



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

Report No.: 50-395/85-30

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

Docket No.: 50-395

License No.: NPF-12

Facility Name: V. C. Summer

Inspection Conducted: July 6 - 31, 1985

Inspectors:	<u><i>A. W. Hehl</i> for</u>	<u>8/16/85</u>
	C. W. Hehl	Date Signed
	<u><i>P. C. Hopkins</i> for</u>	<u>8/16/85</u>
	P. C. Hopkins	Date Signed
	<u><i>D. Falconer</i> for</u>	<u>8/16/85</u>
	D. Falconer	Date Signed

Accompanying Personnel: A. Blumer, NRR, LQB, Training Specialist
M. L. Roe, NRR, LQB, Engineering Psychologist

Approved by:	<u><i>F. S. Cantrell</i></u>	<u>8/16/85</u>
	F. S. Cantrell, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine unannounced inspection entailed 263 inspector-hours onsite in the areas of plant tours; operational safety verifications; monthly surveillance observations; monthly maintenance observations; review of inspector followup items; followup of written reports of non-routine events (LER); review of licensee action on Previous Enforcement Items; special reviews of Substantial Safety Hazard reporting and NRC commitment tracking.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

O. Bradham, Director, Nuclear Plant Operations
*K. Woodward, Manager, Operations
B. Williams, Supervisor of Operations
*M. Quinton, Manager, Maintenance
M. Browne, Manager, Technical Support
B. Croley, Group Manager, Technical and Support Services
*M. B. Williams, Manager, Nuclear Operations Education and Training
*H. T. Babb, Group Manager, Nuclear Education and Training
*J. F. Heilman, Assistant Manager, Nuclear Operations Training
*A. Koon, Jr., Associate Manager, Regulatory Compliance
*R. Fowlkes, Reg. Int. Engineering
*R. Campbell, Engineer, ISEG
*P. Lacoe, Nuclear Licensing Engineer
*H. Sefick, Associate Manager, Station Security
*J. Proper, QA Supervisor, Operations
*J. Geddings, Nuclear Quality Control

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

Attended exit interview

2. Exit Interview (30703)

The inspection scope and findings were summarized on July 24, and August 2, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed the inspection findings, listed below:

Inspector Followup Item: Commitments to enhance Regulatory Commitment Tracking Systems as identified in paragraph 9.

Inspector Followup Item: Commitments related to improving timeliness in processing of Substantial Safety Hazard determinations as identified in paragraph 10.

3. Licensee Action on Previous Enforcement Items (92702)

(Closed) Violation (VIO) 85-13-02, Control Room Supervisor wit' expired Senior Operator License. The inspector reviewed the licensee enhanced administrative control regarding preparation and submittal of License Renewal applications. The controls as delineated in Nuclear Operations Education and Training Instruction 31 appear adequate to preclude recurrence.

(Closed) VIO 83-15-04, Failure to perform 10CFR50.59 review prior to making Component Cooling Water Emergency Makeup Valves inoperable. The inspector reviewed the licensee corrective action for this violation that included a plant modification MRF-20197 which installed check valves necessary to alleviate the concerns which prompted the licensee to gag these makeup valves closed. MRF-20197 was completed for both component cooling water trains on October 5, 1984. The subject emergency makeup valves were subsequently returned to service.

(Closed) VIO 84-30-01, Failure to implement Locked Valve Control Program. The inspector reviewed implementation documentation associated with the licensee's identified corrective action and determined that these commitments were acceptably met. The licensee's corrective action included the production of a video tape discussing procedural compliance and implementation of the Locked Valve Control Program. The inspector viewed the video taped presentation and found the material well presented.

(Closed) VIO 85-04-02, Failure to maintain Test Status Chart and Key Control Log. The inspector reviewed the Licensee's implementation of corrective action commitments. These corrective action commitments were determined to have been acceptably implemented.

