

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

Region I

Report No. 50-443/79-07  
50-444/79-07

Docket No. 50-443  
50-444

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

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: August 13-16, 1979

Inspectors: *Leuis Mattia*  
J. Mattia, Reactor Inspector

10/25/79  
date signed

*A. Varela*  
A. Varela, Reactor Inspector

10/24/79  
date signed

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

date signed  
10/25/79  
date signed

Inspection Summary:

Inspection on August 13-16, 1979 (Report No. 50-443/79-07)

Areas Inspected: Routine, unannounced inspection by two regional based inspectors of construction activities. The inspection involved work activities and record review for containment. The inspectors also reviewed the licensee's surveillance reports. A plant tour inspection was performed. The inspection involved 39 inspector-hours by two regional based inspectors.

Results: Of the three areas inspected, four apparent items of noncompliance were identified in the three areas (Infractions - Failure to reject unacceptable void in cadweld splice, Paragraph 3; Failure to provide details in Perini Procedure for major repairs in concrete, Paragraph 4; Failure to provide criteria in procedure for storage of containment equipment, Paragraph 2; Failure to issue a deficiency report for deficient items uncovered during surveillance, Paragraph 8).

Inspection on August 13-16, 1979 (Report No. 50-444/79-07)

Areas Inspected: Routine, unannounced inspection by two regional based inspectors of construction activities. The inspection involved work activities and record reviews associated with reactor vessel internals. The inspectors also reviewed the licensee's surveillance reports and a plant tour inspection was also performed. The inspection involved 15 inspector-hours by two regional based inspectors.

Results: Of the three areas inspected, three apparent items of noncompliance were identified in the three areas (Infraction - Failure to provide details in Perini Procedure for major repairs in concrete, Paragraph 4; Failure to provide criteria in procedure for the storage of containment equipment, Paragraph 2; Failure to issue a deficiency report for deficient items uncovered during surveillance, Paragraph 8).

## DETAILS

### 1. Persons Contacted

#### Yankee Atomic Electric Company

F. W. Bean, QA Engineer  
\*B. B. Beckley, Manager, Nuclear Projects  
\*J. H. Herrin, Site Manager  
\*G. F. McDonald, Senior QA Engineer (Westboro)  
J. F. Nay, QA Engineer  
\*J. W. Singleton, Field QA Manager

#### United Engineers & Contractors

J. S. Fleming, Long Term Storage Supervisor  
R. A. Hersom, Field Staff Assistant  
R. Phelps, Field Superintendent QA/QC  
C. W. Rogers, Assistant Materials Supervisor  
N. Vitale, QA Supervisor  
T. Vassallo, QA Engineer  
J. B. Zabielski, Concrete Superintendent

#### Pullman Power Products Company

D. Walker, NDE Supervisor

#### Pittsburgh Des Moines Company

W. Stiger, Site QA Superintendent

#### Pittsburgh Testing Laboratories

C. Bodecker, QA Inspector - Concrete  
H. Russner, Site Manager  
M. Sharkey, QA Inspector - Soils

#### Perini Power Contractors

R. Addorisio, QC Inspector  
P. Antonich, Assistant Superintendent of QA  
P. Bruce, Superintendent of QA  
D. Oates, QC Inspector  
R. Vachon, QC Engineer

Perini Power Contractors (Cont.)

F. Veino, QC Inspector  
C. Walter, QC Engineer

\*denotes those present at the exit interview.

2. Plant Tours (Units 1 and 2)

The inspector observed work activities in progress, completed work and plant status in several areas of the construction site. Work items were examined for any obvious defects or noncompliance with regulatory requirements or licensee commitments. Particular note was taken in the presence of quality control inspectors and evidence of quality control activities such as inspection records, material identification, nonconforming material, identification and equipment calibration tags. The inspector interviewed craft personnel and quality inspection personnel as available. Specific activities observed for Unit #1 were containment building liner offstand welding and in place welding of erected rings, vacuum testing of liner welds, stud welding and repair of rejected studs on liner, rebar installation and cadwelding for exterior wall and interior columns, soil backfill, compaction and testing, laboratory testing of concrete cylinders, and qualification testing of new iron workers in cadweld splicing. Unit #2 containment building activities were suspended at this time. However, the inspectors observed completed work. During the plant tour, the following was also observed:

