PMBelCOL PEmails

From: Joshi, Ravindra
Sent: Tuesday, June 16, 2009 2:14 PM
To: BelCol Resource
Subject: FW: Courtesy Email Copy - Response to RAI Letter 30 Supplement 2
Attachments: BLN RAI Response to RAI Letter 030 S2 06_09_09_Final.pdf

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From: Spink, Thomas E [mailto:tespink@tva.gov]
Sent: Tuesday, June 09, 2009 1:52 PM
To: Joshi, Ravindra
Subject: FW: Courtesy Email Copy - Response to RAI Letter 30 Supplement 2

Ravi - Sorry, I put the wrong letter number in the subject.

Thomas E. Spink
Licensing Project Manager
Nuclear Generation Development
1101 Market Street, LP 5A
Chattanooga, TN 37402
423-751-7062; FAX (423) 751-6509

From: Spink, Thomas E
Sent: Tuesday, June 09, 2009 1:48 PM
To: 'Ravindra.Joshi@nrc.gov'
Cc: Sterdis, Andrea Lynn; 'EDDIE GRANT'; Ryan, William T III; Behnke, Donald H.
Subject: Courtesy Email Copy - Response to RAI Letter 129 Supplement 2

Ravi,

I have enclosed a PDF copy of our Response to RAI Letter 30 Supplement 2 with this email as a courtesy. As always, the official submittal has been submitted to the Document Control Desk via paper copy using Federal Express services. The paper copy should arrive on June 10, 2009.

If you have any questions, please do not hesitate to call me.

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Hearing Identifier: Bellefonte_COL_Public_EX
Email Number: 1582

Mail Envelope Properties (CEEA97CC21430049B821E684512F6E5ECA49137BD7)

Subject: FW: Courtesy Email Copy - Response to RAI Letter 30 Supplement 2
Sent Date: 6/16/2009 2:14:10 PM
Received Date: 6/16/2009 2:14:13 PM
From: Joshi, Ravindra

Created By: Ravindra.Joshi@nrc.gov

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

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	1272	6/16/2009 2:14:13 PM
BLN RAI Response to RAI Letter 030 S2 06_09_09_Final.pdf	209123	

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

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

June 9, 2009

10 CFR 52.79

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

In the Matter of)
Tennessee Valley Authority)

No. 52-014 and 52-015

BELLEFONTE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION – RECIRCULATION COL ITEM

References:

1. Letter from Ravindra G. Joshi (NRC) to Andrea L. Sterdis (TVA), Request for Additional Information Letter No. 030 Related to SRP Section 06.02.02 for the Bellefonte Units 3 and 4 Combined License Application, dated June 6, 2008.

2. Letter from Andrea L. Sterdis (TVA) to Document Control Desk (NRC), Bellefonte Combined License Application – Response To Request For Additional Information – Recirculation COL Item, dated June 30, 2008.

3. Letter from Andrea L. Sterdis (TVA to Document Control Desk (NRC), Bellefonte Combined License Application – Response To Request For Additional Information – Correction Of Error In Submittal For Recirculation COL Item, dated July 29, 2008.

4. Letter from Andrea L. Sterdis (TVA to Document Control Desk (NRC), Bellefonte Combined License Application – Response To Request For Additional Information – Recirculation COL Item, dated May 15, 2009.

This letter provides the Tennessee Valley Authority's (TVA) revised response to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) item included in the Reference 1 letter. Reference 4 provided an update to the Containment Cleanliness Program as discussed at the public meeting with Westinghouse regarding the proposed AP1000 Containment and Recirculation Sump Design in Rockville, Maryland on March 20, 2009. This revised response to RAI 06.02.02-01 is submitted as requested by the NRC following verbal clarifications of the requested information.

A supplemental response to the NRC request in Reference 1 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 Thomas 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 9th day of June, 2009.

Andrea L. Sterdis
Manager, New Nuclear Licensing and Industry Affairs
Nuclear Generation Development & Construction

Enclosure: Revised Enclosure for Reference 2
cc: See Page 3

cc: (Enclosure)
J. P. Berger, EDF
E. Cummins, Westinghouse
S. P. Frantz, Morgan Lewis
M. W. Gettler, FP&L
R. C. Grumbir, NuStart
P. S. Hastings, NuStart
P. Hinnenkamp, Entergy
R. G. Joshi, NRC/HQ
M. C. Kray, NuStart
D. Lindgren, Westinghouse
G. D. Miller, PG&N
M. C. Nolan, Duke Energy
N. T. Simms, Duke Energy
G. A. Zinke, NuStart

cc: (w/o Enclosure)
B. C. Anderson, NRC/HQ
M. M. Comar,NRC/HQ
B. Hughes,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
J. M. Sebrosky, NRC/HQ

