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

Region I

Report No. 50-443/80-11
50-444/80-11

Docket No. 50-443
50-444

License No. CPPR-135
CPPR-136 Priority -- Category A

Licensee: Public Service Company of New Hampshire

1000 Elm Street

Manchester, New Hampshire 03105

Facility Name: Seabrook Station, Units 1 and 2

Inspection at: Seabrook, New Hampshire

Inspection conducted: September 16-19, 1980

Inspectors: G. A. Walton, Reactor Inspector — Oct. 15, 1980 date signed

W. F. Sanders, Reactor Inspector — Oct 15, 1980 date signed

date signed

Approved by: L. E. Tripp, Chief, Engineering Support Section No. 1, RC&ES Branch — 10/15/80 date signed

Inspection Summary:

Inspection on September 16-19, 1980 (Report No. 50-443/80-11)
Areas Inspected: Routine, unannounced inspection by two regional based inspectors of work activities relative to containment liner welding, safety related pipe welding, and storage of components. The inspectors also performed plant inspection tours and reviewed licensee action on previous inspection findings. The inspection involved 28 inspector hours onsite by two regional based inspectors.
Results: Of the three areas inspected, three items of noncompliance were identified in two areas (Infraction - missing inspection sequences on field weld repair process sheets, Infraction - failure to comply with requirements when making a weld repair of piping, Deficiency - failure to comply with procedures when welding on paint).

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Results: Of the three areas inspected, one item of noncompliance was identified in one area (Deficiency - failure to comply with procedure when welding on paint).

DETAILS

1. Persons Contacted

Yankee Atomic Electric Company

*W. J. Gagnon, Q.A. Engineer
J. F. Nay, Q.A. Engineer
D. Covill, Q.A. Engineer
*J. Herrin, Site Manager
*R. Pizzuti, Construction Manager

Pullman Higgins

R. G. Davis, Field Q.A. Manager
R. R. Donald, Q.C. Supervisor
J. Godleski, Q.A. Records Engineer

United Engineers and Construction

*R. J. Phelps, Field Superintendent of Q.A.

Pittsburgh-DeMoines Steel Company

W. Stiger, Field Q.A.

2. Plant Tours

The inspector walked through the construction site of Unit 1 and Unit 2 each day of the inspection visit to observe the completed work and the activities in progress and to inspect the general condition, tagging and identification of material. Particular note was taken of the presence of quality control inspectors and quality control evidence such as inspection records and non-conforming material. Specific observations were made of the material lay down areas, installed spool piece sections of the 16" Reactor Coolant piping, identification of nonconforming material and subsequent disposition for limited work authorization on spool piece 1RC-58-3-601. Observations were also made of the following items:

. Unit 1 - Visual inspection of plate welds, permanent and temporary attachment welds, on the upper transition and cylindrical sections of the primary containment liner

. Unit 2 - Fit up of floor plates and leak chase channel

. Unit 2 - Welding of leak chase channel using both S.A.W. and SMAW techniques.

With the exception of the noncompliance and unresolved items described in subsequent paragraphs, no items of noncompliance were identified.

3. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance Item 443/80-04-03: Missing inspection sequences on field weld repair process sheets. The inspector reviewed selected weld repair process sheets for work performed on site by Pullman-Higgins. The inspector noted that corrective action was taken for the two field welds repairs cited in the noncompliance, and corrective action was taken to prevent reoccurrence of these omissions, however, the inspector found that repairs made prior to the infraction were not corrected. For example, line CBS-1208-01, Revision 2 Field Weld F0103 omitted a visual examination of the weld after welding. The field Quality Assurance Manager informed the inspector that corrective action would be taken. A commitment was made to the inspector to review all pipe weld repairs performed to date and where necessary, corrective action would be taken. This item represents a new noncompliance pending the licensee's corrective actions for all weld repairs and a subsequent review by the inspector (443/80-11-01).

4. Pullman Higgins Process Sheet and Associated Documentation Review Unit 1

The inspector randomly reviewed Pullman Higgins field process sheets and associated documentation such as weld repair process sheets.

a. The inspector found a repair on line CBS-1208-01 Field Weld F0103 which failed to comply with applicable requirements. The repair, performed to remove a defect found by radiography, was probe ground to a depth of .406", which is through the total wall thickness. The repair process sheet stated that weld procedure specification 24-III-8-KI-12 Revision 2 was applicable. Note this procedure requires use of a consumable insert and is qualified for a maximum thickness of .240" using "GTAW" and balance using SMAW. The repair was apparently performed using an open butt process since the cavity chart shows a through wall cavity and the rod withdrawal slip does not show any insert issue. The withdrawal slip shows only ER308 electrode issue. The inspector further found that the ER308 (GTAW) wire was used to fill and complete the weld. This exceeds the procedure allowances using the GTAW process (.240" vs. .406"). The inspector further found that the welder A8 was not qualified to weld using an "open butt" process. This item is a noncompliance (infraction) of 10 CFR 50, Appendix B, Criterion V.

