

August 4, 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. 187 RELATED TO
SRP SECTION 16 FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE
APPLICATION

Dear Mr. Head:

By letter dated September 20, 2007, STP Nuclear Operating Company (STP) 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 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 Nos. 3179, 3180, 3189, 3190, 3191 and 3201

Enclosures:
Request for Additional Information

cc: William Mookhoek
G. Steve Cashell

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Docket Nos. 52-012
 52-013

eRAI Tracking Nos. 3179, 3180, 3189, 3190, 3191 and 3201

Enclosures:

Request for Additional Information

cc: William Mookhoek

G. Steve Cashell

Distribution:

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DDority

DScully

NGE ½ R/F

RidsOgcMailCenter

GWunder

SJoseph

SKirkwood

MKowal

RidsNroDnrInge2

CHarbuck

RidsNroDcipCtsb

ccchapell@STPEGS.com

STP.col@nrc.gov

wemookhoek@STPEGS.com

ADAMS Accession No. ML092160209

NRO-002

OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3179)	CHarbuck	OTabatabai	SJoseph	SKirkwood	GWunder
DATE	6/18/2009	6/21/2009	6/29/2009	7/22/2009	8/4/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3180)	CHarbuck	OTabatabai	SJoseph	SKirkwood	GWunder
DATE	6/18/2009	6/21/2009	6/29/2009	7/22/2009	8/4/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3189)	CHarbuck	OTabatabai	SJoseph	SKirkwood	GWunder
DATE	6/20/2009	6/21/2009	7/1/2009	7/22/2009	8/4/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3190)	CHarbuck	OTabatabai	SJoseph	SKirkwood	GWunder
DATE	6/20/2009	6/21/2009	6/29/2009	7/22/2009	8/4/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3191)	CHarbuck	OTabatabai	SJoseph	SKirkwood	GWunder
DATE	6/20/2009	6/21/2009	6/24/2009	7/22/2009	8/4/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3201)	DScully	MKowal	SJoseph	SKirkwood	GWunder
DATE	6/29/2009	6/30/2009	7/6/2009	7/24/2009	8/4/2009

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

OFFICIAL RECORD COPY

Request for Additional Information No. 3179 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: 16.3.10.4**

QUESTIONS for Technical Specification Branch (CTSB)

16-42

The applicant is requested to revise its proposed change to GTS LCO 3.10.4.c.2 (STD DEP 16.3-19) from "All other control rods in a five by five array centered on the control rod or control rod pair being withdrawn are disarmed" to "All control rods, other than the control rods rod or rod pair being withdrawn, in a five by five array centered on each control rod being withdrawn, are disarmed," to match the clarity of SR 3.10.4.2, which states, "Verify all control rods, other than the control rod or rod pair being withdrawn, in a five by five array centered on each control rod being withdrawn, are disarmed." The proposed sentence could be misinterpreted.

Enclosure

Request for Additional Information No. 3180 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: Part 4, bases for plant-specific TS 3.1.3**

QUESTIONS for Technical Specification Branch (CTSB)

16-43

The staff requests that the applicant provide additional justification for STD DEP 16.3-68. This departure proposes that the PTS bases omit the reference to LCO 3.3.5.1 in the bases for Actions A.1, A.2, and A.3 of GTS 3.1.3. The GTS bases contains the following sentence,

If the [fine motion control rod drive] motor is working and the rod is actually stuck, the traveling nut will back down from the bottom of the drive and a rod separation alarm and rod block will result (see LCO 3.3.5.1).

The applicant's justification for this departure is that GTS/PTS LCO 3.3.5.1 does not specify rod block functions related to the "rod separation alarm and [rod separation] rod block," but "does include other control rod block functions." In view of this rationale, the staff is unclear how the [rod separation] rod block is not included in LCO 3.3.5.1.

Request for Additional Information No. 3189 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: Part 4, 16.3.10.5 bases**

QUESTIONS for Technical Specification Branch (CTSB)

16-44

The applicant is requested to change the reference in the LCO section of the bases for GTS 3.10.5 from LCO 3.3.1.1, "SSLC Instrumentation," to LCO 3.3.1.1, "Safety System Logic and Control (SSLC) Sensor Instrumentation." The staff recommends including this change in STD DEP 16.3-23.

Request for Additional Information No. 3190 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: Part 4, 16.3.10.8 Action B**

QUESTIONS for Technical Specification Branch (CTSB)

16-45

In STD DEP 16.3-18, the Actions section of the bases for GTS 3.10.8 is modified to more accurately reflect GTS 3.10.8 Required Actions A.1 and B.1. In particular, the phrase “for reasons other than Condition B” has been added to the bases for Required Action A.1 to accurately reflect Condition A, which is “One or more of the above requirements not met, for reasons other than Condition B.” And the bases for Required Action B.1 are revised to more specifically describe Condition B as “one control rod not coupled to its associated CRD.” These clarifications are acceptable.

Additionally, the Bases for Required Action B.1, to immediately declare the affected control rod inoperable, is revised to clarify that Required Action B.1 also requires entry into the action requirements of LCO 3.9.5, “Control Rod OPERABILITY – Refueling,”

However, if the reactor mode switch is still in the startup/hot standby position upon entry into Condition B, then the unit must be considered to be in Mode 2 for the following reason. Since LCO 3.10.5.c, which requires each withdrawn control rod to be coupled to its associated CRD, is not met, the allowance of LCO 3.10.8 to consider the unit to be in Mode 5, even though the mode switch is in the startup/hot standby position, no longer applies. Therefore, to ensure taking the Actions of LCO 3.9.5, which is applicable only in Mode 5, the applicant is requested to add Required Action B.2, “Place the reactor mode switch in the shutdown or refuel position,” with a Completion time of “Immediately” to the Actions of PTS 3.10.8.

