

Omaha Public Power District
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402/536-4000

July 2, 1990
LIC-90-0524

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

REFERENCES: 1. Docket No. 50-285
2. Letter from NRC (S. J. Collins) to OPPD (W. G. Gates) dated May 24, 1990
3. Letter from NRC (E. J. Butcher) to OPPD (R. L. Andrews) dated July 3, 1985

Gentlemen:

SUBJECT: Response to Notice of Violation (NRC Inspection Report 50-285/90-13)

Attached in accordance with 10 CFR Part 2.201 is Omaha Public Power District's (OPPD) response to the subject inspection report (Reference 2), which identified three violations regarding separation criteria for inverters, storage of contaminated filters and control of danger tags.

A extension of the required response date to July 2, 1990 was discussed in a telephone conversation between NRC (R. V. Azua) and OPPD (T. G. Therkildsen) on June 22, 1990.

If you should have any questions on this response, please contact me.

Sincerely,

W. G. Gates

W. G. Gates
Division Manager
Nuclear Operations

WGG/se1

Attachment

c: LeBoeuf, Lamb, Leiby & MacRae
A. Bournia, NRC Project Manager
R. D. Martin, NRC Regional Administrator, Region IV
P. H. Harrell, NRC Senior Resident Inspector

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Response to Notice of Violation

During an NRC inspection conducted March 1 through April 14, 1990, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10CFR Part 2, Appendix C (1989) (Enforcement Policy), the violations are listed below:

A. Failure to Comply with Separation Criteria for Safe Shutdown Systems

Section III.G.2 of Appendix R to 10CFR Part 50 states, in part, "Where cables or equipment . . . of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

1. Separation of cables . . . of redundant trains by a fire barrier having a 3-hour rating . . . ,
2. Separation of cables . . . of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazard . . . , or
3. Enclose the cable . . . of one redundant train in a fire barrier having a 1-hour rating."

Contrary to the above, the installation of Inverters B, C, and D (redundant trains) failed to comply with the above requirements in that:

1. The cables were not separated by a 3-hour fire barrier.
2. The distance between the cables was less than 20 feet.
3. The cables of redundant trains were not enclosed in a fire barrier having a 1-hour rating.

This is a Severity Level IV Violation. Supplement I) (285/9013-01)

OPPD Response:

1. The Reason for the Violation, If Admitted:

OPPD admits the violation occurred. OPPD reviewed the problem involving Inverters B, C and D on an expeditious basis following OPPD's self-initiated Safety System Functional Inspection (SSFI) of the 120 Vac vital instrument power system. Based on this review, OPPD initially concluded that an Appendix R exemption for Fire Area 36, granted by the NRC on July 3, 1985 (Reference 3), applied to this situation and that FCS was in compliance. The exemption is based on area wide fire detection and the automatic fire suppression system. These remote monitoring and automatic suppression systems, along with fire brigade response, are expected to minimize damage, preventing large scale equipment failures. With area wide systems, the probability of a fire propagating to such an extent that it would lead to failure of the cable from inverter C is expected to be acceptably small, as would the failure of B and D inverters. Following discussion with NRC on the intent of limiting exemption requests to specifically defined scenarios, OPPD agreed to not consider the exemption applicable and proceeded to expeditiously install fuse protection.

As part of our initial evaluation, OPPD examined on a "what if" basis the loss of inverter C in addition to inverters B and D. With the benefit of information on loads previously obtained through a Maintenance Work Order (MWO 886773), OPPD was able to conclude, that AOP-16 could be used to crosstie the inverter C loads (AI-40C) to inverter A.

Subsequent analyses have corroborated the engineering judgements regarding the transient effects of multiple inverter loss on safe shutdown of FCS. Accordingly, OPPD considers that FCS was not outside its design basis nor was it in an unanalyzed condition that significantly compromised plant safety during resolution of this issue.

The violation occurred as a result of an inadequate review of the post fire safe shutdown requirements for the west switchgear room.

2. The Corrective Steps That Have Been Taken and the Results Achieved:

- a. A fuse (located in the east switchgear room) has been installed in the cable between Inverter C and Breaker EE-6C, which will clear the fault in the event of a fire induced fault in the west switchgear room. This will isolate Inverter C and allow it to maintain the loads in the control room. Reference 2 paragraph 5.a indicates that this action is acceptable to the NRC staff.
- b. The Associated Circuit Analysis (EA-FC-89-050) has been reverified and updated. No other design deficiencies of this nature were noted.
- c. The modification process has been revised to assure consideration of cable separation with respect to safe shutdown in the event of a fire. General Engineering Instruction GEI-3 requires a review of the existing safe shutdown analysis if the modification affects safe shutdown components.

3. The Corrective Steps That Will Be Taken to Avoid Further Violations:

No further actions are required; the action described in item 2.b. above is considered to provide adequate assurance that this is an unique incident, and the current modification procedure discussed in item 2.c. above will prevent recurrence.

