



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

Report No. 50-395/82-38

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

Facility Name: V. C. Summer

Docket No. 50-395

License No. CPPR-94

Inspection at V. C. Summer Nuclear Station

Inspector: John F. Raggio, for
J. L. Skolds

7/30/82
Date Signed

Approved by: Vergil H. Brownlee
V. L. Brownlee, Section Chief, Division of
Project and Resident Programs

8/2/82
Date Signed

SUMMARY

Inspection on June 1-30, 1982

Areas Inspected

This routine, unannounced inspection involved 152 inspector-hours onsite in the areas of TMI Action Plan Item Followup, Open Item Followup, Unresolved Item Followup, Preoperational Test Results Review, Surveillance Test Procedures Review, and Licensee Identified Item Review.

Results

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

DETAILS

1. Persons Contacted

Licensee Employees

- *W. A. Williams, General Manager Nuclear Operations
- *O. W. Dixon, Vice President Nuclear Operations
- *O. S. Bradham, Station Manager
- *J. G. Connelly, Deputy Plant Manager
- *B. G. Croley, Assistant Manager, Technical Support
- *S. J. Smith, Assistant Manager, Maintenance
- *L. F. Storz, Assistant Manager, Operations
- *A. R. Koon, Technical Services Coordinator
- *S. S. Howze, Nuclear Licensing
- *D. A. Lavigne, Director, Surveillance Systems
- *H. I. Donnelly, ISEG

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

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 8, and July 2, 1982, with those persons indicated in paragraph 1 above. The inspector also attended the next interview of P. Taylor on June 9, 1982 and W. Peery on June 11, 1982 and R. Goode on June 30, 1982.

3. Licensee Action on Previous Inspection Findings

(Open)(82-13-01) MSIV Lockery Devices. The applicant provided the inspector with a copy of documentation which verified that the MSIV's were assembled under QC supervision the last time the valves were assembled. The documentation also indicates that the valves were assembled in accordance with the vendor technical manual which indicates the proper method of turning the locking tabs. The inspector therefore feels that adequate assurance exists that the inner locking tabs are installed properly. However, the applicant has agreed to inspect the tabs during the next disassembly of the valves. Therefore, this item will remain open until that time.

(Closed)(82-09-04) Discrepancies in Fire Detection Installation. This item dealt with discrepancies between the SER Supplement No. 3 and the licensee's understanding of the SER. NRR and the licensee have reviewed the issues and the results will appear in the SER Supplement No. 4.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Open Item Review

(Closed) (81-29-07) STP 103.001 and STP 103.002. The inspector reviewed a revised STP 103.001. This STP combines the earlier revision of STP 103.002 and STP 103.001. Findings were acceptable.

(Closed) (81-29-12) STP 128.002. The inspector reviewed a revised STP 128.002. Some problems still existed in the procedure. Two valves were omitted and a nonexistent valve was listed. The applicant committed to correct the procedure prior to implementation.

(Closed) (81-29-09) STP 144.001. The inspector reviewed STP 144.001. Findings were acceptable.

(Closed) (80-29-04) SOP-118 and SOP-212. The inspector reviewed a revised SOP-118 and SOP-212. Findings were acceptable.

(Closed) (82-22-02) Training Issues. This item dealt with problems identified in Administrative Procedure (AP)-1101, "General Employee Training" and AP-1106, "Required Reading". The inspector reviewed revisions to both of these procedures. Findings were acceptable.

(Closed) (81-28-07) SOP-401 and SOP 405. This item involves comments made on System Operating Procedures (SOP)-401 and 405. The inspector reviewed revisions made to these procedures. Findings were acceptable.

(Closed) (80-01-02) This item dealt with having as-built flow diagrams or appropriately controlled marked-up drawings available in the control room. The inspector reviewed the drawings in the control room. Findings were acceptable.

(Closed) (82-06-02) This item dealt with having as-built flow diagrams or appropriately controlled marked-up drawings available in the control room. The inspector reviewed the drawings in the control room. Findings were acceptable.

(Closed) (81-03-08) Human Factor Review. The item dealt with a number of items the applicant committed to implement concerning human factors changes in the control room. The inspector reviewed all the changes in conjunction with TMI Action Plan I.D.1. Findings were acceptable.

(Closed) (81-23-03) Plant Procedures Comments. This item dealt with a number of comments concerning the scope and administrative control of plant procedures. All items have been resolved.

