



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BLVD., SUITE 100
KING OF PRUSSIA, PA 19406-2713

July 26, 2021

Mr. Daniel G. Stoddard
Senior Vice President and Chief Nuclear Officer
Dominion Energy, Inc.
Innsbrook Technical Center
5000 Dominion Blvd.
Glenn Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT 1 – SAFE STORAGE INSPECTION
REPORT 05000245/2021001

Dear Mr. Stoddard:

On July 6-9, 2021, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the 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 plant walk-downs by the inspector, interviews with site personnel, and a review of procedures and records. The results of the inspection were discussed with Mr. John Daugherty, Site Vice President, and other members of the Millstone Power Station staff on July 9, 2021 and are described in the enclosed report. No findings of safety significance were identified.

In accordance with 10 Code of Federal Regulations (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 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).

D. Stoddard

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No reply to this letter is required. Please contact Elizabeth Andrews at 610-337-5117 if you have any questions regarding this matter.

Sincerely,

Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health
Physics Branch
Division of Radiological Safety and Security

Docket No: 05000245
License No: DPR-21

Enclosure: Inspection Report No. 05000245/2021001
w/ Attachment

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MILLSTONE POWER STATION, UNIT 1 – SAFE STORAGE INSPECTION REPORT
05000245/2021001 DATED July 26, 2021.

DOCUMENT NAME: https://usnrc.sharepoint.com/:w:/r/teams/Region-I-Decommissioning-Branch/_layouts/15/Doc.aspx?sourcedoc=%7B71945561-fb62-4ae6-bafc-b6a814b98a69%7D&action=edit&wdPid=558c47b0

SUNSI Review Complete: EAndrews

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 050-00245

License No. DPR-21

Inspection No. 05000245/2021001

Licensee: Dominion Energy, Inc.

Facility: Millstone Power Station, Unit 1

Location: Waterford, Connecticut

Inspection Dates: July 6-9, 2021

Inspector: Elizabeth Andrews, Health Physicist
Decommissioning, ISFSI, and Reactor Health Physics
Branch
Division of Radiological Safety and Security

Approved By: Anthony Dimitriadis, Chief
Decommissioning, ISFSI, and Reactor Health Physics
Branch
Division of Radiological Safety and Security

Enclosure

EXECUTIVE SUMMARY

Dominion Energy, Inc.
Millstone Power Station, Unit 1
NRC Inspection Report No. 05000245/2021001

An announced safety inspection was conducted on July 6-9, 2021 at the permanently shutdown Millstone Power Station, Unit 1 (MS-1). The inspector reviewed activities related to the safe storage of radioactive material, including site operations, engineering, maintenance, plant support activities, management oversight, and corrective action program (CAP) implementation. The inspection consisted of observations by the inspector, 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 operation 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 findings of 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, Inc. (Dominion) plans to actively decommission MS-1 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 operation 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)

An announced safety inspection was conducted on July 6-9, 2021. The inspection consisted of observations by the inspector, interviews with site personnel, a review of procedures and records, and plant walk-downs. The inspector 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 inspector reviewed the decommissioning management and staff organization and Dominion's implementation of SAFSTOR activities related to safe storage of radioactive material. The inspector also conducted a walk-down 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.

The inspector reviewed MS-1's program for the safe wet storage of spent fuel. The inspector performed a walk-down of the spent fuel pool and associated support systems to assess material condition, configuration control, and system operation. Additionally, the inspector 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 inspector 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 and surveillance and decommissioning organization and staffing. The inspector reviewed radiological surveys, the annual REMP report, the annual effluent release report, and MS-1 firefighting strategies and procedures.

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

b. Observations and Findings

The inspector confirmed that the SAFSTOR program was being effectively implemented. The inspector 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 inspector also confirmed that no dismantlement or decommissioning activities were performed since the previous inspection. The inspector determined that MS-1 was safely storing spent fuel in wet storage.

The inspector noted that there were no temporary or permanent modifications to the site since the last SAFSTOR inspection performed in calendar year 2020. The inspector 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 operations at MS-1. The inspector reviewed MS-1's firefighting strategies and noted that the fire brigade staffed from MS-2 and Millstone Power Station Unit 3's operations would respond in the event of a fire at MS-1. Fire drills are routinely performed at MS-1 and staff are familiarized with MS-1 during training. The inspector noted that MS-2 health physics support work operations 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 of 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 inspector noted that MS-1 had one shipment of Class A dry active waste for offsite disposal since the last inspection. Additionally, the inspector discussed shipping requirements and processes with site staff to gain an understanding of the site's experience and expertise on shipping radwaste.

