

July 20, 2006

Mr. Ronnie L. Gardner
AREVA NP Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

SUBJECT: PROPOSED APPROACH FOR RESOLUTION OF DESIGN PROCESS AND
VERIFICATION ISSUES

Dear Mr. Gardner,

Your letter of May 24, 2006, provided AREVA NP's proposal for resolution of design process and verification issues for the U.S. Evolutionary Power Reactor (EPR). The proposed process takes advantage of design activities for piping, instrumentation and controls (I&C), and human factors engineering (HFE) design which you expect to continue after the U.S. EPR design certification application is submitted in late 2007. Previous design certifications have included design acceptance criteria (DAC) to specify processes and criteria for development of engineering details where it was found impractical to complete this work before completion of a combined license review. You propose to minimize reliance on DAC by providing additional engineering information during the design certification review, instead of deferring this effort to the combined license application.

The NRC staff believes your proposal can promote a higher degree of standardization for the U.S. EPR for these subject areas by reducing reliance on design acceptance criteria in the design certification rulemaking. Your proposal appears to be consistent with the design-centered review approach described in Regulatory Issue Summary 2006-06, "New Reactor Standardization Needed to Support the Design-Centered Review Approach."

For piping, your letter states your intent to submit a report in September 2006 describing codes and standards, analysis methodology, modeling techniques, stress analysis criteria, and piping support criteria. It is the staff's understanding that the scope of this submittal is similar to that provided in previous design certification applications to describe piping DAC.

Your letter also describes an expected schedule for availability of detailed piping and pipe support analysis information during the course of the design certification review. You state that AREVA NP believes this information will be sufficient to demonstrate correct implementation of piping analysis methods and modeling techniques during the NRC's review of the U.S. EPR design certification application, and that if the NRC verifies that correct implementation, those areas will not be included as DAC for the U.S. EPR.

Similarly, for I&C and HFE, you propose submitting a series of reports starting in December 2006 describing various aspects of these topics. Again, it is the staff's understanding that the scope of these submittals is similar to that provided in previous design certification applications to describe DAC for I&C and HFE.

Your letter states your belief that sufficient design outputs will be available prior to completion of the NRC's design certification review to demonstrate correct implementation of the processes and criteria described in your I&C and HFE submittals. You state that AREVA NP believes this information will be sufficient to demonstrate correct implementation of I&C and HFE designs, and implementation procedures and guidelines during the NRC's review of the U.S. EPR design certification application, and that if the NRC verifies that correct implementation, those areas will not be included as DAC for the U.S. EPR. However, we note that the description of your schedule for development of this information is not as specific as that provided in your piping discussion.

The NRC's schedule for the design certification review will depend in part on the timely availability of relevant design and implementation information for piping, I&C, and HFE, so delays in completing this information may delay completion of the NRC's design certification review. In such an event, you could choose to propose a greater scope of DAC for the U.S. EPR. In that case, the NRC will verify implementation of the processes and criteria as part of the first combined license application referencing the U.S. EPR. Resolution of DAC in the combined license application increases the scope of that review, and so may affect that review until sufficient design information is available. The overall length of time to complete a design certification and this first combined license is expected to be about the same in either case. Given our position on the benefits of a high degree of standardization, we strongly encourage resolution of these issues in the design certification review, rather than in a subsequent combined license review.

The staff will review AREVA's proposed use of DAC for the U.S. EPR, if any, and will engage the Commission accordingly based on the design area in which DAC is proposed to be used and the basis for not providing detailed design information, e.g., unavailability of as-built or as-procured information. If proposed, the staff will ensure that sufficient DAC is submitted to comply with the requirements of 10CFR Part 52; most notably that the application "contain a level of design information sufficient to enable the Commission to judge the applicant's proposed means of assuring that the construction conforms to the design and to reach a final conclusion on all safety questions associated with the design before it is granted" in accordance with paragraph 52.47(a)(2).

The staff will review the submittals described in your May 24, 2006, letter as topical reports, using the guidance of the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-500, Revision 3, "Processing Requests for Reviews of Topical Reports," to the extent practical. This instruction is directed towards topical report reviews for operating reactors, so some specific guidance may not be relevant to EPR design certification pre-application activities. A schedule for review of your submittals, including milestones for requests for additional information, and completion of the draft and final safety evaluations will be provided upon completion of the staff's acceptance review. If you make the staff aware of your need for feedback on these topics as you develop your design certification application, we will consider that need in developing our review schedules.

