

Callaway2COLPEm Resource

From: Surinder Arora
Sent: Wednesday, April 22, 2009 7:32 AM
To: Shafer, David E
Cc: Callaway2COL Resource; Joseph Colaccino; Ann Hodgdon; David Terao; John Honcharik; Michael Miernicki; NPUnit2-EPR@ameren.com
Subject: Final RAI N0. 7 (eRAI 2432) - Public
Attachments: FINAL RAI 2432.doc

Dave,

Attached please find the subject request for additional information (RAI). A draft of this RAI was provided to you on April 6, 2009. Based on the e-mail dated April 14, 2009, from Roger Wink, no phone call was necessary to discuss this RAI.

The schedule we have established for review of your application assumes technically correct and complete responses within 30 days of receipt of RAIs. For any RAIs that cannot be answered within 30 days, it is expected that a schedule date for submitting your technically correct and complete response will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the review schedule.

Thanks.

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Hearing Identifier: CallawayPlant_Unit2_COL_Public
Email Number: 32

Mail Envelope Properties (CB87FC66F95637428C5E0D066E756B6FAD8A173F1C)

Subject: Final RAI N0. 7 (eRAI 2432) - Public
Sent Date: 4/22/2009 7:32:01 AM
Received Date: 4/22/2009 7:32:04 AM
From: Surinder Arora

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Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	966	4/22/2009 7:32:04 AM
FINAL RAI 2432.doc	30202	

Options

Priority: Standard
Return Notification: No
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Expiration Date:
Recipients Received:

Request for Additional Information No. 2432 Revision 0

4/22/2009

Callaway Unit 2

AmerenUE

Docket No. 52-037

SRP Section: 03.05.01.03 - Turbine Missiles

Application Section: 3.5.1.3

QUESTIONS for Component Integrity, Performance, and Testing Branch 1 (AP1000/EPR Projects)
(CIB1)

03.05.01.03-1

COL information item 3.5-2 in the U.S. EPR Rev. 0, FSAR, Tier 2, Ch. 1, Table 1.8-2 states that the COL applicant will confirm that the evaluation of the probability of turbine missile generation for the selected turbine generator, P1, is less than 1×10^{-4} for turbine-generators favorably oriented with respect to containment. Section 3.5.1.3 of the Callaway COL FSAR, Revision 2 states that a turbine missile analysis has been developed for the selected turbine design, and includes charts on missile generation probabilities of turbine rotor failure versus service time for the high pressure/intermediate pressure and low pressure turbine rotors consistent with the guidance in RG 1.115, and is available for review. It should be noted that Section 10.0 of the Callaway COL FSAR states that the turbine generator is an Alstom design. Section 10.2 states that it meets the requirements of Section 10.2 of the U.S. EPR FSAR. To determine whether the turbine missile generation probability is less than 1×10^{-4} , which establishes the inspection interval of the turbine rotors, the staff requests that the applicant provide the turbine missile generation probability analysis to the staff for review.

03.05.01.03-2

Section 3.5.1.3 of the Callaway COL FSAR, Revision 2 states that the turbine rotor inspection program is described in the U.S. EPR FSAR, Section 10.2, and is consistent with the turbine manufacturer's recommended inspection intervals required to meet the calculated failure probability of the turbine rotor. In response to staff's RAIs, AREVA stated that U.S. EPR FSAR, Tier 2, Section 10.2.3.6 will be changed to perform inservice inspections consistent with the inspection intervals from the turbine manufacturer's turbine missile analysis provided by the COL applicant. A COL applicant that references the U.S. EPR FSAR will provide a site-specific turbine rotor inservice inspection interval consistent with the turbine manufacturer's turbine missile analysis. Therefore, the NRC staff requests that the corresponding turbine inspection program description, including the inspection interval that follows the guidance of SRP Sections 3.5.1.3 and 10.2.3 be submitted to the staff for review in order to meet the requirements of GDC 4, "Environmental and Dynamic Effects Design Bases" of 10 CFR Part 50, Appendix A.