



Arizona Public Service Company
CCR Program
Environmental Policy & Programs

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May 7, 2020

CCR Program Documentation

Closure – Notification of Intent to Close under Alternative Provisions

CH_ClosAltIntent_002_20200506

CH_ClosAltIntent_003_20200506

Subject: Closure – Notification of Intent to Comply with Alternative Closure Requirements; Fly Ash Pond and Bottom Ash Pond, Cholla Generating Stations

Pursuant to 40 C.F.R. §§ 257.103(b)(1) and 257.103(c)(1), APS is providing notice of its intent to close the Fly Ash Pond and Bottom Ash Pond under alternative closure provisions.

Attached to this notice are documentation of compliance with the provisions of 40 C.F.R. §§ 257.103(b)(1)(i) and (ii) including a demonstration of no alternative capacity and ongoing compliance with the rule requirements. APS further acknowledges the requirements of 257.103(b)(1)(iii) requiring an annual progress report documenting the continued lack of alternative capacity and the progress towards the closure of the coal-fired boiler.

If you have any questions about this or would like additional information, please consult the CCR information webpage located within APS.com or contact neal.brown@aps.com.

Re: Notification of Intent and Demonstration - Site Specific Alternate to Initiation of
Closure Deadline
Arizona Public Service Company - Cholla Power Plant
Bottom Ash Pond and Fly Ash Pond
Joseph City, Arizona

Notice of Intent

In accordance with 40 CFR 257.103(b)(1), APS hereby provides Notice of Intent that it will cease operation of coal-fired boilers at the Cholla Power Plant (Cholla) and will complete closure of specific impoundments no later than October 17, 2028. Under the Regional Haze program, APS is subject to a federally-enforceable obligation to cease coal burning at this facility by no later than April of 2025. *See* 82 Fed. Reg. 15,139 (Mar. 27, 2017).

CERTIFICATION

APS hereby certifies that Cholla Power Plant's operations currently are, and will remain in, compliance with all applicable requirements contained in 40 C.F.R. Part 257, Subpart D, including the requirements to conduct any necessary corrective action. This certification is substantiated by the documentation and supporting materials attached herein. In addition, based on the enclosed demonstration of the absence of on-site and off-site alternative disposal capacity, APS hereby certifies that there is no alternative disposal capacity, both on-site and off-site, as to the Fly-Ash Pond and the Bottom-Ash Pond.



Richard Nicosia
Plant Manager, Cholla Power Plant
Arizona Public Service Company
Joseph City, Arizona

Compliance

A summary of APS's documentation of ongoing compliance is shown below in table format. APS will continue to comply with specific rule requirements for operations, groundwater monitoring, corrective action, closure, recordkeeping, notification, and posting to the internet.

APS has developed an internal CCR Steering Committee including representatives from management, legal, environmental programs, water resources, engineering, Plant operations, communications and information technology programs. These individuals meet on a near monthly basis to assure ongoing compliance with the CCR program, identify upcoming requirements and programmatic needs, coordination of consultants, and scope and scheduling of on-going projects. Additionally, APS has developed comprehensive matrices to track tasks, groundwater monitoring status, document postings, criteria for new construction and criteria for closure planning to assure that no detail of the rule is overlooked. Short and long-range forecasting tools are used to project engineering projects, costs, expenditures and cash flow to assure adequate resources for program needs.

Information is summarized in table format. Existing, published documents are available at:

<https://www.aps.com/en/Utility/Regulatory-and-Legal/Environmental-Compliance>

Key Activities Timeline

Location Restrictions

Existing Rule Date	Citation	Summary	Recordkeeping status
October 2018	§257.60 – Location Restriction	Location Restriction demonstration for five location restriction criteria.	Posted to Operating Record (OR) and web site; Notifications sent

Design Criteria

Existing Rule Date	Citation	Summary	Recordkeeping status
October 2016	§257.71 – Liner Design Criteria	Liner construction details posted to web site.	Posted to OR and web site; Notifications sent

was placed in the operating record (May 2018). The following is a timeline of activities having occurred since that date.

