UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-321/86-11 and 50-366/86-11

Licensee: Georgia Power Company
P. O. Box 4545
Atlanta, GA 30302

Docket Nos.: 50-321 and 50-366 License Nos.: DPR-57 and NPF-5

Facility Name: Hatch 1 and 2

Inspection Conducted: March 24-27, 1986

Inspector: _____ 4/23/86
for B. R. Crowley Date Signed

Approved by: _____ 4/23/86
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, announced inspection involved 33 inspector-hours on site in the areas of licensee action on previous enforcement matters (Units 1 and 2); inservice inspection (ISI) (Unit 1); and inspection followup items (Units 1 and 2).

Results: One violation was identified - Failure to perform Section XI pressure tests - Paragraph 5.c.(2)(a).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*H. C. Nix, Site General Manager
*T. V. Green, Deputy General Manager
D. S. Read, General Manager, Quality Assurance (QA)
*T. R. Powers, Manager of Engineering
*T. Setz, Manager of Maintenance
P. E. Fornel, Manager of QA
*L. Sumner, Manager of Operations
D. A. McCusker, Superintendent of Quality Control (QC)
J. Hadden, QC Supervisor
*T. L. Elton, Supervisor of Regulatory Compliance
O. M. Fraser, QA Audit Supervisor
*C. M. Dixon, Engineering Support Supervisor, QA
T. S. Huckaby, ISI Engineer
*C. R. Goodman, Senior Plant Engineer - Regulatory Compliance
P. Norris, Senior Plant Engineer
G. R. Brinson, Senior QC Specialist
R. K. Moxley, Associate QA Field Representative

Other licensee employees contacted included construction craftsmen, engineers, technicians, operators, mechanics, security force members and office personnel.

Other Organizations

M. Belford, Supervisor, Inspection Engineering, Southern Company Services (SCS)
D. R. Graham, Senior Engineer, SCS

NRC Resident Inspectors

*P. Holmes-Ray, Senior Resident Inspector
G. N. Nejfelt, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 27, 1986, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

(Open) Unresolved Item 321, 366/86-11-01, Performance of System Leakage and Hydrostatic Tests Using Nuclear Heat - Paragraph 5.b.

(Open) Violation 321, 366/86-11-02, Failure to Perform Section XI Pressure Tests - Paragraph 5.c.(2)(a).

(Open) Inspector Followup Item 321, 366/86-11-03, Review of Procedures Addressing ASME Section XI VT Requirements - Paragraph 5.c.(2)(b).

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

(Open) Unresolved Item 321, 366/85-14-02, Resolution of Requirements for Increase in Inspection Scope When Corrective Actions are Required for Pipe Supports. This item was opened to resolve questions relative to the licensee's program for re-examination of problem supports and expansion of inspection scope when results of pipe support examinations require corrective actions. The licensee has revised procedure 45QC-INS-001-0S to cover scope expansion when problems are found. In addition, the licensee has reviewed past practices and found that Section XI has not been violated in the area of scope expansion. In the area of re-examination, the licensee is in the process of reviewing the Winter 1981 Addenda to the ASME Section XI to revise procedure 45QC-INS-001. For the current outage and previous outages, the Winter of 1980 Addenda, which does not provide details for re-examination, was in effect. Procedure 45QC-INS-001 will be revised prior to the next Unit 2 outage.

(Closed) Unresolved Item 321, 366/85-14-01, Clarification of Requirements for ISI of Snubbers. This item was opened to resolve differences in the Technical Specification (TS) snubber program and the ASME Section XI requirements. The licensee submitted a revised ISI program (See Georgia Power Company letter NER-85-483, dated June 25, 1985) updating to the W81 addenda of ASME Section XI for the second 10-year interval. In the revised program, relief was requested to perform snubber inspections in accordance with the TS program in lieu of ASME Section XI. Also, the program for the first 10-year interval to the 1974 ASME Section XI, S75 addenda, contained relief requests (requests 2.1.2 and 3.1.1) to use the Tech Spec Program in lieu of ASME Section XI. See NRC letter dated July 29, 1983, approving the relief request for the 1974 Code.

