



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

Report No. 50-395/81-23

Licensee: South Carolina Electric and Gas Company
Columbia, SC

Facility Name: V. C. Summer Nuclear Station

Docket No. 50-395

License No. CPPR-94

Inspection at V. C. Summer Nuclear Station

Inspector: Vergil H Brownlee for
J. L. Solds, Senior Resident Inspector

9/24/81
Date Signed

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

9/24/81
Date Signed

SUMMARY

Inspection on August 1-31, 1981

Areas Inspected

This routine unannounced inspection involved 120 inspector-hours on site in the areas of Preoperational Test Procedure Review, Preoperational Test Results Review, Licensee Identified Item Review, Noncompliance Review, Plant Procedures, Operating Procedure Review.

Results

Of the six areas inspected, no items of noncompliance or deviations were identified in five areas; one item of noncompliance was found in one area (Failure to properly review procedure changes - paragraph 8).

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DETAILS

1. Persons Contacted

Licensee Employees

- *O. S. Bradham, Station Manager
- *J. G. Connelly, Assistant Station Manager
- B. G. Croley, Technical Support Supervisor
- L. S. Storz, Operations Supervisor
- K. Woodward, Assistant Operations Supervisor
- S. J. Smith, Maintenance Supervisor
- A. R. Koon, Technical Services, Coordinator
- J. W. Parks, Technical Specialist
- A. A. Smith, Director Site Surveillance

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

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 14, 1981 and September 4, 1981 with those persons indicated in Paragraph 1 above. The violation was discussed at the exit interview on September 4, 1981. The inspector also attended the exit interview of G. Troup on August 14, 1981.

3. Licensee Action on Previous Inspection Findings

(Closed) Violation (395/81-03-01) Failure to establish predetermined locations. The violation involved the failure to establish predetermined locations for quality assurance records. The inspector reviewed the response submitted on March 20, 1981. The Corrective Action taken indicated that AP-301.2 "Nuclear Operations Records Control Procedure" would be revised to reflect the requirement to store records in predetermined locations and to provide a list of such locations. Actually AP-301.2 was not revised but rather the Plant Record System Description was revised to include the above mentioned items. There are at present 23 locations designated as temporary storage facilities. The inspector looked at 15 of the facilities. The facilities were being maintained in accordance with AP-301.2 for temporary storage facilities. The response indicated that the corrective action taken to preclude recurrence was a transmittal to appropriate plant personnel requiring a review of the subject requirements and requiring full compliance. The inspector reviewed this transmittal.

(Closed) Violation (395/81-03-02) Failure to follow procedure, AP 301.2. This item dealt with the failure to keep training qualification records in accordance with AP-301.2 concerning storage, access and record removal. The inspector reviewed the response dated March 20, 1981 which indicated the following: a) fire retardant fire cabinets were obtained and the training records were transferred to them. (b) a list of personnel authorized access to the records was established. (c) A QA Records Log was established and (d) a system for record removal was developed. The inspector reviewed the implementation of items (a) through (d) for the training records and for other record facilities described in the preceding paragraph. Findings were acceptable. The inspector also reviewed a memo describing a meeting held by training personnel to discuss the importance of compliance to record keeping requirements.

In reviewing item 81-03-02 the inspector noted that records being kept by the Quality Assurance Group were not being kept in accordance with AP-301.2. The procedure did not include the location of QA audit records as a temporary record facility. The applicant intended to keep these records in the QA Group and not transfer them to the Permanent Record Vault. ANSI N45.2.9 requires audit records be kept for 6 years. Since the applicant did not intend to use the Permanent Record Vault, a storage facility which meets the requirements of ANSI N45.2.9 is required for storage of the audit records. However, the storage facility being used did not meet the requirements of ANSI 45.2.9 in that:

1. A written storage procedure did not exist.
2. A custodian was not named.
3. A method for filing supplemental information and disposing of superseded records did not exist.
4. Periodic surveys of the record storage facility were not being performed.
5. A person responsible for record receipt was not designated.
6. A receipt control system was not established.
7. An index of records did not exist.

Appendix 3A to the FSAR, page 3A-130 indicates an exception to the requirements of ANSI 45.2.9. The applicant states that only records identified as lifetime records are required to be maintained. The inspector brought this exception to the attention of the NRR QA Reviewer. If this position is accepted, the QA audit records would not be required to be maintained in accordance with ANSI 45.2.9, since they are nonpermanent. The NRR reviewer indicated that this exception to ANSI 45.2.9 would be reviewed. Until the review is complete this item will remain unresolved. (81-23-06).

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 3.

5. Licensee Identified Items (50.55(e) and Part 21)

(Open) (395/81-23-01) Improper Termination of Solenoid Valves. In a letter dated August 25, 1981, the applicant reported that a solenoid valve that controlled an air operated containment valve was found to be improperly terminated. The improper termination could have resulted in valve failure. This item will remain open pending future inspector review.

