

## PMSTPCOL PEmails

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**From:** Nagel, Cheri  
**Sent:** Monday, August 03, 2009 2:04 PM  
**To:** CCChappell@STPEGS.com; Mookhoek, William; STPCOL  
**Subject:** Request For Additional Information Letter No. 181 Related To SRP Section 16 For The South Texas Project COL Application  
**Attachments:** ML092120481.pdf

Letter to: Mr. Scott Head  
From: Stacy Joseph  
Date: August 3, 2009  
ADAMS Accession No. ML092120481

Cheryl A. Nagel (Cheri)  
Secretary  
ESBWR/ABWR Projects 1 (NGE1)  
Division of New Reactor Licensing  
Office of New Reactors  
301-415-1126

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For The South Texas Project COL Application  
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**Created By:** Cheri.Nagel@nrc.gov

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**Recipients Received:**

August 3, 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. 181 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.

S. Head

- 2 -

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 T/ Tai for:/***

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. 3044, 3075

Enclosures:  
Request for Additional Information

cc:  
Mr. William Mookhoek  
Mr. G. Steve Cashell

S. Head

- 2 -

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 T. Tai for:/**

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. 3044, 3075

Enclosures:  
Request for Additional Information

cc:  
Mr. William Mookhoek  
Mr. G. Steve Cashell

Distribution:

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ADAMS Accession No. ML092120481

NRO-002

OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3044)	NAshkeboussi	MKowal	SJoseph	SKirkwood	GWunder
DATE	6/108/2009	6/12/2009	6/18/2009	7/21/2009	7/30/2009
OFFICE	CTSB/TR	CTSB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME (3175)	DScully	MKowal	SJoseph	SKirkwood	GWunder
DATE	6/108/2009	6/12/2009	6/16/2009	7/15/2009	7/30/2009

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

OFFICIAL RECORD COPY

Request for Additional Information No. 3044 Revision 0

7/30/2009

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: 3.6 Containment Systems

QUESTIONS for Technical Specification Branch (CTSB)

16-25

The applicant is requested to revise STD DEP 2.14-1 to include adopting TSTF-447-A, Revision 1, "Elimination of Hydrogen Recombiners and Change to Hydrogen and Oxygen Monitors," and reference STD DEP 2.14-1 on the placeholder page for the bases of PTS 3.6.3.1. The applicant is also requested to insert on this page the text of STP 3&4 DCD Tier 1, Section 2.14, Containment and Environmental Control Systems, Sub-Section 2.14.8, paragraph 2, which was deleted by STD DEP 2.14-1 and which provides the only link to the reasons for omitting this technical specification. Without this text insertion, future reviewers will not find the reasons for omitting PTS 3.6.3.1 and bases to be readily accessible.

Request for Additional Information No. 3075 Revision 0

7/30/2009

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: 3.3

QUESTIONS for Technical Specification Branch (CTSB)

16-26

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

Section 3.3.2.1

1. Correct Spelling of CORE ALERATIONS in SR 3.3.2.1.2 frequency

Section 3.3.1.1

1. Per the requirements of TSTF-GG-05-01 Writers Guide, for Plant-Specific Improved Technical specifications, Section 2.1.4 b, revise A.2.2.2 and SR 3.3.1.1.8 "-----NOTE----" to read "-----NOTES-----"
2. The words "non-regenerative" in function 31 title should be capitalized as per TSTF-GG-05-01 Section 2.5.8 b.
3. Insert the sign  $\leq$  before the brackets in the column ALLOWABLE VALUE of function 2c
4. Replace the sign  $\leq$  with the sign  $\geq$  in the ALLOWABLE VALUE column of function 4, 12, 19 and 26
5. Replace  $\geq$  with  $\leq$  in the ALLOWABLE VALUE for function 20 and 25
6. Replace  $\leq$  with  $\geq$  and  $< =$  with  $\leq$  in the expressions  $\leq$  XX Liters/min and for  $< =$  XX Seconds, respectively for the ALLOWABLE VALUE of function 29.

Section 3.3.1.2

1. Place a page break between the ACTIONS section and the SURVEILLANCE REQUIREMENTS section and place the SURVEILLANCE REQUIREMENTS on a new page.

Section 3.3.1.3

1. For Condition E, of the PTS there is a period missing at the end of the third OR statement. In addition, remove the period at the end of Function 1, 2, and 3 of Table 3.3.1.3-1.

