



South Texas Project Electric Generating Station 4000 Avenue F - Suite A Bay City, Texas 77414

September 24, 2009
U7-C-STP-NRC-090159

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 218 and 222 related to Combined License Application (COLA) Part 2, Tier 2, Sections 5.2 and 5.4. This submittal completes the responses to these RAI letters.

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

RAI 05.02.04-4	RAI 05.02.01.02-2	RAI 05.02.01.02-4
RAI 05.02.01.02-1	RAI 05.02.01.02-3	RAI 05.04-2

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 Scott Head at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

Done
NRC

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

Executed on 9/24/09



Mark McBurnett
Vice President, Oversight and Regulatory Affairs
South Texas Project Units 3 & 4

rhs

Attachments:

1. Question 05.02.04-4
2. Question 05.02.01.02-1
3. Question 05.02.01.02-2
4. Question 05.02.01.02-3
5. Question 05.02.01.02-4
6. Question 05.04-2

cc: w/o attachment except*
(paper copy)

Director, Office of New Reactors
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

Kathy C. Perkins, RN, MBA
Assistant Commissioner
Division for Regulatory Services
Texas Department of State Health Services
P. O. Box 149347
Austin, Texas 78714-9347

Alice Hamilton Rogers, P.E.
Inspections Unit Manager
Texas Department of State Health Services
P.O. Box 149347
Austin, TX 78714-9347

C. M. Canady
City of Austin
Electric Utility Department
721 Barton Springs Road
Austin, TX 78704

*Steven P. Frantz, Esquire
A. H. Gutterman, Esquire
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave. NW
Washington D.C. 20004

*George F. Wunder
*Tekia Govan
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

(electronic copy)

*George Wunder
*Tekia Govan
Loren R. Plisco
U. S. Nuclear Regulatory Commission

Steve Winn
Eddy Daniels
Joseph Kiwak
Nuclear Innovation North America

Jon C. Wood, Esquire
Cox Smith Matthews

J. J. Nesrsta
R. K. Temple
Kevin Pollo
L. D. Blaylock
CPS Energy

RAI 05.02.04-4**QUESTION**

The staff approved the PSI/ISI program for only the reactor pressure vessel (RPV) at the design certification stage. Class 1, 2 and 3 components are subject to NRC review and approval. The ABWR DCD, Section 5.2.4.2.2 states that welds are located to permit ultrasonic examination from at least one side, but where component geometries permit, access from both sides is provided. In the area of one sided access, the staff could not determine if the ultrasonic procedures used on single sided ferritic vessel and piping and stainless steel piping would meet the qualification requirements of 10 CFR 50.55a(b)(2)(xvi). It is the staff's expectation that the PSI/ISI operational program enable the performance of ISI examinations in accordance with 10 CFR 50.55a(g)(3). Please state whether these requirements will be met in the STP 3 & 4 COL FSAR PSI/ISI operational program in order to supplement the ABWR DCD section that addresses accessibility.

RESPONSE:

The PSI/ISI operational program for STP 3&4 will be in compliance with 10 CFR 50.55a(b)(2)(xvi) and 50.55a(g)(3).

There are no COLA changes required as a result of this response.

RAI 05.02.01.02-1**QUESTION**

ABWR DCD Tier 2, Subsection 5.2.1.2 states that Regulatory Guide (RG) 1.84, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III," RG 1.85, "Materials Code Case Acceptability -- ASME Section III, Division 1," and RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1," provide a list of ASME Design and Fabrication Code cases that have been generically approved by the NRC staff, and that Code cases on this list may, for design purposes, be used until appropriately annulled. The NRC has withdrawn RG 1.85 following its incorporation into RG 1.84. The STP COL applicant is requested to indicate the Code Cases listed in RG 1.147 planned to be used at STP Units 3 & 4 as part of fully describing the ISI program.

RESPONSE:

COLA Part 2, Tier 2, Section 6.6.9.1, which is referenced in Tier 2, Section 5.2.6.2, discusses the applicable ASME Section XI, edition and addenda, as well as an outline and schedule for the plant-specific pre-service inspection (PSI) and in-service inspection (ISI) program plan. Tier 2, Section 3.9.7.3 addresses optional implementation of the ASME Code Cases listed in NRC Regulatory Guide 1.147, through Revision 14. Tier 2, Table 5.2-1 lists the Code Cases of RG 1.147 that are applicable to the pressure-retaining ASME Code Section III, Class 1, 2, and 3 components.

