NRR-PMDAPEm Resource

From: Minarik, Anthony
Sent: Monday, December 15, 2014 1:39 PM
To: Bryan, Robert H Jr (rhbryan@tva.gov)
Cc: Arent, Gordon (garent@tva.gov); Dion, Jeanne; Rezai, Ali; Alley, David
Subject: Official Transmittal of NRC RAI RE: Request for Alternative ISPT-03 (MF4970)
Attachments: WBN-1 RAI RfA ISPT-03 (MF4970) PP.DOC

By letter dated September 12, 2014 (ADAMS Accession No. ML14267A368), Tennessee Valley Authority submitted a relief request for Watts Bar Nuclear Plant, Unit 1. The relief request proposes an alternative to the requirements of American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Subparagraph IWB-5222(b), Inspection Item B15.10 to test the piping sections that are directly connected to the Reactor Coolant System (RCS), at a reduced pressure for the duration required by the code. The proposed alternative is requested on the basis that hardship or unusual difficulty exists in establishing a pressurized system configuration that will subject the impacted piping sections to RCS operating pressure. The purpose of this e-mail is to provide to TVA the U.S. Nuclear Regulatory Commission (NRC) staff's technical staff's request for additional information (RAI) related to the safety review of this relief request.

Please review the attached document and provide a written response by February 16, 2015.

If you have any questions please contact me.

Anthony Minarik
301-415-6185

Office of Nuclear Reactor Regulation (NRR)
Division of Operating Reactor Licensing (DORL)
Watts Bar Special Projects Branch (LPWB)

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0600-1545: Mon-Fri

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Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

REQUEST FOR ADDITIONAL INFORMATION
RELIEF REQUEST ISPT-03 REGARDING SYSTEM LEAKAGE TEST OF CLASS 1 PIPING
ISOLATED BETWEEN NORMALLY CLOSED VALVES
TENNESSEE VALLEY AUTHORITY
WATTS BAR NUCLEAR PLANT, UNIT 1
DOCKET NUMBER 50-390

By letter dated September 12, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14267A368), Tennessee Valley Authority (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (B&PV Code), Section XI. The relief request (RR) ISPT-03 pertains the IWB-5222(b) requirement for system leakage testing of the ASME Code Class 1 piping conducted at or near the end of the second 10-year inservice inspection (ISI) interval at the Watts Bar Nuclear Plant (Watts Bar), Unit 1.

The NRC staff requests the following additional information for its detailed safety evaluation.

1. For the chemical volume and control system (CVCS) piping segments listed in Table 1 of Enclosure to ISPT-03, the NRC staff notes that the licensee did not provide any discussions about these lines in Sections titled “Proposed Alternative and Basis for Use” and “Reason for Request” of ISPT-03. For the above piping segments, provide the proposed alternative, basis for use, and reason for request.

2. For those piping segments that are equipped with isolation and check valves, or two check valves, provide discussions regarding the radiation dose incurred by personnel including the safety hazards associated with performing activities such as opening the valve, bypassing the valve, using external hoses and pump, or modifying existing configurations of piping to accommodate pressurization of these lines in order to conduct the IWB-5222(b) required system leakage test. Provide an estimate for person-roentgen equivalent man (rem) exposure with consideration of an as low as reasonably achievable.

3. (a) Discuss whether there are any welded (e.g., full penetration butt weld or fillet weld) connections in the piping segments listed in Table 1 of Enclosure to ISPT-03. (b) Discuss whether these welds have been subjected to any nondestructive examinations (NDE) during previous inservice inspection or are included in the future inservice inspection program. (c) Discuss inspection results. (d) If these welds have not been inspected, provide justification.

4. The NRC staff notes that NRC Information Notice (IN) 2011-04, “Contaminants and Stagnant Conditions Affecting Stress Corrosion Cracking in Stainless Steel Piping in Pressurized water Reactors,” discusses potential stress corrosion cracking (SCC) in the stainless steel piping. Discuss any operating experience regarding SCC of the welds in the subject piping segments.

5. Discuss any operating experience regarding thermal fatigue in the subject piping segments.

6. (a) For the segments of piping for which relief is being requested, identify any pressure boundary leakage regardless of how it was identified (e.g., from the ASME Code,

Section XI, Table IWB-2500-1, Category B-P pressure testing requirements, boric acid corrosion control program walkdowns, or reactor restart walkdowns) during the current 10-year inservice inspection interval. (b) If leakage occurred in the subject piping, discuss the extent of condition assessment and any compensatory measure(s) taken.