

## PMSTPCOL PEmails

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**From:** Govan, Tekia  
**Sent:** Wednesday, June 03, 2009 5:08 PM  
**To:** 'Head, Scott'  
**Cc:** STPCOL; 'Bense, Richard'  
**Subject:** REQUEST FOR ADDITIONAL INFORMATION LETTER No. 116 and 117  
**Attachments:** ML091540452.pdf; ML091540472.pdf

Attached you will find the publically available ADAMS files which contains the "REQUEST FOR ADDITIONAL INFORMATION LETTER No.116 and 117 RELATED TO SRP SECTION 02.05 FOR THE SOUTH TEXAS PROJECT COMBINED LICENSE APPLICATION ." This email is being sent to satisfy the delivery date noted on the letter, however a copy of this document has been sent to you via postal mail.

If you have any questions or concerns, please do not hesitate to contact me.

Tekia V. Govan, Project Manager  
U.S. Nuclear Regulatory Commission  
Office of New Reactors  
MS T-7-F29  
Washington DC 20555-0001  
301-415-6197  
[Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov)

**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 1278

**Mail Envelope Properties** (83F82891AF9D774FBBB39974B6CB134F92A7A9DA9E)

**Subject:** REQUEST FOR ADDITIONAL INFORMATION LETTER No. 116 and 117  
**Sent Date:** 6/3/2009 5:07:37 PM  
**Received Date:** 6/3/2009 5:07:38 PM  
**From:** Govan, Tekia

**Created By:** Tekia.Govan@nrc.gov

**Recipients:**

"STPCOL" <STP.COL@nrc.gov>  
Tracking Status: None  
"Bense, Richard" <rhbense@STPEGS.COM>  
Tracking Status: None  
"Head, Scott" <smhead@STPEGS.COM>  
Tracking Status: None

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

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	691	6/3/2009 5:07:38 PM
ML091540452.pdf	77848	
ML091540472.pdf	76871	

**Options**

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

June 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. 116 RELATED TO SRP  
SECTION 02.05.04 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 **45** 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 301-415-6197 or by e-mail at [Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto:George.Wunder@nrc.gov).

Sincerely,

**/RA/**

Tekia V. Govan, Project Manager  
ABWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-012  
52-013

eRAI Tracking No. 2623

Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Richard Bense

S. Head

-2-

If you have any questions or comments concerning this matter, I can be reached at 301-415-6197 or by e-mail at [Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto:George.Wunder@nrc.gov).

Sincerely,

**/RA/**

Tekia V. Govan, Project Manager  
ABWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-012  
52-013

eRAI Tracking No. 2623

Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Richard Bense

Distribution:

PUBLIC  
NGE 1/2 R/F  
GWunder, NRO  
BAbeywickrama, NRO  
WBieganousky, NRO

CMunson, NRO  
SBrock, OGC  
RidsNroDserRsac  
RidsNroDnrlNge2

**ADAMS Accession No.: ML091540452**

NRO-002

OFFICE	RGS1/TR	RGS1/BC	NGE2/PM	OGC	NGE2/L-PM
NAME	WBieganousky	CMunson	TGovan	SBrock	GWunder
DATE	04/21/2009	04/21/2009	06/03/2009	04/21/2009	05/05/2009

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

**OFFICIAL RECORD COPY**

## Request for Additional Information No. 2623 Revision 2

**South Texas Project Units 3 and 4**  
**South Texas Project Nuclear Operating Co**  
**Docket No. 52-012 and 52-013**  
**SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations**  
**Application Section: 2.5.4**

QUESTIONS for Geosciences and Geotechnical Engineering Branch 1 (RGS1)

### **02.05.04-22**

There is very little information in the FSAR regarding the presence of fissures and slickensides in the Beaumont clay, whereas FSAR reference 2.5S.4-14A by Mahar and O'Neil address the difficulties of measuring soil properties of stiff fissured clays both in the lab and insitu. Since the referenced work is based on Beaumont clay, and is the basis for some of your assumptions regarding engineering properties of the site soils, the staff believes it would be helpful that you address more fully the nature and distribution of fissures and slickensides with respect to that presented in reference 2.5S.4-14A.

Please provide a thorough discussion regarding the dessication features you encountered in the Beaumont clay. Please discuss how the dessication features compare to that presented in the reference 2.5S.4-14A. Please indicate how the various laboratory and insitu test results are conservative in the evaluation of the engineering properties used for bearing capacity, slope stability and settlement analyses.

