



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
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December 21, 2000

Docket No. 05000245

License No. DPR-21

S. E. Scace
Director
Northeast Nuclear Energy Company
Millstone Unit 1
Nuclear Oversight and Regulatory Affairs
c/o Mr. D. A. Smith, Manager - Regulatory Affairs
P.O. Box 128
Waterford, CT 06385

**SUBJECT: INSPECTION 05000245/2000016, NORTHEAST NUCLEAR ENERGY
COMPANY, MILLSTONE UNIT 1, WATERFORD, CONNECTICUT**

Dear Mr. Scace:

On December 8, 2000, the NRC completed an inspection at your Millstone Unit 1 facility. The findings of the inspection were discussed with Mr. Larry Temple and others of your staff on December 14, 2000. The enclosed report presents the results of that inspection.

During the three month period covered by this inspection, you conducted decommissioning activities at Millstone Unit 1 in a safe manner, and maintained appropriate focus on the safe storage of fuel in the spent fuel pool.

Within the scope of this inspection, no violations were identified.

In accordance with 10 CFR 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html>. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

/RA by Marie Miller Acting For/

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

Enclosure:
Inspection Report No. 05000245/2000016

cc w/encl:

B. D. Kenyon, President and Chief Executive Officer - NNECO
L. J. Olivier, Senior Vice President and Chief Nuclear Officer - Millstone
F. C. Rothen, Vice President - Nuclear Work Services
J. T. Carlin, Vice President - Human Services - Nuclear
D. A. Smith, Manager - Regulatory Affairs
L. Temple, General Manager - Unit 1
W. Perks, Director - Unit 1 Operations
R. Walpole, Supervisor - Nuclear Safety and Regulatory Affairs
B. S. Ford, Director - Unit 1 Decommissioning
T. P. White, Manager - Unit 1 Nuclear Oversight
L. M. Cuoco, Senior Nuclear Counsel
State of Connecticut SLO Designee
First Selectmen, Town of Waterford
D. Katz, Citizens Awareness Network (CAN)
T. Concannon, Co-Chair, NEAC
R. Bassilakis, CAN
J. M. Block, Attorney, CAN
G. Winslow, Citizens Regulatory Commission (CRC)
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REGION I

INSPECTION REPORT

Inspection No. 05000245/2000016
Docket No. 05000245
License No. DPR-21
Licensee: Northeast Nuclear Energy Company
Location: Waterford, Connecticut 06385
Inspection Dates: September 15 - December 8, 2000

Inspector: Todd J. Jackson, CHP
Health Physicist

Approved By: Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Northeast Nuclear Energy Company
NRC Inspection Report No. 05000245/2000016

This inspection included aspects of licensee operations, engineering, and plant support during decommissioning activities. The report covers a three-month period of announced inspections by one regional inspector. No violations were identified.

Operations

The licensee had completed preparations for cold weather in accordance with the applicable approved procedure, and by the deadline specified in the procedure. (O2)

Engineering

The licensee's process for evaluating the abandonment and decommissioning of systems, structures, and components (SSCs) was thorough and structured, as preparation for the plant reaching "cold and dark" status continued. Plant Operations Review Committee reviews observed by the inspector were appropriately deliberate and challenging. (E2.1)

The licensee had a program for appropriately identifying and marking SSCs that are necessary to be operable in order to safely support decommissioning of Unit 1. Although the procedure for the program had not yet been finalized, it included adequate guidance to define the program and was being implemented. (E2.2)

Plant Support

The inspector noted that the licensee's approach to resolving outstanding issues related to deficiencies in the Unit 1 liquid radwaste processing systems was evolving in consideration of the transition from operating plant to decommissioning status. Therefore, Violation 01172 (EEI 96-003-01) will remain open pending the licensee's implementation of a revised Radwaste Remediation Program (VIO 01172 (EEI 96-003-01)). (R2.1)

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REPORT DETAILS

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71801)

Millstone 1 is in decommissioning status. Decommissioning work during this period included activities to separate Unit 1 systems from Units 2 and 3, and to achieve a “cold, dark and dry” status for as much of Unit 1 systems, structures, and components (SSCs) as possible. The licensee continued to conduct decommissioning activities in a safe manner.

