



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

Report Nos.: 50-338/86-03 and 50-339/86-03

Licensee: Virginia Electric & Power Company
Richmond, VA 23261

Docket Nos.: 50-338 and 50-339

Facility Name: North Anna 1 and 2

Inspection Conducted: January 6 - February 2, 1986

Inspectors:	<u><i>M. W. Branch</i></u>	<u>3-4-86</u>
	M. W. Branch, Senior Resident Inspector	Date Signed
	<u><i>L. P. King</i></u>	<u>3-4-86</u>
	L. P. King	Date Signed
Approved by:	<u><i>A. J. Ignatonis</i></u>	<u>3/04/86</u>
	A. J. Ignatonis, Acting Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine inspection by the resident inspectors involved 190 inspector-hours on site in the areas of licensee event report (LER) review, engineering safety features (ESF) walkdown, operational safety verification, monthly maintenance, monthly surveillance, and information meeting with local officials.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Licensee Employees Contacted

- *W. L. Stewart, Vice President, Nuclear Operations
- *E. W. Harrell, Station Manager
- *D. B. Roth, Quality Control (QC) Manager
- G. E. Kane, Assistant Station Manager
- *E. R. Smith, Assistant Station Manager
- R. O. Enfinger, Superintendent, Operations
- *M. R. Kansler, Superintendent, Maintenance
- A. H. Stafford, Superintendent, Health Physics
- *J. A. Stall, Superintendent, Technical Services
- *S. A. Harrison, Emergency Planning Coordinator
- J. R. Hayes, Operations Coordinator
- D. A. Heacock, Engineering Supervisor
- D. E. Thomas, Mechanical Maintenance Supervisor
- R. A. Bergquist, Instrument Supervisor
- F. T. Terminella, QA Supervisor
- R. S. Thomas, Supervisor, Engineering
- *W. M. Adams, Maintenance Engineer
- *G. L. Polson, Corporate Emergency Planning
- *J. H. Leberstein, Licensing Coordinator
- *Wendell Austin, Telecommunications

Other licensee employees contacted include technicians, operators, mechanics, security force members, and office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 4, 1986, with those persons indicated in paragraph 1 above. One unresolved item related to Emergency Operations Facility (EOF) communications was identified during this inspection and is discussed in paragraph 10*. Inspector followup items identified during this inspection were also discussed in detail. The licensee acknowledged the inspectors findings. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection. At no time during the inspection was written material provided to the licensee by the inspector.

(Open) Unresolved Item 338,339/86-03-01, Conflicting Requirements for EOF Communication System (paragraph 10).

*An Unresolved Item is a matter about which more information is required to determine whether it is acceptable or may involve a violation or deviation.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Plant Status

Unit 1

At 1:30 a.m. on January 19, 1986, the unit tripped from approximately 4% reactor power. The trip occurred when the turbine overspeed test switch was inadvertently turned in the wrong direction, causing the governor valves to close then reopen creating a pressure spike on the turbine first stage pressure sensor. This pressure spike activated the P7 turbine trip/reactor trip logic and when the turbine trip occurred a reactor trip followed. The reactor was restarted at 6:27 a.m. the same day and after successful testing of the turbine overspeed protection, the generator output breaker was closed and the unit is currently at 100% power.

Unit 2

The unit operated at or near 100% power for the entire inspection period. The current boron concentration is 0 ppm and a unit coastdown, that will last approximately 45 days has been initiated.

No violations or deviations were identified in these areas.

5. Licensee Event Report (LER) Followup

The following LERs were reviewed and closed. The inspector verified that reporting requirements had been met, that causes had been identified, that corrective actions appeared appropriate, that generic applicability had been considered, and that the LER forms were complete. Additionally, the inspectors confirmed that no unreviewed safety questions were involved and that violations of regulations or Technical Specification (TS) conditions had been identified.

(Closed) LER 338/84-025, Inoperable fire detection system in the Unit 1 emergency switchgear and air conditioning rooms.

(Closed) LER 338/85-022, Attempted introduction of unauthorized weapon into the protected area. This item was evaluated and met the criteria of 10 CFR Part 2, Appendix C, Section V.A.; therefore, no Notice of Violation will be issued.

(Closed) LER 339/85-011, Noble gas high range effluent monitors inoperable. The inspectors verified that abnormal procedure (AP) 1-AP-5.3 was developed and implemented as committed in the LER. This procedure should help prevent recurrence of the problem identified in the LER and should provide the necessary guidance to the control room operator if equipment failure reoccurs.

No violations or deviations were identified in these areas.

6. Monthly Maintenance (62703)

Station maintenance activities affecting safety related systems and components were observed/reviewed, to ascertain that the activities were conducted in accordance with approved procedures, regulatory guides and industry codes or standards, and in conformance with Technical Specifications. Several of the activities observed included the replacement of the leaking reactor head gasket and repairs to the unit 1 containment vacuum pump.

No violations or deviations were identified in this area.

7. Monthly Surveillance (61726)

The inspectors observed and reviewed Technical Specification required testing, and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for operation (LCO) were met and that any deficiencies identified were properly reviewed and resolved.

On January 14, 1986, the inspector observed the satisfactory performance of Periodic Test (PT) 82B, "Test of 1J Emergency Diesel Generator."

No violations or deviations were identified in this area.

8. ESF System Walkdown (71710)

The following selected ESF systems were verified operable by performing a walkdown of the accessible and essential portions of the systems.

Unit 1

Quench Spray System (1-OP-7.4A).

Unit 2

Quench Spray System (2-OP-7.4A).

Upon completion of the walkdown, the inspectors had the following comments:

- a. A leak was noted on the flow orifice for FS-QS-201B.
- b. Label plates for valves 2-QS-31 and 2-QS-32 were not securely fastened to the valves.
- c. Drain valve for PI-QS-203 was not labeled.

