

March 6, 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. 83 RELATED TO
SRP SECTION 14.03.05, 14.03.06 AND 14.03.07 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 K. 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 No. 2102, No. 2124 and No. 2132

Enclosures:
Requests for Additional Information

cc:
William Mookhoek
Coley Chappell
James Cook

S. Head

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NRO-002

OFFICE	CCIB/TR	CCIB/BC	NGE2/PM	OGC	NGE2/L-PM
NAME	EKleeh	OTabatabai	SJoseph	SBrock	GWunder
DATE	2/10/2009	2/10/2009	2/19/2009	2/27/2009	3/6/2009

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

OFFICIAL RECORD COPY

Request for Additional Information No. 2102 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co.

Docket No. 52-012 and 52-013

SRP Section: 14.03.06 - Electrical Systems - Inspections, Tests, Analyses, and Acceptance
Criteria

Application Section: Part 9 of RCOLA

QUESTIONS for Construction Inspection and Allegations Branch (CCIB)

14.03.06-1

RCOLA Part 9, ITAAC Item 11 in Table 2.2.1

The intent of this ITAAC is to place a test signal from a power supply and then verify that the signal only exists in the channel powered by that power supply. This assumed that each channel was supplied only by a power supply associated with the same channel. However, based on Revision 2 of Part 7 of the application on Page 2.1-6, each of the two channels of the Rod Control and Information System (RCIS) can be supplied from one power supply when the other power supply is in test mode. Page 2.1-6 seems to state that both RCIS channels can be supplied from either power supply. If verification of the independence of power supplies in that only one power supply can supply one RCIS channel is not required, then what is the intent of the ITAAC? If the purpose of the change is to verify that the signal in one RCIS is independent of the signal in the other redundant channel of the RCIS, then the design commitment and Inspections, Tests, and Analysis (ITA) should be changed to accommodate that verification. Clarify the purpose of the ITAAC and explain how the Acceptance Criteria can meet that purpose?

14.03.06-2

RCOLA Part 9, ITAAC Item 3 in Table 2.3.3

The design commitment refers to 'each CAMs division of radiation channels' is powered. The first Inspections, Tests, and Analyses (ITA) just refers to 'tests will be performed on each of the CAMs radiation channels'. The second ITA refers to the 'as-built Class 1E radiation channels' with the words 'divisions in the CAMs' crossed out. Both of the acceptance criteria refer to 'Class 1E divisions' not the radiation channels. Please clarify the difference in wording between the design commitment and ITAs with the acceptance criteria.

14.03.06-3

RCOLA Part 9, ITAAC Item 3.(c) in Table 3.0-1

The design commitment does not include any reference to the non-class 1E equipment, and the present Acceptance Criterion (AC) only addresses the independence between the Class 1E divisions and non-Class 1E equipment. Why does the acceptance criterion not indicate that electrical independence is achieved between each of the Class 1E divisions, and also between the Class 1E divisions and non-Class 1E equipment?

14.03.06-4

RCOLA Part 9, TAAC Item 6 in Table 3.0-2

It seems that the power circuits were tested in ITAAC Item 1 in this Table. The intent of this ITAAC is confusing because there is no indication between what circuits independence is necessary. Please clarify between which circuits independence is required.

Request for Additional Information No. 2124 Revision 0

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co.
Docket No. 52-012 and 52-013

SRP Section: 14.03.05 - Instrumentation and Controls - Inspections, Tests, Analyses, and
Acceptance Criteria
Application Section: Part 9, Section 2

QUESTIONS for Construction Inspection and Allegations Branch (CCIB)

14.03.05-1

RCOLA Part 9, ITAAC Item 4 in Table 2.7.5

This ITAAC appears to have two design commitments. The first one addresses redundancy in the instrumentation circuits, and the second one addresses self diagnostics and alarming in the main control room for a fault. Please explain how the acceptance criterion as written addresses both of those design commitments.

14.03.05-2

RCOLA Part 9, ITAAC Item 4 in Table 3.0-1

Please explain why the acceptance criterion as written does not address 'the required functions of the UHS system' stated in the design commitment and how the figure referenced provides sufficient information to allow the implementation of this ITAAC given that the figure lacks the required details.

This is also true for the following ITAAC:

ITAAC Item 5 in Table 3.0-5

14.03.05-3

RCOLA Part 9, ITAAC Item 7 in Table 3.0-2

Please explain which DC systems are referred to in this ITAAC - onsite or offsite DC systems local to switchyard. Please also explain why an inspection would not also be required for this ITAAC to verify the as-built installation.

Enclosure

Request for Additional Information No. 2132 Revision 2

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013

SRP Section: 14.03.07 - Plant Systems - Inspections, Tests, Analyses, and Acceptance Criteria
Application Section: Part 9 of application in Table 3.0-1

QUESTIONS for Construction Inspection and Allegations Branch (CCIB)

14.03.07-1

RCOLA Part 9, ITAAC Item 2.(a) in Table 3.0-1

The Inspections, Tests, and Analysis (ITA) for this ITAAC should include both inspection and analysis because pump head requirements and cooling demands of a system are determined by analysis. Explain why an analysis is not required for this ITAAC? Also explain how the acceptance criterion really addresses the design requirement given that the acceptance criterion states only where the suction is located in the Ultimate Heat Sink (UHS) basin wall for the Reactor Service Water (RSW) pumps and not all the other conditions stated in the design requirement?

14.03.07-2

RCOLA Part 9, ITAAC Item 2.(b) in Table 3.0-1

The Inspection, Tests, and Analysis (ITA) for this ITAAC should include both an inspection and an analysis. Please explain why an inspection is not required to verify that the dimensions of the UHS agree with the analysis.

14.03.07-3

RCOLA Part 9, ITAAC Item 1 in Table 3.0-3

Please explain why the design requirement and Inspections, Tests, and Analysis (ITA) do not address having sufficient flow, storage, and temperature of demineralized water for normal plant operations similar to the acceptance criteria (AC). The first AC appears to have omitted the words 'two-pass series configuration' based on page 9.2-18 in the FSAR. The third AC appears to have omitted the words 'for short durations' based on page 9.2-18 in the FSAR. Please explain why the first and third AC do not have better agreement with what is stated on page 9.2-18 of the FSAR.