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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-338/80-09 and 50-339/80-07

Licensee: Virginia Electric and Power Company
Richmond, VA 23261

Facility Name: North Anna Units 1 and 2

Docket Nos. 50-338 and 50-339

License Nos. NPF-4 and CPPR-78

Inspection at North Anna site near Mineral, Virginia

Inspected by: D. J. Perrotti — 3/6/80 Date Signed

R. E. Trojanowski — 3/6/80 Date Signed

Approved by: G. R. Jenkins, Section Chief, FF&MS Branch — 3/6/80 Date Signed

SUMMARY

Inspection on February 19-22, 1980

Areas Inspected

This routine, announced inspection invloved 43 inspector-hours on site in the areas of coordination with offsite support agencies; emergency facilities, equipment and procedures; emergency training; emergency planning audits; emergency drills; follow-up on previously identified inspection findings and follow-up on IE Bulletins. A preoperational inspection was performed on February 20, 1980, to determine the status of completion of Unit 2's auxiliary shutdown panel.

Results

Of the seven areas inspected, no items of noncompliance or deviations were identified in five areas; two items of noncompliance were found in two areas (deficiency - failure to inventory emergency kits - paragraph 6.b; infraction - failure to maintain the minimum number of fire brigade members on each shift - paragraph 9).

DETAILS

1. Persons Contacted

Licensee Employees

*J. Kellams, Operations Superintendent (Acting Station Manager)
*E. Smith, Technical Services Superintendent
*D. Hopper, Health Physics Supervisor
*S. Dodds, Nuclear Training Supervisor
*S. Harvey, Operating Supervisor
*W. Madison, NRC Coordinator
*F. Miller, Quality Control Inspector
*C. Swope, Senior Quality Control Inspector
M. Stokes, Fire Marshall
J. Mosticone, Operations Coordinator
C. Kelsey, Performance Engineer
R. Goodwin, Safety and Training Coordinator

Other licensee employees contacted included 1 technician, 2 operators and 2 office personnel.

Other Organizations

L. Keller, Chief, Mineral Volunteer Fire Department
E. Kube, County Administrator, Louisa County
D. Broga, Director, Radiation Safety, Medical College of Virginia

NRC Resident Inspector

*A. Tattersall

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on February 22, 1980, with those persons indicated in Paragraph 1 above. With regard to the noncompliance item of emergency kits' inventory covered in paragraph 6.b, the licensee stated that the Health Physics procedure would be changed to a periodic test, incorporating the packing lists for all the kits, by May 1, 1980. With regard to the noncompliance item of maintaining a minimum number of fire brigade members on each shift covered in paragraph 9, the licensee acknowledged the inspector's remarks.

3. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-338/78-35-01) Failure to maintain the minimum number of fire brigade members of each shift. This item is being changed to an item of noncompliance (338/80-09-04) after determining that the Technical Specification requirement was in effect as of May 1, 1978 (Paragraph 9).

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 6.c.(5).

5. Coordination with Offsite Support Agencies

a. This area was reviewed with respect to the licensee's commitments to maintain contact and coordination with the offsite agencies as described in the Emergency Plan.

b. The inspector reviewed the licensee's Emergency Plan Implementing Procedures (EPIP), written letters of agreement with offsite support agencies and the list of offsite support agencies specified in the Emergency Plan to verify that:

(1) Detailed procedures have been established describing methods for notifying Local, State, Federal officials and other offsite support agencies in the event of a radiation emergency.

(2) Arrangements for the services of a physician and other medical personnel qualified to handle radiation emergencies have been established.

(3) Arrangements for the transportation and treatment of injured or contaminated individuals at a treatment facility outside the site boundary have been established.

c. The inspector contacted four offsite agencies and met with officials of these agencies to verify that contact is being maintained by the licensee and that services, as described in the letter of agreement, can be provided. Specifically, the inspector met with the primary offsite support agencies that provide fire, medical and rescue services; and with the County Administrator of Louisa County. A member of the licensees staff accompanied the inspector during these meetings, with the exception of the meeting at the Medical College of Virginia, Richmond, VA.

The inspector noted that the licensee no longer maintains explicit letters of agreement with several of the secondary volunteer fire departments and rescue services from the surrounding communities. Mutual Aid agreements between these secondary agencies and the licensee's primary offsite support agencies have been established and, in the event of an emergency, their services would be made available to the licensee.