R. Gardner

-3-

I can be reached at 301-415-1470 or at jfw1@nrc.gov if you have questions regarding this letter.

Sincerely,

/RA/

Joseph F. Williams
Senior Project Manager
AP1000/EPR Projects Branch
Division of New Reactor Licensing

Project 733

R. Gardner

-3-

I can be reached at 301-415-1470 or at jfw1@nrc.gov if you have questions regarding this letter.

Sincerely,

/RA/

Joseph F. Williams
Senior Project Manager
AP1000/EPR Projects Branch
Division of New Reactor Licensing

Project 733

ADAMS ACCESSION NO.: ML061860667

OFFICE	PM:NAPB	BC:NAPB	EICB	EEMB	IOLB
NAME	JWilliams	SCoffin	AHowe	KManoly	NSalgado
DATE	07/20/06	0720/06	07/11/06	07/10/06	07/12/06

OFFICIAL RECORD COPY

EPR

cc:

Mr. David Lochbaum, Nuclear Safety
Engineer
Union of Concerned Scientists
1707 H Street, NW., Suite 600
Washington, DC 20006-3919

Mr. Paul Gunter
Nuclear Information & Resource Service
1424 16th Street, NW, Suite 404
Washington, DC 20036

Mr. James Riccio
Greenpeace
702 H Street, Suite 300
Washington, DC 20001

Mr. Adrian Heymer
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Mr. Paul Leventhal
Nuclear Control Institute
1000 Connecticut Avenue, NW
Suite 410
Washington, DC 20036

Mr. Brendan Hoffman
Research Associate on Nuclear Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Ms. Sandra Sloan
Areva NP, Inc.
3315 Old Forest Road
P.O. Box 10935
Lynchburg, VA 24506-0935

Ms. Patricia Campbell
Morgan, Lewis & Bockius, LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Mr. Charles Brinkman, Director
Washington Operations
Westinghouse Electric Company
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852

Mr. Glenn H. Archinoff
AECL Technologies
481 North Frederick Avenue
Suite 405
Gaithersburg, MD. 20877

Mr. Gary Wright, Manager
Office of Nuclear Facility Safety
Illinois Department of Nuclear Safety
1035 Outer Park Drive
Springfield, IL 62704

Mr. Ronald P. Vijuk
Manager of Passive Plant Engineering
AP1000 Project
Westinghouse Electric Company
P. O. Box 355
Pittsburgh, PA 15230-0355

Mr. Ed Wallace, General Manager
Projects
PBMR Pty LTD
PO Box 9396
Centurion 0046
Republic of South Africa

Mr. Russell Bell
Nuclear Energy Institute
Suite 400
1776 I Street, NW
Washington, DC 20006-3708

Ms. Kathryn Sutton, Esq.
Morgan, Lewis & Bockius, LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Mr. Robert E. Sweeney
IBEX ESI
4641 Montgomery Avenue
Suite 350
Bethesda, MD 20814

Hard Copy

JWilliams

E-Mail:

NAPB Distribution

DMatthews/WBeckner/JCalvo

LDudes

OPA

MKowal

JDixon-Herrity, EDO

RJasinski

OGC

ACRS

LBurkhart

ATardiff

DHuyck

SMorris

JDanna

DRoth

TKobetz

HScott

YHsii

SBajorek

GBagchi

ESullivan

CAbbott

JDanna

RDenning

JFlack

FEltawila

TMensah

NMamish

JJacobson

KWelter

MWaters

AHowe

E-Mail

tansel.selekler@nuclear.energy.gov

tom.miller@hq.doe.gov

bill.ascroft-hutton@hse.gsi.gov.uk

rzentkowskig@cnscccsn.gc.ca

kcrogers@aol.com

mod@inel.gov

tom.miller@nuclear.energy.gov

sandra.sloan@areva.com

mwetterhahn@winston.com

gcesare@enercon.com

eddie.grant@exeloncorp.com

whorin@winston.com

steven.hucik@ge.com

david.hinds@ge.com

chris.maslak@ge.com

james1beard@ge.com

louis.quintana@ge.com

mark.beaumont@wsms.com