

U. S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-423/82-11

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 3

Inspection at: Waterford, Connecticut

Inspection conducted: August 2-31 and September 1-10, 1982

Inspectors: J. C. Mattia  
J. C. Mattia, Senior Resident Inspector

9/23/82  
date signed

\_\_\_\_\_  
date signed

Approved by: T. C. Elsass  
T. Elsass, Chief, Reactor Projects  
Section 1B, DRPI

10/4/82  
date signed

Inspection Summary:

Unit 3 Inspection on August 2-31 and September 1-10, 1982, Report No. 50-423/82-11  
Areas Inspected: Routine, onsite regular and backshift inspection by the resident inspector (125 Hrs.). Areas inspected: Follow up of previous inspection findings, electrical cable storage, document control, piping activities, welding, reactor pressure vessel internals, cadwelding, electrical supports and plant tours.

Violations: Two - Failure to follow design specifications when storing electrical cables (Detail 5); and failure to follow the requirements of document control procedure for use of drawings for construction (Detail 6).

DETAILS

1. Persons Contacted

Northeast Utilities Service Company (NUSCO)

F. Comstock, FQA Technician  
K. Gray, Construction QA Supervisor  
W. Langdon, Construction Engineer  
K. Murphy, FQA Specialist  
E. Peckham, FQA Specialist  
J. Putnam, Senior Construction Engineer  
T. Sullivan, Resident Engineer - New Site Construction  
S. Toth, Superintendent - New Site Construction  
R. Vaccaro, FQA Technician

Stone and Webster Corporation (S&W)

J. Carty, Site Engineering Group Manager  
R. Flodstrom, Assistant Superintendent Field QC  
J. Kappas, Superintendent of Construction  
W. MacKay, Resident Manager  
G. Marsh, Senior Engineer, Welding/NDE  
M. R. Matthews, Assistant Superintendent Field QC  
A. Morales, Field QC Inspector  
S. Morris, Senior Field QC Engineer  
P. Nelson, Engineering Assurance Engineer  
W. Orr, Senior Field QC Inspector  
L. Peterson, Field QC Inspector Supervisor  
R. Scannel, QA Program Administrator (Boston)  
K. Snyder, Senior Field QC Engineer  
G. Turner, Superintendent, Field QC  
W. Voss, Senior Field QC Engineer  
G. Wilson, Field QC Inspector

Westinghouse Corporation

E. Harlow, Site Representative  
C. Peterson, Site Representative

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

## 2. Plant Tours

The inspector observed work activities in progress, completed work, and the construction status in several areas of the plant. The inspector examined work for any obvious defects or noncompliance with Regulatory requirements or license conditions. Particular note was taken of the presence of Quality Control Inspectors and Quality Control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation.

No violations were identified during the various tours conducted; however, the following conditions were observed:

- a. The inspector noted excessive debris in the Auxiliary Building Cubicles housing the four Filtration Assemblies identified as: 3HVR-FLT-1B, -2B, -1A and -2A. The licensee was informed and the equipment and the area was cleaned.
- b. The inspector noted that several of the Rock Anchors in the Auxiliary/Service Building were not completely installed. This was specifically discussed during Inspection 423/81-13, and the NRC Inspector was informed at that time that installation would be complete within a month. The licensee currently feels that work will be completed by September 30, 1982. The inspector informed the licensee that he would follow this during a subsequent inspection.
- c. The inspector noted that there was excessive water in the forms of the Discharge Tunnel Roof (Placement #C-5911). The starter mix was being placed adjacent to this pool of water. The inspector informed S&W of his concern, and the condition was corrected.

## 3. Licensee Action On Significant Deficiency

The licensee issued a clarification on July 20, 1982 of their final report which was issued on February 25, 1980. During a previous inspection (423/82-04), the inspector found several discrepancies when attempting to review the action taken to correct this significant deficiency. With the licensee's clarification letter and the affected drawings, the inspector was able to verify that the significant deficiency was corrected.

This item is considered closed (423/80-00-01)

## 4. Licensee Action On Previous Inspection Findings

- a. (Closed) Violation (423/82-04-04): The S&W Field QC organization did not fully implement the requirements in Procedure QAD 2.1 for continuing education. The inspector verified that the following scheduled four courses which were not presented prior to the violation

were presented and attended by the required Field QC personnel:

<u>Course (Old) No.</u>	<u>Course (New) No.</u>	<u>No. of Attendees</u>
28-JBC-0161	QAD-JA-CB-0100	119
63-JOE-0600	QAD-JB-QO-0100	119
63-JFE-0650	EAD-KB-BF-4300	109
28-SAG-0080	QAD-JG-DG-0100	30

The inspector also reviewed the attendance reports for the three non-destructive examination courses identified as 28-FCE-0030, 28-FCE-0020, and 28-IEE-0500, and verified that the attendance reports for all courses presented on site are being kept at the MS-3 site.