Existing Rule Date	Summary	Recordkeeping Status
Q4 2015 through Q4 2017	Background and detection monitoring; installed GW monitoring system	Operating record (OR), Locus database and annual GW report
Q4 2017	GW system certification and statistical methods certification	GW System Certification report GW Statistical Methods Selection
Q1 2018	Annual GW Report; Annual PE Inspection	Posted to OR and web
Q1 2018	Statistical analysis of data; completion of statistical analysis for App III constituents	OR and annual GW report
Q1 and Q2 2018	Notification of triggering Assessment Monitoring: ASDs initiated (Feb and May due to ASD analysis); Detection monitoring on a semi-annual basis; Assessment for all APP IV annually; and Assessment for APP IV detections semi-annually	Posted Notification of triggering assessment monitoring
Q4 2018	Notification of SSI's above GPLs; installation of wells for characterization; As, Co, F, Li and Mo at FAP; Co, Li at BAP	Notification of Appendix IV exceedance placed in OR and posted to web
Q4 2018	Add'l downgradient monitoring wells installed at FAP to assist in characterization of natural and extended F conditions	See 2018 Annual GW report
Q1 2019	Annual GW Report; Annual PE Inspection; Detection monitoring on a semi-annual basis; Assessment for all APP IV annually; and Assessment for APP IV detections semi-annually	Posted to OR and web
Q1 2019	ASDs performed for As and Co at FAP; Li at BAP	Details in 2019 annual GW report (published 2020)

	pump and treat methods will require further site characterization, investigation of geology and more complex modeling.	
Q4 2019	Public meeting planning – Public was surveyed to baseline current knowledge regarding Plant and CCRs to gauge public knowledge and to develop proper detail for future communications. Open house format at 2 locations including fliers, radio spot, public notices. Open House to include story boards, FAQ sheet, and SME's manning boards to go over history, health and environment, corrective measures and future at Cholla Power Plant.	Not yet ready to schedule Open House. Corrective measures assessment identifies gaps in knowledge and challenges for pump and treat methods.
Q1 2020	2019 Annual GW report with semi-annual update on remedy selection; annual PE Inspection; Detection monitoring on a semi-annual basis; Assessment for all APP IV annually; and Assessment for APP IV detections semi-annually; this covered activities competed through 2019	Posted to OR and web
Q1 2020	Impacted property owner notified*	*Due to error in County Assessor's records, USFWS was originally notified of impact in June 2019, however actual property owner was BLM
Q2 2020	File for Alternative Closure requirements for cessation of boilers by date certain	See Attachment C to this document
Q2 2020	Demonstration of no alternative on-site or off-site capacity	See Attachment A to this document
Q2 2020	Risk Analysis	See Attachment B to this document

October 2015	§257.106	Notification requirements – notifications to relevant local, state and federal authorities.	Notifications sent via email with backup to APS server.
October 2015	§257.107	Publicly accessible internet site	APS maintains a publicly accessible internet site with documents, firewall and secure server.
May 2020	§257.103(f)(2)	Notice of intent to use alternative closure requirements	Attached herein; will comply with §257.103(f)(2)(v) through (vii)



ATTACHMENT A

CHOLLA POWER PLANT NO ALTERNATIVE DISPOSAL CAPACITY DEMONSTRATION 40 CFR 257.103(f)(2)(i)(A)

Arizona Public Service Company (APS) currently operates coal steam boiler Units 1, 3, and 4 at the 840-megawatt (MW) Cholla Power Plant located near Joseph City, Arizona. Given recent changes in the affordability of continued coal-based electricity production, Unit 4 (owned by PacifiCorp) will be shut down in December 2020 and Units 1 and 3 (owned by APS) will operate until no later than April 2025.

Coal combustion residuals (CCR) generated at Cholla Power Plant, including bottom ash, fly ash, flue gas desulfurization (FGD) solids, and boiler slag, are managed on-site in three surface impoundments and one landfill (Table A-1) in accordance with applicable requirements of 40 Code of Federal Regulations (CFR) Section (§) 257 (i.e., the CCR Rule). During coal combustion at the plant, bottom ash and fly ash are produced by far in the highest quantity and are slurried with transport water to the 80-acre Bottom Ash Pond (BAP) and 420-acre Fly Ash Pond (FAP), respectively. Lesser quantities of FGD sludge, boiler slag, and uniquely associated wastes have also been discharged to the BAP and FAP over time. The units were placed in service in 1978 and have operated in more or less the same capacity since that time.

Table A-1. Summary Description of Cholla Power Plant CCR Units

CCR Unit	Primary CCR Stored/ Treated/ Disposed of in Unit	Total Storage Capacity [acre ft]	Maximum Normal Operating Pool/Design Maximum Ash Elevation [ft amsl]	Water Level in November 2019 [ft amsl]	Estimated Solids Level Elevation in November 2019 [ft amsl]	Notes
BAP Surface Impoundment	Slurried (Wet) Bottom Ash	2,300	5,118	5,112	5,115 (varies)	Dredged solids from the BAP are landfilled in the BAM
FAP Surface Impoundment	Slurried (Wet) Fly Ash and FGD sludge	18,000	5,114	5,087	5,094 at discharge pipe	---
SEDI Surface Impoundment	Varies	10.7	5,017	5,014 - 5,015	5,015	Dredged solids are periodically slurried to the BAP or FAP; Unit closure planned for October 2020
BAM Landfill	Dredged Bottom Ash Solids	2,417	5,261	NA	5,184 for west capped portion; 5116 for east portion	---