Enclosure 2

#### Section 3.3.1.4

1. For CONDITION I, insert "One or more SENSOR CHANNELS inoperable" and the first logical connector " OR" as both have been omitted.
2. Start the "SURVEILLANCE REQUIREMENTS" Table on a new page
3. Replace the sign  $\geq$  with the sign  $\leq$  before the bracket in the column ALLOWABLE VALUE of function 1.a., 2.a., 2.b., 3.a., and 12.d.
4. Replace the sign  $\leq$  with the sign  $\geq$  before the brackets in the column ALLOWABLE VALUE of function 1.b. and 3.b.

#### Section 3.3.7.1

1. Insert a blank line between the SURVEILLANCE REQUIREMENTS heading and the Note immediately below to facilitate readability and to duplicate the editorial convention utilized in GTS.

#### Section 3.3.8.1

1. Insert a blank line between the SURVEILLANCE REQUIREMENTS heading on page 3.3.8.1-1 and the ACTIONS heading on page 3.3.8.1-2 and the heavy black line framing these subsection tables to facilitate readability, consistency within this PTS section, and to duplicate the editorial convention utilized in GTS

16-27

Correct the following editorials 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 14, fourth paragraph

Functions 16a and 16b, second and fourth paragraphs

Functions 17 and 18, second and third paragraphs

Functions 21 and 22, fourth paragraph

2. On PTS 3.3.1.1 bases page B 3.3.1.1-39, third paragraph, the phrase "isolation, and feedwater line break mitigation initiation" should be written in title case as illustrated: "ESF, Isolation, and Feedwater Line Break Mitigation Initiation (Functions 11.b, 11.c, and 11.d) are required in MODES 1, 2, and 3..."



3. On PTS 3.3.1.1 bases page B 3.3.1.1-41, the Function 15 title is incomplete. Add the following missing text "- High" to title.
4. On PTS 3.3.1.1 bases page B 3.3.1.1-41, second sentence of bases for Function 15, should capitalize the function title: "This function, concurrent with the Drywell Pressure - High function (Function 11.d) provides a condensate pump trip signal to reduce the amount of energy added to the drywell.
5. On PTS 3.3.1.1 bases page B 3.3.1.1-44, for Function 18,
  - \* Eliminate the break in the second paragraph, line 6.
  - \* In the third paragraph, second sentence, replace "in MODE 1 and in MODES 2 and 3" with "in MODES 1, 2 and 3".

#### Editorial comments for section B 3.3.1.1

1. On PTS bases page B 3.3.1.1-17, in the second paragraph of PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace the word "Polity" with the correct word "Policy".
2. On PTS bases page B 3.3.1.1-18, line 4, in the sixth paragraph of PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace the word "normal" with the correct word "nominal" to be consistent with the GTS bases.
3. On PTS bases page B 3.3.1.1-20, line 4, in the first paragraph of the bases for Functions 1.a and 1.b, in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," re-align the last two words of the sentence ending in "rod withdrawal," which are misplaced.
4. On PTS bases page B 3.3.1.1-26, second sentence of second paragraph of the bases for Function 2.f, in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace the word "provided" by the correct word "provide".
5. On PTS bases page B 3.3.1.1-28, first sentence of third paragraph of the bases for Function 2.g, in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace the word "is" by the correct word "are".
6. On PTS bases page B 3.3.1.1-28, seventh line of first paragraph of the bases for Functions 3.a, 3.b and 3.c in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace the word "results" by the correct word "result".
7. On first line of PTS bases page B 3.3.1.1-30, underline "4. Reactor Steam Dome Pressure-Low (Injection Permissive)".
8. Apply widow/orphan protection to last paragraph on PTS bases page B 3.3.1.1-30 to avoid the orphan text "reduction in risk."
9. On PTS bases page B 3.3.1.1-36, last line of fifth paragraph of the bases for Functions 9.a, 9.b and 9.c in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," replace "ADS 0" with "ADS B".

10. 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 10, fifth paragraph

11. On PTS bases page B 3.3.1.1-38, last item in list of protective actions in the bases for Functions 11.a, 11b, 11.c, and 11.c in the PTS 3.3.1.1 bases section entitled "Applicable Safety Analysis, LCO, and Applicability," capitalize "Feedwater Line Differential Pressure - High."

