



Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

June 1, 2009

10 CFR 52.80 (d)

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

In the Matter of )  
Tennessee Valley Authority )

Docket No. 52-014 and 52-015

**BELLEFONTE COMBINED LICENSE APPLICATION – LOSS OF LARGE AREAS OF THE PLANT DUE TO EXPLOSIONS OR FIRE - MITIGATIVE STRATEGIES DESCRIPTION AND PLANS**

Reference: Letter from Marilyn Kray (NuStart Energy Development) to NRC Document Control Desk, “NuStart COL Project – NRC Project No. 740 Transition of AP1000 Reference Plant COL Application,” dated April 28, 2009.

This letter identifies changes that will be made to a future revision of the Bellefonte (BLN) combined license application (COLA) to address Nuclear Regulatory Commission (NRC) requirements in 10 CFR 52.80(d). This Section requires a description and plans for implementation of the guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions or fire.

**Attachment A to the enclosure to this letter provides the BLN 10 CFR 52.80(d) Mitigative Strategies Description and Plans, which contains Security-Related Information, and accordingly is requested to be withheld from public disclosure under 10 CFR 2.390(d).**

Pursuant to the referenced letter from NuStart Energy Development, dated April 28, 2009, the AP1000 reference COLA (R-COLA) is in the process of transitioning from Bellefonte Units 3 and 4 to Vogtle Units 3 and 4. Because this submittal is intended to address an anticipated open item associated with security reviews, NRC Staff should treat this document as an “S-COLA submittal.” (Other AP1000 COLAs are expected to make similar submittals in the future).

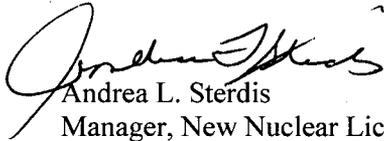
If you should have any questions, please contact Tom Spink at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7062, or via email at [tespink@tva.gov](mailto:tespink@tva.gov).

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I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 1st day of June, 2009.



Andrea L. Sterdis  
Manager, New Nuclear Licensing and Industry Affairs  
Nuclear Generation Development & Construction

Enclosure

cc: See Page 3

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cc: (w/ Enclosures)

J. P. Berger, EDF  
J. M. Sebrosky, NRC/HQ  
E. Cummins, Westinghouse  
S. P. Frantz, Morgan Lewis  
M. W. Gettler, FP&L  
R. Grumbir, NuStart  
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P. Hinnenkamp, Entergy  
M. C. Kray, NuStart  
D. Lindgren, Westinghouse  
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G. A. Zinke, NuStart

cc: (w/o Enclosure)

B. C. Anderson, NRC/HQ  
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M. C. Kray, NuStart  
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R. Reister, DOE/PM  
L. Reyes, NRC/RII  
T. Simms, NRC/HQ

Enclosure  
TVA letter dated June 1, 2009  
10 CFR 52.80(d) – Loss of Large Areas of the Plant Mitigation Strategies Description and Plans

Subject: 10 CFR 52.80(d) – Loss of Large Areas of the Plant Mitigation Strategies Description and Plans  
(3 pages, including this list)

<u>RAI Number</u>	<u>Date of TVA Response</u>
None	

<u>Associated Additional Attachments / Enclosures</u>	<u>Pages Included</u>
Attachment A	30
Attachment B	3
Attachment C	2

Enclosure

TVA letter dated June 1, 2009

10 CFR 52.80(d) – Loss of Large Areas of the Plant Mitigation Strategies Description and Plans

## **NRC Review of Combined License Application**

### **DISCUSSION OF BLN COL APPLICATION CHANGES TO ADDRESS REGULATIONS IN 10 CFR 52.80(d) RELATED TO LOSS OF LARGE AREAS OF THE PLANT DUE TO EXPLOSIONS OR FIRE:**

On March 27, 2009, the NRC published the Final Rule related to Power Reactor Security Requirements (RIN 3150-AG63) in the Federal Register (73 FR 13926). 10 CFR 52.80(d) of the Final Rule requires a combined license (COL) application to include a description and plans for implementation of the guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under the circumstances associated with the loss of large areas of the plant due to explosions or fire as required by 10 CFR 50.54(hh)(2). This enclosure provides changes to the Bellefonte Nuclear Plant Units 3 and 4 (BLN 3 & 4) combined license application (COLA) related to the loss of large areas of the plant due to explosions or fire, in response to the new requirements discussed above. This information will be included in a future revision to the BLN COLA.