Notes:

amsl – above mean sea level
CCR – coal combustion residuals
ft – feet

Promulgated in 2015, the CCR Rule includes groundwater monitoring to evaluate if operating CCR surface impoundments and landfills are impacting the environment. Based on declarations that one or more of the Appendix IV constituents identified in the CCR Rule are



present at statistically significant levels above Groundwater Protection Levels in groundwater downgradient of the BAP and FAP, these units have transitioned into Corrective Action to address the impacted groundwater. In accordance with the CCR Rule, both units must cease receiving CCR in the near future and 'close for cause' per §257.101(a)(1).

§257.103(b)(1) of the existing rule and §257.103(f)(2) of the proposed Holistic Approach to Closure Part A revision to the rule (i.e., the proposed revision) include an alternative closure provision that allows facilities with impending plans to cease burning coal to continue to receive CCR beyond the timeline identified in §257.101(a)(1) for surface impoundments that are greater than 40 acres in areal extent (like the BAP and FAP) if the coal-fired boilers at the associated plant cease operation and the impoundment is closed no later than October 17, 2028. This alternative closure date is applicable, among other requirements, if a lack of alternative capacity can be demonstrated both on and off-site.

The following sections present APS's demonstration that there is no alternative capacity for CCR storage, treatment, and/or disposal if coal combustion at Cholla Power Plant continues until April 2025 and the BAP and FAP cannot receive CCR after October 31, 2020 (the date identified in §257.101(a)(1)). It is important to note that, for facilities with near-term retirement dates (i.e., pursuant to the current §257.103(b)), the current regulations, and the proposed revision thereto, there is no requirement to develop new onsite disposal capacity to comply with the alternative closure provision because coal-fired boiler operations will cease by a date certain prior to October of 2028. In addition, when considering the availability of alternative disposal capacity for facilities with established near-term retirement dates, the conversion from wet to dry handling of ash and the offsite disposal of liquid-waste CCR need not be considered as feasible alternatives. See 80 Fed. Reg. 21,301, at 21,423 (Apr. 17, 2015).

1. No Alternative Disposal Capacity On-Site

As demonstrated by the site map depicted in Figure A-1, there are only two existing CCR units located on-site that are capable of receiving the quantities of wet-generated bottom ash, wet-generated fly ash, and FGD sludge arising from operation of one or more coal-fired boilers at Cholla Power Plant: the BAP and the FAP. The other two CCR units present at the site are the Sedimentation Pond (SEDI) and the Bottom Ash Monofill (BAM).

The SEDI is a 1.6-acre surface impoundment that processes relatively limited quantities of water from the plant's secondary wastewater treatment facility, the plant's oil/water separator, a vehicle wash system, plant wash down activities, and FGD system upset conditions. The SEDI is appreciably undersized to receive the significant quantities of bottom ash or fly ash generated during coal combustion operations at the plant. Further, since this surface impoundment is unlined, the unit has transitioned to assessment monitoring, and CCR discharges are small enough to efficiently reroute, the SEDI will cease receiving CCR no later than October 2020 and initiate closure no later than 30 days thereafter in accordance with 40 CFR §257.102(e)(1).

The BAM is a 43-acre landfill that receives drained bottom ash dredged from the BAP. For the reasons documented above, the BAM is not considered 'existing capacity' with regards to wet ash because this unit is a landfill and not designed to accommodate wet ash disposal.

Thus, on the basis that the BAP and FAP are the only CCR units on-site that are sized and designed appropriately to receive wet ash and FGD sludge from Cholla Power Plant coal