O2 Operational Status of Facilities and Equipment

a. Inspection Scope (71714)

The inspector reviewed the licensee’s preparations for cold weather and protection of plant equipment from freezing.

b. Observations and Findings

The licensee had completed implementation of procedure OP 213, Cold Weather Preparations, Rev. 1, on September 28, 2000. The procedure requires completion by October 1, to confirm the availability of adequate heating capability in areas identified as requiring heat. Building heat will be maintained for the 2000-2001 winter season, with the target of achieving cold-and-dark status in Unit 1 structures by April 1, 2001. The term “cold-and-dark” indicates that SSCs will be placed in a condition not requiring heated space.

c. Conclusions

The licensee had completed preparations for cold weather in accordance with the applicable approved procedure, and by the deadline specified in the procedure.

II. Engineering

E2 Engineering Support of Facilities and Equipment

E2.1 Reclassification of Plant Systems

a. Inspection Scope (37801)

The inspector reviewed the licensee’s plant System Evaluation and Recategorization Team (SERT) program activities to determine which systems must be maintained operable and which can be abandoned for decommissioning.

b. Observations and Findings

The licensee described the SERT program, which is defined in the following Unit 1 procedures:

DEC 1502, Rev. 0	System Evaluation and Categorization
DEC 1503, Rev. 0	System Transition Process
U1 OPE GDL 10.11, Rev.4	Guidelines for SERT Implementation of System Preparation for Decommissioning

The SERT process is a formal approach for engineering evaluations to identify the SSCs necessary to perform the operational functions required to be available during the decommissioning process, such as safely storing and handling spent fuel and radioactive materials, and to comply with regulatory requirements or licensing commitments. The SERT process assures the configuration of the plant is controlled and that drawings and documents accurately reflect the current plant condition.

The SERT process is the licensee's mechanism to determine which systems can be abandoned, thus eliminating related maintenance activities and procedures. For systems not required to be operable, SERT provides an evaluation and review by the Plant Operations Review Committee (PORC) to assure they can be safely abandoned. Procedure DEC 1503 is then used to control the transition of abandoned SSCs from the responsibility of Plant Operations to the Decommissioning Director for future dismantlement.

On December 4, 2000, 158 plant systems were identified as appropriate for abandonment. The transition over to Decommissioning had been completed for 82 of these systems, with the goal of completing abandonment of all 158 SSCs by April 1, 2001, for achievement of the "cold and dark" condition. The inspector observed the PORC meeting and review of two SERT packages on October 4, 2000, including abandonment of the primary containment isolation system, and also the reactor vessel and instrumentation. PORC review included the 10 CFR 50.59 screening determinations of whether there was any unresolved safety question (USQ) regarding the impact on Unit 2 or Unit 3 from abandonment of these SSCs. The screenings concluded there was no USQ, and the SERT packages were approved by PORC.

Also presented and reviewed at the PORC meeting were the following:

- Safety Evaluation S1-EV-00-0046, Rev.0 (Cold and Dark Mod for Fire Protection/Underground Fire Main Cut and Cap and Interior Piping Mods)
- DPR DM1-01-0129-00 for Cold and Dark Mod for Fire Protection/Underground Fire Main Cut and Cap and Interior Piping Mods

The licensee stated that although Safety Evaluation S1-EV-00-0046, Rev. 0, was not required based on a 50.59 screening, future additional aspects of the fire protection modifications will clearly require safety evaluation and concluded that the conservative and prudent approach for the modifications presented at the October 4 PORC was therefore to also perform a safety evaluation for these aspects of the project.

c. Conclusions

The licensee's process for evaluating the abandonment and decommissioning of SSCs was thorough and structured, as preparations for the plant reaching "cold-and-dark" status continued. PORC reviews observed by the inspector were appropriately deliberate and challenging.

