

# NORTHEAST UTILITIES



THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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November 8, 1989  
Docket No. 50-245  
50-336  
50-423  
B13397

Re: Inspection Report  
Nos. 50-245/89-80,  
50-336/89-80,  
50-423/89-80

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Reference: 1. B. A. Boger letter to E. J. Mroczka, "Combined Inspection  
Nos. 50-245/89-80; 50-336/89-80 and 50-423/89-80," dated  
September 1, 1989.

Gentlemen:

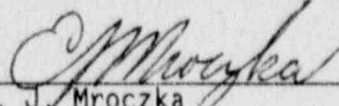
Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
Response to Combined Inspection Nos. 50-245/89-80;  
50-336/89-80 and 50-423/89-80

In a letter dated September 1, 1989 (Reference 1), the NRC Staff transmitted to Northeast Nuclear Energy Company (NNECO) the report of the NRC Special Maintenance Team Inspection conducted from April 30 to June 16 and July 10-14, 1989, at Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3. Within the scope of this inspection, no violations were observed. However, the NRC Staff requested that NNECO provide in writing the actions taken or planned regarding the weaknesses identified in Appendix 3 to this report. In addition, the NRC Staff requested NNECO to provide the program plan outline and implementation schedule to assure dedication of commercial-grade items (CGIs) including parts and materials currently in stock and for any additional procurement of CGIs prior to use in safety-related systems and components. The requested information is provided in Attachment 1.

We trust you will find this information satisfactory and we remain available to answer any questions you may have.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
\_\_\_\_\_  
E. J. Mroczka  
Senior Vice President

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cc: W. T. Russell, Region I Administrator  
M. I. Boyle, NRC Project Manager, Millstone Unit No. 1  
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2  
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3  
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2, and 3

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Attachment 1

Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
Response to Combined Inspection Nos. 50-245/89-80;  
50-336/89-80 and 50-423/89-80

November 1989

Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3  
Response to  
Combined Inspection Nos. 50-245/89-80; 50-336/89-80 and 50-423/89-80

Provided below as items (1) through (6) are NNECO's responses to the Summary of Weaknesses, as identified in Appendix 3 of the referenced Combined Inspection Report. Additionally, item (7) addresses the NRC Staff's concerns associated with the program plan outline and implementation schedule to assure dedication of commercial-grade items (CGIs) for use in safety-related systems and components. These items were identified during the NRC Staff's Special Maintenance Team Inspection conducted from April 30 to June 16 and July 10-14, 1989 at Millstone Nuclear Power Station, Unit Nos. 1, 2, and 3. NNECO believes that the planned and completed actions identified below should enhance our maintenance activities.

NRC Summary of Weaknesses

1. Unit 2's high person-rem radiation exposure resulting from steam generator problems.

Response:

Millstone Unit No. 2 has had extensive steam generator problems which originated during Cycle 1 operation due to secondary chemistry controls. A tube sleeving program was initiated during 1983-1986 to repair numerous tube pitting defects without abandoning the tubes. The extensive scope of the sleeving projects required that the channel heads be chemically decontaminated to reduce the installation person-rem exposure. During the 1985 refuel, a secondary chemical cleaning was undertaken to rid the steam generators of their sludge piles which had been determined to be the cause of tube pitting. Sludge lancing is performed every refueling outage to minimize sludge pile inventories. More recently, plant operation with caustic secondary chemistry has resulted in tube cracks. This has precipitated increased eddy-current testing (ECT) inspections and tube repairs requiring stabilization. During the 1989 refuel outage, Millstone Unit No. 2 was notified by Westinghouse that mechanical tube plugs were subject to cracking due to primary water stress corrosion. An extensive repair program was developed and undertaken to repair the cracked plugs and eventually replace susceptible plugs.

Every responsible effort has been made by NNECO to design, procure, or develop improved techniques to inspect and repair the steam generators. Robotics (such as Westinghouse's ROSA and SM-10C and Combustion Engineering's Genesis and SM-10) are used whenever possible to minimize the channel head entries. ECT probes are constantly being developed and improved to provide faster and more accurate test results. Training, for all phases of steam generator work, is required before manual entries are authorized. An accurate and detailed loop/channel head mockup is available on site for initial and refresher training. ALARA reviews are conducted for all major steam generator evolutions to determine the best techniques and protection before the job is



undertaken. Plant secondary chemistry is maintained at the highest possible level to preclude new problems from surfacing or old ones from reappearing.