A formal agreement no longer exists between the licensee and Hanover County. Although Hanover County is relatively uninhabited, a small protion of the county is included in the ten mile Emergency Planning

Zone (EPZ) for North Anna. During the exit meeting, the inspector briefly described the EPZ concept contained in the joint NRC-FEMA Emergency Planning Criteria, and stated that the licensee should consider re-negotiating a formal agreement with Hanover County.

A lengthy meeting was conducted with the County Administrator of Hanover County, during which time an explanation of the NRC-FEMA Criteria, as applicable to local county entities, was provided. The inspector provided a copy of NUREG-0654; FEMA-REP-1, through the licensee, to the County Administrator. Louisa County expressed a willingness and desire to work closely with the licensee in conforming to the criteria contained in this document.

d. The inspector used the following acceptance criteria for the inspection and evaluation of the above areas.

(1) 10 CFR 50, Appendix E, Paragraph IV, A and D

(2) Emergency Plan

(3) EPIP's 1, 3, 8, 13, 20 and 21

Within the areas inspected, no items of noncompliance or deviations were identified.

6. Facilities, Equipment and Procedures

a. Changes to Facilities, Equipment and Procedures

(1) The inspector reviewed established management controls and interviewed licensee personnel to determine if changes had been made to the Emergency Plan, EPIP's, emergency facilities and equipment since the last inspection.

(2) The review of this area, with respect to changes, was conducted to verify that:

(a) Changes did not consititute an unreviewed safety question.

(b) Changes did not alter the requirements set forth in th Emergency Plan.

(c) Changes were reviewed and approved in accordance with established plant procedures.

(d) Required plant committee review and QA audits of the Emergency Plan were conducted.

(e) Revisions to the Emergency Plan and EPIP's were distributed to the required locations at the facility.

(3) The inspector used the following acceptance criteria for the inspection and evaluation of the above areas.

(a) 10 CFR 50.59

(b) Technical Specifications 6.5.1.6.a and 6.8.1.e

(c) Emergency Plan, Section 1, paragraph 6

Within the areas inspected, no items of noncompliance or deviations were identified. One area of concern was identified by the inspector and is discussed in paragraph 6.a.(4) below.

(4) The distribution of the Emergency Plan and revisions to the Plan to designated outside support agencies was discussed with several members of the licensee's staff. The inspector was informed that the responsibility for revising and and distributing the plan had recently changed hands from the VEPCO Corporate Office to the site. In addition, a new method would be used for distributing the revisions to the plan to outside agencies. The inspector noted that the last revision distributed was Change No. 2, dated May 20, 1977, and that Change No. 3, a major revision, was currently being reviewed by the NRC Emergency Planning Team. Because of the recent change in responsibilities and the proposed method for distribution of the plan, the inspector informed the licensee that this matter would be carried as an open item pending final approval of the new plan by the NRC and distribution to the designated outside agencies (338/80-09-01).

b. Emergency Kits

(1) The inspector reviewed the inventory records of emergency kits located in the Health Physics lab. Types of emergency equipment included in the kits are respirators, protective clothing, emergency supplies, pocket dosimeters, and pocket dosimeter chargers.

(2) The review of emergency kits was conducted to verify that the required periodic inventory, maintenance and calibration of emergency equipment and emergency kits were being conducted.

(3) The inspector used the following acceptance criteria for the inspection and evaluation of the above areas:

(a) Technical Specification 6.8.1.e

(b) Emergency Plan, Appendix 8.5

(c) HP Procedure HP-ADM-EP-1

Within the areas inspected, one item of noncompliance was identified by the inspector and is discussed in paragraph 6.b.(4) below.

