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10CFR2.201

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OCAN050402

U. S. Nuclear Regulatory Commission
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Subject: Arkansas Nuclear One - Units 1 and 2
Docket No. 50-313 and 50-368
License No. DPR-51 and NPF-6
Response To Inspection Report
50-313/01-06, 50-368/01-06

Gentlemen:

Pursuant to the provisions of 10CFR2.201, attached is the response to the Notice of Violation (NOV) regarding the failure to ensure that cables and equipment of redundant trains of systems necessary to achieve and maintain hot shutdown conditions would remain free of fire damage (in the event of a fire) by one of the means specified in 10 CFR Part 50, Appendix R, Paragraph III.G.2, or by alternate means specified in 10 CFR Part 50, Appendix R, Paragraph III.G.3, for Fire Areas 98J and 99M in Arkansas Nuclear One, Unit-1.

Attachment 2 contains a listing of all commitments contained in this submittal.

Should you have any questions or comments, please contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "JSF/rhs".

JSF/rhs
Attachments

IE04

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Attachment 1

to

OCAN050402

Response to Notice of Violation

NOTICE OF VIOLATION

During an NRC inspection conducted June 11 - 22, 2001, and July 2 - 13, 2001, a violation of NRC requirements was identified.

10 CFR 50.48, "Fire protection," Section (b) states, "Appendix R to this part establishes fire protection features required to satisfy Criterion 3 of Appendix A to this part with respect to certain generic issues for nuclear power plants licensed to operate before January 1, 1979. ... With respect to all other fire protection features covered by Appendix R, all nuclear power plants licensed to operate before January 1, 1979, must satisfy the applicable requirements of Appendix R to this part, including specifically the requirements of Sections III.G, III.J, and III.O."

10 CFR Part 50, Appendix R, Paragraph III.G.2 states, "Except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, 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:

- a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;
- b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or
- c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area.

10 CFR Part 50, Appendix R, Paragraph III.G.3 states, "Alternative or dedicated shutdown capability and its associated circuits, independent of cables, systems or components in the area, room or zone under consideration, should be provided:

- a. Where the protection of systems whose function is required for hot shutdown does not satisfy the requirement of paragraph G.2 of this section; or ..."

Contrary to this requirement, the licensee failed to ensure that cables and equipment of redundant trains of systems necessary to achieve and maintain hot shutdown conditions would remain free of fire damage (in the event of a fire) by one of the means specified in 10 CFR Part 50, Appendix R, Paragraph III.G.2, or by alternative means specified in 10 CFR Part 50, Appendix R, Paragraph III.G.3, for Fire Areas 98J and 99M in Arkansas Nuclear One, Unit 1.

This violation is associated with a White significance determination process finding (50-313;368/0106-02).

Response to Notice of Violation 50-313, 368/0106-02

(1) Reason for the violation:

This violation occurred as a result of differences in the interpretation of the requirements of 10CFR50, Appendix R, by Entergy and the Nuclear Regulatory Commission.

Entergy's position was:

- ANO maintains one train of systems necessary to achieve and maintain safe shutdown conditions "free of fire damage" as required by 10 CFR 50, Appendix R, Paragraph III.G.1.
- The unprotected circuits in the referenced fire zones are associated circuits that interface with safe shutdown components but are not part of the systems necessary to achieve safe shutdown conditions.
- Acceptable manual actions outside the fire zones of concern provide necessary control of systems required for safe shutdown, and
- Analysis demonstrated that the subject associated circuits would not inhibit the ability to reach safe shutdown conditions.

The basis for this position was submitted to the NRC by Entergy in a letter dated September 28, 2001.

Subsequently, the NRC concluded that ANO failed to ensure that cables and equipment of redundant trains of systems necessary to achieve and maintain hot shutdown conditions would remain free of fire damage (in the event of a fire) by one of the means specified in 10 CFR 50, Appendix R, Paragraph III.G.2, or by alternate means specified in 10 CFR 50, Appendix R, Paragraph III.G.3, for fire zones 98J and 99M.

(2) Corrective steps that have been taken and the results achieved:

Upon identification of the finding by the NRC during the June 2001 inspection, ANO promptly established and continues to maintain compensatory measures in all areas specified by the finding.

Subsequent to the issuance of this violation, the NRC published (SECY-03-100) its intent to pursue rulemaking that would allow the use of manual actions in lieu of meeting the strict separation criteria of Paragraph III.G.2. Also, additional inspection guidance has been developed for the evaluation of the feasibility of manual actions. As part of its rulemaking effort, the NRC is continuing to refine its guidance for assessing the adequacy of manual actions.

ANO performed detailed circuit analyses for each fire zone where manual actions are required to achieve and maintain hot shutdown conditions. The analyses identified potential circuit damage as well as actions required to mitigate the consequences of the damage to allow safe shutdown in the event of a fire. The results of the analyses were used in developing detailed symptom-based procedures for each fire zone where manual actions are required to achieve and maintain hot shutdown conditions. These

procedures were implemented in the second quarter, 2003. Draft NRC guidance was utilized in evaluating the manual actions credited in the new procedures to ensure their feasibility.

(3) Corrective steps that will be taken to avoid further violations

ANO has initiated a Manual Action Review Project to identify potential changes to plant systems and components in order to reduce the complexity of the manual actions required to safely shutdown the plant in the event of a fire in certain fire zones. This project will assess those fire zones where a significant number of manual actions may be required, where the manual actions may be time-critical, and/or where the manual actions are risk-significant. Where appropriate, modifications will be implemented to reduce redundant train vulnerabilities. Manual actions will be limited to those which can be reasonably achieved in a timely manner. Where necessary, procedure enhancements will be implemented to facilitate successful completion of required manual actions. For fire areas where full compliance with Appendix R cannot be achieved, exemption requests will be submitted to the NRC and/or evaluations will be completed to document compliance with any new rulemaking which may be issued.

(4) Date when full compliance will be achieved:

Entergy will submit a report to the NRC by June 30, 2004, detailing the results of the manual actions review project. This report will include a listing of the manual actions (by zone) that will be eliminated through modifications to the plant or crediting of alternate capable equipment. The remaining manual actions will be addressed by submittal of 10 CFR 50, Appendix R exemption requests or compliance with rulemaking (once finalized) allowing the use of manual actions. A schedule for exemption request submittals and modifications implementation will be provided by June 30, 2005.

Attachment 2

OCAN050402

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE- TIME ACTION	CONTINUING COMPLIANCE	
Submit results of Manual Actions Review Project to NRC	X		June 30, 2004
Submit schedule for Appendix R exemption request submittals and modifications implementation to NRC	X		June 30, 2005