(Closed) VIO 84-29-01, Failure to promptly identify and take corrective action for a failed channel check surveillance of overpower delta-temperature channel ITI-422B. The inspector review the licensee implementation of corrective actions identified in their November 16, 1984 response to this violation. These commitments were determined to have been acceptably implemented.

(Closed) VIO 85-13-01, Failure to adequately evaluate prior to installation, scaffolding constructed in the DG rooms for potential impact on safety-related equipment during a seismic event. The licensee's response to this violation, dated May 30, 1985, identified the corrective actions to be implemented. The inspector reviewed implementation documentation of these corrective actions and determined that they were acceptably met.

(Closed) VIO 85-11-01, Failure to establish measures to assure that conditions adverse to quality are promptly identified and corrected. This violation resulted from a procedural deficiency in that SAP-141, Control and Calibration of Measuring and Test Equipment, did not identify a time constraint for evaluating the effect of out-of-calibration measuring and test equipment previously used on safety-related equipment. SAP 141 has been revised to require an initial evaluation within 7 days and final evaluation completed within 90 days.

(Closed) VIO 84-37-03, Failure to demonstrate operability of Containment Isolation Valves in response to both protection train signals prior to Mode change. The inspection reviewed implementation of corrective action and determined that they had been acceptably met, except with regard to timeliness of implementation as discussed in paragraph 9.

4. Review of Inspector Followup Items

(Closed) Inspector Followup Item (85-11-03), Updating of Surveillance Test Master Procedure. This item concerned the SAP-134, Control of Station Surveillance Test Activities, Revision 2, requirement that General Test Procedure (GTP)-701 Surveillance Test Master, be revised every 92 days as required. During the inspection documented in IE Report No. 50-395/85-11, the inspector determined that surveillance testing requirement changes necessitated by issuance of TS Amendment 34 on November 30, 1984, were not included in GTP-701. Further inspector review of the issue determined that the licensee's QA organization had previously identified this discrepancy during audit, II-4-85-J, conducted February 28, 1985. The commitment date to QA for corrective action on this item was March 28, 1985. GTP-701, Revision 4, dated March 12, 1985, was issued May 12, 1985. The procedure incorporated the missing data.

5. Operational Safety Verification (71707, 71710)

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the report period. The inspector verified the operability of selected emergency systems, reviewed removal and restoration logs, and tagout records, and verified proper return to service of affected components. Tours of the control, auxiliary, intermediate, diesel generation, service water and turbine buildings were conducted to observe plant equipment conditions including potential fire hazards, fluid leaks, and excessive vibrations, and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector, by observation and direct interview, verified that the physical security plan was being implemented in accordance with the Station Security plan.

No violations or deviations were identified in this area.

6. Surveillance Observation (61726)

During the inspection period, the inspector verified by observation/review that selected surveillances of safety-related systems or components was conducted in accordance with adequate procedures, test instrumentation was calibrated, limiting conditions for operation were met, removal and restoration of the affected components were accomplished, test results met requirements and were reviewed by personnel other than the individual directing the test, and that any test deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

No violations or deviations were identified in this area.

7. Maintenance Observation (62703)

Station maintenance activities of selected safety-related systems and components were observed/reviewed to ascertain that they were conducted in accordance with regulatory requirements. The following items were considered in this review: the limiting conditions for operations were met; activities were accomplished using approved procedures; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control record were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; and radiological controls were implemented as required. Maintenance Work Requests were reviewed to determine status of outstanding jobs to assure that priority was assigned to safety-related equipment which might affect system performance.

No violations or deviations were identified in this area.

8. On Site Followup of Written Reports of Non-routine Events (92700)

The inspector reviewed the following Licensee Event Reports (LERs) to ascertain whether the Licensee's review, corrective action, and report of the identified event and associated conditions were adequate and in conformance with regulatory requirements, Technical Specifications, license conditions, and licensee procedures and controls.

(Closed) LER 84-034, Agastat Relay Calibration Problem and Failure to Test Relays 27S and 27T.

(Closed) LER 85-006, Lapse of Operator License. On April 4, 1985 the licensee implemented enhanced programmatic controls to preclude recurrence. The inspector reviewed these control measures and determined that they appeared adequate.

