contained in this certification has been prepared in accordance with the accepted practice of engineering. I certify, for the above-referenced CCR Unit, that the information contained in 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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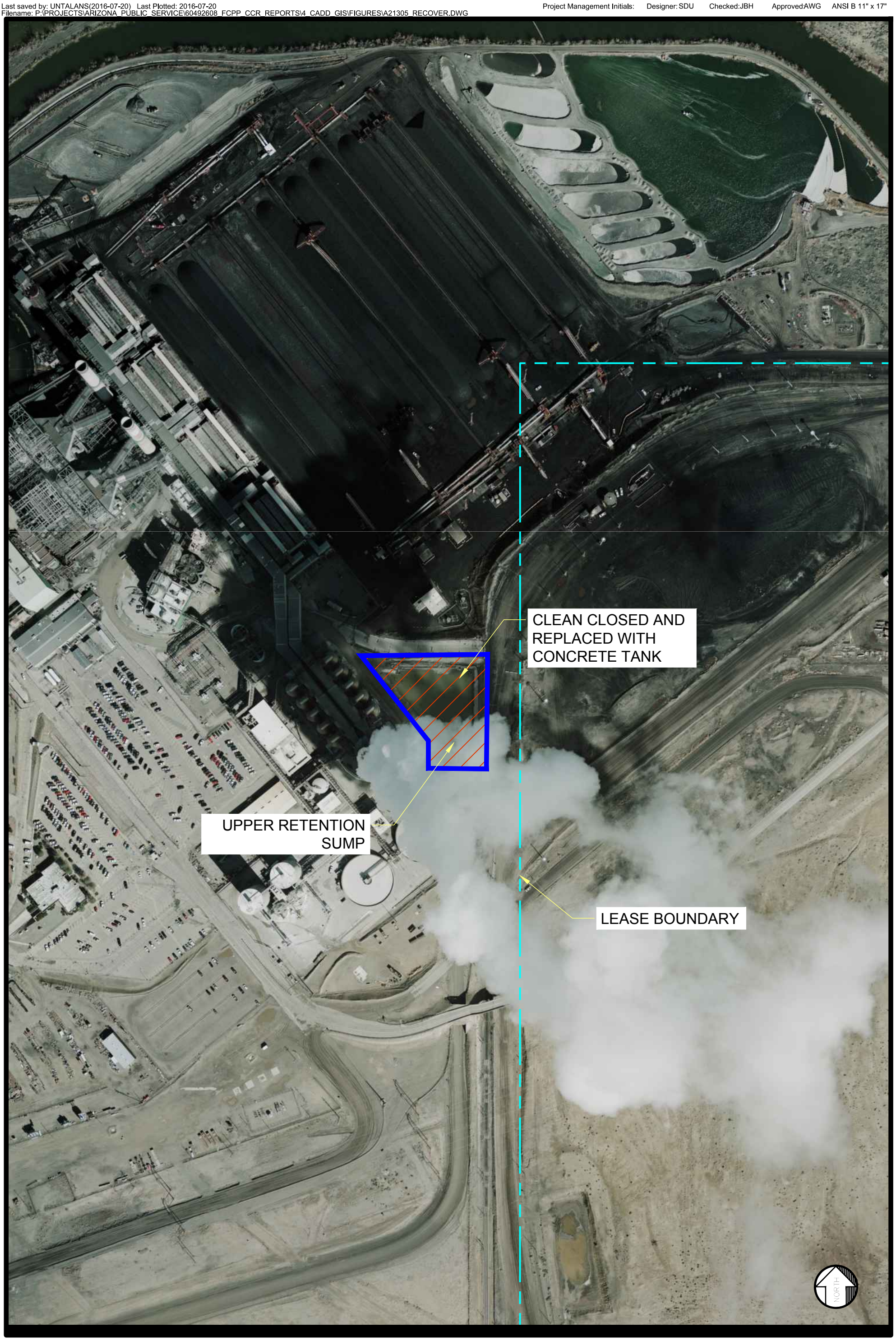
Project Management Initials: Designer: SDU Checked: JBH Approved: AWG ANSI B 11" x 17"



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

Four Corners Power Plant
Upper Retention Sump Closure

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Figure: 1