Enclosure
TVA letter dated June 9, 2009
RAI Response

Responses to NRC Request for Additional Information letter No. 030 dated June 6, 2008

(6 pages, including this list)

Subject: Quality Assurance

RAI Number	Date of TVA Response
06.02.02-01	June 30, 2008; July 29, 2008; May 15, 2009; Supplemented by this letter – see following pages

Attachments / Enclosures	Pages Included
None	

NRC Letter Dated: June 6, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 06.02.02-01

With regard to the containment recirculation systems, please describe TVA's plan to include the recent AP1000 recirculation submittals into the Bellefonte licensing basis and address the two COL items associated with them, COL items 6.3-1 (FSAR Section 6.3.8.1) and 6.3-2 (introduced in Enclosure 2 of TVA letter dated January 14, 2008).

BLN RAI ID: 3440

BLN RESPONSE:

The following response to the above RAI was provided to the NRC on June 30, 2008.

COL item 6.3-1 is addressed in the BLN COL Application, Part 2, FSAR, Table 1.8-202 and Subsection 6.3.8.1, and in Part 10, Proposed License Condition 2, item 6.3-1. This portion of the COL application was not affected by the revisions in the TVA letter dated January 14, 2008.

COL item 6.3-2 was introduced in the TVA letter dated January 14, 2008, in response to a proposed change to the incorporated by reference AP1000 DCD Revision 16 identified in the Westinghouse TR134, Revision 3 dated January 14, 2008. The necessary associated changes to the COLA were shown in the January 14, 2008, letter referenced in the question. These revisions will be included in a future application revision as indicated in that letter with the exception that the title of the COL item will be revised in COLA Part 2, FSAR, Chapter 1, Table 1.8-202 and COLA Part 10, Proposed License Condition 2, COL holder item 6.3-2 to match the DCD. These associated changes are repeated in the Application Revisions section below with the title correction.

The following supplements the response to the above RAI provided to the NRC on June 30, 2008. DCD, Revision 17, Section 6.3.8.2 "Verification of Water Sources for Long-Term Recirculation Cooling Following a LOCA" was revised to state:

> The Combined License information requested in this subsection has been fully addressed in APP-GW-GLR-079 (Reference 3), and the applicable changes are incorporated into the DCD. The design of the recirculation screens is complete. Testing to assess the screen performance and downstream effects is complete. A study of the effects of screen design and performance on long-term cooling is complete. No additional work is required by the Combined License applicant to address the aspects of the Combined License information requested in this subsection.

As a result, the COL holder item has been removed.

This revision supplements the original response by providing additional information to address recent changes in the AP1000 DCD (see DCD RAI Responses RAI-SRP6.2.2-SRSB-05, Revision 1 and RAI-SRP6.2.2-SPCV-14) requirements regarding latent debris in containment. In order to meet the latent debris requirements identified in the DCD, a sampling program is implemented consistent with NEI Guidance Report 04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology," as supplemented by the NRC in the "Safety Evaluation by The Office of Nuclear Reactor Regulation Related to NRC Generic Letter 2004-02, Nuclear Energy Institute

Guidance Report (Proposed Document Number NEI 04-07), 'Pressurized Water Reactor Sump Performance Evaluation Methodology.'" The cleanliness inspection and sampling will be performed prior to startup and, as recommended in the Safety Evaluation, the sampling will be conducted after every second refueling outage. Specific areas may be excluded from latent debris consideration when their cleanliness is demonstrated through sampling and documented cleaning procedures for those areas are exercised before each restart. If the sample results demonstrate the effectiveness of cleanliness inspections, sampling frequency may be reduced. This is supported by the NEI 04-07 statement: "The results of the survey indicate that areas that look clean, including vertical surfaces, represent only a small contribution to the latent debris source term."

This supplemented response also requires changes in the BLN COLA as shown below in the Application Revisions section.

This response is expected to be STANDARD for the S-COLAs.

ASSOCIATED BLN COL APPLICATION REVISIONS:

Note: DCD Revision 17, Section 6.3.8.2 Verification of Water Sources for Long-Term Recirculation Cooling Following a LOCA, includes the following statement:

> The Combined License information requested in this subsection has been fully addressed in APP-GW-GLR-079 (Reference 3), and the applicable changes are incorporated into the DCD.

