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AUTH.NAME AUTHOR AFFILIATION
ZERINGUE,O.J. Tennessee Valley Authority
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SUBJECT: Responds to NRC 930323 ltr re violations noted in insp repts 50-259/93-05,50-260/93-05 & 50-296/93-05.C/As:licensee will provide vendor info to personnel involved in use of machine & will add info to welder training.

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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

O. J. "Ike" Zeringue
Vice President, Browns Ferry Nuclear Plant

APR 21 1993

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of	)	Docket Nos. 50-259
Tennessee Valley Authority	)	50-260
		50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - NRC INSPECTION REPORT 50-259, 50-260, 296/93-05 REPLY TO NOTICE OF VIOLATION (NOV)

This letter provides TVA's reply to the NOV transmitted by letter from C. A. Julian to M. O. Medford dated March 23, 1993. In this letter, NRC cited TVA with a violation for failure to follow procedure during performance of a welding activity.

Enclosure 1 to this letter provides TVA's "Reply to the Notice of Violation" (10 CFR 2.201). A listing of commitments made by this letter is provided in Enclosure 2.

If you have any questions regarding this reply, please telephone Pedro Salas at (205) 729-2636.

Sincerely,

O. J. Zeringue

Enclosure
cc: See page 2

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1/1

U.S. Nuclear Regulatory Commission

APR 21 1993

Enclosure
cc (Enclosure):
NRC Resident Inspector
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ENCLOSURE 1

Tennessee Valley Authority

Browns Ferry Nuclear Plant (BFN)

Reply to Notice of Violation (NOV)

Inspection Report Number
50-259, 260, 296/93-05

RESTATEMENT OF VIOLATION

"During an NRC inspection conducted on February 22-26, 1993, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions;" 10 CFR Part 2, Appendix C, the violation is listed below:

> 10 CFR 50, Appendix B, Criterion V, states that, activities affecting quality shall be prescribed by documented instructions, procedures, and drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings.
>
> TVA's qualified, Detailed Welding Procedure DWPS-GT11-0-1-N, Revision 0 requires that, welding current (Amps) be set within the range qualified of 25 to 120 Amps and shielding gas flow be set between 15 and 25 Cubic Feet Per Hour (CFH).
>
> Contrary to the above, on February 25, 1993 a gas tungsten welder was observed welding on a ASME class 2 Weld (PCI-2-001-001) on the harden vent piping using 165 Amps and a shielding gas flow of 30 CFH. The welder had not checked the amperage or voltage prior to starting his welding operations and the equipment used did not have gages for making these determinations.

This is a Severity Level IV violation (Supplement I), applicable to Unit 2 only."

REPLY TO VIOLATION

1. Reason for Violation

Two reasons have been identified for this violation. First, inadequate instruction for use of the welding machine. Second, inattention to detail regarding gas flow and the amperage requirements established by the Detailed Weld Procedure Specifications (DWPS). The individual did not have specific instructions for interpreting the "weld power control dial" on the welding machine. Other welding machines utilized at BFN have an ampere adjustment to vary the output of the machine. TVA has recently purchased PowCon 300SS welding machines to perform welding at BFN. This machine utilizes a weld power control dial to adjust the output. The dial is graduated in percent power (volts X amperes) and adjusting the weld power varies the machine's output. However, the output is not indicative of ampere output only, the voltage also changes.

The individual performing the weld misinterpreted how the weld power control dial functioned. When establishing the parameters for the weld, the individual used the dial to set the output on was thought to be 35-40 percent of a range of 30-180 amperes. The welder was under the assumption that he would be welding within the parameter of 25-120 amperes. However, by use of an ammeter, the actual output of the machine was determined to be 165-170 amperes. Additionally, the individual did not establish the gas flow rate within the parameter of the DWPS or 15 to 25 cubic feet per hour (CFH). The actual flow rate was 30 CFH.

2. Corrective Steps Taken and Results Achieved

To document the failure to follow the DWPS parameters, TVA issued a Problem Evaluation Report. To ensure that the circumstances surrounding this violation did not continue to occur, TVA stopped all welding activities until the following corrective actions were implemented: First, TVA radiographed the weld in question. The radiography verified that there were no adverse affects from performing the weld at an output of 165-170 amperes. Additionally, because of the welder cup size (No. 8) and 1/8 inch tungsten rod, the gas flow rate of 30 CFH was not turbulent and had no detrimental effect on the weld. Second, performance parameters of the PowCon 300SS welding machine at operating conditions of 165 amperes were measured and a heat input calculation was performed. The maximum heat input allowed by weld procedure was not exceeded. Third, personnel involved in welding activities were trained regarding adherence to the requirements of Site Standard Practice 7.50. "Controlling Welding, Brazing, and Soldering Process" and to TVA General Engineering Specification G-29, "Detailed Welding Procedure Specifications" requirements. Finally, TVA issued an interim bulletin which provides specific information to assist the welder in verifying the voltage, amperage and shielding gas is within the requirements of the DWPS prior to welding on permanent plant equipment.

3. Corrective Steps That [have been or] Will Be Taken To Prevent Recurrence

To resolve the problem associated with the use of the weld power control dial on the PowCon 300SS welding machine, TVA will provide vendor information to personnel involved in the use of the machine. Also, TVA will add information to welder training regarding adherence to the DWPS. Finally, to provide a visual method for the welder to determine voltage or amperage of the machine, TVA will add instrumentation to the PowCon 300SS welding machine.

4. Date When Full Compliance Will Be Achieved

Full compliance will be achieved on June 21, 1993, when the instrumentation is added to the PowCon 300SS welding machines that will allow personnel to monitor amperage and voltage output.

ENCLOSURE 2

Tennessee Valley Authority

Browns Ferry Nuclear Plant (BFN)

Reply to Notice of Violation (NOV)

Inspection Report Number
50-259, 260, 296/93-05

COMMITMENT

1. To resolve interpretation of the function of the "weld power control dial," TVA will provide vendor information to personnel involved in the use of the PowCon 300SS machine. TVA intends to provide this information by May 25, 1993.

2. TVA will add information to welder training regarding adherence to the Detailed Weld Procedure Specifications. TVA intends to have this information in the training folders for both the craft and supervision by May 25, 1993.

3. TVA will add instrumentation to the PowCon 300SS welding machines that will allow personnel to monitor the amperage and voltage output. TVA intends to have this completed by June 21, 1993.