(Closed) Violation 321/86-02-01, Failure to Follow Procedure for Signoff of Traveler Steps for IHSI. Georgia Power Company's letter of response (SL-460), dated March 14, 1986, has been reviewed and determined to be acceptable by Region II (RII). The inspector examined corrective actions as stated in the letter of response and discussed the corrective actions with responsible licensee personnel. In order to verify corrective action, the inspector reviewed:

- Management Memorandum MM-MGR-002-0186, dated January 15, 1986

- Departmental Directive 86-06, dated February 10, 1986

- Nutech travelers for welds 1B31-1RC-12AR-G-1, 1B31-1RC-12AR-F-1, 1B31-1RC-22AM-3BC-1, 1B31-1RC-12AR-K-1, 1B31-1RC-28A-16, 1B31-1RC-28A-3, 1-G31-1RWCU-6-OUT-12, 1-G31-RWCU-6-OUT-10 and 1-G31-RWCU-6-OUT-11.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. One new unresolved items identified during this inspection are discussed in paragraph 5.b.

5. Inservice Inspection - Review of Procedures (73052B) (Unit 1)

The inspector reviewed ISI procedures as indicated below to determine whether procedures were consistent with regulatory requirements and licensee commitments. The applicable code is the ASME Boiler and Pressure Vessel (B&PV) Code, Section XI, 1980 Edition, W80 Addenda.

The following plan documents govern the ISI:

- "Modified First Ten-Year Inservice Examination Plan for Class 1 Components - Edwin I. Hatch Nuclear Plant Unit 1"

- "Nondestructive Examination Outage Plan - Edwin I. Hatch Nuclear Plant Unit 1 - 1985 - Full Outage"

a. Procedure Scope

The Nondestructive Examination Outage Plan and Associated NDE procedures for the areas of examination listed below were examined to determine whether the procedures were consistent with licensee TS commitments and specified the examination category, method of examination and extent of examination:

- Stainless Steel Components
- Reactor Pressure Vessel Shell and Head Welds
- Feedwater System Pipe Welds
- High Pressure Coolant Inject System Welds

b. Reactor Vessel System Leakage and Hydrostatic Tests

Based on BWR Owners Group comments to a revision to Regulatory Guide (RG) 1.99, questions have been raised relative to the method used at plant Hatch to obtain Section XI system leakage and hydrostatic test pressures and temperatures for reactor vessel tests. Hatch performs both tests (system leakage and hydrostatic) using nuclear heat during startup at operating pressures and temperatures. Questions have been raised relative to use of this method based on the fact that under operating pressures and temperatures, any leak would be a steam leak rather than a water leak which would normally be expected from a

hydrostatic test. Other questions center around whether ASME Section XI requirements are being met. Most other BWR utilities use methods other than nuclear heat to obtain required pressures and temperatures.

During the current inspection, the inspector reviewed with the licensee their practices relative to the above question including procedures, code requirements and reasons for their method of testing.

The applicable procedure is plant procedure 42IT-TET-001-05, Revision 1, Pressure Testing of Piping and Components. This is a general procedure used for all pressure testing. The procedure provides administrative controls, a "fill-in-the-blank," "Pressure Test Specification," and a "Pressure Test Data Sheet."

The applicable code is the ASME B&PV Code, Section XI, 1980 Edition, W80 Addenda. Article IWB-5000 of Section XI requires a system leakage test after each refueling outage and a system hydrostatic test at the end of each interval (ten years). Note 5 to table IWB-2500-1 requires that the system leakage test be performed prior to "plant startup". The licensee has interpreted "plant startup" to mean "roll" of the turbine. The ASME Code does not provide a definition of "plant startup." If the TS definition of startup is used, startup would be when the reactor is taken critical. If this definition is used, Note 5 of table IWB-2500-1 of Section XI cannot be met using nuclear heat for obtaining pressure and temperature.

The main reason the licensee gave for performing the test using nuclear heat was that they considered it safer for the reactor vessel since performing the test under these conditions would result in pressure and temperature further to the right of the pressure/temperature curve. The licensee also noted that performing the test under conditions other than nuclear heat would require gagging the safety relief valves with fuel in the vessel which they considered to be undesirable.

Based on BWR Owner's Group comments to RG 1.99, Georgia Power Company, by letter, dated November 11, 1986, requested SCS to evaluate the acceptability of using nuclear heat for hydrostatic testing. At the time of the inspection, SCS was still evaluating the question.

