



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

August 8, 2019

Gregory H. Halnon  
Director, Fleet Regulatory Affairs  
FirstEnergy Nuclear Operating Company  
76 South Main Street  
Akron, Ohio 44308

SUBJECT: NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF FIRSTENERGY NUCLEAR OPERATING COMPANY'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR DAVIS-BESSE NUCLEAR POWER STATION UNIT NO. 1, PERRY NUCLEAR POWER PLANT UNIT NO. 1, AND BEAVER VALLEY POWER STATION UNIT NOS. 1 AND 2 INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

Dear Mr. Halnon:

By letters dated December 17, 2012, and December 8, 2014, FirstEnergy Nuclear Operating Company (FENOC) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, initial decommissioning funding plans (initial DFPs) for the independent spent fuel storage installations (ISFSIs) at Davis-Besse Nuclear Power Station Unit No. 1, Perry Nuclear Power Plant Unit No. 1, and Beaver Valley Power Station Unit Nos. 1 and 2 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12352A194 and ML14342A707). By letter dated December 9, 2015, FENOC submitted, also for NRC staff review and approval, updated decommissioning funding plans (updated DFPs) for the ISFSIs at Davis-Besse Nuclear Power Station Unit No. 1, Perry Nuclear Power Plant Unit No. 1, and Beaver Valley Power Station Unit Nos. 1 and 2 (ADAMS Accession No. ML15343A350). 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 FENOC, 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 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 FENOC 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 the initial DFP, FENOC estimated that the total cost to decommission the ISFSIs at Davis-Besse Nuclear Power Station Unit No. 1, Perry Nuclear Power Plant Unit No. 1, and Beaver Valley Power Station Unit Nos. 1 and 2 for unrestricted use is \$4.7 million, \$6.0 million, \$8.0 million, respectively, in 2012 dollars, except for Beaver Valley, provided in 2014 dollars. Based on its analysis of FENOC's initial DFPs, the NRC staff finds that the submitted DCEs are based on reasonable costs of a third party contractor, include an adequate contingency factor, reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, and are based on reasonable and documented assumptions. Therefore, the NRC staff finds that the DCEs adequately estimated the cost to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are acceptable.

FENOC relied on parent company guarantees as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 72.30(e). The NRC staff confirmed that the parent company guarantees and the financial test meet the criteria of 10 CFR Part 30, Appendix A. The NRC staff finds that the aggregate dollar amount of the licensee's financial instruments provides adequate financial assurance to cover its cost estimates, and therefore, that these financial instruments are 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, FENOC estimates that the total cost to decommission the ISFSIs at Davis-Besse Nuclear Power Station Unit No. 1, Perry Nuclear Power Plant Unit No. 1, and Beaver Valley Power Station Unit Nos. 1 and 2 for unrestricted use is \$5.5 million, \$7.9 million, \$8.0 million for each ISFSI, respectively, in 2014 dollars. The updated decommissioning cost estimates (updated DCEs) 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 FENOC's submittal, the NRC staff finds that the updated DCEs are based on reasonable costs of a third party contractor, include an adequate contingency factor, reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use, and are based on reasonable and documented assumptions. Therefore, the NRC staff finds that the 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 updated DFP, FENOC relied on parent company guarantees as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 72.30(e). The NRC staff confirmed that the parent company guarantees and the financial test meet the criteria of 10 CFR Part 30, Appendix A. 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.

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 FENOC has provided reasonable assurance that funds will be available to decommission the ISFSIs at Davis-Besse Nuclear Power Station Unit No. 1, Perry Nuclear Power Plant Unit No. 1, and Beaver Valley Power Station Unit Nos. 1 and 2. In addition to the NRC staff's review of FENOC's initial and updated DFPs, the NRC staff completed an environmental review. On August 5, 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 38065; 84 FR 38067; and 84 FR 38071) for Davis-Besse Nuclear Power Station, Unit No. 1; Perry Nuclear Power Plant, Unit No. 1; and Beaver Valley Power Station, Unit Nos. 1 and 2; respectively. The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of FENOC's 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 Nos.: 72-14, 72-69, and 72-1043

CAC No.: 001028

EPID Nos.: L-2017-FPR-0019,  
L-2017-FPR-0053, and  
L-2017-FPR-0006

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 NUCLEAR OPERATING COMPANY'S INITIAL AND UPDATED  
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 BEAVER VALLEY POWER STATION UNIT NOS. 1 AND 2 INDEPENDENT  
 SPENT FUEL STORAGE INSTALLATIONS, DOCUMENT  
 DATE: August 8, 2019

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**ADAMS Accession No.: ML19219A607**

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