



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

July 6, 2012

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. 05000245/2012008

Dear Mr. Heacock:

On June 25 - 27, 2012, 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 regulation, and the conditions of your license. The inspection consisted of observations by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with William Bartron, Licensing Supervisor, and other members of your staff on June 27, 2012 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](http://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](http://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).

Please contact Laurie Kauffman (610-337-5323) if you have any questions regarding this matter.

Sincerely,

Marc S. Ferdas, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000245/2012008

cc: Distribution via ListServ  
State of Connecticut

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/RA/

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Decommissioning Branch  
Division of Nuclear Materials Safety

Enclosure: Inspection Report No. 05000245/2012008

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State of Connecticut

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 05000245/2012008  
Docket No. 05000245  
License No. DPR-21  
Licensee: Dominion Nuclear Connecticut, Inc. (Dominion)  
Address: Rope Ferry Road, Waterford, CT 06385  
Location Inspected: Millstone Power Station, Unit 1 (MS-1)  
Inspection Dates: June 25-27, 2012

Inspector: Laurie A. Kauffman  
Health Physicist  
Decommissioning Branch  
Division of Nuclear Materials Safety

Approved By: Marc S. Ferdas, Chief  
Decommissioning Branch  
Division of Nuclear Materials Safety

## **EXECUTIVE SUMMARY**

Dominion Nuclear Connecticut, Inc.  
Millstone Power Station Unit 1  
NRC Inspection Report No. 05000245/2012008

A routine announced safety inspection was conducted between June 25 and 27, 2012, by a Region I inspector at MS-1. The inspection included a review of operations and management oversight, maintenance, corrective action program implementation, and plant support activities while in safe storage (SAFSTOR) status. The inspection consisted of observations by the inspector, interviews with Dominion personnel, and a review of procedures and records. 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."

There are currently no ongoing decommissioning activities being conducted at MS-1. Based on the results of this inspection, no findings of safety significance were identified.

## **REPORT DETAILS**

### **1.0 Background**

MS-1 is located in the town of Waterford, Connecticut. MS-1 was a single cycle, boiling water reactor with a thermal output of 2011 megawatts and a net electrical output of 652.1 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. MS-1 is in SAFSTOR and Dominion plans to actively decommission MS-1 in parallel with the decommissioning of the operational units, after they have been permanently shutdown.

The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in IMC 2561. The inspection consisted of observations by the inspector, interviews with Dominion personnel, and a review of procedures and records.

### **2.0 Safe Storage (SAFSTOR) Performance and Status Review**

- a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 62801, 71801, 83750, 84750, 86750)

A routine announced safety inspection was conducted between June 25 and 27, 2012 at MS-1. The inspector reviewed the SAFSTOR program as outlined in the Defueled Safety Analysis Report (DSAR), Technical Specifications (TS) and Technical Requirements Manual (TRM) to assess the adequacy of management oversight of SAFSTOR responsibilities for MS-1. 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 discussed any design changes or modifications since the previous inspection; and assessed the material condition of MS-1 during plant tours of the reactor building, the fuel handling floor and the radioactive waste building.

The inspector observed the quarterly survey of the standby shutdown heat exchanger room and reviewed maintenance and surveillance tests for the spent fuel pool (SFP) cooling pumps and motors; the decay heat removal (DHR) pumps, fans, and motors; the ventilation fans and motors; and the emergency diesel generator (EDG) to verify that work was being performed within the established frequencies and that the equipment was being properly maintained.

The inspector reviewed activities and documentation associated with the following SAFSTOR programs: occupational exposure, radioactive effluent control, and site radiological environmental monitoring program (REMP). The inspector reviewed radioactive gaseous and liquid effluent release permits, the annual REMP report, and the annual effluent report, which included a summary of the radioactive waste management and transportation programs. The inspector also reviewed radioactive waste and transportation documents related to dry active waste generated from MS-1.