- a. The containment combined equipment hatch and personnel lock (Identification No. 1-MM-29) was stored outdoors without any protective covering from the elements. The flanged sealing surface and bolting were badly corroded and evidence of pitting and scaling was noticed on several bolt threads. The containment fabricator stated that the hatches (Units 1 and 2) came to the site in this condition and were identified in their Site Receiving Report SRR #2, dated June 7, 1979, and that an additional work notice #20001 was issued on June 7, 1979 to clean the sealing surface and coat them with a rust preventative. The inspector informed the contractor that the above documentation doesn't mention the bolting which is also a critical part of the hatches. The inspector also questioned why it is taking over two months to take corrective action. The inspector was informed by the contractor that they were having difficulty in obtaining the rust preventative coating and recently received it. The inspector could not find in the fabricator's procedures the storage requirements, in accordance with ANSI N45.2.2 (a requirement in UE&C Purchase Order 9763.006-15-1, Change Notice #13, issued September 20, 1977). The inspector reviewed an UE&C

letter dated July 6, 1979 (Letter Code SBF-2186), which commented that the containment fabricator incorporate in his storage procedure (CP-02) the ANSI N45.2.2 requirements. The inspector informed the licensee that although the letter addresses the tardiness of incorporating ANSI N45.2.2 requirements, firmer management action was required. The licensee was informed that the allowing of the deterioration of the Units 1 and 2 equipment and personnel hatches and not incorporating ANSI N45.2.2 storage requirements was contrary to Criterion XIII of 10 CFR 50, Appendix B (443/79-07-01 and 444/79-07-01).

3. Containment Building Exterior Wall Rebar Installation and Cadwelding (Unit 1)

The inspector observed work being performed and quality control inspection of rebar installation and cadweld splicing on the easterly quadrant of the exterior containment building wall in the range of the first three ten foot liner rings. He evaluated work performance and inspection activities for conformance to criteria identified in the following:

- Seabrook Station PSAR Section 3.8 and its referenced standards, and Chapter 17.
- PPC Quality Control Procedure 10.2, Reinforcing Steel Placement Inspection.
- PPC Quality Control Procedure 10.3, Cadwelding Inspection.
- PPC Civil Construction Procedure FCCP-7, Mechanical Splicing of Reinforcing Bars by the Cadweld Method.
- ERICO Publication RB-10M-974.

Vertical rebar splice #122-104-8 was observed throughout all operations spliced by qualified operator #8. The inspector observed that a quality control inspector was present and appeared to fulfill requirements required above, including referenced documentation of his inspection. This splice and seven other vertical splices completed on August 15 by the same operators were inspected by the NRC inspector for, centering of sleeve, slag in top hole and end voids. These were observed acceptable.

Five horizontal splices of #18 rebar made on August 14 by operator #116, and inspected by the same QC inspector, were also inspected by the NRC. These were observed marked as acceptable, however, splice number 87-5-116 appeared to the NRC inspector to have a rejectable size void in one end. This condition was brought to the attention of the Perini quality assurance manager who provided confirmation of the NRC inspectors observation. This resulted in the removal and retraining of the QC inspector.

The NRC inspector reviewed the qualification records of the above quality control inspector and, compared oral information regarding his past experience he had obtained in conversation with that written in his recently filed resume. Some apparent discrepancies in length of experience were noted by the NRC inspector. As a consequence of the above, the NRC inspector was informed by contractor that all cadweld splices inspected by this man would be reinspected, and appropriate action would follow.

The licensee was informed that the failure of QC inspection to identify excessive void in cadweld splice #87-5-116 is an item of noncompliance (443/79-07-02).

4. Noncompliance Item/Quality Control Procedure for Structural Concrete Repair Inspection (Units 1 and 2)

QAP 10.10, Revision 2, Structural Concrete Repair Inspection, refers to QAP 10.5 for concrete preplacement and post placement reporting. The latter is used in normal concrete placement, it does not address special requirements necessitating removal of unsound concrete as a prerequisite to concrete placement, such as verification that rebar was not injured in concrete removal and treatment of the construction joint prior to concrete replacement. This is a noncompliance to 10 CFR 50, Appendix B, Criteria V, which contractor accepted for correction by addition of special instructions and forms to QAP 10.5. Noncompliance (443/79-07-03 and 444/79-07-02).

5. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (443/79-06-05): PDM has revised QC inspection procedure SW-1.1, Stud Welding Concrete Anchors in Revision A, provided definitive criteria for control of welds which lack fusion and welds with cracks, and those welds which only have absence of weld. The former must be replaced, the latter with incomplete stud welds can be repaired. The revision procedure was approved by UE&C. This item is resolved.

6. ASME Certifications (Units 1 and 2)

The inspector reviewed documentation and interviewed the licensee and his various contractors to determine that, where applicable an ASME Code Section III (NA-3000) program was in effect. The following are the result of this inspection:

- a. Public Service of New Hampshire (Owner) - is a holder of a certificate of authorization to complete the ASME Code Form N-3, listing the components including inter-connecting welds and the data reports. The certificates of authorization (N-2004, for Unit 2 and N-2006 for Unit 1) were issued on February 13, 1978, and expire on February 13, 1981.

