UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD, SUITE 102
KING OF PRUSSIA, PA 19406-1415

November 12, 2024

Eric S. Carr President –
Nuclear Operations and Chief Nuclear Officer
Dominion Energy, Inc.
Innsbrook Technical Center
5000 Dominion Blvd. Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT 1 – SAFSTOR INSPECTION REPORT 05000245/2024001

Dear Eric S. Carr:

On October 11, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shutdown Millstone Power Station, Unit 1 (MS-1). The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and the conditions of your license. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant walk-downs. The results of the inspection were discussed with Michael O'Conner, Site Vice President, and other members of your staff on October 11, 2024, and are described in the enclosed report.

Within the scope of this inspection, no violations of more than minor safety significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the NRC Agencywide Document and Management System (ADAMS), accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response, if any, should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Radioactive Waste; Decommissioning of Nuclear Facilities**; then **Regulations**, **Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy** (Under 'Related Information'). You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

No reply to this letter is required. Please contact Nicholas Eckhoff of my staff at 610-337-5386 if you have any questions regarding this matter.

Sincerely,

ELISE EVE Digitally signed by ELISE EVE
Date: 2024.11.12 10:42:39 -05'00'

Elise Eve, Team Leader
Decommissioning Team
Decommissioning, ISFSI, and Reactor Health Physics Branch
Division of Radiological Safety and Security

Docket No: 05000245
License No: DPR-21

Enclosure: Inspection Report No. 05000245/2024001
w/ Attachment

cc w/encl: Distribution via ListServ

SUBJECT: MILLSTONE POWER STATION, UNIT 1 – SAFSTOR INSPECTION REPORT 05000245/2024001 DATED NOVEMBER 12, 2024

DOCUMENT NAME: https://usnrc.sharepoint.com/teams/Region-I-Decommissioning-Branch/Inspection Reports/Inspection Reports - Final/Millstone SAFSTOR 2024001 Rev 1.docx
SUNSI Review Complete: NEckhoff
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OFFICE	DRSS/RI	N	DRSS/RI	N		
NAME	NEckhoff/ne		EEve/ee			
DATE	11/5/2024		11/12/2024			

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection Report No.	05000245/2024001
Docket No.:	05000245
License No.:	DPR-21
Licensee:	Dominion Energy Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Unit 1
Location:	Waterford, Connecticut
Inspection Dates:	September 9-13, 2024
Inspectors:	Nicholas Eckhoff, Health Physicist Decommissioning, ISFSI, and Reactor Health Physics Branch Division of Radiological Safety and Security
Approved By:	Elise Eve, Team Leader Decommissioning Team Decommissioning, ISFSI and Reactor Health Physics Branch Division of Radiological Safety and Security

Enclosure

EXECUTIVE SUMMARY

Dominion Energy Nuclear Connecticut, Inc.
Millstone Power Station, Unit 1
NRC Inspection Report No. 05000245/2024001

A routine announced SAFSTOR safety inspection was completed on October 11, 2024, at the permanently shut down Millstone Power Station, Unit 1 (MS-1). The inspection included a review of activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, site radiological programs, and corrective action program (CAP) implementation. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant walk-downs. At the time of the inspection, no ongoing decommissioning activities were being conducted at MS-1. The U.S. Nuclear Regulatory Commission's (NRC's) program for overseeing the safe storage (SAFSTOR) of a shutdown nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program."

Based on the results of this inspection, no violations of more than minor safety significance were identified.

REPORT DETAILS

1.0 Background

MS-1 went into commercial operation on December 28, 1970, and permanently ceased operation on July 17, 1998. Subsequently, the fuel was permanently removed from the reactor vessel and is currently stored in the spent fuel pool. MS-1 is in safe storage (SAFSTOR), and Dominion Energy Nuclear Connecticut, Inc. (Dominion) plans to actively decommission MS-1 in the future, possibly in parallel with the decommissioning of the operational units after they have been permanently shut down. Operations and radiation protection and chemistry personnel from Millstone Power Station Unit 2 (MS-2) provide routine support functions to MS-1.

The NRC's program for overseeing the safe storage of a shutdown nuclear power reactor is described in IMC 2561.

2.0 SAFSTOR Performance and Status Review

a. Inspection Scope (Inspection Procedures 37801, 40801, 60801, 64704, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted September 9-13, 2024, at Unit 1. The inspection consisted of observations by the inspectors, interviews with site personnel, a review of procedures and records, and plant walk-downs. The inspectors reviewed the SAFSTOR program as outlined in the defueled safety analysis report and technical specifications and assessed the adequacy of management oversight of SAFSTOR responsibilities for the MS-1 facility.

Specifically, the inspectors reviewed documentation of the decommissioning management and staff organization and Dominion's implementation of SAFSTOR activities related to safe storage of radioactive material. The inspectors also conducted walk-downs to assess the material condition of the MS-1 facility including the reactor building, fuel handling floor, and turbine building and discussed any design changes or modifications since the previous inspection, conducted in 2023.

The inspectors reviewed MS-1's program for the safe wet storage of spent fuel. The inspectors performed a walk-down of the spent fuel pool and associated support systems to assess material condition, configuration control, and system operation. Additionally, the inspectors reviewed the associated water chemistry analytical data and examined the controls and indications relevant to MS-1 that are available to operators in the MS-2 control room.

The inspectors reviewed activities, components, and documentation associated with the following SAFSTOR programs: occupational exposure, fire protection, radioactive effluent control, site radiological environmental monitoring program (REMP), maintenance, surveillance, decommissioning organization, and staffing. The inspectors reviewed records of radiological surveys, the annual REMP report, the annual effluent release report, and MS-1 firefighting strategies and procedures.

