



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

Report No. 50-395/82-51

Licensee: South Carolina Electric and Gas  
Columbia, SC 29218

Facility Name: V. C. Summer

Docket No. 50-395

License No. NPF-12

Inspection at V. C. Summer site near Jenkinsville, South Carolina

Inspector:	<u>Frank Jape</u>	<u>10/7/82</u>
<i>for</i> M. Thomas		Date Signed
Approved by:	<u>Frank Jape</u>	<u>10/7/82</u>
F. Jape, Section Chief		Date Signed
Engineering Inspection Branch		
Division of Engineering and Technical Programs		

SUMMARY

Inspection on August 31 - September 1 and September 21-24, 1982

Areas Inspected

This routine, unannounced inspection involved 47 inspector-hours on site in the areas of thermal expansion test witnessing and pre-critical test procedure and test results review.

Results

Of the two areas inspected, no violations or deviations were identified.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*T. C. Nichols Jr., Senior Vice President Nuclear Operations
- \*O. W. Dixon, Vice President Nuclear Operations
- \*W. A. Williams Jr., General Manager Nuclear Operations
- \*M. B. Whitaker, Group Manager Nuclear Engineering and Licensing
- \*O. S. Bradham, Station Manager
- J. G. Connelly, Deputy Station Manager
- \*B. G. Croley, Assistant Manager Technical Support
- \*A. R. Koon, Technical Services Coordinator
- \*S. S. Hawze, Nuclear Licensing Engineer
- \*H. C. Fields, Technical Services Engineer
- G. Taylor, Station Nuclear Engineer
- G. Moffatt, Thermal Expansion (TE-3) Test Director

Other licensee employees contacted included engineers, technicians and operators.

#### Other Organizations

D. Cunningham, TE-3 Test Supervisor, Gilbert Associates, Inc. (GAI)

#### NRC Resident Inspector

\*J. L. Skolds, Senior Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 24, 1982, with those persons indicated in paragraph 1 above. The licensee acknowledged the inspectors.

### 3. Licensee Action on Previous Enforcement Matters

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. Independent Inspection Effort (92706)

The inspector toured portions of the control building, auxiliary building, control room, and the turbine building to verify that activities were being

accomplished in accordance with procedures. No violations or deviations were identified in the areas inspected.

6. Testing of Pipe Support and Restraint Systems (70370)

a. Procedure Review

The inspector reviewed test procedure TE-3, Rev. 2, Thermal Expansion Testing During Phase III Testing, for conformance to Regulatory Guide 1.68, applicable portions of FSAR sections 3.9, 14.1, and FSAR Volume XVII, Questions and Responses 110.15 and 110.31. The inspector verified that the procedure included the following:

- (1) Review and approval by appropriate personnel.
- (2) Examination of pipe supports and restraints at various temperature plateaus from ambient to operating temperature.
- (3) Pretest inspection and recording of support and restraint settings at various temperature plateaus.
- (4) Established thermal expansion criteria for system performance.
- (5) Evaluation of system performance during heatup by qualified personnel.
- (6) Discrepancy list from previous hot functional test

(TE-1, Rev. 2) identifying all the areas requiring rework on monitoring during TE-3.

The data for the supports and restraint monitored in TE-3 will be recorded on the test inspection data sheets. During the review of TE-3 the inspector found several supports identified on the discrepancy list which had not been included on the test data sheets. This discrepancy was brought to the attention of licensee personnel who stated that the supports had been inadvertently omitted and would be added to the data sheets for monitoring during TE-3. The inspector had no further questions on this matter.

b. Test Witnessing

The inspector observed test personnel taking expansion measurements of selected supports and restraints in the residual heat removal system during plant heatup at the 250 and 350 degrees Fahrenheit plateaus. The inspector observed overall test personnel performance to verify the following:

- (1) Procedure of appropriate revision was available and in use by all test personnel.

- (2) Minimum crew requirements met.
- (3) Special test equipment required by the procedure was calibrated and in service.
- (4) Test performed as required by the procedure.
- (5) Data was collected for analysis by the appropriate personnel.

No violations or deviations were identified during thermal expansion test procedure review and test witnessing.

7. Pre-critical Test Procedure and Test Results Review (72521, 72564, 72566)

a. Procedure Review

Pre-critical test procedures were reviewed for conformance with Regulatory Guide 1.68, applicable portions of FSAR sections 4.2.3 and 14.1, Technical Specifications, and V. C. Summer station administrative procedures 139 and 420. The inspector verified that management review and approval were indicated, test objectives were clearly stated, and acceptance criteria were specified. The following cold shutdown test (CST) and hot shutdown test (HST) procedures were reviewed.

CST-5	Control Rod Drive Mechanism Timing Test - RCS Cold
CST-6	Rod Drop Time Measurements - Cold No Flow
CST-7	Rod Drop Time Measurements - Cold Full Flow
HST-7	Pressurizer Spray and Heater Capability Test
HST-8	Control Rod Drive Mechanism Timing Test - RCS Hot
HST-9	Rod Drop Time Measurements - Hot No Flow
HST-10	Rod Drop Time Measurements - Hot Full Flow

b. Test Results Review

The inspector reviewed the as-run copies of procedures CST-5, CST-6, and CST-7 to verify the following:

- (1) Individual test steps and data sheets were properly initialed and dated.
- (2) Test changes/exceptions were made in accordance with pertinent administrative procedures.
- (3) Data sheets were complete.
- (4) Deficiencies identified were properly documented.

Review and approval of the test results had not been performed by all designated individuals at the time of this inspection. No violations or deviations were identified during pre-critical test procedure and test result review.

8. Followup on Previously Identified Inspection Findings

(Open) Inspector Followup Item 395/82-23-01 concerning completion of the system thermal expansion test discrepancy list identified in TE-1, Rev. 2, during the next plant heatup and performance of system thermal expansion test TE-3, Rev. 2. As discussed in paragraph 6, the discrepancy list from TE-1 has been included as an attachment to TE-3. At the time of this inspection TE-3 was in progress with data having been taken for some of the supports on the discrepancy list. The inspector will continue to follow the progress of TE-3. This item remains open pending further completion of TE-3 and review of the results and resolution of discrepancies by the licensee.