(Open) (395/81-23-02) Rockbestos Cable Failure. In a letter dated August 12, 1981 the applicant reported a potential significant deficiency concerning Rockbestos cable. The failure involved shorting of the center conductor to the braided shield at temperature above 230°F. A final report will be issued when a determination has been made if any cable in the reactor building needs to be replaced.

(Closed) (395/81-04-02) Cracked HFA Relay Coil Spools. In a letter dated February 2, 1981 the applicant reported the possibility of having cracked HFA Relay Coil Spools in safety-related applications. A search was conducted to determine if any such coils existed in the plant. In a letter dated June 29, 1981 the applicant reported that no such coils existed at the plant and therefore no safety hazard existed.

(Closed) (395/81-04-07) Missing Air Baffle for Emergency Feedwater Pump 1B. In letters dated March 10, 1981 and April 15, 1981 the applicant reported that a motor driven emergency feedwater pump was shipped without an air deflector inside the motor. The air baffle has been replaced. The motor was not run for extended periods of time without the air baffle and there was no evidence of damage to the motor. The 1A Motor Driven Emergency Feedwater Pump had an air baffle installed when it was delivered.

(Closed) (395/80-05-03) Diesel Generator Thrust Bearing Failure. This item dealt with the failure of the "B" Diesel Generator thrust bearing during the testing phase of diesel operation. In a letter dated March 5, 1980 the applicant reported the thrust bearing failure. The cause was reported to be missing plugs in the oil supply system to the bearing. The "A" Diesel Generator was inspected and the required plugs were present. This item was reported by the diesel manufacturer, Colt Industries, to the NRC in a letter dated January 14, 1980. The following documentation was reviewed by the inspector concerning the thrust bearing. Startup Field Report 1891, Maintenance Work Request (MWR) 50504, 50549, and 50980. A concern arose over the fact that the 1B Diesel Generator was shop tested prior to delivery and passed the shop test even with the bearing oil supply plugged. Colt reported that the shop test involved very little and possibly zero load on the thrust bearings and therefore it was not unexpected that the bearing did not fail. The bearing was repaired and has since been extensively tested with satisfactory results.

6. Preoperational Test Procedure Results Review

The inspector reviewed the following preoperational tests:

AH-P47, Service Water Booster Pump Cooling Unit coil Performance
 AH-P46, Speed switch Room Cooling Unit Coil Performance Test
 SG-6, Containment Isolation
 CS-10, BTRS Boron Exchange

The results were reviewed to ensure the tests were performed in accordance with procedures and the commitments in the FSAR. The results were within the acceptance criteria. Findings were acceptable.

7. Preoperational Test Procedure Review

The inspector reviewed the following preoperational tests:

MS-01-H1 (Addendum) - Steam Generator and Main Steam Rehydro

The procedure was reviewed to ensure technical adequacy and to verify the test conformed to commitments made in Regulatory Guide 1.68 and the FSAR. Findings were acceptable with the following exceptions:

- a. The hydrotest data sheet indicated that the hydrotest boundary for test connections, vents and drain lines containing a valve and a blind flange or cap would extend to the blind flange or cap. However, the valve lineup for the test closed valves in vents, drains and test connections, thereby, establishing the hydrotest boundary at the valve and not at the flange or cap. This comment affected approximately sixty (60) vent, drain and test connections. The procedure was changed to correctly identify the hydrotest boundary.
- b. The relief valve installed for the test had a valve between the system and the relief itself. The test did not require the isolation valve to be verified open prior to the start of the test. The procedure was changed to include this verification.

8. Plant Procedures

The scope of plant procedures was reviewed to verify it is adequate to control safety-related operations within applicable regulatory requirements and to determine the adequacy of management controls in implementing and maintaining a viable procedure system. The following references were used.

- a. Draft Technical Specifications
- b. Regulatory Guide 1.33 Revision 2
- c. ANSI 18.7-1976
- d. Administrative Procedure (AP) -102 "Procedure Review, Approval and Revision"
- e. Operational QA Plan, Revision 5.

Findings were acceptable with the following exceptions:

- a. Reference (b) requires procedures exist for various plant activities. Procedures required by reference (b) that have not been written include
 - 1) Loss of Instrument Air
 - 2) Loss of Service Water
 - 3) Solid Radwaste System Procedures
 - 4) Nearly all of the Surveillance Test Procedures
- b. Section 6.8.1 of reference (a) requires that procedures exist covering the Quality Assurance Program for effluent and environmental monitoring, using the guidance in Regulatory Guide 4.15, December 1977. No procedures exist at this time.
- c. Section 6.8.2 of reference (a) requires that procedures described in 6.8.1 be reviewed by the PSRC and approved by the Manager of V. C. Summer Nuclear Station. At present, reference (d) does not require this review and approval cycle for all procedures described in 6.8.1.
- d. Section 6.8.3 of reference (a) describes the provisions for temporary approval of changes to procedures. One provision is that the intent of the original procedure is not altered. Reference (d) describes the procedure for temporary approval of changes to procedures. Reference (d) defines a change to a procedure as a change in the intent of the procedure. Reference (d) does not adequately establish the requirements necessary to temporarily approve a procedure. If the definition used in reference (d) of procedure change is used a temporary approval could never to be processed without violating the provisions in reference (a).
- e. Reference (d) requires that when procedure changes are reviewed, the reviewer concur with the determination made by the originator whether or not the change represents an unreviewed safety question. The inspector interviewed ten personnel who are qualified to review all procedures. Since reference (d) does not define an unreviewed safety question, the inspector asked the qualified reviewer to define an unreviewed safety question. No one knew what the definition was and two personnel knew where to find the definition. The inspector informed the applicant that if the reviewers do not know what an unreviewed safety question is, the procedure will have to define it for them.
- f. A system to ensure that changes to procedures are incorporated into the training program has not yet been developed. The above items (a-f) will remain open (81-23-03) pending future inspector review.