- b. Pittsburgh Des Moines (Containment Contractor) - to date has not performed any code related work activities on site. The company has an "NPT" certificate of authorization (N-1494) issued on August 6, 1976 which expires on October 20, 1981. An ASME survey team was on site in May, 1979, but the contractor did not pass the site survey. A resurvey is scheduled for October, 1979.
- c. Pullman Power Products (Piping Contractor) - the company has an "NPT" certificate of authorization (N-1101) and a "NA" certificate of authorization (N-1102) which were issued on June 9, 1978, and expire on June 16, 1987. A site ASME survey is scheduled for August, 1980.
- d. United Engineering & Construction (Construction Manager) - is applying for "N" stamp and the site ASME survey is scheduled for December, 1979.

The inspector informed the licensee that this item is considered unresolved pending verification by an NRC inspector of successful completion of the above mentioned site survey conducted by the ASME survey team (443/79-07-04 and 444/79-07-03).

7. Storage of Reactor Vessel and Internals (Unit 2)

The inspector reviewed NSSS recommended storage procedures to verify that storage activities are in accordance with these procedures. The procedures reviewed were as follows:

- Applicable portion of Westinghouse "NSSS Component Receiving and Storage Criteria," Volume I, dated March, 1976.
- Westinghouse's Attachment 105C, titled "Reactor Vessel Receipt, Handling, and Storage."
- Westinghouse's Shop Order #42 and 42A for lower and upper internals.
- Westinghouse Letter Code #NAH-1210, which lists 15 items to perform for the reactor vessel during long term storage.

The inspector performed a record review of storage of the reactor vessel, closure head, lower and upper internals, and also conducted an inspection of the items and storage areas. The following are results of this inspection:

- a. Reactor Vessel - The storage and maintenance is being performed in accordance with the applicable requirements. No items of noncompliance were identified.
- b. Reactor Vessel Head and Internals (Lower and Upper) - The inspector noted that some of the Level B requirements (rodent control, temperature, and dew point recorder) for storage of these items were not adhered to.

UE&C stated that this was also identified by them and a Nonconformance Report #279 was issued. A review of storage and maintenance records also indicated that the required (W-42A) lower internals baffle cavity measurements have not been taken. UE&C stated that these measurements will be taken as soon as the Level B storage requirements (close out of NRC 279) have been accomplished. The inspector informed the licensee that this item is unresolved pending review by an NRC inspector of the results of baffle cavity measurements and the adherence to NSSS storage requirements (444/79-07-04).

8. Review of QA Surveillance Reports (Units 1 and 2)

The inspector reviewed several Yankee Atomic Electric Field (YAEC) QA surveillance reports to verify that surveillance activities were conducted in accordance with YAEC Field QA Manual Procedure No. 3, Revision 1, and NRC Regulatory Requirements. The specific reports reviewed are as follows:

<u>Surveillance Report No.</u>	<u>Date of Surveillance</u>
206	May 22, 1979
247	August 1, 1979
230	August 3, 1979
246	July 18, 1979
241	July 12, 1979
216	May 29, 1979
232	June 25, 1979

The following items are the results from this review:

- a. Surveillance Report No. 206 was performed to verify that the piping contractors nondestructive examiners (NDE) were qualified in accordance with ASNT-TC-1A requirements. The YAEC site QA organization found that the NDE technicians were not fully qualified in accordance with ASNT-TC-1A; however, YAEC QA failed to issue a deficiency report as required by their QA Manual Procedure No. 3, Revision 1. The licensee stated that they normally do not issue a deficiency report on deficiencies they uncover since they prefer to use the nonconforming reporting system used by the organization they are monitoring. The inspector was shown a draft of QA Manual Procedure No. 3, where this was described. Further review by the inspector indicated that the piping contractor did not issue a nonconformance report on this deficiency found by the YAEC site QA organization. The licensee was informed that the failure to issue a deficiency report by YAEC site QA was an item of noncompliance (443/79-07-05 and 444/79-07-05).



b. A review of the above surveillance reports indicated that the QA Procedure (QA #3) was lacking detail information in the following areas:

- Not enough detail to fully describe what a surveillance report should contain. The inspector found instances where the reports were essentially a checklist with no details.
- The terminology used in the reports for findings was not consistent with the QA surveillance procedure. The terminology used are "observations," "comments," "findings," and "deficiency." The licensee was informed that the QA manual procedure should list the different categories of findings and also define what they are.

This item is considered unresolved pending review by an NRC inspector the revised QA #3 and the implementation of this revision (443/79-07-06 and 444/79-07-06).

9. 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. Three unresolved items are disclosed during this inspection are discussed in Paragraphs 6, 7, and 8.

10. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 16, 1979. The inspector summarized the purpose and the scope of the inspection and the findings.