(Closed) LER 83-085, Ambient Temperature in Service Water Pump House (SWPH). The inspector reviewed documentation that a modification (MRF 10759) had been completed which installed cooling coils for the SWPH forced ventilation. This modification is expected to alleviate the ambient temperature problems.

(Closed) LER 85-004, Diesel Generator Test Failures. The inspector reviewed the procedure revisions and documentation of training designed to improve the licensee's ability to more accurately track the results of DG tests. The programmatic enhancements implemented by the licensee appeared adequate.

(Closed) LER 83-094. Ambient Temperature in SWPH. See LER 83-085.

(Closed) Special Report 85-007, Area Temperature Monitoring. See LER 83-085.

(Closed) LER 84-032, Reactor Trip due to erratic operation of Main Feedwater Control Valve.

9. NRC Commitment Tracking

On July 11, 1985, the licensee informed the inspector that commitments to revise certain plant procedures by June 30, 1985, made in response to NRC Violations 84-31-01 and 84-37-03, had not been met. Likewise on July 16, 1985, the licensee informed the inspector that a commitment to revise a plant procedure by July 1, 1985, identified in Special Report 85-003, had not been met.

a. Commitments

Violation 84-31-01, discussed in IE Report 50-395/85-31, identified procedural inadequacies associated with the implementation of the ASME Section XI requirement to verify agreement of actual valve position with remote indication. In their response to this violation, submitted on December 27, 1984, the licensee committed to revising applicable Surveillance Test Procedures (STP) by June 30, 1985. Implementation of this commitment consisted of revising 20 valve testing STP's to include a check off for direct observation of valve movement with appropriate instructions in procedures.

Violation 84-37-03, discussed in IE Report 50-395/85-37, identified a failure to perform required isolation time (valve stroking) tests for three valves prior to entering the Mode in which these valves were required to be operable. In their response to this violation, dated March 1, 1985, the licensee identified a procedural inadequacy as a contributory factor and as part of their corrective action, the licensee committed to developing a new series of Mode dependent procedures by June 30, 1985. The procedure associated with this violation also required revision to incorporate the position verification requirements discussed in conjunction with violation 84-31-01, discussed above.

To satisfy the commitments associated with violations 84-31-01 and 84-37-03, a total of 23 procedures were required to be revised. By the commitment date, June 30, 1985, 18 of the 23 procedures had been reviewed and approved. The remaining 5 procedures were not reviewed and approved until July 12, 1985.

Licensee Special Report 85-003 (SPR 85-003) dated June 3, 1985, reported to the NRC an invalid failure of Diesel Generator "B" resulting from a blown O-ring on the air intake header. In SPR 85-003, the licensee committed to revising the preventative maintenance program to add replacement of these O-rings every four years. The applicable preventative maintenance procedure was to be revised to incorporate this commitment by July 1, 1985. The revision to Mechanical Maintenance Procedure 180.033 which implements this commitment, was not reviewed and approved until July 19, 1985.

b. Impact on Plant Safety

The impact on continued safe operation of the facility as a result of not having these procedure revisions issued by the commitment dates was minimal.

The ASME Section XI valve position verification requirement, the basis for violation 84-31-01, was performed in response to this violation during the 1984 refueling outage using temporary changes to existing valve stroke procedures. This valve position verification is a once per two years requirement, therefore, not due to be performed again until 1986. These temporary procedure changes remained in effect and would have prompted position verification had the need arose following maintenance activities on these valves.

The procedural changes identified in response to Violation 84-37-03 were necessary enhancements to replace a technically adequate, but very difficult to manage, single procedure with several more manageable Mode dependent procedures. Had the unit been brought off-line, necessary cold shutdown valve testing could have been accomplished utilizing the existing procedure.

As identified in SPR 85-003, the once per four years replacement of O-rings during preventative maintenance on DG B occurred on May 7, 1985. DG A is not scheduled for preventative maintenance of this type until the second refueling outage scheduled for October 1985.