(4) Technical Specification 6.8.1.e states that written procedures shall be implemented which cover, in part, emergency plan implementation. Appendix 8.5 of the Emergency Plan describes emergency equipment to be maintained onsite and HP procedure HP-ADM-EP-1 requires an inventory of three HP emergency kits every month (30 ± 3 days). From a review of emergency kit inventory records for the period October 1978 to December 1979, the inspector determined that the monthly inventory for November 1979 had apparently not been performed within the time period prescribed by HP-ADM-EP-1 (inventories were performed on October 1, 1979, and next, on November 30, 1979). At the exit meeting, the licensee was informed that this constituted noncompliance with Technical Specification 6.8.1.e as implemented by HP-ADM-EP-1 (338/80-09-02). The inspector also pointed out that the emergency kit packing lists, which are currently being maintained in an uncontrolled manner, should be incorporated in the inventory procedure in order to assure proper accountability of all items in the emergency kits. The licensee acknowledged the inspector's remarks, and stated that the inventory procedure and packing lists would be incorporated in a periodic test (PT) in order to assure that inventories are conducted each month. The licensee committed to establishing this PT by May 1, 1980. The inspector commented that the inventories that fall due between now and May 1, 1980, as well as the new PT, would be reviewed during a subsequent inspection.

c. Main Control Room Habitability

(1) This area was reviewed with respect to maintaining the main control room habitable. The Emergency Plan defines this area as the center for controlling activities during emergency conditions.

(2) The inspector reviewed surveillance test records, control room logs, and channel checks to verify that:

(a) The control room emergency ventilation system is properly aligned.

(b) The required operability tests are being performed on the control room emergency ventilation system at the required frequency, including system automatic start upon receiving a safety injection signal.

(c) The control room air temperature checks and pressurized air bottle verification had been performed at required intervals and surveillance data was satisfactory.

(3) The inspector reviewed the Control Room Boundary Breaching Log to verify that control room conduit penetration was being maintained and audits of the administrative controls had been accomplished.

(4) The inspector used the following acceptance criteria for the inspection and evaluation of the above areas:

(a) Emergency Plan, Section 5.1

(b) Technical Specifications 4.7.7.1.a, 4.7.7.1.d.(2) and 4.7.7.3.

Within the areas inspected, no items of noncompliance or deviations were identified. During a review of surveillance records the inspector identified one area of concern which is discussed in paragraph 6.c.(5) below.

(5) Technical Specification 4.7.7.2.a requires a verification every 31 days, that the bottled air pressurization system contains a minimum of 84 bottles of air each pressurized to at least 2300 psig. During a record review of Periodic Test 1-PT-76.3, the inspector noted that the PT performer encountered a problem on September 6, 1979, and initiated a procedure deviation and requested a permanent change on step 4.1.1 of the procedure, because of a discrepancy in the manifold isolation valve designation. The next scheduled test, February 1980, was performed with step 4.1.1 completed and signed off. A review of the master copy of 1-PT-76.3 on February 22, 1980, revealed that no revisions had been made since August 25, 1976. The inspector asked licensee representatives why this procedure had not been revised in accordance with Section 11, Article 5.35 of the QA Manual, after a procedure deviation and request for permanent change was initiated by the operator, and reviewed and approved by the Station Nuclear Safety Operating Committee (SNSOC) on September 6, 1979. On February 22, 1980, just prior to the exit interview, the inspector reviewed QC Audit No. N-79-40 dated November 6, 1979, which identified the procedure deviation and the fact that the PT had not yet been revised. At the exit meeting, following a physical inspection of the bottled air system (Unit 1 side), the licensee stated that 1-PT-76.3 would be revised right away to reflect the existing system line-up. The inspector initially identified this as an open item, to be followed-up on a subsequent inspection. Subsequent to the inspection, on February 25, 1980, the inspector contacted the licensee to discuss this matter further. The inspector stated that since there was not enough time during the latter part of the inspection to review the licensee's response to QC Audit No. N-79-40, and that since there appeared to be a problem in the administrative handling of this procedure deviation and the needed permanent change, that this matter would be identified as an unresolved item pending a review of the entire matter, including the response and corrective action to the findings of the audit (338/80-09-03). The licensee acknowledged the change in inspector's finding from an open item to an unresolved item.

d. Auxiliary Shutdown Panel

(1) This area was reviewed with respect to insuring that the required plant parameters and controls as described in the Final Safety Analysis Report can be used to perform an emergency shutdown of the plant in the event the main control room cannot be manned.

(2) The inspector performed a physical inspection of Unit 1 to verify that:

(a) The specified Emergency Procedures were at the auxiliary shutdown panel.

(b) The readouts for primary system parameters, controls for main plant components, and emergency communications were available.

