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Subject: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Response To Inspection Report
50-313/95-23; 50-368/95-23

Gentlemen:

Pursuant to the provisions of 10CFR 2.201, attached is the response to the notice of violation identified during the inspection activities associated with the code weld repair of Volume Control Tank Bypass Valve 2CV-4826.

Should you have any questions or comments, please call me at 501-858-4601.

Very truly yours,

Dwight C. Mims
Director, Nuclear Safety

DCM/bws

Attachments

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NOTICE OF VIOLATION

During an NRC inspection conducted on October 2 through October 6, 1995, one violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (60 FR 34381; June 30, 1995) the violation is listed below:

Title 10 CFR Part 50, Appendix B, Criterion V, states, in part, that 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.

Welding Procedure 5120.120, "Implementing And Control Of Welding," Revision 0, Step 4.11, requires that interpass temperature be taken before applying the next layer of weld metal when continuous welding is applied. Continuous welding is defined as welding with breaks of 2 hours or less between layers.

Contrary to the above, on October 5, 1995, during continuous welding on Unit 2 Volume Control Tank Bypass Valve 2CV-4826, welders did not verify interpass temperature before applying the next layer of weld metal after completion of the root pass.

This is a Severity Level IV violation (Supplement I) (313;368/9523-01).

Response to Notice Of Violation 313; 368/9523-01

(1) Reason for the violation:

The repair job on the Volume Control Tank Bypass Valve 2CV-4826 required cutting out the existing elbow to repair the valve internals and re-welding a new elbow at the bottom of the valve. The welding was being performed in accordance with the weld package and Specification M-2415, *Nuclear Welding Standards for Arkansas Nuclear One - Units 1 and 2*, Revision 6. This Specification states in paragraph 6.4 that the interpass temperatures and preheat temperatures over 125 °F shall be checked with temperature indicating crayons or contact pyrometers approximately one to two inches from the bevel edge.

Due to problems with accessibility, and because the valve acted as a heat sink which affected application of the weld, it took a half hour to apply the first half of the root pass. After taking a 45 minute break, the second half of the root pass took an additional hour to complete. The welder was aware that the weld package required the interpass temperature to be less than 350 °F prior to welding the next pass, however, because the root pass took so long to complete and because the valve was a large heat sink, he was confident, based on past experience, that the interpass temperature was below 350 °F. Additionally, the welder noted that he had his gloved hands on the valve during cleaning of the root pass which added to his confidence that the temperature was below the 350 °F limit.

The primary causes for this event are 1) that the training methods were ineffective in delivering management expectations regarding procedure adherence which resulted in the welder believing he could use qualitative methods to meet the intent of the M-2415 specification regarding interpass temperature, 2) inadequate work practices which resulted in the welder not adhering strictly to the requirements of the weld package. A contributing cause was that the procedure was too restrictive in the methods specified for determining interpass temperature.

Additionally, 5120.120 and M-2415 should have been consistent with respect to where, how and when the interpass temperature should be taken.

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

- The details of the event were reviewed to determine if the interpass temperature between the root pass and the subsequent pass was less than the required 350 °F. It was determined that the subsequent pass was a continuous pass done directly following the completion of the root pass and that the temperature stick check performed immediately following completion of the subsequent pass revealed an interpass temperature of less than 350 °F. These details support the conclusion that the interpass temperature before applying the next layer of weld material after completion of the root pass was less than the 350 °F limit.
- This event and management expectations regarding procedure compliance were discussed with the welder.
- This event was discussed with ANO and contract welders. Compliance with M-2415 requirements was stressed.

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

- Follow-up discussions with ANO welders on the details of the event will be performed by November 30, 1995. Emphasis will be placed on procedure compliance and the craft's responsibility to identify procedure problems and initiate revisions to procedures, as well as how meeting procedure intent can result in procedure non-compliance.
- This event will be incorporated into the lessons learned program for modification welders by February 15, 1996.
- OP 5120.120 and M-2415 will be reviewed and any needed changes to ensure consistency between the documents as to how, where, and how often interpass temperature is taken, will be completed by January 15, 1996.
- The ANO and contract welders will be trained on any changes made to OP 5120.120 and Specification M-2415 by April 15, 1996.

(4) Date when full compliance will be achieved:

Since the subsequent review of the weld details determined that the specified interpass temperature limit was not exceeded, ANO is in compliance with applicable requirements.