4. The Date When Full Compliance Will Be Achieved:

OPPD is presently in full compliance.

B. Failure to Follow Procedures

Technical Specification 5.8.1 states, in part, "Written procedures shall be established, implemented, and maintained that meet or exceed the minimum requirements of. . . Appendix A of US NRC Regulatory Guide 1.33."

Section 1.1 of Appendix A to Regulatory Guide 1.33 requires that activities related to the plant fire protection program be covered by written procedures.

Section 3.3.5 of Procedure SO-G-6, "Housekeeping," states, in part, "HEPA (high efficiency particulate air) filters are sources of airborne activity when ignited. These materials shall be transferred immediately to closed containers when removed from inservice use."

Contrary to the above, on February 17, 1990, the licensee failed to place contaminated HEPA filters, removed from inservice use, immediately into closed containers in that 40 HEPA filters were stored in Room 69 (a safety-related area) for approximately 4 days in polyethylene bags.

This is a Severity Level IV violation. (Supplement I) (285/9013-02)

1. The Reason for the Violation, if Admitted:

OPPD admits the violation occurred. The cause of the violation was that the Maintenance Procedure used for removal of the HEPA filters did not contain guidance on storage of the filters after removal. This is an infrequently performed activity and the craftsmen involved were not cognizant of the requirement of Standing Order G-6, "Housekeeping," to immediately transfer the filters to closed containers.

2. The Corrective Steps That Have Been Taken and the Results Achieved:

The HEPA filters were placed in containers meeting the requirements of Standing Order G-6. Additionally, the requirement for "immediate" transfer of HEPA filters to closed containers was reviewed. As a result of this review, Standing Order G-6 was changed to allow a maximum of 72 hours between removal and storage. A Training "Hotline" (HL 90-306) was issued March 21, 1990 which addressed requirements for storage of HEPA filters.

3. The Corrective Steps That Will Be Taken to Avoid Further Violation:

Maintenance procedures which require removal or installation of HEPA filters and/or charcoal filters will be reviewed and revised as necessary to provide guidance to the craftsmen on storage of filters during the removal and installation process.

4. The Date When Full Compliance Will Be Achieved:

OPPD is currently in full compliance with Standing Order G-6. Revisions to the Maintenance Procedures will be completed by October 15, 1990.

C. Inadequate Implementation of Corrective Actions

Criterion XVI of Appendix B to 10 CFR Part 50 and Section A.17 of the licensee's NRC-approved quality assurance program (Appendix A to the Updated Safety Analysis Report) require that measures shall be established to assure that nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall ensure that the cause of the condition is determined and corrective action taken to preclude repetition.

Contrary to the above, on March 20 and 21, 1990, the licensee's quality assurance organization identified problems with the control of danger tags and plant management implemented corrective actions. The corrective actions were inadequate in that, on March 23, 1990, NRC identified similar types of problems with the control of danger tags. In addition, on March 24 and 25, 1990, the licensee, during a follow-up review of the identified danger tag control problems, identified four additional instances where danger tags were not being controlled in accordance with licensee requirements.

This is a Severity Level IV violation. (Supplement I) (285/9013-03)

1. The Reason for the Violation if Admitted

OPPD admits the violation occurred as stated. The reasons for the violation were inadequate training of maintenance and construction personnel prior to the 1990 refueling outage and inadequate verification of equipment tagging.

Training was provided on Standing Order 0-20, "Equipment Tagging Procedure", from the Conduct of Maintenance lesson plan (1219-01) and the Maintenance Crafts Administrative Handbook (1219-07), to craftspersons at the start of the refueling outage. Following the cited procedural non-compliances, it was determined that the pre-outage training did not adequately cover those areas that were found deficient.

2. The Corrective Steps that have been taken and the Results Achieved

When procedural non-compliances to Standing Order 0-20 occurred during the outage, a special tagging briefing was conducted for badged personnel. In addition, Standing Order 0-20 has been revised to require independent verification, by a qualified operator, of equipment tagging in preparation for equipment/component outages for maintenance. This independent verification insures that the tags have been hung in accordance with the Tag Out Sheet and that the components have been placed in the required position prior to the initiation of maintenance activities. This requirement was added to the Equipment Tagging Procedure on April 26, 1990. A Training "Hotline" (HL 90-047) was issued June 6, 1990 which addressed changes to the Equipment Tagging Procedure. To date, no additional incidents involving equipment mispositioning or inappropriate tag placement have been identified Fort Calhoun.

3. The Corrective Steps That Will Be Taken to Avoid Further Violations

Corrective steps described above are considered adequate.

4. The Date when Full Compliance will be Achieved

OPPD is currently in full compliance based on the changes made to Standing Order 0-20 and the training which has been provided.