(3) The inspector used the following acceptance criteria for the inspection and evaluation of the above areas:

(a) FSAR, Section 7.4

Within the areas inspected, no items of noncompliance or deviations were identified. The status of Unit 2 auxiliary shutdown panel is covered in paragraph 12.a. of this report.

e. Emergency Communications

(1) This area was reviewed with respect to licensees commitment to maintain and have available various types of communication systems within the plant for both normal and emergency use as described in the Emergency Plan.

(2) The inspector observed the physical location of communications in the main control room to verify the availability of the communication systems are as required by the Emergency Plan.

(3) The inspector reviewed records to verify that the plant emergency alarm tests have been satisfactorily performed at the required frequency.

(4) The inspector used the following acceptance criteria for the inspection and evaluation of the above areas:

(a) Emergency Plan, Section 5.2

(b) Procedure ADM-7.0

Within the areas inspected, no items of noncompliance or deviations were identified. One concern regarding the testing of Unit 2's evacuation alarm was identified by the inspector and is discussed in paragraph 12.b.

f. Meteorological System

(1) This area was reviewed with respect to the licensee's commitments as described in the Emergency Plan for determining the magnitude of a release of radioactive material and the criteria for determining when protective measures should be considered within and outside the site boundary.

(2) The inspector performed an inspection of instrumentation in the control room and reviewed records for instrumentation calibration and channel checks, to verify that readouts for wind speed, direction and temperature were operable and available as required by the Emergency Plan.

(3) The inspector used the following acceptance criteria for the inspection and evaluation of the above area:

(a) Technical Specification Table 4.3-5

(b) Emergency Plan, Section 5.3.1

Within the areas inspected, no items of noncompliance or deviations were identified.

7. Emergency Training For Licensee Employees and Offsite Groups

a. This area was reviewed with respect to the licensee's commitments as described in the Emergency Plan to conduct emergency training for licensee employees on site, offsite VEPCO employees who are assigned specific authority and responsibility in the event of an emergency, and non-VEPCO offsite groups whose assistance may be needed in the event of a radiological emergency.

b. The inspector reviewed personnel training records along with training schedules and training course content to verify that:

(1) Emergency training had been given to the following categories of personnel: emergency director, emergency coordinators, emergency team leaders, emergency team members, general employees, contractor personnel, licensee offsite employees and non-licensee offsite groups.

(2) Personnel are informed of changes in Emergency Plan and EPIP's.

(3) Refresher training had been given as specified in the Emergency Plan.

(4) The training courses covered the material specified by the Emergency Plan or EPIP's.

c. The inspector interviewed three individuals from the above categories to verify that training had been provided as documented in the training records.

d. The inspector used the following acceptance criteria for the inspection and evaluation of the above area:

(1) 10 CFR 50, Appendix E, Paragraph IV.H

(2) Emergency Plan, Section 7

(3) EPIP-21, Training

Within the areas inspected, no items of noncompliance or deviations were identified.

8. Emergency Drills

a. This area was reviewed with respect to licensee's commitments as described in the Emergency Plan for the planning, execution and evaluation of emergency drills.

b. The inspector reviewed reports and discussed with a licensee representative the most recently conducted full-scale radiation emergency drill to verify that:

(1) The required drills were performed at the prescribed frequency.

(2) Appropriate corrective actions are being initiated to correct identified deficiencies.

(3) Changes to the Emergency Plan or EPIP's, as a result of deficiencies identified during the drill, have been reviewed and approved by licensee management.

(4) Changes were issued to persons, organizations, and support organizations.

c. The inspector used the following acceptance criteria for the inspection and evaluation of the above area:

(1) 10 CFR 50, Appendix E, Paragraph IV. I.

(2) Emergency Plan, Section 7.1.2

Within the areas inspected, no items of noncompliance or deviations were identified.

9. Fire Brigade Organization

a. During a previous inspection (Ref. IE Rpt. No. 50-338/78-35-01, paragraph 11), the inspector identified the matter of the minimum

shift requirements of 5 fire brigade members as an unresolved item pending further clarification as to whether or not the Technical Specification was in effect at the time of the subject inspection finding.

b. From a review of the letter of issuance of Amendment 3 to the Technical Specifications, dated April 1, 1978, and discussions with members of RII staff and the NRC project manager's office, it has been determined that Technical Specification 6.2.2.f was in effect as of May 1, 1978.

c. At the exit meeting, on February 22, 1980, the inspector informed the licensee that this finding constituted noncompliance with Technical Specification 6.2.2.f and that the unresolved item would be changed accordingly (338/80-09-04).