The inservice testing and inspection programs have not yet been established for STP 3&4. The ISI program will identify the Code Cases listed in RG 1.147 that are planned to be used at STP 3&4. The program plan will be completed 12 months prior to commercial power operation as stated in Tier 2, Sections 5.2.6.2 and 6.6.9.1, and Table 13.4S-1. The ISI program plan will be developed together with the program plans for preservice testing (PST) and periodic inservice testing (IST), which are discussed in the response to RAIs 03.09.06-1, 03.09.06-2, 03.09.06-4 and 03.09.06-20, (U7-C-STP-NRC-090097, dated August 17, 2009).

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

RAI 05.02.01.02-2

QUESTION

The STP COL applicant is requested to specify the ASME Code cases to be applied at STP Units 3 & 4, including their acceptance in RG 1.192, "Operation and Maintenance Code Case Acceptability, ASME OM Code," and any conditions specified in RG 1.192 as part of fully describing the IST program. The STP COL applicant should submit a request for relief from or alternative to the ASME OM Code where Code case planned to be used is not accepted in RG 1.192. RG 1.206, "Combined License Applications for Nuclear Power Plants (LWR Edition)," provides guidance for information to be provided by COL applicants requesting relief from or alternatives to the ASME OM Code.

RESPONSE:

As noted in the response and the COLA markup for RAI 03.09.06-2, transmitted by Letter number U7-C-STP-NRC-090097 dated August 17, 2009, STP 3&4 is applying ASME OM – 2004 to the Inservice Testing Program.

The inservice testing and inspection programs have not yet been established for STP 3&4.

The ASME OM Code edition and addenda as well as applicable Code Cases that will be the basis for fully describing the Inservice Testing Program will be reviewed and updated, if appropriate, 12 months before the date for initial loading of fuel as provided in the regulations. At that time, any requests for relief for those instances in which the applicable OM Code will not be satisfied will be submitted along with justification for the code exemption, including references and discussion of applicable code cases.

There are no COLA revisions required as a result of this response.

RAI 05.02.01.02-3**QUESTION**

ABWR DCD Tier 2, Subsection 5.2.1.2 states that annulled cases are considered active for equipment that has been contractually committed to fabrication prior to the annulment. The STP COL applicant is requested to discuss its plans to implement this provision regarding the use of annulled Code Cases in the ABWR DCD.

RESPONSE:

ASME code requirements will be specified as part of the purchase orders for equipment. This will include applicable ASME code cases. The code cases to be applied to that hardware will become "frozen" at the time the purchase order is accepted by the supplier. Any ASME code cases which are annulled by the ASME after that time may still be considered active in that hardware for which the purchase orders have already been accepted by the supplier. It should, however, be noted that STP 3&4 will make every reasonable effort not to apply annulled code cases to the hardware requirement, if at all possible, even after purchase order release based on such considerations as cost and schedule impacts. STPNOC and its equipment suppliers will consider the reasons for ASME III Code Case annulments to ensure there are no detrimental impacts on the equipment or its function.

There are no COLA revisions required as a result of this response.

RAI 05.02.01.02-4**QUESTION**

STP FSAR Section 1.8, "Conformance with Standard Review Plan and Applicability of Codes and Standards," states that the STP FSAR conforms to RG 1.84, Revision 33. STP FSAR Table 5.2-1, "Reactor Coolant Pressure Boundary Components Applicable Code Cases," specifies several changes to the list of code cases provided in the ABWR DCD. Some changes relate to Tier 2* information and the bases for the changes are not clear. The NRC staff requests that the STP COL applicant clarify the application of RG 1.84 (Revision 33) and the changes to the ABWR DCD. Some examples where clarification is needed are as follows:

- a) Code Case N-71-17 has been added to the table, but RG 1.84 (Revision 33) lists Code Case N-71-18 as the approved revision to this code case. Also, the table does not indicate that this code case is conditionally accepted in RG 1.84. As part of clarifying the use of Code Case N-71, the applicant is requested to provide a list of components to be fabricated using this code case and the materials that will be used to fabricate each component.
- b) Code Case N-580-2 has been added to Table 5.2-1, but this code case is not listed in RG 1.84 such that the applicant will need to justify its application.
- c) Code cases related to RG 1.147 added to Table 5.2-1 are not discussed in STP FSAR Section 1.8.
- d) The table continues to list some code cases that have been superseded by later revisions, such as N-71-15 and N-319, listed in RG 1.84 (Revision 33).

