



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

JUL 10 1984

Report Nos.: 50-338/84-21 and 50-339/84-21

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 Dates: June 18-22, 1984

Inspection at North Anna site near Mineral, Virginia

Inspector: R. H. Albright  
R. H. Albright

7-6-84  
Date Signed

Approved by: G. R. Jenkins  
G. R. Jenkins, Section Chief  
Division of Radiation Safety and Safeguards

7/6/84  
Date Signed

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 38 inspector-hours (3 inspector-hours on the backshift) on site in the areas of radiological protection activities during extended outages, transportation of radioactive material, and liquids and liquid waste systems.

Results

One violation was identified - Failure to include complete radioactive material descriptions on radioactive material shipping papers.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*E. W. Harrell, Station Manager
- \*L. A. Johnson, Superintendent Technical Services
- \*A. H. Stafford, Supervisor Health Physics
- \*L. B. Jones, Chemistry Supervisor
- \*L. O. Silman, QC Engineer
- \*S. B. Eisenhart, Licensing Coordinator
- \*R. K. Sharp, Associate Engineer
- C. Bradley, Assistant Health Physics Supervisor
- R. Irwin, Assistant Health Physics Supervisor
- M. Johnson, Assistant Health Physics Supervisor
- J. O'Connell, Assistant Health Physics Supervisor
- S. Tipsword, Assistant Health Physics Supervisor
- C. Tarantino, Health Physicist

#### NRC Resident Inspector

- \*M. Branch, Senior Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on June 22, 1984, with those persons indicated in paragraph 1 above. A violation described in paragraph 6, failure to properly describe radioactive material on radioactive material shipping papers, was discussed in detail. Licensee management acknowledged the findings and took no exceptions.

### 3. Licensee Action on Previous Enforcement Matters

Not inspected.

### 4. Radiological Protection Activities During Extended Outages (83729)

#### a. Organization and Management Controls

Technical Specification 6.2.2 describes the licensee's organization. The inspector reviewed the licensee's organization as it relates to radiation protection. The licensee has not made organizational changes which would adversely affect the ability to control radiation exposures or radioactive material.

No violations or deviations were identified.

b. Training and Qualifications

Technical Specification 6.3.1 requires that each member of the facility staff meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions. Paragraph 4 of ANSI N18.1 states, in part, that supervisors not requiring a license shall have a minimum of four years experience in the craft or discipline supervised.

The licensee has recently selected a new individual for the position of Count Room and Environmental Assistant Health Physics Supervisor within the health physics organization. The inspector reviewed this individual's experience.

No violations or deviations were identified.

c. External Exposure Control

10 CFR 20.101 specifies the applicable radiation dose standards. 10 CFR 20.101(b)(3) requires the licensee to determine an individual's accumulated occupational dose to the whole body on a NRC Form 4 or equivalent record prior to permitting the individual to exceed the limits of 20.101(a). The inspector reviewed selected occupational exposure histories (complete NRC form 4) for individuals who exceeded the limits of 10 CFR 20.101(a). The exposure histories were being completed and maintained as required by 10 CFR 20.102. The inspector reviewed selected individual exposure records and verified through discussion with plant personnel that quarterly radiation doses for plant personnel are within the quarterly limits of 20.101(a).

10 CFR 20.202 requires that the licensee provide appropriate personnel monitoring equipment to specific individuals and require the use of such equipment. During tours of the plant the inspector observed workers wearing appropriate personnel monitoring devices.

No violations or deviations were identified.

d. Internal Exposure Control

10 CFR 20.103(b) requires that when it is impracticable to apply process or engineering controls to limit concentrations of radioactive material in air below 25% of the concentrations specified in Appendix B Table I, Column 1 other precautionary measures should be used to maintain the intake of radioactive material by any individual within seven consecutive days as far below 40 MPC-hours as is reasonably achievable. By review of records, observations and discussions with licensee representatives, the inspector evaluated the licensee's respiratory protection program, including engineering controls, MPC-hr controls, and the use of respirators.

No violations or deviations were identified.

e. Posting and Control of Radiological Areas

10 CFR 20.203 specifies the posting, labeling and control requirements for radiation areas, high radiation areas, airborne radioactivity areas and radioactive material. Additional requirements for control of high radiation areas are contained in Technical Specification 6.12.

During tours of the plant, the inspector reviewed the licensee's posting and control of radiation areas, high radiation areas, contamination areas, radioactive material areas and the labeling of radioactive material.

No violations or deviations were identified.

f. ALARA Program

10 CFR 20.1c states that persons engaged in activities under licenses issued by the NRC should make every reasonable effort to maintain radiation exposure as low as reasonably achievable (ALARA). The recommended elements of an ALARA program are contained in Regulatory Guide 8.8, Information Relevant to Ensuring that Occupational Radiation Exposure at Nuclear Power Stations will be ALARA, and Regulatory Guide 8.10, Operating Philosophy for Maintaining Occupational Radiation Exposures ALARA.

The inspector discussed the administrative aspects of the program with licensee representatives. The inspector reviewed the ALARA evaluations for several major jobs performed during the current outage.

No violations or deviations were identified.

6. Transportation of Radioactive Material (86721)

10 CFR 71.5 requires that licensees who transport licensed material outside the confines of its plant or other place of use, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation in 49 CFR Parts 170 through 189. 49 CFR 172.202 and 172.203 state the information required to be included in the shipping paper description for radioactive material.

The inspector reviewed selected shipping papers for radioactive waste and other radioactive materials for the period January 1984 to June 1984. Shipping papers for radioactive material labelled Radioactive Yellow II and shipped on January 2, 1984 and May 1, 1984, did not include the radioactive material shipping name, identification number or transport index as the radioactive material description. A Low Specific Activity (LSA) radioactive material shipments on June 1, 1984, did not include the radioactive material shipping name or identification number in the material description on the shipping papers. An LSA shipment on May 15, 1984, did not include the

radioactive material shipping name in the material description on the shipping papers. Failure to include the complete radioactive material description on the listed shipments is a violation of 10 CFR 71.5. (Violation 338, 339/84-21-01)

7. Liquids and Liquid Wastes (84723)

Technical Specification 3/4.11.1, Liquid Effluents, states concentration limits, sampling frequency and the types of analyses required for sampling of radioactive liquid effluents. The inspector discussed the radioactive liquid effluent pathways and sampling program with licensee representatives. Records of selected sample analyses for the period January 1984 to June 18, 1984, were reviewed.

No violations or deviations were identified.