



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

May 16, 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 NUCLEAR PLANT (BLN) COMBINED LICENSE APPLICATION –
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION (RAI) – REACTOR
VESSEL PRESSURIZED THERMAL SHOCK

Reference: Letter from Ravindra G. Joshi (NRC) to Andrea L. Sterdis (TVA), Request
for Additional Information (RAI) Letter No. 004 Related to SRP Section
05.03.03 for the Bellefonte Units 3 and 4 Combined License Application,
dated April 22, 2008.

This letter provides the Tennessee Valley Authority response to the Nuclear Regulatory
Commission RAI items included in the reference letter. The items address the reactor
vessel pressurized thermal shock requirements.

The enclosure provides responses to the RAI 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, LP
5A, Chattanooga, Tennessee 37402-2801, by telephone at (423)751-7030, or via email at
pmray@tva.gov.

Sincerely,

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

Enclosure

DOBS
HRO

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cc: T. A. Bergman, NRC/HQ
R. W. Borchardt, NRC/HQ
M. P. Cazaubon, NuStart
S. M. Coffin, NRC/HQ
S. P. Frantz, Morgan Lewis
R. C. Grumbir, NuStart
P. S. Hastings, NuStart
G. M. Holahan, NRC/HQ
R. H. Kitchen, PGN
M. C. Kray, NuStart
D. B. Matthews, NRC/HQ
V. M. McCree, NRC/RII
E. M. McKenna, NRC/HQ
A. M. Monroe, SCE&G
C. R. Pierce, SNC
L. R. Plisco, NRC
J. M. Sebrosky, NRC/HQ
M. E. Shields, DOE/HQ
R. F. Smith-Kevern, DOE/HQ
G. A. Zinke, NuStart
P. L. Hiland, NRC/NRR/ADES/DE
K.A Kavanagh, NRC/NRO/DCIP/CQVP
J. D. Peralta, NRC/NRO/DCIP/CQVP
C. B. Cook, NRC/NRO/DSER/RHEB
M. Concepcion, NRC/NRO/DCIP/CQVP
K. R. See, NRC/NRO/DSER/RHEB
Y. Malave, NRC/NRO/DSER/RHEB

Enclosure
TVA letter dated May 16, 2008
RAI Responses

Responses to NRC Request for Additional Information
Letter No. 004 Dated April 22, 2008
(3 Pages, including this list)

Subject: Reactor Vessel Pressurized Thermal Shock in the Final Safety Analysis Report

| <u>RAI Number</u> | <u>Date of TVA Response</u> |
|-------------------|-----------------------------------|
| 05.03.03-01 | This letter – see following pages |

Attachments / Enclosures
Pages Included

None

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TVA letter dated May 16, 2008
RAI Responses

NRC Letter Dated: April 22, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 05.03.03-01

The as-procured reactor vessel material properties would be available to the COL holder after the acceptance of the reactor vessel. In order to enable timely NRC review of the pressurized thermal shock (PTS) evaluation using the as-procured reactor vessel material properties, please describe whether a more specific and timely milestone for submitting the PTS evaluation to the NRC can be established. If so, please provide.

BLN RAI ID: 0104

BLN RESPONSE:

As indicated in the question, as-procured reactor vessel material properties will be available to the COL holder after the acceptance of the reactor vessel. Related to this subject is the ITAAC in DCD Table 2.1.3-2, item 11, to provide the Charpy upper-shelf energy for the reactor vessel.

The as-procured reactor vessel material properties are expected to be available sufficiently in advance of fuel loading to allow for NRC review of the PTS evaluation. However, in order to provide the more specific and timely milestone requested, the PTS evaluation will be made available at least 18 months prior to fuel load. This commitment will be included as a part of proposed license condition number 6.

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

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 10, Proposed License Conditions, item 6, will be revised to include an additional specific item such that it reads (the "x" will be replaced with appropriate next letter):

"6. OPERATIONAL PROGRAM READINESS:

The NRC inspection of operational programs will be the subject of the following license condition in accordance with SECY-05-0197:

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PROPOSED LICENSE CONDITION:

The licensee shall submit to the appropriate Director of the NRC, a schedule, no later than 12 months after issuance of the COL, that supports planning for and conduct of NRC inspections of operational programs listed in the operational program FSAR Table 13.4-201. The schedule shall be updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational programs in the FSAR table have been fully implemented or the plant has been placed in commercial service, whichever comes first.

- a. This schedule shall include a submittal schedule for the emergency planning implementing procedures to the NRC consistent with 10 CFR Part 50,
- b. Appendix E, Section V.

- x. This schedule shall include a submittal schedule for the reactor vessel pressurized thermal shock evaluation at least 18 months prior to initial fuel load.”

ATTACHMENTS/ENCLOSURES:

None