



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

August 8, 2019

Mr. Daniel G. Stoddard
Senior Vice President
and Chief Nuclear Officer
Dominion Energy Services, Inc.
Innsbrook Technical Center
5000 Dominion Blvd
Glen Allen, VA 23060

SUBJECT: NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF THE INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE SURRY POWER STATION, UNITS 1 AND 2; NORTH ANNA POWER STATION, UNITS 1 AND 2; KEWAUNEE POWER STATION; AND MILLSTONE POWER STATION INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

Dear Mr. Stoddard:

By letter dated December 17, 2012, Virginia Electric and Power Company, Dominion Energy Kewaunee, Inc. and Dominion Nuclear Connecticut, Inc. (collectively, Dominion) 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 Surry Power Station, Units 1 and 2 (Surry), North Anna Power Station, Units 1 and 2 (North Anna), Kewaunee Power Station (Kewaunee), and Millstone Power Station (Millstone) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13002A036). By letter dated December 13, 2012 (ADAMS Accession No. ML12353A032), Old Dominion Electric Cooperative (ODEC) submitted, for NRC staff review and approval, an initial DFP for the North Anna ISFSI.

In addition, by letters dated December 2, 2015, and December 15, 2015, Dominion and ODEC submitted, also for NRC staff review and approval, updated decommissioning funding plans (updated DFPs) for the ISFSI at North Anna (ADAMS Accession Nos. ML15342A039 and ML16020A001). By letters dated December 2, 2015, and December 9, 2015, Dominion submitted, also for NRC staff review and approval, updated DFPs for Surry, Millstone, and Kewaunee (ADAMS Accession Nos. ML15342A038, ML15342A064, and ML15349B005, respectively). 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 Dominion and ODEC, 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 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 Dominion and ODEC in their initial DFPs for North Anna, and Dominion's initial DFPs for Surry, Kewaunee, and Millstone on how reasonable assurance will be provided that funds will be available to decommission the ISFSIs, including the amount of the DCEs, and the method of assuring funds for decommissioning. As a result, the NRC staff issued a request for additional information (RAI) by letter dated July 18, 2013 (ADAMS Accession No. ML13200A025). Dominion responded to the NRC's RAI on September 30, 2013 (ADAMS Accession No. ML13283A085). Separately, on October 21, 2013 (ADAMS Accession No. ML13296A023), ODEC submitted a response to the request for additional information.

In their initial DFPs, Dominion and ODEC estimated that the total cost to decommission the ISFSI at North Anna for unrestricted use to be \$1,857,000 in 2012 dollars. Dominion estimated that the total cost to decommission the ISFSIs at Surry, Kewaunee, and Millstone for unrestricted use is \$1,840,000, \$1,283,000, and \$1,912,000, respectively, in 2012 dollars. Based on its analysis of Dominion and ODEC's initial DFPs for North Anna; Dominion's initial DFPs for Surry, Kewaunee, and Millstone; and responses to the RAIs, the NRC staff finds that the submitted DCEs: are based on reasonable costs of a third party contractor; include an adequate contingency factor; meet 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.

Dominion and ODEC relied on external sinking funds as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e)(5). The external sinking funds are 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 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 DFPs 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 DFPs). The updated DFPs must update the information submitted with the original or prior-approved plan. In addition, the updated DFPs 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 DFPs, Dominion and ODEC estimate that the total cost to decommission the ISFSI at North Anna for unrestricted use is \$1,580,600 in 2015 dollars. Dominion estimated that the total cost to decommission the ISFSIs at Surry, Kewaunee, and Millstone for unrestricted use is \$1,764,000, \$1,847,000, and \$1,431,000, respectively, in 2015 dollars. The updated decommissioning cost estimates (updated DCEs) considered the requirements of 10 CFR 72.30(c)(1)-(4) and the licensees provided a discussion of each requirement. The licensees stated:

1. There have been no reported spills affecting the ISFSIs.
2. There have been no facility modifications affecting the ISFSI DCEs.
3. There are no changes in authorized possession limits affecting the DCEs.
4. No actual remediation costs have been incurred.

The licensee provided the following response to 10 CFR 72.30(c)(3) for Kewaunee. "The ISFSI DCE is based on an ISFSI that is sized to accommodate the spent fuel generated through permanent cessation of operations, which occurred in May 2013." By letter dated March 15, 2019 (ADAMS Accession No. ML19081A117), Dominion Energy Kewaunee, Inc. submitted the following clarifying sentence for Kewaunee's updated DFP. "There are no changes in authorized possession limits affecting the DCE."

Based on its review of Dominion and ODEC's submittals, the NRC staff finds that the updated DCEs: are based on reasonable costs of a third party contractor; include an adequate contingency factor; contain funds sufficient to meet 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.

Dominion and ODEC currently rely on external sinking funds as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 50.75(e) and 10 CFR 72.30(e)(5). The external sinking funds are based on site-specific cost estimates that include estimated ISFSI decommissioning costs. The NRC staff reviewed the licensees' updated DFP submittals, and finds that the aggregate dollar amount of the licensees' financial instruments provide 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 that Dominion and ODEC have provided reasonable assurance that funds will be available to decommission the North Anna ISFSI. Additionally, Dominion has provided reasonable assurance that funds will be available to decommission the Surry, Kewaunee, and Millstone ISFSIs.

In addition to the NRC staff's review of Dominion and ODEC's initial and updated DFPs for North Anna, and Dominion's initial and updated DFPs for Surry, North Anna, Kewaunee, and Millstone, the NRC staff completed environmental reviews for Surry, North Anna, Kewaunee, and Millstone. On August 5, 2019, the NRC staff published the results of each review in an environmental assessment and finding of no significant impact in the *Federal Register* (84 FR 38069; 84 FR 38075; 84 FR 38063; and 84 FR 38073), for Kewaunee; Millstone; North Anna; and Surry, respectively. The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of Dominion and ODEC's 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.: 72-02, 72-16, 72-56,
72-55, 72-64, and 72-47

CAC No.: 001028

EPIDS: L-2017-FPR-0066;
L-2017-FPR-0047;
L-2017-FPR-0002;
L-2017-FPR-0004;
L-2017-FPR-0036; and
L-2017-FPR-0042

SUBJECT: NUCLEAR REGULATORY COMMISSION'S ANALYSIS OF THE INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE SURRY POWER STATION, UNITS 1 AND 2, NORTH ANNA POWER STATION, UNITS 1 AND 2, KEWAUNEE POWER STATION, AND MILLSTONE POWER STATION
INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS, DOCUMENT
DATE: August 8, 2019

DISTRIBUTION:

SFM R/F

JMcKirgan, NMSS ABowers, NRR KLois, NRR SHarwell, NRR MHenderson, NRR

BWatson, NMSS TCarter, NMSS MWoods, OGC NMertz, OGC

RidsNrrPMMillstone.Resource@nrc.gov

RidsNrrPMNorthAnna.Resource@nrc.gov

RidsNrrPMSurry.Resource@nrc.gov

LOCATION: G:/SFST/72.30 Decommissioning Funding Plans/CLOSEOUT/Dominion/Dominion Closeout Letter (NLO).docx

ADAMS Package No.: ML19219A503

OFFICE	NMSS/DSFM	NMSS/DSFM	OGC	NMSS/DSFM
NAME	PLongmire	WWheatley	NMertz via email	JMcKirgan
DATE	5/29/19	6/12/19	3/22/19	8/08/19

OFFICIAL RECORD COPY