

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

February 5, 1988

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Serial No. 88-021
NAPS/GGH
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

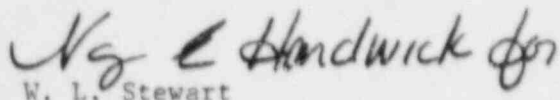
Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
NRC INSPECTION REPORT NOS. 50-338/87-37 AND 50-339/87-37

We have reviewed your letter of January 6, 1988 which referred to the inspection conducted at North Anna between October 19, 1987 and October 23, 1987 and reported in Inspection Report Nos. 50-338/87-37 and 50-339/87-37. The responses to the Notice of Violation and Notice of Deviation are provided in the attachment.

We have no objection to this correspondence being made a matter of public record. If you have any further questions, please contact us.

Very truly yours,


W. L. Stewart

Attachments

cc: U. S. Nuclear Regulatory Commission
101 Marietta Street, N. W.
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Mr. J. I. Caldwell
NRC Senior Resident Inspector
North Anna Power Station

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ATTACHMENT
RESPONSE TO THE NOTICE OF VIOLATION REPORTED DURING THE NRC
INSPECTION CONDUCTED BETWEEN OCTOBER 19, 1987 AND OCTOBER 23, 1987
INSPECTION REPORT NOS. 50-338/87-37 AND 50-339/87-37

NRC COMMENT

During the Nuclear Regulatory Commission (NRC) inspection conducted on October 19-23, 1987, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR 2, Appendix C (1987), the violations are listed below:

- A. Technical Specification 6.8.1.f requires written procedures to be established, implemented, and maintained on the fire protection program. The Fire Protection Program Revision 7, Section 3.3.5.d requires at least one drill per quarter for each brigade. In addition, Section 7.7 of the Fire Protection Program and Technical Specification Section 6.5 require corrective action to be initiated to prevent recurrence of a discrepancy, when an audit of the program identifies a failure to implement the requirements of the Fire Protection Program.

Contrary to the above, the fire brigade drill requirements were not implemented in that, not all shift fire brigades had participated in one drill per quarter as required by the Fire Protection Program. In addition, the failure to provide drills for each brigade on a quarterly basis was identified in the latest Fire Protection Triennial Audit as a finding; however, no corrective action had been taken to resolve the finding.

This is a Severity Level IV violation (Supplement I).

1. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION:

The violation is correct as stated.

2. REASON FOR THE VIOLATION:

The violation was caused by the failure to properly document the conduct of the fire brigade drills for all operating shifts and by inadequate scheduling practices. Some of the shifts had actually participated in the required fire brigade drills per the North Anna Fire Protection Plan, but the documentation of the drill was not forwarded to the Training

Department for record retention and for updating of personnel training qualification files.

We have also determined that, in some instances, fire brigade members did not participate in quarterly fire brigade drills because of scheduling difficulties encountered during outages and periods of planned overtime. In the past, fire brigade drills have been cancelled or rescheduled based on shift workload. Also, during periods of overtime, individuals supplementing the regularly scheduled shift were sometimes assigned to participate in fire brigade drills rather than the scheduled brigade members. As a result, some individuals participated in drills in consecutive quarters while others missed some quarterly drills.

3. CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Drills were conducted for the shifts that had not met the minimum requirements of the North Anna Fire Protection Plan. Documentation was forwarded to the Training Department for record retention and updating of personnel training qualification files.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS:

A fire protection maintenance procedure will be developed to proceduralize the conduct of fire brigade drills and provide for formal transmittal of records to the Training Department.

The North Anna Fire Protection Plan will be revised to specify that drills are to be pre-approved by station management and shall only be cancelled with station management approval.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

The new procedure and revision of the Fire Protection Plan addressing scheduling, performance, and documentation of fire brigade drills will be fully implemented by April 1, 1988. The revised Fire Protection Plan will be approved by May 1, 1988.

- B. Technical Specification 6.8.1.f requires written procedures be established, implemented, and maintained for the fire protection program.

Contrary to the above, surveillance procedures were not developed and implemented for the periodic inspection of fire barrier wrap enclosures, fire stops, and radiant energy shields installed to satisfy the separation requirements of 10 CFR 50 Appendix R, Section III.G.2.

This is a Severity Level IV violation (Supplement I).

1. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION:

The violation is correct as stated.

2. REASON FOR THE VIOLATION:

The violation was caused by inadequate implementation of Fire Protection Program requirements related to equipment testing and maintenance. Section 8.0 of the Engineering Review and Safety Analysis, of Design Change Package (DCP) 84-27, Charging Pump and Component Cooling Water Pump Cables - Fire Protection Modifications, identified the need for periodic inspections of the electrical cable fire wraps and cable tray fire stops. The decision was made to implement the necessary testing and inspection procedures when the equipment was added to the Technical Specifications. Virginia Power subsequently decided not to include Appendix R equipment in the Technical Specifications, and there was a failure to take timely action to implement the necessary procedures.

3. CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Fire protection maintenance procedures are being developed for areas containing electrical cable fire wraps, radiant energy shields, and cable tray fire stops. These procedures will require surveillance of these Appendix R separation barriers.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS:

The fire protection maintenance procedures for Appendix R separation barriers will be completed and approved by April 15, 1988.

