



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

Report No. 50-395/83-17

Licensee: South Carolina Electric & Gas Co
Columbia, SC

Facility Name: V. C. Summer

Docket No: 50-395

License No: NPF-12

Inspection at V. C. Summer near Columbia, South Carolina

Inspector: Ross Butcher Jr.
J. L. Skold

7/7/83
Date Signed

Approved by: F. S. Cantrell Jr.
F. S. Cantrell, Chief, Division of Project
and Resident Programs

7/11/83
Date Signed

SUMMARY

Inspection on May 16 - June 10, 1983

Areas Inspected

This routine announced inspection involved 160 inspector-hours on site in the areas of plant tour, plant operation review, Technical Specification compliance physical protection, maintenance and surveillance review, review of nonroutine event reports.

Results

Of the six areas inspected, no items of noncompliance or deviations were identified in two areas; five items of noncompliance were found in four areas (Failure to establish procedures; paragraph 5, 6 and 9, Control room foreman leaving the control room; paragraph 5. Failure to follow procedure; paragraph 5 and 6. Failure to comply with an action statement; paragraph 10. Failure to comply with Technical Specification 3.0.4; paragraph 10).

DETAILS

1. Persons Contacted

Licensee Employees

*O. W. Dixon, Vice President Nuclear Operations
*O. S. Bradham, Station Manager
*J. G. Connelly, Deputy Station Manager
*K. W. Woodward, Assistant Manager Operations
*M. N. Browne, Assistant Manager Technical Support
*M. D. Quinton, Assistant Manager - Maintenance
A. R. Koon, Technical Services Coordinator
S. F. Fipps, Director, Technical Services
B. C. Williams, Supervisor of Operations
F. L. Lamphere, Director, Administration
*A. L. Holder, Fire Protection Coordinator
*H. C. Fields, Technical Services Engineer
*H. I. Donnely, Nuclear Licensing

Other licensee employees contacted included operators and office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 10, 1983, with those persons indicated in paragraph 1 above. The violations were discussed with those personnel present at the exit interview.

3. Licensee Action on Previous Enforcement Matters

(Closed) 82-55-03, 82-55-04, 82-55-05 and 82-55-06. ISI Pump Program Violations. The inspector reviewed the status of the Inservice Inspection (ISI) pump program. The program was reviewed previously in Inspection Report 83-15. That report identified 3 items that needed to be corrected. General Test Procedure (GTP)-001 does not allow the use of uncalibrated gages for collection of data on pumps. The surveillance procedures for the reactor building spray pump and the component cooling water pumps are revised. The surveillance procedure for the diesel generator fuel oil transfer pump was revised to provide valid comparisons of pump performance.

(Closed) 83-09-06, RMA-2. Maintenance records are not clear as to the status of RMA-2 during the time period in question. Specifically, if the high voltage is secured to the detector, the automatic closure signal is not present at the valve. However, if all power is removed, the signal is present. Since the valve remained closed during this entire period and other closure signals were available, the inspector does not consider the event warrants additional attention.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Plant Tour

The inspector conducted plant tours periodically during the inspection interval to make an independent assessment of equipment conditions, plant conditions, radiological controls, safety and adherence to regulatory requirements. The inspector also verified that monitoring equipment was operating properly, equipment was properly tagged, operations personnel were aware of plant conditions and plant housekeeping efforts were adequate. During these tours the inspector looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint settings, various valve and breaker positions, adequacy of firefighting equipment and instrument calibration dates. Some tours were conducted on backshifts. Findings were acceptable with the following exceptions:

