



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

Report Nos. 50-338/81-10 and 50-339/81-17

Licensee: Virginia Electric and Power Company
 P. O. Box 26666
 Richmond, VA 23261

Facility Name: North Anna Units 1 and 2

Docket Nos. 50-338 and 50-339

License Nos. NPF-4 and NPF-7

Inspector:	<u><i>H.C. Dance</i></u>	<u>9-3-81</u>
	E. H. Webster	Date Signed
Approved by:	<u><i>H.C. Dance</i></u>	<u>9-3-81</u>
	H. C. Dance, Section Chief, Division of Resident and Reactor Project Inspection	Date Signed

SUMMARY

Inspection on June 6-26, 1981

Areas Inspected

This routine inspection by the resident inspector involved 37 inspector-hours on site in the areas of operational safety, maintenance and surveillance.

Findings 1

Of the three areas inspected, no items of noncompliance or deviations were identified.

Areas Inspected Unit 2

This routine inspection by the resident inspector involved 48 inspector hours onsite in the areas of operational safety, maintenance and surveillance.

Unit 2 Findings

Of the three areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

Licensee Employees

W. R. Cartwright, Station Manager
*E. W. Harrell, Assistant Station Manager
*J. A. Hanson, Superintendent - Technical Services
J. R. Harper, Superintendent - Maintenance
*S. L. Harvey, Superintendent - Operations
*D. B. Roth, Engineering Supervisor
*L. O. Silman, QC, Engineer
J. M. Mosticone, Operations Coordinator
M. E. Fellows, Staff Assistant

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

*Attended one or more exit interviews

2. Exit Interview

The inspection scope and findings were summarized on June 26, 1981, with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Unit 1

During most of this inspection period, Unit 1 operated at 100% capacity. The licensee has experienced difficulties in maintaining containment temperatures below the 105°F limit, and also generator lead cooling has required work, but neither problem has required any significant power reduction. The unit tripped on loss of electro-hydraulic control (EHC) fluid, causing a turbine trip-reactor trip on June 24. The unit was restored to operation the next morning.

Unit 2

During this inspection period, Unit 2 operated at 100% capacity except for a Unit trip on June 6 and remained shutdown following a unit trip on June 19. The trip on June 6 was due to a hydraulic line break in turbine EHC system, causing a turbine trip-reactor trip. On June 19, a failure of the C main

transformer caused a turbine trip-reactor trip. In both cases the plant responded as expected and safety systems responded as designed.

6. On June 6, while conducting a logic surveillance test on the reactor protection system (procedure 1-PT-36.1), the source range of the nuclear instrumentation system was energized while the unit was operating at 100% power. The operator promptly denenergized both channels and conservatively estimated that both channels were energized for 25 seconds, during which time they both indicated off-scale high.

This operation caused some burnout of the boron trifluoride gas in the source range nuclear detectors, and could result in reduced detector sensitivity. As a result, the licensee has posted signs in the control room to warn the operators that source range may be unreliable, and that the incore detector system should be aligned to give flux current, should the source range be needed (plant shutdown) and show abnormal indication. Licensee instrument technicians were unable to reconstruct the occurrence. During the plant shutdown on June 24 the source range instruments exhibited normal operating characteristics. The inspector had no further questions.

7. Safety Injection Reset Control Circuitry

The design deficiency concerning failure of certain systems to remain in their accident condition following reset of the safety injection was first identified by the licensee in late 1979 and was followed up by an IE Bulletin 80-06.

The licensee identified nine circuits initially as being affected and corrected four of them early in 1980 from both Units (see IE Report 338/80-19 and 339/80-20). Since then, the following design changes were completed as indicated:

1. DC 79-S76, CRDM fans - Unit 1 only; Unit 2 completed by E&DCR P2704
2. DC 80-S11, Air ejector discharge both units
3. DC 80-S20, Main steam trip valves both units
4. DC 79-S75, Auxiliary feedwater pump P-2 trip valve - Unit 1 only; Unit 2 completed by E&DCR P2704
5. DC 79-S79, Service water radiation monitor pumps - Unit 1 only; Unit 2 completed by E&DCR P2704

The inspector reviewed these design changes and E&DCR P2704 including special tests conducted to verify functional operation of the revised circuitry. In each case the circuitry was revised to require two independent operations to change the equipment from its emergency mode.

The inspector had no further questions in this area and closed items (338/79-46-01, 338/80-16-04, 338/80-20-01, 339/79-56-04, and 339/80-17-12).

This also closes IEB 80-06 and the 10 CFR 21 report, serial number 964 of November 21, 1979.

8. Radiography of Reactor Vessel

On June 8, the NRC was informed by Westinghouse of deficiencies noted in radiograph inspection records of the control rod drive penetration tube to rod drive adaptor on eleven reactor vessels supplied by Rotterdam Dockyard. The radiographic results failed to meet ASME section III standards for clarity and density. Westinghouse informed the affected licensees on June 5, which included Virginia Electric and Power Company. The licensee was informed that both units 1 and 2 were affected. Onsite reviews of pre-service inspections of those welds, including visual and PT tests indicated all receipt inspection were completed satisfactorily and are on file. Licensee NDT personnel are evaluating the results and corrective action, if any, to be conducted. Final analysis and corrective action shall be followed up by the inspector (338/81-20-01 and 339/81-17-01).