E2.2 Plant Equipment Identification and Marking Program

a. Inspection Scope (37801)

The inspector reviewed the licensee's program for identification and marking of SSCs necessary for spent fuel pool cooling.

b. Observations and Findings

The inspector observed various SSCs marked with orange paint in different areas of the plant. The licensee described the markings as intended to identify those SSCs that supported the spent fuel cooling systems and were to remain in operation. The licensee had assigned one person as the coordinator for the orange marking program, and described the program as defined in a draft procedure (identified as DEC 1516). The coordinator was responsible for assuring that all SSCs required to remain in service following completion of the SERT process, and when the plant reaches the "cold-and-dark" status, were clearly identified with orange markings. One of the stated program objectives is to minimize the possibility of decommissioning work being performed on the wrong SSCs. The inspector observed that SSCs in the vicinity of the spent fuel pool were marked appropriately, in accordance with the guidelines for marking and controlling of marking in the draft procedure.

c. Conclusions

The licensee had a program for appropriately identifying and marking SSCs that are necessary to be operable in order to safely support decommissioning of Unit 1. Although the procedure for the program had not yet been finalized, it included adequate guidance to define the program and was being implemented.

IV. Plant Support

R2 Status of RP&C Facilities and Equipment

R2.1 (Update) Violation 01172/EEI 50-245/96-003-01: Liquid Radwaste Management System

a. Inspection Scope (37801)

The inspector reviewed the extent of the licensee's implementation of their Radwaste Remediation Program that followed the NRC's identification and subsequent issuance of a violation as detailed in NRC Inspection Report 50-245/96-03. This violation was associated with changes made to the liquid waste processing systems, making the systems different than as described in the Updated Final Safety Analysis Report (UFSAR) without evaluating whether an USQ existed. This review included the licensee's evaluation of liquid radioactive waste processing systems and future strategy for handling liquid wastes.

b. Observations and Findings

Significant deficiencies in the liquid radwaste processing systems were documented by the NRC in Inspection Reports 50-245/95-35 and 50-245/96-03, and identified as Violation 01172/EEI 50-245/96-003-01. The licensee's plans for addressing these deficiencies have been changing in consideration of the decommissioning status of Unit 1. The licensee stated that plans for the liquid radwaste systems included the likely abandonment and decommissioning of all systems rather than making improvements to the physical condition of the equipment. An engineering evaluation of the available options for replacing the installed systems with modular systems was in progress during this inspection. Included in the licensee's evaluation and analysis were identification of the sources of liquid wastes and possible methods to reduce or eliminate the sources, with the goal of achieving "cold-and-dark" status in radwaste by April 1, 2001.

c. Conclusions

The inspector noted that the licensee's approach to resolving outstanding issues related to deficiencies in the Unit 1 liquid radwaste processing systems was evolving in consideration of the transition from operating plant to decommissioning status. Therefore, Violation 01172 (EEI 96-003-01) will remain open pending the licensee's implementation of a revised Radwaste Remediation Program (VIO 01172 (EEI 96-003-01)).

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection period via teleconference on December 6, 2000. The licensee acknowledged the findings presented.

The inspector also attended a meeting of the Millstone 1 Decommissioning Advisory Committee (MIDAC) on October 5, 2000, and presented a summary of NRC activities related to Millstone 1.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Temple, Unit 1 General Manager
W. E. Perks, Director, Unit 1 Operations
B. Ford, Director, Decommissioning & Nuclear Safety and Regulatory Affairs
J. Veglia, Manager, Engineering Decommissioning, Unit 1
W. McCollum - Unit 1 Operations Manager
D. Meekhoff, Unit 1 Operations
P. Quinlan, Unit 1 Decommissioning
S. Thickman - Corrective Actions
K. Gross, Unit 1 Compliance

INSPECTION PROCEDURES USED

37801	Safety Reviews, Design Changes, and Modifications
71714	Cold Weather Preparations
71801	Decommissioning Performance and Status Review at Permanently Shutdown Reactors