



July 15, 2024

Arizona Public Service Company
400 N. 5th Street
Phoenix, Arizona 85004

**Subject: Semiannual Report Documenting Progress In Remedy Selection
Fly Ash Pond And Bottom Ash Pond
Cholla Power Plant – Navajo County, Arizona**

In accordance with 40 Code of Federal Regulations (CFR) Section (§) 257.97(a) of the Coal Combustion Residuals (CCR) Rule, this Semiannual Remedy Selection Progress Report (Semiannual Report) has been prepared on behalf of Arizona Public Service Company (APS) to document progress in selection of remedies for CCR units which have been identified as potentially impacting groundwater at the APS Cholla Power Plant, located in Navajo County, Arizona (the Site). The identified applicable site CCR units include the Fly Ash Pond (FAP) and the Bottom Ash Pond (BAP). Semiannual progress reporting to support remedy selection began on July 15, 2019. The most recent update was provided in the *Annual Groundwater Monitoring and Corrective Action Report (GMCAR) for 2023*, dated January 31, 2024. This Semiannual Report serves as the eleventh update on remedy selection progress at the Site and documents activities completed to date in 2024.

SUMMARY OF ACTIVITIES COMPLETED IN 2024

Activities completed by APS in the first half of 2024 in support of remedy selection for the FAP and the BAP include the following:

- *Continued Assessment Monitoring at the BAP and FAP* – While corrective action evaluation progresses, assessment monitoring (including analysis of collected samples for Appendix III and Appendix IV constituents) has continued on a semi-annual basis at the BAP and FAP per 40 CFR §257.95(b) and (d)(1).
- *Interim Response Measures at the FAP and BAP*. In tandem with operation of existing seepage collection systems at the FAP and BAP, interim response measures including construction of improvements to make the BAP Seepage Collection Systems operate more effectively continued throughout early 2024 to limit the groundwater impacts from the BAP while remedies are being evaluated and selected.
- *Performance Monitoring of Active Systems* – Average flow rates will continue to be monitored for each active seepage extraction system at the FAP and BAP. Additionally, total removed mass of Appendix IV constituents (minus radionuclides) will be calculated for the active seepage extraction systems at the FAP and BAP during the 2024 reporting year and included in the 2024 GMCAR.
- *Updates to the Numerical Groundwater Model* – The existing numerical groundwater model for the Site used to assist the evaluation and selection of remedies for the FAP and BAP was updated in 2023. In early 2024, the

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modeling procedures and results were documented in a summary report in accordance with industry standards and guidelines and will be included as an appendix to the Remedy Selection Report.

- *Evaluation of FAP Dewatering Strategies.* A pilot-test field program to evaluate the extent and removal of drainable pore water upgradient of the FAP dam has been ongoing since May 2023. Multiple wells have been installed through the ash to the alluvium underlying the FAP with testing performed.
- *Construction of an Evaporation Pond to Receive Groundwater Seepage Flows After Cholla Power Plant Shutdown.* During the first half of 2024, APS completed excavation of the future pond and initiated installation of a liner system.
- *Remedy Selection Reports for the FAP and the BAP.* Preparation of a remedy selection report continued through the beginning of 2024 to document how the selected remedy will meet the requirements of 40 CFR §257.97(b).

FUTURE PLANNED ACTIVITIES

APS plans to perform the following activities in support of remedy selection during the second half of 2024 (and in upcoming years, as noted):

- *Integration of Extraction Wells and Improvements to Intercept Trenches into Seepage Collection System Operations at the BAP.* The installation of extraction wells and improvements to seepage intercept trenches at the BAP will likely be completed in late 2024. Completed activities associated with incorporating the extraction wells and intercept trenches into the system will be documented in the 2024 GMCAR.
- *Continued Operations of Existing FAP and BAP Seepage Collection Systems.* The seepage systems at both the FAP and BAP will continue to serve as part of interim response measures at both CCR units until remedial activities begin. The updated seepage collection systems at both units will also likely be a part of final selected remedies.
- *BAP In-Situ Remedy Pilot Study.* Based on recommendations put forth in the bench-scale evaluation, a pilot-scale study of in-situ strategies for cobalt remediation may be conducted at the BAP. The pilot-scale study would implement testing of groundwater oxidation amendments at near select wells. Implementation and assessment of the pilot-scale study will be evaluated during the second half of 2024 and would likely be part of initial remedial activities for adaptive remedy options in future years.
- *Evaluation of FAP Dewatering Strategies.* A third phase of well installations for dewatering will be initiated during the summer of 2024 to install additional vertical wells into the CCR along the existing alignment of wells from east to west across the FAP impoundment. A horizontal well drilling company will also be conducting work concurrently to drill and install a horizontal well at the bottom of the CCR impoundment to extract porewater. Treatment options for extracted dewatering water will be evaluated concurrently.
- *Construction of an Evaporation Pond to Receive Groundwater Seepage Flows After Cholla Power Plant Shutdown.* The new pond should be complete before the end of 2024.
- *Remedy Selection* – APS will select remedies for the FAP and the BAP that meet the requirements of 40 CFR §257.97(b). Additionally, a remedy selection report will be prepared per 40 CFR §257.97(a).
- *Initiation of Remedial Activities* – Per 40 CFR §257.91(f), APS will begin remedial activities at the FAP and the BAP within 90 days of selecting a remedy for each unit.



Respectfully submitted,

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A handwritten signature in blue ink, appearing to read 'Rebecca Weaver'.

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