- a. The inspector toured the reactor building on May 6, 1983 and identified three fire extinguishers that were being used in conjunction with a burn permit that had not been inspected in accordance with the established fire extinguisher inspection program. Preventive Test Procedure (PTP) 114.002, Fire Extinguisher Checks, implements the licensee's commitment in the fire protection evaluation concerning fire extinguishers. This commitment is described on page 5.0-34a of the fire protection evaluation. The fire extinguishers identified by the inspector were not included in the inspection program. Section 6.8.1 of the Technical Specifications requires that procedures be established to implement the fire protection program. PTP 114.002 was part of this program but was inadequate to cover all fire extinguishers in use. The failure to have an adequate procedure is considered a violation (83-17-01).
- b. On May 24, 1983, the inspector observed the control room foreman leave the control room and enter the tagging office. The inspector noted that the plant was in Mode 1 and that no other Senior Reactor Operator (SRO) qualified individual had been designated to assume the control room command function. Section 6.2 of the Technical Specifications states that during any absence of the control room foreman from the control room while the unit is in Mode 1, 2, 3 or 4, an individual (other than the Shift Technical Advisor) (STA) with a valid SRO license shall be designated to assume the control room command function. The control room foreman was absent from the control room for a very short period of time; however, the control room boundary is very clear and any absence from the boundary of the control room during Modes 1, 2, 3 or 4 is considered a violation (83-17-02).
- c. On May 31, 1983, during a tour of the auxiliary building, intermediate building and turbine building the inspector noted discrepancies in the revisions of procedures in use in the plant. The following is a summary of the problems identified:

Latest RevisionRevision In UseCopy #7 (Intermediate Building)

SOP-105 Rev 4, Change 1	Rev 4
SOP-114 Rev 6, Change 1	Rev 6
SOP-118 Rev 5	Rev 4
SOP-124 Rev 2, Change 1	Rev 2
SOP-201 Rev 2, Change 2	Rev 2, Change 1
SOP-310 Rev 3	Rev 2
SOP-501 Rev 3, Change 1	Rev 3

Copy #7A (Auxiliary Building)

SOP-101 Rev 8, Change 1	Rev 7
SOP-102 Rev 2, Change 1	Rev 2
SOP-104 Rev 3, Change 1	Rev 3
SOP-105 Rev 4, Change 1	Rev 3
SOP-108 Rev 6, Change 2	Rev 6
SOP-112 Rev 4, Change 1	Rev 2
SOP-114 Rev 6, Change 1	Rev 5
SOP-115 Rev 4	Rev 3
SOP-116 Rev 6	Rev 5
SOP-117 Rev 6	Rev 4
SOP-118 Rev 5	Rev 4
SOP-119 Rev 4, Change 2	Rev 4
SOP-123 Rev 4	Rev 3
SOP-124 Rev 2, Change 2	Rev 2
SOP-201 Rev 2, Change 1	Rev 2, Change 1
SOP-212 Rev 5	Rev 4
SOP-501 Rev 3, Change 1	Rev 3
SOP-502 Rev 3	Rev 2

Copy #7B (Turbine Building Operator)

SOP-124 Rev 2, Change 2	Rev 1
SOP-201 Rev 2, Change 2	Rev 2, Change 1
SOP-210 Rev 2, Change 2	Rev 1
SOP-212 Rev 5	Rev 4
SOP-310 Rev 3	Rev 2

Technical Specification 6.8.1 requires written procedures be implemented and maintained. Plant Document Procedure (PDP)-101, Document Control Procedure, paragraph 3.2 states that only the approved documents of the latest revision be utilized. Utilization of procedures not of the latest revision is considered a violation (83-17-03).

6. Plant Operations Review

The inspector periodically reviewed shift logs and operations records including surveillance test procedure data sheets, instrument traces and

records of equipment malfunctions. The review also included the control room logs, tagout log and the removal and restoration log. The inspector routinely observed operator alertness during plant tours. Shift turnovers were observed to verify that they were conducted in accordance with approved procedures. Findings were acceptable with the following exceptions:

- a. On May 23, 1983 the inspector observed trouble alarms for the post accident hydrogen analyzers to be in the alarm condition in the control room. The operator on shift did not know the reason why the alarms were present. Upon investigation, the post accident hydrogen analyzers were found not to be in the alarm condition and were promptly reset. However, the annunciator response procedures for these alarms, which should have been followed by the operator, were found to have the symptoms and actions for the hydrogen recombiners in the waste gas system. The procedures have existed in this form since the operating license was issued. Section 6.8.1 of the Technical Specifications requires procedures be established covering alarm conditions. The procedure for these annunciators was totally inadequate in that the wrong equipment was described in the procedure. Also, these alarms have existed before so the problem with the procedure should have been identified and corrected. The failure to correct the procedure indicates that the operators are either not using the procedures or are not promptly correcting the deficiencies when they are identified. The failure to have an adequate procedure is considered a violation. This is the second example of violation (83-17-01).
- b. On May 23, 1983 the inspector observed the Digital Metal Impact Monitoring System (DMIMS) in the alarm condition. When brought to the attention of the operators, the inspector found that the operators were not aware of the alarm condition. Because of the number of impacts registered on the system, it was apparent that the system was in the alarm condition for some time. System Operating Procedure (SOP)-409, Digital Metal Impact Monitoring System, Section V, gives instructions for evaluating alarm conditions. None of the instructions had been followed when the inspector identified the alarm condition. Section 6.8.1 of the Technical Specifications requires that procedures covering alarm conditions be followed. The failure to follow this procedure is considered a violation. This is the second example of violation (83-17-03).

