

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-423/80-06

Docket No. 50-423

License No. CPPR-113 Priority -- Category A

Licensee: Northeast Nuclear Energy Company

P.O. Box 270

Hartford, Connecticut 06101

Facility Name: Millstone Nuclear Power Station, Unit No. 3

Inspection at: Waterford, Connecticut

Inspection conducted: August 20-21, 1980

Inspectors: *B. W. McLaughlin*
for R. Feil, Reactor Inspector

September 12, 1980
date signed

_____ date signed

_____ date signed

Approved by: *B. W. McLaughlin*
R. W. McLaughlin, Chief, Projects Section
RC&ES Branch

September 10, 1980
date signed

Inspection Summary:

Inspection on August 20 and 21, 1980 (Report No. 50-423/80-06)

Areas Inspected: Routine unannounced inspection by a regional based inspector of licensee action on previous inspection findings, facility tour and reactor vessel installation records review. The inspection involved 16 inspector hours on-site by 1 regional based inspector.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

Northeast Utilities Service Company (NUSCO)

- *Mr. K. W. Gray, Jr., Supervisor CQA
- *Mr. S. Orefice, Superintendent New Site Construction
- *Mr. J. L. Peterson, Senior Project Technician
- *Mr. S. R. Toth, System Superintendent - Generation Construction

Stone and Webster Engineering Company (S&WEC)

- Mr. W. B. Anderson, Assistant Supervisor FQC
- Mr. T. J. Bilodeau, Senior Construction Engineer
- *Mr. J. G. Kappas, Superintendent of Construction
- *Mr. W. Mackay, Resident Manager
- *Mr. M. R. Matthews, Assistant Superintendent, FQC
- *Mr. A. M. Prussi, Resident Engineer
- Mr. W. W. Orr, Senior Engineer FQC
- Mr. J. D. Simmons, Rigging Supervisor
- *Mr. F. S. Sullivan, Resident Engineer

*Denotes those present at exit interview.

The inspector conferred with other licensee and contractor personnel during the course of the inspection.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (423/80-04-02): Broken bolts in Polar Crane. An analysis of a failed bolt was made by Franklin Research Institute. The conclusion was 1) the bolt met microstructure and hardness for ASTM A490 and 2) the bolt failed because of excessive torque. The licensee had a bolt tested by Bridgeport Testing Laboratory, Inc. They confirmed that the bolt met ASTM A490 requirements. Testing on additional bolts using a torque wrench and multiplier were made to determine a torque-tension relationship. The results were so scattered that a meaningful comparison could not be made. The licensee replaced all bolts on the crane. Tightening of the replaced bolts was made without the torque wrench in accordance with the requirements of the American Institute of Steel Construction (AISC). The original torque wrench was verified to be in calibration. The licensee concluded that the problem with the bolts was not reportable under 10 CFR 50.55e since it did not meet the criteria as stated in Stone and Webster Engineering Company Quality Standard 16.2.

(Open) Unresolved Item (423/80-05-01): Possible deficiency in reactor vessel outlet nozzle safe-ends. On August 18, 1980 the reactor vessel outlet nozzle safe-ends were acid etched to determine the interface between the stainless steel safe-end forging and the inconel attachment weld. Each nozzle was etched with a solution of 18% hydrochloric acid and 30% hydrogen peroxide (50/50 mixture). The length of the safe-end forgings was measured. The shortest length measured was 5/16" on loop 'B' outlet nozzle. All the measurement results are being evaluated by Westinghouse (W) and Combustion Engineering (CE), fabricator of the reactor vessel.

The inspector was informed that the licensee did not consider the possible deficiency in the reactor vessel safe ends a potential safety problem and did not consider it to be reportable in accordance with 10 CFR 50.55(e).

3. Facility Tour

The inspector observed work activities in progress, completed work and plant status in several areas of the facility during the course of the inspection. Presence of quality control inspectors, quality control records, conformance with procedural requirements and equipment preservation was observed. The inspectors conferred with craft personnel, supervision and quality inspection personnel as such personnel were available in the work areas.

Specifically, the inspector noted an unprotected mechanical shock absorber exposed to work hazards in cubicle B of the containment building. The licensee took appropriate action to cover the exposed component. The power to a Limitorque motor heater was observed to be off. Subsequently the licensee found 4 units without heater power. Action was initiated to correct the deficiency. Routine surveillance of heaters is conducted on a monthly basis. This surveillance was scheduled for the week of the inspection and would have been observed by the S & Q QC person doing the surveillance inspection. The inspector was apprised of the status of temporary welding of unistrut to the ceilings in the containment building and the status of reject tags on installed components.

The inspector observed in part the installation of the primary pump volute in cubicle C of the containment building. The inspector noted the presence of QC personnel and the adherence to the procedure during the movement from storage to the installation of the volute in the cubicle.

No items of noncompliance were observed.

4. Reactor Vessel

The inspector was informed that the reactor vessel was installed on July 26, 1980. Subsequently alignment and final positioning was made. The licensee

stated that no problems were encountered and that the installation took place in accordance with the procedure.

The inspector verified that procedures exist for inspecting the reactor vessel for protection after it was installed. S&WEC Quality Standard QS-13.12, Material and Equipment Maintenance, specifies that FQC shall perform verification inspections of equipment for various attributes. The inspector verified that storage inspections were performed on a monthly basis and documented on Inspection Report Forms T 158E and Equipment Storage History Card.

Quality Standards for the lifting and handling of the reactor vessel were verified by the inspector. S&WEC Quality Standard QS-13-1 establishes a program for the control of rigging equipment and lifting operation which requires the QA Department to observe and document certain attributes during Class A and B lifts. S&WEC Quality Standard QS-10.17 establishes a program for control of QA Category 1 and other project designated structural steel erection.

The inspector reviewed Inspection Reports X0040015 and X0040016 which documented the QC observation and inspection of the movement and the lifting of the reactor vessel. The following inspection reports which documented the setting and adjustment of the reactor vessel were reviewed by the inspector.

Inspection Report M0000040 dated July 16, 1980 - Torquing of Lubrite Pads to the Neutron Shield Tank - 6 cap screws in each of the 4 lubrite pads were torqued to 100 ft lbs in accordance with paragraph 6.2.1 of FCP 289, Final Setting and Alignment of Reactor Vessel.

Inspection Report M0000044 dated July 28, 1980 - Setting of Reactor Vessel in accordance with FCP 288, Reactor Vessel Installation.

Inspection Report M0000045 dated July 30, 1980 - Setting of Reactor Vessel - 4 each vertical restraint blocks were bolted to the reactor vessel. Bolt Data Sheets document installation of bolts and torque wrench calibration.

Inspection Report M0000046 dated August 4, 1980 - Alignment of Reactor Vessel - All adjusting screws were torqued to 500 ft lbs. A dial indicator was used to monitor the movement of the reactor vessel during torquing.

Inspection Report M0000049 dated August 4, 1980 - Leveling of Reactor Vessel - The reactor vessel was leveled by using the internal seating flange as the datum plane. The vessel was level within 0.002" as measured at 4 points on the flange.

The inspector verified that documentation in accordance with FCP-289, Final Setting and Alignment of Reactor Vessel, was completed as required. Hold points for QC inspection were made. Measurement forms for gib and vertical restraint, gib and nozzle support pad, bottom slot and top vertical restraint pad were completed in accordance with the procedure. No items of noncompliance were identified.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved items discussed during the inspection in Paragraph 2.

6. Exit Interview

The inspectors met with licensee's representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 21, 1980. The inspectors summarized the findings of the inspection. The licensee acknowledges the inspectors comments.