## PMSTPCOL PEmails

**From:** Keith, Felicia
**Sent:** Thursday, August 20, 2009 10:51 AM
**To:** Scott Head; STPCOL; Bill Mookhoek; Chappell, Coley
**Subject:** Request for Additional Information Letter No. 215 Related To SrP SEctions 14.03.02 and 16 For The South Texas Project Combined License Application
**Attachments:** ML092320008.pdf

TO: Scott Head

FROM: Stacy Joseph

DATE: August 20, 2009

ADAMS Accession No. ML092320008

*Felicia Keith, Secretary*
*ESBWR/ABWR Projects Branch 2*
*Division of New Reactor Licensing*
*Office of New Reactors*
*301-415-2950*
*Felicia.Keith@nrc.gov*

**Hearing Identifier:** SouthTexas34Public_EX
**Email Number:** 1612

**Mail Envelope Properties** (CEEA97CC21430049B821E684512F6E5ECA5636D001)

**Subject:** Request for Additional Information Letter No. 215 Related To SrP SEctions 14.03.02 and 16 For The South Texas Project Combined License Application
**Sent Date:** 8/20/2009 10:51:07 AM
**Received Date:** 8/20/2009 10:51:09 AM
**From:** Keith, Felicia

**Created By:** Felicia.Keith@nrc.gov

**Recipients:**
"Scott Head" <smhead@stpegs.com>
Tracking Status: None
"STPCOL" <STP.COL@nrc.gov>
Tracking Status: None
"Bill Mookhoek" <wemookhoek@stpegs.com>
Tracking Status: None
"Chappell, Coley" <ccchappell@STPEGS.COM>
Tracking Status: None

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| MESSAGE | 301 | 8/20/2009 10:51:09 AM |
| ML092320008.pdf | 107978 | |

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

August 20, 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. 215 RELATED TO SRP SECTIONS 14.03.02 AND 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. 3263, 3270 and 3279

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 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. 3263, 3270 and 3279

Enclosures:
Request for Additional Information

cc: William Mookhoek
G. Steve Cashell

Distribution:

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**ADAMS Accession No. ML092320008** NRO-002

| OFFICE | CTSB/TR | CTSB/BC | NGE2/PM | OGC | NGE2/L-PM |
|---|---|---|---|---|---|
| NAME (3263) | CHarbuck | MKowal | SJoseph | SKirkwood | GWunder |
| DATE | 6/30/2009 | 6/30/2009 | 7/6/2009 | 8/13/2009 | 8/20/2009 |
| OFFICE | CTSB/TR | CTSB/BC | NGE2/PM | OGC | NGE2/L-PM |
| NAME (3270) | CHarbuck | MKowal | SJoseph | SKirkwood | GWunder |
| DATE | 6/30/2009 | 6/30/2009 | 7/6/2009 | 8/13/2009 | 8/20/2009 |
| OFFICE | SEB2/TR | SEB2/BC | NGE2/PM | OGC | NGE2/L-PM |
| NAME (3279) | HCandra | MChakravorty | SJoseph | SKirkwood | GWunder |
| DATE | 7/1/2009 | 7/1/2009 | 7/6/2009 | 8/13/2009 | 8/20/2009 |

***Approval captured electronically in the electronic RAI system.**
**OFFICIAL RECORD COPY**

**Request for Additional Information No. 3263 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: STD DEP 16.3-42, bases for LCO 3.8.4 Action D**

QUESTIONS for Technical Specification Branch (CTSB)

**16-52**

The applicant requested to revise the bases for Required Actions D.1 and D.2 of PTS 3.8.4 to be consistent with GTS and PTS 3.8.4 Condition D. In STD DEP 16.3-42, the applicant proposed to make the bases for Required Actions D.1 and D.2 of PTS 3.8.4, DC Sources – Operating," consistent with Condition D, which states, "Required Action and associated Completion Time not met," by removing the GTS bases phrase "for Required Actions A.1, B.2, C.1, and C.2." However, this change does not fully correct the bases so that they are consistent with Condition D. This is because the bases phrase "If all inoperable DC electrical power subsystems cannot be restored to OPERABLE status within the associated Completion Times" would not apply to all of the Required Actions in Condition A. The response to this question should include revising the discussion of STD DEP 16.3-42 in Part 7 of the application.

**Request for Additional Information No. 3270 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, B 3.10.5**

QUESTIONS for Technical Specification Branch (CTSB)

**16-53**

In STD DEP 16.3-23. the applicant-recommended correction to the title of Technical Specification LCO 3.3.1.2 in BASES 16.3.10.5 is incorrect. The title should be corrected to "Reactor Protection System (RPS) and Main Steam Isolation Valve (MSIV) Actuation."

The applicant is requested to change two references 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;” and LCO 3.3.1.2, “Reactor Protection System (RPS) and MSIV Trip Actuation Logic“ to 3.3.1.2, “Reactor Protection System (RPS) and Main Steam Isolation Valve (MSIV) Actuation.”