Refuel outage exposures were reviewed since the first extensive steam generator repair effort in 1981. As can be seen in the graph located on page 5, great strides have been made to reduce cycle exposures from a high of 2176 person-rem in 1983. NNECO will continue to investigate and specify steam generator inspection and repair techniques which further reduce overall cycle person-rem.

2. Greater attention to detail is needed while performing housekeeping and configuration control walkdowns in all three units.

Response:

Each unit has written specific Unit Instructions addressing housekeeping criteria with the general goals of increasing plant safety, avoiding fire hazards, and reducing radioactive waste. Each instruction provides for a weekly walkdown by plant management representatives covering specific plant areas. In addition, a new Administrative Control Procedure, "Administration of Plant Design Change Turnover and Preoperational Testing," was recently approved. This procedure specifically addresses configuration control walkdown requirements for newly installed projects and modifications.

3. NPRDS data is not typically used by Unit 3 maintenance and I&C departments.

Response:

NNECO realizes the benefits of NPRDS. An NPRDS Task Force has been created to evaluate how NNECO will manage the NPRDS program. The task force consists of department head level personnel for both Millstone Nuclear Power Station and our Haddam Neck Plant under the direction of the Millstone Unit No. 1 Superintendent. This task force will determine an NPRDS usage policy, standards of performance, and an action plan for achieving established goals. One of the improvement areas is to review the Component Failure Analysis Report. This review will be conducted on a department level. Recommendations to improve the reliability of equipment are expected. These recommendations will be tracked via existing systems.

4. NEO Policy Statement No. 31, "Nuclear Plant Maintenance," is lacking definition of lines of responsibility and who periodically reviews and updates the policy statement.

Response:

As defined in the policy statement, the Vice President, Nuclear Operations retains responsibility for the conduct of nuclear plant maintenance. This responsibility is delegated to the functional organization chain from the respective Unit Superintendents to the Maintenance Supervisors.

Policy statements intentionally reflect the philosophy of how we conduct business as directed by the Senior Vice President of Nuclear Engineering and Operations. Therefore, we do not expect to routinely change policy statements since substantial changes in how business is to be conducted are not frequently made by the Senior Vice President.

5. PMMS maintenance planning group staffing for Unit 1 during outage periods was minimal as evidenced by the quantity of overtime worked by the PMMS maintenance planner.

Response:

The significant overtime worked by the PMMS maintenance planner can be largely attributed to the recent hiring and training of a PMMS assistant planner. The assistant has since become more familiar with his job function and can be more heavily depended upon to support the planner. Management will be monitoring this area more closely. Additionally, the department is now focusing additional technical support on the PMMS group.

6. Work order procedure is weak in defining requirements for retests and acceptance criteria.

Response:

The Administrative Control Procedure on work orders was revised on October 17, 1989 to better address the documentation of work scope. Work order instructions will be improved to more clearly specify the work to be done and the retest necessary to confirm that the equipment is ready for service. A comprehensive post-maintenance testing guideline will be developed for all three units. Appropriate INPO guidelines will be used to develop this program.

7. Commercial Parts Program Plan and Implementation Schedule

Although this item was not identified as an inspection weakness, the Commercial Parts Program was called out specifically as requiring a response. NNECO has established a Material Control Group/Procurement Engineering Section (MCG/PES) to review all QA purchase requisitions and commercial grade part dedications. This group is currently staffed with a representative from each unit Engineering Department, and additional manpower will be provided through use of outside contractors starting January 1, 1990. Current duties and responsibilities are as follows:

- a. Perform technical and QA review of all QA purchase requisitions originating at Millstone Station.
- b. Assist departments in dedicating Commercial Grade Items (CGI) and document all CGI dedication requirements.

- c. Develop recommendations for addressing all QA items stocked as replacement/spare parts for plant equipment in the Millstone warehouse that were not procured as engineered, Category I items.
- d. Develop recommendations for addressing a sample of CGIs installed in each unit to ensure that they meet acceptable critical attributes/-dedication.

Items (a) and (b) have been implemented, and items (c) and (d) will commence when staffing levels are augmented. This is currently scheduled to commence in 1990.



### CYCLE EXPOSURES

1981-1988

