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

July 25, 2008

10 CFR 52.79

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

In the Matter of) Docket No. 52-014 and 52-015
Tennessee Valley Authority)

BELLEFONTE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION – CODE RECONCILIATION

Reference: Letter from Ravindra G. Joshi (NRC) to Andrea L. Sterdis (TVA), Request for Additional Information Letter No. 051 Related to SRP Section 05.02.01.01 for the Bellefonte Units 3 and 4 Combined License Application, dated June 25, 2008.

This letter provides the Tennessee Valley Authority's (TVA) response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) items included in the reference letter.

A response to each NRC request in the subject letter is addressed in the enclosure which also identifies any associated changes that will be made in a future revision of the BLN application.

If you should have any questions, please contact Phillip Ray at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7030, or via email at pmray@tva.gov.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on this 25th day of July, 2008.

Jack A. Bailey,
Vice President,
Nuclear Generation Development

Enclosure
cc: See page 2

D085
NRO

cc: (Enclosures)
J. P. Berger, EDF
E. Cummins, Westinghouse
S. P. Frantz, Morgan Lewis
M.W. Gettler, FP&L
R. C. Grumbir, NuStart
P. S. Hastings, NuStart
P. Hinnenkamp, Entergy
R. G. Joshi, NRC/HQ
M.C. Kray, NuStart
D. Lindgren, Westinghouse
G. D. Miller, PG&N
M.C. Nolan, Duke Energy
N. T. Simms, Duke Energy
G .A. Zinke, NuStart

cc: (w/o Enclosure)
B. C. Anderson, NRC/HQ
M.M. Comar,NRC/HQ
B. Hughes,NRC/HQ
R. H. Kitchen, PGN
M.C Kray, NuStart
A.M. Monroe, SCE&G
C. R. Pierce, SNC
R. Reister, DOE/PM
L. Reyes, NRC/RII
T. Simms, NRC/HQ
J. M. Sebrosky, NRC/HQ

Enclosure
TVA letter dated July 25, 2008
RAI Responses

Responses to NRC Request for Additional Information letter No. 051 dated June 25, 2008
(5 pages, including this list)

Subject: Code Reconciliation in the Final Safety Analysis Report

RAI Number	Date of Response
05.02.01.01-02	This letter – see following pages
05.02.01.01-03	This letter – see following pages
05.02.01.01-04	This letter – see following pages
05.02.01.01-05	This letter – see following pages

Associated Additional Attachments / Enclosures	Pages Included
None	

Enclosure
TVA letter dated July 25, 2008
RAI Responses

NRC Letter Dated: June 25, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER 05.02.01.01-02

Subsection 5.2.1.1 of AP1000 DCD Tier 2 discusses the application of ASME BPV Code, Section III, for the design and fabrication of reactor coolant pressure boundary components. Other ASME BPV Code sections and the ASME OM Code are not discussed in this subsection. Discuss the application at Bellefonte of sections of the ASME BPV Code and the ASME *Code for Operation and Maintenance of Nuclear Power Plants* (OM Code) not referenced in Subsection 5.2.1.1 of AP 1000 DCD Tier 2.

BLN RAI ID: 0595

BLN Response:

Section 5.2 of the AP1000 DCD Tier 2 discusses the measures to provide and maintain the integrity of the reactor coolant pressure boundary (RCPB) during plant operation. DCD Subsection 5.2.1 discusses compliance with Codes and Code Cases and DCD Subsection 5.2.1.1 discusses compliance with 10 CFR 50.55a with respect to Code compliance, providing the edition and addenda applicable to the design of the AP1000 reactor coolant pressure boundary components and materials. DCD and FSAR Subsections 5.2.4 discuss the ASME Code edition and addenda applicable to the preservice and inservice inspection programs, FSAR Subsection 3.9.6 discusses the applicable ASME OM Code edition and addenda for preservice and inservice testing of safety-related components (pumps, valves) and FSAR Subsection 3.9.3.4.4 discusses the ASME OM Code applicable to preservice and inservice testing of snubbers used as component and piping supports. FSAR Subsection 5.2.1.1 will be revised to provide references to these subsections that discuss ASME Section XI and OM Code (and thus 10 CFR 50.55a) compliance as indicated in the Application Revisions section below.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS

COLA Part 2, FSAR, Chapter 5, Subsection 5.2.1.1, will be revised to add the following new paragraph at the end of the subsection (the existing LMA STD COL 5.2-1 is applicable):

Inservice inspection of the reactor coolant pressure boundary is conducted in accordance with the applicable edition and addenda of the ASME Boiler and Pressure Vessel Code Section XI, as described in Subsection 5.2.4. Inservice testing of the reactor coolant pressure boundary components is in accordance with the edition and addenda of the ASME OM Code as discussed in Subsection 3.9.6 for pumps and valves, and as discussed in Subsection 3.9.3.4.4 for dynamic restraints.