The inspector reviewed corrective action program (CAP) condition reports (CRs) associated with MS-1 to determine if issues were being properly identified and evaluated, and if corrective actions were appropriately prioritized in the CAP.

b. Observations and Findings

The inspector noted that there were no personnel changes within the Dominion organization related to the SAFSTOR activities and confirmed that the staff effectively implemented the SAFSTOR activities. The inspector confirmed that no design changes, or plant modifications were made since the previous inspection. The inspector 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 inspector also confirmed that no dismantlement or decommissioning activities were performed since the previous inspection. The annual radiological effluent and radiological environmental monitoring reports demonstrated that all calculated doses were below regulatory dose criteria of 10 CFR 50, Appendix I.

The inspector noted that no significant water intrusion was evident and the material condition of components had remained unchanged in the reactor building, the fuel handling floor and the radioactive waste building since the previous inspection. The inspector also noted that the maintenance and surveillance test results for the SFP cooling pumps and motors; the DHR pumps, fans, and motors; the ventilation fans and motors; and the EDG met the acceptance criteria defined in the procedures and the systems and components were operable and available for service.

The inspector determined that issues were entered into the CAP, and prioritized and evaluated commensurate with their safety significance. Corrective actions were implemented to address identified issues and were being tracked to closure using the CAP.

c. Conclusions

There are currently no ongoing decommissioning activities being conducted at MS-1. No findings of safety significance were identified.

**3.0 Exit Meeting Summary**

On June 27, 2012, the inspector presented the inspection results to Mr. William Bartron, Licensing Supervisor, and other members of the Dominion management and staff. The inspector confirmed that proprietary information was not removed from the site.

## **PARTIAL LIST OF PERSONS CONTACTED**

### **Licensee**

W. Bartron	Licensing Supervisor
J. Drzewianowski	Radiation Protection Technician
A. Elms	Organizational Effectiveness Manager
C. Gannon	Health Physicist, Radiation Protection
J. Lane	Radiation Protection and Chemistry Manager
E. Palmieri	Nuclear Maintenance Supervisor MS-1
L. Salyards	Licensing Engineer
G. Sturgeon	Operations Nuclear Specialist MS-1
P. Tulba	Radioactive Material Control Supervisor
S. Turowski	HP Technical Services Supervisor

## **ITEMS OPEN, CLOSED, AND DISCUSSED**

None

## **LIST OF DOCUMENTS REVIEWED**

MS-1 Radiation Surveys conducted between July 2011 and June 2012  
MS-1 Radiation Exposure (ALARA) Reports for 2011, and most current for 2012  
MS-1 Surveillance Form for Operator Logs and Inspections (Unit 1 rounds)  
Radioactive Waste Shipping Papers (No. 11-150) dry active waste, dated February 2011  
Micro ALARA Plan RP-AA-300, SFP System Instrumentation and Calibration  
RP-AA-220, Rev 1 "Radiological Survey Scheduling," effective May 20, 2012  
SP 852, Rev 4, "Spent Fuel Pool Chemistry Control," effective April 5, 2011  
SP-608AA, Rev 000, "Backup Diesel Generator Loaded Run," effective March 28, 2012  
ONP540 F, Rev. 002-03, "Loss of Normal Power," effective December 7, 2011  
OP312 I, Rev. 003, "Waste Water Evaporator System," effective February 2, 2012  
OP312 K, Rev. 000-01, "Waste Water Processing System," effective February 27, 2012  
OP328 A, Rev. 015-04, "Refueling Platform," effective January 9, 2012  
OP328 C, Rev. 024-02, "Main Hoist Operations," effective January 9, 2012  
OP360, Rev 001-03, "Programmable Logic Controller," effective January 9, 2012  
MS-1 CRs between June 2011 and June 2012  
CR436420; CR478363; CR401895; CR434744; CR469912; CR465958; CR465414; CR466007

## **LIST OF ACRONYMS USED**

CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
DHR	Decay Heat Removal
Dominion	Dominion Nuclear Connecticut, Inc.
DSAR	Defueled Safety Analysis Report
EDG	Emergency Diesel Generator
IMC	Inspection Manual Chapter
IP	Inspection Procedure
MS-1	Millstone Power Station Unit 1
REMP	Radiological Environmental Monitoring Program
SAFSTOR	Safe Storage
SFP	Spent Fuel Pool
TRM	Technical Requirements Manual
TS	Technical Specification