



babcock & wilcox nuclear energy

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December 21, 2011

BW-JAH-2011-271

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

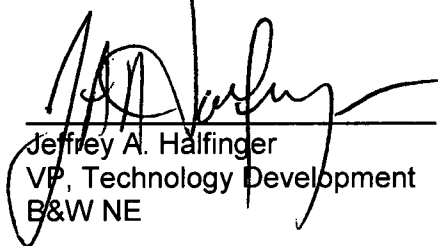
Babcock & Wilcox Nuclear Energy, Inc. (B&W NE)
Docket Number-PROJ0776
Project Number-776

Subject: Submittal of Responses to mPower™ Reactor Electrical Design Questions

Recently NRC technical staff developed a set of questions related to the electrical design for the B&W mPower Reactor that were submitted to us by the Office of New Reactors Project Manager. We have developed answers for the questions and are providing them to facilitate discussions that will occur at a meeting to be held in January with the technical staff on electrical design and other topics.

Attachment 1 is the set of responses that contains B&W NE Confidential Commercial Information (CCI) in brackets. We request that this information be withheld from public disclosure in accordance with the requirements of 10 CFR 2.390. Attachment 2 is an affidavit that provides the justification for withholding the CCI information in that attachment. Attachment 3 is a redacted, non-proprietary version of the responses that can be made available to the public.

Questions concerning this submittal may be directed to Jeff Halfinger at 434-316-7507 (email: jahalfinger@babcock.com) or T. J. Kim at 434-382-9791 (email: tjkim@babcock.com).



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

JAH/jlr

Attachments: 1: Electrical Design Questions/Responses (Proprietary Version)
2: Affidavit
3: Electrical Design Questions/Responses (Redacted Version)

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

D104

Attachment 2

AFFIDAVIT OF Jeffrey A. Halfinger

STATE OF Virginia

CITY OF Lynchburg

I, Jeffrey A. Halfinger, being duly sworn, do hereby depose and say:

1. I am a citizen of the United States of America. I am a resident of Lynchburg, Virginia. My birth date is November 4th, 1961.

2. I am the Vice President for Babcock & Wilcox Nuclear Energy, Inc. (B&W NE), located in Lynchburg, Virginia.

I have held this position since June 1, 2010. I have personal knowledge of the facts set forth in this affidavit, and if called and sworn as a witness in a deposition or before any court, I could and would testify competently under oath to these facts.

3. B&W NE requests that the NRC withhold from public disclosure the information marked as "B&W Confidential Commercial Information" in a set responses to mPowerTM Reactor electrical design questions received from the NRC technical staff. This information is included in Attachment 1 to a letter dated December 21, 2011.

4. I have personal knowledge of the criteria and procedures used by B&W NE in designating confidential commercial or financial information as proprietary and have been delegated the function to review the information to identify proprietary information and authorized to apply for its withholding. The need for confidentiality is driven by the following:

- a) The information requested to be withheld reveals the distinguishing aspects of a process (or component, structure, tool, method, etc.) whose use by any of B&W NE's competitors, without a license from the submitter, would constitute a competitive economic disadvantage to B&W NE.
- b) Use by a competitor of the information requested to be withheld would reduce a competitor's expenditure of resources, or improve its competitive position, in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product.

c) The information requested to be withheld reveals aspects of privately funded development plans or programs of commercial value to B&W NE.

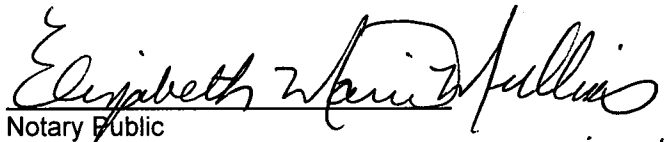
d) The information requested to be withheld consists of patentable ideas.

5. Specifically, the information identified in paragraph 3 above, is classified as proprietary because B&W NE has developed the conceptual and technical approaches regarding details of the B&W mPower™ reactor design features, disclosure of which could adversely affect B&W NE's competitive position by informing competitors of the degree of maturity and viability of the program, thereby motivating them to increase efforts to develop competing technologies. These features of the reactor design were privately funded by B&W NE and are of commercial value to B&W NE because of their nature in providing key elements of the B&W mPower™ reactor design analysis. All or parts of the approach described in the withheld material is patentable.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is a true and correct statement of facts.


Jeffrey A. Halfinger

Subscribed and sworn to before me this 21st day of December, 2011.


Notary Public

My commission expires: 9/30/15

my notary registration # 103141

Attachment 3

Electrical Design Questions/Responses (Redacted Version)

Electrical Design Questions on mPower for B&W

1. **In the event of a Loss of Off-site Power (LOOP) or other anticipated operational occurrences, is onsite AC power planned to be used (in the short term before 72 hrs) to support operation of decay heat removal, RCIPS, or other risk-significant functions? If so, please describe.**

Response

[

] [CCI per Affidavit 4(a)-4(d)]

2. **A B&W presentation dated April 21, 2011, entitled “Design considerations for Fukushima-type Events,” identifies Auxiliary Power Units (APUs) located inside reactor building to recharge battery system in the event of an Station Blackout.**
 - a. **Please provide a more detailed functional description of the APUs (type, number, function, the batteries they charge, etc.)**
 - b. **Are they in addition to the standby DGs?**

Response

[

] [CCI per Affidavit 4(a)-

4(d)]

3. What is the total number of standby / backup electrical power generators (e.g., EDGs) that are included in the design, and are any of them considered to be risk significant?

Response

The standard design will be based upon a two unit facility. [

] [CCI per Affidavit 4(a)-4(d)]

4. Are backup/standby power sources shared between modules/units? If so, please describe.

Response

[]
[CCI per Affidavit 4(a)-4(d)]

5. Are AC and DC electrical support system components for RTNSS or non-safety-related but risk-significant SSCs (e.g., DHR pump), also designated as RTNSS or non-safety-related but risk significant? Please describe.

Response

The required support systems for RTNSS components are classified appropriately

[

] [CCI per Affidavit 4(a)-4(d)]

6. The April 21, 2011 B&W presentation also identifies a ***“Long duration ‘station keeping’ 7+ Day battery supply for plant monitoring/control.”***
Please provide a more detailed functional description of this equipment

Response

[

] [CCI per Affidavit 4(a)-4(d)]