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

Report No.: 50-395/88-25

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

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

Facility Name: V. C. Summer

Inspection Conducted: October 1-31, 1988

Inspectors: H C Dance /for 11/22/88
Richard L. Prevatte Date Signed

H C Dance /for 11/22/88
Perry C. Hopkins Date Signed

Approved by: Hugh C Dance 11/22/88
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 monthly surveillance observations, monthly maintenance observation, operational safety verification, engineered safety features system walkdown, onsite followup of events and subsequent written reports, design, design changes and modifications and other areas.

Results: The licensee was in the forty-fifth day of the outage as of October 31, 1988, and are within 24 hours of the schedule. Apparently the efforts spent on scheduling before the outage have contributed to the ability of staying on schedule at this time. Of over 300 environmental qualification tasks scheduled during the outage, 133 have been completed. Over 11,000 tasks were scheduled and approximately 6,000 have been completed SG eddy current testing has been completed with on going plugging operations and tube pulling completed. Outage radioactivity exposure has been controlled very well with the large amount of steam generator work taking place. The exposure is at 317 person-rems.

Emergency DG "A" work was slow due to leaking water jacket seals. However, the diesel was operational on time. Diesel Generator "B", "B" train work such as SW, CCS, reactor building spray pump and sump suction, and "B" train RHRS work is in progress. Critical path work on the schedule centers around "B" train work and reloading of fuel that began October 30, 1988.

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

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

W. Baehr, Manager, Chemistry and Health Physics
*K. Beale, Manager, Nuclear Protection Services
O. Bradham, Vice President, Nuclear Operations
C. Bowman, Manager, Scheduling and Modifications
*M. Browne, General Manager, Station Support
W. Higgins, Supervisor, Regulatory Compliance
*S. Hunt, Manager, Quality Systems
*A. Koon, Manager, Nuclear Licensing
*G. Moffatt, Manager, Maintenance Services
*D. Moore, General Manager, Engineering Services
*K. Nettles, General Manager, Nuclear Safety
C. Price, Manager, Technical Oversite
J. Shepp, Associate Manager, Operations
J. Skolds, General Manager, Nuclear Plant Operations
G. Soult, General Manager, Operations and Maintenance
*G. Taylor, Manager, Operations
*D. Warner, Manager, Core Engineering and Nuclear Computer Services
*M. Williams, General Manager, Nuclear Services
K. Woodward, Manager, Nuclear Operations Education and Training

NRC Resident Inspectors

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

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

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. 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 12 selected surveillance tests including all aspects of DG Refueling Inspection, STP 409.001. 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 TS requirements, test discrepancies were rectified, and the systems were properly returned to service.

Direct observation of performance of surveillance testing took place. STP's were technically adequate to perform the required testing. STP's were present in the testing location, followed step by step during performance, and completion of steps was documented by marking check off blocks as required. Independent verification was properly performed in accordance with instructions. Pretest activities included reviewing procedures prior to start, selecting and acquiring proper measuring and test equipment, obtaining permission from the shift supervisor or his designee, and a discussion of the test and its effect on the plant was held. Posttest activities included the review of the completed procedures by the test performers for completeness and accuracy. The shift supervisor/supervising operator reviewed the test for completion and the final group supervisor reviewed the procedure for completeness. Tests were suspended when required in order to satisfy and/or correct test deficiency or procedural deficiency. Performance of test procedures appeared to be adequate.

No violations or deviations were identified.

3. 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 not developing a backlog which might affect a given system's performance. The following specific maintenance activities were observed:

MWR 88I0342	Repair DG "A" coolant expansion tank level indicator
PMTS P106196	Electrical equipment inspection and cleaning
PMTS P102577	Visually inspect and cycle relays for annual inspection
PMTS 108902	DG "A" annual air start compressor system
MWR 10380	Replacement of electronic NA4 cards
MWR 319520010	Reinstall the over current sensing relay and perform wiring change
MWR 21364002	Replace/remove gating and the synchronizing of the boards
PMTS P97377	Calibration of 120 volts inverter

PMTS P0107614	Partial teardown for 18 month PM for DG "A"
MWR 88M0006	Support refueling DG 18 month inspection
MWR 8801533	Repair pressure controller on instrument air
PMTS P0108936	DG "A" engine partial teardown
PMTS P0108934	DG "A" inservice inspection
PMTS P0103279	DG "A" jacket water heater repair
PMTS P106159	DG instrumentation calibration
MWR 88M0052	Remove and replace DG "A" instrumentation
MWR 8801206	Repair non-functioning annunicators on DG "A" panel
MWR 109010018	Repair double wall seal in trace 109E1B, 1005 and ECB1039
MWR 214290002	Repair of main steam regulator to increase efficiency and exhaust more water
MWR 87E0173	Replace manual and automatic voltage regulators on DG "A"
PMTS P0110939	DG "A" lubrication check
MWR 88M0386	Repair cylinder oil leak on DG "A"
MWR 213770002	Install air duct on the air handling unit per MRF 21377
MWR 213770003	Fabricate and install supports for ducting for cooling safety harsh environment equipment
MWR 21377	Install additional cooling for safety harsh environment equipment in the intermediate building for the main steam system isolation valves
MWR 88M0243	Overhaul DG "A" compressor unloader and outlet valve
MWR 88E0070	Performance of inspection of "A" train motor control centers
PMTS P010622	Inspect motor starter for safety injection system XVG 0888880
PMTS P0101950	Work cold leg injection header isolation valves XMC 1DA2Y, 13DG XVG 08889