The above findings were conveyed to the licensee for corrective action as appropriate.

No violations or deviations were identified in these areas.

9. Routine Inspection (71707)

By observations during the inspection period, the inspectors verified that the control room manning requirements were being met. In addition, the inspectors observed shift turnover to verify that continuity of system status was maintained. The inspectors periodically questioned shift personnel relative to their awareness of plant conditions.

Through log review and plant tours, the inspectors verified compliance with selected Technical Specification and Limiting Conditions for Operations.

During the course of the inspection, observations relative to Protected and Vital Area security were made, including access controls, boundary integrity, search, escort and badging.

On a regular basis, radiation work permits (RWP) were reviewed and the specific work activity was monitored to assure the activities were being conducted per the RWPs. Selected radiation protection instruments were periodically checked and equipment operability and calibration frequency was verified.

The inspectors were kept informed, on a daily basis, of overall plant status and of any significant safety matter related to plant operations. Discussions were held with plant management and various members of the operations staff on a regular basis. Selected portions of operating logs and data sheets were reviewed daily.

The inspectors conducted various plant tours and made frequent visits to the Control Room. Observations included: witnessing work activities in progress; verifying the status of operating and standby safety systems and equipment; confirming valve positions, instrument and recorder readings, annunciator alarms, and housekeeping.

The inspectors also observed the station fire brigade response to an oil fire on the unit 1B main feed pump. The fire was extinguished quickly, but due to oil soaked lagging, a reflash occurred but again was quickly extinguished.

The licensee uses Gulf Harmony 32AW type oil as a lubricant for the main feed pump. This oil has a flash point of 345°F and whenever leaking oil contacts the 450°F pump casing a fire occurs. The inspectors recommended that the licensee review the type oil used in equipment having a high operating temperature, and if necessary adjust the oil type to reduce the fire hazard to that equipment.

No violations or deviations were identified in these areas.

10. Emergency Operations Facility Communications System

During a review of the EOF communications system, the inspectors noted what appears to be conflicting requirements. Specifically, 10 CFR, Part 50, Appendix E, requires in Section IV.E.9 that the offsite communications system be provided with a backup power source, whereas, NUREG 0696, "Function Criteria for Emergency Response Facilities" only requires a reliable system. The current licensee's emergency plan indicates the facility is designed to the criteria specified in NUREG 0696, and the actual installation does not include the backup power source specified by 10 CFR 50, Appendix E. The licensee was requested to resolve the apparent conflict and this item is considered unresolved pending licensee and Region II resolution of requirements (338,339/86-03-01 "Conflicting Requirements for EOF Communication System").

11. Emergency Work Requests

The inspectors reviewed the guidance provided in industry standard and licensee's documentation on emergency work requests.

Section 5.2.7 of ANSI N 18.7-1976, Maintenance & Modification, states that maintenance or modification of equipment shall be preplanned and performed in accordance with written procedures, documented instructions or drawings. The licensee's implementation of the above standard is contained in Section 17.2-12 of the VEPCO QA Topical Report (VEP-1-4A (UPDATE)) which includes the following statement:

Except in the emergency or abnormal operating conditions where immediate actions are required to protect health and safety of the public, to protect equipment or personnel or to prevent the deterioration of plant conditions to a possibly unsafe or unstable level maintenance or modification of equipment shall be preplanned and performed in accordance with written procedure.

Administrative Procedure 16.5, page 3 of 7, states the following in 3.3. Note: "Emergency applies only to a true emergency which if not immediately corrected will endanger personnel, cause major damage to equipment, or result in significant loss of generation."

The inspectors reviewed portions of the emergency work order log to determine if the work requests written fall into the category described in the QA Manual and Administrative Procedure 16.5. Several work orders by description appeared not to fit into this category. A followup on the details of these work orders will be made to determine if the intent of the emergency work order is being met. This item is identified as Inspector Followup Item 338,339/86-03-02.

12. Information Meeting with Local Officials (94600)

On February 17, 1986, the inspectors met with the Louisa County Administrator and members of his staff. The purpose of the meeting was to introduce NRC personnel and to discuss lines of communication between the local officials and the NRC. The meeting was open and frank and lasted approximately one hour.

13. Rockwell Edwards "Univalve" Failures

At the conclusion of the Unit 1 refueling outage a flow restriction was discovered in the "C" loop resistance temperature detector (RTD) bypass line. During the reactor head gasket replacement outage, the licensee conducted radiographic examination of all fifteen valves in the RTD bypass lines. Fourteen of these valves were identified as having their valve disc separated from the valve stem. The failures occurred in the sharp-cornered shoulder at the bottom of the stem where the disc-nut rest. An engineering review was conducted and a decision to not repair the valves was made based on an analysis that showed that with the valves in their present orientation, normal flow under the disc will keep the disc in the open position. However, reversed flow will cause the disc to act as a check valve, preventing flow.

These valves are just a few of the valves identified by the licensee, as being of the type described in Inspection and Enforcement Information Notice (IEIN) 84-48. IEIN 84-48 described several events at other facilities where similar failures had occurred.

The inspectors requested the licensee to reevaluate IEIN 84-48 based on the high failure rate identified, and provide a course of action to ensure that all applications of this type stem-disc arrangement are examined. This item is identified as Inspector Followup Item 338, 339/86-03-03.

*** Print Diagnostics for: 31SD 5912

Total Formatting Exceptions = 1 Total Listed Below = 1

The Following Two Formats Will Be Used:

<u>Page/Line</u>	<u>Format Exception Message Found By The IBM 5520</u>
<u>Sheet Number</u>	<u>Format Exception Message Found By The Printer</u>
2.0.0/32	0020-Line Is Too Long To Be Justified