



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

Report No.: 50-395/87-08

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: March 1 - April 3, 1987

Inspectors: Leo P. Modemus 4/9/87
for Richard L. Prevatte Date Signed

Leo P. Modemus 4/9/87
for Perry E. Hopkins Date Signed

Approved by: Hugh C. Dance 4/9/87
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, unresolved item, onsite followup of events and subsequent written reports, monthly surveillance observations, engineered safety features system walkdown, monthly maintenance observation, operational safety verification, refueling activities and maintenance program implementation.

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
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
W. Higgins, Associate Manager, Regulatory Compliance
B. Williams, Supervisor, Operations

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

2. Exit Interview (30702,30703)

The inspection scope and findings were summarized on April 3, 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)

(Open) Licensee Identified Item 80-29-01, Charging pumps minimum flow: long term fix in progress - see SCE & G letter to Denton dated, January 22, 1982. Inspection and Enforcement Bulletin 80-18, addressed the problems associated with maintenance of adequate minimum flow through centrifugal charging pumps following a secondary side high energy line rupture. This bulletin provided the licensee with a recommended interim fix for this item. The licensee completed the interim fix and addressed it in the above letter to Nuclear Reactor Regulation (NRR). The licensee has indicated that they now consider this interim fix to be the final solution to this problem. The inspector discussed this item with Region II management and the licensing project manager in NRR on March 24, 1987. NRR stated that if the licensee considers this to be the final solution to the problem, then they must provide NRR with appropriate written justification. The licensee has indicated that this information will be provided to NRR in a timely manner. This item will remain open pending receipt and review of this information by NRR.

(Closed) Inspector Followup Item 85-42-01, Anchor Darling check valves. In August, 1985, Anchor Darling identified a safety concern associated with missing lock welds on swing check safety valves. The licensee inspected and performed repairs on 63 of the 64 valves of this type installed at Summer plant. The inspector in November, 1985 identified that the licensee was evaluating the need to perform an inspection of the remaining three inch, nonsafety valve in the recirculation line to the Reactor Makeup Water Storage Tank. The inspection of this valve will require draining of this tank. The licensee has performed a 10CFR 50.59 evaluation to determine if the failure of this valve could result in an unanalyzed safety concern. The results of the evaluation were negative and the licensee has evaluated the valve to "accept as-is". The licensee will perform an inspection of this valve at a future time to be designated when the tank is drained for other work. This item is closed.

4. Unresolved Item*

See paragraph 9b for a unresolved item identified in this report.

5. 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 the required administrative approvals were obtained prior to initiating the test, that the testing was accomplished by qualified personnel, that required test instrumentation was properly calibrated, that data met Technical Specification (TS) requirements, that test discrepancies were rectified, and that the systems were properly returned to service. The following specific surveillance activities were observed:

STP 104.001	Boric acid makeup to CVCS flow test
STP 134.001	Shutdown margin calculation
STP 120.006	Emergency feedwater valves backup air supply test
STP 126.002	Spent fuel pool ventilation operability test
STP 127.001	Pressurizer block valve operability test
STP 103.001	RCS and pressurizer heat up - cool down surveillance test
STP 409.001	Emergency diesel generator refueling inspection

*Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations.

STP 345.001	Delta T - Tavg protection loop "A" Calibration
ICP 240.092	Seismic mounts/environmental seals torquing
STP 112.006	Reactor building systems spray nozzle flow test
STP 360.002	Fuel handling building, bridge area radiation monitor operational test
STP 360.003	Reactor building manipulator crane area radiation monitors calibration
STP 118.006	Reactor building purge and exhaust refueling weekly test
STP 147.001	Reactor building penetration test
STP 404.901	Steam generator tube inspection
STP 131.001	Manipulator crane test
STP 601.003	Boron concentration of RCS & refuel canal during refuel operations

No violations or deviations were identified.

6. 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:

MWR 87E0036	Repair position indicator on the auxiliary building spray valve XVG 603003A
MWR 8700371	Repair/time main steam valve XVM 02801C
MWR 8700370	Repair/time main steam valve XVM 02801B
MWR 318250009	Fabricate the back plate per MRF 31825, for support of instruments on the accumulator tank pressure transmitter

MWR 8700372	Investigate and repair spray valve
MWR 86M0124	Perform maintenance as required on feedwater system hangers
MWR 86M0333	5 year refueling inspection of diesel generator "B"
MWR 20700012	Replace and calibrate N 31 and N 35, source of intermediate range drawers
MWR 86M0382	Replace exhaust manifold gaskets on diesel generator "B"
MWR 8601818	Investigate and repair XVG02808BMS valve packing leak
MWR 87M0141	Disassemble spare safety valve, inspect reset nozzle rings and install anti-rotation pin on main steam safety valve
PMST 0077121	Hot source permissive relay calibration
PMST 0077124	Differential relay calibration
PMST 0077115	Ground relay calibration
MWR 20805005	Install tubing and transmitter FT 475A per MRF 20805
MWR 20789009	Perform wiring modification and testing of XSW1DB unit 5 per MRF 20789
MWR 208000018	Install new auxiliary panel per MRF 20800

No violations or deviations were identified.