An inspection was conducted to verify that the S&W Field QC organization is currently complying with the requirements of Continuing Education (CE) Procedure QAD 2.1. The inspector reviewed the monthly CE forecast for July-December 1982. This forecast listed two CE courses: QAD-JEH-P0100 and QAD-JAE-00200 scheduled for August. A S&W Field QC memorandum dated August 5, 1982, listed several FQC personnel who were required to attend. The inspector verified that the attendees of these courses were also on the required list.

This item is considered closed.

- b. (Open) Violation (423/82-04-03): The RHR pump alignment plates were being leveled by grinding the support plate which was contrary to requirements specified in Drawing EV-52A, Revision 5, and its associated design change E&DCR Number F-J-6640. The inspector reviewed the engineering disposition on the nonconformance report No. 1236, which accepted the grinding that encroached on the minimum material thickness allowed by ASTM A6, based upon ample factor of safety. The inspector reviewed engineering change E&DCR #F-P-7758 to Specification 914 which will allow construction to remove uneven material due to warpage. This disposition allows support material to be removed beyond tolerance specified in ASTM A6 for a given thickness. The NRC inspector questioned this disposition and asked S&W site engineering that if support designs are based on minimum material thickness of support material, then this E&DCR voids design calculations. S&W is to review the situation and, if necessary, revise E&DCR #F-P-7758.
- c. (Open) Violation (81-12-04): The inspector continued the ongoing review of the licensee's corrective action on Document Control. The following S&W Audit results were reviewed:

<u>Date (Wk. Ending)</u>	<u>No. Dwgs. Checked</u>	<u>No. Dwg. Sta. Checked</u>	<u>% Error</u>
8/13/82	631	61	0.32
8/20/82	454	50	0.22
8/27/82	569	58	0.77
9/3/82	620	61	0.48

The inspector will re-inspect this area at a subsequent inspection.

- d. (Closed) Unresolved Item (423/82-02-01): S&W was using excerpts from design documents (Drawings & Specifications) for field procured items. The excerpts are known as "Sketches" for drawings and "Attachments Nos. 1, 2, etc.", and have now been formalized and require Engineering and Field QC approvals. The inspector reviewed the following S&W Field Purchase Requisitions (FPR) employing the more formal method of using "Sketches and Attachments":

<u>FPR No.</u>	<u>Date Issued</u>
381309	9/1/82
381310	9/1/82
381601	8/27/82
381602	8/27/82
381308	8/31/82
323930	8/23/82

No violations were identified.

#### 5. Storage Of Electrical Cables In Yard Area

The inspector performed an inspection of the cables stored in the cable storage yard to verify that the storage requirements of S&W Electrical Specification E-350 were being implemented. The following cable reels were found with cable ends not sealed to exclude moisture:

<u>Reel No.</u>	<u>Vendor</u>
NRP 1907	Boston Insulated Wire Co. (BIW)
NRP 1904	BIW
NRP 1839	"
NRP 1828	"
NRP 2004	"
NRP 2000	"
NRP 2001	"
NRP 1998	"

The inspector informed the licensee that the above was contrary to specification requirements, and was a violation. The inspector noted several other minor discrepancies such as: 1) miscellaneous cables of various lengths less than 15 feet stored in area without any segregation or status; 2) cribbing for Kerite Reel No. E-8104 not adequate; 3) Cable Reel No. NRP-647 end properly sealed but on ground; 4) Reel No. NRP-473, the sealed cable end was nailed to the reel.

The licensee immediately corrected all the inspector's findings and held a training session for the Field QC inspectors on the cable storage requirements.

The inspector verified the licensee's corrective action and informed him that a written response to this violation will not be required (423/82-11-01).

6. Document Control

- a. The inspector conducted an inspection of the electrical work station in the Auxiliary Building to verify that the drawings and design changes used by the crafts are the current issue. This particular location was not a drawing station, but the craft foreman's work station which had an unusual number of design documents. The foreman was not at the work station or the work areas during this inspection. The inspector asked one of the electricians who was working on the vertical cable supports (Ref. Dwg. EE-34MM), if the drawings at the work station were being used for the supports he was erecting. His reply was in the affirmative. The following drawings were noted at the work station, and were not in compliance with S&W Procedure P-CMP 11.1, Revision B, in that when a "Black or Yellow" print is used for fabrication/erection, the foreman/supervisor shall verify that the drawing is the correct revision on a daily basis. This verification is to be documented by his initialing and dating the drawing. This verification was not done by the foreman or supervisor.

<u>Dwg. No. And Rev. at Work Sta.</u>	<u>Remarks</u>
EE-34MJ - Rev. 1	Current Drawing
EE-34DW - Rev. 2D	Obsolete, Revision 2E current
EE-34DS - Rev. 2D	Current Drawing
EE-34JB - Rev. 4	" "
EE-34JL - Rev. 1	" "
EE-34JD - Rev. 1	" "
EE-34MK - Rev. 2	" "
EE-34ML - Rev. 2	" "
EE-34MM - Rev. 2	" "
EE-34MN - Rev. 2D	" "

The inspector informed the licensee that the above item is a violation contrary to Criterion VI of 10CFR50, Appendix B (423/82-11-02).