- g. Reference (e), Section 4.5.2 states that in addition to the safety-related Administrative Procedures, the following procedures will be reviewed by QA prior to implementation:

- 1) Power Ascension Control Program
- 2) Safety-Related Administrative Procedures
- 3) Fire Protection Administrative Procedures

Items 1, 2 and 3 are safety-related Administrative Procedures. As the QA Plan is written, it implies that there is something beyond the safety-related administrative procedures that QA will review prior to implementation. The inspector requested that this section of the QA Plan be clarified to specifically state what QA will approve prior to implementation. This item will remain open (81-23-04) pending future inspector review.

- h. 10 CFR 50, Appendix B, Criterion V requires activities affecting quality be prescribed by documented instructions procedures or drawings appropriate to the circumstances and shall be accomplished in accordance with these instruction procedures or drawings. Section 4.5.2 of the Operational QA Plan requires that QA review the Start Up Manual prior to implementation. Section 4.6 of the Operational QA Plan requires that changes to procedures receive a review equivalent to that applied to the original procedures. The Startup Manual consists of twenty five procedures covering the activities of the Startup Program. Changes to the Startup Manual are handled by initiating either minor changes which did not change the intent of the procedure or major changes. The Startup Manual does not require minor changes be reviewed by QA prior to implementation. Numerous minor changes have been implemented without QA review. This is in violation of the Operational QA Plan and Appendix B to 10 CFR 50. (81-23-05).

9. Operating Procedure Review

The inspector reviewed the following Operating Procedures:

SOP-114, Reactor Building Ventilation

SOP-116, Reactor Building Spray

The procedures were reviewed for technical adequacy and that they adequately control safety-related operations within the applicable regulatory requirements. Findings were acceptable with the following exceptions:

a. SOP-114

<u>Step</u>	<u>Comment</u>
4.7.2.A	Fan number is XFN67 instead of XFN 63
4.9.2.B	Fan starts on high temperature instead of low temperature

6.2.1.A Alarm designations for Reactor Building cooling unit do not exist.

Attachment II Exhaust Fan A inlet damper is XDP-31A
Exhaust Fan B inlet damper is XDP-31B
Exhaust Fan A outlet damper is omitted

Attachment III Locations of 3164, 3165 and 3169 are incorrect

Attachment IV Omitted valves 6092, 6093A, B, 16050, 16051

These items will remain open pending future inspector review.
(81-23-07)

b. SOP-116

<u>Step</u>	<u>Comment</u>
4.3.2	If the RWST Low-Low Level alarm is not reached the procedure should indicate when to turn the pumps off.
4.3.6, 4.4.6	(later) statements are indicated
5.2.6	XVT-3018 (NaOH tank fill valve) is closed during filling operation.
Attachment I	
(page)	
1	-XVT-3018 is fill valve - ILT-7356-HP-SP should be closed
2	-ILT-7356-LD-SP should be closed
3	-ILT-7358-LT-SP should be closed
4	-IPX-7364-HR-SP should be closed
5	-IPX-7374-HR-SP should be closed
7	-XVT-3001A, B (Suction valves from RWST) should be open -Location of XVT-3001A, B, 3002A is incorrect

- 8 -XVT-13014 and XVT-13018 (page 9) have descriptions reversed or metal tags on valves are reversed.
- 9 -Root valves (4) for 7361A, B 7371A, B should be closed.
- 10 -Locations of XVT-13001, 13002, 13003, 13004 are incorrect
- Attachment II -R. B. Spray Pump A Space Heater Power supply is incorrect

This item will remain open pending future inspector review. (81-23-08)

10. Independent Inspection Effort

(Open) (81-03-08) Control Room Human Factors. The inspector reviewed some changes made to the control room as a result of the human factors study. Some of the changes are completed and are as described in the Human Factors Report. A large number of changes are still being worked on and will be reviewed at a later date.

(Open) (81-23-09) In a letter dated August 4, 1981 the applicant committed to establish an emergency procedure on the administrative control and proper activation of the emergency siren system. Also, the physical and administrative functions of the siren system will be tested. This item will remain open until the procedure has been written and the system tested.

11. Plant Tour

The inspector toured the plant at various times to observe construction activities, housekeeping, maintenance, equipment preservation and log books. Findings were acceptable.