UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-395/80-40

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

Facility Name: V. C. Summer Nuclear Station

License No. CPPR-94

Inspection at: V. C. Summer Nuclear Station near Parr, South Carolina

Inspector: R. K. Harden for — 2/11/81
J. L. Skolds — Date Signed

Approved by: R K Harden for — 2/11/81
P. J. Kellogg, Section Chief RONS Branch — Date Signed

Inspection on November 17, 1980 thru January 2, 1981

Areas Inspected

This routine, announced inspection involved 204 inspector-hours onsite in the areas of Preservice Valve Program review, open item review, preoperational test procedure review, preoperational test observation, TMI Action Plan, Independent Inspection Effort, 10CFR21 Report Review and Plant tours.

Results

Of the 8 areas inspected, no apparent items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

Licensee Employees

*O. S. Bradham, Station Manager
*J. G. Connelly, Assistant Station Manager
*L. Storz, Operations Supervisor
*S. Smith, Maintenance Supervisor
*B. G. Croley, Technical Support Supervisor
*C. Ligon, Administrative Supervisor
*A. Koon, Technical Services Coordinator
*P. Fant, QC Inspection Coordinator
*K. Woodward, Assistant Operations Supervisor
*A. A. Smith, Director, Surveillance Systems
*D. Moore, Manager, QA

*Attended exit interviews.

Other licensee employees contacted included technicians, operators, mechanics, and office personnel.

2. Exit Interview

The inspection scope and findings were summarized on November 21, 1980, December 12, 1980, and January 6, 1981 with those persons indicated in Paragraph 1 above. The Resident Inspector also attended the exit interview of C. Perry and A. Hill on November 21, 1980; E. Girard on December 19, 1980; A. Belisle on November 25, 1980; B. Crowley on December 11 1980 and H. Whitener on December 12, 1980.

3. Licensee Action on Previous Inspection Findings

(Open) Noncompliance (395/80-25-11) Failure to follow procedure concerning valve lineups performed during HFT. The inspector reviewed the response dated November 24, 1980. Special Inspection 80-01 was also reviewed and appears to take adequate corrective action to prevent recurrence. However, the valve lineup involved in the item of noncompliance has not been changed yet. This item will remain open until the valve lineup is corrected.

(Closed) Unresolved item (395/80-34-07) Low Voltage Power Circuit Breakers. The inspector reviewed letters from Gould-Brown Boveri concerning the grease on the main and arcing contacts. The vendor determined that grease would have no chemical effect on the contact surfaces and would not in any way affect the integrity of the circuit breaker because of the contact pressure itself. The inspector agreed with the applicant that this was not reportable to the NRC. This item is closed.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Preservice Valve Program

The inspector reviewed Revision 1 to the Preservice Valve Program (November 1980). The inspector found the valve data technically inadequate due to the following errors:

a. The following valves had stroke times listed which do not agree with either a preoperational test or the FSAR:

XVT-8153	XVG-8133A,B
XVT-8154	XVT-8105
XVC-8106	XVG-8706A,B
XVC-8109A,B,C	XVG-8885
XVG-8130A,B,C	XVG-8945A,B
XVG-8131A,B,C	XVG-8942
XVG-8132A,B	XVG-8808A,B,C
XVG-8887A,B	SVG-8809A,B
XVG-8812A,B	XVG-2662A

b. The following valves are listed as not having remote valve position indication when they actually do:

XVT-8153	XVT-8145
XVT-8154	XVT-8100
XVC-8106	XVG-8130A
XVD-7126	XVD-7150
XVD-7136	XVG-9625
XVG-9626	XVG-6797

c. The valve numbers listed for two of the pressurizer code safety valves are incorrect.

d. The title of valves XVC-8381 and XVC-8348A is incorrect.

e. The valve number for valves XVC-3130A, SVC-6387A, XVC-8958A and XVC-8348A is incorrect.

f. Valves XVR-8117 and SVC-8997A are listed as Category "A" valves but no leak test is listed.

g. Valves XVR-8708A and B are listed as Category A/C yet they serve only as relief valves and do not appear to be Category A.

h. Relief is requested for valve XVC-8926 by request "C-13". However, C-13 was not included in the Relief Request Section.

