



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

July 16, 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

**BELLEVILLE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR
ADDITIONAL INFORMATION – FIRE PROTECTION PROGRAM**

Reference: Letter from Tanya Simms (NRC) to Andrea L. Sterdis (TVA), Request for
Additional Information Letter No. 040 Related to SRP Section 09.05.01 for the
Belleville Units 3 and 4 Combined License Application, dated June 17, 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.

The enclosure provides the responses to the RAIs and identifies 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 16th day of July, 2008.

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

Enclosure
cc: See Page

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cc: (Enclosures)

- 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 Energ
- N. T. Simms, Duke Energy
- T. Simms, NRC/HQ
- G. A. Zinke, NuStart

cc: (w/o Enclosure)

- B. Anderson, NRC/HQ
- 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
- J. M. Sebrosky, NRC/HQ

Enclosure
Letter to NRC Dated July 16, 2008
RAI Responses

Responses to NRC Request for Additional Information Letter No. 040 dated June 17, 2008
(5 pages, including this list)

Subject: Fire Protection Program in the Final Safety Analysis Report

<u>RAI Number</u>	<u>Date of TVA Response</u>
09.05.01-06	This letter – see following pages
09.05.01-07	This letter – see following pages

Attachments / Enclosures

None

Pages Included

Enclosure
Letter to NRC Dated July 16, 2008
RAI Responses

NRC Letter Dated: June 17, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 09.05.01-06

The AP1000 DCD design specifies an alternative concrete/steel composite material having at least a 2-hour fire rating for the Auxiliary Building stairwells serving as escape routes, access routes for firefighting, or access routes to areas containing equipment necessary for safe shutdown. Will the applicant use the concrete/steel composite building material for stairwells in the Yard Area and other outlying buildings? If so, please revise Section 9A.3.3 and address fire testing standards ASTM-E-119 and NFPA 251 in Section 9.5.5 as appropriate.

BLN RAI ID: 573

BLN RESPONSE:

As indicated in FSAR Subsection 9A.3.3, stairwells in miscellaneous buildings located in the yard serving as escape routes or access routes for firefighting are enclosed in masonry or concrete towers with a minimum fire resistance rating of 2 hours and self-closing Class B fire doors. Access routes to areas containing equipment necessary for safe shutdown are addressed in the AP1000 DCD.

FSAR Subsection 9A.3.3 will be revised to include fire testing standards ASTM E119 and NFPA 251. These standards will also be added to FSAR Subsection 9.5.5 references.

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

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 2, FSAR Chapter 9, Appendix 9A, Subsection 9A.3.3, will be revised from:

STD COL 9.5-3 Stairwells in miscellaneous buildings located in the yard serving as escape routes or access routes for firefighting, are enclosed in masonry or concrete towers with a minimum fire resistance rating of 2 hours and self-closing Class B fire doors.

To read:

STD COL 9.5-3 Stairwells in miscellaneous buildings located in the yard serving as escape routes or access routes for firefighting are enclosed in masonry or concrete towers with a minimum fire resistance rating of 2 hours and self-closing Class B fire doors. The two-hour fire-resistance rating for the masonry or concrete material is based on testing conducted in accordance with ASTM E119 (Reference 211) and NFPA 251 (Reference 212).

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COLA Part 2, FSAR Chapter 9, Subsection 9.5.5 will be revised to add the following references:

211. American Society of Mechanical Engineers, "Standard Test Methods for Fire Tests of Building Construction and Materials," ASTM E119-08a.
212. National Fire Protection Association, "Standard Methods of Tests of Fire Endurance of Building Construction and Materials," NFPA 251, 2006.

ATTACHMENTS/ENCLOSURES:

None

Enclosure
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NRC Letter Dated: Jun 17, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 09.05.01-07

The Bellefonte COLA referenced DCD Section 9.5.2.2.1 (Wireless Telephone System) and FSAR Section 9.5.2.2.3.2.2 (VHF Radio System) for meeting BTP CMEB 9.5.1, Section C.5.g(4). However, neither of the above sections referenced their use by the fire brigade and other operations personnel required to achieve post-fire safe shutdown. Clarify which portable communication system is credited for the fire brigade and the post-fire safe shutdown operators.

BLN RAI ID: 0574

BLN RESPONSE:

No actions are required by the operations staff outside the control room for post-fire safe shutdown; therefore, a discussion pertaining to plant operators is not required.

DCD Subsection 9.5.2, Communication System, states that the communication system (EFS) provides effective intraplant communications during fire conditions. The communication system consists of multiple subsystems including wireless telephone and sound powered subsystems. The portable communication system used by the fire brigade is the wireless telephone system. In addition to the wireless system, other plant communication subsystems may be used as necessary for fire emergencies including the telephone-page, PABX telephone, and sound-powered communication systems.

FSAR Table 9.5-201, Item 111, provides cross references to sections of the FSAR or DCD that demonstrate satisfaction of the requirement of BTP CMEB C.5.g(4) to provide a portable radio communications system for use by the fire brigade. FSAR Subsection 9.5.1.8.1.2.a.3.v establishes that providing portable communication equipment for the fire brigade is a responsibility of the site executive and engineer in charge of fire protection. FSAR Subsection 9.5.1.8.2.2 addresses training fire brigade members in proper use of communication equipment. FSAR Subsection 9.5.2.2.3.2.2 discusses the VHF Radio System as an alternate means of communication between the Control Room/TSC/EOF with offsite local authorities; however, this system is not part of the mobile communications system for fire brigade. The reference to FSAR Subsection 9.5.2.2.3.2.2 will be removed from Table 9.5-201, Item 111. DCD Subsection 9.5.2 establishes that the site Communication System provides communication during fire conditions. DCD Subsection 9.5.2.2.1 lists the various communication subsystems, of which the wireless telephone system is the mobile system.

FSAR Table 9.5-201, AP1000 FIRE PROTECTION PROGRAM COMPLIANCE WITH BTP CMEB 9.5-1, Item 111, will be changed in a future revision of the BLN COLA to add DCD Subsection 9.5.2 as a reference and to remove FSAR Subsection 9.5.2.2.3.2.2 as a reference.

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

Enclosure
TVA letter dated July 16, 2008
RAI Responses

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 2, FSAR Chapter 9, Table 9.5-201, Item 111 will be revised from:

111.	A portable radio communications system should be provided for use by the fire brigade and other operations personnel required to achieve safe plant shutdown.	C.5.g(4)	C	Comply. Subsections 9.5.1.8.1.2.a.3.v, 9.5.1.8.2.2, 9.5.2.2.3.2.2, and DCD Subsection 9.5.2.2.1 address this requirement.
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To read:

111.	A portable radio communications system should be provided for use by the fire brigade and other operations personnel required to achieve safe plant shutdown.	C.5.g(4)	C	Comply. Subsection 9.5.1.8.2.a.3.v, 9.5.1.8.2.2, and DCD Subsection 9.5.2 and 9.5.2.2.1 addresses this requirement.
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ATTACHMENTS/ENCLOSURES:

None