Thus, the impact on plant safety of these specific delays in the implementation of commitments was minimal, never-the-less what is of potential safety significance is the breakdown that occurred in the licensee commitment tracking system.

c. Cause Corrective Action and Analysis

Licensee and inspector review of the circumstance surrounding these missed commitments determined that they resulted from personnel error with contributing deficiencies in the licensee's program for tracking corrective action commitments.

Inspector review of Nuclear Licensing Procedures (NL) 102 and 104 which discuss the methodology the licensee employs for tracking regulatory commitments identified the following deficiencies.

1. No formal means for escalating to upper management problems encountered in obtaining resolution of corrective action commitments.
2. The interface between the Nuclear Licensing and Regulatory Compliance organizations was not clearly defined.

3. The programmatic controls utilized by the Regulatory Compliance organization for tracking commitments were not adequately proceduralized.

As a result of these missed commitments, the licensee has formulated short term and long term corrective action.

In the short term the licensee has conducted a review of all outstanding commitments and have found no other instances of late or missed corrective action commitments. The licensee has discussed this event with personnel having commitment tracking responsibilities.

Programmatic Controls on tracking commitments within the Regulatory Compliance Group will be revised and adequately proceduralized to include a formalized escalation mechanism.

Corporate Nuclear Licensing will enhance their existing procedures to more clearly define their interface with the Regulatory Compliance Group.

The inspector will follow implementation of the above commitments as an Inspector Followup Item 85-30-01.

Clearly the failure on the part of the licensee to accomplish the corrective action commitments made in response to VIO 84-31-01, VIO 84-37-03 and SPR 85-003 constitute a Deviation from a commitment to the NRC. In recognition of the licensee efforts in the areas of self-identification, prompt corrective action and inspector evaluation of the impact on plant safety associated with the delay in issuing these procedures, these missed commitments appear to fit the criteria of a licensee identified deviation and therefore no Notice of Deviation will be issued.

10. Substantial Safety Hazard - 10 CFR Part 21 Reports (36100)

During this reporting period, the inspector conducted an evaluation of certain aspects of the licensee's program for identification, evaluation and reporting of defects and non-compliance per the requirements of 10 CFR Part 21. The reference materials utilized during this evaluation were as follows:

10 CFR Part 21
NUREG 0302

The primary focus of this evaluation was the licensee's programmatic controls for assuring timely commission notification following the determination that a defect or non-compliance existed that could create a substantial safety hazard. This evaluation consisted of a review of the licensee's implementing procedures and selected records associated with Part 21 reports made to the commission since 1983.

In the case of a power reactor licensee, 10 CFR Part 21 requires that appropriate procedures be adopted to provide for evaluating deviations and assuring that a responsible officer is informed if the construction or operation of a facility, or activity or basic component fails to comply with applicable regulations relating to a substantial safety hazard, or contains a defect. 10 CFR Part 21 further requires that the responsible officer notify the commission within two days following receipt of this information. The inspector reviewed the following licensee procedures which implement this requirement.

Nuclear Operations Department Management Directives Manual, Rev. 17

Nuclear Licensing Procedure (NL)-111, Processing and Disposition of 10 CFR 21 Items After Issuance of an Operating License, Rev. 4

Technical Services Procedure (TS) 123, Processing and Disposition of Substantial Safety Hazard, Rev. 1

As delineated in these procedures, the determination that a potential substantial safety hazard exists is the responsibility of the licensee's Nuclear Engineering (Technical Services) organization. The final determination with regard to reportability lies with the Vice President, Nuclear Operations (VPNO). With the exception of one area of concern, the inspector determined that these procedural controls appeared adequate to meet the requirements of 10 CFR Part 21. The area of concern deals with the licensee's process of informing the VPNO of TS's determination that an item has been evaluated as a substantial safety hazard. The licensee's procedure only addresses presenting this information to the VPNO after it has been developed into a written document ready for signature and transmittal to the NRC. As was identified below during inspector review of submitted 10 CFR Part 21 reports, this methodology lends itself to and has resulted in significant delays in notifying the NRC of the existence of a significant safety hazard. (SSH)

The inspector reviewed documentation associated with the seven Significant Safety Hazard reports made by the licensee since 1983. This documentation indicated that in each of the seven cases, the Commission was notified as required by 10 CFR Part 21 within two days of presenting the VPNO with the evaluation results.