i. The main feedwater header check valves are listed as XVC-1612A,B,C. Seven months prior to the submittal of the preservice program, the valve numbers were changed to XVC-1684A,B,C.

j. The "normal position" for the following valves was listed incorrectly: XVX-6051A, 6053A, 6051B, 6050B, 6053B, 5052B.

k. Valve LCV-1003 is a containment isolation valve, yet does not appear in the Program.

l. Relief request A-14 concerns valve LCV-115E yet this valve does not appear on the valve list. Also, if LCV-115E belongs in the program, LDV-115B, C and D should also be included.

m. The basis for relief for C-1, C-2, C-3, C-5, C-6, C-7 and C-8 is incorrect.

n. The function and basis for relief for G-1 and G-2 are incorrect.

o. Valves 3177A and B are missing from the program.

p. It is not clear why some valves in the CVCS system are in the program and others are not. The purpose of the Preservice Valve Program needs to be reviewed in generating the valve list. These items will remain open as part of previously opened item 79-31-06.

6. Open Items

The inspector reviewed the following open items:

Closed (79-37-06) Battery Charger Location. This item dealt with the fact that the battery chargers were located against a wall and the SCI Technical Manual states that six inches should be provided behind the chargers to allow for adequate ventilation. SFR 1573 was written to investigate this issue. The SFR was dispositioned by Gilbert Associates stating that the present installation was acceptable as is because the statement in the Technical Manual was a statement covering units with rear panel ventilation only. The chargers installed have top and front panel ventilation. This item is closed.

Closed (79-41-11) Diesel Generator Building Ventilation. This item dealt with the diesel generator building ventilation system being taken apart and put back together in support of another job and not being put back together properly. Apparently, in support of some conduit work in the vicinity of the ductwork, the ductwork was taken down and not reinstalled properly. Some bolts were loose and the ductwork was crooked. The Startup Supervisor and Construction Manager issued memos to responsible supervisors to caution against doing this in the future on any system. The inspector has looked for similar cases during tours of the plant. No further examples were identified. This item is closed.

Closed (79-31-02) This item dealt with the fact that the Preoperational Test SI-6, "Safety Injection Flow Balancing" indicated a maximum flow of 680 gpm for the Charging/Safety Injection pumps and the Technical Manual indicates a maximum flow of 650 gpm. SFR 1695 was written to evaluate this condition. The disposition of this SFR was that 680 gpm is allowable as long as the pump is still operating on its performance curve. SI-6 demonstrates that the pump would operate up to 680 gpm and still be on its performance curve. This item is closed.

Closed (80-01-05) This item dealt with the fact that Section 6.3.5.3.1 of the FSAR stated that a low flow alarm exists for the boric acid recirculation of the BIT and the alarm did not exist. A low flow alarm is now present in the control room. This item is closed.

Closed (80-06-01) This item dealt with the fact that complete control room isolation was not assured if XFN30A or XFN30B failed to start on an accident. SFR 2165 was written to change the circuitry to ensure that both XDP-134A and XDP-134B closed when either XFN30A or XFN30B started. This work was accomplished under CWR3036. This item is closed.

Closed (80-06-04) This item dealt with the fact that the high flow closure of valves 1920A and B was set at 150 gpm which was identical to the minimum flow setting in preoperational test, RC-8. SFR 1340 and 1502 were written to disposition this situation. The SFR 1502 disposition was to set the high flow closure at 170 gpm. This item is closed.

Closed (80-13-02) This item dealt with the following:

a. Substitution of surveillances for audits. The applicant has revised the QA program to require all Type II Surveillances be performed by qualified auditors and that a qualified lead auditor perform the substitution of surveillances for audits.

b. Qualifications of auditors. The applicant has revised Quality Assurance Procedure (QAP) No. 2 "Indoctrination, Training and Certification" to more clearly establish minimum qualification levels of personnel qualified as auditors.

c. Nuclear Safety Review Committee composition. The Operational QA Plan and the Proposed Technical Specifications are in agreement.

d. Periodic review of audit program and commitment to ANSI N45.2.12, Draft 4, Revision 2. The requirement to review the audit program will be met by the NSRC (Nuclear Safety Review Committee). The applicant has committed to ANSI N45.2.12, Draft 4, Revision 2.

