



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 24, 2019

Thomas N. Weber
Department Leader, Regulatory Affairs
Arizona Public Service Company
P.O. Box 52034
Phoenix, AZ 85072

SUBJECT: NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF ARIZONA PUBLIC SERVICE COMPANY'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR PALO VERDE NUCLEAR GENERATING STATION'S INDEPENDENT SPENT FUEL STORAGE INSTALLATION

Dear Mr. Weber:

By letter dated December 14, 2012, Arizona Public Service Company (APS) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, an initial decommissioning funding plan (initial DFP) for the independent spent fuel storage installation (ISFSI) at Palo Verde Nuclear Generating Station (PVNGS) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12354A129). By letter dated March 31, 2015, APS submitted, also for NRC staff review and approval, an updated decommissioning funding plan (updated DFP) for the ISFSI at PVNGS (ADAMS Accession No. ML15093A052). In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Sections 72.30(b) and (c) and using NUREG-1757, Vol. 3, Rev. 1, "Consolidated Decommissioning Guidance," the NRC staff reviewed the initial and updated DFPs submitted by APS, including the initial and updated decommissioning cost estimates (DCE) and the method of assuring funds for decommissioning.

Pursuant to 10 CFR 72.30(b), each holder of, or applicant for, a license under Part 72 must submit for NRC review and approval a DFP containing information on how reasonable assurance will be provided that funds will be available to decommission its ISFSI. The DFP must contain a detailed DCE, in an amount reflecting: (1) the cost of an independent contractor to perform all decommissioning activities, (2) an adequate contingency factor, and (3) the cost of meeting the 10 CFR 20.1402 unrestricted use criteria (or the cost of meeting the 10 CFR 20.1403 restricted use criteria, provided the licensee can demonstrate its ability to meet these criteria). The licensee's DFP must also identify and justify using the key assumptions contained in the DCE. Further, the DFP must describe the method of assuring funds for ISFSI decommissioning, including means for adjusting cost estimates and associated funding levels periodically over the life of the ISFSI. Additionally, the DFP must specify the volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination, and contain a certification that financial assurance for ISFSI decommissioning has been provided in the amount of the DCE.

The NRC staff reviewed and analyzed the information submitted by APS in its initial DFP on how reasonable assurance will be provided that funds will be available to decommission the ISFSI, including the amount of the DCE and the method of assuring funds for decommissioning.

In the initial DFP, APS estimated that the total cost to decommission the ISFSI at PVNGS for unrestricted use is \$12.3 million, in 2012 dollars. Based on its analysis of APS's initial DFP, the NRC staff finds that the submitted DCE: is based on reasonable costs of a third party contractor; includes an adequate contingency factor; reflects the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and is based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCE adequately estimated the cost to carry out required ISFSI decommissioning activities prior to license termination, and that the DCE is acceptable.

APS relied on an external sinking fund as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e). The external sinking fund is based on site-specific cost estimates that include estimated ISFSI decommissioning costs. The NRC staff finds that the aggregate dollar amount of the licensee's financial instrument provide adequate financial assurance to cover its cost estimates, and therefore, that this financial instrument is acceptable.

Pursuant to 10 CFR 72.30(c), at the time of license renewal and at intervals not to exceed 3 years, the initial DFP required to be submitted by 10 CFR 72.30(b) must be resubmitted with adjustments as necessary to account for changes in costs and the extent of contamination (updated DFP). The updated DFP must update the information submitted with the original or prior approved plan. In addition, the updated DFP must specifically consider the effect of the following events on decommissioning costs, as required by 10 CFR 72.30(c)(1)-(4): (1) spills of radioactive material producing additional residual radioactivity in onsite subsurface material, (2) facility modifications, (3) changes in authorized possession limits, and (4) actual remediation costs that exceed the previous cost estimate.

In the updated DFP, APS estimates that the total cost to decommission the ISFSI at PVNGS for unrestricted use is \$9.5 million in 2014 dollars. The updated decommissioning cost estimate (updated DCE) considered the requirements of 10 CFR 72.30(c)(1)-(4) and the licensee provided a discussion of each requirement. The licensee's submittal states, in part, that there have been:

1. No spills of radioactive material producing additional residual radioactivity in onsite subsurface material;
2. No facility modifications;
3. No changes in authorized possession limits; and
4. No actual remediation costs that exceed the previous cost estimate.

Based on its review of APS's submittal, the NRC staff finds that the updated DCE: is based on reasonable costs of a third party contractor; includes an adequate contingency factor; reflects the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and is based on reasonable and documented assumptions. Therefore, the NRC staff finds that the updated DCE adequately estimates the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the updated DCE is acceptable.

APS currently relies on the prepayment and external sinking fund methods as authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e). The external sinking fund is based on site-specific cost estimates that include estimated ISFSI decommissioning costs. The NRC staff reviewed the

licensee's updated DFP for PVNGS (ADAMS Accession No. ML15093A052), and finds that the aggregate dollar amount of the licensee's financial instrument provides adequate financial assurance to cover its updated DCE.

Therefore, based on its review, the NRC staff finds that the initial and updated DFPs contain the information required by 10 CFR 72.30(b) and (c) and that APS has provided reasonable assurance that funds will be available to decommission the PVNGS ISFSI.

In addition to the NRC staff's review of APS's initial and updated DFPs, the NRC staff completed an environmental review. On May 20, 2019, the NRC staff published the results of that review in an environmental assessment and finding of no significant impact in the *Federal Register* (84 FR 22911). The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of APS' initial and updated DFPs.

If you have any questions regarding this matter, please contact me at (301) 415-5722 or Pamela Longmire, of my staff, at (301) 415-7465.

Sincerely,

/RA/

John McKirgan, Chief
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No.: 72-44
CAC No.: 001028
EPID No.: L-2017-FPR-0051

Enclosure:
Final Environmental Assessment

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ADAMS Package No.: ML19148A411**Letter: ML19148A412****Encl.: ML19148A413**

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