This violation may not be specific only to DCP 84-27. There may have been other Appendix R equipment installed for which testing and inspection procedures were not fully implemented as called for in the design change package. As a result, a review will be conducted to identify other procedures which need to be developed. Our plans are to use fire protection maintenance procedures to accomplish the required testing and inspection.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

The new fire protection maintenance procedures will be implemented by May 1, 1988 for those fire separation barriers that are located outside containment. Procedures for those fire separation barriers located inside containment will be implemented by the end of the next scheduled refueling outage for each unit.

The review to identify test and inspection procedures for equipment other than the fire separation barriers will be completed by April 15, 1988. By May 1, 1988, an update to this response will be provided to define our schedule for implementing any additional procedures which are identified as being required.

NOTICE OF DEVIATION

The following deviation was identified during an inspection conducted on October 19-23, 1987.

By letter dated May 1, 1984, and as supplemented by letters dated October 31, 1984, August 21, 1985, March 21, 1986, and September 30, 1986, the Virginia Electric and Power Company (VEPCO) requested thirty-four (34) exemptions from Appendix R to 10 CFR Part 50. Included in these transmittals was Exemption 3 which requested an exemption from the requirements for full area suppression for the Unit 2 Quench Spray Pump House. As part of the justification for this exemption the licensee committed to upgrade the detection system in the area to provide full area coverage. This modification was scheduled to be completed by January 31, 1985. Subsequently, on November 6, 1986, the licensee's exemption request was granted and a supplemental Safety Evaluation was issued for the Unit 2 Quench Spray Pump House.

Contrary to the above, the licensee has not upgraded the detection system at the ceiling of the upper compartment of the Unit 2 Quench Spray Pump House. This upgrade was not included in the completed fire detection design change package for that plant area, therefore, the commitment to provide full area detection coverage for the Quench Spray Pump House was not fully implemented.

RESPONSE

1. ADMISSION OR DENIAL OF THE ALLEGED DEVIATION

Virginia Electric and Power Company agrees that there is a deviation to our commitment to provide "full area coverage" in the North Anna Unit 2 Quench Spray Pump House. This deviation also applies to the Unit 1 Quench Spray Pump House.

2. REASON FOR THE ALLEGED DEVIATION

The deviation occurred due to a change in the basis of the commitment between the submissions of Revision 2 and Revision 3 of our Appendix R Report for North Anna Power Station Units 1 and 2. This change was not explicitly stated in Revision 3 and resulted in our acceptance of an installation which failed to satisfy the conditions of the original commitment.

In Revision 1 to our Appendix R Report submitted on October 10, 1984, Virginia Electric and Power Company requested an exemption to the requirement for full area fire suppression in the Unit 1 and Unit 2 Quench Spray Pump Houses. In order to provide an equivalent level of protection, we committed to install "additional smoke detectors...to provide full area detection in accordance with NFPA 72E". Additional smoke detectors were installed in the Units 1 and 2 Quench Spray Pump Houses by January 31, 1985 in order to provide full area coverage as evaluated by Company engineers. A review of the plant fire protection systems by an independent consultant in 1985 resulted in recommendations that more smoke detectors be installed to achieve compliance with NFPA 72E. However, a review of these recommendations by Company fire protection engineers concluded that the unprotected areas were not significant. Therefore, the decision was made not to install the additional detectors, but there was a failure to consider the commitment to provide full area detection in accordance with NFPA 72E. The basis for the exemption request was not re-evaluated or revised to explicitly state this change.

It was not our intention to change the basis of our commitment by dropping the reference to the standard without explicitly identifying the change.

3. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

We have reviewed the 1985 evaluation of the Unit 1 and 2 Quench Spray Pump House detector coverage. Although the installed system does not exactly conform to NFPA 72E, there is effectively full area coverage. For the upper level of the Quench Spray Pump Houses, which was the area specifically identified in this deviation, this conclusion is based on the following:

- a) The unprotected area is in the corner at the doorway, so that it is unlikely that combustibles will be located there.
- b) Even if a fire occurred in this corner, the smoke would be quickly picked up by the already installed detectors, since smoke in a corner is reflected into the center of the room and since the room exhaust fan will pull smoke towards the two ceiling detectors.
- c) There are intermediate level detectors above the pumps which can provide earlier detection for the area of greatest concern.
- d) The unprotected area is a small percentage of the total floor area.

Evaluations have been done for the other portions of fire areas 15.1 and 15.2 with similar results. We conclude that although the detection system does not comply with our commitment, adequate protection has been provided.

Based on our review of the Appendix R Report and commitments, this lack of compliance is an isolated incident. No other commitments were made for conformance to NFPA 72E.

4. CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER DEVIATIONS

The detection systems in the Unit 1 and Unit 2 Quench Spray Pump Houses will be upgraded to fully conform to NFPA 72E by the addition of detectors to provide full area coverage which was the basis for the exemption request. An evaluation is currently being done to determine specifically what modifications are required. In the interim, we feel the currently installed detection systems provide adequate protection.

The 10 CFR 50, Appendix R Report will be revised to reflect the final upgraded detection systems for the Unit 1 and Unit 2 Quench Spray Pump Houses.

5. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

An engineering study is being performed to define the installation details for the upgrade to the detection systems. The study, which will be completed by April 15, 1988, will establish the design and installation schedule for bringing the Unit 1 and Unit 2 Quench Spray Pump Houses into full compliance with NFPA 72E. If the study identifies any difficulties in implementing the necessary modifications which require further interpretation of NFPA 72E, you will be notified. A final schedule for upgrading the fire detection system in the Unit 1 and Unit 2 Quench Spray Pump Houses will be provided by May 1, 1988.

The 10 CFR 50, Appendix R Report will be updated by May 30, 1988.