

BellefonteRAIsPEm Resource

From: Brian Anderson
Sent: Monday, July 21, 2008 3:34 PM
To: BellefonteRAIsPEm Resource
Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 086 RELATED TO SRP
SECTION 09.02.01 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE
APPLICATION
Attachments: BLN-RAI-LTR-086.doc
Importance: High

Hearing Identifier: Bellefonte_COL_RAI_Public
Email Number: 64

Mail Envelope Properties (CB87FC66F95637428C5E0D066E756B6F7C72EA8259)

Subject: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 086 RELATED TO
SRP SECTION 09.02.01 FOR THE BELLEFONTE UNITS 3 and 4 COMBINED LICENSE APPLICATION
Sent Date: 7/21/2008 3:33:45 PM
Received Date: 7/21/2008 3:33:47 PM
From: Brian Anderson

Created By: Brian.Anderson@nrc.gov

Recipients:
"BellefonteRAIsPEm Resource" <BellefonteRAIsPEm.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	3	7/21/2008 3:33:47 PM
BLN-RAI-LTR-086.doc	56826	

Options
Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

July 21, 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. 086 RELATED TO
SRP SECTION 09.02.01 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 45 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 301-415-9967 or you may contact Joseph Sebrosky, the lead project manager for the Bellefonte combined license at 301-415-1132.

Sincerely,

/RA/

Brian C. Anderson, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015

Enclosure:
Request for Additional Information

CC: see next page

If you have any questions or comments concerning this matter, you may contact me at 301-415-9967 or you may contact Joesph Sebrosky, the lead project manager for the Bellefonte combined license at 301-415-1132.

Sincerely,

/RA/

Brian C. Anderson, Project Manager
AP1000 Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-014
52-015
eRAI Tracking No. 712

Enclosure:
Request for Additional Information

Distribution:

Public	SCoffin	SLee
RidsNroDnrlNwe1	TSimms	JTatum
RidsNroLAKGoldstein	RJoshi	
RidsOgcMailCenter	BHughes	
RidsAcrsAcnwMailCenter	MComar	
RidsRgn2MailCenter	AHodgdon	
JSebrosky	PMoulding	

NRO-002

OFFICE	COLP/BC		NWE1/PM	OGC	NWE1/L-PM
NAME	SLee*		TSimms*	PMoulding*	JSebrosky*
DATE	7/11/08		7/15/08	7/18/08	7/21/08

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

**Request for Additional Information
Bellefonte Units 3 and 4
Tennessee Valley Authority
Docket No. 52-014 and 52-015
SRP Section: 09.02.01 - Station Service Water System
Application Section: 9.2.11**

QUESTIONS from Balance of Plant Branch 2

09.02.01-2

To address compliance with General Design Criteria (GDC) 4, "Environmental and Dynamic Effects Design Bases" and considerations relative to regulatory treatment of non-safety systems (RTNSS), identify and address the potential effects of raw water system (RWS)-related failures on safety-related and RTNSS equipment. Establish plant-specific inspection, test, analyses, and acceptance criteria (ITAAC); initial test program provisions; technical specifications, and availability controls for the RWS as appropriate, or explain why they are not necessary. Provide any markups of the Final Safety Analysis Report (FSAR) and other parts of the application, as applicable, to facilitate the staff's evaluation.

09.02.01-3

Section 9.2.11 of the FSAR generally discusses the raw water system (RWS) and contingencies that exist for providing makeup for the service water system (SWS) cooling tower basins. Provide a clearly defined RWS design basis for assuring the defense-in-depth and RTNSS capabilities for the most limiting situations, and describe measures for assuring the functional capability of the RWS over time. For example, describe the minimum RWS flow rate, water inventory, temperature limitations, and corresponding bases for providing SWS makeup for the two Bellefonte units. Describe net positive suction head criteria, materials considerations, and industry operating experience. Describe any design provisions and measures being implemented to resolve vulnerabilities and degradation mechanisms, to confirm the adequacy of design, and to assure the functional capability of the RWS over time; include consideration of plant-specific ITAAC, the initial test program, technical specifications, and availability controls as appropriate. Fully describe the RWS design basis and address those review considerations specified by Section III of SRP Sections 9.2.1 and 9.2.5 that are relevant for assuring the functional capability of the RWS over time, or explain why this is not necessary. Additional guidance for addressing these SRP areas of review is provided in Sections C.I.9.2.1 and C.I.9.2.5 of Regulatory Guide (RG) 1.206. Provide markups of the FSAR and other parts of the application, as applicable, to facilitate the staff's evaluation.

09.02.01-4

As specified by 10 CFR 20.1406, combined operating license (COL) applicants are required to describe how facility design and procedures for operation will minimize the generation of radioactive waste and contamination of the facility and environment, and facilitate eventual plant decommissioning. Although the raw water system (RWS) has no interconnections with any systems that contain radioactive fluids, industry experience has shown that this alone may not be sufficient to prevent the RWS from becoming

contaminated. For example, unplanned leaks or release of contaminated fluids as a result of component failures or transport, drainage problems in contaminated areas, and the migration of contamination through soils and other porous barriers over time have caused systems and areas of the plant that are not directly connected with contaminated systems to become contaminated. With respect to the RWS, describe design provisions and other measures that will be implemented to satisfy 10 CFR 20.1406, including measures that will be implemented to monitor the RWS for contamination and corrective actions that will be taken to eliminate any radioactive contamination that is identified. Regulatory Guide (RG) 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning," provides guidance that may be used for addressing the provisions of 10 CFR 20.1406.