

July 9, 2007

Mr. William R. Campbell, Jr.  
Chief Nuclear Officer and  
Executive Vice President  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 - REQUEST FOR ADDITIONAL  
INFORMATION REGARDING INSERVICE INSPECTION REQUEST FOR  
RELIEF NO. PDI-2 (TAC NO. MD4448)

Dear Mr. Campbell:

By letter dated February 7, 2007, the Tennessee Valley Authority (TVA, the licensee) submitted Request for Relief (RR) No. PDI-2 is for the second 10-year inservice inspection interval at Watts Bar Unit 1. In RR No. PDI-2, TVA proposed to perform volumetric examinations on reactor pressure vessel nozzle-to-vessel welds at a reduced volume of ½ inch beyond the widest part of the boundary of the deposited weld material, in lieu of the requirements of the American Society of Mechanical Engineers Code, Section XI, Figures IWB-2500-7(a) and IWB-2500-7(b).

In order for the staff to complete its review of the information provided by the licensee, we request that TVA provide responses to the enclosed request for additional information (RAI). Based on discussions with your staff, we understand that you plan to respond to the enclosed RAI by July 27, 2007. If you have any questions about this material, please contact me at (301) 415-3974.

Sincerely,

Brendan T. Moroney, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: RAI

cc w/encl: See next page

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INFORMATION REGARDING INSERVICE INSPECTION REQUEST FOR  
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Dear Mr. Campbell:

By letter dated February 7, 2007, the Tennessee Valley Authority (TVA, the licensee) submitted Request for Relief (RR) No. PDI-2 is for the Second 10-year inservice inspection interval at Watts Bar Unit 1. In RR No. PDI-2, TVA proposed to perform volumetric examinations on reactor pressure vessel nozzle-to-vessel welds at a reduced volume of 1/2 inch beyond the widest part of the boundary of the deposited weld material, in lieu of the requirements of the American Society of Mechanical Engineers Code, Section XI, Figures IWB-2500-7(a) and IWB-2500-7(b).

In order for the staff to complete its review of the information provided by the licensee, we request that TVA provide responses to the enclosed request for additional information (RAI). Based on discussions with your staff, we understand that you plan to respond to the enclosed RAI by July 27, 2007. If you have any questions about this material, please contact me at (301) 415-3974.

Sincerely,

*/RAI*

Brendan T. Moroney, Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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Enclosure: RAI

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REQUEST FOR ADDITIONAL INFORMATION

SECOND 10-YEAR INSERVICE INSPECTION INTERVAL REQUEST FOR RELIEF NO. PDI-2

WATTS BAR NUCLEAR PLANT, UNIT 1

TENNESSEE VALLEY AUTHORITY

DOCKET NUMBER 50-390

Request for Relief (RR) No. PDI-2 is for the second 10-year inservice inspection interval, in which Watts Bar Nuclear Plant, Unit 1 adopted the 2001 Edition with addenda through the 2003 Addenda of the American Society of Mechanical Engineers (ASME) Code, Section XI as the ASME Code of record.

In its letter dated February 7, 2007, Tennessee Valley Authority (TVA) proposed to perform volumetric examinations on reactor pressure vessel nozzle-to-vessel welds at a reduced volume of ½ inch beyond the widest part of the boundary of the deposited weld material in lieu of the requirements of ASME Code, Section XI, Figures IWB-2500-7(a) and IWB-2500-7(b).

1. The “Justification For Granting Relief” states that “the examination volume required by [ASME Code, Section XI, Figures] IWB-2500-7(a) and (b) for the pressure retaining nozzle-to-vessel welds extends far beyond the weld and the heat effected zones into the base metal, and is unnecessarily large.”
  - a. Provide supplemental sketches showing the specific configuration nozzle-to-vessel weld and revised examination volume (including dimensions).
  - b. Provide a listing of components for which relief is being requested.
  - c. Identify the ultrasonic technique (manual or automated), nominal pipe diameters, and weldment material (ferritic, austenitic stainless steel, Inconel) that TVA is proposing to inspect.
  - d. Since TVA is complying with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(b)(2)(xv)(K)(1), and 10 CFR 50.55a(b)(2)(xv)(K)(2), will TVA be performing any examinations from the outside surface of the subject nozzles?
  - e. Clarify how TVA’s personnel will be able to locate the widest portion of the nozzle-to-vessel weld precisely. It is unclear how repaired areas extending beyond the ideal weld cross-sectional area are identified and how these areas will be examined. If personnel are to identify widest sections of the nozzle-to-vessel weld, specify what positive means of examination will be used to

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identify the weld extremities. Will the extremities be identified on both the inside and outside diameters of the nozzle to ensure complete coverage of the welds?

- f. Have the subject welds been previously ultrasonically examined using the examination volumes of ASME Code, Section XI, Figures IWB-2500-7(a) and (b)?

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## **WATTS BAR NUCLEAR PLANT**

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