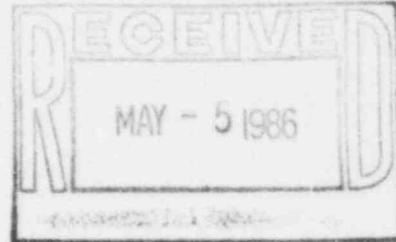


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Omaha Public Power District
1623 Harney Omaha, Nebraska 68102-2247
402/536-4000

May 2, 1986
LIC-86-182



Mr. Robert D. Martin
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive, Suite 1000
Arlington, Tx. 76011

- References:
- 1) Docket No. 50-285
 - 2) EA 86-29 - Notice of Violation (NRC Inspection Report No. 50-285/85-09) from R. D. Martin to R. L. Andrews dated April 2, 1986.

Dear Mr. Martin:

Notice of Violation
NRC Inspection Report 50-285/85-09

Omaha Public Power District (OPPD) received Reference 2 which forwarded the subject Notice of Violation. Pursuant to 10 CFR 2.201, please find attached OPPD's response to the Notice of Violation. If you desire further conversations regarding this matter, please do not heistate to contact us.

Sincerely,

JR Stager
R. L. Andrews *for*
Division Manager
Nuclear Production

RLA/DJM/me

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Ave., N.W.
Washington, DC 20036

D. E. Sells, NRC Project Manager
P. H. Harrell, NRC Senior Resident Inspector

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IC-086/86

ATTACHMENT

"During an NRC inspection conducted during the period April 29 - May 3, 1985, violations of NRC requirements were identified. The violations involved the failure to meet the requirements of 10 CFR 50.49 regarding environmental qualification of electrical equipment. In accordance with the 'General Statement of Policy and Procedure for NRC Enforcement Actions,' 10 CFR Part 2, Appendix C (1985), the violations are listed below:

10 CFR 50.49 (f) requires that qualification of each component be based on testing or experience with identical equipment or with similar equipment with a supporting analysis to show that the equipment to be qualified is acceptable.

10 CFR 50.49 (k) requires that equipment previously required by the Commission to be qualified to the 'Guidelines for Class 1E Electrical Equipment Operating Reactors', (DOR Guidelines) need not be requalified. Section 5.1 of the DOR Guidelines requires that qualification for severe temperature, pressure, and steam service conditions be based on type testing (as opposed to analysis or test combined with analysis). Section 5.2.2 of the DOR Guidelines requires that the type test only be considered valid for equipment identical in design and materials construction to the test specimen and any deviations be evaluated."

Pursuant to the provisions of 10 CFR 2.201, Omaha Public Power District is hereby required to submit to this office within 30 days of the date of the letter transmitting this Notice, a written statement or explanation in reply, including for each violation: (1) the reason for the violations if admitted, (2) the corrective steps which have been taken and the results achieved, (3) the corrective steps which will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time.

Contrary to the above, at the time of the NRC inspection:

- A. Conax Electrical Penetration Assemblies in the modified configuration installed in the plant were not qualified based on testing or experience with identical equipment, qualification was not based solely on type testing, nor did the evaluation of design differences between the plant equipment and the specimens actually tested adequately establish qualification. Further testing and/or evaluation would be required to qualify the penetration assemblies.

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

ATTACHMENT (Continued)

OPPD's RESPONSE

(1) Reason For The Violation If Admitted

In a letter dated April 3, 1984, OPPD requested an extension to the deadline for equipment qualification in order to complete qualification testing of the electrical penetration subassemblies. When testing complications arose, OPPD promptly notified the NRC per 10 CFR 50.72. In July, 1984, OPPD requested an extension until November 30, 1985 in order to complete qualification of the electrical penetration subassemblies. In a letter to the NRC (H. R. Denton) dated February 14, 1985, OPPD revised the July 3, 1984 request for deadline extension to provide additional information. In that letter, information was provided concerning the electrical penetration subassemblies modified with RTV silicone rubber. As was noted at that time, OPPD believed that since both the RTV and sleeving were LOCA-qualified, and since their application was correct as indicated by the manufacturer, the equipment so modified could be considered qualified. This justification was also reviewed and accepted by consultants for OPPD.

At the time of the 85-09 inspection, the NRC staff provided OPPD with the interpretation that type testing was required on this moisture seal/insulation system. OPPD believes that the reason for this violation was a difference in interpretation of the requirements for qualification.