### **02.05.04-23**

The FSAR supplemental exploration data contains CPT soundings that show high pore water pressure response in a zone of silt (based on soil behavior type) in the depth range of 48 feet to 60 feet and 80 feet to 100 feet (reference CPT soundings C-304 and C-305s, for example). Similar high pore water pressure response is observed in other soundings across the site occurring at various depths, but typically below 48 feet. This appears to correspond to layers D and F in FSAR Section 2.5.4.2. The staff understand that high pore water pressure response is normally associated with contractive behavior, and more near normally consolidated soils. OCR average values determined from site-wide CPT soundings for the depths under consideration are shown to range from 4.2 to 1.7, as shown on FSAR Figure 2.5S.4-33. The range of individual OCR predictions from CPT measurement are very widely spread between approximate depths of 40 and 65 feet in this figure.

Please discuss how you interpret the high pore water pressure response measured in the over-consolidated clay soils. Since your strength determinations for layers D and F use OCR relationships to evaluate insitu shear strength, is there concern that the high pore water pressure response observed in the CPT data may indicate lower OCR values and consequently lower undrained shear strength? Please justify your strength parameters for layers D and F in light of the CPT pore water pressure response.

Enclosure

June 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. 117 RELATED TO SRP  
SECTION 02.05.02 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 **45** 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 301-415-6197 or by e-mail at [Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto:George.Wunder@nrc.gov).

Sincerely,

**/RA/**

Tekia V. Govan, Project Manager  
ABWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-012  
52-013

eRAI Tracking No. 2572

Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Richard Bense



S. Head

-2-

If you have any questions or comments concerning this matter, I can be reached at 301-415-6197 or by e-mail at [Tekia.Govan@nrc.gov](mailto:Tekia.Govan@nrc.gov) or you may contact George Wunder at 301-415-1494 or [George.Wunder@nrc.gov](mailto:George.Wunder@nrc.gov).

Sincerely,

**/RA/**

Tekia V. Govan, Project Manager  
ABWR Projects Branch  
Division of New Reactor Licensing  
Office of New Reactors

Docket Nos.: 52-012  
52-013

eRAI Tracking No. 2572

Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Richard Bense

Distribution:  
PUBLIC  
NGE 1/2 R/F  
GWunder, NRO  
BAbeywickrama, NRO  
YLi, NRO  
CMunson, NRO  
SBrock, OGC  
RidsNroDserRsac  
RidsNroDnrlNge2

**ADAMS Accession No.: ML091540472**

**NRO-002**

OFFICE	RGS1/TR	RGS1/BC	NGE2/PM	OGC	NGE2/L-PM
NAME	YLi	CMunson	TGovan	SBrock	GWunder
DATE	04/09/2009	04/16/2009	06/03/2009	04/17/2009	04/27/2009

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

**OFFICIAL RECORD COPY**

**Request for Additional Information No. 2572 Revision 2**

**South Texas Project Units 3 and 4  
South Texas Project Nuclear Operating Co.  
Docket No. 52-012 and 52-013  
SRP Section: 02.05.02 - Vibratory Ground Motion  
Application Section: SRP 2.5.2**

QUESTIONS for Geosciences and Geotechnical Engineering Branch 2 (RGS2)

**02.05.02-19**

In your FSAR Com 2.5S-1, you summarized the process to incorporate 16 RC/TS testing results for soil dynamic properties and presented two sample plots to illustrate the sample testing results and the comparison between these samples and EPRI generic curves or Vucetic and Dobry curves. You also described that you modified the onsite generic deep shear wave velocity profile using three oil well geophysical data. Because Sections 2.5S.4.7.3, "Static and Dynamic Laboratory Testing" and 2.5S.2.5, "Seismic Wave Transmission Characteristic of the Site" were significantly affected by these updates, please provide complete contents for those sections, including all supporting figures, for example, sample's modulus reduction and damping curves for foundation supporting soil layers and maximum strain curves. In addition, please include P and S wave profiles from those oil wells and the final shear wave velocity profile used in site response analysis.

**02.05.02-20**

You summarized Mid America Trench sensitivity analysis in FSAR Com 2.5S-1. Please provide detailed contents on this sensitivity analysis, including detailed source characterization, attenuation relationships and other related information.

Enclosure