ArevaEPRDCPEm Resource

From: Tesfaye, Getachew
Sent: Thursday, April 05, 2012 3:42 PM
To: 'usepr@areva.com'
Cc: Hayes(NRO), Michelle; Lu, Shanlai; Schmidt, Jeffrey; Donoghue, Joseph; Gleaves, Bill; Segala, John; ArevaEPRDCPEm Resource
Subject: Draft - U.S. EPR Design Certification Application RAI No. 544 (6411), FSAR Ch. 4 - NEW PHASE 4 RAI
Attachments: Draft RAI_544_SRSB_6411.doc

Attached please find draft RAI No. 544 regarding your application for standard design certification of the U.S. EPR. If you have any question or need clarifications regarding this RAI, please let me know as soon as possible, I will have our technical Staff available to discuss them with you.

Please also review the RAI to ensure that we have not inadvertently included proprietary information. If there are any proprietary information, please let me know within the next ten days. If I do not hear from you within the next ten days, I will assume there are none and will make the draft RAI publicly available.

Thanks,
Getachew Tesfaye
Sr. Project Manager
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Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 3867

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Request for Additional Information No. 544(6411), Revision 0

4/5/2012

U. S. EPR Standard Design Certification
AREVA NP Inc.
Docket No. 52-020
SRP Section: 04.04 - Thermal and Hydraulic Design
Application Section: 4.4

QUESTIONS for Reactor System, Nuclear Performance and Code Review (SRSB)

04.04-67

OPEN ITEM

New Phase 4 RAI

Reference: March 15, 2012 letter from J. Sam Armijo, Chairman, Advisory Committee on Reactor Safeguards (ACRS), “Chapters 6,7,11,13,15,16, and 18 of the Safety Evaluation Report with Open Items associated with the U.S. Evolutionary Power Reactor Design Certification Application”

The response to RAI 16 on ANP-10287 “Incore Trip Setpoint and Transient Methodology for U.S. ERP,” states that when a global 3-loop flow signal is received, the DNBR algorithm replaces the reference volumetric flow rate with a constant lower volumetric flow rate consistent with three pump operation. Does this lower flow rate capture the effects of reduced coolant flow, reverse flow, and penalties associated with non-uniform flow?

04.04-68

OPEN ITEM

New Phase 4 RAI

Reference: March 15, 2012 letter from J. Sam Armijo, Chairman, Advisory Committee on Reactor Safeguards (ACRS), “Chapters 6,7,11,13,15,16, and 18 of the Safety Evaluation Report with Open Items associated with the U.S. Evolutionary Power Reactor Design Certification Application”

The transient in Section 15.4.4 “Startup of an Inactive Reactor Coolant Pump at an Incorrect Temperature” does not capture all potential operating points described in technical specification (TS) 3.4.4. Provide an analysis demonstrating DNBR margin is maintained for the most limiting operation allowed by this technical specification, including operation just below the P3 permissive. This analysis should justify the statement in FSAR Section 7.2.1.3.2 that the P3 permissive setpoint value corresponds to the value below which loss of one reactor coolant pump does not lead to risk of DNB.