(2) Corrective Steps Taken and Results Achieved

OPPD replaced the EEQ-related penetration subassemblies during the 1985 refueling outage. This was verified and closed out in Inspection Report 85-26. Applications of RTV similar to this item have been reviewed and addressed to ensure qualification. Future installations and modifications will be conducted according to current qualification standards.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

OPPD believes the steps described in (2) above are adequate to resolve this issue.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

- B. States Company terminal blocks in the modified configuration installed in the plant were not qualified based on testing or experience with identical equipment or with similar equipment with a supporting analysis, qualification was not based solely on type testing, nor did the evaluation of design

ATTACHMENT (Continued)

differences between the plant equipment and the specimens actually tested adequately establish qualification. However, these terminal blocks could be qualified without additional testing based on further analysis of available information.

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

OPPD'S RESPONSE

(1) Reason For The Violation If Admitted

RTV silicone rubber was applied to States Company terminal blocks to correct a qualification deficiency. The RTV silicone rubber was applied as a moisture seal/ insulation. OPPD believed that use of a qualified material in a normal, vendor-specified application was an acceptable resolution to the terminal block deficiency.

The NRC staff did not accept the qualification because type testing had not been done, or, alternatively, analysis had not been performed. The reason for this violation was a difference in interpretation of equipment qualification requirements.

(2) Corrective Steps Taken and Results Achieved

- a) An analysis was performed which verified the leakage currents due to reduced insulation resistance could be tolerated.
- b) Terminal blocks in transmitter circuits were replaced.
- c) Terminal blocks in the remaining circuits (solenoid control, and position indication) were inspected and repaired to ensure the adequacy of the RTV coating. This will ensure instrument accuracy or the proper function of the solenoid valves.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

The actions described in (2) above are considered adequate to resolve this concern.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

ATTACHMENT (Continued)

OPPD's RESPONSE

(1) Reason For The Violation If Admitted

In a letter dated April 3, 1984, OPPD requested an extension to the deadline for equipment qualification in order to complete qualification testing of the electrical penetration subassemblies. When testing complications arose, OPPD promptly notified the NRC per 10 CFR 50.72. In July, 1984, OPPD requested an extension until November 30, 1985 in order to complete qualification of the electrical penetration subassemblies. In a letter to the NRC (H. R. Denton) dated February 14, 1985, OPPD revised the July 3, 1984 request for deadline extension to provide additional information. In that letter, information was provided concerning the electrical penetration subassemblies modified with RTV silicone rubber. As was noted at that time, OPPD believed that since both the RTV and sleeving were LOCA-qualified, and since their application was correct as indicated by the manufacturer, the equipment so modified could be considered qualified. This justification was also reviewed and accepted by consultants for OPPD.

At the time of the 85-09 inspection, the NRC staff provided OPPD with the interpretation that type testing was required on this moisture seal/insulation system. OPPD believes that the reason for this violation was a difference in interpretation of the requirements for qualification.

(2) Corrective Steps Taken and Results Achieved

OPPD replaced the EEQ-related penetration subassemblies during the 1985 refueling outage. This was verified and closed out in Inspection Report 85-26. Applications of RTV similiar to this item have been reviewed and addressed to ensure qualification. Future installations and modifications will be conducted according to current qualification standards.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

OPPD believes the steps described in (2) above are adequate to resolve this issue.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

- B. States Company terminal blocks in the modified configuration installed in the plant were not qualified based on testing or experience with identical equipment or with similar equipment with a supporting analysis, qualification was not based solely on type testing, nor did the evaluation of design

ATTACHMENT (Continued)

differences between the plant equipment and the specimens actually tested adequately establish qualification. However, these terminal blocks could be qualified without additional testing based on further analysis of available information.

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

OPPD'S RESPONSE

(1) Reason For The Violation If Admitted

RTV silicone rubber was applied to States Company terminal blocks to correct a qualification deficiency. The RTV silicone rubber was applied as a moisture seal/ insulation. OPPD believed that use of a qualified material in a normal, vendor-specified application was an acceptable resolution to the terminal block deficiency.

The NRC staff did not accept the qualification because type testing had not been done, or, alternatively, analysis had not been performed. The reason for this violation was a difference in interpretation of equipment qualification requirements.

