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

July 18, 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 – RAW WATER SYSTEM

Reference: Letter from Tanya Simms (NRC) to Andrea Sterdis (TVA), Request for Additional Information Letter No. 044 Related to SRP Section 09.02.01 for the Bellefonte Units 3 and 4 Combined License Application, dated June 20, 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 NRC request in the subject letter is addressed in the enclosure which does not identify any associated changes to 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 18th day of July, 2008.

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

Enclosure
cc: See Page 2

D085
NRO

cc: (Enclosure)

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M.W. Gettler, FP&L
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cc: (w/o Enclosure)

B. Anderson, NRC/HQ
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B. Hughes ,NRC/HQ
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A.M. Monroe, SCE&G
C.R. Pierce, SNC
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Enclosure
TVA letter dated July 18, 2008
RAI Response

Responses to NRC Request for Additional Information letter No. 044 dated June 20, 2008
(2 pages, including this list)

Subject: Raw Water System in the Final Safety Analysis Report

RAI Number	Date of TVA Response
01-3	This letter – see following pages

Attachments / Enclosures	Pages Included
None	

Enclosure
TVA letter dated July 18, 2008
RAI Response

NRC Letter Dated: June 20, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 01-3

In Bellefonte FSAR Section 9.2.11.3, "System Operation," the applicant stated that the ancillary raw water system (RWS) pumps are available for operation during a loss of offsite power (LOOP) to support the service water system (SWS), and if necessary the filters can be bypassed to provide unfiltered river water to the SWS. Also, the SWS provides an indirect non-safety related means of cooling to the normal decay heat removal system during shutdown operations and has established investment protection short-term availability controls to ensure its operability (see Section 16.3, "Investment Protection Short-Term Availability Controls," page 16.3-22 of AP1000 DCD, Revision 16). In order to properly evaluate the Bellefonte RWS and its components, the staff requests the applicant to provide additional information describing the purpose of providing the diesel driven ancillary RWS pumps and clarify whether these ancillary RWS pumps perform a function to maintain SWS operable for long term decay heat removal in the event of a LOOP. Also, the staff requests the applicant to identify whether the ancillary RWS pumps are credited for long term decay heat removal, since these ancillary pumps remain functional and available during a LOOP to support the SWS.

BLN RAI ID: 608

BLN RESPONSE:

Per the AP1000 DCD, Subsection 9.2.1.2.2, raw water is automatically supplied to the service water system (SWS) cooling tower basin to makeup for evaporation, drift and blowdown losses. In addition, an alternate makeup water supply is available by gravity flow from one of the fire protection storage tanks, using water that is not dedicated to fire protection purposes. With no makeup to the SWS cooling tower basin, the storage capacity of the basin allows continued system operation for at least 12 hours under limiting conditions, provided that blowdown flow is isolated. While not credited in the safety analysis, the ancillary Raw Water System (RWS) pumps are powered from a diesel-backed power supply as an additional backup feature. This feature is provided to protect owner assets in the event of a loss of offsite power. Per the AP1000 DCD, Section 9.2, the SWS serves no safety-related function; therefore, the makeup capability to the SWS cooling tower basin provided by the RWS also serves no safety-related function as noted in FSAR Subsection 9.2.11.1.1. Ancillary RWS pumps do not perform a function to maintain SWS operability for long term decay heat removal in the event of a LOOP. Safety-related long term decay heat removal for the AP1000 is achieved through passive plant features only. The ancillary RWS pumps are not credited for long term decay heat removal in the FSAR.

The response is PLANT SPECIFIC.

ASSOCIATED BLN COL APPLICATION REVISIONS:
No COLA revisions have been identified with this response

ATTACHMENTS/ENCLOSURES:

None