PMTS 98341	Inspect and repair cold leg injection header isolation valve XVG 088884
PMTS P104850	Repair and repack main steam header "B" drain valve XVT 2849B-MS
PMTS P104849	Repair and repack main steam header "A" drain valve XVT 2849A-MS
PMTS P98399	Repair hydrogen analyzer and "A" reactor building sample valve XVX 06051C-M
PMTS P108166	Perform operational check on cooling water circuit breaker XW K1070
PMTS P104614	Repack high root isolation valve on main steam line IAX 126-MS
PMTS P104851	Repair and repack main steam header "C" drain valve XVT 2849C-MS
PMTS P104613	Repair and repack high root isolation valve on main steam line valve IAX 001281-HR-MS
PMTS P0107693	Repair operator for RHR header "B" isolation valve XVG 0870-1B-0-RH
MWR 8800132	Check and repair snubber, as necessary, (MKCSH 0468) and perform STP 403.002
MWR 8800131	Check and repair snubber, as necessary, (MKCSH 0467) and perform STP 403.002
PMTS P0098261	Repair and verify EQ qualification for pressurizer tank vent isolation valve XVD 08047-RC
MWR 88E01731	Replace spring packs and perform MOVATS testing

No violations or deviations were identified.

4. Operational Safety Verification (71707)

a. The inspectors toured the control room, reviewed plant logs and 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.

b. Section 4.4.5.5 of TS requires the results of steam generator tube inspection which fall into category C-3 be reported pursuant to 10 CFR 50.72.(b).2.(i). Based on the completion of eddy current inspections, the results classify the steam generators as category C-3, (more than 1% of the inspected tubes are defective). This information has been reported telephonically to the NRC regional office. The final result on 10/28/88 are as follows:

S/G A	S/G B	S/G C
184 plug	233 plug	176 plug
97 F*	203 F*	69 F*
25 as is	43 as is	18 as is

*-Star

See LER 88-11 for further details.

c. The plant is currently in an outage. The control room is in the process of being painted, including the control boards, and replacing carpeting. Discipline of control room personnel is quite good. Disruptions have been at a minimum even with the high volume of work activity taking place. Shift turnovers are conducted in a professional manner.

No violations or deviations were identified.

5. ESF System Walkdown (71710)

The inspectors verified the operability of an ESF system by performing a walkdown of the accessible portions of the Diesel Fuel 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 (e.g., inoperable hangers and supports poor 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.

No violations or deviations were identified.

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

The inspectors reviewed the following SPR's to ascertain whether the licensee's review, corrective action and report of the identified event or deficiency was in conformance with regulatory requirements, TS, license conditions, and licensee procedures and controls. Based upon this review the following items are closed:

SPR 88-007 Lightning strike of meteorological instrumentation

SPR 88-006 Fire suppression system

No violations or deviations were identified.

7. Design, Design Changes and Modifications (37700)

The inspectors reviewed design changes, listed below, not previously approved by NRR, to assure that the changes had been reviewed and approved in accordance with the TS and 10 CFR 50.59. During the review, the inspectors verified (1) that the design changes were reviewed and approved in accordance with TS and established QA/QC controls, (2) that design changes were controlled by established procedures, (3) that the licensee conducted a review and evaluation of test results and that these test results were within previously established acceptance criteria and that any test deviations were resolved and necessary retesting was accomplished as appropriate, (4) that operating procedure modifications were made and approved in accordance with TS, and (5) that as-built drawings were changed to reflect the modifications. The inspectors observed (1) that change activities were conducted in accordance with the appropriate specifications, drawings, and other requirements, (2) that acceptance and startup testing of modifications were conducted in accordance with technically adequate and approved procedures, and (3) that appropriate controls were implemented, (e.g., firewatch, portable fire fighting equipment, welding and cutting permit, etc.). Additionally, the inspectors reviewed the outstanding FCR's and determined that an excessive backlog was not developing. Design changes reviewed were:

MRF 21022, this MRF work is to reduce required output of each SWBP from 4000 GPM to 2000 GPM: (1) making SW valves XVC3109 A, B, C, and D, and their associated circuitry "active" and (2) causing the valves corresponding with the selected to run RBCU fans to open and the other two valves to close upon receipt of an "SI" signal.

No violations or deviations were identified.

8. Other Areas

A Region II maintenance inspection team visited V.C. Summer during the week of October 17, 1988.

9. Exit Interview (30703)

The inspection scope and findings were summarized on October 31, 1988, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during the inspection.

10. Acronyms and Initialisms

CCS	Component Cooling System
DG	Diesel Generator
EQ	Environmental Qualification
ESF	Engineered Safety Feature
FCR	Facility Change Requests
GPM	Gallons Per Minute
MWR	Maintenance Work Request
MRF	Modification Request Form
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
PM	Post Maintenance
PMTS	Preventative Maintenance Task Sheet
QA	Quality Assurance
QC	Quality Control
RBCU	Reactor Building Cooling Units
RHRS	Residual Heat Removal System
SG	Steam Generator
SI	Safety Injection
STP	Surveillance Test Procedures
SW	Service Water
SWBP	Service Water Booster Pump
TS	Technical Specifications