

## NRR-PMDAPEm Resource

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**From:** Singal, Balwant  
**Sent:** Monday, June 22, 2015 4:34 PM  
**To:** 'Hope, Timothy' (Timothy.Hope@luminant.com)  
**Cc:** 'Jack.Hicks@luminant.com' (Jack.Hicks@luminant.com)  
**Subject:** Request for Additional Information - Relief Request 2A3-1 (TAC No. MF5813)  
**Attachments:** MF5813-RAI.docx

Tim:

By letter dated March 4, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML15083A085), Luminant Generation Company LLC (Luminant, the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). Specifically, the licensee's relief request 2A3-1 pertains to the risk informed inservice inspection (RI-ISI) program for the Class 1 and 2 piping at Comanche Peak Nuclear Power Plant, Unit 2.

The U.S. Nuclear Regulatory Commission (NRC) staff requires additional information described in the attachment to complete its review. Draft Request for Additional Information (RAI) was transmitted via e-mail on June 17, 2015. Mr. Jack Hicks of Luminant informed us on June 22, 2015 that a clarification is no needed. Please provide your response to the request within 30 days from the date of this e-mail.

Please treat this email as formal RAI.

Thanks.

Balwant K. Singal  
Senior Project Manager, Comanche Peak and Columbia  
[Balwant.singal@nrc.gov](mailto:Balwant.singal@nrc.gov)  
301-415-3016

**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 2169

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**Received Date:** 6/22/2015 4:34:00 PM  
**From:** Singal, Balwant

**Created By:** Balwant.Singal@nrc.gov

**Recipients:**

"'Jack.Hicks@luminant.com' (Jack.Hicks@luminant.com)" <Jack.Hicks@luminant.com>

Tracking Status: None

"'Hope, Timothy' (Timothy.Hope@luminant.com)" <Timothy.Hope@luminant.com>

Tracking Status: None

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REQUEST FOR ADDITIONAL INFORMATION  
RELIEF REQUEST 2A3-1 REGARDING RISK INFORMED INSERVICE INSPECTION  
PROGRAM FOR THE CLASS 1 AND 2 PIPING  
LUMINANT GENERATION COMPANY LLC  
COMANCHE PEAK NUCLEAR POWER PLANT, UNIT 2  
DOCKET NUMBER 50-446

By letter dated March 4, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML15083A085), Luminant Generation Company LLC (Luminant, the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI requirements. Specifically, the licensee's relief request (RR) 2A3-1 pertains to the risk informed inservice inspection (RI-ISI) program for the Class 1 and 2 piping at Comanche Peak Nuclear Power Plant (CPNPP), Unit 2.

The U.S. Nuclear Regulatory Commission (NRC) staff requires the following additional information to complete its review.

1. Of the welds not selected for future examinations, did the previous examinations identify any service induced degradation? If service induced degradation was identified, please discuss the degradation mechanism. Please discuss the corrective actions taken to mitigate the degradation?
2. Please identify any augmented inspection programs subsumed in the proposed third 10-year interval RI-ISI program and discuss the reason(s) for any changes. Examples include: augmented program for managing thermal fatigue (NRC Bulletin (BL) 88-11<sup>1</sup>, Generic Letter (GL) 89-08<sup>2</sup>, NRC Information Notice (IN) 93-20<sup>3</sup>, and Materials Reliability Program (MRP)-146<sup>4</sup>, augmented program for addressing stress corrosion cracking (BL 79-17<sup>5</sup>), augmented program to address the requirements of 10 CFR 50.55a(g)(6)(ii)(E) that requires implementation of ASME Code Case N-722-1<sup>6</sup> with conditions, augmented program for piping welds in high energy main steam and main Feedwater piping (NRC NUREG-0800, Standard Review Plan 3.6.2<sup>7</sup>, and augmented program for inspection of feedwater system piping (NRC BL 79-13)<sup>8</sup>.
3. The NRC staff notes that the licensee did not specify in RR 2A3-1 whether it will review and update the proposed third 10-year CPNPP, Unit 2, RI-ISI program on a regular basis (e.g., at least on the basis of the ASME Code periods, more frequently if dictated by any plant procedure to update the probabilistic risk assessment (PRA), or as new degradation mechanisms are identified). Please clarify whether the licensee will

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<sup>1</sup> Bulletin 88-11: Pressurizer Surge Line Thermal Stratification (Legacy Accession No. 8812150118).

<sup>2</sup> Generic Letter 89-08: Erosion/Corrosion-Induced Pipe Wall Thinning (Legacy Accession No. 8905040276).

<sup>3</sup> Information Notice 93-20: Thermal Fatigue Cracking of Feedwater Piping to Steam Generators (Legacy Accession No. 9303180065).

<sup>4</sup> Electric Power Research Institute (EPRI) Material Reliability Program: Management of Thermal Fatigue in Normally Stagnant Non-Isolable Reactor Coolant System Branch lines (MRP-146), June 2005 (ADAMS Accession No. ML071640259).

<sup>5</sup> Bulletin 79-17: Revision 1, Pipe Cracks in Stagnant Borated Water Systems in PWR [Pressurized Water Reactors] Plants (Legacy Accession No. 7908220137).

<sup>6</sup> Code Case N-722-1, Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated With Alloy 600/82/182 Materials.

<sup>7</sup> Standard Review Plan 3.6.2, Revision 2, "Determination of Rupture Locations and Dynamic Effects Associated with the Postulated Rupture of Piping," (ADAMS Accession No. ML070660494).

<sup>8</sup> Bulletin 79-13: Cracking in Feedwater System Piping (Legacy Accession No. 7906250348).

implement a monitoring program to review and update the proposed RI-ISI program for the third 10-year ISI interval in accordance with the guidance in NRC Regulatory Guides (RGs) 1.174<sup>9</sup> and 1.178<sup>10</sup>.

4. In Section 4.0 of the NRC safety evaluation report of EPRI TR-112657, Revision B-A, "Revised Risk-Informed Inservice Inspection Evaluation Procedure," (ADAMS Accession No. ML013470102), the NRC staff concluded that a licensee requesting to implement an RI-ISI program pursuant to 10 CFR 50.55a(z)(1) may incorporate into its application, by reference, the program described in EPRI TR-112657, Revision B-A, together with appropriate plantspecific information, provided that the application includes, among other items, a summary of the risk impact of the changes to the ISI program.

The licensee stated in its application dated March 4, 2015 that a new risk impact analysis was performed, and that the revised RI-ISI program continues to represent a risk reduction when compared to the last deterministic ASME Code, Section XI, inspection program.

To demonstrate that the acceptance criteria of EPRI TR-112657, Revision B-A, for change in CDF and LERF per system are met, please provide tabulated values for the system level changes in CDF and LERF (i.e., the changes in CDF and LERF compared between the ASME Code ISI program and the CPNPP, Unit 2, third 10-year RI-ISI program). For an example, please refer to Tables 3.6.1 and 3.6.2 of Luminant letter dated February 15, 2001 (ADAMS Accession Number ML010520269) requesting relief from the ASME Code, Section XI examination requirements for inservice inspection of Class 1 and 2 piping welds for CPNPP, Units 1 and 2.

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<sup>9</sup> Regulatory Guide 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," May 2011 (ADAMS Accession No. ML100910006).

<sup>10</sup> Regulatory Guide 1.178, Revision 1, "An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping," September 2003 (ADAMS Accession No. ML032510128).