Findings or issues identified from audits, plant equipment operator rounds, and staff observations were 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

Based on the results of this inspection, no findings of safety significance were identified.

3.0 Exit Meeting Summary

On July 9, 2021, the inspector presented the inspection results to Mr. John Daugherty, Site Vice President, and other members of the Millstone Power Station staff who acknowledged the inspection results. No proprietary information was retained by the inspector or documented in this report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Millstone Power Station Personnel

J. Daugherty, Site Vice President
C. Alford, Chemistry Supervisor
R. Castle, Maintenance Supervisor
C. Dix, Radiation Material Control Supervisor
L. Djoukam, Licensing Engineer II
W. Gorman, Instrument and Control Supervisor
B. Graber, Superintendent Radiation Protection Technical
J. Langworthy, Radiation Protection Technician
K. Long, Instrument and Control Supervisor
W. McCollum, Nuclear Technical Specialist III
S. Pawlow, Senior Software Engineering Specialist
S. Salisbury, IT Supervisor
C. St. John, Senior Radiation Protection Technician

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Audits

20-10, Maintenance & NAPS/SPS QC Inspection, dated January 25, 2021
21-01, Security, dated March 8, 2021
21-02, Emergency Preparedness, dated April 15, 2021
21-03, Measuring & Test Equipment and North Anna Power Station Refueling, dated April 29, 2021
21-04, Fire Protection QA Program and Implementation, dated April 20, 2021

Condition Reports

1139964	1140652	1140936	1141099	1144006	1146293
1146468	1151276	1151278	1153863	1153897	1155631
1155643	1159204	1162104	1162389	1164955	1167285
1167712	1168063	1170016	1170412	1175343	1176583

Miscellaneous

10 CFR 50.75(g) for MS-1, dated June 22, 2021
2020 Annual Radioactive Effluent Release Report
2020 Annual Radiological Environmental Operating Report
C21915 Package Characterization Waste Report, dated June 12, 2021

Miscellaneous (Cont'd)

DOM-QA-1, Nuclear Facility Quality Assurance Program Description, Revision 30
ETE-MP-2021-1035, Millstone Power Station Fire Protection Program Manual, Revision 0
Millstone Power Station Unit 1 Decommissioning Funding Status Report
Millstone Power Station Unit 1 Defueled Safety Analysis Report, Revision 15
Millstone Power Station Unit 1 Defueled Technical Requirements Manual
Millstone Power Station Unit 1 Defueled Technical Specifications

Procedures

CM-AA-FPA-101, Control of Combustible and Flammable Materials, Revision 15
MP-22-REC-BAP01, Radiological Effluent Monitoring and Offsite Dose Calculation Manual,
Revision 31
NF-AA-SNM-101, SNM Control and Inventory, Revision 3
ONP-505, Fire, Revision 006-03
SP 419, Spent Fuel Pool Island Instrumentation Calibration, Revision 4
SP 852, Spent Fuel Pool Chemistry Control, Revision 5
SP 2669B, Unit 1 Operator Logs and Inspections, Revision 1

Radiation Work Permit

1210002, Nuclear Station Operations and Maintenance
1210004, (HRA) High Radiation Area Entries
1210005, (LHRA) Locked High Radiation Area Entries
1210110, Spent Fuel Pool Activities

Radiological Surveys

MPS-M-20200719-5, Unit 1 #47 Drywell 14'6, dated July 29, 2020
MPS-M-20200729-7, Unit 1 #46 Drywell -8 Elevation, dated July 29, 2020
MPS-M-20200901-2, Unit 1 #17 Lower Level Radwaste, -20 Elevation, dated
September 1, 2020
MPS-M-20210421-1, Unit 1 #20 Rx Bldg. -26' Torus Room, dated April 21, 2021
MPS-M-20210503-1, Unit 1 #21 Rx Bldg. -26' and -8' NW Corner Room, dated May 3, 2021
MPS-M-20210524-9, Unit 1 #15 Rx Bldg. 108', dated May 24, 2021
MPS-M-20210610-5, Unit 1 #06 Turbine Bldg. 54' Deck, dated June 10, 2021
Quarterly High Radiation Area Audit, dated March 18, 2021
Quarterly High Radiation Area Audit, dated July 1, 2021

Work Orders

53102445515
53102509743
53102876550
53203260917
53203291132
53203308606

LIST OF ACRONYMS USED

CAP	corrective action program
Dominion	Dominion Energy, Inc.
IMC	inspection manual chapter
MS-1	Millstone Power Station Unit 1
MS-2	Millstone Power Station Unit 2
NRC	U.S. Nuclear Regulatory Commission
REMP	radiological environmental monitoring program
SAFSTOR	safe storage