



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

September 28, 2016

Docket No. 05000245

License No. DPR-21

David A. Heacock
President and Chief Nuclear Officer
Dominion Resources
5000 Dominion Blvd.
Glen Allen, VA 23060-6711

SUBJECT: DOMINION NUCLEAR CONNECTICUT, INC., MILLSTONE POWER STATION
UNIT 1 - NRC INSPECTION REPORT NO. 05000245/2016011

Dear Mr. Heacock:

On August 29 - 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection 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 observations by the inspectors, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with Rob Garver, Director, Nuclear Engineering, and other members of your organization on August 31, 2016, at the conclusion of the inspection. The enclosed report presents the results of this inspection. No findings of safety significance were identified.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; 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).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document 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.

D. Heacock

2

No reply to this letter is required. Please contact Mark Roberts at (610-337-5094) if you have any questions regarding this matter.

Sincerely,

/RA/

Raymond J. Powell, Chief
Decommissioning and Technical
Support Branch
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000245/2016011

cc: w/encl: Distribution via ListServ

D. Heacock

2

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cc: w/encl: Distribution via ListServ

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DATE	09/28/2016		09/28/2016		09/28/2016			

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

INSPECTION REPORT

Inspection No.	05000245/2016011
Docket No.	05000245
License No.	DPR-21
Licensee:	Dominion Nuclear Connecticut, Inc. (Dominion)
Facility:	Millstone Power Station, Unit 1 (MS-1)
Location:	Rope Ferry Road Waterford, CT 06385
Inspection Dates:	August 29 - 31, 2016
Inspectors:	Mark C. Roberts, Senior Health Physicist Decommissioning and Technical Support Branch Division of Nuclear Materials Safety Katherine Warner, Health Physicist Decommissioning and Technical Support Branch Division of Nuclear Materials Safety
Approved By:	Raymond J. Powell, Chief Decommissioning and Technical Support Branch Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Dominion Nuclear Connecticut, Inc.
Millstone Power Station Unit 1
NRC Inspection Report No. 05000245/2016011

An announced safety inspection was conducted on August 29 – 31, 2016 at MS-1. The inspectors reviewed MS-1's 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 inspectors, interviews with Dominion personnel, a review of procedures and records, and plant walk-downs. There are currently no ongoing decommissioning activities being conducted at MS-1. The NRC's program for overseeing the safe operation of a shut-down 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 was a single cycle, boiling water reactor with a thermal output of 2011 megawatts and a net electrical output of 652 megawatts. The plant went into commercial operation on December 28, 1970, and permanently ceased operations on July 17, 1998. Subsequently, the fuel was permanently removed from the reactor vessel and is currently stored in the spent fuel pool (SFP). MS-1 is in SAFSTOR and Dominion Nuclear Connecticut, 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/chemistry personnel from Millstone Unit-2 (MS-2) provide routine support functions to MS-1.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561.

2.0 Safe Storage (SAFSTOR) Performance and Status Review

- a. Inspection Scope Inspection Procedures 36801, 37801, 40801, 60801, 62801, 64704, 71111.01, 71801, 83750, 84750, 86750)

An announced safety inspection was conducted on August 29 – 31, 2016. The inspection consisted of observations by the inspectors, interviews with Dominion 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, Technical Specifications (TS), and technical requirements manual and assessed the adequacy of management oversight of SAFSTOR responsibilities for the MS-1 facility. Specifically, the inspectors reviewed the decommissioning management and staff organization and Dominion's implementation of SAFSTOR activities related to safe storage of radioactive material. The inspectors also conducted a walk-down to assess the material condition of the MS-1 facility (reactor building, the fuel-handling floor, building exterior, the roof-mounted decay heat removal system, and balance of plant) and discussed any design changes or modifications since the previous inspection.

The inspectors reviewed MS-1's program for the safe wet storage of spent fuel. The inspectors performed walk-downs of the SFP, the MS-2 control room, and associated support systems to assess material condition, configuration control, and system operation.

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 and surveillance, fire protection, adverse weather preparation, and decommissioning organization and staffing. The inspectors reviewed radiological survey reports, radioactive liquid effluent release permits, the annual REMP report, the annual effluent release report, condition reports, and a work order for maintenance on the SFP decay heat removal system.

The inspectors 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 inspectors confirmed that the SAFSTOR program was being effectively implemented. The inspectors verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the TS and TRM requirements and established procedures. The inspectors also confirmed that no dismantlement or decommissioning activities were performed since the previous inspection. The inspectors noted that progress was being made on the project to replace the MS-1 transformer and that upgrades to exterior temperature indications for decay heat removal components were in the review stage.

