



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

May 18, 2021

Brad Gacke, Manager
Rancho Seco Assets
14440 Twin Cities Road
Herald, CA 95638-9799

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF SACRAMENTO MUNICIPAL UTILITY DISTRICT'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE RANCHO SECO INDEPENDENT SPENT FUEL STORAGE INSTALLATION

Dear Mr. Gacke:

By letter dated March 14, 2013, Sacramento Municipal Utility District (SMUD) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, an initial decommissioning funding plan (initial DFP) for the Rancho Seco Independent Spent Fuel Storage Installation (ISFSI) (Agencywide Documents Access and Management System Accession No. ML13098A100).

By letter dated March 23, 2015, SMUD submitted a report on Rancho Seco's Decommissioning Funding Status which referenced the ISFSI DFPs and updated previously submitted information (ADAMS Accession No. ML15093A058). By letter dated March 14, 2016, SMUD submitted its updated decommissioning funding plan (updated DFP) (ADAMS Accession No. ML16102A097). By letter dated April 7, 2016, SMUD supplemented its updated DFP for the ISFSI at Rancho Seco to correct an error in *Attachment 1, 2015 Decommissioning Cost Estimate* in the March 14, 2016, submission (ADAMS Accession No. ML16106A109). The NRC issued a request for additional information (RAI) dated April 3, 2018 (ADAMS Accession No. ML18094A261), regarding SMUD's updated DFP for the Rancho Seco ISFSI. SMUD provided RAI responses to the NRC on April 16, 2018 (ADAMS Accession No. ML18113A051).

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 SMUD's initial and updated DFPs, including the initial and updated decommissioning cost estimates (DCE) 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 SMUD 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 DFPs, SMUD estimated that the total cost to decommission the ISFSI for unrestricted use, in 2012 dollars. The DCE for Rancho Seco was \$7,229,000.

Based on its analysis of SMUD's submittal, the NRC staff finds that the DCE submitted for 2012: (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;¹ and (4) is based on reasonable and documented assumptions. Therefore, the NRC finds that the 2012 DCE adequately estimates the cost to carry out required ISFSI decommissioning activities prior to license termination, and that the 2012 DCE is acceptable.

In the initial DFP, SMUD relied on an external sinking fund as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 50.75(e)(1)(ii)(A) which is allowed under 72.30(e)(5). This is allowed because, at the time of filing, the Rancho Seco ISFSI belonged to a licensee with a power reactor license under part 50. 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 this financial instrument is 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 SMUD has provided reasonable assurance that funds will be available to decommission the Rancho Seco ISFSI.

Pursuant to 10 CFR 72.30(c), at the time of license renewal and at intervals not to exceed 3 years, the decommissioning funding plan (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 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 its 2016 updated DFPs, SMUD provided estimates of the total cost to decommission its ISFSI for unrestricted use in 2015 dollars. SMUD estimated that the total cost to decommission the ISFSI at Rancho Seco for unrestricted use is \$6.9 million, in 2015 dollars.

SMUD's updated DCE and its April 16, 2018, RAI response provided narratives on each of the requirements of 10 CFR 72.30(c)(1)–(4). Specifically, the licensee explained that there were no changes in the factors listed in 10 CFR 72.30(c)(1)–(4). Based on its review of SMUD's 2016 submittal, and the 2018 supplement, the NRC staff finds that the updated DCE: is based on reasonable costs of a third party contractor; reflects the cost of meeting the 10 CFR 20.1402

¹ Under 10 CFR 72.30(b)(2)(iii), licensees may address either the 10 CFR 20.1402 or 10 CFR 20.1403 criteria. The staff understands the licensee based its cost estimates on the 10 CFR 20.1402 criteria for unrestricted use because it did not address the requirements of 10 CFR 20.1403.

criteria for unrestricted use;² and includes an adequate contingency factor; and is based on reasonable and documented assumptions. Therefore, the NRC staff finds that the 2016 updated DCE adequately estimated the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCE is reasonable.

In the updated DFP, SMUD relied on an external sinking fund as financial assurance for ISFSI decommissioning, a method authorized by 10 CFR 50.75(e)(1)(ii)(A) which is allowed under 10 CFR 72.30(e)(5). This is allowed because at the time of filing, the Rancho Seco ISFSI belonged to a licensee with a power reactor license under part 50. The NRC reviewed the licensee's updated DFP and finds that the aggregate dollar amount of the licensee's financial instrument provides adequate financial assurance to cover its cost estimates. Therefore, the NRC staff finds this financial instrument is acceptable.

The NRC staff reviewed SMUD's updated DFP submissions, 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 DFP contains the information required by 10 CFR 72.30(c). The NRC staff finds that SMUD provided reasonable assurance that funds will be available to decommission the Rancho Seco ISFSI.

In addition to the NRC staff's analyses of SMUD's initial and updated DFPs, the NRC staff completed an environmental review. The NRC staff published a summary of the results of the environmental reviews in the *Federal Register* in April 2021 for the Rancho Seco ISFSI. The environmental assessment and findings of no significant impact and related documents for the ISFSI will be available in <https://www.regulations.gov> under the Docket ID: NRC-2020-0056. The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of SMUD's initial and updated DFP.

If you have any questions regarding this matter, please contact me at (301) 415-5722 or 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.: 72-11
License No.: SNM-2510
CAC No.: 001028
EPID No.: L-2017-FPR-0059

² Under 10 CFR 72.30(b)(2)(iii), licensees may address either the 10 CFR 20.1402 or 10 CFR 20.1403 criteria. The staff understands the licensee based its cost estimates on the 10 CFR 20.1402 criteria for unrestricted use because it did not address the requirements of 10 CFR 20.1403.

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