

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555



November 3, 1986

Docket Nos. 50-280/281

Virginia Electric and Power Company  
ATTN: Mr. William L. Stewart  
Vice President, Nuclear Operations  
Post Office Box 26666  
Richmond, Virginia 23261

Gentlemen:

SUBJECT: INSPECTION NO. 50-280,281/86-12

Enclosed is the report of the team inspection conducted by Mr. S. D. Alexander and other NRC representatives during the period of June 16 through 20, 1986 at your engineering offices in Richmond, Virginia and at the Surry Power Station, of activities authorized by NRC License Nos. DPR-32 and DPR-37. The team's findings were discussed with you and members of your staff at the conclusion of the inspection. The inspectors reviewed your implementation of a program as required by 10 CFR 50.49 for establishing and maintaining the environmental qualification (EQ) of electrical equipment within the scope of 10 CFR 50.49. Within these areas, the inspection consisted of examination of selected procedures and records, inspection of selected plant equipment, interviews with personnel, and other observations by the inspectors.

The inspectors determined that you have implemented a program to meet the requirements of 10 CFR 50.49 except for certain deficiencies identified in the enclosed inspection report. Six of these deficiencies, summarized in Appendix A, are classified as Potential Enforcement/Unresolved Items and will be referred to the NRC Region II office for further action. The most serious deficiencies involved unidentified and potentially unqualified internal control wiring in safety-related Limitorque valve actuators and the presence of safety-related pressure transmitters in the Main Steam Valves Houses which were potentially unqualified for the Main Steam Line Break environment. Other Potential Enforcement/Unresolved Items included failure to maintain qualified status of the High Head Safety Injection Pump motors, failure to establish qualification (by similarity) of Low Head Safety Injection Pump motors, failure to maintain Raychem splice sleeves in a qualified configuration, and failure to establish qualification of two installed types of Rockbestos cable.

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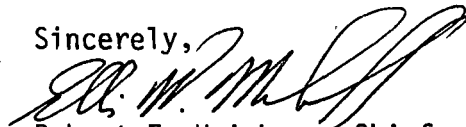
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Four additional concerns were classified as Open Items, and a future NRC inspection will review your actions concerning them. Details of all the deficiencies and concerns are discussed in the enclosed inspection report.

Your corrective actions regarding the identified deficiencies and concerns should not be delayed pending either a future NRC inspection or further action by the NRC Region II Office.

We are available to discuss any questions you may have concerning this inspection.

Sincerely,

  
FOR Robert F. Heishman, Chief  
Vendor Program Branch  
Division of Quality Assurance, Vendor  
and Technical Training Center Programs  
Office of Inspection and Enforcement

Enclosures:

1. Appendix A - Potential Enforcement/Unresolved Items
2. Inspection Report No. 50-280,281/86-12

cc w/encl:

J. A. Ahtadas, Vice President, Engineering, Virginia Power  
R. J. Hardwick, Manager, Nuclear Programs and Licensing, Virginia Power  
R. F. Saunders, Station Manager, Surry Power Station  
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Virginia Electric and Power Company

November 3, 1986

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APPENDIX A

Potential Enforcement/Unresolved Items

As a result of the equipment qualification inspections during the period of June 16 through 20, 1986 at the Virginia Electric and Power Company (VEPCO) engineering offices and the Surry Power Station, (SURRY-1,2) the following items have been referred to the NRC Region II office as Potential Enforcement/Unresolved Items. (Paragraph references in parentheses are to detailed portions of the inspection report.)

1. Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and sections 5.2.2 and 5.2.6 of the DOR Guidelines, VEPCO failed to ensure that after the qualification deadline date of March 31, 1985 set forth in 10 CFR 50.49, or after the extended deadline date (with NRC Staff-approved extensions) of November 30, 1985, all Limitorque valve actuators required to be qualified at SURRY-1 & 2 were in an installed condition similar to that in which they were tested in that VEPCO did not have assurance that Limitorque internal control wiring was either the same as that tested with the actuators or, if different, that it was qualified separately. (Paragraph 4.A(1), Item 50-280,281/86-12-01)
2. Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and section 4.0 of the DOR Guidelines, pressure transmitters important to safety (TAG Nos. PT-1474,5,6, 1484,5,6, 1494,5,6 for Unit 1 and PT-2474,5,6, 2484,5,6, 2494,5,6 for Unit 2, were located in the Main Steam Valve House and subject to a Main Steam Line Break (MSLB) environment for which they were unqualified in that original qualification parameters would not envelope potentially much more severe superheated steam MSLB service conditions. (Paragraph 4.A(1), Item 50-280,281/86-12-02)
3. Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and sections 5.2.2 and 5.2.6 of the DOR Guidelines, VEPCO had failed to maintain the High Head Safety Injection Pump Motors (TAG Nos.: CH-P-1A,B and C) in a condition similar to that in which they were tested in that motor lube-oil had not been changed out at the frequency specified in the EQ test report. (Paragraph 4.D(1), Item 50-280,281/86-12-03)
4. Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and sections 5.2.2 and 5.2.6 of the DOR Guidelines, VEPCO had failed to establish similarity between the wire with which Low Head Safety Injection Pump Motors (TAG Nos.: SI-P-1A and SI-P-1B) had been rewound and wire covered by their EQ test report. (Paragraph 4.D(2), Item 50-280,281/86-12-04)
5. Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and sections 5.2.2 and 5.2.6 of the DOR Guidelines, VEPCO had failed to maintain Raychem splice insulation sleeves in safety-related cables in condulets (e.g., for solenoid valve TAG No. TV-GW-112B) in a condition similar to that in which they were tested in that they were excessively bent with bend radii less than the minimum allowed by Raychem specifications. (Paragraph 4.E(3), Item 50-280,281/86-12-05)

6. Contrary to paragraphs (f), (g) and (k) of 10 CFR 50.49 and section 3.0 of the DOR Guidelines, VEPCO had failed to establish qualification for Rockbestos "Pyrotrol" cable with the KXL-510 formulation and "Firewall" cable with the KXL-760[A] formulation of chemically cross-linked polyethylene insulation in that existing qualification documentation for Rockbestos (Cerro) cable did not cover these formulations recently determined to be in use at SURRY. (Paragraph 4.D(3), Item 50-280,281/86-12-06)