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

Report No.: 50-395/87-36

Licensee: South Carolina Electric and Gas Company
Columbia, SC 29218

Docket No.: 50-395 License No.: NPF-12

Facility Name: Summer

Inspection Conducted: December 1 - January 4, 1988

Inspectors: H C Dance 1/20/88
Richard L. Prevatte Date Signed

H C Dance 1/20/88
Perry E. Hopkins Date Signed

Approved by: Hugh C Dance 1/20/88
Hugh C. Dance, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope: This routine, announced inspection was conducted by the resident inspectors onsite, in the areas of licensee action on previous inspection findings, monthly surveillance observation, monthly maintenance observation, operational safety verification, ESF system walkdown, onsite followup of events and subsequent written reports, and I.E. bulletin followup.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

D. Nauman, Vice President, Nuclear Operations
*O. Bradham, Director, Nuclear Plant Operations
D. Moore, Director, Quality and Procurement Services
*J. Skolds, Deputy Director, Operations and Maintenance
*G. Soult, Manager, Operations
M. Browne, Group Manager, Technical and Support Services
*M. Quinton, Manager, Maintenance Services
*A. Koon, Manager, Technical Support
G. Putt, Manager, Scheduling and Materials Management
K. Woodward, Manager, Nuclear Education and Training
L. Blue, Manager, Support Services
S. Hunt, Manager, Quality Assurance Surveillance Systems
K. Beale, Manager Nuclear Protection Services
A. Paglia, Manager Licensing
*W. Higgins, Associate Manager, Regulatory Compliance
*B. Williams, Supervisor, Operations

NRC Resident Inspectors

*R. Prevatte, Senior Resident Inspector
*P. Hopkins, Resident Inspector

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

*Attended exit interview

2. Exit Interview (30702, 30703)

The inspection scope and findings were summarized on January 4, 1987, with those persons indicated in paragraph 1 above. The inspectors described the areas inspected and discussed the inspection findings. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during the inspection.

3. Licensee Action on Previous Inspection Findings (92701, 92702)

(Closed) IFI 395/85-23-02, Determination of inspection requirements for seismically designed steel platforms. The inspector reviewed licensee procedures and plans for inspection of seismically designed steel platforms. The items reviewed included Quality Related Plan No. QRP-5 for Quality Related Access Steel, Rev. 0, dated June 12, 1986 and drawing

No. 04 4461 E-511-260 Rev. A, dated September 30, 1987, list of quality related access steel associated with QRP-5. Based on this review there are no further questions at this time. This item is closed.

4. Monthly Surveillance Observation (61726)

The inspectors observed surveillance activities of safety related systems and components to ascertain that these activities were conducted in accordance with license requirements. The inspectors observed portions of selected surveillance tests including all aspects of one major surveillance test involving safety related systems. The inspectors also verified that required administrative approvals were obtained prior to initiating the test, testing was accomplished by qualified personnel, required test instrumentation was properly calibrated, data met Technical Specification (TS) requirements, test discrepancies were rectified, and the systems were properly returned to service. The following specific surveillance activities were observed:

STP 114.002	Operational Leakage Test
STP 102.002	Nuclear Instrumentation System Power Range Heat Balance
STP 112.002	Reactor Building Spray Pump Test
STP 120.002	Turbine Driven Emergency Feedwater Pump Test
STP 122.002	Component Cooling Pump Test
STP 360.006	Reactor Building Area Radiation Monitor (RM-G7) Operational Test
STP 506.001	Pressurizer Heater Capacity Test
STP 506.002	RCP Undervoltage Unit Trip Actuating Device Operation Test
STP 506.003	RCP Underfrequency Unit Trip Actuating Device Operational Test
STP 302.030	Steam Generator "C" Steam/Feedwater Flow Instrument Operational Test
STP 506.009	Reactor Trip Breaker Shunt and Undervoltage Trip Verification
STP 108.001	Quadrant Power Tilt Ratio
STP 105.001	Charging/Safety Injection Pump Test

No violations or deviations were identified.

5. Monthly Maintenance Observation (62703)

The inspectors observed maintenance activities of safety related systems and components to ascertain that these activities were conducted in accordance with approved procedures, TS and appropriate industry codes and standards. The inspectors also determined that the procedures used were adequate to control the activity, and that these activities were accomplished by qualified personnel. The inspectors independently verified that equipment was properly tested before being returned to service. Additionally, the inspectors reviewed several outstanding job orders to determine that the licensee was giving priority to safety related maintenance and a backlog which might affect its performance was not developing on a given system. The following specific maintenance activities were observed:

PMTS P0094095	Perform resistance check on speed switch on the air handling unit "B" supply fan
MWR 8701774	Inspect, test and repair/replace molded case circuit breaker on XMC1DB2Y 13AD
MWR 8702070	Repair level switch on the turbine driven emergency feedwater pump (IC502031)
PMTS P0097975	Inspect and resplice wires in termination box for steam generator "A" turbine driven air operated emergency feed pump flow control valve IFV03536EF
PMTS P0097977	Inspect and resplice wires in termination box for steam generator "B" turbine driven air operated emergency feed pump flow control valve IFV03546EF
PMTS P0097979	Inspect and resplice wires in termination box for steam generator "C" turbine driven air operated emergency feed pump flow control valve IFV03566EF
MWR 87E0253	Remove brush recorder used to monitor ambient temperature on and around the 27D relays (voltage relays)
PMTS P0098405	Investigate and repair wiring for accumulator tank sample header isolation valve XOX09387-SS
PMTS P0098296	Perform E.Q. inspection and repair/replace splices as necessary on purge line isolation valve XVG06057-HR solenoid 20-1.

