



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

November 23, 2020

Paul R. Duke, Jr.  
Licensing Manager  
PSEG Nuclear LLC  
P.O. Box 236  
Hancocks Bridge, NJ 08038-0236

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF PUBLIC SERVICE ENTERPRISE GROUP NUCLEAR, LLC'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR SALEM-HOPE CREEK AND PEACH BOTTOM INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

Dear Mr. Duke:

By letter dated December 17, 2012, Public Service Enterprise Group Nuclear, LLC (PSEG) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, initial decommissioning funding plans (DFPs) for NRC's review and approval of its portions of the shared Hope Creek Generating Station (Hope Creek) and Salem Generating Station, Units 1 and 2 (Salem) Independent Spent Fuel Storage Installation (ISFSI) and the ISFSI at Peach Bottom Atomic Power Station Units 2 and 3 (Peach Bottom) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12353A037)<sup>1</sup>.

By letter dated December 17, 2015, PSEG submitted, for NRC staff review and approval, updated DFPs for the ISFSI shared by Hope Creek and Salem (Salem-Hope Creek ISFSI), and the Peach Bottom ISFSI (ADAMS Accession No. ML15351A336).<sup>2</sup> The NRC issued a request for additional information (RAI) dated April 5, 2018 (ADAMS Accession No. ML18094B084), regarding PSEG's updated DFPs for the Salem-Hope Creek and Peach Bottom ISFSIs. PSEG provided RAI responses to the NRC on May 7, 2018 (ADAMS Accession No. ML18127A045).

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 PSEG, including the initial and updated decommissioning cost estimates (DCEs) and the method of assuring funds for decommissioning.

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<sup>1</sup> As PSEG and Exelon Generation Company, LLC (Exelon) share responsibility for the Peach Bottom and the Salem-Hope Creek ISFSIs, Exelon submitted its financial information and its portions of the Peach Bottom and Salem-Hope Creek DFPs by letter dated December 17, 2012 (ADAMS Accession No. ML12353A488). This letter also contained financial information and DFPs related to other Exelon facilities. The NRC staff provided its financial review of the DFPs for these facilities, including Peach Bottom and Salem-Hope Creek, in a separate letter (ADAMS Accession No. ML20279A501).

<sup>2</sup> As with the initial DFPs, Exelon submitted updated DFPs for its portions of the Salem-Hope Creek and Peach Bottom ISFSIs by letter dated March 31, 2015 (ADAMS Accession No. ML15090A537). This letter also included information regarding the DFP updates for other Exelon facilities. The NRC staff provided its financial review of the updated DFPs for these facilities, including Peach Bottom and Salem-Hope Creek, in a separate letter (ADAMS Accession No. ML20279A501).

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 ISFSIs. 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 PSEG in its initial DFPs on how reasonable assurance will be provided that funds will be available to decommission the ISFSIs, including the amount of the DCE and the method of assuring funds for decommissioning.

In its 2012 initial DFP, PSEG estimated its portion of the cost to decommission the Salem-Hope Creek ISFSI for unrestricted use as \$3,650,000 and \$3,250,000 for the Hope Creek and Salem portions of the ISFSI. These costs are in 2012 dollars and the Salem cost is per unit. The PSEG cost to decommission the ISFSI at Peach Bottom is \$3,300,000 for each unit, in 2012 dollars. Based on its analysis of PSEG's submittal, the NRC staff finds that the submitted DCEs: (1) are based on reasonable costs of a third party contractor; (2) include an adequate contingency factor; (3) reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and (4) are based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCEs adequately estimated the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are acceptable.

In 2012, PSEG relied on excess funds from the decommissioning trust fund, a method authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e)(5). This is allowed because the Salem-Hope Creek and Peach Bottom ISFSIs are Part 72 general licensed ISFSIs. The trust fund balances account for the 10 CFR Part 50 license expiration dates and the ISFSI DCEs assume all costs incurred following the year in which spent fuel has been fully removed from the ISFSI. The NRC staff finds that the aggregate dollar amount of the licensee's financial instrument provided adequate financial assurance to cover its cost estimates, and therefore, that this financial instrument is acceptable.

The NRC staff reviewed the Initial DFPs submitted by PSEG, including the initial DCEs and the method of assuring funds for decommissioning, in accordance with 10 CFR 72.30(b) and NUREG-1757, Vol. 3, Rev. 1, "Consolidated Decommissioning Guidance." Based on its financial analyses, the NRC staff finds that the initial DFPs contain the information required by 10 CFR 72.30(b) and that PSEG has provided reasonable assurance that funds will be available to decommission its portion of the Salem-Hope Creek and Peach Bottom ISFSIs.

