



December 14, 2021

ATTN: Document Control Desk
Director, Division of Spent Fuel Management
Office of Nuclear Material Safety and Safeguards
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Serial No.: 21-356
NRA/ENC: R0
Docket No.: 72-47

DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION ISFSI
10 CFR 72.30 DECOMMISSIONING FUNDING PLAN

Pursuant to 10 CFR 72.30(b) and (c), Dominion Energy Nuclear Connecticut, Inc. (DENC) submits the attached decommissioning funding plan for the Millstone Power Station Independent Spent Fuel Storage Installation (ISFSI).

Please contact Erica N. Combs at (804) 273-3386 if you have any questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark D. Sartain", followed by a horizontal line.

Mark. D. Sartain
Vice President – Nuclear Engineering & Fleet Support
Dominion Energy Nuclear Connecticut, Inc.

Attachment: Decommissioning Funding Plan for Millstone Power Station ISFSI

Commitments made in this letter: None

cc: Ms. Yen-Ju Chen
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ATTACHMENT

Decommissioning Funding Plan for
Millstone Power Station ISFSI

Millstone Power Station
Independent Spent Fuel Storage Installation
Dominion Energy Nuclear Connecticut, Inc. (DENC)

Decommissioning Funding Plan for Millstone Power Station ISFSI

General License under 10 CFR 72.210, Docket No. 72-47

Pursuant to 10 CFR 72.30(b), Dominion Energy Nuclear Connecticut, Inc. (DENC) submitted a decommissioning funding plan for the Millstone Power Station (MPS) Independent Spent Fuel Storage Installation (ISFSI) on December 19, 2018 (ADAMS Accession No. ML18361A575). 10 CFR 72.30(c) requires each holder of a license under Part 72 to submit a decommissioning funding plan at the time of license renewal and at intervals not to exceed three (3) years with adjustments as necessary to account for changes in costs and the extent of contamination. In accordance with 10 CFR 72.30(c), the information below provides DENC's periodic update to the MPS ISFSI decommissioning funding plan.

Pursuant to 10 CFR 72.30(b), a decommissioning funding plan must contain:

(1) Information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS [Monitored Retrievable Storage Installation].

MPS Unit 1 (MPS1) is currently maintaining its spent fuel in wet storage and is not relying on an ISFSI. DENC and the MPS Unit 3 (MPS3) co-owners¹ provide financial assurance for decommissioning MPS Unit 2 (MPS2) and MPS3 through the prepayment method. The nuclear decommissioning trusts for MPS2 and MPS3 are allocated to radiological decommissioning.

Table 1 below shows crediting 2% real earnings on the prepaid funds through 3.5 years after license expiration as permitted by 10 CFR 50.75(e)(1)(i). The amounts accumulated in the nuclear decommissioning trusts for MPS2 and MPS3 as of December 31, 2020 exceed that required to meet the Nuclear Regulatory Commission (NRC) minimum and the ISFSI radiological decommissioning cost estimate (DCE) combined. The amounts reported in Table 1 reflect the total amount of funds in the MPS Trusts including those of the MPS3 co-owners. The NRC Minimum and ISFSI DCE amounts are also reported at the 100% level.

¹ MPS3 is jointly owned by Dominion Energy Nuclear Connecticut, Inc. (93.4707%), Green Mountain Power Corporation (1.7303%), and Massachusetts Municipal Wholesale Electric Company (4.7990%).

Table 1. Total Funds and Allocated Radiological Funds as of December 31, 2020 *(in millions of dollars)*

Unit End of License Year	Total Funds in External Trusts (12/31/2020 \$)	Total Funds in External Trusts (Future \$) ^[1]	NRC Minimum (Future \$) ^[2]	Funds in Excess of NRC Minimum (Future \$) ^{[1][2]}	Funds in Excess of NRC Minimum (12/31/2020 \$) ^[3]	ISFSI DCE (12/31/2020 \$) ^[4]
MPS Unit 2 2035	\$939.67	\$1,344.31	\$482.34	\$861.97	\$602.52	\$1.87
MPS Unit 3 2045	\$971.64	\$1,705.74	\$512.82	\$1,192.92	\$679.55	

- [1] Total Funds in External Trusts (Future \$) = 2% Real Rate of Return applied to growth of funds in the External Trust to 3.5 years after Start of Decommissioning for each unit.
- [2] NRC Minimum (Future \$) = NRC Minimum amount reflects December 31, 2020 NRC Minimum Amount due to the application of a 2% Real Rate of Return to growth of funds in the External Trusts and keeping the NRC Minimum amount constant. The MPS NRC Minimum amounts are presented representing 100% responsibility of decommissioning costs.
- [3] Funds in excess of NRC Minimum (12/31/2020 \$) are calculated by applying a 2% discount rate to the Funds in Excess of NRC Minimum (Future \$).
- [4] ISFSI DCE amount as reported in Table 2 of this filing.