No violations or deviations were identified.

6. Operational Safety Verification (71707)

The inspectors toured the control room, reviewed plant logs, records and held discussions with plant staff personnel to verify that the plant was being operated safely and in conformance with applicable requirements. Specific items inspected in the control room included: adequacy of staffing and attentiveness of control room personnel, TS and procedural adherence, operability of equipment and indicated control room status, control room logs, tagout books, operating orders, jumper/bypass controls, computer printouts and annunciators. Tours of other plant areas were conducted to verify equipment operability, control of ignition sources and combustible materials, the condition of fire detection and extinguishing equipment, the control of maintenance and surveillance activities in progress, the implementation of radiation protective controls and the physical security plan. Tours were conducted during normal and random off hour periods.

No violations or deviations were identified.

7. ESF System Walkdown (71710)

The inspectors verified the operability of an engineered safety features (ESF) system by performing a walkdown of the accessible portions of the Reactor Building Spray System. The inspectors confirmed that the licensee's system lineup procedures matched plant drawings and the as-built configuration. The inspectors looked for equipment conditions and items that might degrade performance (hangers and supports were operable, housekeeping, etc.) and inspected the interiors of electrical and instrumentation cabinets for debris, loose material, jumpers, evidence of rodents, etc. The inspectors verified that valves, including instrumentation isolation valves, were in proper position, power was available, and valves were locked as appropriate. The inspectors compared both local and remote position indications. Minor deficiencies such as missing equipment tags and housekeeping were identified. These items were immediately corrected by the licensee.

No violations or deviations were identified.

8. Onsite Followup of Events and Subsequent Written Reports (92700, 93713, 93702)

The inspectors reviewed the following Licensee Event Reports (LER's) to ascertain whether the licensee's review, corrective action and report of the identified event or deficiency was in conformance with regulatory requirements, technical specifications, license conditions, and licensee procedures and controls. Based upon this review the following items are closed.

LER 87-017 Seismic instrumentation setpoints

LER 87-022 ESF actuation auto start of motor drum emergency feedwater pump

LER 87-025 Environmental qualification of 600 volt taped wiring splices. This item resulted in a special team inspection being conducted in this area by Region II, during the period of October 20-23, 1987. The deficiencies associated with the items discussed in the above LER were identified as violations in report 395/87-30. Corrective actions associated with above items will be tracked as a part of violations 87-30-01 and 87-30-02.

No violations or deviations were identified.

9. I.E. Bulletin Followup (92703)

The inspectors accompanied licensee personnel during the selection of fasteners for testing as required by NRC Compliance Bulletin No. 87-02, Fastener Testing to Determine Conformance with Applicable Material Specifications. The licensee's selection of fastening materials for laboratory testing was not strictly based on usage data but was based on which types were contained in the largest quantities in the warehouse and the types listed in the bulletin with strong NRC interest. A later review of usage data by the licensee indicated that the selected samples were representative of plant usage.

The samples consisted of 10 safety related fasteners of the following types; A 325, type 2, A 193, grades B7 and B8, A 307, grades A and B, and A 490, type B7. The safety related nuts for these fasteners consisted of A 563, grade A and A 194, type 2H. The 10 non-safety fasteners were A 354, grade BD, A 563, grade B, A 449, A 574, grade 4140, and F 593, alloy 303. The nuts for these fasteners were A 563, grade B.

The above samples were shipped to LAW Engineering Industrial Services, 501 Minuet Lane, Charlotte, NC on December 11, 1987. The testing was completed and the results were returned to the licensee on December 18, 1987. The test results for the safety related fasteners indicated that one A 307, grade B fastener and one A 490 type 1 fastener failed the Rockwell hardness test. The A 307, grade B fastener's average of three readings was 66.3 vice the 69 required minimum. The A 490, type 1 fastener failed the Rockwell C and B hardness tests with an average of three readings of 22.2 vice 33 and 95.0 on the B scale. One A 325, type 2 fastener failed the chemical analysis with high Carbon of 0.39 vice 0.37 and Boron of less than the 0.0005 required minimum. For the non-safety fasteners one A 574, grade 4140, failed the hardness test with average readings of 30 and 34 on two samples vice the 37 required. One F 593 bolt failed the chemical analysis with Nickel reading 7.89 vice the 8.0 required and Sulfur reading 0.01 vice 0.15 minimum required. An additional F 593 fastener failed the chemical analysis with Nickel reading 7.96 and Sulfur reading 0.01. A third F 593 fastener failed Sulfur with a

reading of 0.01. A copy of the test results were provided to Region II under separate correspondence. The licensee is currently preparing a report on this item.