The inspectors determined that MS-1 was safely storing spent fuel in wet storage. The inspectors discussed the actions that would be taken by Millstone Power Station (Millstone) staff in the event that offsite power was lost to MS-1 and the decay heat removal system was inoperable. Millstone staff described that both local and MS-2 control room indications would provide notification of the event. MS-2 operators would be dispatched to manually start the emergency diesel generator to supply power, and, if necessary, drain and vent the decay heat removal system coolers if temperatures were below freezing, and then initiate system restart once the diesel generator was operational. The inspectors noted that due to the age of the fuel in the MS-1 SFP, SFP heat up will be very gradual, MS-1 staff would have many days to add make-up water to the pool and that multiple water sources were available. The inspectors also noted that Millstone performs a quarterly operational test of the MS-1 diesel generator.

As previously indicated, MS-2 operations and radiation protection staff support operations at MS-1. The MS-1 TS require that a certified fuel handler and a non-certified plant equipment operator are available onsite. The MS-2 shift managers and plant operators fill these rolls respectively at MS-1. The inspectors discussed training requirements and duty rosters with an MS-2 shift manager. The shift manager discussed that training for MS-1 duties included satisfactory performance of job performance measures, e.g. adding make-up water to the SFP, and periodic written examinations. The inspectors viewed the MS-1 duty roster and noted that the TS-required positions were appropriately staffed.

The annual radiological effluent and the annual REMP reports demonstrated that all calculated doses were below regulatory dose criteria of 10 Code of Federal Regulations (CFR) 50, Appendix I. The inspectors noted that spent filters from the SFP clean-up system were stored in the SFP. Dominion staff indicated that these filters would be aggregated with similar wastes from the operating units for subsequent offsite disposal. The inspectors noted that Dominion did not have any radioactive waste that was shipped for offsite disposal from MS-1 since the last inspection.

Findings or issues identified from audits, plant equipment operator's rounds, and staff observations were entered into the CAP. Dominion 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 August 31, 2016, the inspectors presented the inspection results to Rob Garver, Director, Nuclear Engineering, and other members of Dominion's staff. The inspectors confirmed that no copies of proprietary information were used during this inspection and none were removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

B. Bowen	Shift Supervisor, Health Physics
P. Bradley	Manager, Radiation Protection & Chemistry
W. Brown	Licensing Technical Lead
K. Carlson	Health Physics Technician
N. Coderre	Health Physics Technician
R. Garver	Director, Nuclear Engineering
J. Langan	Manager, Nuclear Station Licensing
R. Senn	Plant Equipment Operator
P. Sikorski	Shift Manager, MS-2; Certified Fuel Handler, MS-1
G. Sturgeon	Operations Nuclear Specialist MS-1
M. Sweet	Supervisor, Health Physics Operations

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

2015 Radioactive Effluent Release Report and Off-Site Dose Calculation Manual (REMODCM), April 28, 2016
2015 Annual Radiological Environmental Operating Report, April 28, 2016
AOP 2508, Loss of 23 kV OffSite Power, Revision 001-06
Audit 16-04; Radiation Protection/Process Control Program/Chemistry and Millstone Refueling, April 18, 2016 through May 5, 2016
C OP 200.13 Seasonal Weather Operations
C SP 600.22, Unit 1 Dry Fire Hose Station Flow Test, Revision 000
Defueled Safety Analysis Report
Millstone -1 2016 Liquid Waste Water Discharge Permits
Millstone Unit 1 Defueled Technical Requirements Manual
Millstone Power Station Unit 1 Permanently Defueled Technical Specifications (TS)
Millstone Unit 1 Makeup Water Capability for Spent Fuel Pool, December 9, 2005
MS-1 Operational Issues Tracking Report
MS-1 Radiation Surveys 2016
MS-2 Control Room Logs (selected August 2016 dates)
ONP 540 F, Loss of Normal Power, Revision 003-00
OP 310B SFPI Purification System
PI-AA-200, Corrective Action
Radiation Work Permit (RWP) 1160001 – Nuclear Safety & Licensing Millstone Unit 1, Task 5, External Oversight
SP 852, Spent Fuel Pool Chemistry Control
SP 2669B, Unit 1 Logs, Revision 004
SP 2669B, Unit 1 Operator Logs and Inspections, Revision 000-05
SP 2669B, Unit 1 Rounds, Revision 009
TR-MP-TPG-1850, Unit 1 Certified Fuel Handler (CFH) and Equipment Operator (EO) Training Program Guide, Revision 2
Work Order 53102977011, Motor Repair/Replacement “A” DHR Cooling Fan Assembly
Work Order 53102901028, Turbine Building Crane Maintenance

Condition Reports:

568971	569281	1017248
569114	569968	1017718
569120	570067	1020195
569227	570989	1039307
569279	571020	1041856
569280	1007282	

LIST OF ACRONYMS USED

CAP	Corrective Action Program
Dominion	Dominion Nuclear Connecticut, Inc.
IMC	Inspection Manual Chapter
MS-1	Millstone Power Station Unit 1
MS-2	Millstone Power Station Unit 2
Millstone	Millstone Power Station
NRC	U.S. Nuclear Regulatory Commission
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
SFP	Spent Fuel Pool
TS	Technical Specification