7. Technical Specification Compliance

During the reporting interval the inspector verified compliance with selected Limiting Conditions of Operation (LCO) and results of selected surveillance tests. The verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions, and review of completed logs, records and chemistry results. The licensee's compliance with LCO action statements were reviewed as they happened. Findings were acceptable with the following exceptions:

- a. Technical Specification 6.2.2.f details the guidelines on working hours for various personnel at the plant and makes the following provisions:
 - (1) Any deviations from these guidelines shall be authorized by the Station Manager or his deputy, or higher levels of management in accordance with established procedures and with the basis for granting the deviations.
 - (2) Controls shall be included in the procedures such that individual overtime shall be reviewed monthly by the Station Manager or his designee to assure that excessive hours have not been assigned.

The inspector found that Station Administrative Procedure (SAP)-152, Control of Overtime for Key Personnel, provides the administrative controls for this system. However, the monthly review by the Station Manager was not being formally done, i.e. in writing. Also, there appeared to be no designated location(s) for keeping the approved deviation requests. It is felt that signing deviation sheets in advance of an outage is not in keeping with the intent of the Technical Specification. Even during outages, any deviations from the working hours guidelines must be approved on an individual case-by-case basis.

Only the Station Manager, Deputy Manager or the Assistant Managers can grant a deviation from the guidelines. This is the interpretation of the phrase "Station Manager or his deputy" from the Technical Specifications.

This item will remain open (83-17-04) pending future inspector review of deviation requests.

- b. On May 31, 1982 during a walkdown of the control board a NRC Operator trainee noted that the speed control for the turbine driven auxiliary feedwater pump was in the "slow" position. This rendered the pump technically inoperable since it would not produce the required pressure and flow. The control was immediately placed in "fast." Technical Specification 3.7.1.2 addresses the operability of the emergency feedwater system. The action statement states that with the emergency feedwater pumps inoperable, restore the required emergency feedwater pump to operable without 12 hours or be in hot standby within the next 6 hours and in hot shutdown within the following 6 hours. On May 25, 1983 the turbine driven emergency feedwater pump speed controller was left in the slow position following a surveillance test. The plant did go to hot standby in the following 78 hours due to an inadvertent reactor trip. However the plant did startup and return to power without placing the controller in fast. Therefore the action statement was violated. This is considered a violation (83-17-05).

8. Physical Protection

The inspector verified by observation and interviews during the reporting interval, that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors and isolation zones in the proper condition, that access control and badging were proper, and procedures were followed.

No violations or deviations were identified.

9. Maintenance and Surveillance Review

The inspector witnessed and reviewed the results of selected maintenance and surveillance activities during this inspection interval. The activities were reviewed to ensure that test instrumentation was calibrated, results of a surveillance met the acceptance criteria, post maintenance testing was conducted by qualified personnel, and approved procedures were being used. LCOs were reviewed to ensure they were met during the activities and that the system was restored to normal at the completion of the activity. Findings were acceptable with the following exceptions:

- a. The inspector reviewed a letter from the licensee dated May 12, 1983. The letter indicated that the licensee had taken the following actions concerning the reactor trip breakers:
 - (1) Replaced the UV devices with modified devices that have all identified manufacturing problems corrected and with modified grooves to accommodate improved retaining rings.
 - (2) Completed installation testing of modified UV devices by performance of ten (10) successive operations with thirty (30) minute intervals between each operation.
 - (3) Completed installation checks on the modified UV devices to verify proper alignment and interfaces with the breaker trip shaft.

