



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

Report No.: 50-395/85-43

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

Docket No.: 50-395

License No.: NPF-12

Facility Name: Summer

Inspection Conducted: November 4 - 7, 1985

Inspector:

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K. W. Van Dyne

Frank Jape

12/3/85

Date Signed

Approved by:

Frank Jape

12/3/85

Date Signed

F. Jape, Section Chief,
Test programs Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed 25 inspector-hours on site in the areas of witnessing and reviewing refueling activities, surveillance test witnessing and followup of IE Bulletin 84-03.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *D. L. Arthur, Security Administrative Supervisor
- *O. S. Bradham, Director, Nuclear Operations
- *M. N. Browne, Manager Technical Support
- *B. G. Croley, Group Manager, Technical and Support Services
- *H. I. Donnelly, Senior Licensing Engineer
- *R. M. Fowlkes, Regulatory Compliance Engineer
- *C. Osier, Independent Safety Engineering Group

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

NRC Resident Inspectors

- R. L. Prevatte
- *P. C. Hopkins

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 7, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during the inspection.

5. Plant Tour (61701)

The inspector conducted a general inspection of the reactor building, spent fuel pool, control room, turbine building and diesel generator room to observe maintenance and testing activities. During the tours the inspector looked for the existence of fluid leaks, equipment caution and danger tags, component positions and status, adequacy of fire fighting equipment, appropriate radiation postings, and instrument calibrations dates.

The inspector witnessed diesel generator surveillance testing as performed by Maintenance Special Instruction (MSI)-10. This instruction verifies the output voltage of the diesel generators within a specified tolerance and allows for adjustment if required.

No violations or deviations were identified in the areas inspected.

6. Refueling Activities (60705, 60710, 86700)

The inspector verified that initial preparations and conditions were satisfied prior to core alteration in accordance with licensee and NRC requirements. Surveillance Test Procedure (STP) - 110.001, Pre-Core Alterations Verifications, Revision 2 ensures that the prerequisites for core alterations have been met per Technical Specifications. Individual prerequisites are accomplished by the following STPs as referenced in STP-110.001:

- STP-131.001, Manipulator Crane Test
- STP-147.001, Reactor Building Penetration Test
- STP-118.006, Reactor Building Purge and Exhaust Refueling Weekly Test
- STP-134.001, Shutdown Margin Calculation
- STP-146.002, Reactor Makeup Water System Refueling Alignment Verification
- STP-102.001, Source Range Analog Channel Operational Test (N-31), (N-32)
- STP-601.003, Boron Concentration of RCS and Refueling Canal During Refuel Operation

The preceding test procedures were reviewed to ensure that preparation, review, approval, and revision were accomplished in accordance with applicable administrative requirements. In addition, the inspector verified that completion of these procedures was documented in STP-110.001.

Total core unloading was accomplished by October 28, 1985. During the core unloading one fuel assembly strap was broken and three others - on separate fuel assemblies - were slightly damaged or bent. This information was reported to Region II on October 25, 1985, by the Resident Inspector. Subsequent investigation by the licensee indicated that no fuel damage was apparent and an evaluation was performed to determine the feasibility of utilizing these assemblies in future core loadings. The licensee intends to reload only one of the damaged fuel assemblies. This decision is based on Westinghouse's acceptance of the licensee's repair of the damaged strap as shown on videotape.

Core loading commenced November 5, 1985. The inspector witnessed the transfer of new and irradiated fuel into the core on November 5, 6, and 7, 1985. Specific activities observed included fuel handling operations at the spent fuel pool, transfer canal, and the refueling cavity. These activities and general plant conditions, as well, were verified to be in conformance with the following Technical Specifications:

3.9.1	3.9.4	3.9.7.1	3.9.9
3.9.2	3.9.5	3.9.7.2	3.9.10
3.9.3	3.9.6	3.9.8	

No violations or deviations were identified in the areas inspected.

7. Followup On IE Bulletins (92703)

(Closed) IE Bulletin (IEB) 84-03, Refueling Water Cavity Seal. The licensee's October 16, 1984, response to IEB 84-03 provides a discussion of seal features, installation procedures, and postulated occurrences. It addresses all concerns identified in the bulletin. The refueling cavity water seal in use at V. C. Summer Nuclear Station is considered to be adequate. This finding is based primarily on the design differences between the Summer seal and the failed Haddam Neck Seal.

One of the most important features of the refueling cavity water seal assembly is that the components are passive. There is no dependency on an air supply for inflation or other active means required to maintain a sealed conditions. Moreover, the introduction of water above the seal ring enhances the sealing capability of the assembly in that the hydrostatic pressure exerted by the water column above the seal ring provides additional sealing force. Considering the refueling cavity water seal assembly, significant leakage during refueling operations at the Summer Nuclear Station is extremely unlikely.