The inspectors reviewed Dominion fleet audit reports and CAP documents associated with MS-1 to determine if issues had been appropriately identified, assessed, and reviewed, and that corrective actions had been appropriately implemented.

b. Observations and Findings

The inspectors verified that the SAFSTOR program was effectively implemented. The inspectors verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the technical specification requirements and established procedures. The inspectors also confirmed that no dismantlement or decommissioning activities were performed since the previous inspection. The inspectors determined that MS-1 was safely storing spent fuel in wet storage.

The inspectors reviewed any modifications to the site, temporary or permanent, since the last SAFSTOR inspection performed in calendar year 2023. The inspectors reviewed information relevant to the status of the decommissioning trust fund and its expenditures, as provided by Dominion during the inspection period, with no concerns identified.

As previously indicated, MS-2 operations staff support maintenance activities at MS-1. The inspectors reviewed MS-1's firefighting strategies and noted that the fire brigade staffed from MS-2 and MS-3's operations would respond in the event of a fire at MS-1. Fire drills were routinely performed at MS-1 and staff had completed familiarization activities in MS-1 during training. The inspectors noted that MS-2 health physics supported maintenance work at MS-1 by performing surveys, providing radiation protection coverage for any emerging work, and providing radiation protection briefings as necessary.

The annual radiological effluent and the annual REMP reports demonstrated that all calculated doses were below regulatory dose criteria outlined in 10 CFR 50, Appendix I, "Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion 'As Low as is Reasonably Achievable' for Radioactive Material in Light- Water-Cooled Nuclear Power Reactor Effluents." The inspectors noted that MS-1 had one shipment of Class A dry active waste for offsite disposal (Energy Solutions) in 2023.

Findings or issues identified from audits, plant equipment operator rounds, and staff observations had been entered into the CAP. Site staff effectively addressed identified issues, implemented corrective actions, and tracked them to closure. Condition reports and corrective actions appeared to be prioritized and evaluated commensurate with their safety significance.

c. Conclusions

No violations of more than minor safety significance were identified.

3.0 Exit Meeting Summary

On October 11, 2024, the inspectors presented the inspection results to Michael O'Conner, Site Vice President, and other members of the Millstone Power Station staff who acknowledged the inspection results. No proprietary information was retained by the inspectors or documented in this report.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Millstone Power Station Personnel
M. O'Connor, Site Vice President
J. Petty, Plant Manager
M. Goolsbey, Director of Nuclear Station Safety & Licensing
L. Kelley, Manager EP and Licensing
D. Beachy, Supervisor Licensing
C. Dix, Radiation Material Control Supervisor
J. Cawley, Shift Manager Nuclear Operations
J. Bookmiller, Manager Nuclear Site Engineering
E. Bergstrom, Manager, Radiological Protection and Chemistry
M. Wynn, Superintendent, Health Physics Technical Services
J. Patel, Licensing/Compliance

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Condition Reports

1235452	1232439	1250872
1254280	1235459	1239940

Miscellaneous
2024 SFP Chemistry Samples and Analysis
2024 Unit 1 Radiological Surveys
2024 Annual Radioactive Effluent Release Report
2024 Annual Radiological Environmental Operating Report
2024 Waste Shipment Records
DOM-QA-1, Nuclear Facility Quality Assurance Program Description, Rev. 36
MPG-21-01026, Rev. 2, Unit 2 Beyond Design Basis Flooding Mods – Flood Barriers
ETE-MP-2024-1021, Rev 2, MP1 - Reactor Building Crane Rail Clip Bolting Weld Repair
MSRC Meeting #2023-3 & 4, Management Safety Review Committee
Millstone Power Station Unit 1 Decommissioning Funding Status Report, March 2024
Millstone Power Station Unit 1 Defueled Safety Analysis Report, Rev. 18
Millstone Power Station Unit 1 Defueled Technical Requirements Manual Millstone
Millstone Power Station Unit 1 Defueled Technical Specifications
5 Year -B4C Blackness Testing
Millstone Unit 1, Quarterly High Radiation Area Audit
MP-HPO-24024, 10 CFR 50.75(g) Decommissioning Records - Updated Report 2024
MPS-M-20240715-5, U1 Outside RCA Yard
MPS-M-20240627-4, U1 Reactor Building -26' Torus Room
MP-PROC-OPS-SF9-001 Technical Procedure Approval, Unit 1 Fire Extinguisher Inspection
RE-MG-110, Liquid Waste Processing System

Procedures
MP-22-REC-BAP01, Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM), Rev 32
CM-AA_DDC-201, Design Changes, Rev 23
PI-AA-200, Corrective Action Rev 42
C OP 200.22, SNM Physical Inventory, Rev 004
NF-AA_SNM-101, SNM Control and Inventory, Rev 3
SP 848A, SFPI Vent Gas Rad Monitor Inoperable, Rev 002-01
SP 849A, SFPI Vent Particulate Sampler Inoperable, Rev 001-00
SP 849B, BOP Vent Particulate Sampler Nonfunctional, Rev 001-00

Work Orders
53102445515
53203369760

LIST OF ACRONYMS USED

ADAMS	Agencywide Document and Management System
BOP	Balance of Plant
CAP	Corrective Action Program
CFR	Code of Federal Regulations
Dominion	Dominion Energy, Inc.
GPO	Government Printing Office
IMC	Inspection Manual Chapter
MS-1	Millstone Power Station Unit 1
MS-2	Millstone Power Station Unit 2
NRC	U.S. Nuclear Regulatory Commission
RCA	Radiological Control Area
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
SFPI	Spent Fuel Pool Inventory
SNM	Special Nuclear Material