ATTACHMENTS/ENCLOSURES

None

NRC Letter Dated: June 25, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER 05.02.01.01-03

Bellefonte FSAR 5.2.1.1 indicates that if a later Code year/addenda than the Design Certification Code year/addenda is used by the material and/or component supplier, then a code reconciliation is performed. The reconciliation is performed using the methodology set forth in ASME Section XI for the repair and replacement of components. Provide justification for using Section XI inservice/inspection code for operating plants in the reconciliation for Section III new reactor designs.

BLN RAI: 596

BLN Response:

See the response to Bellefonte Combined License Application – Response To Request For Additional Information – Code Compliance, RAI No. 05.02.01.01-01, dated July 3, 2008.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS

No COLA revisions have been identified associated with this response.

ATTACHMENTS/ENCLOSURES

None

Enclosure
TVA letter dated July 25, 2008
RAI Responses

NRC Letter Dated: June 25, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER 05.02.01.01-04

Bellefonte FSAR Section 5.2.1.1 indicates that if Code Cases other than those included in AP1000 DCD Table 5.2-3 are used, a similar review and reconciliation are performed. Please explain how this meets 10CRF50.55a(a)(3), (b)(4), (b)(5) and (b)(6).

BLN RAI: 597

BLN Response:

No Code Cases other than those included in the DCD have been identified as necessary at this time. Code Cases approved by the NRC in Regulatory Guide 1.147 may be used, and if so, they will be identified in a revision to the FSAR. The FSAR statement regarding reconciliation of Code Cases is incorrect and will be revised as indicated in the Application Revisions section below.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS

COLA Part 2, FSAR, Chapter 5, Subsection 5.2.1.1, will be revised from:

Similarly, if Code Cases other than those included in DCD Table 5.2-3 are used, a similar review and reconciliation is performed.

To read:

Code Cases to be used in design and construction are identified in the DCD; additional Code Cases for design and construction beyond those for the design certification are not required.

ATTACHMENTS/ENCLOSURES

None

NRC Letter Dated: June 25, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER 05.02.01.01-05

AP1000 DCD Revision 16 requires use of the 1989 Edition 1989 Addenda for NB-3200, NB-3600, NC-3600 and ND-3600 for construction of components and piping. List components that are designed and constructed using the 1989 ASME Code and discuss whether these components also meet requirements of the 1998 Edition through and including 2000 Addenda ASME Code, which is the code of record for AP1000 DCD.

BLN RAI: 598

BLN Response:

Westinghouse has recently submitted a document (APP-GW-GLE-005) by letter DCP/NRC2136 dated May 16, 2008, to partially address a discrepancy between NRC requirements and ASME Code Section III rules on the use of portions of the Code from different editions and addenda. The ASME Code, Section III citation in the AP1000 DCD Subsection 5.2. 1.1 requires the use of the 1998 Edition, 2000 Addenda; except that the 1989 Edition, 1989 Addenda is used for Subarticles NB-3200, NB-3600, NC-3600, and ND-3600. The DCD is to be changed to limit the use of 1989 Edition, 1989 Addenda to piping design only. While the 1989 Edition, 1989 Addenda will be used for piping design, the 1998 Edition, 2000 Addenda for Subarticles NB-3200, NB-3600, NC-3600, and ND-3600 will be used for design and construction of components other than piping. The use of the 1989 Edition, 1989 Addenda for these four subarticles is still included for piping design. This change is based on the understanding that the concerns that the NRC has with later versions of the four subarticles are confined to the seismic design of piping.

As Westinghouse explained in a technical review meeting on April 8, 2008, the expected approach for piping is to use the 1998 Edition, 2000 Addenda for piping design, except that for the four subarticles, NB-3200, NB-3600, NC-3600, and ND-3600, the 1989 Edition, 1989 Addenda will be used. As an example, the equations for calculations would come from the 1989 Addenda but the material property values used in the equations would come from other sections that use the 2000 Addenda. Fabrication and NDE requirements would also use the 2000 Addenda.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS

No COLA revisions have been identified associated with this response.

ATTACHMENTS/ENCLOSURES

None