Request for Additional Information No. 3191 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: Part 4, 16.3.8.1**

QUESTIONS for Technical Specification Branch (CTSB)

16-46

GTS LCO 3.8.1 requires two qualified AC electrical power source circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System. This is based on one circuit utilizing the unit auxiliary transformer (UAT) and the other circuit utilizing the reserve auxiliary transformer (RAT). Each of the two required offsite circuits have a connection to each of the three 4.16 kV ESF buses. The LCO section of the bases for GTS 3.8.1 states, "Offsite circuit OPERABILITY includes the normal offsite source [utilizing the UAT] supplying two of the three AC divisions and the alternate offsite source [utilizing the RAT] supplying the third AC division. Other configurations make an offsite circuit inoperable." GTS 3.8.1 Action A addresses the condition of "One of the two offsite AC power sources to one engineered safety features (ESF) bus inoperable." The ACTIONS section of the bases explains that Condition A corresponds to an ESF bus with its associated UAT inoperable. Required Action A.1 allows 72 hours to verify that the affected ESF bus is powered from the other operable offsite AC circuit; in this case that would be the circuit utilizing the RAT.

The applicant is requested to explain why the bases should not be revised to address the condition of "One of the two offsite AC power sources to one engineered safety features (ESF) bus inoperable" when the affected ESF bus is the one that is normally supplied by the RAT and not the UAT.

The STP Units 3 and 4 design has been modified to use two RATs with the result that each ESF bus may be supplied by any one of three offsite AC power sources. The applicant is requested to explain why PTS 3.8.1 does not account for the third offsite circuit in the LCO and Actions, and in the Background, LCO, and ACTIONS sections of the bases. In particular, why will the LCO not require three offsite circuits (utilizing the UAT and both RATs) to be operable (one to each ESF bus), and provide an Action for the Condition of "One of the three offsite AC power sources to one engineered safety features (ESF) bus inoperable."

Request for Additional Information No. 3201 Revision 2

**South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 16 - Technical Specifications
Application Section: Chapter 16 Sections 2 and 3**

QUESTIONS for Technical Specification Branch (CTSB)

16-47

Insert "(continued)" at the bottom right hand side of the following pages of the Technical Specifications in accordance with the Technical Specifications Writer's Guide section 2.5.7.e, which applies to STS Rev. 0 and Rev. 1 formatting:

- 3.3.2.1-1, -2, -3
- 3.3.1.1-1 through -6, -8, -9, -11 through -18
- 3.3.1.2-1 through -4
- 3.3.1.3-1 and -2
- 3.3.1.4-1 through -4, -7 through -11
- 3.3.3.1-1
- 3.3.5.1-1 and -2
- 3.3.7.1-1
- 3.3.8.1-1
- 3.10.2-1
- 3.10.4-2
- 3.10.5-1
- 3.10.7-1
- 3.10.8-2
- 3.10.11-2

Insert "(continued)" at the bottom right hand side of the following pages of the Technical Specifications Bases in accordance with the Technical Specifications Writer's Guide section 2.7.1.h, which applies to STS Rev. 0 and Rev. 1 formatting:

- B 2.1.1-2
- B 3.1.1-2 through -4
- B 3.1.2-2
- B 3.1.3-3, -4, -5, -7
- B 3.1.4-1 through -4
- B 3.1.5-2
- B 3.1.6-1 and -2
- B 3.1.7-1 through -5
- B 3.2.1-1
- B 3.2.2-1
- B 3.3.1.2-1 through -14
- B 3.3.1.3-1 through -5
- B 3.3.2.1-1, -2, -4 through -8
- B 3.3.3.1-1 through -4
- B 3.3.4.1-1 through -18

- B 3.3.4.2-1 through -4, -6
- B 3.3.5.1-1 through -7
- B 3.3.7.1-1, -2, -4, -5, -6
- B 3.3.8.1-1 through -3
- B 3.3.8.2-1
- B 3.10.1-1 through -3
- B 3.10.2-2 and -3
- B 3.10.3-1 through -3
- B 3.10.4-1 and -3
- B 3.10.5-1 and -2
- B 3.10.6-1
- B 3.10.8-1 and -3
- B 3.10.9-1
- B 3.10.10-1
- B 3.10.11-1 and -3
- B 3.10.12-1

16-48

Correct the following editorial in Surveillance Requirement 3.4.1.1:

Replace:

"Verify that at least the required number of RIPs are operating at any thermal power level."

with

"Verify that at least the required number of RIPs is operating at any thermal power level."

16-49

Address the following editorial comment for various tables contained in Section 3.3:

All Notes (such as for separate condition entry) applying to and preceding the ACTIONS table in Section 3.3 should be placed after the label "ACTIONS" and before the table for the following:

- 3.3.1.2
- 3.3.1.3
- 3.3.2.1
- 3.3.3.1
- 3.3.4.1
- 3.3.4.2
- 3.3.6.1
- 3.3.6.2
- 3.3.7.1
- 3.3.8.1

16-50

Correct the following editorial contained in the bases portion of Section 3.8.3:

On page B3.8.3-2, in the last line of the first paragraph, there is an open parenthesis before the word "Coolant" with no corresponding closed parenthesis. The open parenthesis should be deleted from the text.

16-51

Correct the following editorial contained in Section 3.3 of the Technical Specifications:

Editorial comments for PTS 3.3.1.1 bases.

1. Edit the bases for following functions of PTS 3.3.1.1, as applicable, so that discussions of the following topics are in separate paragraphs, for consistency in bases presentation of other functions:

- * number of channels required to be operable
- * Allowable Values
- * Applicability

Function 20, fourth paragraph