RESPONSE:

- a) STP 3&4 FSAR Table 5.2-1 will be revised replacing Code Case N-71-17 with Code Case N-71-18 in conformance with RG 1.84, Revision 33. Also, "Accepted per RG 1.84," will be changed to "Conditionally Accepted per RG 1.84." The markup for a COLA revision is provided below.
- b) Use of Code Case N-580-2 is addressed in the response to RAI 04.05.02-3, (U7-C-STP-NRC-090027, dated April 2, 2009).
- c) ABWR DCD Tier 2, Section 1.8, lists the applicable revision of RG 1.147 in Table 1.8-20, but does not list Code Cases. STP 3&4 COLA Part 2, Tier 2, follows that format. Code Cases are listed in COLA Part 2, Tier 2, Table 5.2-1.
- d) Code Cases N-71-15 and N-319 are listed in ABWR DCD Tier 2, Table 5.2-1. These are applicable to the equipment in the systems that are in the scope of the DCD. Code Cases N-71-18 (as noted above) and N-319-3 are also listed in COLA Part 2, Tier 2, Table 5.2-1 for applicability to the equipment in the systems outside the scope of the DCD, i.e., site-

specific systems. If a Code Case is marked as Tier 2* in DCD Table 5.2-1, the additionally listed revision is also marked as Tier 2* in FSAR Table 5.2-1

COLA Revision 3, Table 5.2-1, Reactor Coolant Pressure Boundary Components Applicable Code Cases, is changed as shown below. Changes are identified in gray shading.

Number	Title	Applicable Equipment	Remarks
[N-71-178]	(1)	Component Support]*	Conditionally Accepted per RG 1.84

RAI 05.04-2**QUESTION**

This request for additional information is a follow-up RAI to the applicant's response to RAI ID 2771 (RAI 5.4-1, ML091880282) in letter U7-C-STP-NRC-090062 dated July 2, 2009. The RAI response referred to FSAR Section 13.5.3.3.1 which discusses administrative procedures and, according to the applicant, these procedures will be developed only 6 months prior to pre-operational testing. However, the applicant did not address the RAI with respect to the contingency plan related to the specifics questions stated in the RAI. Confirm that the following staff concerns will be addressed in the administrative procedure when they are developed with respect to RIP shaft lifting or maintenance plug removal.

- Worst case scenario evaluated
- Impact on personnel and plant
- Assumptions made in respect to contingency plan
- Response time of plant and personnel in regard to contingency plan
- Worst case flow rate of drain down of vessel
- Number of pumps plant procedures allow to perform concurrent maintenance activities with the potential to drain the vessel
- Recovery phase.

RESPONSE:

The administrative procedure involving RIP pump maintenance, as referred to in the response to RAI 05.04-1, will include the following items:

- Worst case scenario evaluated
- Impact on personnel and plant
- Assumptions made in respect to contingency plan
- Response time of plant and personnel in regard to contingency plan
- Worst case flow rate of drain down of vessel
- Number of pumps plant procedures allow to perform concurrent maintenance activities with the potential to drain the vessel
- Recovery phase

As a result of this response, the COLA will be revised as shown in the attached markup of COLA Rev 3, Part 2, Section 5.4.15.4. Changes from COLA Rev 3 are shown with gray shading.

5.4.15.4 RIP Installation and Verification During Maintenance

The following site-specific supplement addresses COL License Information Item 5.10.

Procedures address RIP installation and verification for motor bottom cover, as well as visual monitoring of the potential leakage during impeller-shaft and plug removal. A contingency plan assures that core and spent fuel cooling can be provided in the event of loss of coolant during Reactor Internal Pump (RIP) maintenance. This contingency plan will address the following items:

- Worst case scenario evaluated
- Impact on personnel and plant
- Assumptions made in respect to contingency plan
- Response time of plant and personnel in regard to contingency plan
- Worst case flow rate of drain down of vessel
- Number of pumps plant procedures allow to perform concurrent maintenance activities with the potential to drain the vessel
- Recovery phase