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

Report Nos.: 50-280/85-12 and 50-281/85-12

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: April 2 - May 6, 1985

Inspectors: Gregory A. Pick for 5/21/85
D. J. Burke, Senior Resident Inspector Date Signed

Gregory A. Pick for 5/21/85
M. J. Davis, Resident Inspector Date Signed

Approved by: Wright L. Brumley for 5/21/85
S. Elrod, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope: This inspection involved 150 inspector hours on site in the areas of plant operations and operating records, plant maintenance and surveillance, plant security, followup of events and licensee event reports.

Results: In the areas inspected, no violations 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
H. W. Kibler, Superintendent of Maintenance
D. Rickeard, Supervisor, Safety Engineering Staff
S. Sarver, Superintendent of Health Physics
R. Johnson, Operations Supervisor
R. Driscoll, Site Quality Assurance Manager
W. R. Runner, Supervisor, Administrative Services

Other licensee employees contacted included control room operations, shift technical advisors (STA), 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 above. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inpsection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

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 Technical Specifications (TS) and procedures. The inspectors verified that monitoring equipment was recording as required; equipment was properly tagged; and plant housekeeping efforts were adequate. The inspectors also determined that appropriate radiation controls were properly established; clean areas were being controlled in accordance with procedures; excess

material or equipment was stored properly; and combustible material and debris were disposed of expeditiously. During tours, the inspectors looked for the existence of 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.

Some tours were conducted on backshifts. Inspections included areas in the Units 1 and 2 cable vaults, vital battery rooms, diesel generator rooms, fire pump house, switchgear rooms, control rooms, auxiliary building, Unit 2 Containment and cable penetration areas to verify certain breaker and equipment positions for safety related components. The inspectors routinely conduct partial walkdowns of ECCS and ESF systems.

b. Unit 1 began the reporting period operating at full power. On April 22, a normal rampdown to 25% power was conducted to reduce radiation levels in preparation for Furmanite work on the residual heat removal (RHR) inlet valves MOV-RH-1700 and MOV-RH-1701. Leak rates to the Primary Drains Transfer Tank (PDTT) had increased, and elevated temperatures were observed on the stem packing leakoff line from the RHR valves. The unit was returned to full power operation following Furmaniting work. On April 29, leakage to the PDTT again began to increase, and although the leakage was within the TS 3.1.c limits, a unit shutdown was commenced to repair the leakage. During the rampdown, a reactor trip occurred at approximately 18% power, when the operating main feedwater (MFW) pump electrical breakers opened. The trip of the MFW pump appeared to be the result of the failure of the feedwater (FW) recirculation valve open switch to pick-up the valve open condition. The MFW pump trips if the discharge flow is below 2800 gpm for 15 seconds and the recirculation valve is not open. A similar event occurred on Unit 2 on December 14, 1984 - see LER 84-21. Safety systems responded normally during the Unit 1 trip. Unit 1 ended the reporting period in cold shutdown for a two week maintenance and snubber inspection outage.

c. Unit 2 remained in a cold shutdown condition for the duration of the reporting period, while continuing the refueling and 10 year Inservice Inspection outage.

6. Survey of Licensee's Response to Selected Safety Issues

The inspectors performed a survey of the licensee's response to the issues of steam binding of auxiliary feedwater (AFW) pumps due to back leak (IE Information Notice 84-06) and Control Rod Mispositioning (IE Information Notice 83-75) in accordance with Inspection and Enforcement Temporary Instruction (TI) 2515/67. No problems were identified in these areas. The AFW discharge line temperatures are monitored each shift, and procedures to prevent, detect and correct check valve backleakage have been implemented. No steam voiding or backleakage has been detected on either unit over the past several months of operation, following repairs to the AFW check valves.

7. LER Review

The inspectors reviewed the Licensee Event Reports (LER) 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 (SNSOC) meeting minutes, and discussions with various staff members.

(Closed) LER 281/85-02 concerned the improper alignment of the charging pump intermediate seal coolers due to operator's attempting to shift the coolers without using the approved operating procedure. Personnel were reinstructed in the importance of using the proper approved procedures (Reference violation 281/85-07-01).

(Closed) LER 280/85-04 concerned a reactor trip from low power. When the steam dump valves were unisolated, leakage past the dump valves caused power to increase near 10%. At this time an attempt was made to latch the turbine to prevent a trip. Only one electric hydraulic (EH) pump was available and running during the turbine latching but could not satisfy the EH demands during latching. The turbine stop valves went shut, and the reactor trip occurred. An attempt was made to isolate the steam dump valves, but the valves could not be closed quickly enough to prevent the trip. The steam dump leakage was identified and isolated. Operations personnel were briefed on the details of the event.

(Closed) LER 280/84-05 concerned the inadvertent actuation of safety injection (SI) logic during a maintenance outage. A voltage transient was induced on vital buses I and III when they were inadvertently cross connected out of phase which caused tripping 2 of 4 containment high pressure relays. Since channel II was in the trip condition prior to the voltage transient, the 3 of 4 matrix for containment high pressure was completed, and an SI signal initiated. Vital buses I and III were cross connected because a licensed operator failed to recognize which vital bus system was being placed in service. The vital bus transfer switches were subsequently relabeled, and the operator reinstructed.

(Closed) LER 280/84-25 concerned a source and intermediate range reactor trip signal during a maintenance outage. The trip signal was generated due to a voltage transient induced on vital bus II during the replacement of a key switch on a boric acid flow transmitter. During replacement of the switch, an energized lead momentarily shorted to ground creating the voltage transient.

(Closed) LER 280/84-19 concerned inadequate post maintenance testing of Control Room Area Emergency Ventilation Systems. The procedures used to

return the system to service did not reference all testing requirements in TS. Test procedures covering TS requirements are currently available.

Within the areas inspected, no violations were identified.

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 plans were not compromised or obstructed.

c. Personnel were properly identified, searched, authorized, badged and escorted as necessary for plant access control.