Pending resolution of the question relative to the ASME Code requirement/intent for performing the reactor vessel system leakage test and/or hydrostatic test prior to "plant startup", Unresolved Item 321, 366/86-11-01, Performance of System Leakage and Hydrostatic Tests Using Nuclear Heat, is identified.

c. Pressure Testing Program

In the process of reviewing the reactor pressure vessel leakage and hydrostatic test requirements, the inspector made a general review of the Hatch program for pressure testing of ASME Class 1, 2 and 3

components and piping to ASME Section XI as detailed below:

(1) Requirements

In general, Section XI requires:

Class 1 - System leakage test following opening and reclosing of a component after each refueling outage

- System hydrostatic test during plant shutdown near the end of each inspection interval (ten years)

Class 2 - System pressure test during system functional test of systems not required to operate during normal reactor operation - each inspection period (40 months)

- System hydrostatic test during plant shutdown near the end of each inspection interval (ten years)

Class 3 - System inservice test at operating pressure (categories DA and DC) - each inspection period (40 months)

- System pressure test during functional testing (category DB) - each inspection period (40 months)

- System hydrostatic test near the end of each interval (ten years)

The Section XI requirements and the test boundaries are identified in the Hatch Ten-Year Examination Plans. The only procedure for implementing the Ten-Year Plans is procedure 42IT-TET-001-0S, a general procedure for performing all pressure tests. Prior to the current outage, there was no formal document identifying the required tests for each outage. For the current Unit 1 outage, the required hydrostatic tests are listed in the Nondestructive Examination Outage Plan.

(2) Problems Identified

The following problems were identified during the above review:

(a) There are no formal implementing procedures for scheduling and tracking ASME Section XI pressure tests with exception of the hydrostatic tests listed in the current Unit 1 Inservice Examination Outage Plan. Discussions with licensee and SCS personnel revealed that in the past, the scheduling and tracking have been on informal lists.

Based on discussions with licensee and SCS personnel, lack of implementing scheduling and tracking procedures has resulted in Class 3 and possibly some Class 2, 40 month pressure tests not being performed. The licensee pointed out that some of the tests were probably performed in the process of performing other tests. However, it is not clear for these cases that VT-2 qualified examiners were used as required by ASME Section XI.

The failure to have implementing procedures is in violation, TS 6.8.1. The failure to perform required Section XI tests is in violation of 10 CFR 50.55(a). This violation is identified as 321, 366/86-11-02, Failure to Perform Section XI Pressure Tests.

(b) In reviewing procedure 42IT-TET-001-0S, the inspector noted that the procedure did not reference a procedure for the required VT-2 inspection. The procedure only specifies a QC walkdown and inspection for leakage without details or reference to VT-2. Discussion with licensee personnel revealed that personnel performing the walkdown are qualified to VT-2 requirements. However, no procedure exist detailing the code requirements for a VT-2 inspection.

During investigation of this finding, the inspector found that site QA had an open audit finding (audit 85-ISI-02, finding 85-ISI-2/165) identifying the fact that procedures do not address VT-1, VT-2, VT-3 and VT-4 requirements of ASME Section XI. Pending review of the QA audit finding corrective actions, Inspector Followup Item 321, 366/86-11-03, Review of Procedures Addressing ASME Section XI VT Requirements, is identified.

Within the areas inspected, no violations, except as noted in paragraph (2)(a), or deviations were identified.

6. Inservice Inspection - Observation of Work and Work Activities (73753B) (Unit 1)

The inspector observed the ISI activities described below to determine whether these activities were being performed in accordance with regulatory requirements and licensee procedures. See paragraph 5 above for the applicable code.

Since the ISI work for the current outage was essentially complete and no work was in process for observation, the following records were reviewed in lieu of work observation:

a. Magnetic particle (MT) inspection records for the following welds were reviewed:

- 1B21-1MS-24A-8PS-B-1
- 1B21-1MS-24A-8PS-B-2
- 1X13A-RHR-1
- 1X13A-RHR-2
- 1X13A-RHR-3

The records were reviewed in the areas of:

- Availability of and compliance with approved NDE procedures
- Use of knowledgeable NDE personnel
- Use of NDE personnel qualified to the proper level
- Recording of inspection results
- Examination method
- Contrast of dry powder particle color with background and surface temperature
- Examination overlap and directions
- Pole spacing and lifting power for yoke method
- Acceptance criteria

b. Liquid Penetrant (PT) inspection records for the following welds were reviewed:

