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July 23, 2009
U7-C-STP-NRC-090081

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

South Texas Project
Units 3 and 4
Docket Nos. 52-012 and 52-013
Response to Request for Additional Information

Attached are the responses to the NRC staff questions included in Request for Additional Information (RAI) letter numbers 138 and 139 related to Combined License Application (COLA) Part 2, Tier 2, Sections 5.3 and 5.2 respectively. This submittal completes the responses to these RAI letters.

The attachments address the responses to the RAI questions listed below:

RAI 05.03.01-4
RAI 05.03.01-5
RAI 05.02.04-1

RAI 05.02.04-2
RAI 05.02.04-3

When a change to the COLA is indicated, it will be incorporated in the next routine revision of the COLA following the NRC acceptance of the RAI response.

There are no commitments in this letter.

If you have any questions, please contact me at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

STI 32507991

DO NOT
NRC

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 7/23/09



Scott Head
Manager, Regulatory Affairs
South Texas Project Units 3 & 4

rhs

Attachments:

1. RAI 05.03.01-4
2. RAI 05.03.01-5
3. RAI 05.02.04-1
4. RAI 05.02.04-2
5. RAI 05.02.04-3

cc: w/o attachment except*
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RAI 05.03.01-4**QUESTION:**

In response to RAI 2137, the applicant provided Topical Report UTLR-0003, Revision 0, "Reactor Vessel Materials Surveillance Program," April 2009. Based on our review of the information provided in the topical report, the staff finds that the applicant has appropriately responded to RAI 2137. However, the applicant did not propose any revisions to the FSAR. Therefore, the staff requests that STP 3 & 4 COL FSAR Section 5.3.4.2, "Materials and Surveillance Capsule," and Section 5.3.5, "References," be updated to incorporate Topical Report UTLR-0003.

RESPONSE:

In response to this RAI, the COLA will be revised in a future revision as shown in the markup below of Rev 2 of the COLA. Section 5.3.4.2 of the FSAR does not require any update as it already points to Reference 5.3-3 in Section 5.3.5.

5.3.5 References

- 5.3-3 ~~"STP 3 & 4 Reactor Pressure Vessel Surveillance Program", Toshiba Corporation, July 2008 (RS-5126528, Rev. 1).~~
~~"Reactor Pressure Vessel Material Surveillance Program", Toshiba Corporation, April 2009 (UTLR-0003, Rev. 0)~~

RAI 05.03.01-5**QUESTION:**

STP COL FSAR Section 5.3.1.6.4 states that the surveillance capsule specimen holder locations are selected to produce a lead factor of approximately 1 to 1.5 for the inserted capsule specimens. However, ASTM E-185 recommends that the surveillance capsule lead factors be greater than one(1) and less than or equal to three (3). Therefore, the staff finds that the applicant's proposed lead factors are not in compliance with ASTM E-185 and thus do not meet the requirements of Appendix H to 10 CFR 50. Please revise the FSAR to provide lead factors that are in compliance with the recommendations of ASTM E-185.

RESPONSE:

The surveillance capsule specimen holders are located to produce a lead factor of greater than 1 which is in compliance with ASTM E-185. The COLA will be revised as shown in the markup to COLA Rev 2 below to reflect that. Note that this is consistent with Part 2 Tier 2 Subsection 5.3.4.2(2) of Rev 2 of the COLA which states that the lead factor of each capsule is approximately 1.1.

**5.3.1.6.4 Position of Surveillance Capsules and Methods of Attachment
Appendix H.II B (2)**

STD DEP 5.3-1

The surveillance specimen holders, described in Subsections 5.3.1.6.1 and 3.9.5.1.2.10, are located at different azimuths at common elevation in the core beltline region. The locations are selected to produce lead factor of ~~approximately greater than 1.2 and less than or equal~~ to 1.5 for the inserted specimen capsules. A positive spring-loaded locking device is provided to retain the capsules in position throughout any anticipated event during the lifetime of the vessel. The capsules can be removed from and reinserted into the surveillance specimen holders. See Subsection 5.3.4.2 for COL license information requirements pertaining to the surveillance material, lead factors, withdrawal schedule and neutron fluence levels.

RAI 05.02.04-1**QUESTION:**

SRP 5.2.4 states that the reviewer will determine if the licensee's relief requests have demonstrated that any ASME Code requirement is impractical due to design, geometry, or materials of construction. The issue of impracticality is addressed under RAI-2943, however, the ABWR DCD, nor the STP 3 & 4 COL FSAR list this element. Furthermore, the SRP lists relief requests as an essential element of a PSI/ISI operational program. Please provide a section addressing this element of the PSI/ISI operational program and state whether any relief requests are expected for the first 120 month interval.