(Closed) (81-32-06) This item dealt with some inconsistencies in the preoperational test program with regard to Regulatory Guide 1.79, 1.68 and

1.9. These inconsistencies have been resolved by providing documentation to verify that the requirements in the Regulatory Guides have been met.

6. Surveillance Test procedure Review

The inspector reviewed the following Surveillance Test Procedure (SPT):

107.001	Steam Generator Pressure/Temperature Verification
105.008	CHV/SI Pump Breaker Position Verification
105.001	CHV/SI Pump Test
105.009	Accumulator Interlock Refueling Test
104.001	Boric Acid Makeup to CVCS
104.004	Boric Acid Transfer Heat Tracing
126.002	Fuel Handling Building Operability Test
128.002	Fire Protection Monthly Valve Lineup Verification
128.401	Diesel Fire Pump Inspection
128.017	Weekly Inspection of Fire Doors
128.010	Fire Hose Station Refueling Inspection
128.007	CO ₂ System Valve Lineup Verification
128.001	Electric Fire Pump Monthly Test
128.003	Fire Protection Annual Valve Test
128.014	Cycling of Valves Not Testable during Operation
128.024	CO ₂ System Functional Refueling Test
146.002	Reactor Makeup Water Refueling Alignment
149.015	Hydrostatic Test of RCP A, B, and C Seal Return Line
128.402	Fire Yard Hydrant Annual Inspection
134.001	Calculation of Shutdown Margin
147.001	Reactor Building Penetration Test
342.004	Condensate Storage Tank Level Instrument 3621
342.005	Condensate Storage Tank Level Instrument 3631
124.001	Control Room Emergency Air Cleanup system Operational Test
127.001	Pressurizer Valve Operability Test
125.006	Diesel Generator Refueling Operability Test
104.003	Boron System Monthly Valve Lineup Verification Test
111.001	Seismic Instrumentation Channel Check
125.001	Electrical Power System Weekly Test
125.002	Diesel Generator Operability Test
128.004	Diesel Fire Pump Weekly Test
403.002	Mechanical Snubber Visual Examination
501.001	DC Battery Quarterly Test
501.002	DC Battery Quarterly Test
501.003	DC Battery Service Test
501.004	DC Battery Capacity Test
501.005	DC Battery Charger Capacity Check
118.006	Reactor Building Purge Exhaust Refueling Weekly Test
131.001	Manipulator Crane Test
128.020	Fire Protection System Refueling Function Test
128.015	Fire Hose 3 year Inspection
127.003	PORV Overpressurization Protection Alignment Verification
128.013	Fire System Valve Operability Test

119.001 Hydrogen Recombiner Functional Test
 123.001 Service Water Valve Linup
 123.002 Service Water Pump Test

Findings were acceptable with the following exceptions:

- (1) Some STP's written to implement the ASME Section XI Inservice Pump Program were not in accordance with ASME Section XI.
- (2) STP's written to implement the Fire Protection Surveillances in the Technical Specifications had numerous errors. Incorrect Technical Specifications errors, improper implementation of the surveillance requirements, requirements to verify valve positions of valves for which it is not possible to verify valve position and improper valve nomenclature are examples of some errors identified.
- (3) Some STP's did not adequately document the performance of the surveillance requirement.
- (4) One STP locked out the Motor Driven Emergency Feedwater Pumps during the verification of Diesel Generator Load Sequencer. The pumps should not have been locked out.

The applicant has been informed of all specific comments on the STPs. In no STPs reviewed could the inspector identify the placing of the plant in an unsafe condition. However there were numerous cases where an STP would not have properly implemented the Technical Specifications Surveillance Requirement or the STP would not have adequately documented the data required by Technical Specifications. The inspector informed the applicant that the errors identified in the STPs would be reviewed at a later date during plant startup.

7. Preoperational Test Results Review

The inspector reviewed the results of the following preoperational tests:

FH-2 Fuel Handling Buildings Storage Space Drag Test
 FH-3 Fuel Handling Machine and New Fuel Elevator
 FH-4 Fuel Transfer Test
 FH-5 Manipulator Crane Functional Test

The results were reviewed to ensure the indicated results were within the acceptance criteria and that the records indicated the test was performed in accordance with the procedure. Findings were acceptable.

