From:	Kalyanam, Kaly
To:	MASON, MICHAEL E (WF3)
Cc:	POLLOCK, JIM; WILLIAMS, JOE D
Subject:	RAI on Waterford 3"s "Request for Alternative W3-ISI-020, ASME Code Case N-770-1 Baseline Examination Request for Alternative."
Date:	Monday, November 05, 2012 9:13:00 AM

Mike,

By letter dated October 16, 2012, Entergy Operations, Inc. (Entergy) made a request to NRC for approval to "Request for Alternative W3-ISI-020, ASME Code Case N-770-1 Baseline Examination Request for Alternative." The TAC No. for this request is ME9801.

The NRC Staff has reviewed the and determined that we require additional information to complete our review. A request for additional information is below.

In view of the very short turnaround time you have requested (December 1, 2012), the staff requests you to provide a response to this RAI as soon as possible but no later than November 15, 2012.

Thanks

Kaly N. Kalyanam
Project Manager, ANO 1&2 and Waterford 3

REQUEST FOR ADDITIONAL INFORMATION
ASME CODE CASE N-770-1 BASELINE EXAMINATION
ENTERGY OPERATIONS, INC
WATERFORD STEAM ELECTRIC STATION, UNIT 3
DOCKET NUMBER 50-382

By letter dated October 16, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12296A241), Entergy Operations, Inc (the licensee) submitted proposed alternative W3-ISI-020, "ASME Code Case N-770-1 Baseline Request for Alternative," for U. S. Nuclear Regulatory Commission (NRC) review and authorization. The proposed alternative is related to acceptance of a previous examination of nickel-based Alloy 82/182 dissimilar metal butt welds to satisfy the baseline examination of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Case N-770-1, as required and conditioned by Title 10 of the *Code of Federal Regulations*, Part 50, paragraph 55a(g)(6)(ii)(F)(3), at the Waterford Steam Electric Station, Unit 3. In order to complete our review, the NRC staff requests additional information.

1. Have the crowns of the subject welds been contoured by machining in order to improve circumferential scan coverage?

2. Please provide a copy of the performance demonstration qualification summary

(PDQS) and identify any specific limitations associated with the scope of the SI-UT-130 Rev. 3 ultrasonic (UT) examination procedure.

3. Section 5 of the proposed alternative, “Proposed Alternative and Basis for Use,” states that the SI-UT-130 Rev. 3 UT procedure has been successfully qualified for single-sided axial scan examination, per the requirements of the ASME Code, Section XI, Appendix VIII

    a. Explain why axial scan coverage of the susceptible material past the weld centerline was not credited

    b. Provide data for the axial scan coverage of the susceptible material for the inner 1/3 wall thickness for each of the subject welds, crediting scan coverage of the susceptible material ensonified past the weld centerline

        i. For each weld where the axial scan coverage of the susceptible material is less than 100 percent, provide a circumferential cross sectional map indicating the unexamined zone (crediting scan coverage past the weld centerline) and the size of largest potential flaw in the susceptible material within the unexamined zone

    c. Provide data for the circumferential scan coverage of the susceptible material for the inner 1/3 of wall thickness of each of the subject welds

        i. For each weld where the circumferential scan coverage of the susceptible material is less than 100 percent, please provide an axial cross sectional map indicating the unexamined zone and the size of largest potential flaw in the susceptible material within the unexamined zone

4. The request for alternative states that circumferential indications were found in safety injection nozzle welds 08-009 and 10-008 during the June 2011 refueling outage examinations and that they were determined to be acceptable per ASME Code, Section XI, Table IWB-3514-1

    a. Were the indications found in the initial construction radiographic examination?

    b. Table IWB-3514-1 gives the acceptance standards for planar flaws in ferritic steels. Were the circumferential indications planar and in the ferritic material? If not, justify the use of Table IWB-3514-1 for flaw acceptability

    c. The 2007 Edition with the 2008 Addenda of the ASME Code, Section XI, paragraph IWB-3514 states “The acceptance standards of IWB-3514 do not apply to planar surface flaws in UNS N06600, N06082, or W86182 in BWR or PWR environments.” If the circumferential indications are in the susceptible weld material

        i. Justify using Table IWB-3514-1 for flaw acceptability and not Table IWB-3514-2 per IWB-3514.4(b)

ii. Are the indications planar? If determined to be not planar, justify this determination

iii. Are the indications connected to the inside surface of the pipe, i.e., surface-connected in contact with coolant? If determined to be not surface connected, justify this determination

iv. If the indications are planar and inside surface connected

1. Provide maps showing the scale of the drawing and the location, depth and length of the indications

2. Provide an analytical PWSCC flaw growth evaluation for each of the indications

3. What is the aspect ratio of each of these indications?

4. What is the wall thickness?

5. What is the length of the safe end (center to center) for these welds?