



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

Report Nos.: 50-338/85-10 and 50-339/85-10

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: April 1-4, 1985

Inspector: *T. E. Conlon* for 4-15-85
G. R. Wiseman Date Signed

Approved by: *T. E. Conlon* 4-15-85
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 29 inspector-hours on site in the area of fire protection.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *E. W. Harrell, Station Manager
- *M. L. Bowling, Assistant Station Manager
- *G. J. Mocarski, Loss Prevention Supervisor
- *S. B. Eisenhart, Licensing Coordinator
- S. P. Hughes, Shift Supervisor

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

NRC Resident Inspectors

- *M. W. Branch
- *J. G. Luehman

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on April 4, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

- a. Inspector Followup Item (338, 339/85-10-01), Review of Fire Fighting Equipment Inventory for Hose Houses - paragraph 5.d.(1).
- b. Inspector Followup Item (338, 339/85-10-02), Position Verification and Position Control for Critical Carbon Dioxide Fire Suppression System's Valves - paragraph 5.d.(4).

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

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. Fire Protection/Prevention Program Implementation (64704)

a. Administrative Procedures

The licensee's fire protection/prevention procedures are denoted in the Fire Protection Manual entitled, "North Anna Power Station - Fire Protection Program, dated June 28, 1984. This procedure was reviewed by the inspector and found to meet provisions of the applicable NRC guidelines provided in the Branch Technical Position CMEB 9.5-1, "Guidelines for Fire Protection For Nuclear Power Plants."

b. Fire Brigade

(1) Organization

The plant fire brigade is composed of various plant employees with a minimum of five members maintained onsite at all times. Normally the fire brigade is composed of three members from the operations organization and two from security.

The inspector reviewed the Shift Supervisor's personnel roster and verified that at least five qualified fire brigade members were on duty.

(2) Training and Drills

The inspector reviewed the training records for 1984 for five fire brigade members from the on-duty shift. The inspector verified that these members had received initial fire brigade training, respirator training, annual requalification training and that each shift had completed at least two brigade drills per quarter in 1984. The brigade leaders had also attended at least one fire brigade scene leadership course. In addition, the inspector reviewed the licensee's fire brigade drill evaluation for a March 29, 1985 fire drill, in which the station fire brigade responded to a simulated fire emergency at Warehouse No. 2. This exercise was critiqued by the loss prevention supervisor and rated satisfactory in its performance. The drills and training appear to conform to the provisions of the site Fire Protection Program.

c. Fire Brigade Equipment

The inspector examined the eight sets of fire brigade turnout gear and associated breathing apparatus stored in the fire brigade staging area located in the turbine-service building.

Copies of the designated Fire Fighting Strategies and additional fire fighting equipment such as portable exhaust fans, portable foam units, radios and spare air cylinders are also stored in the fire brigade staging area. The above examined equipment appeared to be adequately maintained and serviced.

d. Administrative Control and Periodic Test Procedures For Fire Protection Systems

The inspector reviewed the following periodic test procedures, administrative control procedures, and associated 1984 inspection and test records. These appeared satisfactory except where noted.

- (1) PT-105.3, Hose House Inspection (31 days) - The inspector reviewed the inspection procedure, the Fire Protection Program (FPP) dated June 28, 1984, and performed a physical walkdown of inventory of houses A, C, and E. From this, it was determined that the fire fighting equipment inventory for the Hose Houses provided in Form PT-105.3 does not agree with the inventory list in the Fire Protection Program. Specifically, the PT-105.3, Section 4.1 inventory list does not include having adjustable hose nozzles with 250 feet of 2½-inch fire hose as denoted in the FPP. The fire fighting equipment stored in the hose houses appears adequate and well maintained. The procedure documents need to be revised as necessary to provide a consistent inventory listing based on the North Anna fire protection commitments for this area. This item is identified as Inspector Followup Item (338, 339/85-10-01), Review of Fire Fighting Equipment Inventory For Hose Houses. The licensee agreed to evaluate this item and it will be reviewed on a subsequent NRC inspection.
- (2) PT-105.2.1, Hose Station Inspection - Safety Related, (31 days). -
No discrepancies were noted.
- (3) PT-100.3, Fire Suppression Water System Valve Position Verification (7 days). -