7. 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.

On March 10, 1987, during the refueling outage, the licensee identified that the weekly surveillance was not performed on the diesel fire pumps starting battery as required by TS 4.7.9.1.3. There were no adverse consequences because the electric driven fire pump remained operable and the diesel fire pump had been demonstrated operable on March 8, and after this event occurred on March 10, 1987.

The licensee, upon discovery of this item, immediately performed the required surveillance and determined the diesel fire pump operable. The event was discussed in the electrical shop safety meeting and supervision has reemphasized the need for timeliness of surveillance testing.

The NRC wishes to encourage and support licensee initiative for self-identification and correction of problems, and since this item meets the applicable guidance of NRC enforcement policy for licensee identified items, contained in 10 CFR 2, Appendix C, no violation will be issued for this item.

No violations or deviations were identified.

8. 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 RHR 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.

No violations or deviations were identified.

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

- a. The pressurizer safety valves were removed during the current refueling outage and sent to Wyle Laboratories for testing and repair. The valves were tested for the as received steam set pressure during the period of March 29-31, 1987. The test results ranged from a low of 2525 psig to a high of 2726 psig. The technical specification setpoint is 2485 psig +/- 1 percent. The as received setpoints were well outside the limit of 2509 psig. The licensee, upon receipt of this information, made the required 4 hour report to the NRC. The licensee has additionally sent their equipment used to

test and set the pressurizer safety valves to Wyle Laboratories. A licensee engineer will also be dispatched to the Laboratory to evaluate the licensee's safety valves and test equipment and determine the cause of this deficiency. Upon completion, the evaluation results will be reported by the licensee.

- b. At 0044 hours on April 2, 1987, the licensee discovered that conditions existed which could permit unmonitored access to a vital area from the protected area. This access could be gained through unsecured grating that covered a fire damper penetration. This grating normally separates two vital equipment areas. Due to maintenance activities being performed during the current refueling outage, one of these areas had been downgraded from a vital area to a protected area at 1105 hours on March 29, 1987.

Upon discovery of this condition the licensee took immediate compensatory action and secured the penetration with chains and security locks. The licensee reported the incident to the NRC at 1130 hours on April 2, 1987. During the time period when unauthorized access was available, the plant was in a refueling outage with the reactor defueled. The inspectors and Region II are currently evaluating this item and have not determined the seriousness of this event. Pending completion of evaluation, this item will be tracked as an unresolved item; access control to a vital area (87-08-01).

- c. 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 86-16	Reactor shutdown due to reactor coolant system leakage
LER 86-11	Reactor trip due to inadvertent feedwater isolation valve closure
LER 87-01	Failure to sample radioactive effluent storage tank

No violations or deviations were identified.

10. Refueling Activities (60710)

The inspectors reviewed the licensee activities associated with the current refueling outage which began on March 7, 1987. These activities consisted of: (1) testing of refueling equipment prior to use, (2) plant shutdown, cooldown and depressurization for refueling, (3) removal of fuel from the core and transfer to the spent fuel pool, and (4) inspection of fuel. The inspectors verified that the periodic testing required by technical specifications and station administrative procedures were completed within the prescribed time limits.

In addition to the above, the inspectors observed the licensee's activities associated with work on the steam generators. This work included: (1) cleaning of secondary side and inspection of moisture separators, (2) eddy current testing of steam generator tubes, (3) stress relieving in the tube "U" bend area, (4) shot peening of tubes and (5) steam generator plug removal in preparation for steam generator tube repair. The above work on the steam generator was being performed under Modification Request Forms (MRF's) 21133 steam generator tube sleeving, MRF 21134, steam generator U-bend stress relieving and MRF 21135 steam generator tube shot peening. The inspectors will continue to follow the above items and other important refueling activities until completion.

11. Maintenance Program Implementation (62700)

The inspectors interviewed plant personnel, reviewed plant operating history and NRC reports and selected six completed maintenance activities which will be used to determine if, (1) the maintenance program is being implemented in accordance with regulatory requirements, (2) the effectiveness of the maintenance program on important plant equipment and (3) the ability of the maintenance staff to conduct an effective maintenance program. The selected maintenance activities consist of the following maintenance work request (MWR's):

MWR 8502263	
MWR 8402724	Repair of pressurizer spray valve
MWR 84I0683	
MWR 8601125	Investigate and repair feedwater regulating valve
MWR 8600928	Investigate and repair feedwater isolation valve
MWR 8600455	Investigate and repair alterex brush failure

After selecting the above MWR's, the inspectors assembled the work packages and procedures associated with the above work in order to perform a detailed review. This item will be completed after the current refueling outage and reported in a subsequent report.