But, a review of the time periods following completion of the evaluations by the reviewing engineer until the presentation of material to the VPNO appear to confirm the inspectors concern. These time periods are as follows:

<u>SSH Number</u>	<u>Assigned Reviewer's Deter.</u>	<u>Manager TS Concurrence</u>	<u>Manager NL Concurrence</u>	<u>VPNO Signature</u>
83-05	08-25-83	08-29-83	09-02-83	09-02-83
83-16	10-28-83	10-28-83	10-28-83	10-31-83
84-02	06-27-84	07-09-84	08-09-84	08-10-84
84-04	04-13-84	08-08-84	08-08-84	08-10-84
85-022	04-23-85	04-24-85	04-29-85	04-30-85
85-038	06-14-85	07-19-85	07-25-85	07-26-85
85-047	07-15-85	07-17-85	07-25-85	07-26-85

As can be discerned from the above data, taking into consideration that a determination of SSH by TS does not occur until the manager of TS concurs with the reviewing engineer's decision, excluding SSH No. 84-02, processing time from determination by TS to presentation of this information to the VPNO has averaged approximately 5 days. SSH No. 84-02 took 32 days.

10 CFR Part 21 requires that any individual director or responsible officer, subject to this regulation, who obtains information reasonably indicating that an item could create a substantial safety hazard, immediately notify the Commission. To implement this requirement, 10 CFR Part 21 identifies a two day time frame for notification following the responsible officer obtaining information reasonably indicating a failure to comply or a defect exists. This initial commission notification may be other than written, but a written report must be submitted within five days. Except for these identified time frames of two and five days following a responsible officer being informed, 10 CFR Part 21 appears silent regarding "timeliness" for evaluating and processing of SSH determination.

Discussions with the licensee, in light of the data presented above, has led to a determination that program enhancements need to be made to improve the "timeliness" associated with the processing of these SSH items. The licensee has committed to implement program enhancements to expedite processing of SSH determinations. Implementation of these program enhancements will be tracked for subsequent review as Inspector Followup Item 85-30-02.

11. Review of Startup Rate Event (92700)

On July 23-24, 1985, a special team inspection was conducted to determine if inadequacies in the licensee's training program were significant contributors to the February 28, 1985 high startup rate event. The inspection consisted of reviewing selected personnel training records, plant

administrative training procedures, task analysis, lesson plans and training materials.

The inspection team identified three programmatic deficiencies in the administration of plant on-the-job training programs which contributed to the February 28, 1985 event. These deficiencies are as follows:

- a. Plant administrative procedures do not adequately address the responsibilities of the shift supervisor or control room supervisor in the administration of on-the-job training programs.
- b. The plant specific task analysis identified the performance of on-the-job training as a task required for the senior licensed operator job position. The plant training program does not provide adequate instruction to senior licensed operators in the administration, conduct and techniques of on-the-job training.
- c. Sufficient administrative controls have not been established to ensure that proper sequencing of learning objectives are maintained throughout the on-the-job training period. As a result, the reactor operator trainee involved in the event was allowed to bypass the learning objective sequence and attempt to perform the on-the-job training task of "operate the control rod drive system to bring the reactor critical" prior to receiving instruction in the basic skills and knowledges required to accomplish this task. These skills and knowledge are identified in the task analysis and include such knowledge as the administrative limits for startup rate, definition of a critical reactor, and the interpretation of estimated critical position.

The licensee acknowledged that the deficiencies listed above may have contributed to the February 28, 1985 startup rate event and stated that these deficiencies would be evaluated and corrected.

Within the areas inspected, no violations or deviations were identified.