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SUBJECT: Responds to NRC 880826 ltr re violations noted in Insp Repts 50-269/88-03 & 50-270/88-03 & 50-287/88-03.

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Duke Power Company
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DUKE POWER

September 26, 1988

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
IE Inspection Report 50-269, -270, -287/88-03

Gentlemen:

Please find attached a response to the subject Notice of Violation dated August 26, 1988 concerning environmental qualification of electrical equipment.

Very truly yours,

Hal B. Tucker

Hal B. Tucker
PJN/393/mmf

Attachment

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DUKE POWER COMPANY
OCONEE NUCLEAR STATION
RESPONSE TO NOTICE OF VIOLATION
NRC INSPECTION REPORT NOS. 50-269, -270, -287/88-03

Violation A

10 CFR 50.49 (d)(1), (f) and (k) require in part, that (1) qualification files for electrical equipment important to safety specify the performance requirements under conditions existing during and following a DBA; (2) electrical equipment important to safety shall be qualified by testing of, or experience with identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (3) electric equipment important to safety which was previously qualified in accordance with "Guidelines for Evaluating Environmental Reactors" dated November 1979 (DOR Guidelines) need not be requalified to 10 CFR 50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen. 10 DFR 50.49(j) requires that records must be maintained in an auditable form.

Contrary to the above, the Oconee file, at the time of inspection, did not adequately document the performance characteristics for the Victoreen High Range Radiation Monitor System in that Insulation Resistances (IR) and Leakage currents for system components (cable, connectors, and penetration assemblies) were not adequately addressed. The installed system configuration was not in the same configuration as the qualified tested system and deviations were not adequately evaluated as part of the qualification file; however, during the Enforcement Conference held on July 2, 1988, the licensee presented sufficient information in the form of test reports to establish that the installed configuration was qualifiable.

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

Response

1. Admission or denial of the violation:

   Duke Power Company (Duke) admits the violation subject to the following clarification. The as-built high-range radiation monitor configuration was designed by Duke to meet qualification requirements. However, the qualification evaluation for the Duke configuration was not fully documented and included in the EQ files to supplement the Victoreen test report. The equipment which makes up the Duke configuration is qualified to the Oconee accident environment.

2. The reason for the violation if admitted:

   The containment high range radiation monitors were installed in response to NRC post TMI requirements. Difficulties were experienced during the initial installation of the system and subsequently, the original design

was modified to include component parts (cable, connector, etc.) for which qualification documentation was on file. While component qualification documentation was on file for the modification, the Victoreen EQ documentation supplied by the vendor was not revised to reflect the modification and reference the other files required to support qualification.

3. The corrective steps which have been taken and the results achieved:

Duke has supplemented the Victoreen test report to include specific analysis and qualification of the as-built configuration. This document in conjunction with the loop accuracy calculation conclusively demonstrates the qualification of the as-built configuration.

4. The corrective steps which will be taken to avoid further violations:

It is Duke's position that this violation was unique due to the modification which had to be made in order to achieve reliable operation of the system during the initial installation. Consolidation of EQ files during the modification process will be emphasized under Duke's periodic EQ training program.

5. Date when full compliance will be achieved:

As of the date of this response, all revisions to Victoreen Qualification files as noted in 3 above have been completed.

Violation B

10 CFR 50.49(f) and (k) respectively require, in part, that (1) each item of electric equipment important to safety shall be qualified by testing of, or experience with identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (2) electric equipment important to safety which was previously qualified in accordance with "Guidelines for Evaluating Environmental Reactors", dated November 1979 (DOR Guidelines) need not be requalified to 10 CFR 50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, at the time of inspection, the Reactor Building level transmitter junction box was not completely filled with oil and, therefore, was not in the as tested configuration. The EQ file had no supporting analysis to show the equipment to be qualified in this configuration.

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

Response

1. Admission of denial of the alleged violation:

   This violation is admitted.

2. Reasons for the violation:

   The requirement to have the transmitter junction box filled with oil was not noted in the manufacturer's equipment maintenance manual, but was noted in the manufacturer's equipment qualification test report. This requirement was overlooked during initial development of both the periodic surveillance procedure for that component and the Equipment Qualification Reference Index (EQRI). The EQRI is used by Duke Power to identify all qualification - specific maintenance activities.

3. The corrective steps which have been taken and the results achieved:

   The periodic surveillance procedure now includes instructions for assuring that the proper oil level is maintained in the transmitter junction box. Qualified oil has been procured and established in the materials system. All three units have had the oil level in the transmitter junction verified as correct.

4. Corrective steps which will be taken to avoid further violations:

   The EQRI will be updated to include the requirement for maintenance of oil level in the transmitter junction box.

5. Date when full compliance will be achieved:
   Actions noted in (4) above will be completed by October 15, 1988.

Violation C

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstance and that such activities be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, the licensee's maintenance procedures were deficient in that the requirements specified in the Equipment Qualification Reference Index (EQRI) were not addressed properly in maintenance procedures.

Examples are:

(1) Requirement to ensure proper oil level in Reactor Building Level Transmitter junction box

(2) Requirement to check for T-drains and grease reliefs on Limitorque actuators

(3) Requirement concerning the lubrication frequency for motors

This is a Severity V violation (Supplement I).

Response

1. Admission or denial of the alleged violation:

   This violation is admitted. Example (1) is addressed in the response to Violation B.

2. Reasons for the violation:

   Example (2)

   There are two aspects to this violation example:

   A. The failure to ensure that all applicable maintenance procedures addressed verification of the proper installation of T-drains resulted from a failure to incorporate into the procedures this requirement, which was identified in the Equipment Qualification Reference Index (EQRI). Several maintenance procedures did address this requirement but all applicable procedures did not. This was an error in the procedure development and review process.

   B. The failure to check for proper installation of grease reliefs occurred because this requirement was not specified in the EQRI. This was an oversight on the part of the Duke Design Engineering program which ensures that all equipment qualification specific requirements are specifically detailed in the EQRI.

Example (3)

There are two factors which contributed to this violation example:

A. The EQRI did not specifically mandate a six month lubrication frequency.

B. The manufacturer's equipment maintenance manual described this requirement as "recommended". This was interpreted as allowing some variation from this frequency. This interpretation was erroneous.

3. The corrective steps which have been taken and the results achieved:

Example (2)

All Qualified Limitorque operators on all three units have been verified to have properly installed, unobstructed T-drains and grease reliefs. All applicable maintenance procedures have instructions included for reverification of this status when they are performed.

Example (3)

Duke Power Design Engineering Department has evaluated the present lubrication frequency (every 6 months +/- 3 months) and established that it is sufficient to maintain equipment qualification. Design Engineering has also evaluated the previous lubrication frequency (annually) used and established that no adverse effects to the equipment or its qualification had resulted.

4. Corrective steps which will be taken to avoid further violations:

For Examples (2) and (3), the EQRI will be updated to include both checking of grease reliefs on Limitorque actuators, and a six month lubrication frequency for motors.

5. Date when full compliance will be achieved:

Activities noted in (4) above will be completed by October 15, 1988.