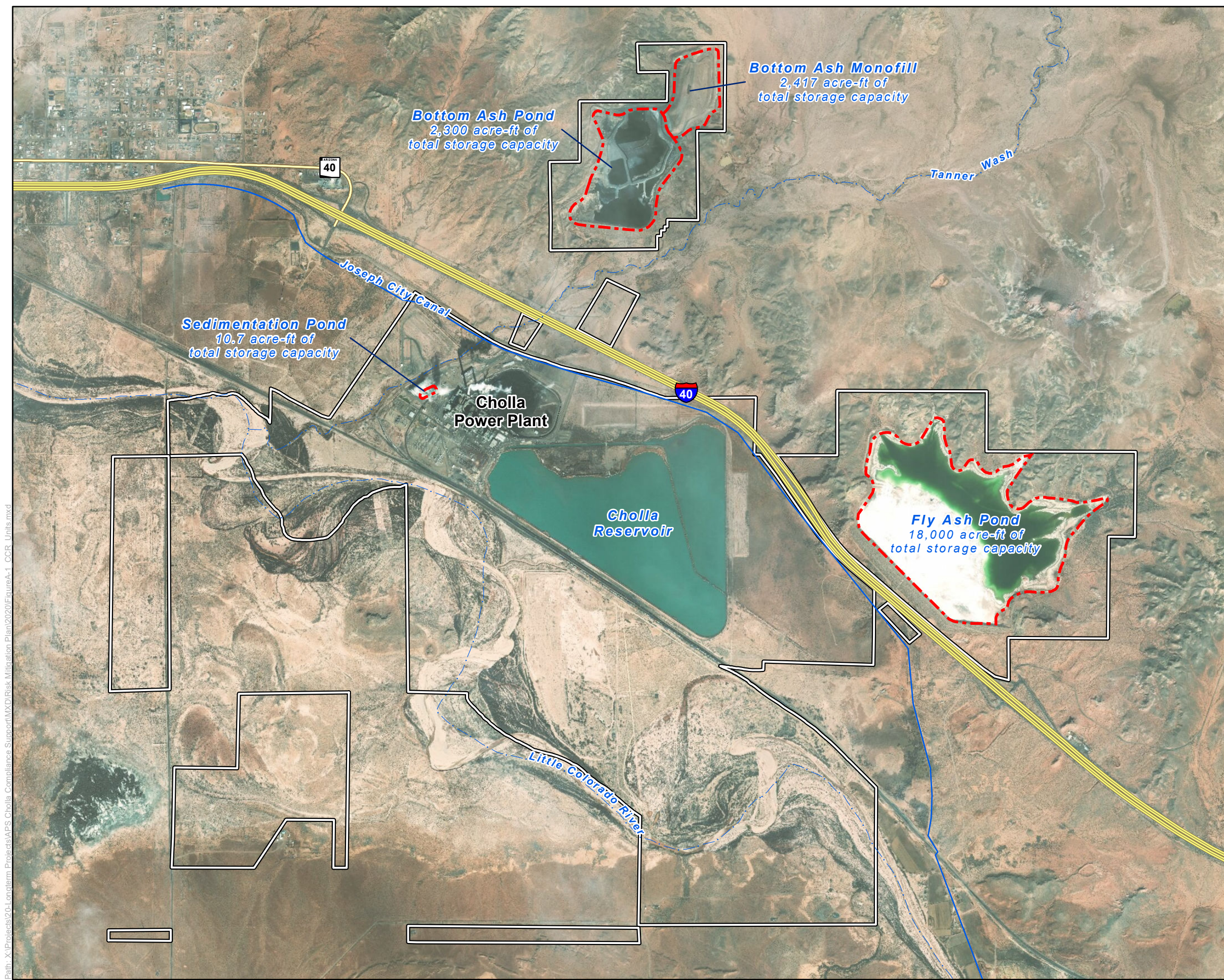


combustion activities, there is no alternative disposal capacity on-site for CCR waste streams if these units must stop receiving CCR by the timeline identified in §257.101(a)(1).

2. No Alternative Disposal Capacity Off-Site

Bottom ash, fly ash, and FGD sludge are high volume, wet-generated CCR waste streams generated at Cholla Power Plant during coal combustion operations. As discussed in the preamble to the CCR Rule, it is not feasible to send wet CCR off-site for disposal. Trucking significant quantities of liquids is impractical and has associated risks to public safety that do not out-weigh the benefit of off-site disposal of CCR. On this basis, there is no alternative capacity off-site for CCR waste streams if the BAP and FAP must stop receiving CCR by the timeline identified in §257.101(a)(1).

Path: X:\Projects\20-Longterm Projects\APS Cholla Compliance Support\MXD\Risk Mitigation Plan\2020\FigureA-1 CCR Units.mxd



Legend

- Ephemeral Surface Water Feature
- Canal
- - - Approximate Extent of CCR Unit
- APS Land Ownership

Notes:

CCR: Coal Combustion Residuals

Parcel Sizes and shapes are approximate

Property Ownership Information Sources:

1. Navajo County Assessor Property Tax Map
2. Arizona State Land Department Land Ownership Shapefiles

0 1,100 2,200
Feet



Arizona Public Service
Cholla Power Plant
Navajo County, Arizona

FIGURE
A-1

Site Map Depicting
CCR Units

Job No. 1420182040
PM: EHL
Date: 4/15/2020
Scale: 1"= 2,200'

wood.

The map shown here has been created with all due and reasonable care and is strictly for use with Wood Environment & Infrastructure Solutions, Inc. Project Number 1420182040. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Wood Environment & Infrastructure Solutions, Inc. assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.