

## PMSTPCOL PEmails

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**From:** Joseph, Stacy  
**Sent:** Tuesday, August 04, 2009 4:47 PM  
**To:** 'Cashell, George S'; STPCOL  
**Subject:** RAI Letter Nos. 186 and 187  
**Attachments:** ML0921601134.pdf; ML0921602093.pdf

Steve,

Please see attached RAI letter nos. 186 and 187 related to SRP Section 16. These documents are puublically available in ADAMS. A hard copy of the subject letters will be sent shortly.

Thank you,  
Stacy

Stacy Joseph  
Project Manager  
U. S. Nuclear Regulatory Commission  
Office of New Reactors  
Division of New Reactor Licensing

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Washington DC 20555-0001

**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 1565

**Mail Envelope Properties** (CEEA97CC21430049B821E684512F6E5ECA55D4F1D5)

**Subject:** RAI Letter Nos. 186 and 187  
**Sent Date:** 8/4/2009 4:46:48 PM  
**Received Date:** 8/4/2009 4:46:49 PM  
**From:** Joseph, Stacy

**Created By:** Stacy.Joseph@nrc.gov

**Recipients:**  
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Tracking Status: None  
"STPCOL" <STP.COL@nrc.gov>  
Tracking Status: None

**Post Office:** HQCLSTR01.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	447	8/4/2009 4:46:49 PM
ML0921601134.pdf	139224	
ML0921602093.pdf	125285	

**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

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. 186 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](mailto:Stacy.Joseph@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto: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. 3077, 3095 and 3096

Enclosures:  
Request for Additional Information

cc: William Mookhoek  
G. Steve Cashell

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](mailto:Stacy.Joseph@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto: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. 3077, 3095 and 3096

Enclosures:  
Request for Additional Information

cc: William Mookhoek  
G. Steve Cashell

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RidsNroDcipCtsb  
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**ADAMS Accession No. ML092160113**

**NRO-002**

OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3077)	DDority	MKowal	SJoseph	SKirkwood	GWunder
DATE	6/8/2009	6/12/2009	6/24/2009	7/22/2009	8/4/2009
OFFICE	SBPA/TR	SBPA/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3095)	RWolfgang	JSegala	SJoseph	SKirkwood	GWunder
DATE	6/22/2009	6/22/2009	6/24/2009	7/22/2009	8/4/2009
OFFICE	SBPA/TR	SBPA /BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3096)	RWolfgang	JSegala	SJoseph	SKirkwood	GWunder
DATE	6/22/2009	6/22/2009	6/24/2009	7/22/2009	8/4/2009

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

**OFFICIAL RECORD COPY**

**Request for Additional Information No. 3077 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: TS Section 3.3**

QUESTIONS for Technical Specification Branch (CTSB)

**16-28**

In PTS Table 3.3.1.1-1 the applicant is requested to add SR 3.3.1.1.9, SR 3.3.1.1.10, and SR 3.3.1.1.14 to the surveillance requirements for Functions 24a and 24b, MODE (f), (g) of the PTS.

The GTS 3.3.1.1 Function 24a, Reactor Building Area Exhaust Air Radiation-High and Function 24b, Fuel Handling Area Exhaust Air Radiation-High, MODE (f), (g) requires the following surveillances: SR 3.3.1.1.1, SR 3.3.1.1.5, SR 3.3.1.1.9, SR 3.3.1.1.10, and SR 3.3.1.1.14. The PTS omits SR 3.3.1.1.9, SR 3.3.1.1.10, and SR 3.3.1.1.14 for Functions 24a and 24b.

Part 7 of the COLA contains no departure to justify omitting SR 3.3.1.1.9, SR 3.3.1.1.10, and SR 3.3.1.1.14 for this function.

**16-29**

In PTS Table 3.3.1.1-1, the applicant is requested to add SR 3.3.1.1.9 and SR 3.3.1.1.10 to the surveillance requirements for Function 25, RCIC, Steam Line Flow - High.

GTS 3.3.1.1 Function 25, RCIC, Steam Line Flow - High, requires the following surveillances: SR 3.3.1.1.1, SR 3.3.1.1.5, SR 3.3.1.1.9, and SR 3.3.1.1.10. The PTS omits SR 3.3.1.1.9 and SR 3.3.1.1.10 for Function 25.

Part 7 of the COLA contains no departure to justify omitting SR 3.3.1.1.9 and SR 3.3.1.1.10 for this function.