Editorial Comments for section B 3.3.1.1

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 23, second and third paragraphs

Function 25, 26, & 27, fourth paragraph

Function 28, fourth and fifth paragraphs

Function 29, fifth paragraph

Functions 30, 31, & 32, second and third paragraphs

Function 33, first and second paragraphs

2. In the bases for PTS 3.3.1.1, Function 27, change "These Functions are not" to "This Function is not".
3. In the bases for PTS 3.3.1.1, format References consistently. References are formatted in three different ways in this section e.g., "of Reference(s)", "in Reference" and "(Ref.)" See PTS bases pages B 3.3.1.1-17, 21, 23, 26, 28, 30, 35, 36, 37, 40, 41, 42, 44, 45, and 48.
4. "Applicability Bases" is referred to in many different ways in this section. For example, variances noted included "for the applicability basis", "for Applicability Bases", "for the Applicability basis", "for applicability basis", "for the Applicability Bases", "The applicability basis", the Applicability", etc. Revise the bases to be consistent when referring to the applicability bases.

Editorial comments for PTS 3.3.1.1 bases

Note: Every edit to GTS bases text requires an associated STD DEP in COLA Part 7.

1. Revise the second paragraph of the bases for Required Action N.1, to state: "Declaring the supported features inoperable will cause entry into the applicable Conditions and Required

Actions associated with the LCOs for the supported features, and will result in suitable compensatory measures being taken."

2. In the bases for PTS SR 3.3.1.1.3, delete the blank line after the fourth line of the third paragraph.
3. In the bases for PTS SR 3.3.1.1.13 and SR 3.3.1.1.14, in the second paragraph, replace the hyphen in "infrequent-provide" with the conjunction "and".
4. In the bases for PTS 3.3.1.1, in the Reference section, remove the unnecessary page break after Reference 8. In addition, Reference 8, should state "Overpressure Protection".
5. For consistency with Function listings in GTS Table 3.3.1.1-1 and PTS Table 3.3.1.1-1, and for internal consistency, PTS 3.3.1.1 bases Table B 3.3.1.1-1, Functions 3, 6, 7, 8, 9, 11, 16, and 24 should be presented similar to functions 1 and 2 e.g. function 3 with 3a, 3b, 3c; in addition, all Function titles should be presented in the table.
6. In PTS 3.3.1.1 bases Table B 3.3.1.1-1, correct the error in the title for Function 5 as the title is incomplete and missing the word "Vessel".
7. In PTS 3.3.1.1 bases Table B 3.3.1.1-1, correct the title for Function 8 as the title is incomplete and missing the word "Low".
8. In PTS 3.3.1.1 bases Table B 3.3.1.1-1, correct the error in title for Function 9. Instead of "9. Reactor Vessel Water Level, Low-Level 1", the title should read "9. Reactor Vessel Water Level - Low, Level 1".
9. In PTS 3.3.1.1 bases Table B 3.3.1.1-1, capitalize the word "non-regenerative" in the title for Function 31.

#### Additional editorial comments on PTS 3.3.1.1 bases

1. On PTS bases page B 3.3.1.1-42, revise the second paragraph of the bases for Function 15, to be consistent with the Function title, e.g., "measured drywell pressure" should be "feedwater line differential pressure."
2. On PTS bases page B 3.3.1.1-42, make the last sentence of the second paragraph of the bases for Function 15 a new paragraph for clarity and consistency with the bases for the Allowable Values of other functions.

#### Editorial Comments for section B 3.3.1.1

1. In the PTS bases, avoid blank lines at the end of a page, except as needed for widow/orphan prevention when the text continues to the next page.
2. On PTS 3.3.1.1 bases pages B 3.3.1.1-1 and 2, the information contained in the DTF section breaks in the middle of the sentence and continues on the next page. Break the sentence at the end rather than in the middle.

3. On PTS 3.3.1.1 bases page B 3.3.1.1-3, second to last paragraph, remove the word "other" from the last sentence of the paragraph where it is currently shown before the word divisions.
4. On PTS 3.3.1.1 bases page B 3.3.1.1-3, create a new paragraph after the first row and combine the second and third sentences in the new paragraph as shown below:  
There are two basic segments that are used to initiate protective actions.

The SENSOR CHANNEL segment consists of the instrumentation portion which encompasses the sensors, sensor data conversion, sensor data transmission path and the setpoint comparison. Capability is provided to manually trip individual SENSOR CHANNELS. Interlocks are provided to prevent placing more than one SENSOR CHANNEL for a given Function in trip at the same time.

The LOGIC CHANNEL segment consists of the functions responsible for implementing the initiation logic, generating initiation signals when needed, and various support functions. The LOGIC CHANNELS in each division send data to the OUTPUT CHANNELS.