This item is an infraction (443/80-11-02).

b. The inspector audited the following items associated with the installation of piping to ascertain compliance with code and regulatory requirements.

- Weld Procedure Specification Number 24 III-8-K1-12 dated January 19, 1979 and supporting procedure qualification number 106.
- Random review of field weld process sheets, weld rod withdrawal slips and nondestructive examination reports such as visual, radiography and liquid penetrant.
- Material certifications for items E2936-338 and E2936-339, weld insert material, heat number 3017R308 and electrode material, lot number C4187T308.
- Noncomformance reports number 252, 292, 302, 325 and 330.

Except as identified in paragraph 7 below no items of noncompliance were identified.

5. Shop Fabrication Records (Dravo)

The inspector audited the following records applicable to shop fabrication of Class 2 and Class 3 piping.

- Nondestructive examination requirements and records of completion.
- NPP-1 Data Report for piping subassemblies.
- Material Test Report, Heat W7377 and chip analysis for electrode sample 8 x 98.

No items of noncompliance were identified.

6. Storage of Piping and Structural Steels

The inspector performed an audit of the laydown area storage of piping and structural steels. The inspector noted all material was stored off the ground on wood forms. All piping was capped to prevent water entry and all items appeared stored in an orderly manner.

No items of noncompliance were identified.

7. Welding on Painted Surfaces

During the inspection of the welds on the primary containment liner it was observed that temporary attachment welds had been made on two areas

without removing the paint prior to welding. These areas were located on the Unit 1 upper transition and the ring guides attachment on the first ring of Unit 2. Further inquiries revealed that welding over painted surfaces was not permitted by the contractors procedures 9763-WS-4A and WS-2 and welders had been instructed to grind or use a wire vibrator to remove paint and clean surfaces prior to welding. Subsequent to the inspector's observations, the welding contracto issued a (AWN) additional work notice describing the problem and disposition which requires a visual and magnetic particle inspection on these areas after removal of the welded brackets and the designated welders to be reinstructed on the procedure requirements. This is considered to be a deficiency, however, since corrective actions were established prior to the conclusion of the inspection, a response is not required. 443/80-11-03 and 444/80-11-01)

8. Review of Quality Records

A review was performed on the pertinent material and quality records associated with approximately 5% of the steel for the containment structure and liner plate. The material test reports/certification records for the following material which is listed by heat number was examined for conformances to the requirements of SA516 Grade 60:

- 2-1110
- 2-0834
- 3-5434
- 2-0978
- 6-2922
- 3-5246 - 18 Plates 19.10" MM thick
- 1-3601
- 1-2797
- 3-2216

Each one of these heat numbers represent a furnace charge and is the source identification for a group of plates as shown above.

No items of noncompliance were identified.

9. QA/QC Interface Between Contractors

During the inspection of the installation of floor plates on the primary containment base, it was noted that the leveling layer of concrete had numerous cracks. The licensee representative obtained an engineering evaluation and informed the inspector that the cracked condition was not detrimental to the design or function of the concrete. Additional information was obtained that a nonconforming condition described as concrete spalling had occurred earlier in the year and had been cleared by the concrete contractor. These events in conjunction with other irdicators prompted an inspection specifically directed to the quality interface procedures and actions between contractors to identify and resolve defective conditions which may occur or be missed between the final inspection of the one contractor and the starting activities of the subsequent contractor. Example:

Cracking of welds after final N.D.E. (Temperature differential and stress conditions, hydrogen embrittlement, etc.) where welder contractor program has finalized and a coating or equipment contractor takes over. A meeting was held with representatives of the AE and licensee where these examples and concern for contractor interface were expressed. The inspector was informed that the AE Construction Management and the licensee were aware that the contractor interface procedures needed to be revised and actions were planned to accomplish this. The inspector stated that this item would be considered unresolved and subject to review on subsequent inspections (444/80-11-02).

10. 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. An unresolved item disclosed during the inspection is discussed in Paragraph 9.

11. Management Meetings

At the conclusion of the inspection on September 19, 1980, a meeting was held at the Seabrook Station Site with representatives of the licensee. Attendees at this meeting included personnel whose names are indicated by notation (*) in Paragraph 1. The inspectors summarized the results of the inspection as described in this report.