

April 29, 2010

MEMORANDUM TO: Stewart L. Magruder, Branch Chief
Advanced Reactor Branch 2
Advanced Reactor Program
Office of New Reactors

FROM: Yanelly Malave, Project Manager */RA/ J. Starefos for*
Advanced Reactor Branch 2
Advanced Reactor Program
Office of New Reactors

SUBJECT: SUMMARY OF CLOSED MEETING WITH BABCOCK & WILCOX
COMPANY REGARDING THE mPOWER DESIGN (PROJ0776)

On March 31, 2010, staff from the U.S. Nuclear Regulatory Commission (NRC) met with representatives from the Babcock & Wilcox (B&W) Company, at NRC Headquarters in Rockville, MD. The purpose of the meeting was to discuss mPower design updates, in particular, the Emergency Core Cooling System (ECCS) design and Integrated Systems Test (IST) Plan. Enclosures 1 and 2 are the meeting agenda and meeting attendees, respectively. A summary of the meeting is included below.

As part of the introductory remarks it was stated that Tennessee Valley Authority (TVA), First Energy and Oglethorpe Power are working together to identify design attributes from the operator's perspective and gather licensing background information that can support the licensing process of the mPower design. In addition, B&W explained that the mPower module is being designed to be transported by train, which will allow easier access to remote places.

B&W provided an update to the NRC staff of the mPower plant arrangement, in particular to the containment size reduction, the location of the spent fuel pool and the use of a single control rod drive mechanism design supplemented by emergency boron injection. It was explained that the safety approach of the mPower design consists of (1) inherent safety features; (2) defense in depth (which includes multiple physical barriers to prevent the release of fission products and multiple heat removal paths, like the emergency core cooling system (ECCS) and the reactor coolant inventory and purification system (RCIPS), which is a non-safety system); (3) passive engineered safety systems like emergency boron tanks and high pressure emergency condensers; and (4) anticipated response to transient and accident conditions.

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B&W described the different modes that encompass the ECCS, including high pressure decay heat removal using a high pressure condenser, automatic depressurization, low pressure passive injection, reactor water storage tank (RWST) cooling, emergency soluble boron injection and cavity flood. Also, B&W explained that the integrated systems test of the mPower design is being developed to gather information related to the steam generator and components performance, to verify the control and protection of systems, to provide design enhancements and licensing support, to verify computer codes/models, and to develop operating procedures and training.

During the meeting NRC staff asked many questions and identified topics requiring further dialogue and detail (e.g. the containment design, fuel core design, and the use of probabilistic risk assessment (PRA) during the design phases). B&W agreed to consider these areas for discussion in a future meeting and proposed the next meeting with the NRC staff in July 2010. In addition, B&W provided a list of reports that will be submitted to the NRC as stated below:

- Quality Assurance Plan – April
- Critical Heat Flux Program Plan – End of April
- Integrated System Test Plan – June
- Fuel Design Criteria – July
- CRDM Program Plan - October

The B&W's slide presentation are available through the Agency wide Documents Access and Management System (ADAMS). ADAMS accession number for the non-proprietary, redacted version of the slide presentation is ML101050103. ADAMS is the system that provides text and image files of NRC's public documents. Documents are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. If you do not have access to ADAMS or have problems accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) staff at 1-800-397-4209, 301-415-4737, or pdr@nrc.gov.

Docket No.: PROJ0776

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As stated

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DATE	04/29/2010	04/29/2010	04/29/2010

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COMPANY REGARDING THE mPOWER DESIGN (PROJ0776)

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CHoxie, RES

NHudson, RES

PLien, RES

IMadni, RES

CMurray, RES

ARamirez, RES

RSkarda, RES

JStaudenmeier, RES

AUises, RES

JWhitman, RES

RidsNroArp Resource

RidsNroArpArb1_2 Resource

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**TENTATIVE AGENDA
BABCOCK & WILCOX COMPANY (B&W) MEETING WITH NRC
MARCH 31, 2010**

<u>TIME</u>	<u>TOPIC</u>	<u>LEAD</u>
1:00 p.m. – 1:10 p.m.	Opening Remarks & Introductions	NRC/B&W
1:10 p.m. – 1:40 p.m.	An overview of the B&W <i>mPower</i> [™] design with emphasis on changes since the last meeting	B&W
1:40 p.m. - 3:00 p.m.	ECCS/DHRS design update	B&W
3:00 p.m. - 3:40 p.m.	Integrated Systems Test Plan Update - current status, projected schedule, etc.	B&W
3:40 p.m. - 4:00 p.m.	NRC feedback & next steps	ALL
4:00 p.m.	Adjourn	

ATTENDANCE LIST

CLOSED MEETING BETWEEN B&W AND THE NRC REGARDING THE mPOWER SMALL MODULAR REACTOR DESIGN MARCH 31, 2010

<u>Name</u>	<u>Organization</u>
Jeffrey Wood	NRC
Nathanael Hudson	NRC
Yang Yaguang	NRC
John Jolicoeur	NRC
Matt Bernard	NRC
Stewart Magruder	NRC
Jim O'Driscoll	NRC
Josh Whitman	NRC
Peter Lien	NRC
Steve Bajorek	NRC
Andrea Sterdis	TVA
Thomas Kenyon	NRC
Yanely Malave	NRC
Sam Hobbs	Enercon Services Inc.
TJ Kim	B&W
Jeff Halfinger	B&W
Kenneth Baity	B&W
Mark Caruso	NRC
Samina Shaikh	NRC
Andrzej Drozd	NRC
Shanlai Lu	NRC
Tanya Ford	NRC
George Thomas	NRC
Jonathan DeGange	NRC
Anne-Marie Grady	NRC
Russell Sydnor	NRC
J. Raymond Skarda	NRC
Arlon O Costa	NRC
Vince Bilovsky	B&W/Burns & Roe
John D. Malloy	B&W/Nova Tech
Billy E. Bingham	B&W
Dough Lee	B&W
Eric Williams	B&W
Rob Tregoning	NRC
Debbie Jackson	NRC
Chris Hoxie	NRC
Imtiaz Madni	NRC
John Smith	NRC
Al Schneider	Enercon
Michelle Hayes	NRC
Joseph Staudenmeier	NRC
Mike Childerson	B&W

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(Revised 04/07/2010)

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