



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

Report Nos.: 50-338/85-22 and 50-339/85-22

Licensee: Virginia Electric and Power Company
Richmond, VA 23261

Docket Nos.: 50-338 and 50-339

License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: August 5 - September 1, 1985

Inspectors:	<u><i>M. W. Branch</i></u>	<u>9/18/85</u>
	M. W. Branch, Senior Resident Inspector	Date Signed
	<u><i>J. G. Luehman</i></u>	<u>9/18/85</u>
	J. G. Luehman, Resident Inspector	Date Signed
Approved by:	<u><i>S. Elrod</i></u>	<u>9/18/85</u>
	S. Elrod, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine inspection by the resident inspectors involved 130 inspector-hours on-site in the areas of Licensee Event Reports, Engineered Safety Features walkdown, operational safety verification, monthly maintenance, monthly surveillance and inspection of spent fuel pool reracking.

Results: One violation was identified in that the licensee failed to comply with the action statement requirements for Limiting Condition for Operations (LCO) 3.3.3.6.a (paragraph 13).

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REPORT DETAILS

1. Licensee Employees Contacted

E. W. Harrell, Station Manager
A. L. Hogg, Jr., Quality Control (QC) Manager
G. E. Kane, Assistant Station Manager
M. L. Bowling, Assistant Station Manager
R. O. Enfinger, Superintendent, Operations
J. R. Harper, Superintendent, Maintenance
A. H. Stafford, Superintendent, Health Physics
J. A. Stall, Superintendent, Technical Services
G. J. Paxton, Supervisor, Administrative Services
J. R. Hayes, Operations Coordinator
J. P. Smith, Engineering Supervisor
D. E. Thomas, Mechanical Maintenance Supervisor
E. C. Tuttle, Electrical Supervisor
R. A. Bergquist, Instrument Supervisor
F. T. Terminella, Quality Assurance (QA) Supervisor
R. C. Sturgill, Engineering Supervisor
G. H. Flowers, Nuclear Specialist
J. H. Leberstein, Licensing Coordinator

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

2. Exit Interview

The inspection scope and findings were summarized during the reporting period with selected individuals identified in paragraph 1. The licensee acknowledged the inspectors' findings. The licensee identified as proprietary the Westinghouse technical manual for the Reactor Vessel Level Indication System (RVLIS) that was reviewed by the inspectors during this inspection. However, no proprietary information is contained in this report.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Plant Status

On August 3, 1985, Unit 1 was removed from service and cooled down to repair leaks in the 1A Steam Generator. Approximately 800 tubes were eddy current tested; 13 were found to be defective and were mechanically plugged. The unit was returned to service on August 17, 1985, and after power level holds

for secondary chemistry clean-up, operated at or near 100 percent power for the remainder of the inspection period.

Unit 2 operated at or near 100 percent power for the entire inspection period.

6. Licensee Event Report (LER) Follow-Up

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 339/85-08, Plant Shutdown Required by the TS due to High Reactor Coolant System (RCS) Leakage

(Closed) LER 338/85-08, Security Breach - Potential for Unauthorized Entry into the Protected Area. This event resulted in an inspection by an NRC Region II physical security inspector. The results of that inspection are contained in Inspection Reports 338, 339/85-20.

7. Follow-Up of Previously Identified Items

Not inspected.

8. Monthly Maintenance

Station maintenance activities affecting safety-related systems and components were observed/reviewed to assure that they were conducted in accordance with approved procedures, regulatory guides, industry codes or standards, and the facility's TS. In conjunction with the problem documented in paragraph 13, the troubleshooting of RVLIS was closely followed by the inspectors.

No violations or deviations were identified in this area.

9. Monthly Surveillance

The inspectors observed/reviewed TS required testing and verified that it was performed in accordance with adequate procedures, that test instrumentation was calibrated, that LCOs were met and that any deficiencies identified were properly reviewed and resolved. In addition to closely following the problems associated with 1-PT-44.7 documented in paragraph 13, the inspectors observed the performance of 1-PT-30.2.2, Nuclear Instrumentation

System (NIS) Power Range Channel II (N42) Functional Test. The inspectors questioned the personnel performing the procedure and ascertained that they clearly understood its requirements.

No violations or deviations were identified in this area.

10. Engineered Safety Features (ESF) System Walkdown

The following selected ESF systems were verified operable by performing a walkdown of the accessible and essential portions of the systems on August 29, 1985:

Unit 1

Auxiliary Feedwater (1-OP-31.2A) dated April 18, 1985

Unit 2

Auxiliary Feedwater (2-OP-31.2A) dated April 25, 1985

No violations or deviations were identified in this area.

11. Routine Inspection

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

Through log review and plant tours, the inspectors verified compliance with selected TSs and LCOs.

During the course of the inspection, the inspectors verified the maintenance of Protected and Vital Area security. Observations included access control, boundary integrity, and personnel search, escort, and badging.

On a regular basis, radiation work permits (RWPs) were reviewed, and specific work activities were monitored to assure compliance with the RWPs. Selected radiation protection instruments were periodically checked, and equipment operability and calibration frequency were verified.

