

July 22, 2010

Mr. Thomas E. Sliva
Vice President
New Plants Projects
AREVA NP Inc.
3315 Old Forest Road
Lynchburg, VA 24506-0935

SUBJECT: STATUS OF U.S. EPR DESIGN CERTIFICATION APPLICATION REGARDING
DIGITAL INSTRUMENTATION AND CONTROLS REVIEW

Dear Mr. Sliva:

This is in response to your letter of July 1, 2010, regarding outstanding issues addressing U.S. EPR design certification digital instrumentation and controls review.

On June 25, 2010, the U.S. Nuclear Regulatory Commission (NRC) staff met with AREVA NP Inc. (AREVA NP), to discuss the results of the review of the proposed digital instrumentation and controls (I&C) design for the U.S. EPR design certification application currently under NRC review.

During the June 25, 2010, public meeting, AREVA NP described proposed design changes intended to reduce the level of complexity as well as address some of the inter-communication issues which need to be resolved to demonstrate compliance with the regulations. AREVA NP also described certain areas where it felt that changes to the design were not advisable. In a letter dated July 1, 2010, AREVA NP committed to provide closure plans that define the scope and schedule for the proposed design changes. In those areas where AREVA NP proposes to maintain the current design, AREVA NP requested an opportunity to meet again with the staff to present more detailed justification for the current design.

The staff believes that AREVA NP understands the concerns of the NRC, and has identified design changes that should address several areas of concern. As identified in AREVA NP's presentation, other areas remain to be addressed to achieve resolution. Specifically, those areas in which AREVA NP proposes to maintain the current design may not meet NRC regulations for independence.

AREVA NP's letter addresses the staff's identified positions as discussed in the meeting and further outlined below. The underlying issues have been discussed in previous public meetings and other interactions.

First, to address the staff's position that the docketed design of the U.S. EPR I&C safety system architecture has not been demonstrated to meet NRC regulations for independence, the staff recommends that AREVA NP revise the design such that each safety division can perform its

function without relying on information originating from outside the safety division and is protected from adverse influence from outside the division.

Second, to address the staff's position that the docketed design of the U.S. EPR I&C safety data communication systems has not been demonstrated to meet NRC regulations for independence, the staff recommends that AREVA NP follow the NRC-approved guidance on bi-directional communications, or fully describe an alternative method of assuring safety system independence.

AREVA requested, and the staff agreed, that in order to resolve these two concerns, further interactions between the staff and AREVA are necessary. The staff agreed to support these interactions during July and September 2010, to expedite resolution.

Third, to address the staff position that the design architecture is highly complex, AREVA NP has proposed significant architectural changes specifically directed at this issue. The complexity has also been affecting the staff's ability to reach a finding on safety in the timeframe desired by AREVA NP and the combined license applicants referencing this design. The staff understands that these changes have significant impacts and will review these changes expeditiously to determine if the concern has been resolved.

Your July 1, 2010, letter also discussed AREVA NP's expectation and the desire to minimize schedule impacts on the design certification review. While the NRC desires to reestablish the review schedule with the least amount of impact to the established public milestones, given that all aspects of redress have not been agreed upon, and all additional review submittals have not been scheduled, the NRC cannot revise this aspect of the review schedule until the design change information has been received and its impact assessed. Once sufficient information is received, the NRC will move expeditiously to reestablish these review activities.

If you have any questions regarding this matter, please contact the lead project manager Getachew Tesfaye at 301-415-3361 or via e-mail at getachew.tesfaye@nrc.gov.

Sincerely,

/RA/

David B. Matthews, Director
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-020
cc: See next page

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If you have any questions regarding this matter, please contact the lead project manager Getachew Tesfaye at 301-415-3361 or via e-mail at getachew.tesfaye@nrc.gov.

Sincerely,

/RA/

David B. Matthews, Director
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-020

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*by email

NRO-002

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Letter to Thomas E. Sliva from David B. Matthews dated July 21, 2010

SUBJECT: STATUS OF U.S. EPR DESIGN CERTIFICATION APPLICATION REGARDING
DIGITAL INSTRUMENTATION AND CONTROLS REVIEW

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(Revised 06/23/2010)

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