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

Report Nos.: 50-338/90-07 and 50-339/90-07

Licensee: Virginia Electric and Power Company
Glen Allen, VA 23060

Docket Nos.: 50-338 and 50-339 License Nos.: NPF-4 and NPF-7

Facility Name: North Anna 1 and 2

Inspection Conducted: March 17 - April 20, 1990

Inspectors: S M Sutton FOR 5/18/90
J. L. Caldwell, Senior Resident Inspector Date Signed

S M Sutton FOR 5/18/90
L. P. King, Resident Inspector Date Signed

Approved by: J. F. Jaudon 5/18/90
P. E. Fredrickson, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine inspection by the resident inspectors involved the following areas: plant status, maintenance, surveillance, operational safety verification, and action on previous inspection findings. During the performance of this inspection, the resident inspectors conducted reviews of the licensee's backshift operations on April 11, 1990.

Results:

Within the areas inspected, no violations or deviations were identified. Weaknesses were identified involving maintaining control room envelope pressurization (paragraph 5.a) and the timeliness of resolution for QA audit findings and work observation discrepancies (paragraph 5.b).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*M. Bowling, Assistant Station Manager
*G. Clark, Supervisor, Quality
R. Driscoll, Quality Assurance Manager
*L. Edmonds, Superintendent, Nuclear Training
*R. Enfinger, Assistant Station Manager
*D. Heacock, Superintendent, Engineering
G. Kane, Station Manager
*J. Leberstien, Senior Engineer
*W. Matthews, Superintendent, Maintenance
T. Porter, Nuclear Safety Engineering Supervisor
A. Stafford, Superintendent, Health Physics
J. Stall, Supervisor, Operations
*F. Terminella, Supervisor, Quality Assurance
V. West, Superintendent, Outage Management

Other licensee employees contacted during this inspection included operators, mechanics, security force members, and office personnel.

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Plant Status

Unit 1 began the inspection period on March 17 operating at 100% power, day 52 of continuous operation. The unit completed the inspection period on April 20 operating at 100% power, day 86 of continuous operation.

Unit 2 began the inspection period on March 17 operating at 100% power, day 313 of continuous operation. The unit completed the inspection period on April 20 operating at 100% power, day 347 of continuous operation.

3. 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 TS requirements.

On April 18, 1990, the inspector observed a partial outage of the component cooling water system to repair two leaking butterfly valves from the boron evaporators. The common loads to Units 1 and 2 were isolated and a twelve-inch freeze seal was used to avoid draining excess component cooling water from the lines. The inspector reviewed procedure 1-MOP-50.34, CCW Common Load Header, which was used to isolate the system.

The work orders to repair these valves had been long standing work orders due to the complexity in isolating the system while operating. The licensee has an on-going program to reduce the backlog of old work orders.

The seal was replaced on one of the valves and the seal disc and stem on the other valve. The work was well thought out from a planning and contingency basis. The departments, including health physics, operations, maintenance, scheduling, and engineering, interfaced extremely well to expedite and successfully complete the work. All the necessary parts were available to repair the valves with the exception of a bushing that was machined for the stem of one valve.

No violations or deviations were identified.

4. Surveillance (61726)

The inspectors observed/reviewed TS required testing and verified that testing 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.

No violations or deviations were identified.

5. Operational Safety Verification (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 TS requirements and LCOs.

In the course of the monthly activities, the resident inspectors included a review of the licensee's physical security program. The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital areas access controls, searching of personnel, packages, and vehicles; badge issuance and retrieval; escorting of visitors; patrols; and compensatory posts. On a regular basis, RWPs were reviewed and the specific work activity was monitored to assure that the activities were being conducted per the RWPs.

The inspectors kept informed, on a daily basis, of overall status of both units 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, and annunciator alarms; and observing housekeeping.

a. Control Room Pressure Testing

Inspection Report 338,339/88-31 identified the inability to obtain .05 inch of water pressure between the control room and the cable vault, cable spreading area, and technical support center during the control room bottled air test (1-PT-76.4) due to the combination of supply and exhaust blowers operating in the turbine building. The test was rerun with a different combination of blowers and the test was completed satisfactorily.

The licensee engineering staff was to evaluate what requirements were necessary to ensure .05 inch of water is met during control room pressurization. As a result of the evaluation, a periodic test "Control Room/Pressure Envelope Ventilation Check" (1-PT-76.4.1) was run on a weekly basis to ensure proper alignment of the ventilation systems that affect control room positive pressure. This procedure specified a .15 inch differential pressure with turbine building ventilation operating to ensure the ability to meet the .05 inch pressure differential when using the control room bottled air. The turbine building ventilation system has the greatest effect on boundary pressure readings. Excessive negative pressure will adversely affect the other pressure differential readings.

The periodic test requires the operators to adjust turbine building ventilation as required to obtain readings on the Unit 1 and Unit 2 control room differential pressure gauges up to a value of .15 inch water gauge and to insure the remaining differential pressure gauges indicate above zero and less than full scale but are no more than .10 inch of water below the turbine building readings.

Even with securing the turbine building exhaust fans and changing all supply fans to outside air, in at least two cases, on February 8 and March 7, 1990, the periodic test was declared unsatisfactory because the operators could not obtain less than .15 inch of water between the control room and turbine building. Presently, the system is operating at approximately .15 inch of water.

The inspector has discussed his concern with the licensee that these conditions could prevent achieving the required .05 inch of water during the first hour of an accident condition. The inspector requested that the licensee run the control room pressurization test as soon as practical after engineering has evaluated the problem of not being able to meet the required differential pressure between the control room and turbine building.

b. Timeliness of QA Findings

Inspection Report 338,339/90-04 documented that the inspector reviewed QA Audit 87-06, which identified the failure of the Grinnel valve preventive maintenance program to meet the requirements of maintenance administrative procedure 12.0.