The Nuclear Energy Institute (NEI) has been working with the industry to adapt NEI 06-12, the guidance document used by the operating reactor fleet for addressing provision B.5.b of the NRC's February 25, 2002, Interim Compensatory Measures Order, to facilitate its use in developing mitigating strategies for new reactors. By letter dated May 1, 2009 (Reference 1), NEI provided NEI 06-12, proposed Revision 3, Draft A, to the staff for review. In addition to providing guidance on the development and assessment of mitigative strategies as required by 10 CFR 50.54(hh)(2), the draft NEI document also includes a template that may be used for the development of a Mitigative Strategies Description and Plans to address the requirements of § 52.80(d).

The Tennessee Valley Authority (TVA) developed the attached site-specific Mitigative Strategies Description and Plans based on the template that was provided as Attachment 2 to NEI's May 1, 2009, letter. During the development of this site-specific document, minor changes were identified that would enhance the content of the common text in the template. These enhancements, which are expected to be provided to the staff as Draft B of the plan template, have been incorporated into this site-specific document.

Pursuant to the new requirements in 10 CFR 52.80(d), Attachment A to this enclosure provides the Bellefonte Mitigative Strategies Description and Plans. **The site-specific document in Attachment A contains Security-Related Information, and accordingly should be withheld under 10 CFR 2.390 (d). Attachment B contains a redacted version of the Mitigative Strategies Description and Plans, which consists of the cover sheet only.** Attachment C contains a variance listing of the areas where the Bellefonte document varies from the NEI 06-12 template (proposed Revision 3, Draft A). TVA will incorporate the full, non-redacted version of the Mitigative Strategies Description and Plans document, including any applicable changes identified in response to NRC requests for additional information or other change drivers, in a future revision of COLA Part 9, Withheld Information. The redacted version of this Mitigative Strategies Description and Plans document will be incorporated into a future revision to COLA Part 11, Enclosures. The Loss of Large Areas mitigative strategies, including implementation of operational and programmatic aspects of responding to loss of large area events, will be implemented prior to initial fuel load.

The attached Mitigative Strategies Description and Plans document includes industry generic information, STANDARD technology-specific information, and SITE-SPECIFIC information, in accordance with the guidance provided in the draft NEI template. STANDARD text will generally be preceded with the phrase, "For the AP1000 ..." and SITE-SPECIFIC text will be preceded by, "For BLN 3 & 4 ..." to facilitate the staff's review of this document and the S-COLA documents to follow. Additionally, in the Mitigative Strategies Table, industry generic strategies are preceded by the phrase, "For new plants, ..." This approach conforms with the use of bracketed text in the Mitigative Strategies Description and Plans

Enclosure

TVA letter dated June 1, 2009

10 CFR 52.80(d) – Loss of Large Areas of the Plant Mitigation Strategies Description and Plans

template that is attached to NEI 06-12, Revision 3. TVA plans to provide a color-coded reviewer's aid in a separate submittal to facilitate the staff's review by differentiating between generic, standard, and site-specific text.

Reference:

1. Letter from Douglas J. Walters, NEI, to Thomas A. Bergman, NRC, "Revision to NEI 06-12, *B.5.b Phase 2 and 3 Submittal Guideline*, Revision 2, December 2006," dated May 1, 2009.

**ASSOCIATED BLN COL APPLICATION REVISIONS:**

1. Change COLA Part 9, Withheld Information, to include the new Mitigative Strategies Description and Plans (as provided in Attachment A), which contains security-related information, and therefore, should be withheld, in accordance with 10 CFR 2.390 (d).
2. Change COLA Part 11, Enclosures, by including the new Mitigative Strategies Description and Plans (as provided in Attachment B). Note: The actual plan should be withheld from disclosure in accordance with 10 CFR 2.390 (d), because it contains security-related information. Consequently, the version of this Mitigative Strategies Description and Plans in Part 11 is redacted, and the full document is provided in COLA Part 9, Withheld Information.

