UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

Report Nos.: 50-321/78-28 and 50-366/78-36

Docket Nos.: 50-321 and 50-366

License Nos.: DPR-57 and NPF-5

Licensee: Georgia Power Company
270 Peachtree Street, N. W.
Atlanta, Georgia 30303

Facility Name: Plant Hatch Units 1 and 2

Inspection at: Plant Site Baxley, Georgia

Inspection conducted: August 15-18, 1978

Inspectors: H. L. Whitener

Approved by: R D Martin 11/3/78
R. D. Martin, Chief Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear Support Branch

Inspection Summary

Inspection on August 15-18, 1978 (Report Nos. 50-321/78-28 and 50-366/78-36)
Areas Inspected: A routine unannounced inspection of surveillance activity on pipe support and restraint systems for Unit 1 including examination of procedures, test results and installed restraints, and, examination of records and restraints on Unit 2 subsequent to the initial heatup. The inspection involved 29 man-hours of inspection by one NRC inspector.
Results: Of the two areas inspected, no items of noncompliance or deviations were identified.

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DETAILS I

Prepared by: R. D. Martin for 11/3/78
H. E. Whitener, Reactor Inspector Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear
Support Branch

Dates of Inspection: August 15-18,

Reviewed by: R. D. Martin 11/3/78
R. D. Martin, Chief Date
Nuclear Support Section No. 1
Reactor Operations and Nuclear
Support Branch

1. Persons Contacted

Georgia Power Company (GPC)

*H. Nix, Assistant Plant Manager
R. Bellamy, Associate Plant Engineer
C. Coggin, Nuclear Engineer
*J. Edwards, Engineering Associate
*C. E. Belflower, QA Field Supervisor
*R. Glisson, Associate Engineer
*W. Barrett, QA Field Engineer
*M. Upchurch, Jr., QA Field Representative
*D. Barnett, Maintenance Foreman
H. Anderson, Engineer (Corporate)
B. Trice, Associate Engineer
W. Nettleton, Construction

General Electric Company

*A. Schneider, Operations Superintendent
*M. Wyatt, Lead Engineer

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Open) Unresolved Item 366/78-32-01: Evaluate mechanical and hydraulic shock suppressor piston settings (midrange at cold condition). Discussion with licensee management indicates that a preliminary 10 CFR 50.59 review was performed to evaluate the installation of shock suppressors centered at the midpoint of the full stroke at the cold condition rather than centered about the midpoint of total travel range at the hot condition as specified in Section 14.B 15.a of the FSAR. Licensee representatives stated that a preliminary evaluation indicates that the current installation is adequate and a formal review per 10 CFR 50.59 will be completed prior to approval of the system expansion test results. This item remains open pending inspector review of the final evalution.

(Closed) Unresolved Item 366/78-32-02: Determine operable limits of piston travel. For the system expansion test the licensee has established a minimum reserve stroke of ½ inch for mechanical and hydraulic snubbers based on a letter to GPC (Georgia Power Company) from Bergen Paterson dated July 11, 1978. This letter states that both types of snubbers are effective over full travel range. This item is considered closed relative to the system expansion snubber inspections but is discussed further under procedure review, paragraph 6.a.1 of this report.

(Closed) Unresolved Item 366/78-32-03: Verify that scales indicating piston positions are absolute and for externally mounted scales determine that scales have not been inadvertently moved. The licensee has verified through construction records that the scale measurements are absolute position indicators and has specified that scale alignment be verified during the inspection by checking a reference point provided on the snubber.

3. Unresolved Items

None identified during this inspection.

4. Exit Interview

Areas of inspection and inspection findings were reviewed with Mr. Nix and members of his staff on August 18, 1978 and are discussed in this report. Attendees at this interview are identified in paragraph 1.

