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APR 4 1984

Tennessee Valley Authority  
ATTN: Mr. H. G. Parris  
Manager of Power  
500A Chestnut Street Tower II  
Chattanooga, TN 37401

Gentlemen:

SUBJECT: REPORT NOS. 50-438/83-24 AND 50-439/83-24

Thank you for your responses of November 15, 1983, December 29, 1983 and January 19, 1984, to our Notice of Violation issued on October 17, 1983, concerning licensed activities conducted at your Bellefonte facility. We have evaluated your responses and found that they meet the requirements of 10 CFR 2.201. We will examine the implementation of your actions to correct violations A.1, A.7, and A.8 during future inspections.

We accept your denial of violations A.2, A.6, and B and have deleted these violations from our records.

We have reviewed your responses to violations A.4 and A.5 and have concluded that your schedule for achieving full compliance is excessively long. We therefore request that you reconsider your schedule and provide a supplemental response.

After careful consideration of the bases for your denial of violation A.3, we have concluded, for the reasons presented in the enclosure to this letter, that the violation occurred as stated in the Notice of Violation. Therefore, in accordance with 10 CFR 2.201(a), please submit to this office within 30 days of the date of this letter a written statement describing steps which have been taken to correct violation A.3 and the results achieved, corrective steps which will be taken to avoid further violations, and the date when full compliance will be achieved.

The responses directed by this letter is not subject to the clearance procedure of the Office of Management and Budget issued under the Paperwork Reduction Act, PL 96-511.

We appreciate your cooperation in this matter.

Sincerely,

*DMV for*

Richard C. Lewis, Director  
Division of Project and  
Resident Programs

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Enclosure: (See page 2)

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Tennessee Valley Authority

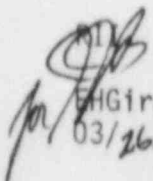
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Enclosure:

Staff Assessment of Licensee Response


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A. M. Qualls, Plant Superintendent  
L. S. Cox, Project Manager  
W. R. Brown, Jr., OEDC Project Manager  
J. W. Anderson, Manager  
Office of Quality Assurance  
H. N. Culver, Chief, Nuclear Safety  
Review Staff  
D. L. Williams, Jr., Supervisor  
Licensing Section  
Ms. K. D. Mali, Project Engineer

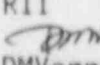
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ENCLOSURE

STAFF ASSESSMENT OF LICENSEE RESPONSE

Violations A.3, A.4, and A.5, as presented in Notice of Violation issued on October 17, 1983, read as follows:

10 CFR 50, Appendix B, Criterion V, as implemented by FSAR Section 17.1A.5, requires that activities affecting quality, such as ultrasonic examinations (ultrasonic testing) of containment penetration welds and control of records for examinations of these welds -

- (1) Be prescribed by procedures, instructions or drawings that contain documented criteria for determining that important activities are satisfactorily accomplished.
- (2) Be accomplished in accordance with the procedures.

Contrary to the above, procedure BNP-QCP-7.2, the procedure prescribed by the licensee for ultrasonic testing of containment penetration welds 1N100009, 10, 12, 13 and 14 and 2N100009, 10, 12, 13 and 14, did not contain criteria to assure that the ultrasonic testings were satisfactorily accomplished; and the ultrasonic testings and control of records therefore were not accomplished in accordance with the prescribed procedures, as indicated by the following examples:

- (3) The ultrasonic testing procedure did not provide any requirements or other documented criteria to assure that ultrasonic testing calibrations were maintained. No rechecks of calibration were required by the procedure, on any frequency, and the licensee's records do not indicate any instances of calibration rechecks. Calibration rechecks are necessary to assure that calibrations are not significantly affected by equipment handling, electronic component drift, etc.
- (4) The ultrasonic testing procedure (and the Code) required that the calibration block for the examinations be of the same or equivalent P-No. as the material being examined. The material examined was P-No. 1. The ultrasonic testing records indicate the calibration block used was P-No. 8, which is not equivalent to P-No. 1. Thus, the calibration was not accomplished in accordance with the procedure.
- (5) The ultrasonic testing procedure (and the Code) specifies calibration block and hole dimensions based on the thickness of the material examined. The material for ultrasonic testing of the penetration welds was over one inch thick. The block utilized in final ultrasonic testings of all the subject penetration welds was the block designated for material less than one inch thick. Thus, the calibration was not accomplished in accordance with the procedure.

The licensee responded as follows:

G-29M Process Specification 3.M.7.1, "Specification for Ultrasonic Examination of Weld Joints," will be revised to include more detailed information regarding calibration, recalibration, and the use of transfer techniques. This revision to the G-29M Process Specification 3.M.7.1, coupled with the retraining of ultrasonic testing inspection personnel in the proper method of completing the ultrasonic testing, and the incorporation of this method into the training program at the Nondestructive Examination (NDE) Training Center at Watts Bar Nuclear Plant, will assure that all future ultrasonic testing personnel will be consistent in the completion of this type of test report.

Neither ASME Section V nor our procedures require rechecks or post-calibration following examination; however, we do periodically check the integrity of the calibration in process of examination by the use of a portable "rompas" field calibration block as a matter of good practice.

Although TVA still maintains that our program meet minimum Code requirements, we do agree with NRC-Region II that our program would be improved by revising the G-29M Process Specification 3.M.7.1 to include scanning rate limitations, detailed information regarding calibration (recalibration), the use of transfer techniques, and calibration rechecks. Changes to the G-29M Process Specification will be completed by March 15, 1984. Also, construction ultrasonic testing procedure QCP 7.2 will be revised to include the G-29M changes by January 1, 1985.

A sample ultrasonic test report has been prepared detailing specific data to be recorded that will insure repeatability of the examination. This sample report is being incorporated into the site ultrasonic testing procedure QCP-7.2 by Revision Request BNP-123.

There are approximately 150 welds which will require reexamination. Some of the affected welds are located in systems where the insulation must be removed in order to examine the welds. Therefore, reexamination of affected welds and correction of any deficient conditions found will be accomplished by January 1, 1985.

#### Staff Evaluation:

Violation A.3 - Although the ASME Code was not cited in this violation, the Code does require recording of "any significant changes in subsequent rechecks;" thereby implying the performance of calibration checks. It is clear that measurement and test equipment subject to change in use must be calibrated at specified periods to insure maintenance of accuracy. The licensee provided no documented criteria for periodic checks of calibration of ultrasonic examination equipment. The licensee bases for denial of the violation are inadequate.

Violations A.4 and A.5 - The licensee stated that the relevant reexaminations would be completed by January 1, 1985. The licensee also stated that the procedures governing the relevant reexaminations would not be revised until January 1, 1985. This late commitment of procedure revision does not meet the requirements of 10 CFR 2.201.