The inspectors kept informed, on a daily basis, of the overall status of both units and of any significant safety matters 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. The inspectors observed work activities in progress and verified the status of operating and standby safety systems and equipment.

Valve positions, instrument and recorder readings, and annunciator alarms were confirmed by the inspectors. The status of plant housekeeping was also observed.

During the brief outage for steam generator tube plugging and repair on Unit 1, the inspectors toured the containment to observe housekeeping/cleanliness and general radiological control practices.

No violations or deviations were identified in this area.

12. Spent Fuel Storage Racks (50095)

The inspectors continued to monitor the replacement of the storage racks in the spent fuel pool. The inspectors observed selected portions of the new rack installation, including leveling procedures and associated diving operations. The licensee has completed removal of all the old racks and installation, including drag testing, of 10 of the 16 new racks. The cell in location Q-31 failed testing and has been capped by the licensee to prevent any possibility of installing a spent fuel element in that location.

The inspectors also monitored the licensee's preparation and inspection of the vehicles intended for use in shipping the old fuel storage racks.

No violations or deviations were identified in this area.

13. Compliance with Technical Specifications

During a Unit 1 control room tour on August 27, 1985, the inspectors noted that channel A of the RVLIS was tagged with a work request sticker (No. 227414) annotated with words to the effect that "channels do not agree within two percent". When questioned by the inspectors, the licensee stated that on August 19, 1985, the channel had exceeded the two percent maximum deviation between channels allowed by 1-PT-44.7, Power Operated Relief Valve, Core Cooling Monitor and RVLIS Indication Channel Check. This PT is used to satisfy the monthly channel check and operability demonstration requirement of TS 4.3.3.6 and Table 4.3-7. Based upon the inspectors' review of the TS, the failure of the channel to meet the specified two percent deviation criterion should have resulted in the plant's entering action (a) of TS 3.3.3.6 (number of operable accident monitoring channels less than the total number of channels shown in Table 3.3-10). A review of control room logs indicated that the system's operability had not been evaluated and the TS required action had not been followed. Following consultation with NRC Region II, the licensee was informed that the unit was in TS 3.0.3, which specifies the steps to be taken when a LCO is not met. The licensee entered the action required by TS 3.0.3 and immediately contacted the RVLIS vendor to obtain assistance in evaluating the system's operability with regard to the two percent deviation criterion specified in the RVLIS technical manual. The vendor evaluated the licensee's test data taken on August 19, 1985, and concurred with the licensee that two percent between channels was a very tight band and indicated that 10 percent would

be a more realistic deviation limit. The vendor representative stated that the two percent criterion was not intended to be a threshold for determining operability but rather a threshold for initiation of corrective action to bring the two channels into closer agreement. Based upon the vendor's recommendation, the licensee reevaluated the August 19, 1985, data against the new acceptance criterion and determined RVLIS to be operable, thereby satisfying the action of TS 3.0.3. The licensee has also initiated a change to procedure 1(2)-PT-44.4.

Action (a) of TS 3.3.3.6 requires that an inoperable channel of RVLIS be restored to operable status within seven days or that the plant be placed in hot shutdown within the next 12 hours. However, Unit 1 continued to operate at power past the seven days without restoring the RVLIS channel to an operable status. This failure to comply with the action of the TS appears to have been caused, in part, by an improper surveillance procedure (1-PT-44.7) which was approved in a handwritten form by the Station Nuclear Safety and Operating Committee (SNSOC) on July 3, 1985. The acceptance criterion portion of the procedure stated, in part, that "the maximum span between trains for the reactor vessel level indication system is less than 2% or a work request (WR) has been submitted to recalibrate the system and the appropriate Action Statement has been entered." Prior to the procedure's approval, the Performance and Test Engineer had lined through the underlined section of the above quote. He later attempted to reinstate the lined-through section by annotating it with "OK", as a proofreader's notation to ensure that the typist would include the information when typing the final approved procedure. When the inspectors questioned the operator who performed the surveillance, he indicated that he was not familiar with the "OK" notation. He had assumed that the procedure writer had determined that failure to meet the two percent criteria did not make the equipment inoperable and all that was necessary was to submit a WR for grooming of the system. The operator also indicated that he had assumed the "OK" to be the initials of the person who had lined through the statement.

The use of hard-to-follow handwritten procedures was discussed in paragraph 9 of the inspectors' last report (338, 339/85-18). It appears that a quicker turn-around time on final typed procedures or more restrictions on the use of hand-written procedures will be necessary to prevent further problems in this area. The inspectors also questioned the actions of the Control Room Operator and the Senior Reactor Operator, who, although led by an improper procedure, did not question the operability of RVLIS when the WR procedure prompted a decision as to whether the equipment is necessary to satisfy a TS condition. The inspectors expressed an additional concern to the licensee as to the extent of training the operators had received on the recently implemented post-accident monitoring TS.

The failure to comply with the action of TS 3.3.3.6 is identified as a violation 338/85-22-01.