**16-30**

In PTS Table 3.3.1.1-1, the applicant is requested to add SR 3.3.1.1.9 and SR 3.3.1.1.10 to the surveillance requirements for Function 1a, SRNM Neutron Flux High, MODE 2.

The GTS 3.3.1.1 specifies the following surveillances for Function 1.a, SRNM Neutron Flux High, MODE2: SR 3.3.1.1.1, SR 3.3.1.1.3, SR 3.3.1.1.8, SR 3.3.1.1.9, and SR 3.3.1.1.10. The PTS omits SR 3.3.1.1.9 and SR 3.3.1.1.10 for Function 1a.

Part 7 of the COLA contains no departure to justify omitting SR 3.3.1.1.9 and SR 3.3.1.1.10 for this function.

Enclosure

### 16-31

In PTS Table 3.3.1.1, the applicant is requested to add SR 3.3.1.1.9 to the surveillance requirements for Function 1d, SRNM - Inop, MODE 5(a).

The GTS 3.3.1.1 specifies the following surveillances for Function 1d. SRNM - Inop, MODE 5(a): SR 3.3.1.1.4, and SR 3.3.1.1.9. The PTS omits SR 3.3.1.1.9 for Function 1d. SRNM - Inop, MODE 5(a).

Part 7 of the COLA contains no departure to justify omitting SR 3.3.1.1.9 for this function.

### 16-32

According to the Allowable Value description:

The Allowable values are selected high enough to detect degradation in offsite power to the point where it cannot supply the loads but low enough to assure that normal transients do not cause a spurious DG start. The degraded voltage Function uses a higher voltage set point but a longer time delay than the loss of voltage Function.

The ALLOWABLE VALUE presented in the PTS section is as follows:

≥ [ ] V and  
≤ [ ] V for  
≥ [ ] s and  
≤ [ ] s

In the applicable PTS Bases B 3.3.1.4 section the same information is denoted as:

≥ [ ] V or  
≤ [ ] V for  
≥ [ ] s

Provide more information or correct the discrepancy between Table 3.3.1.4-1 and Bases B 3.3.1.4 section.

### 16-33

Provide justification for deleting the Containment Atmospheric Monitors-Drywell H2 & O2 Analyzer, and Containment Atmospheric Monitors-Well H2 & O2 Analyzer PAM functions from GTS 3.3.6.1, Table 3.3.6.1-1 Post Accident Monitoring Instrumentation in STD DEP 7.5-1.

The Applicable Safety Analysis section of the bases for PTS 3.3.6.1, "Post Accident Monitoring (PAM) Instrumentation," states that PAM instrumentation that meets the definition of Type A in Regulatory Guide 1.97 satisfies Criterion 3 of the NRC Policy Statement.

Category 1, non-Type A instrumentation is retained in the Technical Specifications because it is intended to assist operators in minimizing the consequences of accidents. Section 7.5.2.1 of

Part 2, "Final Safety Analysis Report," of the STP Units 3 & 4 (STP 3&4) COL application, in Post Accident Monitoring Table 7.5-2, "ABWR PAM Variable List," gives the Drywell/Wetwell Hydrogen Concentration and the Drywell/Wetwell Oxygen Concentration as Type C variables and as Category 3 and Category 2 variables, respectively. The Drywell/Wetwell Hydrogen Concentration and the Drywell/Wetwell Oxygen Concentration were originally listed as Category 1 variables in the ABWR DCD.

Category 1 variables are Type A variables that are key variables for the indication of the accomplishment of a given safety function. Category 1 variables are also Type B and Type C key variables. Category 2 variables are Types B and C backup variables and Types D and E key variables. Category 3 variables are backup variables. Containment and Drywell Hydrogen Concentration and Containment and Drywell Oxygen Concentration (for inerted containment plants) have been stated as Type C variables in Regulatory Guide 1.97, Rev. 3, Table 2.

Because the Drywell/Wetwell Hydrogen Concentration and the Drywell/Wetwell Oxygen Concentration have been changed from Category 1 variables to Category 2 and Category 3 variables, respectively, they no longer meet the criterion for inclusion as Category 1, non-Type A instrumentation. However, no explanation is given in Section 7.5.2.1, or in STD DEP 7.5-1 as to why the recategorization of these variables is justified.