10. Audits

a. The inspector examined licensee's Quality Assurance Audit No. N-79-11 dated March 23, 1979, which was an inspection in the areas of Emergency Planning and Emergency Implementing Procedures. The audit concluded that the administration and implementation of the North Anna Power Station Emergency Plan is being carried out in accordance with the provisions of the plan with the exception of three minor deficiencies One deficiency, involving distribution of current EPIP's to two onsite locations, was corrected and closed out by follow-up Audit No.N-79-11A on April 25, 1979. The other two deficiencies, involving changing the wording in the Emergency Plan to reflect existing plant facilities, were corrected and closed out by follow-up Audit No. N-79-11B on September 17, 1979.

11. Followup on IE Bulletin 79-18

a. IE Bulletin 79-18, Audibility of Evacuation Alarms in High Noise Areas, was reviewed and discussed with a licensee representative. The inspector noted that the licensee's response dated September 24, 1979, to IEB 79-18, states that corrective action was taken for all areas of the plant except for the emergency diesel generator rooms when the diesels are operating. The response also states that a design change to install a visual evacuation signal in the diesel generator room is underway. However, there is no specified completion date for installation of the visual evacuation system. At the exit meeting a tentative installation date of mid-April was given to the inspector. The inspector stated that until the new system is installed and tested there should be some means of alerting those personnel who are in the emergency diesel rooms with the diesels operating, in the event of an evacuation alarm. A licensee representative stated that an Administrative Procedure may be in effect to accomplish this, and that it would be checked out. Subsequent to the inspection, on February 27, 1980, the inspector contacted a licensee management representative to find out if the Administrative Procedure in question was in effect. The inspector was informed that no procedure existed, however, it was explained that few

personnel enter the room, that entry is controlled by card key, and that in the event of an evacuation an accountability would be performed, and any missing persons would be searched for. The inspector stated that steps should be taken to assure a rapid evacuation from this area. After discussing this matter with the resident inspector on February 27, 1980, the inspector again contacted the licensee. The acting station manager agreed to establish a system which would require personnel entering the diesel generator room to notify the control room. Then in the event of an evacuation, an individual would be sent to the diesel generator room to clear the area. The inspector stated that this interim system would be satisfactory, and that this matter would be carried as an open item pending a review of the installation and testing of the permanent visual evacuation alarm system (338/80-09-05).

12. Unit 2 Preoperational Inspection

a. Auxiliary Shutdown Panel - this matter was reviewed during a previous inspection and was identified as an outstanding item (50-339/78-31-01). From discussions with licensee representatives, the inspector learned that final testing of the panel would be done during start-up, when the unit would be tripped from fifty-percent power and brought to hot shutdown conditions by using the panel. Successful completion of the test would be documented under start-up test 2-SU-36. The inspector stated that this matter would remain an outstanding item to be reviewed during a subsequent inspection.

b. Unit 2 Station Evacuation Alarm

During a record review of weekly tests of the station alarms, the inspector noted that the Unit 2 station evacuation alarm was identified as inoperable and a maintenance request (MR-N2-790 5091327) was submitted on May 30, 1979. As of December 19, 1979, records indicated that the alarm was still inoperable. The inspector asked a licensee representative to check the status of Unit 2 station evacuation alarm. The inspector was informed that some maintenance was required on the alarm control on the Unit 2 side of the control room. The inspector was provided with a copy of the Unit 2 Fuel Load Master Deficiency List (MDL) as of February 15, 1980, which identified this item as work to be completed (Ref. MDL-CDR #25). During the exit meeting, a licensee representative stated that since the Unit 1 evacuation alarms were operable and audible throughout the plant, it was felt that the Unit 2 alarm controls were not required to be operable prior to start-up. The inspector stated that if controls are installed on the Unit 2 side of the control room, they must be operable and tested weekly similar to Unit 1 controls. The licensee was informed that this matter would be carried as an outstanding item pending a review of the completion of maintenance and close out of this item on the Unit 2 MDL (339/80-07-01).