PMSTPCOL PEmails

From: Stacy Joseph
Sent: Tuesday, January 27, 2009 5:11 PM
To: 'jetomkins@stpegs.com'; STPCOL
Subject: Request for Additional Information Letter #76
Attachments: ML0902700490.pdf

Jim,

Attached you will find the publically available ADAMS files which contains the " REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 76 RELATED TO SRP SECTION 06.02.01.01.C FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE APPLICATION." This email is being sent to satisfy the delivery date noted on the letter, however a copy of this document has been sent to you via postal mail.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Stacy Joseph
Project Manager
U. S. Nuclear Regulatory Commission
Office of New Reactors
Division of New Reactor Licensing

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Hearing Identifier: SouthTexas34Public_EX
Email Number: 985

Mail Envelope Properties (CEEA97CC21430049B821E684512F6E5EB6543E6D18)

Subject: Request for Additional Information Letter #76
Sent Date: 1/27/2009 5:10:30 PM
Received Date: 1/27/2009 5:10:31 PM
From: Stacy Joseph

Created By: Stacy.Joseph@nrc.gov

Recipients:
"'jetomkins@stpegs.com'" <jetomkins@stpegs.com>
Tracking Status: None
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	705	1/27/2009 5:10:31 PM
ML0902700490.pdf	94997	

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

January 26, 2009

Mr. Scott Head, Manager
Regulatory Affairs
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 76 RELATED TO SRP SECTION 06.02.01.01.C FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE APPLICATION

Dear Mr. Head

By letter dated September 20, 2007, South Texas Project Nuclear Operating Company (STPNOC) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U. S. Nuclear Regulatory Commission (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 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, I can be reached at 301-415-2849 or by e-mail at Stacy.Joseph@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Stacy K. Joseph, Project Manager
ESBWR/ABWR Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 1868

Enclosure:
Request for Additional Information

cc:
Mr. William Mookhoek
Mr. James Tomkins

If you have any questions or comments concerning this matter, I can be reached at 301-415-2849 or by e-mail at Stacy.Joseph@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Stacy K. Joseph, Project Manager
ESBWR/ABWR Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 1868

Enclosure:
Request for Additional Information

cc:
Mr. William Mookhoek
Mr. James Tomkins

Distribution:
PUBLIC
NGE ½ R/F
ADrozd, NRO
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JBiggins, OGC
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ADAMS Accession No. ML090270049 NRO-002

OFFICE	SBCV/TR	SBCV/BC	NGE2/PM	OGC	NGE2/L-PM
NAME	ADrozd	MSnodderly	SJoseph	JBiggins	GWunder
DATE	12/18/2008	1/7/2009	1/13/2009	1/13/2009	1/26/2009

***Approval captured electronically in the electronic RAI system.**

OFFICIAL RECORD COPY

Request for Additional Information No. 1868 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 06.02.01.01.C - Rev. 7 Pressure-Suppression Type BWR Containments
Application Section: 6.2

QUESTIONS for Containment and Ventilation Branch 2 (ESBWR/ABWR Projects) (SBCV)

06.02.01.01.C-1
Section 6.2.1.1.3: The staff found the containment analyses in support of the certified ABWR design to be acceptable based on the use of the GESSAR methodology and confirmatory calculations by the staff. It is the staff's understanding that the applicant plans to replace GESSAR with the GOTHIC computer program. It is also the staff's understanding that the GOTHIC code was adapted to employ models and assumptions outlined in the NEDO-20533 reports. Please, provide:
- GOTHIC input deck/description for the STP ABWR DBA containment analyses,
- detailed description of how the models and assumptions presented in the NEDO-20533 reports were incorporated into the GOTHIC model, and
- reference for qualification and/or benchmarking of GOTHIC to be used as an acceptable tool for performing the STP ABWR DBA containment analysis.

