



March 27, 2007
NRC:07:011

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Request for Review and Approval of ANP-10281P, "U.S. EPR Digital Protection System Topical Report"

Ref. 1: Letter, Ronnie L. Gardner (AREVA NP Inc.) to Document Control Desk (NRC), "Proposed Plan for the Pre-Application Review of the U.S. EPR," NRC:06:036, September 8, 2006.

Ref. 2: Letter, Ronnie L. Gardner (AREVA NP Inc.) to Document Control Desk (NRC), "Proposed Plan for the Pre-Application Review of the U.S. EPR," NRC:07:007, February 14, 2007.

AREVA NP Inc. (AREVA NP) requests the NRC's review and approval of the enclosed report ANP-10281P, Revision 0, "U.S. EPR Digital Protection System Topical Report." This technical report was identified as a pre-application submittal for the U.S. EPR in Attachment 3 of Reference 1 and Attachment 1 of Reference 2.

This topical report describes the design of the U.S. EPR Protection System, which is a digital, integrated reactor protection and engineered safety features actuation system that is implemented using TELEPERM XS technology. This topical report describes the application of the TELEPERM XS technology to the U.S. EPR Protection System design and presents the Protection System architecture and the implementation of protective functions within this architecture.

AREVA NP requests that the NRC issue a Safety Evaluation Report (SER) for the U.S. EPR Protection System design. Section 1.0, "Introduction," of the enclosed topical report lists the specific aspects of the U.S. EPR Protection System design for which AREVA NP requests NRC approval. AREVA NP plans to reference the topical report in its Design Control Document (DCD) for the U.S. EPR. Therefore, AREVA NP requests that the NRC provide timely feedback and interactions to inform development of the DCD. AREVA NP requests that the NRC complete its review of the topical report and issue the SER by March 2008.

The U.S. EPR Protection System provides for functional diversity, as described in Section 10.0, "Functional Diversity," of the report. The functional diversity design rules described in the report represent elements of diversity that correspond to the functional and signal diversity elements described in NUREG/CR-6303, "Method for Performing Diversity and Defense-in-Depth Analyses of Reactor Protection Systems." AREVA NP is also aware that the NRC is performing research to help develop criteria for what constitutes adequate diversity and what credit can be taken for designed-in robustness. AREVA NP would appreciate any feedback from the NRC on the U.S. EPR functional diversity design rules and the degree to which this diversity could be credited in a diversity and defense-in-depth analysis. Similarly, AREVA NP would also

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An AREVA and Siemens company

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appreciate any feedback from the NRC on whether the application software diversity described in Section 8.5.3, "Typical Manual ESF Actuation," of this report can also be credited in a diversity and defense-in-depth analysis. The feedback can be provided separately from the requested safety evaluation for the topical report.

AREVA NP considers some of the material contained in the topical report to be proprietary. As required by 10 CFR 2.390(b), an affidavit is enclosed to support the withholding of the information from public disclosure. Proprietary and non-proprietary versions of the topical report are provided on the enclosed CDs.

Ms. Sandra M. Sloan, Regulatory Affairs Manager for New Plants Deployment, remains the point of contact with the NRC for U.S. EPR licensing activities. She may be reached by telephone at 434-832-2369 or by e-mail at sandra.sloan@areva.com.

Sincerely,



Ronnie L. Gardner, Manager
Site Operations and Regulatory Affairs
AREVA NP Inc.

Enclosures

cc: L. Burkhart
G. Tesfaye
Project 733

requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information".

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b) and 6(c) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Russell D Wells

SUBSCRIBED before me this 26th
day of March, 2007.

Kathleen Ann Bennett

Kathleen Ann Bennett

NOTARY PUBLIC, STATE OF VIRGINIA
MY COMMISSION EXPIRES: 08/31/2011

