



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

April 7, 2021

Peter A. Gardner
Senior Vice President
and Chief Nuclear Officer
Northern States Power Company – Minnesota
414 Nicollet Mall 7th Floor
Minneapolis, MN 55401

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ANALYSIS OF NORTHERN STATES POWER COMPANY'S INITIAL AND UPDATED DECOMMISSIONING FUNDING PLANS FOR THE PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2, AND MONTICELLO NUCLEAR GENERATING PLANT INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

Dear Mr. Gardner:

By letter dated February 29, 2012, Northern States Power Company, a Minnesota corporation, doing business as Xcel Energy (Xcel) submitted, for U.S. Nuclear Regulatory Commission (NRC) staff review and approval, an initial decommissioning funding plan (DFP) for the independent spent fuel storage installation (ISFSI) at Prairie Island Nuclear Generating Plant, Units 1 and 2 (PINGP) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12065A073).

By letter dated December 14, 2012, Xcel submitted, for U.S. NRC staff review and approval, an initial DFP for the ISFSI at Monticello Nuclear Generating Plant (MNGP) (ADAMS Accession No. ML12353A292).

By letter dated December 11, 2015, Xcel submitted, for NRC staff review and approval, updated decommissioning funding plans (DFP Updates) for the ISFSIs at PINGP and MNGP (ADAMS Accession No. ML15348A141).

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 Xcel'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 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 Xcel 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 its 2012 initial DFPs, Xcel estimated the total costs to decommission the ISFSIs to unrestricted use, in 2012 dollars. The DCEs were provided for PINGP (\$2,502,000), and MNGP (\$3,061,000).

Based on its financial analysis of Xcel's submittals, the NRC staff finds that the DCEs submitted for 2012: (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 finds that the 2012 DCEs adequately estimate the cost, to carry out required ISFSI decommissioning activities prior to license termination, and that the 2012 DCEs are acceptable.

In the initial DFPs, Xcel 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 PINGP and MNGP belong to a licensee with power reactor licenses under part 50. The external sinking fund is 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.

Based on its financial analyses, the NRC staff finds that the 2012 initial DFP submitted for MNGP contains the information required by 10 CFR 72.30(b). The staff also finds that the 2012 initial DFP submitted for PINGP, as part its license renewal, contains the required by 10 CFR 72.30(c). The staff finds that Xcel has provided reasonable assurance that funds will be available to decommission the ISFSIs at PINGP and MNGP.

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 2015 updated DFP, Xcel provided estimates of the total cost to decommission its ISFSIs for unrestricted use in 2015 dollars. Xcel estimated that the total costs to decommission the ISFSIs at PINGP (\$2,987,100), and MNGP (\$7,324,200) for unrestricted use, in 2015 dollars.

Xcel's updated DCEs provided narratives on each of the requirements of 10 CFR 72.30(c)(1)–(4). Specifically, the licensee explained there were no changes in the factors listed in 10 CFR 72.30(c)(1)–(4). Based on its review of Xcel's 2015 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 2015 updated DCEs adequately estimate the cost, at this time, to carry out required ISFSI decommissioning activities prior to license termination, and that the DCEs are reasonable.

In the updated DFPs for the PINGP and MNGP ISFSIs, Xcel 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). The external sinking fund is based on site-specific cost estimates that include estimated ISFSI decommissioning costs. The NRC staff reviewed the Xcel's updated DFPs and finds that the aggregate dollar amount of the licensee's financial instruments provides adequate financial assurance to cover its cost estimates. Therefore, the NRC staff finds these financial instruments are acceptable.

The NRC staff reviewed Xcel'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 DFPs contain the information required by 10 CFR 72.30(c). The NRC staff finds that Xcel provided reasonable assurance that funds will be available to decommission the ISFSIs at PINGP and MNGP.

In addition to the NRC staff's review of Xcel'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 PINGP and MNGP. The environmental assessments and findings of no significant impact for these ISFSIs are available in <https://www.regulations.gov> under the Docket ID: NRC-2021-0059. The NRC staff determined there were no environmental impacts from the NRC staff's review and approval of Xcel'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): 72-10, 72-58,
License No(s): SNM-2506, SFGL-37
CAC No.: 001028
EPID No(s): L-2017-FPR-0056, L-2017-FPR-0043

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ADAMS Accession No.: ML21067A038

*** concurrence via email**

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