The above items (a through d) are closed.

Closed (80-13-03) Diesel Generator Day Task discrepancies. This item dealt with a discrepancy between the instrument list and the preoperational test

procedure for the day tank. The preoperational test was correct and the instrument list is being revised. This item is closed.

Closed (80-13-05) Feed Pump Suction Valve Operation during Flooding. This item dealt with the fact that preoperational test, MD-01, indicated that a flooding signal from the Intermediate Building closes the Feed Pump Suction Valves and Section 7.6.5.1.2 of the FSAR states that a flooding signal allows the operator to close the suction valves. SFR 2453 was written to resolve this discrepancy. The FSAR was changed to reflect what is in preoperational test MD-01. This item is closed.

Closed (80-13-09) HVAC Control Board. This item dealt with incorrect labeling on the HVAC Control Board. This problem has been corrected. This item is closed.

Closed (80-15-01) SI-2. This item dealt with the fact that SI-2 "Safety Injection Accumulator Discharge Valves" did not require the reactor vessel head off and the internals removed as a prerequisite but chapter 14 of the FSAR did. The FSAR was changed. This item also dealt with the fact that the FSAR required a tygon hose be isolated before pressurizing the accumulators for this test and the preoperational test, SI-2, did not have this provision. The preoperational test was changed. This item is closed.

Closed (80-15-02) Evacuation Alarm Audibility. This item dealt with the fact that the preoperational test EE-01-E-01, Plant Paging and Communications, did not adequately verify that evacuation alarms could be heard in all parts of the plant. The procedure was revised. This item is closed.

Closed (80-15-04) Turbine Driven Emergency Feedwater Pump. This item dealt with the fact that no audible alarm existed in the control room for the Emergency Feedwater flow control valves and that the minimum, maximum and normal exhaust pressure for the Turbine was 1 psig. Alarms are now present in the Control Room. The 1 psig. was intended to be an "expected" value and a 6 psig. relief valve will protect the system should pressure get too high. This item is closed.

Closed (80-15-05) Proposed Technical Specifications on Emergency Feedwater. This item dealt with the fact that no flow was given in the Motor Driven Emergency Feedwater Surveillance requirement in the proposed Technical Specifications. The proposed Technical Specifications have been changed. This item is closed.

Closed (80-18-02) Motor Driven Emergency Feedwater. This item dealt with the fact that the preoperational test, EF-1, required a discharge pressure of 1620 psig. and the proposed Technical Specifications requires only 1580 psig. The pressure required in the proposed Technical Specifications is the minimum pressure to obtain the required flow to one steam generator at a steam generator pressure of 1211 psig. This item is closed.

Closed (80-18-04) CS-4 Comments. This item dealt with several comments concerning the technical adequacy of CS-4, "Charging, Seal Injection and Letdown". All items were corrected or resolved. This item is closed.

Closed (80-18-05) Diesel Generator Alarms. This item dealt with an alarm on the Diesel Generator Control Panels labeled "Close to Alarm". These alarms have been renamed "Local Control". This item is closed.

Closed (80-18-08) Operational QA Plan. This item dealt with two statements in the FSAR which were either incorrect or unclear. Both items have been resolved. This item is closed.

Closed (80-18-09) Changing signs on I & C procedures. This item dealt with technicians inserting minus signs in I & C procedures if they knew the acceptance criteria was negative. Training has been given to the I & C technicians to either change the sign of the acceptance criteria by generating a test change or assume the valve should be positive. This item is closed.

Closed (80-25-02) This item dealt with a problem in BD-1 "Blowdown Cooling Test." The procedure indicated that valves 47C2A, B and C would close on a high flow or high pressure signal. These valves do not close on these signals and the test was changed to reflect this.

7. Preoperational Test Procedure Review

The inspector reviewed the following procedures:

LR-2 Reactor Building Structural Acceptance Test

LR-3 Integrated Leak Rate Test

LR-5 Air Lock Leak Test

The procedures were reviewed to ensure they were technically adequate and to ensure they were consistent with the commitments made in Chapter 14 of the FSAR and with Regulatory Guide 1.68.

