Nuclear Operating Company

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

March 24, 2010
U7-C-STP-NRC-100068

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 is the response to an NRC staff question included in Request for Additional Information (RAI) letter number 303 related to Combined License Application (COLA) Part 2, Tier 2, Section 3.6.1. This completes the response to the letter. The attachment addresses the response to the RAI question listed below:

RAI 03.06.01-3

Where there are COLA markups, they will be made at the first routine COLA update following NRC acceptance of the RAI response.

There are no commitments in this letter.

If you have any questions regarding this response, please contact Scott Head at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

D091
NRO

STI 32638562

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

Executed on MARCH 24th, 2010

John W. Crenshaw
Vice President, Engineering and Construction
STP Nuclear Operating Company

jep

Attachment:

RAI 03.06.01-3

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
P. O. Box 149347
Austin, Texas 78714-9347

Alice Hamilton Rogers, P.E.
Inspections Unit Manager
Texas Department of Health Services
P. O. Box 149347
Austin, Texas 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

*Tom Tai
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

(electronic copy)

*George F. Wunder
*Tom Tai
Loren R. Plisco
U. S. Nuclear Regulatory Commission

Steve Winn
Joseph Kiwak
Eli Smith
Nuclear Innovation North America

Jon C. Wood, Esquire
Cox Smith Matthews

J. J. Nesrsta
Kevin Pollo
L. D. Blaylock
CPS Energy

RAI 03.06.01-3

QUESTION:

The RAI described below is the supplemental RAI for RAI 129, 03.06.01-1, and for RAI 3209, 03.06.01-2.

In the response to (E-RAI 3209) RAI 03.06.01 -2, the applicant stated:

> *"As summarized in the FSER, the piping DAC clearly cover the aspects of the design of the piping system necessary for issuance of the design certification. The DCD includes the ITAAC that were determined to be necessary to support the safety determination for the ABWR piping."*

The applicant's response also states that:

> *"As such, it is clear that the Pipe Break Analysis Report will be prepared for the as-designed condition, as well as requiring reconciliation of the as-built condition. Although ITAAC 3.3.2 states in the acceptance criteria that the Pipe Break Analysis Report must exist for the as-built plant, this DAC is a requirement for the final product, which includes the design basis and the asbuilt reconciliation."*

The applicant's response stated that the piping design acceptance criteria (DAC) are a requirement for the final product which includes the design basis and the as built reconciliation. However, the staff notes that the DAC as identified in DCD Tier 1 ITAAC 3.3.2 and as defined in Table 7, "Piping Design Acceptance Criteria", of the ABWR DCD Introduction, does not cover the full scope of the pipe break analysis report as identified in DCD Tier 2 Subsection 3.6.5.1.

The staff still considers that the latest applicant RAI response is not acceptable. Therefore the staff maintains requests the applicant to complete and submit the as-designed Pipe Break Analysis Report within the COL review phase; or to propose a site-specific ITAAC to address the as-designed Pipe Break Analysis Report with a license condition that provides a description pertaining to the closure schedule of the report; or an acceptable alternative.

RESPONSE:

STPNOC believes that ITAAC 3.3.2 encompasses the pipe break analysis report including both as-designed and as-built piping. Nevertheless, to resolve this issue, STPNOC will propose a new site-specific ITAAC to clearly indicate that this matter is within the scope of the ITAAC.

STPNOC will provide a new site-specific ITAAC in COLA Part 9 to provide a specific post-COL requirement related to the as-designed Pipe Break Analysis Report.

COLA Part 9, Section 3.0 will be revised in a future COLA revision to incorporate the new site-specific ITAAC as noted above. COLA Part 2 Tier 2 Section 3.6.5.1 will be revised to include reference to this new site-specific ITAAC, and to state that the as-designed Pipe Break Analysis Report will be available prior to installation of the high-energy piping described in FSAR Section 3.6.

The current schedule shows the high-energy pipe break analysis report for the as-designed plant will be completed and ready for review by the end of 2012. This is prior to the scheduled installation of any of the high-energy lines addressed in the report. The end of 2012 represents the current completion date from the integrated project schedule and is subject to potential future adjustments. As part of our periodic issuance of the project schedule and ITAAC schedule to the NRC, the NRC will be informed of any required changes.

The changes to COLA Revision 3 are shown below, with changes highlighted in gray shading.

COLA Part 2 Tier 2 revisions:

3.6.5.1 Details of Pipe Break Analysis Results and Protection Methods

The following standard supplemental information addresses COL License Information Item 3.16.

The details of pipe break analysis results and protection methods will be provided for NRC review as part of the ITAAC Table 3.3 Item 2 in the reference ABWR DCD Tier 1 Section 3.3. A pipe break analysis report for the as-designed plant will be available for NRC review as part of site-specific ITAAC Table 3.0-14 Item 1 in COLA Part 9. This report for the as-designed plant will be available prior to the installation of high-energy piping described in this section.

COLA Part 9 revisions:

3.0 Site-Specific ITAAC

The STP 3 & 4 site-specific systems and activities that require ITAAC because they have a safety-related, safety-significant, or risk significant function are listed below:

- Breathing Air (BA) System
- Pipe Break Analysis Report for the As-designed Plant

Table 3.0-14 Pipe Break Analysis Report for the As-designed Plant

Design Requirement	Inspections, Tests, Analyses	Acceptance Criteria
1. Systems, structures, and components, that are required to be functional during and following an SSE, shall be protected against or qualified to withstand the dynamic and environmental effects associated with postulated failures in Seismic Category I and NNS piping systems. Each postulated piping failure shall be documented in the Pipe Break Analysis Report.	1. Inspections of the Pipe Break Analysis Report will be conducted. Pipe break events involving high-energy piping systems are analyzed for the effects of pipe whip, jet impingement, flooding, room pressurization, and other temperature effects. Pipe break events involving moderate-energy piping systems are analyzed for wetting from spray, flooding, and other environmental effects.	1. A Pipe Break Analysis Report exists for the as-designed plant and concludes that for each postulated piping failure, the reactor can be shut down safely and maintained in a safe, cold shutdown condition without offsite power. The report documents the analysis to determine where protection features are necessary to mitigate the consequences of a pipe break.