



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

April 30, 2021

Mr. Kevin Cimorelli  
Site Vice President  
Susquehanna Nuclear, LLC  
769 Salem Boulevard  
NUCSB3  
Berwick, PA 18603-0467

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF PPL  
SUSQUEHANNA, LLC'S, SUSQUEHANNA NUCLEAR, LLC'S, AND ALLEGHENY  
ELECTRIC COOPERATIVE, INC'S, INITIAL AND UPDATED  
DECOMMISSIONING FUNDING PLANS FOR THE SUSQUEHANNA STEAM  
ELECTRIC STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATION

Dear Mr. Cimorelli,

By letter dated December 15, 2012 (Agencywide Documents Access and Management System [ADAMS] Accession No. ML12352A171), PPL Susquehanna, LLC (PPL), currently doing business as Susquehanna Nuclear, LLC, submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, an initial decommissioning funding plan (DFP) for its 90% ownership of the independent spent fuel storage installation (ISFSI) at Susquehanna Steam Electric Station (Susquehanna). By letter dated December 17, 2012 (ADAMS Accession No. ML123630019), Allegheny Electric Cooperative, Inc. (Allegheny) submitted, for NRC staff and approval, an initial DFP for its 10% ownership of the Susquehanna ISFSI.

By letter dated December 16, 2015 (ADAMS Accession Nos. ML15350A071), Susquehanna Nuclear, LLC (part of Talen Energy<sup>1</sup>) submitted for NRC staff review and approval, an updated DFP for its 90% ownership of ISFSI at Susquehanna. By letter dated January 8, 2016 (ADAMS Accession No. ML16032A339), Allegheny submitted for NRC staff review and approval, an updated DFP for its 10% ownership of the ISFSI at Susquehanna.

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 Entergy's initial and updated DFPs, including the initial and updated decommissioning cost estimates (DCEs) 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 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

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<sup>1</sup> Talen Energy acquired the PPL's share of Susquehanna via an indirect license transfer (ADAMS Accession No. ML15058A073).

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 PPL and Allegheny in their Initial DFPs 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 their 2012 initial DFPs, PPL and Allegheny estimated that the total cost to decommission the ISFSI at Susquehanna for unrestricted use is \$7.5 million, in 2012 dollars. Based on its analysis of PPL's and Allegheny's Initial DFPs, the staff finds that the submitted DCE is based on reasonable costs of a third-party contractor which includes an adequate contingency factor, and is based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCE adequately estimates the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCE is acceptable.

PPL and Allegheny utilized the method of prepayment, per the requirements of 10 CFR 50.75 (b), (e), and (h) to provide financial assurance for the Susquehanna ISFSI. PPL and Allegheny have segregated funds which would be used to pay for the ISFSI decommissioning, a method authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e). The NRC staff finds that the aggregate dollar amount of the financial instrument provided by PPL and Allegheny provides adequate financial assurance to cover the cost estimates, and therefore, that these financial instruments are acceptable.

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 PPL and Allegheny provided reasonable assurance that funds will be available to decommission the ISFSI at Susquehanna.

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 in an updated DFP. The updated DFP must update the information submitted with the original or prior approved plan. In addition, the updated 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 their 2015 updated DFPs, Susquehanna Nuclear, LLC and Allegheny estimate that the total cost to decommission the ISFSI at Susquehanna for unrestricted use is \$14.8 million, in 2015 dollars. In its March 7, 2019, response (ADAMS Accession No. ML19066A132) to NRC staff's request for additional information, dated December 13, 2018 (ADAMS Accession No. ML18352B184), Susquehanna Nuclear, LLC provided narratives on each of the requirements of 10 CFR 72.30(c)(1)-(4).

Based on its review of Susquehanna Nuclear, LLC's and Allegheny's submittals, 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 2015 updated DCEs adequately estimate the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the updated DCEs are acceptable.

In the 2015 updated DFPs for the Susquehanna ISFSI, Susquehanna Nuclear, LLC and Allegheny relied on the prepayment method as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 72.30(e). The NRC staff reviewed the licensee's financial assurance method for Susquehanna and finds that the financial instruments discussed in the 2015 DCE provide adequate financial assurance to cover its updated DCE. Therefore, the NRC staff finds that these financial instruments are acceptable.

The NRC staff reviewed the initial DFPs submitted by PPL and Allegheny, respectively, and updated DFPs submitted by Susquehanna Nuclear, LLC, and Allegheny, respectively, including the Initial and updated decommissioning cost estimates and the method of assuring funds for decommissioning, in accordance with 10 CFR 72.30(b) and (c) and NUREG-1757, Vol. 3, Rev. 1, "Consolidated Decommissioning Guidance." 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 Susquehanna Nuclear, LLC, and Allegheny have provided reasonable assurance that funds will be available to decommission the ISFSI at Susquehanna.

In addition to the NRC staff's review of the aforementioned initial and updated DFPs, the NRC staff completed an environmental review. The NRC staff published a summary of the results of the environmental review in the *Federal Register* on April 30, 2021, for the ISFSI at Susquehanna. The environmental assessments and findings of no significant impact for Susquehanna ISFSI is available in <https://www.regulations.gov> under the Docket ID: NRC-2021-0056. The NRC staff determined that there was no environmental impact from the NRC staff's review and approval of Susquehanna Nuclear, LLC's, and Allegheny's initial and updated DFPs.

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

Docket No.: 72-28  
License No.: SFGL-07  
CAC No.: 001028  
EPID No.: L-2017-FPR-0067

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF SUSQUEHANNA NUCLEAR, LLC'S, AND ALLEGHENY ELECTRIC COOPERATIVE, INC'S, INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE SUSQUEHANNA STEAM ELECTRIC STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATION

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