



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

August 29, 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 – PRESERVICE INSPECTION**

Reference: Letter from Joseph M. Sebrosky (NRC) to Andrea L. Sterdis (TVA), Request for  
Additional Information Letter No. 023 Related to SRP Section 05.02.04 for the  
Bellefonte Units 3 and 4 Combined License Application, dated May 21, 2008.

This letter provides the Tennessee Valley Authority's (TVA) revised response to the Nuclear  
Regulatory Commission's (NRC) request for additional information (RAI) items included in the  
reference letter. This revised response is submitted as requested by NRC following verbal  
clarifications of the requested information regarding the preservice inspection procedures.

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 Tom 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 29<sup>th</sup> day of Aug, 2008.

Jack A. Bailey  
Vice President, Nuclear Generation Development

Enclosure

cc: See Page 2

W085  
NRD

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cc: (Enclosures)

J. P. Berger, EDF  
J.M. Sebrosky, NRC/HQ  
E. Cummins, Westinghouse  
S. P. Frantz, Morgan Lewis  
M. W. Gettler, FP&L  
R. 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  
K. N. Slays, NuStart  
G. A. Zinke, NuStart

cc: (w/o Enclosure)

B. C. 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. Reister, DOE/PM  
L. Reyes, NRC/RII  
T. Simms, NRC/HQ

Attachment 02.03.01-3A  
TVA letter dated August 29, 2008  
RAI Responses

Responses to NRC Request for Additional Information letter No. 23 dated May 21, 2008  
(2 pages, including this list)

Subject: Preservice Inspection in the Final Safety Analysis Report

<u>RAI Number</u>	<u>Date of TVA Response</u>
05.02.04-01	July 3, 2008
05.02.04-02	July 3, 2008
05.02.04-03	Revised by this letter – see following page
05.02.04-04	July 3, 2008

Associated Additional Attachments / Enclosures

Pages Included

None

Enclosure  
TVA letter dated August 29, 2008  
RAI Responses

**NRC Letter Dated: May 21, 2008**

**NRC Review of Final Safety Analysis Report**

**NRC RAI NUMBER: 05.02.04-03**

Discuss the details of TVA's program regarding preservice and inservice inspection (ISI) of Class 1 austenitic and dissimilar-metal welds, including with respect to monitoring for primary water stress-corrosion cracking. Specifically address the method and type of nondestructive examination, number and type of welds projected and two-sided access provisions. If two-sided access cannot be obtained to perform the same type of nondestructive examination method during inservice examination as performed during preservice examination, discuss how NRC regulations and the ASME Code ISI requirements will be met. Note that the Staff assumes that any relief from ISI of these susceptible welds on the basis of design, geometry, or materials of construction will not be necessary, since these factors can be rectified at the design stage before the plant is constructed.

**BLN RAI ID: 1202**

**BLN RESPONSE:**

As part of the design-for-inspectability process, the ASME Class 1 portion of the reactor coolant system is designed for two-sided access for austenitic stainless steel piping welds wherever possible. This is consistent with currently-qualified ultrasonic inspection procedures which comply with ASME Section XI and 10 CFR 50.55a(b)(2)(xv)(A)(1). In some locations, such as at branch connections, two-sided access for examination for circumferential degradation is not possible. In these cases, the weld crowns are required to be flush such that one-sided ultrasonic examination techniques similar to that applied to dissimilar-metal welds can be applied. For such austenitic stainless steel welds where two-sided access is challenged, the ultrasonic inspection procedures will comply with ASME Section XI, 10 CFR 50.55a(b)(2)(xvi)(B) and 10 CFR 50.55a(b)(2)(xv)(A)(2). For dissimilar-metal welds, the welds are designed for one-sided access as a minimum. This is consistent with currently-qualified ultrasonic inspection procedures which comply with ASME Section XI, 10 CFR 50.55a(b)(2)(xvi)(B) and 10 CFR 50.55a(b)(2)(xv)(A)(2). The exact number of welds is still under development at this time, but for each type of weld, the accessibility requirements of ASME Code Section XI are being applied to the design of these welds. ASME Section XI, 10 CFR 50.55a(b)(2)(xvi) and 10 CFR 50.55a(b)(2)(xv)(A) qualified ultrasonic inspection procedures for austenitic and dissimilar metal welds will be used for both the preservice and inservice inspections. Therefore, accessibility, geometry, and material of construction during inservice inspection should not be a concern, and no relief from inservice inspection requirements is expected at this time. Since the AP1000 reactor vessel design, fabrication, and installation does not include the use of nickel-chromium-iron Alloy 600, the examination methods and procedures do not need to address examination of Alloy 600.

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