A follow-up by the inspector of QA Audit 87-04 indicates that prompt corrective action, on some items, was not initiated in a timely fashion. The inspector requested that the licensee identify all audit items starting with Audit 87-04 that took greater than six months to resolve or items that are still open and require corrective action implementation greater than six months. Items that take more than six months to complete are escalated to the vice president for approval.

The licensee informed the inspector that sixteen audit items are complete that required implementation action in excess of six months, and twelve items are still open. It should be noted the licensee has a program to insure all open items, which require more than six months to complete are in compliance with NRC requirements. This program is accomplished by a licensee periodic inspection in the applicable area and/or by the interim actions for the applicable item.

The inspector is concerned that several of these items have not received the attention to resolve them in a timely fashion. Examples of these are:

Audit #N-87-04-07: The alarm trip set points contained in Technical Specification 3.3-6, part 2.c.i and 2.c.ii, Noble gas high range effluent monitor vent and process vent do not contain units to indicate set point values to be used. This item was identified on August 10, 1987, has had several six-month extensions, and is still open.

Audit #N-88-U2-11: Development of comprehensive training program for emergency preparedness personnel issued on July 12, 1988, has been extended several times to July 1, 1990.

Audit #N-88-16-01: This audit identified several problems with the UFSAR. Initially, the licensee proposed seven years to correct the identified problems, but later changed the schedule to five years. Management subsequently agreed to correct major inconsistencies and errors by the end of 1989. This had been extended to March, 1990, and is not completed. It has again been extended to June, 1990. The inspector expressed concern that agreed-upon dates continue to be missed. The licensee informed the inspector that a new set of advisory notices to correct the UFSAR would be out in two months.

Audit #VP COB-08-01: This audit was issued on December 2, 1988. Due to a concern identified by a consultant pertaining to EQ equipment maintenance procedures, an evaluation was performed on selected procedures and quality documentation review packages. The results of the evaluation indicate a programmatic problem exists. The root causes were identified to be as follows:

(1) The QDR's were revised to only include maintenance requirements that were not indicated in the manufacturer's technical manual. This change was not effectively communicated to the people responsible for maintaining the equipment.

(2) Adequate procedure controls do not exist to ensure equipment qualification are maintained, i.e., use of generic procedures, may cause pertinent EQ requirements to be missed.

The maintenance requirements were due to be revised by December 31, 1989. An extension was requested to September 15, 1990, and was approved, only after an action plan was submitted justifying the extension. The inspector expressed his concern to the licensee that these items need to have the resources to complete them without further delays.

Timeliness of other QA actions were also reviewed. The inspector expressed concern to the licensee about observations he made concerning removal of protective clothing in an improper manner. The inspector questioned the QA supervisor about these observations and was given a recently completed QA observation report. The report identified that coaching by training personnel was occurring during the dress-out evaluation phase of training. The inspector stated that he felt timely corrective follow-up to the report had not been initiated. Training management was instructed by plant management to cease the coaching and require retraining as necessary for the personnel to ensure proper undressing procedures are followed.

The NRC inspector also questioned the QA manager and the QA inspector whose observation report documented the procedure problems which resulted in the contamination of several personnel in February 1990, and led to violation 338,339/90-04-04. The QA inspector determined that a previous similar finding had been identified on October 10, 1989, on removal of 2-CH-FL-5 filter changeout and it was identified at that time that steps were performed out of sequence. Corrective action for this problem had not occurred prior to the contamination event on February 27. A meeting was held with the QA manager to determine how the inspectors interface with maintenance and operations personnel when problems are identified during the performance of a task. He was told that jobs are stopped if there are planned or equipment hazards involved. As a result of the filter contamination incident, work stoppage criteria also now includes radiation and contamination exposure.

No violations or deviation were identified.

6. Action on Previous Inspection Items (92701, 92702)

(Closed) 338/88-33-01 (UNR), Qualification of 1-CH-P-1C. This item is considered closed. The licensee identified that a certificate of

conformance was received and the manager of quality presented the information to the inspector.

(Closed) 338,339/89-28-02 (UNR), Potential Violation Concerning the Transportation of Contaminated Instrumentation from North Anna to the Waterford Station. This was changed to violation 89-33-01.

(Closed) 338,339/89-30-02 (UNR), Potential Violation Concerning Failure of Licensed Operators to have Biennial Medical Examinations by a Physician as required by 10 CFR 55.21. Operations has established a shift roster board in the TSC with each individual member having an identification card listing the medical expiration date. These cards are posted and checked prior to the shift assuming the watch. In addition, operations is working with the site medical office and training to maintain a listing and scheduling of individual physical examinations to ensure that the certifications are maintained.

(Closed) 338,339/90-01-01 (UNR), Leak Testing the Gas Stipper. This was changed to violation 90-04-02.

7. Exit Interview

The inspection scope and results were summarized on April 20, 1990, with those persons indicated in paragraph 1. Dissenting comments were not received from this report. Proprietary information is not contained in this report.

8. Acronyms and Initialisms

CCW	Component Cooling Water
EQ	Environmental Qualification
LCO	Limiting Condition for Operation
QA	Quality Assurance
QDR	Quality Documentation Review
RWP	Radiation Work Permit
TS	Technical Specification
TSC	Technical Support Center
UNR	Unresolved Item
UFSAR	Updated Final Safety Analysis Report