(2) Corrective Steps Taken and Results Achieved

- a) An analysis was performed which verified the leakage currents due to reduced insulation resistance could be tolerated.
- b) Terminal blocks in transmitter circuits were replaced.
- c) Terminal blocks in the remaining circuits (solenoid control, and position indication) were inspected and repaired to ensure the adequacy of the RTV coating. This will ensure instrument accuracy or the proper function of the solenoid valves.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

The actions described in (2) above are considered adequate to resolve this concern.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

ATTACHMENT (Continued)

- C. Rockbestos Pyrotrol III cable installed in the plant was not qualified based on testing or experience with identical equipment or with similar equipment with a supporting analysis, qualification was not based solely on type testing, nor did the evaluation of differences between the plant cable and the specimens actually tested adequately establish qualification. However, this cable could be qualified without additional testing based on further analysis of available information.

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

OPPD'S RESPONSE

(1) Reason For The Violation

The similarity documents were not considered adequate by the NRC staff. Testing done by Rockbestos or contracted out by Rockbestos was considered inadequate due to QA problems and lack of supporting test laboratory data.

(2) Corrective Steps Taken and Results Achieved

- a. A qualification file was prepared based on a plant specific splice test for OPPD's Fort Calhoun Station using Pyrotrol III cable. This test and analysis qualification file adequately demonstrates qualification.
- b. Additional aging calculations were performed to ensure the cable could meet station operating criteria.

The cable is considered fully qualified.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

The actions described in (2) above are considered adequate to resolve this concern.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

- D. 10 CFR 50.49 (e)(5) also requires that equipment that has reached the end-of-installed life condition for which it is qualified be replaced or refurbished at the end of this designated life unless ongoing qualification demonstrates that the item has additional life. Section 7.0 of the DOR

ATTACHMENT (Continued)

Guidelines requires that component maintenance schedules include consideration of the specific aging characteristics of the component materials.

Contrary to the above, at the time of the NRC inspection, the licensee had not performed maintenance necessary to maintain equipment qualification for Allis-Chalmers component cooling water pump motors nor were these requirements incorporated into plant procedures. The neglected maintenance included six-month checks of the bearing lubricant as required by the qualification report. In addition, the licensee did not perform an analysis to determine the service life of one motor that was repaired with replacement windings.

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

OPPD'S RESPONSE

(1) Reason For The Violation

The requirement for preventative maintenance schedule of this motor was inadvertently omitted from the Qualified Life Program.

The material comparison was not considered adequate by the NRC staff.

(2) Corrective Action Taken and Results Achieved

- a) An aging analysis was performed on the rewound motor. This was reviewed in Inspection Report 85-26.
- b) A preventive maintenance schedule has been established for motor lubrication and motor screen inspection.
- c) A generic review of EEQ motors was completed to ensure the proper motor maintenance has been completed, is scheduled or is under review prior to the need to perform maintenance.

(3) Corrective Steps Which Will Be Taken To Avoid Further Violations

The actions described in (2) above are considered adequate to resolve this concern.

(4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.

ATTACHMENT (Continued)

- E. 10 CFR 50.49 (d)(1) also requires the licensee to document the performance specifications of qualified equipment under conditions existing during and following design basis accidents. Paragraph 5.2.5 of the DOR Guidelines requires that failure criteria should include instrument accuracy requirements based on the maximum error assumed in the plant safety analysis.

Contrary to the above, at the time of the NRC inspection, the licensee has not documented required accuracies for post-accident monitoring transmitters nor compared them with errors reported from qualification type tests.

This is a Severity Level IV violation (Supplement 1).

OPPD'S RESPONSE

1) Reason For The Violation If Admitted

OPPD's interpretation of the requirements for (Post Accident Monitoring) PAM error analysis only considered equipment in a harsh environment, and not the loop uncertainties. The NRC staff did not agree with this interpretation.

2) Corrective Steps Taken and Results Achieved

a) Loop uncertainties were generated for the PAM instrumentation.

b) A comparison of the loop uncertainties to the Emergency Operating Procedure requirements was conducted at the plant. FAM instrumentation was determined to be adequate for its intended function.

c) The EEQ manual has been updated to provide the necessary information for future analysis.

3) Corrective Steps Which Will Be Taken To Avoid Further Violations

The actions described in (2) above are considered adequate to resolve this concern.

4) Date When Full Compliance Will Be Achieved

OPPD is presently in full compliance.