



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

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MAR 12 1980

Report No. 50-395/80-05

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

Facility Name: V. C. Summer

Docket No. 50-395

License No. CPPR-94

Inspection at Summer site near Columbia, South Carolina

Inspector: T. L. Burdette  
T. L. Burdette

3/10/80  
Date Signed

Approved by: J. K. Rausch  
J. K. Rausch, Acting Section Chief, RC&ES Branch

3/11/80  
Date Signed

SUMMARY

Inspection on February 25-28, 1980

Areas Inspected

This routine, unannounced inspection involved 25 inspector-hours in the areas of 10 CFR 50.55(e) items, IE Bulletins, IE Circulars, and construction activities.

Results

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

## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*O. S. Bradham, Operations Manager
- \*\*D. R. Moore, QA Manager
- \*\*A. A. Smith, Site QA Coordinator
- \*J. M. Woods, QC Manager
- \*M. W. Eddins, Site Management
- \*H. Radin, Senior Engineer
- \*\*J. F. Algar, Site Manager

Other licensee employees contacted included construction craftsmen, and office personnel.

#### Other Organizations

- \*K. E. Heaton, Daniel Construction Company
- \*J. R. Fletcher, Daniel Construction Company
- \*R. L. Dail, Gilbert Associates Incorporated

#### NRC Resident Inspector

- \*J. L. Skolds

\*Attended exit interview on February 28, 1980

\*\*Attended pre-exit meeting on February 28, 1980

### 2. Exit Interview

The inspection scope and findings were summarized on February 28, 1980 with those persons indicated in Paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. Independent Inspection

- a. The inspector conducted a walk-through inspection of the reactor, auxiliary, and intermediate buildings; observed construction activities, construction progress, and work practices, and talked to various craft and inspection personnel. The inspector performed inspections

of deficient pipe hanger installations and deficient pipe butt and attachment welds, which the licensee has recently reported to NRC as significant deficiencies (50.55(e)).

- b. Discussions with the SCE&G licensing manager and site Project Manager indicate that the scheduled fuel load date for Summer Nuclear Plant has been changed from July 1980 to December 1980. Testing and construction schedules have been changed to reflect the new fuel load date.
- c. The licensee has taken steps to reorganize the Quality Assurance organization. D. R. Moore, has been designated Manager of Quality Assurance reporting to the Group Manager QA and Security. J. P. Harrison has been designated Manager of Security reporting to the Group Manager QA and Security. D. R. Moore is also presently acting as Director of Surveillance Systems until an individual has been selected for the position. The licensee is taking action to change procedures and organization charts to reflect this organization change.
- d. The inspector examined the damage to the condensate storage tank which was damaged February 7, 1980 as a result of testing on the tank. Subsequent investigations by the licensee revealed that a blank flange had been left installed in the tank overflow line. The inspector reviewed documentation on the tank diaphragm repair which preceded the test on February 7, 1980 and held discussions with site management personnel on the cause of the tank damage. The licensee is currently conducting an investigation into this matter to determine the cause and corrective actions. The inspector expressed concern with the licensee's planned corrective actions. Better plans to assure that test blanks are removed after repairs are required. Pending completion of this investigation and review by Region II, this item will remain open. It is identified as an inspector follow-up item 395/80-05-09, Correction action for condensate storage tank problem.

6. Licensee Identified Items (50.55(e))

- a. (Open) Item 395/80-05-01: Undetectable failure in engineered safety features actuation system. On November 7, 1979, the licensee reported a Westinghouse identified problem in the engineered safety features actuation system. On December 3, 1979, the licensee provided a final report to Region II on this item. A failure analysis, assuming a failure of the affected circuit in both the redundant protection trains, revealed that automatic safety injection could be lost under certain conditions. The licensee is taking action to revise plant procedures to require verification of P-4 contact status following certain events. This item will remain open pending completion of licensee actions in this matter.
- b. (Open) Item 395/80-05-02: Rod drop analysis. On November 16, 1979, the licensee reported a deficiency regarding rod drop analysis. Westinghouse had notified NRC of this problem on November 15, 1979 in

- a letter to IE Headquarters. On December 19, 1979, the licensee provided an interim report to Region II. Corrective actions have not been identified. This item will remain open pending receipt of the licensee's final report on this matter.
- c. (Open) Item 395/80-05-04: Deficient conduit support installations. On February 4, 1980, the licensee reported a deficiency in electrical conduit support installations. On February 11, 1980, the licensee provided Region II with a final report on this item. To correct problems in "cold spring" of conduit and support installations, the licensee has changed engineering specifications and has initiated actions to repair deficient supports. This item will remain open pending completion of licensee actions and review by Region II.
- d. (Open) Item 395/80-05-05: Deficient design in Bahnson ventilation dampers. On December 18 and February 8, 1980, the licensee reported a Bahnson design problem in ventilation dampers. On December 18, 1979 and February 12, 1980, the licensee provided Region II with final reports on this item.
- The Bahnson design failed to consider the hardness of the operating shaft when setscrews are used to hold blades, linkages and actuator arms in place. Under operating conditions, setscrews can loosen. Actions to correct deficient setscrew installation are in progress. The licensee has evaluated this item to be a 10 CFR Part 21 item and has reported under 10 CFR 50.55(e). Pending completion of licensee actions, this item will remain open.
- e. (Open) Item 395/80-05-06: Deficient close 3 pipe butt and attachment welds. On February 21, 1980, the licensee reported a deficiency with regard to inspection of butt welds and attachment welds. Reinspection of butt welds has identified deficiencies such as porosity, cracks, undercut. Reinspection of attachment welds has identified deficiencies such as weld size and arc strikes. The licensee is reinspecting 100% of the pipe butt and attachment welds. This item will remain open pending receipt of the licensee's final report and review by Region II.
- f. (Open) Item 395/80-05-07: Inadequate drawings for pipe branch connections. On February 21, 1980, the licensee reported a deficiency in Daniel Construction Company and Southwest Fabricating drawings. The drawings failed to provide the required minimum throat thickness for branch connection fillet welds. The licensee is inspecting branch connection fillet welds to assure correct fillet weld size. This item will remain open pending receipt of the licensee's final report and review by Region II.
- g. (Open) Item 395/80-02-01: 480 volt motor terminations. On January 8, 1980, the licensee reported termination deficiencies for 480 volt motors. On February 7, 1980, the licensee provided Region II with a final report on the termination deficiencies. Corrective actions have been implemented to assure proper terminations but the licensee has