5. System Expansion and Vibration Testing

The inspector reviewed a portion of vibration test procedure and results, discussed system expansion data with licensee and GE representatives, and performed an inspection of certain drywell piping supports and restraints. These matters are discussed below.

a. Vibration Tests

The inspector reviewed the reports of tests perfomed at cold conditions to determine if flow induced excessive vibrations were observed in the RC1C, HPC1, Core Spray or RHR. Test instructions were included as portions of procedures as follows:

RCIC	-	10029
HPCI	-	10030
Core Spray	-	2E21-3510
RHR	-	2E11-3510

No excessive vibrations were observed as a result of pump starts, stops, and operation.

b. System Expansion

The inspector discussed the piping displacement data taken from instrumented points on the drywell piping during heatup with licensee and GE representatives. It appears that a number of points had not moved as predicted but no obvious pattern is detected. Some of these data are as follows:

- Recirculation System Vertical Movement: indicated movement 1.1 to 1.3 inches; expected movement 1.6 to 1.8 inches.

- Recirculation B Discharge Line: indicated movement 0.33 inches; expected movement 0.04 inches.

- Main Steam Lines: One point indicated movement of 0.1 inch where the expected movement was 0.2 inches in the opposite direction. One point has not indicated movement where the expected movement was 0.35 inches. In general the points indicate movement in the expected direction but at about two-thirds the expected distance.

- RHR Discharge to Recirculation Line A: indicated 0.45 inches; expected 0.17 inches.

- RHR Head Spray Line: indicated 0.5 inches, expected 0.77 inches.

- RWCU: indicated 0.39 inches; expected 0.45 inches.

- HPCI Steam Line Supply: indicated 0.015 inches; expected 0.06 inches in opposite direction.

Based on a preliminary analysis the licensee and GE representatives believe no serious problem to exist but all data points not performing as expected have been reported to the designer for reanalysis. The inspector identified examination of the data analysis results as an item for future inspection (366/78-36-01).

c. Vibration Measurements - Heatup

The licensee stated that data taken during HPCI and RCIC starts performed at selected temperature plateaus during heatup indicated essentially zero vibrations. Some vibration was observed in the safety relief valve lines during valve actuation. A maximum amplitude of 0.2 inches at about 15 cycles per second was observed. The vibrations damped out and no permanent displacement was observed. This data has been sent to Bechtel for evaluation. Additional data will be obtained during the power ascension testing. Review of the evaluation of transient vibration was identified for future review (366/78-36-02).

d. Drywell Inspection

The inspector examined a number of pipe supports and restraints in the drywell at rated conditions. Due to the drywell ventilation system problem only those in the lower levels were accessible at this time. Systems inspected included the Recirculation System and Relief Valve Discharge Piping. Snubbers and hangers which could be observed appeared to be within the operating ranges. The licensee will perform a complete inspection subsequent to resolution of the drywell temperature problem.

6. Pipe Supports and Restraints

The inspector reviewed the licensee's surveillance program for safety-related hydraulic supports and restraints. This included a review of procedures for technical adequacy; examination of various installed dynamic and fixed pipe supports and restraints; and review of recent surveillance records. Pertinent aspects of this review are discussed below.

a. Shock Suppressor Surveillance Procedures

(1) Visual Inspection Procedure

The inspector reviewed Surveillance Procedure 3915, Hydraulic Shock and Sway Arrestor Inspection and Functional Test (Revision 3) for technical adequacy and discussed his findings with the licensee as follows:

(a) Inspection of vent holes to ensure the vents are open is not identified in the procedure nor included in the check off list on the data sheet.

(b) Acceptance criteria specifying the minimum operable fluid level is not defined in the procedure.

(c) Use of baseline piston position data as a guideline to determine appropriate piston positions has not been specified.

(d) Acceptance criteria specifying limits of operable range for piston rod stroke is not defined in the procedure.

(e) The procedure does not specify that for any discrepancies identified during inspection, and for which corrective action is not planned immediately, the evaluation to determine that the snubber is operable as found must also include an evaluation to ensure that the snubber will remain operable during the next inspection interval.

