

BellefonteRAIsPEm Resource

From: Joseph Sebrosky
Sent: Thursday, July 17, 2008 4:05 PM
To: BellefonteRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 082 RELATED TO SRP SECTION 2.4.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION
Attachments: BLN-RAI-LTR-082.doc

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 082 RELATED TO SRP SECTION 2.4.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION
Sent Date: 7/17/2008 4:04:50 PM
Received Date: 7/17/2008 4:04:52 PM
From: Joseph Sebrosky

Created By: Joseph.Sebrosky@nrc.gov

Recipients:
"BellefonteRAIsPEm Resource" <BellefonteRAIsPEm.Resource@nrc.gov>
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Reply Requested: No
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July 17, 2008

Ms. Andrea L. Sterdis
Manager, Nuclear Licensing & Industry Affairs
Nuclear Generation Development & Construction
Tennessee Valley Authority
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 082 RELATED TO
SRP SECTION 2.4.3 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED
LICENSE APPLICATION

Dear Ms. Sterdis:

By letter dated October 30, 2007, as supplemented by letters dated November 2, 2007, January 8, 2008 and January 14, 2008, Tennessee Valley Authority (TVA) submitted its application to the U. S. Nuclear Regulatory Commission (NRC) for a combined license (COL) for two AP1000 advance passive pressurized water reactors pursuant to 10 CFR Part 52. The NRC staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter.

To support the review schedule, you are requested to respond within 30 days of the date of this letter. If changes are needed to the final safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, you may contact me at 301-415-1132.

Sincerely,

/RA/

Joseph M. Sebrosky, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015

eRAI Tracking No. 398

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-1132.

Sincerely,

/RA/

Joseph M. Sebrosky, Senior Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015

eRAI Tracking No. 398

Enclosure:
Request for Additional Information

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DATE	6/4/08	6/4/08		06/5/08	07/16/08

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information
Bellefonte Units 3 and 4
Tennessee Valley Authority
Docket No. 52-014 and 52-015
SRP Section: 02.04.03 - Probable Maximum Flood (PMF) on Streams and Rivers
Application Section: 2.4.3

QUESTIONS from the Hydrological Engineering Branch

02.04.03-1

Provide a description of the method used to estimate precipitation losses and perform a sensitivity analysis to investigate the effect of increasing the precipitation excess (decreasing the infiltration) in each sub-basin. Also please provide a copy of reference 3 of the white paper, Kohler, M.A., and R.K. Linsley, Research Paper No. 34, "Predicting the Runoff from Storm Rainfall", U.S. Department of Commerce, Weather Bureau, Washington, September 1951. This issue is associated with Attachment 5, item 41, of the May 13 -16, 2008, hydrology-related safety site trip report dated June 12, 2008 (ADAMS accession number ML081610308).

02.04.03-2

TVA should provide further explanation and justification for the use of the Goodrich semi-graphical method for tributary routings. This issue is associated with Attachment 5, item 43, of the May 13 -16, 2008, hydrology-related safety site trip report dated June 12, 2008 (ADAMS accession number ML081610308).

02.04.03-3

TVA needs to clarify FSAR text regarding dam-safety modifications (existing, anticipated, or not) for the Chickamauga Dam. This issue is associated with Attachment 5, item 44, of the May 13 -16, 2008, hydrology-related safety site trip report dated June 12, 2008 (ADAMS accession number ML081610308).

02.04.03-4

Description: Attachment 5, item 45, of the May 13-16, 2008 trip report stated that TVA should provide a subject matter expert to discuss the assumptions about the status of spillway gates and other adjustable structures during the PMF. During the trip (including staff's visit to Chickamauga Dam), TVA staff stated that six spillway bays will be out of service during construction of the new navigation lock at Chickamauga Dam. Once construction has been completed, only five spillway bays will be permanently out of service due to the new navigation lock.

Commitment: TVA will perform and document sensitivity runs that compute the water surface elevation at the Bellefonte Site with Chickamauga Dam spillway gates out of service due to the new navigation lock. This includes both the construction (6 bays out-of-service) and operation (5 bays out-of-service) configurations.

Enclosure

02.04.03-5

TVA should provide a description of the method used to estimate the initial state of the reservoir, the reservoir state at the end of the antecedent storm and how these assumptions comply with Standard Review Plan 2.4.4 and GDC 2, Appendix A of 10 CFR 50. This issue is associated with Attachment 5, item 46, of the May 13 -16, 2008, hydrology-related safety site trip report dated June 12, 2008 (ADAMS accession number ML081610308).

02.04.03-6

TVA should provide a description of impacts on the probable maximum flood brought about by a change in the reservoir operation policy discussed in the Reservoir Operations Study conducted by TVA in 2004. This issue is associated with Attachment 5, item 48, of the May 13 -16, 2008, hydrology-related safety site trip report dated June 12, 2008 (ADAMS accession number ML081610308).

02.04.03-7

In order for staff to make a determination of reasonable assurance of adequate protection from flooding, the staff must ensure that the conceptual model(s) considered in the design basis evaluation represent the most conservative plausible model. The staff relies on the available data to determine which conceptual models are plausible and which conceptual models are implausible. The uncertainty resulting from a paucity of data is compensated for with more conservative conditions being considered. Provide a description of the process used to ensure that the conceptual models employed for a) site flooding b) Town Creek drainage flooding and c) regional flooding of the Tennessee River calculations are the most conservative plausible conceptual models.