



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

July 21, 2008

10 CFR 52.79

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 – RESPONSE TO REQUEST FOR  
ADDITIONAL INFORMATION – CIRCULATING WATER SYSTEM**

Reference: Letter from Brian Anderson (NRC) to Andrea L. Sterdis (TVA), Request for  
Additional Information Letter No. 038 Related to SRP Section 10.04.05 for the  
Bellefonte Units 3 and 4 Combined License Application, dated June 10, 2008

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

A response to the 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 Thomas Spink at 1101 Market Street, LP5A,  
Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7062, or via email at  
tespink@tva.gov.

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

Executed on this 21<sup>st</sup> day of July, 2008.

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

Enclosure  
cc: See Page 2

DOSS  
NRO

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cc: (Enclosure)

- B. C. Anderson, NRC/HQ
- 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
- 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)

- M.M. Comar, NRC/HQ
- B. Hughes, NRC/HQ
- R. G. Joshi, NRC/HQ
- R. H. Kitchen, PGN
- M.C. Kray, NuStart
- A.M. Monroe, SCE&G
- C. R. Pierce, SNC
- R. Register, DOE/PM
- L. Reyes, NRC/RII
- T. Simms, NRC/HQ
- J. M. Sebrosky, NRC/HQ

Enclosure  
TVA letter dated July 21, 2008  
RAI Response

Response to NRC Request for Additional Information letter No. 038 dated June 10, 2008  
(3 pages, including this list)

Subject: Circulating Water System Design Parameters in the Final Safety Analysis  
Report

<u>RAI Number</u>	<u>Date of TVA Response</u>
10.04.05-01	This letter – see following pages

Attachments / Enclosures

Pages Included

None

Enclosure  
TVA letter dated July 21, 2008  
RAI Response

**NRC Letter Dated: June 10, 2008**

**NRC Review of Final Safety Analysis Report**

**NRC RAI NUMBER: 10.04.05-01**

In Bellefonte FSAR Section 10.4.5, the applicant provided conceptual design information (CDI) for the circulating water system (CWS). The applicant replaced bracketed text throughout Section 10.4.5 of the AP1000 DCD, Revision 16, to provide specific CWS power generation design basis component information, general CWS description, component descriptions, system operation, tests and inspections, and instrumentation applications. As part of the CDI, the applicant also revised plant-specific data such as the CWS design parameters listed in Table 10.4-201 and Table 10.4-202 of the COL application.

With respect to the parameters in Table 10.4-202, please provide the following information:

- Heat transfer rate (Btu/hr), and
- Wind velocity design (mph) and seismic design criteria per Uniform Building Code.

In addition, with respect to FSAR Table 10.4-201, "Condenser Design Data," please provide information to address all parameters from the corresponding Table 10.4.1-1 in AP1000 DCD, Revision 16, or justify its exclusion.

**BLN RAI ID: 0369**

**BLN RESPONSE:**

Typically, the DCD information is not repeated in the FSAR but rather is incorporated by reference. If a FSAR Table requires both DCD and site specific information; only the FSAR additional supplementary information is provided unless there are exceptions to the DCD.

FSAR Tables 10.4-201 and 10.4-202 have a footnote indicating that this is "supplementary information." This information is for the plant specific Bellefonte analysis based on DCD heat transfer performance requirements. Thus, all parameters from the corresponding DCD Table 10.4.1-1 are addressed, either through incorporation by reference to DCD Table 10.4.1-1, or by the supplemental information in FSAR Table 10.4-201.

FSAR Table 10.4-202 will be revised as shown in the Applicable Revisions section below to address the remaining bracketed information in DCD Table 10.4.5-1.

The response is PLANT SPECIFIC.

Enclosure  
TVA letter dated July 21, 2008  
RAI Response

**ASSOCIATED BLN COL APPLICATION REVISIONS:**

COLA Part 2, FSAR. Chapter 10, Table 10.4-202, will be revised to include the following additional line items under Circulating Water Pump and Natural Draft Cooling Tower as shown below:

**Circulating Water Pump**

Quantity	Three per unit
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**Natural Draft Cooling Tower**

Quantity	One per unit
Heat transfer (Btu/hr)	$7,628 \times 10^6$
Wind velocity design (mph)	110
Seismic design criteria per Uniform Building Code	

**ATTACHMENTS/ENCLOSURES:**

None