5. On PTS 3.3.1.1 bases page B 3.3.1.1-4, third paragraph, last sentence, replace the word "effect" with "affect".
6. On PTS 3.3.1.1 bases page B 3.3.1.1-8, the title, Low Pressure Flooder (LPFL) System (Mode of the Residual Heat Removal System) should be underlined.
7. On PTS 3.3.1.1 bases page B 3.3.1.1-10, last paragraph, replace the word "then" with "than".
8. On PTS 3.3.1.1 bases page B 3.3.1.1-14, underline "3. Reactor Core Isolation Cooling (RCIC) System Isolation".
9. On PTS 3.3.1.1 bases page B 3.3.1.1-16, underline "ATWS MITIGATION".

#### Editorial Comments for section B 3.3.1.2

1. On bases page B 3.3.1.2-8, second line, in the bases for PTS 3.3.1.2 Actions D.1 and D.2, correct the typographical error, "repairs on at least on of the" should be "repairs on at least one of the".
2. On bases pages B 3.3.1.2-14 and -15, last sentence of bases for PTS SR 3.3.1.2.6 and SR 3.3.1.2.7, correct the typographical error, "but not channel failure, are infrequent provide confidence that" should be "but not channel failure, are infrequent and provide confidence that".

#### Editorial Comments for section B 3.3.1.3

1. On PTS bases page B 3.3.1.3-1, in the bases section title, place a comma after "LCO".

#### Editorial comments for section B 3.3.4.1

1. On PTS bases page B 3.3.4.1-13 in the last paragraph of the bases for PTS 3.3.4.1 Actions C.1.1, C.1.2.1, and C.1.2.2 and C.2, replace C.2.1 with C.1.1, C.2.2.1 with C.1.2.1, and C.2.2.2 with C.1.2.2.
2. On PTS bases page B 3.3.4.1-14 in the first paragraph of the bases for PTS 3.3.4.1 Actions F.1 and F.2, replace "...appropriate actions are taken for if the required Actions..." with "...appropriate actions are taken if the required Actions..."
3. On PTS bases page B 3.3.4.1-14 in the bases for PTS 3.3.4.1 Action G.1, correct the second sentence to read, "Because of the low probability of an event requiring these Functions, [24] hours is provided to restore the inoperable functions."

#### Editorial comments for section B 3.3.6.1

1. On PTS bases page B 3.3.6.1-5, in the bases for PTS 3.3.6.1 Functions 9 and 10, replace "10-6%" with either "1E-6%" or with the "-6" written as a superscript immediately following "10".
2. Add "Revision 4" to Reference 1 of the bases reference section on page B 3.3.6.1-10 in the bases for PTS 3.3.6.1. Reference 1 is Regulatory Guide 1.97, "Instrumentation for Light-Water Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident," June 2006.

#### Editorial Comments for Section B 3.3.5.1

1. On PTS bases page B 3.3.5.1-2, last paragraph of the bases Background section, second sentence, remove the extra word "establish." This correction will require a departure from the GTS bases.
2. On PTS bases page B 3.3.5.1-2, first paragraph, fourth sentence, of the bases section entitled "Applicable Safety Analysis, LCO, and Applicability," for Function 1.a, replace "These analysis" with "This analysis."
3. On PTS bases page B 3.3.5.1-3, last paragraph, 1st sentence. The acronym "RWE" has already been previously defined, revise the sentence accordingly. Define the acronym "RTP".
4. Correct the typographical errors in the following sentences is SR 3.3.5.1.1 and SR 3.3.5.1.2. The sentence, "The setpoint shall be left set consistent with the assumptions". should be revised to read, "The setpoint shall be set consistent with the assumptions.."
5. On PTS bases page B 3.3.5.1-6, last sentence of second paragraph of the bases for PTS SR 3.3.5.1.1 and SR 3.3.5.1.2, replace "provides" with "provide".
6. On PTS bases page B 3.3.5.1-7, first sentence second paragraph of the bases for PTS SR 3.3.5.1.5, remove the extra phrase "one hour after".
7. On PTS bases page B 3.3.5.1-8, first sentence of the bases for PTS SR 3.3.5.1.7, replace "required" with "require".

#### Editorial Comments for Section B 3.3.8.2-1

1. The upper right page heading for GTS & PTS 3.3.8.2 is "RPV Coolant Temperature Monitoring". The subsection title for GTS & PTS 3.3.8.2 is "Reactor Coolant Temperature Monitoring - Shutdown". The upper right page heading and the subsection title for the bases of GTS & PTS 3.3.8.2 are "Reactor Coolant Temperature Monitoring." Make these headings and titles consistent, and associated needed deviations from the GTS and bases with a standard departure.