The inspector found that a procedure was used to complete item (1). However, the licensee had no written procedure for the installation testing and installation checks. Although the installation testing was a fairly simple test, the licensee should have had a procedure to conduct the test, collect data and establish acceptance criteria. The installation checks were also done without a procedure. The Westinghouse technical representative directed the measurements but did not use an approved procedure. The licensee collected the data but failed to record one set of data. This data was subsequently obtained from the technical representative's notes. Section 6.8.1 of the Technical Specifications requires that written procedures be established covering the applicable procedures recommended in Appendix A to Regulatory Guide 1.33, Revision 2. Regulatory Guide 1.33, Rev. 2 recommends that maintenance procedures exist. This failure to establish maintenance procedures is considered a violation. This is the third example of violation (83-17-01).

10. Review of Nonroutine Event Reports by the Licensee (Unit 1)

The following Licensee Event Reports (LERs) were reviewed for a potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events which were reported immediately were reviewed as they occurred to determine if Technical Specifications were satisfied.

All LERs were reviewed in accordance with the current NRC enforcement policy.

83-014	Reactor Coolant System, Relief Valves
83-009	Engineered Safety Feature Actuation System Instrumentation
83-022	Fire Protection Instrumentation

The above LERs are considered closed.

(Open) LER 82-032 Radioactive Effluents, Liquid Waste Treatment. Review of this LER indicates that the nuclear blowdown holdup tank was inspected for desiccant, but the generic implications of the cause of the failure of the nuclear blowdown monitor tank has not been completed.

(Open) LER 83-034 Cold Shutdown-Loops Filled. Review of this LER indicates that the cause and corrective action mentioned in the LER was not adequate. A revision to this LER will be submitted.

(Closed) LER 83-044 Reactor Trip System Instrumentation. This LER involved failure to implement the action statement of Technical Specification 3.3.1 (Table 3.3-1, Item 14). The action statement for this specification requires an inoperable channel be placed in the tripped condition within one hour. Flow Transmitter (FT)-486, Steam Generator B Feedwater Flow, was tagged out of service on May 12, 1983 and not returned to service until May 23, 1983. Technical Specification 3.3.1 requires FT-486 be operable in Modes 1 and 2. Between May 12, 1983 and May 23, 1983, the plant entered Mode 2 on three separate occasions; May 20, 22, and 23, 1983. The operators did not know the flow transmitter was inoperable until sufficient feedwater flow was developed to identify the isolated instrument. However, the instrument was recorded in the tagout log and should have been identified as inoperable prior to entering Mode 2. Technical Specification 3.0.1 requires that, upon failure to meet the Limiting Condition for Operation, the associated action requirements shall be met. The failure to comply with the action statement of Technical Specification 3.3.1 is considered a violation. This is the second example of violation (83-17-05).

(Closed) LER 83-042 Fire Detection Instrumentation. This LER describes the failure to station a continuous fire watch in the intermediate building after the system became inoperable. Technical Specification 3.7.9.2 requires a continuous fire watch be established within 1 hour if the intermediate building sprinkler becomes inoperable. At 0656 hours on May 19, 1983, a steam leak in the intermediate building caused the deluge valve to the sprinkler system to trip. An operator was subsequently sent to reset

the system after the alarm was received. Resetting the system requires that the system be isolated, rendering it inoperable. The operator did isolate the system but failed to report the status of the system to the control room. Because of poor communication between the operator and the control room, the isolation of the system was not detected until 0919 hours. The shift supervisor became aware of the inoperability at 0930 hours and implemented the required action statement within 1 hour. However, given the circumstances surrounding this event, the control room operators should have been aware of the status of the system because the order to isolate the system came from the control room and the integrated fire and security panel displayed the system status during the period when the system was isolated. The fire watch should have been stationed within 1 hour of isolating the system. The failure to establish a fire watch is considered a failure to implement an action statement and is a violation. This is the third example of violation (83-17-05).

(Closed) LER 83-041 Boron Injection Tank Heat Tracing. This LER involves the failure to energize one channel of heat tracing on the boron injection tank. Technical Specification 3.5.4.2, requires two independent channels of heat tracing be operable prior to entering Mode 3. Specification 3.0.4 states that entry into an operational mode shall not be made unless the limiting condition for operation is met without reliance on the action statement. On May 1, 1983, with the plant in Mode 5, the train "B" heat tracing was turned off. This train was left deenergized until May 20, 1983. However, the plant entered Mode 3 on May 18, 1983, thus violating Specification 3.0.4. This is considered a violation (83-17-06).