Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

APR 16 1993

William J. Museler
Site Vice President
Watts Bar Nuclear Plant

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

Gentlemen:

In the Matter of the Application of) Docket No. 50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) - PREOPERATIONAL TEST PROGRAM - COMMITMENT CLARIFICATION

The purpose of this letter is to provide clarification of a commitment associated with TVA's submittal of FSAR Chapter 14, Amendment 69, and TVA's response to NRC's request for additional information (RAI) on Chapter 14 dated January 13, 1993. In each of these submittals, TVA indicated that a cold hydrostatic test of the reactor coolant system would be performed to verify integrity and leak-tightness due to modifications completed since the last test. Because TVA has developed techniques to hydrostatically test welds and weld repairs completed since the last primary hydrostatic test, an overall hydrostatic test of the reactor coolant system is not required. The enclosure to this letter addresses the methodology TVA plans to employ to meet this commitment and the ASME Section III requirements.

If you have any questions, please telephone P. L. Pace at (615) 365-1824.

Very truly yours,

W. J. Museler

William J. Museler

Enclosures
cc: See page 2

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cc (Enclosure):

NRC Resident Inspector
Watts Bar Nuclear Plant
P.O. Box 700
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ENCLOSURE
WATTS BAR NUCLEAR PLANT UNIT 1
PREOPERATIONAL TEST PROGRAM
COMMITMENT CLARIFICATION

TVA has evaluated the modifications and repairs performed within the primary coolant system pressure boundary since the last ASME Section III cold hydrostatic test was performed. The purpose of this evaluation was to ensure that all modifications and repairs will satisfy ASME requirements. In order to continue work activities in the containment area and to prevent subjecting the entire primary system, including the reactor vessel, to another cycle of hydrostatic test pressure, TVA has elected to perform the required hydrostatic testing in segments. The following methodology has been developed to complete this activity:

- Modifications made, such as the deletion of the upper head injection (UHI) system, will be isolated by means of test plugs. These areas will then be subjected to a ASME Section III hydrostatic test without subjecting the entire reactor coolant system to another cold hydrostatic test.

- Modifications made as a result of the elimination of the resistance temperature detector bypass (RTD) system and the upgrade to the Eagle 21 process protection system will be subjected to ASME III hydrostatic test requirements. This will be accomplished by either using test plugs or by using a special fixture constructed to allow pressurization of the new welds.

- Welds made for the correction of instrument line slope or because of system modifications will be isolated using either root valves or special test fixtures and subjected to ASME Section III test pressure.

- Weld repairs resulting from the review of radiographs associated with TVA welds within the primary coolant system pressure boundary will be isolated using test plugs or fixtures and hydrostatically tested to ASME Section III requirements.

During the re-review of radiographs by TVA and NRC, two indications were identified within the Class I boundary. Both of these indications were located in vendor-supplied components that had previously been code stamped and hydrostatically tested. These indications were initially identified as being potentially unacceptable by ASME Section III acceptance criteria.

The first indication was identified adjacent to TVA field weld 1-068F-W001-04 in Unit 1 reactor coolant pump No. 1 casing. An investigation by TVA confirmed the location of the potential deficiency to be in the base material with the appearance of casting shrinkage. During the NRC review of radiographs, a second indication was identified adjacent to TVA field weld 1-068B-W001-01A in the Westinghouse weld attaching the Unit 1 reactor vessel safe-end N-14-SE. TVA removed the portion of weld in question by cutting a "boat sample" to remove the indication for analysis.

The investigation of both potentially unacceptable indications confirmed that they were acceptable and in full compliance with the code. TVA restored each of the areas to their original configuration and radiographed them to show compliance with Section III acceptance criteria. Prior to their excavation both components had been fabricated to ASME Section III requirements, subjected to Section III hydrostatic test pressure, and code data reports furnished by the vendor to TVA.

- TVA will include a visual inspection of both welded areas during the hot functional testing of the reactor coolant system while subjected to the pressure test requirements of ASME Section XI, Article IWB-5000.

These actions reflect TVA's commitment to meet ASME Section III requirements for welding activities at WBN. The methodology of completing the required hydrostatic testing of welds completed since the last cold hydrostatic test of the reactor coolant system has been reviewed with the NRC resident inspector and independently reviewed and concurred with by Reedy Associates, Inc. A copy of the results from the Reedy Associates review is attached for your information.

REEDY ASSOCIATES, INC.
ENGINEERING MANAGEMENT CONSULTANTS

March 12, 1993
TVA-93-003

Mr. Nicholas C. Kazanas, Vice President
TENNESSEE VALLEY AUTHORITY
1101 Market Street
Chattanooga, Tennessee 37402

Subject: Technical Position by TVA Nuclear Engineering regarding Compliance with ASME Hydrostatic Testing Requirements

Dear Mr. Kazanas:

I have reviewed the following documents regarding TVA's commitment to the NRC for evaluating and repairing welds, and retesting the appropriate piping systems in the plant:

1. United States Nuclear Regulatory Commission Letter dated July 24, 1986 addressed to Mr. S. A. White, Manager of Nuclear Power, Tennessee Valley Authority, from B. J. Youngblood, Director PWR Project Directorage #4, Division of PWR Licensing-A with Docket Nos. 50-390 and 50-391.

2. Letter addressed to Mr. Harold R. Denton, Director, Office of Nuclear Reactor Regulation, dated December 5, 1986, from C. C. Mason, Acting Manager of Nuclear Power, Tennessee Valley Authority with attachments.

3. United States Government Memorandum from R. D. Schulz, Compliance Licensing Manager, ONP, Watts Barr Nuclear Plant, dated July 14, 1987, Subject: Watts Bar Nuclear Plant (WBN) - Nuclear Regulatory Commission (NRC) Meeting Response to the June 26, 1987 Meeting between the NRC and TVA.

4. Letter addressed to U. S. Nuclear Regulatory Commission, Attention: Document Control Desk, dated December 24, 1987, from R. Gridley, Director, Nuclear Licensing and Regulatory Affairs with attachments.

5. Licensing Transmittal to NRC Summary and Concurrence Sheet, dated 09/28/88 prepared by J. A. Cruise.

I have also read the "Technical Position by Nuclear Engineering on Compliance with ASME Hydrostatic Testing Requirements." On the basis of the commitments and the technical position by TVA Nuclear Engineering, I feel that you will, based on your hydrostatic testing commitments, meet all the requirements of the ASME Section III Code for repairing and hydrostatic testing the welds made by TVA.

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There were two welds required to be made because of excavations of questionable areas in radiographs. The questionable areas, however, were in the pressure vessel on one end of the piping system and in a vendor supplied pump on the other end. Therefore, the two welds were in components which had been N stamped by the vendors supplying the components. The excavations proved there were no problem areas, but the excavations were required to be welded to bring the configuration back to its original condition. Because these two excavations were in vendor supplied components which had been N stamped, the applicable requirements for hydrostatic testing are those contained in Section XI. It is my understanding that you have welded the excavations and examined then to the requirements in Section III of the Code.

Based on my knowledge of the Code and TVA's commitments, I can state with no reservations that the welding and hydrostatic testing to be performed by TVA fully comply with all of the requirements for new construction. Therefore, I believe that you have met both the written word and the intent of the commitments made to the NRC with regard to weld repairs, modifications and hydrostatic testing. For your information, I am enclosing a copy of my resume which indicates the extent of that background.

Very Truly Yours,

Roger F. Reedy

Roger F. Reedy

RFR:k
Enclosure