Within Section 4.0 of the instructions a statement was noted that open valves, which are not electrically monitored for position, (curb valves excluded), shall be sealed by breakable locks or plastic seals. Administrative Procedure 19.29, Administrative Padlocking of Equipment, denotes the lock control for critical water fire suppression system valves; however, verification that the plastic tamper seals are in-place on required fire protection water valves, 1-FP-33 and 1-FP-20, is not included in PT-100.3. The licensee stated that this item would be evaluated for inclusion in the periodic test procedure, and will be reviewed during a future NRC inspection as part of Inspector Followup Item (338, 339/85-10-02).

- (4) PT-104.4, Low Pressure CO2 and Halon Systems Required Valve Lineup Verification, (31 days). -

This procedure is intended to provide verification of the correct valve position of critical valves that may affect the flow path for the fire suppression system. Review of the procedure and the inspector's walkdown of the systems' flow paths revealed that

several critical valves were not included within the procedure's valve check list.

On the 6-ton CO2 unit, valve 1-FP-T-42, the system master actuation selector isolation valve was not included in the procedure checklist. It appears that the misposition of this valve in a closed position would render the CO2 system inoperable. In addition, the 6-ton and 17-ton CO2 storage units fill and equalizing lines isolation valves require position verification to assure that CO2 would not be lost from the storage units. It was also recommended to the licensee that the CO2 generator hydrogen purge line isolation valve on the 17-ton storage unit be included for position verification to preclude possible misalignment to the hydrogen system in the turbine building. In addition, the inspector requested the licensee to include all of the above valves in the valve position control locking or tamper seal program to provide improved valve lineup position control. This item is identified as Inspector Followup Item (338, 339/85-10-02), Position Verification and Position Control for Critical Carbon Dioxide Fire Suppression System's Valves. This item will be reviewed during a subsequent NRC inspection.

Within the areas examined, no violations or deviations were identified.

e. Plant Tours

The inspector made tours of the plant to verify that the licensee was implementing a program for fire protection and prevention that was in conformance with the site procedures, NRC requirements, commitments to the NRC and applicable industry standards. These tours included walkthroughs of the following plant areas:

- (1) Fire Area 2 - Control Room
- (2) Fire Area 3-1 - Unit 1 Cable Vault and Tunnel
- (3) Fire Area 3-2 - Unit 2 Cable Vault and Tunnel
- (4) Fire Area 6-1 - Emergency Switchgear Room
- (5) Fire Area 9A-1 - Diesel Generator Area
- (6) Fire Areas 10A + 10B - Fuel Oil Pumphouses
- (7) Fire Area 12 - Service Water Pump House
- (8) Fire Area 13 - Auxiliary Service Water Pump House
- (9) Fire Area 14A - Turbine Driven Auxiliary Feedwater Pump Room
- (10) Fire Area 14B - Motor Driven Auxiliary Feedwater Pump Room
- (11) Fire Area 15-1 - Quench Spray Pump House

(12) Fire Area 46 - Technical Support Center

Housekeeping throughout the plant site was, as a whole, generally good. No improper storage of combustibles or flammable materials, liquids or gases and no unsafe welding and cutting operations were identified.

However, several minor items involving the control of cigarette smoking in Fire Areas 14A and 14B, the Auxiliary Feedwater Pump Rooms, were identified to the site Loss Prevention Staff. The licensee is to review this item and take appropriate action. This will be further evaluated during a subsequent NRC inspection.

The following post-indicator valves (PIVs) of the yard fire protection water distribution system were examined and found to be locked in the correct position:

1-FP-534	1-FP-122
1-FP-535	1-FP-98
1-FP-536	1-FP-110
1-FP-245	1-FP-105

The inspector observed fire watch patrols in the Auxiliary Building. The fire watches appeared attentive and knowledgeable of their required duties.

The following fire protection systems were inspected and were found in service: motor driven fire pump, diesel driven fire pump, Halon system for main control room sub-floor, and the carbon dioxide suppression system for the cable vault and tunnel.

Within the areas examined, no violations or deviations identified.