- SA-PL-1
- SA-PL-2
- 1E11-1RHR-20B-D-5
- 1B31-1RC-12AR-K-3

The records were reviewed in the areas of:

- Availability of and compliance with approved NDE procedures
- Use of knowledgeable NDE personnel
- Use of NDE personnel qualified to the proper level
- Recording of inspection results
- Method consistent with procedure
- Penetrant materials consistent with ASME Code materials
- Surface preparation
- Drying time following surface cleaning
- Penetrant application and penetration time
- Examination surface temperature
- Penetrant removal
- Drying of surface prior to developing
- Developer type, application, and time interval after penetrant removal
- Time interval between developer application and evaluation
- Evaluation technique
- Reporting examination results

Within the areas inspected, no violations or deviations were identified.

7. Inservice Inspection - Data Review and Evaluation (73755B) (Unit 1)

The inspector reviewed the ISI NDE records indicated below for the current ISI to determine whether the records were consistent with regulatory requirements and licensee procedures. See paragraph 5 above for the applicable code.

NDE records for the following pipe welds were reviewed:

- 1G31-1RWCU-6-D-20: UT (45°, 60°)
  PT
- 1G31-1RWCU-6-D-16: UT (45°, 60°)
  PT
- 1E11-1RHR-20B-D-1BC: UT (60°)
- 1E11-1RHR-20B-D-1: UT (45°, 60°)
  PT

The records were reviewed in the areas of:

- Calibration data sheets
- Proper recording of recordable indications
- Evaluation of examination data by a Level II or Level III examiner
- Evaluation of data complies with applicable procedures
- Evaluation of indications complies with applicable procedures

Within the area inspected, no violations or deviations were identified.

8. Inspector Followup Items (92700B) (Units 1 and 2)

a. (Open) Inspector Followup Item 321, 366/85-26-01, Examination of New Welding Program. The inspector reviewed the status of development and issue of the new welding program. Based on review of interoffice GPC correspondence LR-ENG-029-0286, completion and issue of the new program has been delayed. As noted in RII report 50-321, 366/85-26, the program was to be implemented by March 31, 1986. The first draft of the program was completed by December 1, 1985. Due to Unit 1 outage demands, personnel were not available to complete review and issue of the program. Therefore, procedure 42SP-MNT-001-0S, Temporary Welding Controls, was issued for the Unit 1 outage. Completion of the welding program is estimated to be eight weeks after unit 1 startup.

b. (Closed) Inspector Followup Items 321, 366/85-14-03, Clarification of Procedures for ISI Inspection of Pipe Supports. Licensee procedures have been clarified and revised in the six areas identified in the inspector followup item.

c. (Open) Inspector Followup Item 321, 66/85-14-04, Update of ISI Plan Pipe Support Sketches to Reflect Latest Design Information. This item identified a problem with sketches for ISI of supports not being updated to reflect the latest design information. As noted in RII report 50-321, 366/85-14, QA audit 85-ISI-1 identified the identical finding. Prior to the Unit 1 outage, the licensee walked down all accessible systems and compared existing support sketches with all design change information (IEB 79-14, DCR, etc.). During the outage, inaccessible systems were walked down for the same purpose. Sketches were or will be updated as necessary. The same procedure will be followed for Unit 2 prior to and during the next outage.

During investigation of this problem, the licensee found that there is a possibility that design change information, other than for supports, may not have been incorporated into the ISI program since 1980 when the ISI contract was changed from Southwest Research to SCS. Another change that may have influenced the problem was a change in AE. To determine extent of the problem, all DCRs since February 1980, are being reviewed for ISI impact. In addition, procedures are being changed to insure that DCRs that impact ISR are factored into ISI requirements. SCS is assigning a permanent engineer at the site for review of DCRs that affect ISI and to take action to include changes in the ISI program.

d. (Closed) Inspector Followup Item 321/85-35-04, Review of ISI Inspection Plans to Insure That Ten-Year Requirements are Met. The inspector reviewed deviations 008 through 016 to the NDE Outage Plan and deviations 002 and 003 to the Modified First Ten-Year Plan and found that all items identified in this inspector followup items had been corrected. The deviations also include items identified in SCS's review of the plans. In addition, the inspector reviewed SCS memorandum, dated March 25, 1986, indicating that their review had been completed and all errors corrected.