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 DFP must also 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 2015 updated DFP, PSEG estimates of its portion of the cost to decommission the Hope Creek-Salem shared ISFSI for Hope Creek Generating Station for unrestricted use is \$6,610,000 in 2015 dollars. The total cost to decommission the Salem portion of the shared ISFSI is \$7,440,000 in 2015 dollars. The total cost to decommission the ISFSI at Peach Bottom is \$9,100,000 in 2015 dollars.

The updated decommissioning cost estimates (DCE) considered the requirements of 10 CFR 72.30(c)(1)–(4) and in its May 7, 2018 RAI response, the licensee provided a narrative on each requirement. In sum, the licensee explained that no changes in any of the factors listed in 10 CFR 72.30(c)(1)–(4) occurred that warrant revision of the previously submitted decommissioning costs. Based on its review of PSEG’s submittal, the NRC staff finds that the updated DCEs: (1) are based on reasonable costs of a third party contractor; (2) include an adequate contingency factor; (3) reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and (4) are based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCEs adequately estimate the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are reasonable.

In the updated DFP, PSEG relied on an external sinking fund in the form of a trust as financial assurance for its ISFSI decommissioning, a method authorized by 10 CFR 50.75(e)(1)(ii) and 10 CFR 72.30(e)(5). This is allowed because the Salem-Hope Creek, and Peach Bottom ISFSIs are Part 72 general license ISFSIs. The NRC staff reviewed the licensee’s updated DFP, and finds that the aggregate dollar amount of the licensee’s financial instruments provides adequate financial assurance to cover its updated DCEs.

The NRC staff reviewed PSEG’s updated DFPs, including the updated DCEs and the method of assuring funds for decommissioning, in accordance with 10 CFR 72.30(c) and NUREG-1757, Vol. 3, Rev. 1, “Consolidated Decommissioning Guidance.” Based on its review, the NRC staff finds that the updated DFPs contains the information required by 10 CFR 72.30(c). The NRC staff finds that PSEG has provided reasonable assurance that funds will be available to decommission the Salem-Hope Creek and Peach Bottom ISFSIs.

In addition to the NRC staff’s review of PSEG’s initial and updated DFPs, the NRC staff completed an environmental review. The NRC staff will publish a summary of the results of that review in the *Federal Register* in November 2020 for the shared Salem-Hope Creek ISFSI and the Peach Bottom ISFSI.<sup>3</sup> The environmental assessment and findings of no significant impact for these ISFSIs will be available in <https://www.regulations.gov> under the Docket ID: NRC-2020-0132. The NRC staff determined there were no environmental impacts from the NRC

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<sup>3</sup> This *Federal Register Notice* also includes results for the ISFSIs at the Braidwood Station, Units 1 and 2; Byron Station, Units 1 and 2; Dresden Nuclear Power Station, Units 1, 2, and 3; LaSalle County Station, Units 1 and 2; Limerick Generating Station, Units 1 and 2; Oyster Creek Nuclear Generating Station; Quad Cities Nuclear Power Station, Units 1 and 2; Clinton Power Station, Unit 1; Calvert Cliffs Nuclear Power Plant; Nine Mile Point Nuclear Station, Units 1 and 2; R. E. Ginna Nuclear Power Plant; Zion Nuclear Power Station, Units 1 and 2; Arkansas Nuclear One, Units 1 and 2; Grand Gulf Nuclear Station, Unit 1; River Bend Station, Unit 1; and Waterford Steam Electric Station, Unit 3.

staff's review and approval of PSEG initial and updated DFPs for Salem-Hope Creek (ADAMS Accession Nos. ML20150B683) and for Peach Bottom (ADAMS Accession No. ML20150A873).

If you have any questions regarding this matter, please contact me at (301) 415-5722 or [John.McKirgan@nrc.gov](mailto:John.McKirgan@nrc.gov).

Sincerely,

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

Docket No(s): 72-48, and 72-29  
License No.: SFGL-30, and SFGL-08  
CAC No.: 001028  
EPID No(s): L-2017-FPR-0033,  
and L-2017-FPR-0052

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**ADAMS Package Accession No.: ML20279A577**

**\*via email**

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