Burkhardt, Janet

From: Singal, Balwant
Sent: Friday, November 13, 2015 8:36 AM
To: 'Hope, Timothy' (Timothy.Hope@luminant.com)
Cc: 'Jack.Hicks@luminant.com' (Jack.Hicks@luminant.com); Burkhardt, Janet
Subject: Request for Additional Information (RAI) - Relief Request B-10 (CAC No. MF6555)
Attachments: RAI-MF6555-RR-B10.docx

Tim,

By letter dated August 3, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML15224B363), Luminant Generation Company LLC requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Relief Request (RR) B-10 pertains to the examination coverage of the safety injection system elbow to pipe weld at the Comanche Peak Nuclear Power Plant, Unit 2.

The NRC staff requests for the attached additional information to complete the review of this RR.

Draft RAI were transmitted on November 6, 2015. Jack Hicks of your organization informed the NRC staff on November 12, 2015 that a clarification call is not needed.

Please treat this e-mail as formal transmittal of RAIs. You are requested to respond to this RAI request within 30 days from the date of this e-mail.

Thanks.

REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST B--10

LUMINANT GENERATION COMPANY LLC

COMANCHE PEAK NUCLEAR POWER PLANT, UNIT 2

DOCKET NUMBER 50-446

By letter dated August 3, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML15224B363), Luminant Generation Company LLC (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Relief Request (RR) B-10 pertains to the examination coverage of the safety injection system elbow to pipe weld at the Comanche Peak Nuclear Power Plant, Unit 2.

To complete its review, the U.S. Nuclear Regulatory Commission (NRC) staff requests the following additional information.

1. Please clarify whether it would be possible to remove structural restraints to increase the examination coverage, and discuss any impracticality associated with removal of structural restraints and any burden that may be caused.

2. Section 2 of the RR, states;

> The applicable ASME Boiler and Pressure Vessel Code (hereafter referred to as the "Code") edition and addenda is ASME Section XI, "Rule for Inservice Inspection of Nuclear Power Plant Components," 1998 Edition, through 2000 Addenda. In addition, as required by 10 CFR [Title 10 of *Code of Federal Regulations*] 50.55a, ASME Section XI, 1995 Edition, 1996 Addenda is used for Appendix VIII, Performance Demonstration for Ultrasonic Examination System.

The NRC staff notes that pursuant to 10 CFR 50.55a(b)(2)(xv), "Section XI condition: Appendix VIII specimen set and qualification requirements," licensees using Appendix VIII in the 1995 Edition through the 2001 Edition of the ASME Code may elect to comply with all of the provisions in paragraphs (b)(2)(xv)(A) through (M) of 50.55a, except for paragraph (b)(2)(xv)(F) of 50.55a, which may be used at the licensee's option. Licensees using editions and addenda after 2001 Edition through the 2006 Addenda must use the 2001 Edition of Appendix VIII and may elect to comply with all of the provisions in paragraphs (b)(2)(xv)(A) through (M) of 50.55a, except for paragraph (b)(2)(xv)(F) of 50.55a, which may be used at the licensee's option.

   a. Please clarify if 1998 Edition through 2000 Addenda to the ASME Code, Section XI, Appendix VIII, was used for ultrasonic testing (UT) personnel qualification and procedures demonstration.
   b. Please provide justification if other editions and addenda were used.

Enclosure

3. Please provide the following information:

    a. Material specifications (e.g., austenitic stainless steel pipes SA-376, TP-304 and austenitic stainless steel ER-308 weldment) for the welds and associated components (e.g., pipe, and elbow).
    b. Thickness of each pipe.

4. Please describe the following:

    a. The inservice inspection (ISI) history (i.e., inspection years, disposition of detected flaws, extent of condition assessment, and corrective actions).
    b. Whether the licensee identified any indications during construction and preservice inspections (i.e., radiographic testing or surface examination, or both) on the volume not covered by UT.
    c. Disposition of identified flaws.

5. Given the reduced inspection coverage of the welds under consideration, please discuss the following:

    a. Any walkdowns (e.g., under Boric Acid Corrosion Control Program or normal operator rounds) usually performed to monitor and identify leakage in an unlikely event of a through wall leak.
    b. Reactor coolant system leakage detection capabilities at the plant, or any measures taken, to monitor and identify leakage during operation in an unlikely event of a through wall leak in the weld under consideration.

6. In an unlikely event of a potential though wall flaw and leakage, please discuss significance of the leak and potential for structural failure of the subject weld.

7. Please discuss any industry or plant-specific operating experience regarding potential degradation (e.g., stress corrosion cracking, corrosion, and fatigue) and potential severe loading (e.g., vibration, water hammer, and overloading) for the subject weld and associated components.

8. Please discuss whether use of alternative volumetric examination techniques (e.g., the radiographic testing and phased array UT) would increase examination coverage.

9. Section 4 of the RR, states;

    > The examinations of the subject piping welds were limited by the closeness of the piping welds to safety injection piping structural restraints, attached to the steam generator lower beam. This configuration limited portions of the weld volume from being examined.

    Given the reduced inspection coverage of the weld under consideration, please clarify whether the licensee's UT inspected the weld root and heat affected zone of base materials typically susceptible to high stresses and potential degradation.

10. Please discuss whether this weld has been subjected to augmented inspection program in accordance with Bulletin (BL)-79-17 “Pipe Cracks in Stagnant Borated Water Systems at PWR [Pressurized Water Reactors] Plants,” (Legacy Accession No. 7908220137)

11. Section 4 of the RR, the licensee stated that it determined that Weld Number TCX-1-4301-9, that is also valve to pipe weld and have similar restraint and subject to similar degradation mechanism, is the only weld that provides essentially 100 percent coverage. Will the licensee plan to examine this weld in the next 10-year interval?