8. 50.55(e) and Part 21 Review

(Open) (80-37-05) Inadvertent Boron Dilution. The applicant has notified Region II of a substantial safety hazard concerning inadvertent Boron dilution in correspondence dated November 20, 1982. In the letter dated February 10, 1982 the applicant indicated that plant tests were run to

measure the flow rate of the reactor makeup water. The applicant indicated that the tests verified that the maximum flow condition was approximately 120 gpm and since the flow was well below the 150 gpm used in previous analyses, one reactor makeup water pump did not have to be unavailable. The inspector informed the applicant that not all the possible flow paths were verified during the test. The inspector requested a different flow path be tested. The test was run and the reactor makeup water flow was 150 gpm, the same as the assumed flow used in the analyses. The letter dated June 29, 1982 reports this condition to NRR.

Since the applicant had not submitted a final report on this subject the item will remain open. However, actions taken to date to preclude an inadvertent boron dilution are satisfactory to the NRC as indicated in the V. C. Summer SER. Therefore this item is no longer a fuel load restraint.

(Open) (82-38-01) Reactor Protection Underfrequency Relay Failure. In a letter dated June 14, 1982 the applicant reported that the reactor protection underfrequency relay's output contacts chattered. The underfrequency relays will be reviewed at a later date.

9. TMI Action Plan Item Followup

(Closed) II.B.2 Plant Shielding. This item requires:

- (1) A radiation and shielding design review that identifies the location of vital areas and equipment in which personnel occupancy may be unduly limited or safety equipment may be unduly degraded by radiation during operations following an accident resulting in a degraded core.
- (2) A description of the types of corrective actions needed to assure adequate access to vital areas and protection of safety equipment.

Supplement No. 1 to the V.C. Summer SER states that plant modifications were necessary in several areas. The inspector reviewed the modifications and inspected the implementation. Findings were acceptable.

(Open) II.F.2 Inadequate Core Cooling Instrumentation. Supplement No. 4 to the V. C. Summer SER indicated that the instrumentation installed is satisfactory for the first cycle of operation and that the schedule of June 1983 for installation of environmentally qualified incore thermocouples is acceptable to the staff. This item will remain open until then.

(Closed) I.B.1.2 Evaluation of Organization and Management Improvements of Near Term Operating License Applicants. This item was discussed in Inspection Report 50-395/82-06. The only issue remaining was to staff the Independent Safety Engineering Group (ISEG) with five dedicated fulltime site - based engineers. The inspector reviewed the staffing of the ISEG effective July 1982. Findings were acceptable.

(Closed) III.D.3.3. Inplant Radiation Monitoring. This item requires equipment, training and procedures necessary to accurately determine the

presence of airborne radioiodine in areas within the plant where plant personnel may be present during an accident. This item is discussed in the V. C. Summer SER. The inspector reviewed the equipment necessary to collect airborne samples and found that the equipment meets the requirements of NUREG 0737. The training and procedures were reviewed in Inspection Report 50-395/82-40.

(Closed) I.D.1 Control Room Design Review. This item requires a assessment of the control room to identify significant human factors deficiencies and instrumentation problems and to establish a schedule for correcting deficiencies. An assessment of the V. C. Summer Control Room and Control Room Evacuation Panel was performed. Discepancies are identified in the V. C. Summer SER, through Supplement No. 4. The inspector has reviewed the changes made to correct all of the deficiencies. Findings were acceptable.

(Closed) II.B.3 Post Accident Sampling System. This item requires:

- (1) a design and operational review of the reactor coolant and containment atmosphere sampling line system to determine the capability of personnel to promptly obtain a sample under accident conditions without incurring radiation exposure in excess of three and 18 3/4 rem to the whole body or extremities, respectively. Accident conditions should assume a Regulatory Guide 1.3 or 1.4 release of fission products. If the reveiw indicates that personnel could not promptly and safely obtain the samples, additional design features of shielding should be provided to meet the criteria.

This item is discussed in the V. C. Summer SER. The inspector reviewed the implementation of the commitments made in the SER and other correspondence referenced in the SER. Findings were acceptable.

(Closed) II.F.1 Accident Monitoring Instrumentation (Noble Gase Monitor, Iodine Particulate Sampling and Containment High Range Monitor)

This item deals with the requirement to have additional accident monitoring instrumentation. The Noble Gas Monitor, Iodine Particulate Sampling and Containment High Range monitor were reviewed in IE Inspection Report 50-395/82-40.