(f) As found - as left data are not recorded on the data sheet.

(2) Functional Test

The inspector reviewed the functional test instructions in surveillance Procedure 3915 for technical adequacy and discussed this findings with the licensee as follows:

(a) The acceptance criteria does not include a correction to the measured lockup velocity and bleed rate to correct for the difference between test temperature and operating temperature.

(b) The procedure does not require that free motion of the piston rod be verified.

(3) Maintenance Procedure

Licensee personnel are in the process of developing a comprehensive maintenance procedure to include detailed instructions for the installation, removal, repair, filling and venting of hydraulic shock suppressors.

The licensee will evaluate the items in 6.a.(1) and 6.a.(2) above and address these matters in a revision to Procedure 3915. Procedure revision will be completed or prior to reuse. Revision of Procedure 3915 and development of an adequate maintenance procedure is identified for inspector followup (321/78-28-01 and 366/78-36-03).

b. Administrative Control/LER 50-321/1978-57

The inspector reviewed Administrative Procedures HNP-831, "Technical Specification Surveillance Program," to determine that adequate controls had been established for implementing the shock suppressor inspection and test procedures.

The inspector found that HNP-831 provides an adequate mechanism for tracking the performance of routine surveillance testing but does not specifically address tracking tests whose frequency vary in accordance with test results as is the case with the visual inspection of shock suppressors. The licensee stated that the variable frequency is picked up in another manner. A deviation report is written for inoperable shocks and forwarded to appropriate personnel through the Plant Review Board. The inspector reviewed LER 50-321/1978-57 which reported a late surveillance test on hydraulic shock suppressors. From discussion with the maintenance and scheduling personnel it appears that the late surveillance (3 days) was an isolated event caused by the reclassification as inoperable of snubbers thought to be operable after the frequency had been assigned. The inspector concluded that based on a single event the tracking system appeared to be adequate and closed LER 50-321/1978-57.

The inspector reviewed recent visual inspection and functional test results and had no questions except as noted under procedure review in paragraph 6.9.1 and 6.9.2 of this report.

c. Acceptance Criteria/NRC Positions

The inspector reviewed the basis of the hydraulic shock suppressor acceptance criteria and discussed NRC requirements with licensee personnel as follows:

(1) Lockup Velocity and Bleed Rate

The inspector reviewed the NRC interpretation of an adequate acceptance criteria for lockup velocity and bleed rate for functional testing as follows:

(a) Determine the operating range in which the snubber is designed to operate from the vender.

(b) Determine the upper and lower limit allowable for lockup velocity and bleed rate which is consistent with the piping design analysis from the Architect Engineer.

(c) Determine the temperature correction factor required to correct the measured values from test temperature to operating temperature. The licensee will determine the temperature correction factor. These corrections will be applied to the 1978 refueling outage functional test data for Unit 1. This item was identified for inspector followup (321/78-28-02).

(2) Seal Material

The inspector discussed the NRC position that for shock suppressors with non ethylene propylene seals, a seal lifetime must be determined on the basis of the material characteristics and operating conditions. The licensee believed that all seals were ethylene propylene but agreed to perform a record review and confirm this. This matter will be reviewed at a subsequent inspection (321/78-28-03, 366/78-36-04).

(3) Representative Sample

The inspector advised the licensee that the term, "Representative Sample", as used in the Technical Specification, requires evaluation of the factors affecting shock suppressor operation. The licensee agreed to develop written guidelines for selection of the snubber test sample (321/78-28-04, and 366/78-36-05).

(4) Verification of Visual Inspection

The inspector advised the licensee that functional testing cannot be used to determine operability of a snubber which does not meet the visual inspection acceptance requirements. The operability of the snubber must be determined on the basis of an engineering evaluation of existing conditions; and furthermore, if a deficiency is identified and not corrected at that time, the evaluation must confirm operability over the next inspection interval.