



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

Report Nos.: 50-280/85-36 and 50-281/85-36

Licensee: Virginia Electric and Power Company
 Richmond, VA 23261

Docket Nos.: 50-280 and 50-281

License Nos.: DPR-32 and DPR-37

Facility Name: Surry 1 and 2

Inspection Conducted: November 5 - December 2, 1985

Inspectors:	<u>S. Guenther</u>	<u>Dec 19, 1985</u>
for	D. J. Burke, Senior Resident Inspector	Date Signed
	<u>S. Guenther</u>	<u>Dec 19, 1985</u>
for	M. J. Davis, Resident Inspector	Date Signed
Approved by:	<u>S. Elrod</u>	<u>Dec 19, 1985</u>
	S. Elrod, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This inspection involved 150 inspector-hours onsite in the areas of plant operations and operating records, plant maintenance and surveillance, plant security, followup of events, licensee actions on previous enforcement items and licensee event reports (LERs).

Results: In the areas inspected, no violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

R. F. Saunders, Station Manager
D. L. Benson, Assistant Station Manager
H. L. Miller, Assistant Station Manager
D. A. Christian, Superintendent of Operations
E. S. Grecheck, Superintendent of Technical Services
J. W. Patrick, Superintendent of Maintenance
D. Rickeard, Supervisor, Safety Engineering Staff
S. Sarver, Superintendent of Health Physics
R. Johnson, Operations Supervisor
D. Driscoll, Site Quality Assurance Manager

Other licensee employees contacted included control room operators, shift technical advisors, shift supervisors, chemistry, health physics, plant maintenance, security, engineering, administrative, records, contractor personnel, and supervisors.

2. Exit Interview

The inspection scope and findings were summarized on a biweekly basis with certain individuals in paragraph 1. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters and Open Items

- a. (Closed) Infraction (281/80-24-05) concerned the auxiliary feedwater pumps which failed to meet start time acceptance criteria during testing. Also an outside recirculation spray pump failed to start due to an improperly racked-in circuit breaker. Management review of test procedures failed to resolve problems or identify required retesting. Components have subsequently been retested satisfactorily, and the procedures strengthened.
- b. (Closed) Violation (280/85-01-02) failure to perform adequate Technical Specification (TS) 4.1 surveillance testing on control room chlorine detectors, containment hydrogen analyzers, and locks on the reactor vessel head vent. Surveillance and administrative procedures have been revised and adequate testing implemented. All of the administrative procedures (e.g., AP-24) were not revised by June 30, 1985, although the delays were discussed with the NRC.

- c. (Closed) Violation (280, 281/85-19-01), failure to properly prescribe or accomplish proper installation of safety-related EQ [environmentally qualified] electrical components in accordance with Criterion V of Appendix B to 10 CFR 50. A programmatic review and inspection of the electrical components has been performed and corrective actions have been implemented on discrepancies identified.
- d. (Closed) Open Item (281/80-26-01) concerned diesel exhaust fumes accumulating in adjacent diesel rooms, apparently due to the horizontal exhausts on the emergency diesel generator (EDG) building roof. Exhaust deflectors were subsequently installed.
- e. (Closed) Unresolved Item (281/80-43-02) concerned bottom stoplogs inadvertently left in the Unit 2 high level intake structure screenwells. Also two portable pumps that had been left in the 2A screenwell could not be located. The stoplogs were subsequently removed and the pumps located, one was found previously removed but not documented, the second pump was found in the intake water box and removed.
- f. (Closed) Open Item (280/84-04-02) concerned the malfunction of the auto reset of the Source Range (SR) high voltage following reactor trip when power level decayed to below the permissive setpoint. The electronic circuitry has been adjusted and now appears to operate satisfactorily. Reactor trip recovery procedures require operators to check SR indication and manually re-energize the detectors, if required.
- g. (Closed) Open Item (280/85-01-04) concerned the improvement of the accuracy of the estimated critical positions (ECPs). The licensee has completed an engineering study of estimated critical conditions, and has implemented refinements to the plant procedures and data in the plant curve books; recent predictions have been more accurate.
- h. (Closed) Inspector Followup Item (280/85-32-03), correct containment isolation valve identification tags in the control room. The safety injection (SI) initiating signal was inscribed on the valve tags.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Operations

- a. Units 1 and 2 were inspected and reviewed during the inspection period. The inspectors routinely toured the control room and other plant areas to verify that plant operations, testing, and maintenance were being conducted in accordance with the facility TS and procedures. The inspector verified that monitoring equipment was recording as required, that equipment was properly tagged, and that

plant housekeeping efforts were adequate. The inspectors also determined that appropriate radiation controls were properly established, that clean areas were being controlled in accordance with procedures, that excess material or equipment was stored properly, and that combustible material and debris were disposed of expeditiously. During tours, the inspectors monitored the plant for unusual fluid leaks, piping vibrations, piping hanger and seismic restraint settings, various valve and breaker positions, equipment caution and danger tags, component positions, adequacy of fire fighting equipment and instrument calibration dates.