06.02.01.01.C-2
Section 6.2.1.1.3: The staff is preparing an STP ABWR MELCOR model in support of performing independent confirmatory analysis. The following information is needed for development of the MELCOR input file:
- reactor vessel: water flow loss coefficient for the following junctions: downcomer to lower plenum, lower plenum to core channel, lower plenum to core bypass, core channel to steam separator, steam separators to downcomer,
- reactor vessel: elevation of the main feed water spargers,
- setpoint value of the Condensate Storage Tank (CST) level at which High Pressure Core Flooder (HPCF) and Reactor core Isolation Cooling (RCIC) systems suction transfer from the CST to the Suppression Pool (SP),
- setpoint value of the SP level at which HPCF and RCIC systems suction transfer from the CST to the SP,
- setpoint value of the reactor vessel pressure at which the low pressure permissive signal is generated to open the Low Pressure Core Flooder (LPCF) injection valve,
- ADS valves opening sequence after receiving the ADS initiation signal,
- a figure showing the feedwater line break flow from the feedwater system side of break (i.e., Figure 6.2-3 in STP COLA, Rev. 2 with the time axis varying from 0.0 to 5 hrs),
- a figure showing the feedwater line break flow enthalpy from the feedwater system side of break (i.e., Figure 6.2-4 in STP COLA, Rev. 2 with time axis varying from 0.0 to 5 hrs),
- a figure showing the feedwater line break flow from the RPV side of break (i.e., Figure 6.2-23 in ABWR DCD with time axis varying from 0.0 to 5 hrs),
- a figure showing the feedwater line break flow enthalpy from the RPV side of break (i.e., Figure 6.2-23 in ABWR DCD with time axis varying from 0.0 to 5 hrs),
- a figure showing the main steam line break flow from the RPV side of break (i.e., Figure 6.2-24 in ABWR DCD with time axis varying from 0.0 to 5 hrs),

- a figure showing the main steam line break flow enthalpy from the RPV side of break (i.e., Figure 6.2-24 in ABWR DCD with time axis varying from 0.0 to 5 hrs),
- a figure showing the main steam line break flow from the piping side of break (0 to 5 hrs),
- a figure showing the main steam line break flow enthalpy from the piping side of break (0 to 5 hrs),
- a figure showing the feedwater flow rate and enthalpy assumed for the MSLB accident analysis as described in section 6.2.1 of STP COLA, Rev. 2.

06.02.01.01.C-3
App. 3B, p 3B-1: Reference to ABWR LTR NEDO-33372 has been crossed out. Due Diligence Report Action Item 98 indicates that this report has been replaced with an alternative COLA text. Staff can not identify the replacement text in Revision 2 of the COLA. Please clarify or provide the alternative COLA text.

06.02.01.01.C-4
STP FSAR Tier 2 Chapter 3, App. 3B, p. 3B-2: 3B.3.3 (STD DEP Admin) – Figure 3B-8 shows a “typical” X-quencher pressure amplitudes. Provide a list of the similarities and differences between a “typical” X-quencher analyzed in reference 3B-5 and the Toshiba proposed quencher. Provide a pressure signature for the Toshiba proposed quencher if it is different from the “typical” X-quencher analyzed in reference 3B-5.

06.02.01.01.C-5
STP FSAR Tier 2, Chapter 3, App. 3B, p. 3B-2: 3B.4.1 (STD DEP 6.2-2) – a statement is made that “Bounding pressure and temperature envelope curves for large, intermediate, and small break LOCAs are used to establish the structural loading conditions in the containment.” Provide the reference(s) for these bounding P/T curves, including the reference for the Toshiba proposed STP ABWR P/T transient calculations.

06.02.01.01.C-6
STP FSAR Tier 2, Chapter 3, App. 3B, p. 3B-2: 3B.4.2.1 (STD DEP 6.2-2) – Elevations used for determination of the structure loads have been revised, i.e., 7m to 8.5m, and 10.3m to 11.7m. Provide the reference and/or models used to justify these changes.

06.02.01.01.C-7
STP FSAR Tier 2, Chapter 3, App. 3B, p. 3B-2: 3B.4.2.1 (STD DEP 6.2-2) – a statement is made that the “load calculation methodology for defining such loads will be based on that approved for Mark III containment (NUREG-0978).” Provide the reference for these calculations including a description of the adaptation of the Mark III methodology to the Toshiba proposed ABWR design.