



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

April 8, 2010  
U7-C-STP-NRC-100077

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
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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 the NRC staff questions included in Request for Additional Information (RAI) letter number 325 related to Combined License Application (COLA) Part 2, Tier 2, Sections 5.2 and 5.4.

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

05.02.05-5

05.04.06-3

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

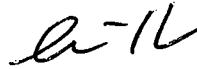
There are no commitments in this letter.

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

DO91  
NRO

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

Executed on 4/8/10



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

rhs

Attachments:

- 1) Question 05.02.05-5
- 2) Question 05.04.06-3

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

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**RAI 05.02.05-5****QUESTION:**

In its June 26, 2008, response to staff's request for additional information (RAI), the applicant appeared to commit to developing the following two procedures as they would form the basis for the staff's safety findings:

1. The procedures described in the response to RAI Questions 05.02.05-2 and -3 to specify operator's diagnostic and corrective actions to address the alarm for prolonged low level leakage.
2. The procedures described in the response to RAI Question 05.02.05-4 to convert the various leakage measurements into a common leakage equivalent.

The content of the referenced RAI responses indicated that the applicant was committing to develop these two procedures prior to fuel load. However, contrary to staff's expectation, there were no commitment numbers in the FSAR corresponding to these statements in the RAI responses. Furthermore, in the cover letter of the RAI responses, the applicant stated "there are no new commitments made in this letter." To resolve this apparent discrepancy in the applicant's RAI-response, the applicant is requested to clarify in the FSAR its commitment to develop the above two procedures.

**RESPONSE:**

The Plant Operating Procedures Development Plan (COL License Information Item 13.3) is presented in STP COLA FSAR Subsection 13.5.3.1.

With respect to Question 1 above, Subsection 13.5.3.1 paragraph (5) addresses Alarm Response Procedures (ARP), which are included as part of the plant operating procedures.

With respect to Question 2 above, Subsection 13.5.3.1 paragraph (5) addresses Surveillance Test Procedures (STP), which are included as part of the plant operating procedures.

FSAR Subsection 13.5.3.4 includes lists of procedures included in the scope of the plan, which will be developed (COL License Information Item 13.6). The two which have been requested in this RAI are included under the following items:

**13.5.3.4.6 Alarm Response Procedures****13.5.3.4.8 Calibration, Inspection, and Test Procedures****(24) Leak Detection System Tests**

The cover letter associated with the subject RAI responses stated that there were no new commitments in the submittal because the referenced procedures are encompassed by the Operating Procedure Development Program. However, as requested, the FSAR will be revised as

shown below to clarify that these specific procedural considerations will be included in the program. Changes to the FSAR are shown in gray shading.

#### **13.5.3.4.6 Alarm Response Procedures**

Procedures will be prepared for off-normal or alarm conditions that require operator action in the Main Control Room. An individual procedure will be written for each annunciator window containing instructions for each alarm associated with that window which is important to safety or the operation of the power plant. These instructions will normally contain (1) the meaning of the alarm, (2) the source of the signal, (3) the immediate action that is to occur automatically, (4) the immediate operator action, and (5) the long-range actions. If more than one alarm applies to a given procedure, repetition of the procedure may not be required if the applicable annunciators are listed at the beginning of the procedure.

Included in this procedure group will be specific guidance specifying operator actions in response to prolonged low level reactor coolant system leakage below Technical Specifications limits.

#### **13.5.3.4.8 Calibration, Inspection, and Test Procedures**

- (24) Leak Detection System Tests \*
- (25) Area, Portable, and Air borne Radiation Monitor Calibrations
- (26) Process Radiation Monitor Calibrations
- (27) Safety Relief Valve Tests
- (28) Turbine Overspeed Trip Tests
- (29) Water Storage Tanks Level Instrumentation Calibrations
- (30) Reactor Building In-leakage Tests
- (31) Nitrogen Inerting System Tests

\*Included in this procedure group will be guidance regarding conversion of various leakage measurements into a common leakage equivalent.

**RAI 05.04.06-3****QUESTION**

ECCS pumps suction strainer design was incorporated on STP 3&4 (STD DEP 6C-1) with a cassette type strainer. The applicant submitted the technical bases for the pumps NPSH change in response to RAI 2570 (RAI 05.04.06-1) in letter dated July 2, 2009 (U7-STP-NRC-090062). The response did not provide the pump NPSH margin and hence this issue is not resolved. The symbols  $H_F$  and  $H_{ST}$  were provided without numerical values because the new strainer head loss had not been determined. The applicant needs to submit the results of the pump NPSH calculations showing the available NPSH margin when the new strainer head loss is determined.

**RESPONSE**

The results of the STP 3&4 pump NPSH calculations that show the NPSH margin for the RCIC pumps are not yet available. It is expected that these results will not be available prior to COL issuance.

Regulatory Guide (RG) 1.206 Section C.III.4.3 discusses "Combined License Information Items that Cannot Be Resolved Before the Issuance of a License." It states one situation that supports issuance of the COLA before the complete resolution of a COL action or information item. That situation is if the COL information is found to be completely redundant to an ITAAC from the referenced certified design that will be included in the COL. The Regulatory Guide further states that the COL applicant should justify why that item cannot be resolved prior to issuance of the license.

The detailed system design for the RCIC suction strainer, which will form the basis for the head loss calculation to demonstrate that adequate NPSH margin exists, will not be completed until the first quarter of 2011. However, an ITAAC currently exists in ABWR DCD Tier 1 Subsection 2.4.4, Table 2.4.4 Design Commitment j. which requires that an analysis be performed to ensure that sufficient NPSH exists for the RCIC pump. This ITAAC has been incorporated into the STP 3&4 FSAR with one departure (STD DEP T1 2.4-4) to Design Commitment j. This departure is described in the response to RAI 06.02.02-22 (U7-C-STP-NRC-100007, dated January 13, 2010), which provides a marked up revision that will be incorporated in a future revision of the STP 3&4 COLA. Based on those markups, which implement this departure, subitem (3) to the ITAAC for Design Commitment j. was revised to require that analytically derived values for blockage of (the RCIC) pump suction strainers are determined based upon the as-built design.

The implementation of this ITAAC ensures that the RCIC pump NPSH calculations will demonstrate adequate NPSH margin using the cassette strainer design. Closure of this item through ITAAC will be subject to the NRC's construction inspection program. The schedule for ITAAC closure activities is being provided to NRC separately.

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