10 CFR 50.34(f)(2)(xvii), "Accident Monitoring Instrumentation," requires in part that instrumentation be provided to measure, record, and read out in the control room: containment pressure, containment water level, containment hydrogen concentration, containment radiation intensity (high-level), and noble gas effluents. Containment hydrogen concentration has been established as an important variable that merits attention in the control room. As the South Texas 3 and 4 design has chosen to focus on the containment oxygen concentration in place of the containment hydrogen concentration, then this variable becomes the important variable. Its exclusion from the Post Accident Monitoring Instrumentation must be justified.

## **16-34**

According to GTS and PTS Table 3.3.1.1-1, SR 3.3.1.1.4 applies only to SRNM Functions 1a, 1b & 1d, and only in Mode 5.

The bases for GTS and PTS SR 3.3.1.1.4 mentions the APRM - High Functions in the second paragraph. This does not appear to be relevant to the discussion of SR 3.3.1.1.4. The resolution of this apparent discrepancy will require a standard departure if it removes the reference to the APRM-High Functions.

In addition, the bracketed Frequency of GTS and PTS SR 3.3.1.1.4 is [32] days; but the bases state the Frequency as [31] days.

In response to COL Action Item 16.1 and RAI 16-1, resolve this inconsistency. The bracketed Frequency of [92] days for the Divisional Functional Test, SR 3.3.1.1.5, and Channel Functional Test, SR 3.3.1.1.6, must be justified in the same manner that the 92-day Frequency for the Channel Functional Test was justified for the BWR/6; i.e., via topical reports.

See the reviewer's notes and the referenced topical reports in the bases for Section 3.3 of NUREG-1434, STS for GE Plants, BWR/6, Rev 3. Otherwise, the justification stated in the GTS is acceptable for specifying a 31-day Frequency.

### 16-35

The applicant is requested to use the same units for leakage rates in the bases for PTS 3.3.1.1.

The bases Functions 22 and 28 state, "The Allowable Values are set low enough to detect a leak equivalent to 95 L/min," while the bases for Functions 23, 27, 30, 31, and 32 state the "Allowable Values are set low enough to detect a leak equivalent to  $1.58 \times 10^{-3}$  m<sup>3</sup>/s.

The value  $1.58 \times 10^{-3}$  m<sup>3</sup>/s is equivalent to 95 L/min. For consistency the same units should be used.

### 16-36

Restore GTS 3.3.1.1 text that is missing from the bases for PTS 3.3.1.1 Functions 2.c and 2.f, or justify omitting this text in a standard departure from the GTS bases.

1. The following sentence is missing from the bases for PTS 3.3.1.1 Function 2.c, Average Power Range Monitor Fixed Neutron Flux-High:

"This Function's trip signal is sent to the TLFs over the same data transmission paths as those described for Function 2.a above and is subject to the same OPERABILITY conditions."

2. The following paragraph is missing from the bases for PTS 3.3.1.1 Function 2.f, Oscillation Power Range Monitor:

"There are four divisions of OPRMs, one in each NMS division. Each OPRM acquires data from LPRMs distributed throughout the core. Therefore, each OPRM is capable of detecting an oscillation in any core region. Each OPRM sends trip data to all four RPS TLFs via suitable isolators."

### 16-37

On page B 3.3.4.1-16 in the second paragraph of the bases for PTS SR 3.3.4.1.3, to perform Sensor Channel Calibration, is the following sentence:

"If the as found setpoint is not within its required Allowable Value, the plant specific setpoint methodology may be revised, as appropriate, if the history and all other pertinent information indicate a need for the revision."

The applicant is requested to remove this sentence because it is inappropriate to just simply revise the plant specific setpoint methodology if the as-found setting is less conservative than the Allowable Value.

This is an indication that the instrument processing channel or sensor are either out of calibration or malfunctioning and in either case would require some type of formal corrective action to evaluate the condition of the inoperable sensor channel.

In addition, the setpoint control program specification contains requirements for dispositioning an instrumentation sensor channel that is found to have a trip setting that is non-conservative compared to the Allowable Value.

The applicant is also requested to remove the second sentence of the paragraph since it simply restates the last sentence of the preceding paragraph.

The applicant is requested to examine the bases for all instrumentation channel calibration surveillance requirements and remove similar language where ever it occurs.

### **16-38**

What is a termination module and why was it removed from an earlier version of the PTS and bases?

The previous PTS ACTIONS indicated that with one or more of these termination modules inoperable, the feedwater and main turbine trip instrumentation could not perform its design function (feedwater and main turbine trip capability is not maintained).