**ASSOCIATED ATTACHMENTS/ENCLOSURES:**

- |              |  |
|--------------|--|
| Attachment A | Bellefonte Nuclear Plant, Units 3 and 4; Loss of Large Areas of the Plant due to Explosions or Fire; Mitigative Strategies Description and Plans; [Required by 10 CFR 52.80 (d)] (Non-Public Version)        |
| Attachment B | Bellefonte Nuclear Plant, Units 3 and 4; Loss of Large Areas of the Plant due to Explosions or Fire; Mitigative Strategies Description and Plans; [Required by 10 CFR 52.80 (d)] (Public Version - Redacted) |
| Attachment C | Variances from Draft B of NEI 06-12 Mitigative Strategies Description and Plans Template   |

**NOTE: Attachment A contains Sensitive Unclassified Non-Safeguards Information (SUNSI) - Withhold Under 10 CFR 2.390(d).**

**ATTACHMENT B -- BELLEFONTE NUCLEAR PLANT, UNITS 3 AND 4  
LOSS OF LARGE AREAS OF THE PLANT DUE TO EXPLOSIONS OR FIRE  
MITIGATIVE STRATEGIES DESCRIPTION AND PLANS [REQUIRED BY 10 CFR 52.80 (d)]  
(PUBLIC VERSION - REDACTED)**

## **ATTACHMENT B**

**BELLEFONTE NUCLEAR PLANT, UNITS 3 AND 4**

**LOSS OF LARGE AREAS OF THE PLANT  
DUE TO EXPLOSIONS OR FIRE**

**MITIGATIVE STRATEGIES DESCRIPTION AND  
PLANS**

**[REQUIRED BY 10 CFR 52.80 (d)]**

**(PUBLIC VERSION - REDACTED)**

**(3 pages, including this cover)**

**TENNESSEE VALLEY AUTHORITY**

**Bellefonte Nuclear Plant Units 3 & 4**

**LOSS OF LARGE AREAS OF THE PLANT  
DUE TO EXPLOSIONS OR FIRE**

**Mitigative Strategies Description and Plans**

**Required by 10 CFR 52.80(d)**

**Revision 0 – May 29, 2009**

**Security-Related Information - Withheld Under 10 CFR 2.390(d)**

**Security-Related Information - Withheld Under 10 CFR 2.390(d)**  
**(See Part 9 of this COL Application)**

**ATTACHMENT C -- VARIANCES FROM DRAFT B OF NEI 06-12 MITIGATIVE  
STRATEGIES DESCRIPTION AND PLANS TEMPLATE**

**ATTACHMENT C**

**Variances from Draft B of NEI 06-12  
MITIGATIVE STRATEGIES DESCRIPTION AND  
PLANS TEMPLATE**

**(2 pages, including this cover)**

**ATTACHMENT C -- VARIANCES FROM DRAFT B OF NEI 06-12 MITIGATIVE STRATEGIES DESCRIPTION AND PLANS TEMPLATE**

Variances from Draft B of NEI 06-12, "Mitigative Strategies Description and Plans Template

1. Changed the footer of each page to indicate the revision of the BLN 3 & 4 document (i.e., Revision 0) rather than the draft of the NEI template upon which it was developed (i.e., Draft B).
2. Wherever the bracketed "site" is standard for all AP1000 sites, the words "the AP1000" have been entered instead of the site name (BLN).
3. In Section 5.1.1, the generic text has been modified to provide the correct description of the AP1000 yard main loop header system, including the use of post indicating valves and redundant flow paths to each building.
4. In the first sentence of Section 5.1.2, the generic text has been modified slightly to allow the correct description of the AP1000 fire pump house and the location of the fire pumps.
5. In Section 6.1, the first sentence has been modified to state that the normal makeup to the SFP is the DWS. Also, the first part of the sentence that begins "The alternative diverse makeup..." has been altered to more accurately describe the alternate makeup sources for the AP1000.
6. In the MST, each strategy that is standard for the AP1000 begins with "For the AP1000,..." or "The AP1000..."