babcock & wilcox nuclear energy
109 ramsey place lynchburg, va 24501 phone 434.316.7592
fax 434.316.7534 www.babcock.com

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U.S. Nuclear Regulatory Commission (NRC)
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Babcock & Wilcox Nuclear Energy, Inc. (B&W NE)
Docket Number-PROJ0776
Project Number-776

Subject: B&W NE Plans for Supplementing the Topical Report: "Core Nuclear Design Codes and Methods Qualification

A meeting was held on January 19th between B&W NE and NRC staff to discuss the approach and scope of the subject topical report (submitted in August 2010) and also to provide an overview of our strategy for expanding the scope of that report in a future submittal. The purpose of this letter is to document the details and schedule of our planned supplement to the topical report.

Our approach includes performing and documenting a number of important analyses and adding supporting technical information in a supplemental submittal to the NRC that will focus the staff review specifically on the applicability of the CASMO-5/SIMULATE-3 code suite to the mPower™ design concept. As discussed in the public meeting, B&W NE will be using the MCNPX code, Version 2.7.0 (a new version being developed by Los Alamos and expected to be released for general use in the near future) to benchmark key analysis points from the reference mPower core design developed using the CASMO-5/SIMULATE-3 code suite. We also will perform some validation of the new release of MCNPX against relevant published benchmark data (if it is determined that Los Alamos has not already done so). As noted in the discussions, the MCNPX analysis will require intensive staff and computer resources. We will supplement the August 2010 topical report, clarify the objectives and expanded scope of the requested topical approval, and will include, at a minimum:

(a) a comparison of MCNPX (Version 2.7.0) versus CASMO-5/SIMULATE-3 results for a reference mPower core design,
(b) appropriate supporting data,
(c) CASMO-5/SIMULATE-3 code suite user and theory manuals,
(d) a description of code options and branch cases for the reference core design, and
(e) uncertainty and sensitivity analyses as necessary.

We plan to begin work on our new analyses using the above referenced release version of MCNPX and the preparation of the information to expand the scope of the topical next month and will provide our submittal to the NRC not later than the end of February, 2012. Based on this, we do not expect the NRC technical staff will continue review of the August 2010 topical report. We also anticipate that upon receipt of the February 2012 submittal, the staff will complete its acceptance

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review of the expanded topical report, assign appropriate resources, and establish a review schedule at that point in time.

We appreciate the NRC staff efforts on the above submittal and look forward to continued effective pre-application meetings and interactions on this important design area.

Jeffrey A. Halfinger
VP, Technology Development
B&W NE

JAH/msc

cc: Joelle L. Starefos, NRC, TWFN 9-F-27
Stewart L. Magruder, Jr., NRC, TWFN 9-F-27