Callaway2COLPEm Resource

From: Surinder Arora
Sent: Monday, April 06, 2009 10:49 AM
To: Shafer, David E
Cc: Callaway2COL Resource; David Terao; John Honcharik; Michael Miernicki; Ann Hodgdon; Joseph Colaccino; NPUnit2-EPR@ameren.com
Subject: Draft RAI No. 7 (eRAI No. 2432) - Public
Attachments: RAI 2432.doc

Dave,

Attached is DRAFT RAI No. 7 (eRAI No. 2432). You have until April 20, 2009 to review it and decide whether you need a conference call to discuss it. After the call or after April 20, 2009, the RAI will be finalized and sent to you for response. You will then have 30 days to respond.

SURINDER ARORA, PE
PROJECT MANAGER,
Office of New Reactors
US Nuclear Regulatory Commission

Phone: 301 415-1421
FAX: 301 415-6077
Email: Surinder.Arora@nrc.gov

Hearing Identifier: CallawayPlant_Unit2_COL_Public
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From: Surinder Arora

Created By: Surinder.Arora@nrc.gov

Recipients:
"Callaway2COL Resource" <Callaway2COL.Resource@nrc.gov>
Tracking Status: None
"David Terao" <David.Terao@nrc.gov>
Tracking Status: None
"John Honcharik" <John.Honcharik@nrc.gov>
Tracking Status: None
"Michael Miernicki" <Michael.Miernicki@nrc.gov>
Tracking Status: None
"Ann Hodgdon" <Ann.Hodgdon@nrc.gov>
Tracking Status: None
"Joseph Colaccino" <Joseph.Colaccino@nrc.gov>
Tracking Status: None
"NPUnit2-EPR@ameren.com" <NPUnit2-EPR@ameren.com>
Tracking Status: None
"Shafer, David E" <DShafer@ameren.com>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

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4/6/2009

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.