Certain tours were conducted on backshifts. Inspections included areas in the Units 1 and 2 cable vaults, vital battery rooms, control room, auxiliary building, and cable penetration areas to verify certain breaker and equipment conditions and positions for safety-related components. The inspectors routinely conducted partial walkdowns of emergency core cooling systems and engineered safety features systems to verify operability and observe maintenance and testing of certain equipment and components in these systems.

- b. Unit 1 operated at power for the duration of the reporting period. No trips or shutdowns occurred.

Unit 2 began the reporting period in the last week of a 20 day snubber inspection and maintenance outage. A reactor startup was conducted on November 6, 1985. During power ascension on November 7, the reactor tripped from 22 percent power due to a high level signal from the 'B' steam generator caused by manual overfeeding. All systems functioned normally and the unit was restarted later that day. Unit 2 operated at power for the remainder of the reporting period.

6. Surveillance and Maintenance

During the month, the inspectors verified that the surveillance or testing of various safety-related systems and components was performed in accordance with TS requirements. Testing of the auxiliary feedwater pump(s), certain nuclear instrumentation and reactor protective system (RPS) channels, and motor operated valves (MOVs) was observed. Maintenance or testing on certain MOVs was also verified to be in accordance with the procedures and requirements.

Within the areas inspected, no violations were identified.

7. Licensee Event Report Review

The inspectors reviewed the LERs listed below to ascertain that NRC reporting requirements were being met and to determine the appropriateness of corrective action taken and planned.

Certain LERs were reviewed in greater detail to verify corrective action and determine compliance with TS and other regulatory requirements. The review included examination of logbooks, internal correspondence and records; review of Station Nuclear Safety and Operating Committee meeting minutes and discussions with various staff members.

(Closed) LER 280/83-23 concerned unmonitored steam generator (SG) blowdown to the condenser water boxes. The radiation monitor (RM) flow isolation valves were not properly adjusted to allow for adequate blowdown flow through the RM when the monitoring system was placed in service. Startup checklists for the SG blowdown system were modified to ensure RM flow is monitored and verified correct. The current practice is to recirculate SG blowdown flow to the condenser hotwell to reduce condensate release and make-up requirements.

(Closed) LER 280/83-28 concerned a low level condition in the low pressure carbon dioxide (CO₂) storage tank. The tank was being used to purge the Unit 2 main generator of hydrogen. The operator failed to monitor the purge and allowed the tank level to drop below the minimum required level. Fire watches were posted until the tank was refilled. The generator purge procedure was changed to add a precaution to maintain the TS minimum level in the CO₂ storage tank.

(Closed) LERs 280/83-50 and 83-56 concerned heat tracing panel feeder breakers tripping on ground fault during maintenance. Ground fault circuitry for heat tracing feeder breakers was subsequently modified to correct the feeder breaker ground fault circuitry; the thermal overload trip settings remain intact.

(Closed) LER 281/83-60 concerned the tripping of the feeder breaker for heat tracing panel 2B1. The breaker tripped due to a ground fault that occurred when the power supply AC fuse blew. The redundant heat tracing panel was verified operable. The heat tracing panel was checked for grounds but no problems were found. The fuse was replaced and the feeder breaker was reset.

(Closed) LER 281/83-56 concerned the tripping of containment spray pump motor breakers during attempted starts for periodic testing. The motor breakers' instantaneous delay trip times were set lower than the optimum setting of .07 seconds. The instantaneous delay trip times for the pump motor breakers were subsequently reset to .07 seconds, tested satisfactorily, and returned to operable status.

(Closed) LER 281/83-25 concerned the failure of service water motor operated valve, MOV-SW-202B, to cycle closed (electrically) due to a malfunctioning mechanism. The clutch failed to disengage due to rust buildup between the clutch shaft and the motor operator housing. The rust was removed and the valve was satisfactorily tested and returned to service. The valve is included in the licensee's programmatic review of safety-related MOVs (see Open Item 281/85-07-02).

8. Plant Physical Protection

The inspectors verified the following by observation:

- a. Gates and doors in protected and vital area barriers were closed and locked when not attended.
- b. Isolation zones described in the physical security plan were not compromised or obstructed.
- c. Personnel were properly identified, searched, authorized, badged, and escorted as necessary for plant access control.