

BellefonteRAIsPEm Resource

From: Sebrosky, Joseph
Sent: Wednesday, June 24, 2009 8:21 AM
To: BellefonteRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 162 RELATED TO SRP
SECTION 1.0 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE
APPLICATION
Attachments: BLN-RAI-LTR-162.doc

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Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 162
RELATED TO SRP SECTION 1.0 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED
LICENSE APPLICATION

Sent Date: 6/24/2009 8:21:16 AM

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From: Sebrosky, Joseph

Created By: Joseph.Sebrosky@nrc.gov

Recipients:

"BellefonteRAIsPEm Resource" <BellefonteRAIsPEm.Resource@nrc.gov>

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June 24, 2009

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. 162 RELATED TO
SRP SECTION 1.0 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 and is consistent with the SER with Open Items for Chapter 1 that was provided to you on June 23, 2009.

To support the review schedule, you are requested to respond within 45 days of the date of the issuance of the SER with Open Items for Chapter 1 (June 23, 2009). 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. 2997, 2566, 2610, and 2640
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. 2997, 2566, 2610, and 2640

Enclosure:
Request for Additional Information

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Bellefonte Units 3 and 4
TVA
Docket No. 52-014 and 52-015
SRP Section: 01 - Introduction and Interfaces
Application Section: 1.0

QUESTIONS for AP1000 Projects Branch 1 (NWE1)

01-15

In th section 1.10 of the application, the applicant provides an assessment of the potential hazards due to construction of one unit on SSCs important to safety for an operating unit, in accordance with 10 CFR 52.79(a)(31).

- STD SUP 1.10-1

The NRC staff reviewed the information in BLN COL FSAR Table 1.10-201, identifying the potential hazards from construction activities, BLN COL FSAR Table 1.10-202 that cross-references the construction hazard with the impacted SSCs, and BLN COL FSAR Table 1.10-203, identifying the specific managerial and administrative controls to preclude or mitigate the construction hazard. There is the potential that review of other areas of the application could impact the hazards and management programs identified in the Bellefonte application. For example, site runoff from construction of Unit 4, if not properly controlled, could impact the operation of Unit 3. Site runoff is evaluated in Section 2.4 of this report. The staff has not yet completed its review of this application against the requirements of 10 CFR 52.79(a)(31). This is part of an Open Item 1.4-3.

- BLNSUP 1.10-1

The supplemental information states that the power blocks for BLN 3 and 4 have a minimum separation of at least 800 feet between plant centerlines and notes that new units SSCs important to safety are described in BLN COL FSAR Chapter 3 and the LCOs for BLN 3 and 4 are identified in Part 4 of the COL application. In the standard portion of FSAR Section 1.10, there is a discussion that the primary consideration in setting the 800 foot separation distance is the space needed to support plant construction via the use of a heavy-lift crane.

The site-specific supplemental information is provided to supplement the standard information above and provides with specificity the location of the SSCs and LCOs required by 10 CFR 52.79(a)(31). The staff has not yet completed its review of this application against the requirements of 10 CFR 52.79(a)(31). This is Open Item 1.4-3.

01-16

TVA states that controls within Section 1.10 of the FSAR are not required unless there is an operating unit on the site. To clarify this FSAR commitment, the staff requests TVA to revise the application to positively state these programs will be in place when there is an operating unit on the site. This is Open Item 1.4-4.

Enclosure

In TVA's letter transmitting Revision 1 of the COL application, dated October 30, 2007, and in Part 1, "General and Financial Information," of the application TVA requested material licenses for receipt, possession and use of source, byproduct and special nuclear material in accordance with Commission regulations in 10 CFR Parts 30, 40, and 70. The reviews conducted to support the issuance of the COL encompass those necessary to support granting 10 CFR Parts 30, 40, and 70 licenses. The standard license that the staff intends to issue is based on operating licenses for nuclear power plants licensed in accordance with 10 CFR Part 50. The staff is considering the following standard license provisions for the Bellefonte combined license as it relates to authorization pursuant to regulations in Parts 30, 40, and 70:

"Subject to the conditions and requirements incorporated herein, the Commission hereby licenses TVA:

(1) (i) pursuant to the Act and 10 CFR Part 70, to receive and possess at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, described in the final safety analysis report (FSAR), as supplemented and amended;

(ii) pursuant to the Act and 10 CFR Part 70, to use special nuclear material as reactor fuel, after the finding in Section 2.D(1) of this license has been made ((note: 2D(1) is a reference to the 10 CFR 52.103(g) finding), in accordance with the limitations for storage and amounts required for reactor operation, and described in the FSAR, as supplemented and amended;

(2) pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(3) pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required, any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(4) pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility."

The staff notes that FSAR Table 13.4-201 of the BLN 3 and 4 COL application provides milestones for various operational programs to be implemented. Important milestone dates for various operational programs that support issuance of the license and requirements relative to 10 CFR Parts 30, 40, and 70 include the following:

- Radiation Protection Program (including ALARA principles) – prior to initial receipt of byproduct, source, or special nuclear materials (excluding exempt quantities as described in 10 CFR 30.18)
- Fire Protection Program – prior to receipt of fuel onsite

- Security Program including physical security, safeguards contingency programs, training and qualification program – prior to receipt of fuel onsite

These implementation milestones are discussed in Section 13.4 of this SER.

In addition to the evaluation of the implementation milestones noted above, the staff's evaluation of the radiation protection program that supports the issuance of the 10 CFR Parts 30, 40, and 70 licenses is addressed in Chapter 12 of this SER. Additional staff evaluations that support the issuance of the 10 CFR Part 70 license are addressed in Chapter 9 of this SER (i.e., new fuel storage, spent fuel storage, and fire protection programs) and in the staff's evaluation of TVA's security program. The staff finds that the information in the Bellefonte COL application to support granting of the 10 CFR Part 70 license mentioned as part of the license above is sufficient, pending resolution of the open items in this report related to new and spent fuel, fire protection program, security program, and the implementation of the fire protection and security programs. However, TVA needs to provide a discussion of which parts of its COL application other than the reference to the radiation protection program provide sufficient information to support compliance with the applicable portions of 10 CFR Part 30 and 40, prior to the 10 CFR 52.103(g) finding. This is Open Item 1.5-1.

01-18

TVA will need to supplement this application, where necessary, based on completion of the AP1000 DC amendment. This activity is being tracked as Open Item 1-1.

01-19

The staff has not yet determined which BLN COL FSAR commitments require a license condition. The decision on which BLN COL FSAR commitments, if any, should become license conditions is Open Item 1-2.