

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-354/85-60

Docket No. 50-354

License No. CPPR-120 Priority - Category B

Licensee: Public Service Electric & Gas Company

Facility Name: Hope Creek Generating Station, Unit 1

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: November 18-22, 1985

Inspectors: Robert A. McBrearty December 19, 1985
R. A. McBrearty, Reactor Engineer date

Approved by: J. J. Wiggins 12/19/85
J. J. Wiggins, Chief date
Materials & Processes Section

Inspection Summary:

Inspection on November 18-22, 1985 (Report No. 50-354/85-60)

Areas Inspected: Routine, unannounced inspection of licensee action on previous inspection findings; spent fuel racks; and review of preservice inspection data including independent plotting of ultrasonic reflectors in selected welds. The inspection involved 44 hours onsite by one regional-based inspector.

Results: No violations were identified. This report, along with report 50-354/85-46, have identified problems with the precision and completeness of documentation for PSI UT data evaluations by the licensee and its vendor. Additional licensee attention in this area appears warranted.

DETAILS

1. Persons Contacted

Public Service Electric & Gas Company (PSE&G)

- * A. D. Barnabei, Principal Quality Assurance Engineer
- * R. B. Donges, Lead Quality Assurance Engineer
- * A. E. Giardino, Manager - Station Quality Assurance
- * R. T. Griffith, Principal Quality Assurance Engineer
- * L. T. Lake, ISI Engineer
- * E. J. Maloney, ISI Supervisor
- * T. J. McLaughlin, Quality Assurance Engineer
- * M. T. Metcalf, Principal Quality Assurance Engineer

Southwest Research Institute (SWRI)

- * S. Richter, Project Manager
- * E. Ruescher, Group Leader - Level III

U. S. Nuclear Regulatory Commission

- * J. J. Lyash, Resident Inspector

2. Licensee Action on Previous Inspection Findings

(Open) Unresolved Item (354/85-46-01): Evidence that an ultrasonic indication was evaluated. The licensee provided a letter from SWRI which discussed the investigation of ultrasonic indications greater than 50% of the DAC curve and less than 100% of DAC curve. The letter did not provide evidence that those indications were investigated by a Level II or Level III examiner. The following are examples of welds in which ultrasonic indications were detected with no evidence of evaluation or basis for disposition of those indications:

- Weld 1-BJ-10DBB-003A-5
- Weld 1-BJ-14DBB-003A-9
- Weld 1-BJ-14DBB-003A-15
- Weld 1-BJ-14DBB-003A-16
- Weld 1-BJ-14DBB-003A-30
- Weld 1-BJ-14DBB-003A-33

At the exit meeting on November 22, 1985 the licensee committed to complete the following actions by January 15, 1986:

- a. Identify all stainless steel welds whose data package summary sheet identify "insignificant" indications.
- b. Develop a statistical sample of these "insignificant" indications in accordance with Quality Assurance Manual QAI 7-5.

- c. Require SWRI to evaluate the indications in the welds selected and include resolution sheets and supporting sketches.

The item will remain open pending completion of the above listed action and subsequent NRC review.

3. Review of Preservice Inspection (PSI) Data

The inspector reviewed data and, using the licensee's data, replotted ultrasonic reflectors associated with the following welds to ascertain that findings were properly recorded and evaluated, and that ASME Code, regulatory and procedural requirements were met:

Magnetic Particle Examination

- Weld 1-AB-26DLA-031-12
- Weld 1-FC-6DBB-004-16 LG (1-8)

Liquid Penetrant Examination

- Weld 1-AB-26DLA-031-12

Ultrasonic Examination

- Weld 1-BB-22VCA-013-2
- Weld 1-BB-28VCA-012-2
- Weld 1-BB-28VCA-012-3LUO
- Weld 1-BB-28VCA-012-5
- Weld 1-BB-28VCA-012-5LU
- Weld 1-BB-28VCA-012-6
- Weld 1-BB-28VCA-012-9
- Weld 1-BB-28VCA-013-1
- Weld 1-BB-28VCA-013-2
- Weld 1-BB-28VCA-013-4
- Weld 1-AB-26V(D)LA-031-9
- Weld 1-AB-26V(D)LA-031-11
- Weld 1-AB-26V(D)LA-032-1
- Weld 1-AB-26V(D)LA-032-2
- Weld 1-FC-6DBB-004-10
- 1-BE-14DBB-009-17

The inspector noted that the indications which were detected in elbow to pipe weld 1-BB-28VCA-013-4 appeared to have been plotted by PSI personnel from the wrong side of the weld.

The sketch of the weld on which the plotting was done did not identify the elbow side or the pipe side, nor was the direction of flow through the pipe identified. The inspector discussed this with the SWRI Level III who stated that SWRI conventionally sketches the upstream side of a weld to the left of the data sheet so that the flow is from left to right. If

the questioned sketch follows this convention, the indications were plotted from the side of the weld opposite to where they were detected. This is considered unresolved pending licensee determination of the correct weld orientation and whether or not the reflectors are accurately located with regard to the weld (354/85-60-01).

Additionally the inspector found that some ultrasonic reflectors appeared to have been plotted at incorrect sound beam angles. Weld 1-AB-26V(D)LA-032-1 and weld 1-BB-28VCA-012-5 are examples of this in which a reflector which was detected in the former weld using a 60° beam angle was plotted at 70°, and three reflectors which were detected in the latter weld using a 45° beam angle were plotted at an angle of approximately 37°. This is considered unresolved pending licensee action to determine the accuracy of the data and what affect these apparent discrepancies have on the resulting evaluation and disposition of the UT results (354/85-60-02).

No violations were identified.

A. High Density Spent Fuel Storage Racks

NRC Region I Inspection Report No. 354/85-41 discussed the new fuel storage racks at Hope Creek, Unit 1. During inspection 85-41 the licensee provided a commitment by the A-E to complete the review of the seismic analysis of the racks by the middle of September, 1985.

The inspector reviewed the seismic analysis which was approved on November 12, 1985 by the A-E.

No violations were identified.

5. Unresolved Items

Unresolved items are items about which more information is required to ascertain whether they are acceptable, violations or deviations. Unresolved items are discussed in paragraph 3 of this report.

6. Exit Interview

The inspector met with licensee representatives denoted in paragraph 1 at the conclusion of the inspection on November 22, 1985. The inspector summarized the purpose and the scope of the inspection and the findings. At no time during this inspection was written material provided by the inspector to the licensee.