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U. S. Nuclear Regulatory Commission
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SUBJECT: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313/50-368
License Nos. DPR-51 and NPF-6
Response to Inspection Report
50-313/89-45; 50-368/89-45

Gentlemen:

Pursuant to the provisions of 10CFR2.201, attached is the response to the violations regarding a failure to prepare splices in accordance with a drawing and failure to follow procedural requirements which were identified in the subject inspection report.

Very truly yours,

E. C. Ewing
General Manager,
Technical Support
and Assessment

ECE/DWB/sgw
attachment

cc: Regional Administrator
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Notice of Violation

- A. 10 CFR 50, Appendix B, Criterion V, requires that licensee activities affecting quality shall be prescribed by documented instructions, procedures, or drawings . . . and shall be accomplished in accordance with these instructions, procedures, or drawings.

To meet the requirements of 10 CFR, Appendix B, in preparing tape splices for motor operated valves, the configuration for an electrical connection splice was detailed in AP&L Drawing E-2052, Sheet 37E. This drawing establishes acceptable configurations for environmentally qualified tape splices and requires the use of T-95/35 tape.

Contrary to the requirements of Drawing E-2052, Sheet 37E, the tape splices for Feedwater Containment Isolation Valves CV-2630 and CV-2680 (required to be environmentally qualified) had no Okonite T-95/35 tape installed.

This is a Severity Level IV violation. (Supplement I) (313/8945-01)

Response to Violation 313/8945-01

- (1) The reason for the violation

The reason was determined to be inadequate instructions to an offsite vendor such that environmental qualification (EQ) requirements were not maintained. The vendor was not made aware of the EQ requirements when the motors were received for rework.

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

During an effort to replace Scotch 33 tape jacketing overlays with Okonite 35 tape, it was discovered that no Okonite T-95/35 tape had been installed on Feedwater Containment Isolation Valves CV-2630 and CV-2680. The splices for the internal motor lead connections for these valves were immediately taped according to design drawings to satisfy environmental qualification requirements; a first layer wrap of Okonite T-95 tape covered with a jacket of Okonite 35 tape. In addition, the only other motor sent to this vendor, Makeup Pump Room Cooler, VUC-7B, was also inspected and reworked to comply with EQ requirements.

Approximately twenty-seven Unit One valve operators, which originally had nylon crimped connectors, were identified to be inspected to ensure that EQ requirements were satisfied. This inspection was completed on December 21, 1989, from the twenty-seven valves operators identified above, no additional Okonite T-95 tape splice discrepancies were identified which would have challenged the environmental qualification of the splices.

(3) Corrective steps which will be taken to prevent recurrence:

To ensure that proper controls are implemented and maintained, Administrative Procedure 1032.006, "Procurement Technical Assistance", will be revised to clarify actions required to maintain EQ Qualifications when components are repaired. Administrative Procedure 1000.011, "Purchase Requisition Preparation and Control Procedure", will be revised to require personnel who originate purchase requisitions to list known requirements to maintain EQ qualifications for items being repaired. These procedure revisions will be completed by May 1, 1990.

As an interim control, the Materials Engineering Supervisor is responsible for ensuring that vendors comply with ANO's EQ specifications when components are sent to vendors for repair and return.

In accordance with our commitment contained in Licensee Event Report No. 50-313/89-049-00, dated January 19, 1990 (1CAN019012), a supplemental report on the results of the inspection of EQ components involving qualified tape splices located outside of containment, will be provided to the NRC by April 1, 1990.

(4) Date of full compliance:

Full compliance was achieved on December 20, 1989, when the internal motor lead connections for Feedwater Containment Isolation Valves CV-2630 and CV-2680 were taped according to design drawings to satisfy EQ requirements. A supplemental report on the results of the inspection of EQ components involving qualified tape splices located outside of containment will be provided to the NRC by April 1, 1990.

Notice of Violation

- B. 10 CFR Part 50, Appendix B, Criteria V states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings"

Licensee Procedure 1025.003, "Conduct of Maintenance," provides requirements for the control of work activities. Specifically, paragraphs 3.8 and 4.3A require that lifted leads be marked to aid in retermination and that independent verification of the retermination be performed. In addition, paragraphs 6.27.6 and 6.27.7 provide measures for the control of procedures, including signoffs, when working in a contaminated area.

Contrary to the above, the licensee failed to comply with procedural requirements during maintenance activities in the three examples discussed below:

1. During calibration of the Unit 2 feedwater control system, various electrical leads were lifted. Subsequent inspections of a feedwater control cabinet identified a loose electrical lead. A review of the work history indicates that no independent verifications of electrical lead reterminations were performed.
2. On November 27, 1989, while testing Unit 1 Low Pressure Injection Flow Transmitter PDT-1402, the output leads from the transmitter were lifted then later re-terminated. Subsequent testing revealed that the output leads were reversed when reconnected. When the output leads were re-terminated, an independent verification was not performed.
3. On November 27, 1989, while observing the reassembly of the motor operator for Unit 1 High Pressure Injection Valve CV-1220, the inspector noted that none of the removed or restored signoffs on the "Lifted Lead Data Sheet" had been made. The licensee's craftsman stated that all of the signoffs would be made after the work was completed and the worker had exited the contaminated area. This method of completing signoffs is contrary to the requirements of Administrative Procedure 1025.003.

The above examples constitute a Severity Level IV violation. (Supplement I)
(313/8945-02; 368/8945-02)

(1) The reason for the violation:

The "Conduct of Maintenance" procedure was revised on September 25, 1989, to change the word "should" to "shall" in the instructions, "independent verification of re-termination shall be done." This information was not adequately communicated to the craftsmen by management and, subsequently, the requirements were not properly executed.

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

Procedure 1025.003, "Conduct of Maintenance" has been revised to include additional instructions to document the lifting and re-termination of leads and independent verification of these activities. Attachment 7, "Lifted Lead Log Sheet Instructions" and Form 1025.003B, "Lifted Lead Log Sheet" were added to provide a method to document these activities. This procedure revision was approved on December 22, 1989.

The training associated with this procedure revision was provided on November 21-22, 1989. Most job orders planned previous to the date of the training did not contain a Lifted Lead Log Sheet and work proceeded without formal documentation of lifted leads. Job Order packages scheduled subsequent to January 15, 1990, contained the new Lifted Lead Log Sheet Form 1025.003B. Since implementation of these forms, there have been no known instances of failure to comply with the procedure concerning the control of lifted leads.

The failure to signoff required procedural steps for lifted leads, while working in a contaminated area, was a personnel error. A memorandum was sent to the maintenance craft personnel on March 2, 1990, to emphasize the procedural requirements contained in steps 6.27.6 and 6.27.7 of procedure 1025.003, "Conduct of Maintenance." These steps address measures for the control of procedures, including signoffs, when working in a contaminated area.

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

Administrative level procedure enhancements will be made to strengthen the requirements for the identification and delivery of training associated with procedure changes that significantly affect the process being controlled by the change. The changes to the Station Administrative Procedures will be completed by May 31, 1990.

(4) The date when full compliance will be achieved:

Full compliance for maintenance procedure revisions and training was achieved on March 2, 1990.