**Request for Additional Information No. 3279 Revision 2**

**South Texas Project Units 3 and 4**
**South Texas Project Nuclear Operating Co**
**Docket No. 52-012 and 52-013**
**SRP Section: 14.03.02 - Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria**
**Application Section: 14.03.02**

QUESTIONS for Structural Engineering Branch 2 (ESBWR/ABWR Projects) (SEB2)

**14.03.02-1**

STP Unit 3 & 4 FSAR 14.3S - Inspections, Tests, Analyses and Acceptance Criteria (ITAAC) stated that "The selection criteria and methodology provided in Section 14.3 of the reference ABWR DCD for the certified ABWR design were utilized as the site-specific selection criteria and methodology for inspections, tests, analyses, and acceptance criteria including those applicable to the emergency planning and physical security hardware. In general, the ITAAC for site-specific systems were developed to correspond to the interface criteria in Tier 1 of the reference ABWR DCD." The applicant is requested (a) to explain the basis for the use of the phrase "in general," (e.g., Are there any exceptions taken?) and (2) to provide a screening summary table relating pertinent ABWR DCD interface requirements vs. STP 3 and 4 FSAR ITAAC actions taken in addressing the interface requirements for site-specific structures.

**14.03.02-2**

ITAAC tables in COLA Part 9 Section 3.0 have been established in two different ways: some of the non-safety related systems have entries (e.g., Table 3.0-3 makeup Water Preparation System(MWP) and Table 3.0-9 Circulating Water System (CW)), while others are designated with "No entry for this system". Explain the reasons for using two different approaches.

**14.03.02-3**

The UHS is designed to withstand the most severe natural phenomenon or site-related event (e.g., SSE, tornado, hurricane, flood, freezing, spraying pipe whip, jet forces, missiles, fire, failure of non-Seismic Category I equipment, flooding as a result of pipe failures or transportation accident), and reasonably probable combinations of less severe phenomena and/or events, without impairing its safety function (GDC 2 and 4). The UHS is also designed to withstand any credible single failure of man-made structural features and to withstand chemical and gas explosions without impairing its safety function. The UHS cooling tower internals are protected from missile impacts. There are also requirements concerning the integrity of the division structures between the three independent sections of the RSW system.

Given the complexity of safety functions intended for the UHS, its required design criteria, load cases and combination thereof, the applicant is requested to expand the ITAAC contents of Table 3.0-1 Ultimate Heat Sink (UHS) item 5 to provide necessary level of detail that are consistent with the design basis loads and required safety functions discussed above for the UHS.

**14.03.02-4**

With respect to Table 3.0-2 Offsite Power System, provide additional information regarding Seismic Category I structures that either support or enclose Category IE electrical SSC. If such structures are present, their corresponding structural related ITAAC in Table 3.0-2 should be provided with the same level of detail and scope of coverage as those discussed in the previous question (14.03.02-3).

**14.03.02-5**

The RSW System is designed to withstand the most severe natural phenomenon or site-related event (e.g., SSE, tornado, hurricane, flood, freezing, spraying pipe whip, jet forces, missiles, fire, failure of non-Seismic Category I equipment, flooding as a result of pipe failures or transportation accident), and reasonably probable combinations of less severe phenomena and/or events, without impairing its safety function (GDC 2 and 4). The RSW system is also designed to withstand any credible single failure of man-made structural features and to withstand chemical and gas explosions without impairing its safety function. The RSW system is protected from missile impacts. There are also requirements concerning the integrity of the division structures between the three independent sections of the RSW system.

Given the complexity of safety functions intended for the RSW system, its required design criteria, load cases and combination thereof, the applicant is requested to expand the contents of Table 3.0-5 Reactor Service Water (RSW) system items 2 and 8 to provide structural ITAAC items with the same level of detail as those stipulated in the previous questions (14.03.02-3 and 14.03.02-4).

**14.03.02-6**

Given the importance and the safety significance of back fills under category I structures, the design description provided in Item 1 of Table 3.0-11 lacks the needed level of detail and specificity. The item should be expanded to include the specific method and approach as well as quantitative acceptance criteria to be implemented by the proposed ITAAC. Also provide references to pertinent FSAR sections where the technical basis for verifying adequacy and acceptability of the backfill material and placement is discussed.

**14.03.02-7**

The Breathing Air (BA) system is not a safety-relevant system but uses primary containment penetrations that are safety-related, therefore this system should be designed such that its failure would not impair any Category I SSC under service or accident conditions, including containment penetrations. Expand item 2 of Table 3.0-12 to include necessary ITAAC tasks.

**14.03.02-8**

With respect to the STP 3 and 4 site-specific SSCs, SRP Section 14.3.2, II (11) requires that structural analyses should be performed which reconcile the as-built configuration of the site-specific structures with their structural design bases. The applicant is requested to discuss how STP 3 and 4 intends to

implement this ITAAC requirement and provide the corresponding ITAAC table addressing the as-built configuration reconciliation ITAAC for each site-specific SSCs, as applicable.