ACTION F of the previous version of the PTS and bases was specified for the condition of one or more termination modules inoperable with a required action to

"restore termination module to OPERABLE status" within "72 hours." This Action was subsequently removed from Revision 2 of PTS 3.3.4.2 and bases. The previous PTS bases stated that with one or more of these termination modules inoperable, the feedwater and main turbine trip instrumentation could not perform its design function (feedwater and main turbine trip capability is not maintained).

No discussion of these termination modules could be found in FSAR Section 7.

### **16-39**

1. In the bases for PTS 3.3.4.2 Actions, the applicant is requested to clarify the functional interdependence of the three instrument channels and the three digital controllers in the feedwater pump and main turbine trip instrumentation. Specifically, can the combination of one instrument channel and one digital controller being inoperable simultaneously result in a loss of function, such as addressed in PTS 3.3.4.2 Actions C.1 and D.1?

Provide additional justification for allowing operation with a loss of function for 72 hours of this important safety function, even though this is allowed in GTS 3.3.4.2.

2. Why is PTS 3.3.4.2 not also associated with STD DEP T1 3.4-1, Safety-Related I&C Architecture? Why are the options of placing an inoperable instrumentation channel or digital controller in trip or bypass not provided in Action A.1 or B.1, respectively
3. Clarify in the PTS bases and in the STP 3&4 FSAR whether each channel is comprised of an instrument channel with a dedicated digital controller, or whether the digital controllers function independently of the channel instrumentation. ABWR GTS 3.3.4.2 Actions address in one condition one inoperable feedwater and main turbine trip Instrumentation

channel. PTS 3.3.4.2 Actions address in separate conditions one inoperable instrumentation channel and one inoperable digital controller. If each digital controller is dedicated to one instrumentation channel, a condition could exist where one digital controller is inoperable on one channel, and the instrumentation channel is inoperable on another channel, leading to required actions having a completion time of 14 days when, in fact, two feedwater pump and main turbine trip instrumentation channels would be inoperable, for which a 72-hour completion time to restore two channels to operable status should be specified.

4. Revise the justification of STD DEP 16.2-39 in Section 2.2.1, page 2.2-29 of Part 7, Departures Report, to provide the basis for omitting from PTS 3.3.4.2, Actions A and B, the GTS 3.3.4.2 Action A required actions and completion times for placing one inoperable feedwater and main turbine trip channel in trip or bypass within 6 hours.

The omission of GTS 3.3.4.2 Required Actions A.1 and A.2.1 from PTS 3.3.4.2 Actions A and B, as part of STD DEP 16.3-39, reduces the number and flexibility of operator options previously available in GTS 3.3.4.2 to address the loss of a single channel or digital controller. In GTS bases Subsection B 3.3.4.2, "Feedwater and Main Turbine Trip Instrumentation," page B 3.3-188, the bases for GTS 3.3.4.2, Required Actions A.1 and A.2.1, for the condition of one inoperable channel; states, "The Completion Time of six hours for implementing Actions A.1 and A.2.1 is based on providing sufficient time for the operator to determine which action is appropriate. The Completion Time is acceptable because the probability of an event coupled with a failure that would defeat another channel occurring within the time period is low. The self test features of the main turbine and feed pump trip logic provide a high degree of confidence that no undetected failures will occur within the allowable Completion Time."

**Request for Additional Information No. 3095 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: 16.0**

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

**16-40**

FSAR Tier 2 Chapter 16, "Technical Specifications," includes Surveillance Requirement 3.8.3.2 which states that "This Surveillance ensures that sufficient lube oil inventory is available to support at least 7 days of full load of operation for each DG. The [7,300] liter requirement is based on the DG manufacturer's consumption values for the run time of the DG."

Verify that the quantity of stored lube oil, 7,300 liters, accounts for a 10% margin above the 7-day guideline as stated in ANSI/ANS 59.52.1988.

**Request for Additional Information No. 3096 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: 16.0**

QUESTIONS for Balance of Plant Branch 1 (AP1000/EPR Projects) (SBPA)

**16-41**

FSAR Tier 2, Chapter 16, "Technical Specifications," lists in B3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air Subsystem, the following ASTM references: D975-08, D4176-04, and D1552-07. The current revisions for these three standards are D975-08a, D4176-04e1, and D1552-08.

Why is the applicant not using the current revisions?

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.

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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](mailto:Stacy.Joseph@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto: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

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](mailto:Stacy.Joseph@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto: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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**ADAMS Accession No. ML092160209**

**NRO-002**

OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3179)	CHaruck	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)	CHaruck	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)	CHaruck	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)	CHaruck	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)	CHaruck	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.**

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**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