



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

December 17, 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 – SLOPE CHARACTERISTICS**

Reference: Memorandum from Joseph Sebrosky (NRC) to Stephanie Coffin (NRC), Trip Report,
October 27-29, 2008, Seismology and Geotechnical Site Visit in Support of the
Bellefonte Combined License Application, dated November 20, 2008

This letter provides the Tennessee Valley Authority's (TVA) response to the Nuclear Regulatory
Commission's (NRC) referenced trip report item 2 identified during the October 27- 29 Bellefonte (BLN)
site visit.

This responds to the NRC observation that text contained in the BLN was unclear and may indicate a
discrepancy between a figure and application text. This response identifies any associated 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 17th day of DEC, 2008.


Andrea L. Sterdis
Manager, New Nuclear Licensing
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Enclosure
cc: See Page 2

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NRO

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cc: (w/ Enclosures)

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Enclosure
TVA letter dated December 17, 2008
Observation response

This response is in regard to an NRC observation identified during the BLN site visit conducted October 27-29, 2008. (3 pages, including this list)

Subject: Slope Characteristics

Response in this enclosure

Associated Additional Attachments / Enclosures

Pages Included

None

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NRC Review of Final Safety Analysis Report

During the Bellefonte site visit during week of 10/27/08, the NRC reviewers noted a possible discrepancy in the description of the slopes adjacent to the plant fill pad contained in the text of FSAR Section 2.5.4 and the figure 2.4.2-202 showing the site grade. This description was the height and slope of a cut in the natural terrain on the southeast corner of the plant fill pad.

BLN RESPONSE:

TVA's review of this possible discrepancy between the FSAR text and figure indicated that the text was unclear in one section and TVA agrees with the NRC that the text should be revised. In addition, TVA identified one other discrepancy in the same paragraph describing the fill slope as having an approximate 4:1 slope. This fill slope is the same as the cut slope of 3:1. TVA will update the text in FSAR 2.5.5.1.1 that is referenced in FSAR 2.5.4 as indicated below in a future revision of the application.

This response is PLANT-SPECIFIC.

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 2, FSAR Chapter 2, Section 2.5.5.1.1 will be revised from:

Based on the grades in the plant area as shown on Figure 2.4.2-202, no permanent cut slopes, or man-made fill slopes, exist that could compromise the operation of the safety-related plant facilities. The grading shown on Figure 2.5-362 of the BLN power block construction zone pad is generally level at about elevation 628.6 ft. for a minimum distance of over 500 ft. from the perimeter of the BLN nuclear islands. Fill slopes at the perimeter of the fill pad are limited in height to approximately 16 ft., and inclined at grades less than approximately 4:1 (horizontal to vertical). Existing graded or natural ground surface inclinations below or adjacent to the edge of the southwest, northwest, and northeast margins of the pad are relatively flat, and do not show evidence of past instability or potential unstable conditions as described in Subsection 2.5.4.1. The southeast margin of the pad extends to the toe of natural ridge slopes, a portion of which is steepened by excavation to extend the level pad southeastward. The steepest slope at the southeast pad margin is an 80-ft. high cut at an inclination of approximately 3:1 (horizontal to vertical). The toe of this cutslope is at least 950 ft. from the Unit 4 turbine building, and 1000 ft. from the Unit 4 nuclear island. The minimum separation distance between the plant and cutslope toe is over 10 times the slope height, providing a substantial safety buffer zone against possible slope failure under dynamic or static loading conditions. Therefore, this cut slope does not pose a potential safety hazard to the Unit 4 Category I Structures.

To read:

Based on the grades in the plant area as shown on Figure 2.4.2-202, no permanent cut slopes, or man-made fill slopes, exist that could compromise the operation of the safety-related plant facilities. The grading shown on Figure 2.5-362 of the BLN power block construction zone pad is generally level at about elevation 628.6 ft. for a minimum distance of over 500 ft. from the perimeter of the BLN

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nuclear islands. Fill slopes at the perimeter of the fill pad are limited in height to approximately 16 ft., and inclined at approximately 3:1 (horizontal to vertical). Existing graded or natural ground surface inclinations below or adjacent to the edge of the southwest, northwest, and northeast margins of the pad are relatively flat, and do not show evidence of past instability or potential unstable conditions as described in Subsection 2.5.4.1. The southeast margin of the pad extends to the toe of natural ridge slopes, a portion of which is steepened by excavation to extend the level pad southeastward. The steepest slope at the southeast pad margin is an inclination of approximately 3:1 (horizontal to vertical) on an 80 to 160-ft. high cutslope. The toe of this cutslope is at least 950 ft. from the Unit 4 turbine building, and 1000 ft. from the Unit 4 nuclear island. The minimum separation distance between the plant and cutslope toe is over 10 times the slope height, providing a substantial safety buffer zone against possible slope failure under dynamic or static loading conditions. Therefore, this cut slope does not pose a potential safety hazard to the Unit 4 Category I Structures.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

None