

March 26, 2008

Ms. Sandra M. Sloan
Manager of Regulatory Affairs
New Plants Deployment
AREVA NP Inc.
3315 Old Forest Road
Lynchburg, VA 24506-0935

SUBJECT: AREVA NP INC. - U.S. EPR STANDARD DESIGN CERTIFICATION
APPLICATION REVIEW SCHEDULE

Dear Ms. Sloan:

By letter dated December 11, 2007, as supplemented by letters dated February 7 and February 20, 2008, AREVA NP Inc. (AREVA) submitted an application to the Nuclear Regulatory Commission (NRC) for a standard design certification (DC) of the U.S. Evolutionary Power Reactor (EPR), pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." By letter dated February 25, 2008, the NRC staff docketed the application and informed AREVA of its intention to publish a schedule for the detailed review of the application within 30 days. This letter transmits that schedule.

The established review schedule reflects tasks for all six phases of the safety review, from the start of review until the final safety evaluation report (FSER) with no open items is issued. The review officially began on March 19, 2008, and the safety review supports the issuance of a FSER in May 2011. Milestones for the six phases of the DC review as well as the supporting topical reports that are currently under review are provided in the enclosure to this letter. As discussed in the March 13, 2008, public meeting, the following areas may introduce significant uncertainty into the review schedule if not adequately addressed in Phase 1 of the staff's review.

1. The U.S. EPR design does not rely on active containment cooling systems for post-accident containment mixing. As a result, to adequately justify the level of mixing in the containment and the level of steam condensation in the reactor coolant system credited in the post-accident analysis, the staff anticipates requesting additional information which may require long lead items to properly address the issue.
2. The proposed use of earthquake experience and/or test experience approach for seismic and dynamic qualification of mechanical and electrical equipment is highly dependent on the selection of equipment and the type of experience database proposed. AREVA will be requested to submit the database and the equipment to be qualified. Based on past experience with similar applications, it has taken longer than anticipated to complete the review. If AREVA chooses to proceed with this approach the scheduled may be impacted.

3. AREVA has proposed to use M5™ cladding material for the U.S. EPR fuel. M5™ fuel cladding material has exhibited unanticipated axial growth in current operating plants. Resolution of this issue and its impact on EPR design is unknown.
4. AREVA has submitted four topical reports that are incorporated by reference in the accident analyses and fuel design chapters of the U.S. EPR Final Safety Analysis Report. If issues arise regarding the use of new methodologies in these topical reports, they may impact the review schedule.
5. The staff will require additional information to address emergency core cooling system strainer downstream effects on post-loss-of-coolant accident long-term core cooling with recirculation flow. Based on past experience with operating plants, resolution of this issue may take longer than anticipated. This is an industry-wide issue and the resolution of it is uncertain.

The staff will evaluate this schedule when the safety evaluation report with open items is issued (i.e., at the end of Phase 2). At that point, the staff may establish new milestones in Phases 4 through 6 based on the number and complexity of the open items. The schedule assumes technically correct and complete responses within 30 days of receipt to NRC's requests for additional information (RAIs). For any RAIs that cannot be answered within 30 days, it is expected that a date for receipt of this information will be provided to the staff within the 30 day period so that the staff can assess how this information will impact the published schedule. In addition, any new and significant changes or additions to the DC application or supporting documentation could impact scheduled completion dates.

It is the staff's intent to establish a predictable review schedule and a review process that supports identification and resolution of complex issues as early in the review as possible. To that end, the staff intends to interact with AREVA as the review progresses to address open items, schedule details, and potential schedule refinements.

S. Sloan

- 3 -

If you have any questions or comments concerning this matter, I can be reached at 301-415-3361 or via e-mail address at getachew.tesfaye@nrc.gov.

Sincerely,

/RA/

Getachew Tesfaye, Sr. Project Manager
EPR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-020

Enclosure:
As stated

cc: See next page

S. Sloan

- 3 -

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AREVA NP Inc. – U.S. EPR Design Certification Application Review Milestones

Task	Target Date
Phase 1 - Preliminary Safety Evaluation Report (SER) and Request for Additional Information (RAI)	Jan 28, 2009
Phase 2 - SER with Open Items	Nov 20, 2009
Phase 3 – Advisory Committee on Reactor Safeguards (ACRS) Review of SER with Open Items	Mar 5, 2010
Phase 4 - Advanced SER with No Open Items	November 2010
Phase 5 - ACRS Review of Advanced SER with No Open Items	March 2011
Phase 6 – Final SER with No Open Items	May 2011

Topical Reports Draft Safety Evaluation

Topical Report	Target Date
ANP-10264(NP), Revision 0, "U.S. EPR Piping Analysis and Pipe Support Design"	May 30, 2008
ANP-10272, "Software Program Manual TELEPERM XS™ Safety Systems Topical Report"	Jul 14, 2008
ANP-10273P, "AV42 Priority Actuation and Control Module Topical Report"	Nov. 20, 2008
ANP-10278P, Revision 0, "U.S. EPR Realistic Large Break Loss of Coolant Accident Topical Report"	July 15, 2008
ANP-10279, "U.S. EPR Human Factors Engineering Program Topical Report"	Oct 15, 2008
ANP-10281P, "U.S. EPR Digital Protection System Topical Report"	Sep 05, 2008
ANP-10284, "U.S. EPR Instrumentation and Control Diversity and Defense-in-Depth Methodology Topical Report"	Nov 13, 2008
ANP-10285P, "U.S. EPR Fuel Assembly Mechanical Design Topical Report"	Aug 21, 2008
ANP-10286P, "U.S. EPR Rod Ejection Accident Methodology Topical Report"	May 31, 2009
ANP-10287P, "Incore Trip Setpoint and Transient Methodology for U.S. EPR Topical Report"	May 31, 2009