Therefore, the COLA changes identified as items 1, 2, and 3 in previous Reference 2 and 3 submittals are superseded.

4. COLA Part 2, FSAR Chapter 6, Subsection 6.3.8.1 will be revised from:

6.3.8.1 Containment Cleanliness Program
Insert the following information at the end of DCD Subsection 6.3.8.1:

This COL Item is addressed below.

Administrative procedures implement the containment cleanliness program. Implementation of the program minimizes the amount of debris that might be left in containment following refueling and maintenance outages. The program is consistent with the containment cleanliness program used in the evaluation discussed in DCD Subsection 6.3.8.2. The program includes as a minimum the following:

<u>Responsibilities</u>

The program defines the organizational responsibilities for implementing the program; defines personnel and material controls; and defines the inspection and reporting requirements.

Implementation

Containment Entry

- Controls to account for the quantities and types of materials introduced into the containment.
- Limits on the types and quantities of materials, including scaffolding and tools, for a particular entry.
- Defined prohibited materials and limits on quantities of materials that may generate hydrogen when exposed to the containment environment.
- Personnel responsible for authorizing the types and quantities of material that may be introduced into containment, and approving the leaving of these materials unattended in containment.
- Controls for loose items, such as keys and pens, which could be inadvertently left in containment.
- Methods and controls for securing any items and materials left unattended in containment.

Containment Exit

- Controls for accounting for tools, equipment and other material left unattended in containment necessary for ongoing work.
- Controls for accounting of the permanent removal of materials previously introduced into the containment.
- Limits on the types and quantities of materials, including scaffolding and tools, that may be left unattended in containment during outages and power operation. Types of materials considered are tape, labels, plastic film, and paper and cloth products.
- Requirements and actions to be taken for unaccounted for material.
- Requirements for final containment cleanliness inspections.
- Record keeping requirements for entry/exit logs.

To read:

6.3.8.1 Containment Cleanliness Program
Insert the following information at the end of DCD Subsection 6.3.8.1:

This COL Item is addressed below.

Administrative procedures implement the containment cleanliness program. Implementation of the program minimizes the amount of debris left in containment following personnel entry and exits. The program is consistent with the containment cleanliness program limits discussed in DCD Subsection 6.3.8.1. The program includes, as a minimum, the following:

Responsibilities

The program defines the organizational responsibilities for implementing the program; defines personnel and material controls; and defines the inspection and reporting requirements.

Implementation

Containment Entry/Exit

- Controls to account for the quantities and types of materials introduced into the containment.
- Limits on the types and quantities of materials, including scaffolding and tools, to ensure adequate accountability controls. This may be accomplished by the work management process. Storage of aluminum is prohibited without engineering authorization. Cardboard boxes or miscellaneous packing material is not brought into containment without approval.
- If entries are made at power, prohibited materials and limits on quantities of materials that may generate hydrogen are established.
- Controls for loose items, such as keys and pens, which could be inadvertently left in containment.
- Methods and controls for securing any items and materials left unattended in containment.
- Administrative controls for accounting for tools, equipment and other material are established.
- Administrative controls for accounting of the permanent removal of materials previously introduced into the containment.
- Limits on the types and quantities of materials, including scaffolding and tools, that may be left unattended in containment during outages and power operation. Types of materials considered are tape, labels, plastic film, and paper and cloth products.
- Requirements and actions to be taken for unaccounted for material.
- Requirements for final containment cleanliness inspections consistent with the design bases provided in DCD Subsection 6.3.8.1.
- Record keeping requirements for entry/exit logs.

Housekeeping

Housekeeping procedures require that work areas be maintained in a clean and orderly fashion during work activities and returned to original conditions (or better) upon completion of work.

Sampling Program

A sampling program is implemented consistent with NEI Guidance Report 04-07, "Pressurized Water Reactor Sump Performance Evaluation Methodology" as supplemented by the NRC in the "Safety Evaluation by The Office of Nuclear Reactor Regulation Related to NRC Generic Letter 2004-02, Nuclear Energy Institute Guidance Report (Proposed Document Number NEI 04-07), 'Pressurized Water Reactor Sump Performance Evaluation Methodology.'" Latent debris sampling is implemented before startup. The sampling is conducted after containment exit cleanliness inspections to provide reasonable assurance that the plant latent debris design bases are met. Sampling frequency and scope may be adjusted based on sampling results. Results are evaluated post-start up and any nonconforming results will be addressed in the Corrective Action Program.

ATTACHMENTS/ENCLOSURES:

None