- b. In addition to the above, several design changes were noted at this foreman's work station. Most of the documents were of green stock indicating that they were S&W Control Level I Classification and therefore require their most stringent control. The documents all proved to be current revisions. It appears that this foreman, thru his supervisor, received some advance distribution of E&DCR's, prior to August 16, 1982, when the S&W Site Engineering Group was responsible for distributing advance copies. After August 16, 1982, in

accordance with Field Construction Procedure (FCP) 323, this advance distribution is the S&W document control group's responsibility. The inspector pointed out that procedure CMP 11.1, Rev. B needs to be revised to agree with FCP 323.

S&W issued change notice #2 to CMP 11.1 to revise the procedure. The inspector also questioned how many other advance design changes are on the construction site which were issued prior to August 16, 1982.

A purge of all work stations containing advance copies (not accountable by S&W document control group) was accomplished by S&W.

7. Use of ASME Code Case

It was brought to the NRC inspectors attention that ASME Code Case No. 339 was invoked in S&W specification M968 by design change F-P-9249 and that the code case was not approved by NRC (Note: It was not listed as approved in Reg. Guide 1.84 or 1.85). The inspector called NRC Headquarters to determine if the licensee had requested advance approval to use this code case. The inspector was informed by headquarters that they had not. The licensee was informed by the inspector that this design change was not to be used until approval by NRC is obtained. This item is considered unresolved pending approval of Code Case No. 339 by the NRC. (423/82-11-03)

8. Identification Stamping of Thin Wall Piping

The inspector informed the licensee of a potential significant deficiency that occurred at another nuclear construction site. This deficiency involved the same pipe fabricator being used at Millstone 3 (MS-3). The fabricator pressure stamped pipe spool pieces with wall thickness less than  $\frac{1}{4}$  inch. S&W randomly sampled 20 spool pieces with pressure stamping and found eight (8) of them with wall thicknesses less than code allowable. This item is unresolved pending review of the licensee's evaluation of this situation. (423/82-11-04)

9. Piping Weld Activities

The following Weld Joints in various stages of completion were inspected for compliance with ASME Section III Code, S&W Specification No. 968, and various S&W Weld Technique Sheets:

<u>Weld Joint Identification</u>	<u>Weld Technique</u>	<u>Location</u>
CI-BDG-501, Fieldweld 1	W11B, Rev. 1	MS Valve Bldg.
CI-BDG-501, Fieldweld 3	W11B, Rev. 1	MS Valve Bldg.
CI-FWS-17, Fieldweld 12	W11B, Rev. 1	MS Valve Bldg.
GWS-001-163-3, Fieldweld 1	W3-52, Rev. 0	Aux. Bldg.
CI-RCS-504A, Fieldweld 1	W12F, Rev. 3	Containment
CI-RHS-50-1, Fieldweld 1	W13B, Rev. 3	Containment

No violations were identified.

10. Machining In Reactor Pressure Vessel

The inspector observed the machining of the lower radial core support clevis in accordance with Westinghouse Drawing 685J389, Revision 9. The machining is under Westinghouse's technical direction. Five of the six reactor vessel radial core supports have been machined. No violations were identified.

11. Inservice Inspection

The reactor vessel (RV) inner diameter surfaces are suitable for ASME Section XI required preservice and inservice inspection except for the inlet and outlet nozzle bore surfaces and the RV nozzle to pipe field welds. Westinghouse has prepared a procedure NEU-ES-001, Rev. 0 and change notice No. 1 to allow grinding and weld repair of these surfaces.

The inspector reviewed the procedure and observed the grinding of two RV nozzle bore surfaces. The grinding was under the direction of Westinghouse and Combustion Engineering (vessel manufacturer). No violations were identified.

12. Pressurizer Lifting

The inspector observed portions of the relocation of the pressurizer to its permanent location inside containment. The lifting and installation was performed in accordance with S&W procedure FCP-321. No violations were identified.

13. Cadwelding

The inspector observed a S&W cadwelder performing cadwelding of a No. 18 rebar on the containment crane wall to verify compliance with S&W procedure CMP 6.1. The inspector questioned the adequacy of cleaning the rebar end by hand wire brushing. One rebar end was badly rusted. The rebar manufacturer's instructions outlined in their supplement to catalog #CRS 31249 has a method of cleaning which varies from that outlined in CMP 6.1. The specific cadweld joint was redone to the inspector's satisfaction. The licensee was informed that the two documents should be compatible. The licensee and S&W increased their surveillance of this activity to assure adequate cleaning. The licensee is also evaluating the differences in the procedures. This item is unresolved pending review of the licensee's evaluation. (423/82-11-05).



14. Nonconformance of Electrical Support

The inspector reviewed two S&W nonconformance and desposition reports (..SD) Nos. 1426 and 1433 which involved welding defects for several safety related electrical raceway supports located in the control building. The inspector inspected all welds that had engineering dispositions to "Accept-as-is". The visual examination performed by the inspector did not identify any violations of the AWS D1.1 welding standard.

15. 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 disclosed during the inspection are discussed in Paragraphs 7, 8 and 13.

16. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior plant management to discuss the scope and findings of this inspection.