The inspector had the following comments concerning the tests:

LR-5

The air locks have double O-rings on the operating shafts and on the foot pedal shafts of the door operating mechanism. Page 6.2-112 of the FSAR states that the double O-rings of the shafts are subjected to type B tests. The O-rings have the capability to be tested individually like the O-rings on the door of the air lock. The inspector asked the applicant to identify how the shaft O-rings would be tested once the plant is operating. The item will remain open (80-40-01) pending future review by the inspector.

8. Preoperational Test Procedure Observation

The inspector observed portions of the following test:

FH-5 Manipulator Crane

LR-4 Local Leak Rate Test (Type B/C)

The inspector observed the test to ensure the procedure was being followed, the testing was performed under properly controlled conditions and to independently verify the results. Findings were acceptable.

9. TMI Action Plan

The inspector reviewed a letter from the applicant to the NRC dated December 11, 1980 concerning TMI Items II.K.1, "IE Bulletins or Measures to Mitigate Small Break LOCAS and Loss of Feedwater Accidents" and I.C.6, "Guidance on procedures for verifying correct performance of operator activities." Attachment I to the letter states that "An Administrative procedure has been developed to control locks and to verify on a periodic basis that they have not been tampered with". Actually no procedure has been developed to do this but one is being developed. Attachment II to the letter states that Administrative Procedure AP 204.1 "Safety Tagging" includes measures for locking of equipment. AP-204.1 does not cover locking of equipment. The inspector cautioned the applicant to be accurate in making commitments to the NRC.

10. 10CFR21 Reports

The inspector reviewed 10CFR21 Report 80-37-05 dated November 20, 1980 concerning Inadvertent Boron Dilution. The letter states that the applicant may incorporate the Westinghouse interim corrective actions into the operating procedures. Attachment A to the letter included the interim corrective action. However, the corrective action included locking out valves that either did not exist at V. C. Summer or that had no effect on boron dilution. The applicant has committed to amend the report to include the correct valves.

11. Independent Inspection Effort

a. The inspector was informed that the nigh flow trip setpoints on the Emergency Feedwater lines will be raised to 600 gpm for each motor driven pump line and 700 gpm for each turbine driven pump line. Pump runout occurs at approximately 750 gpm for the motor driven pump and 950 gpm for the turbine driven pump. The inspector has asked the applicant to show why pump runout will not occur when a motor driven pump reaches 750 gpm (total flow) and 600 gpm does not exist down one line (i.e., 250 gpm down each line) or when the turbine driven pump reaches 950 pgm (total flow) and 700 gpm does not exist down one line. The item will remain open (80-40-02) pending future inspector review.

b. The inspector reviewed a letter from the applicant to the NRC dated December 10, 1980 concerning diesel generators. The letter indicates that confirmatory vibration measurements will be taken during the next testing phase of the diesel generators. This item will remain open (80-40-03) pending future review by the inspector.

c. The inspector reviewed TI2515/34 concerning Westinghouse 17x17 Rodlets. Procedures are being generated at this time to evaluate incore flux maps. When the procedures are generated, the concerns of this TI will be reviewed to ensure they are incorporated in the procedures.

d. The inspector met with the Fairfield County Council on December 15, 1980 to discuss various aspects of emergency planning. There were no significant problems encountered.

e. The inspector reviewed the following Start Up Field Reports (SFR) 1501, 1512, 1519, 1523 and 1531. The SFR's were reviewed to ensure compliance with Start Up Manual Procedure SUM B-13 "Start Up Field Reports". Findings were acceptable.

f. Section 6.2.1.2.2 of the FSAR states that the maximum external design pressure of the Containment Building is 3 psig. Section 6.2.1.3.6 of the FSAR states that during the postulated worst case spraydown of the Containment Building, an external pressure of 3.4 psig. occurs which does not exceed the design pressure. This apparent conflict will remain open (80-40-04) pending future review by the inspector.

12. Plant tour

The inspector toured the plant at various times to observe construction activities, housekeeping, maintenance, equipment preservation and log books. Findings were acceptable.