RESPONSE:

As noted in 10 CFR 50.55a(g)(4), throughout the service life of a BWR, ASME Class 1, Class 2 and Class 3 components must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions of the ASME Code that become effective subsequent to editions specified in paragraphs (g)(2) and (g)(3) and that are incorporated by reference in paragraph (b) of 10 CFR 50.55a, to the extent practical within the limitations of design, geometry and materials of construction of the components. Because these Code requirements can differ from the Code requirements to which the components were designed, as reflected in paragraphs (g)(2) and (g)(3), it is not known whether any relief requests will be necessary for the first 120 month interval; however, none are expected.

As required in 10 CFR 50.55a(g)(5)(iii), STP 3&4 will notify the Commission of any Code requirements that are determined to be impractical and submit information to support that determination.

No COLA change is required as a result of this response.

RAI 05.02.04-2**QUESTION:**

COL Information item 5.2.6.2 states in part that any additional relief requests shall be submitted with a supporting technical justification if needed. The ABWR DCD, Section 5.2.4.2.2, states that physical arrangement of piping, pumps, and valves provides personnel access to each weld location for performance of ultrasonic and surface examinations, and sufficient access to supports for performance of visual, VT-3 examinations. In addition, 10 CFR 50.55a(g)(3) requires that Class 1, 2, and 3 components and supports be designed to enable the performance of ISI examinations. The staff expects that interferences due to design, geometry, and materials of construction be eliminated at the design stage such that no relief requests are necessary for the first 120 month ISI interval in accordance with the regulation. Relief requests due to impracticality of design are appropriate for intervals subsequent to the first 120 month interval per the regulations. The discussion of additional relief requests parenthetically implies that the regulation may not be met for the first ISI interval. Please revise the subject sentence to state that interferences due to design, geometry, and materials of construction are eliminated at the design stage and that no relief requests are necessary for the first ISI interval.

RESPONSE:

STP 3&4 will be fully compliant with the requirements of 10 CFR 50.55a with regard to PSI and ISI examinations.

The reference to the term “to the extent practical” appears in 10 CFR 50.55a(g)(4) which applies to Subsection 10 CFR 50.55a(g)(4)(i) dealing with ISI requirements for the initial 120 month ISI interval. The referenced section of 10 CFR 50.55a(g)(3) in this RAI question does not make any reference to the 120 month ISI inspection interval. That section addresses the design of and access to Class 1, Class 2 and Class 3 components and supports consistent with the Code incorporated by reference in Section 50.55a(b) and “applied to the construction of the particular component”. The code edition for the ISI requirements specified in 10 CFR 50.55a(g)(4), where the initial 120-month inspection interval applies, is for subsequent editions of the Code after that incorporated in Section 50.55a(b). As a result, the Code requirements for Subsection (g)(3) may be different than those for (g)(4). As stated in the response to RAI 05.02.04-1, STP does not expect any relief requests to be necessary; however, it would be impractical to commit to no relief requests based on a Code edition which was issued subsequent to that which is applied to the component design.

No COLA change is required as a result of this response.

RAI 05.02.04-3**QUESTION:**

STD DEP Vendor discusses Table 1.8-21. The subject table lists the 1989 Edition of the ASME Code, while Table 1.8-21a lists the 2004 Edition of ASME Section XI for site specific components. Please make a distinction in the departure between the design of the RPV and the PSI/ISI program development. This discussion should also address the inconsistency in COL Information Item 5.2.6.2, which states the PSI/ISI program will conform to the 1989 Edition of ASME Section XI.

RESPONSE:

STP 3&4 will be fully compliant with the requirements of 10 CFR 50.55a with regard to PSI and ISI examinations. The PSI/ISI program will be based on the editions and addenda of Section XI of the ASME code incorporated by reference in paragraph (b) on the date 12 months before the date scheduled for initial loading of fuel under a combined license under 10 CFR Part 52. This is consistent with 10 CFR 50.55a(g)(4), as adopted by the NRC at 72 Fed. Reg. 49,500 (Aug. 28, 2007). Although the provision applicable to combined licenses was omitted when NRC subsequently adopted a revised section 50.55a(g)(4) at 72 Fed. Reg. 71,755 (Dec. 19, 2007), NRC did not discuss deletion of this provision in the Notice of Final Rule, its associated regulatory analysis or any notice of proposed rulemaking. Accordingly, it appears that NRC intends to retain that provision.

As a result of this response, COLA Rev 2 Section 5.2.6.2 will be revised as shown in the response to RAI 06.06-2.