reported that the cause of incorrect terminations is indeterminable. This item will remain open pending further review by Region II of the cause and corrective actions for this item.

- b. (Closed) Item 395/79-24-01: Condensate storage tank. The licensee provided Region II with a final report on this item on February 4, 1980. Actions to correct the damaged conditions in the condensate storage tank have been completed. The licensee reported several possible causes for the deficient condition and implemented actions to prevent recurrence in each case. This item is closed.
- i. (Open) Item 395/79-24-02: Deficient pipe hanger installations. On July 30, 1979, the licensee informed Region II on deficient pipe hanger welds. On February 21, 1980, the licensee reported additional pipe hanger installation deficiencies such as improper torque of fasteners, missing parts, and documentation problems. The licensee has determined that the scope of the original problem has expanded significantly. Reinspection of hanger installations will be performed 100% and be performed by SCE&G quality control personnel in lieu of Daniel Construction Company quality control personnel. This item will remain open pending receipt of a final report and review by Region II.
- j. (Closed) Item 395/79-30-07: Lightning arrestors. On February 4, 1980, the licensee reported deficient lightning arrestors in 480 volt load centers. On February 11, 1980, the licensee reported in a final report to Region II that the deficient arrestors have been replaced. Resistance checking of arrestors has been changed as a result of this problem to assure that manufacturer requirements are satisfied. This item is closed.
- k. (Closed) Item 395/78-14-02: Diesel generator fuel lines, lube oil header, fuel injection pumps, and exhaust rocker arms. On June 28, 1978, the licensee notified Region II of the problem with the diesel generator fuel lines. This was the first of four problem areas identified by Colt Industries requiring corrective action on Summer diesel generators. On June 18, 1979, the licensee issued a final report on the diesel generator deficiencies. In November 1979, the last identified problem, lube oil headers, was corrected. The inspector has reviewed documentation indicating corrective actions have been completed on the diesel. This item is closed.
- l. (Closed) Item 395/79-36-03: Sonicbar door deficiencies. On November 5, 1979, the licensee reported design deficiencies with two door frames supplied by Sonicbar. This item was reported to Region II by Sonicbar, a Division of Rysdon Products Company, in a letter dated November 12, 1979. On December 5, 1979 the licensee provided Region II a final report on this item. Design modifications have been completed for the two door frames. This item is closed.

7. 10 CFR Part 21 Items

- a. (Open) Item 395/80-05-08: Bergen-Paterson shock arrestors. Bergen-Paterson reported in a letter dated December 28, 1979 to Southwest Fabricating & Welding Co., that certain strut assemblies with Pacific Scientific Mechanical shock arrestors are subject to damage at installation. IE Circular 79-25 also referred to a potential shock arrestor strut assembly interference problem. The licensee has previously identified in four NCN Nos. 505, 716, 906, and 940, deficiencies with Bergen-Paterson strut assemblies. This item will remain open pending further review by Region II.
- b. (Open) Item 395/80-05-03: Colt diesel generator crankshaft thrust bearing. On January 14, 1980, Colt Industries reported to Region II a failure of the Summer Plant diesel generator crankshaft thrust bearing. Bearing failure occurred due to the omission of plugs in the oil supply system for the bearing. Discussions with the licensee indicate that the thrust bearing will be replaced for one diesel and that no action will be required for the second diesel. This item will remain open pending completion of thrust bearing corrective actions and review by Region II.

8. Status of Inspection and Enforcement Bulletins (IEB's)

- a. (Closed) IEB 79-25: Failures of Westinghouse BFD relays in safety-related systems. On December 17, 1979, the licensee issued a letter in response to IEB 79-25. This letter reported that (W) type BFD/NBFD relays have not been used on the V. C. Summer project. This item is closed.
- b. (Closed) IEB 79-28: Possible malfunction of Namco model EA 180 limit switches at elevated temperatures. On February 4, 1980, the licensee issued a letter in response to IEB 79-28. This letter reported that Summer received Namco limit switches were manufactured later than the deficient switches discussed in the IEB 79-28. This item is closed.

9. Status of Inspection & Enforcement Circulars (IEC's)

The licensee has received, reviewed evaluated and is taking necessary action on information in the following circulars:

- a. IEC 79-25: Shock arrestor strut assembly interference.
- b. IEC 80-01: Service advice for GE induction disc relays.
- c. IEC 80-02: Nuclear power plant staff work hours.

The inspector discussed the above circulars with the licensee.