



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

April 7, 2021

Ms. Carla Pizzella
Vice President, Chief Financial Officer
And Treasurer
Yankee Atomic Electrical Company
49 Yankee Road
Rowe, MA 01367

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF YANKEE ATOMIC
ELECTRIC COMPANY, LLC'S INITIAL AND UPDATED DECOMMISSIONING
FUNDING PLANS FOR THE YANKEE ROWE INDEPENDENT SPENT FUEL
STORAGE INSTALLATIONS

Dear Ms. Pizzella:

By letter dated December 17, 2012, Yankee Atomic Electric Company (YAEC) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, initial decommissioning funding plans (DFPs) for the independent spent fuel storage installations (ISFSIs) at the former Yankee Nuclear Power Station (Agencywide Documents Access and Management System (ADAMS) Accession No. ML123630169).

By letter dated December 14, 2015, YAEC submitted, for NRC staff review and approval, updated decommissioning funding plans (DFP Updates) for the ISFSI at the former Yankee Nuclear Power Station (ADAMS Accession No. ML16020A016).

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 YAEC's initial and updated DFPS, including the initial and updated decommissioning cost estimates (DCEs) and the method of assuring funds for decommissioning.

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 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 decommissioning cost estimate (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 YAEAC 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 its 2012 Initial DFP, YAEAC estimated that the total cost to decommission the ISFSI at Yankee Rowe for unrestricted use is \$8.5 million in 2012 dollars. Based on its analysis of YAEAC's Initial DFP, the staff finds that the submitted DCE: (1) is based on reasonable costs of a third-party contractor; (2) includes an adequate contingency factor; (3) reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and (4) is based on reasonable and documented assumptions. Therefore, the NRC 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.

In the Initial DFP, YAEAC relied on an account within its Nuclear Decommissioning Trust (NDT) entitled "ISFSI Radiological Decom," that segregated the funds for decommissioning of the ISFSI from the larger balance in the NDT, a method authorized by 10 CFR 72.30(e). The NRC staff finds that the aggregate dollar amount of the licensee's financial instrument provides adequate financial assurance to cover its cost estimates, and therefore, that these financial instruments are acceptable.

Based on its financial analyses, the NRC staff finds that the Initial DFP contains the information required by 10 CFR 72.30(b) and that IMP has provided reasonable assurance that funds will be available to decommission the ISFSI at Yankee Rowe.

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 its 2015 Updated DFP, YAEAC provided estimates of the total cost to decommission the ISFSIs at Yankee Rowe for unrestricted use was \$10.1 million, in 2015 dollars. The updated decommissioning cost estimate (Updated DCE) considered the requirements of 10 CFR 72.30(c)(1)-(4) and the licensee provided a narrative on each requirement. The licensee stated:

No spills of radioactive material producing additional residual radioactivity in onsite subsurface material have occurred.

Facility modifications that affected the ISFSI, including those that were implemented within the licensed area, were assessed for impact

There were no changes in authorized possession limits

No active decommissioning has occurred, thus, there have not been any actual remediation costs that exceed the previous cost estimate.

Based on its review of YAEC's 2015 submittal, the staff finds that the Updated DCE: (1) is based on reasonable costs of a third-party contractor; (2) includes an adequate contingency factor; (3) reflect the cost of meeting the 10 CFR 20.1402 criteria for unrestricted use; and (4) is based on reasonable and documented assumptions. Therefore, the NRC staff finds that the 2015 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.

In the updated DFP, YAEC relied on an account within its Nuclear Decommissioning Trust (NDT) entitled "ISFSI Radiological Decom," that segregated the funds for decommissioning of the ISFSI from the larger balance in the NDT, a method authorized by 10 CFR 72.30(e). The NRC staff reviewed the 2015 Updated DFP submittal and finds that the aggregate dollar amount of the licensee's financial instrument provides adequate financial assurance to cover its cost estimates, and therefore, that these financial instruments are acceptable.

The NRC staff reviewed the Initial and Updated DFPs submitted by YAEC, including the Initial and Updated DCEs and the method of assuring funds for decommissioning, in accordance with 10 CFR 72.30(b) & (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 YAEC has provided reasonable assurance that funds will be available to decommission the Yankee Rowe ISFSI.

In addition to the NRC staff's review of YAEC's 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* in **April 2021** for the ISFSIs at the former Yankee Nuclear Power Station. The environmental assessments and findings of no significant impact for these ISFSIs are available in <https://www.regulations.gov> under the **Docket ID: NRC-2021-0064**. The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of YAEC'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.

Sincerely,

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

Docket No(s): 72-31
License No.: DPR-03
CAC No.: 001028
EPID No(s): L-2017-FPR-0074

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF YANKEE ATOMIC ENERGY COMPANY'S INITIAL DECOMMISSIONING FUNDING PLANS AND DECOMMISSIONING FUND PLAN UPDATES FOR THE YANKEE ROWE INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

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*** By email**

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