- (2) A detailed cost estimate for decommissioning, in an amount reflecting:**
- (i) The cost of an independent contractor to perform all decommissioning activities;**
 - (ii) An adequate contingency factor; and**
 - (iii) The cost of meeting the §20.1402 of this chapter criteria for unrestricted use, provided that, if the applicant or licensee can demonstrate its ability to meet the provisions of §20.1403 of this chapter, the cost estimate may be based on meeting §20.1403 criteria.**

General Methodology Used to Develop ISFSI Decommissioning Cost Estimates

A site-specific ISFSI DCE based on 10 CFR 72.30 requirements was prepared for the MPS ISFSI in 2020. The ISFSI DCE was based on the assumption that a third-party contractor would perform decommissioning. To determine the cost of using a third-party contractor, fully burdened labor rates (labor costs plus employee benefits and taxes) were used as a basis and a premium was added to represent a third-party contractor's profit margin.

The site-specific ISFSI DCE includes undistributed costs (for support activities and costs such as staff, security, insurance, energy, materials, and services) allocated to the ISFSI decommissioning period. The site-specific ISFSI DCE includes 25% contingency in accordance with NUREG-1757, "Consolidated Decommissioning Guidance," Volume 3, Revision 1. Table 2 below shows the contingency as one line item.

The site-specific ISFSI DCE is based on remediating the site to a residual radioactivity level consistent with 10 CFR 20.1402 (i.e., unrestricted use). As shown in Table 2, the estimated cost to decommission the ISFSI at MPS is \$1.87 million in 2020 dollars (100% decommissioning responsibility).

Table 2. MPS Site-Specific Cost Estimates Applicable to ISFSI Decommissioning Costs – 10 CFR 72.30 (*in thousands of dollars*)

ISFSI Decommissioning Activity Description	Labor	Equipment	Disposal	Other	25% Contingency	Total (2020 \$)
Distributed (Direct) Cost						
Preparation and NRC Review of License Termination Plan	\$ 115			\$ 160	\$ -	\$ 275
Verification Survey of Horizontal Storage Modules	\$ 210	\$ 55			\$ -	\$ 265
Preparation of Final Report on Decommissioning and NRC Review	\$ 115			\$ 160	\$ -	\$ 275
Total Distributed (Direct) Cost	\$ 440	\$ 55	\$ -	\$ 320	\$ -	\$ 815
Total Undistributed (Allocated) Cost	\$ 680	\$ -	\$ -	\$ -	\$ -	\$ 680
Total MPS ISFSI Decommissioning Cost	\$ 1,120	\$ 55	\$ -	\$ 320	\$ -	\$ 1,495
25% Contingency Applied to Total MPS ISFSI Decommissioning Cost Estimate					\$ 374	\$ 374
Total MPS ISFSI Decommissioning Cost Estimate with Contingency						\$ 1,869

Information required by 10 CFR 72.30(c)

10 CFR 72.30(c) requires an updated decommissioning funding plan to specifically consider the effect of the following events on decommissioning costs:

- (1) *Spills of radioactive material producing additional residual radioactivity in onsite subsurface material.*

There have been no reported spills at the ISFSI.

- (2) *Facilities modifications.*

There have been no facility modifications affecting the ISFSI DCE.

- (3) *Changes in authorized possession limits.*

As stated below, the ISFSI DCE is based on an ISFSI sized, when used in conjunction with the spent fuel pool, to accommodate the spent fuel generated over the life of the station. There have been no changes in authorized possession limits affecting the DCE.

- (4) *Actual remediation costs that exceed the previous cost estimate.*

No actual remediation costs have been incurred.

(3) Identification of and justification for using key assumptions contained in the DCE.

The DCEs for the MPS ISFSI assumes:

- (i) An ISFSI that is sized, when used in conjunction with the spent fuel pool, to accommodate the spent fuel generated over the life of MPS2 and MPS3.
- (ii) Decommissioning will be performed by an independent contractor.
- (iii) Storage canisters will be used to ship the contained spent fuel to the Department of Energy.
- (iv) A dry transfer facility will not be necessary.
- (v) The ISFSI pad and support modules are assumed to be free of contamination and left in place.

- (4) A description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility.**

DENC (for MPS2 and MPS3) and the MPS3 co-owners use the prepayment method of assuring funds for decommissioning MPS2 and MPS3. As shown above, the prepaid funds in the MPS2 and MPS3 decommissioning trusts exceed, with credited earnings, the amount required by the NRC for radiological decommissioning and the ISFSI DCE combined. The MPS decommissioning cost study and the ISFSI DCE are updated approximately every five (5) years. When a site-specific ISFSI Decommissioning Cost Estimate (DCE) is not performed in a reporting year, the ISFSI decommissioning funding plan will adjust the most recent site-specific ISFSI DCE using a CPI indice based annual escalation rate and will consider the need for any further adjustment based on the factors in 10 CFR 72.30(c)(1) – (4).

The CPI indice annual escalation rate mnemonic is as follows:

CPI – U: Urban Consumer – All Items, (Index 1982-84=100, SA), U. S. Bureau of Labor Statistics (BLS); Moody's Analytics (ECCA) Forecast, Quarterly, United States.

- (5) The volume of onsite subsurface material containing residual radioactivity that will require remediation to meet the criteria for license termination.**

Onsite subsurface material is assumed to have no residual radioactivity that will require remediation to meet the criteria for license termination. The spent fuel storage casks are sealed and contain no liquid.

- (6) A certification that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning.**

DENC certifies that financial assurance for the estimated cost of decommissioning the MPS ISFSI has been provided as discussed above.