

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. 188 RELATED TO
SRP SECTIONS 12.03-12.04 AND 19 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

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If you have any questions or comments concerning this matter, I can be reached at 301-415-3104 or by e-mail at Michael.Eudy@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Michael Eudy, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking Nos. 3101, 3195 and 3200

Enclosure:
Request for Additional Information

cc: William Mookhoek
Scot Stephens
Bill Stillwell

S. Head

-2-

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NRO-002

OFFICE	CHPB/TR	CHPB/BC	NGE2/PM	SEB2/TR	SEB2/TR	SEB2/BC	NGE2/P M	OGC	NGE2/L-PM
NAME	RKellner	TFrye	TTai	DJeng	HCandra	MChakravorty	RFoster	SKirkwood	GWunder
DATE	6/16/09	6/16/09	8/4/09	6/22/09	6/25/09	6/25/09	6/23/09	7/22/09	7/30/09

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

OFFICIAL RECORD COPY

Request for Additional Information No. 3101 Revision 2

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

**SRP Section: 12.03-12.04 - Radiation Protection Design Features
Application Section: 12.4**

QUESTIONS for Health Physics Branch (CHPB)

12.03-12.04-9

RG 1.206, Section C.I.12.3.5 requests that an applicant should provide estimated annual dose to construction workers in a new unit construction area, as a result of radiation from onsite sources from the existing operating plant(s). The applicant should provide bases, models, assumptions, and input data.

STP 3 and 4 COL FSAR Section 12.3.8 provides a description of the potential sources of exposure to construction workers and comparison to the limits in 10 CFR 20.1301 and 40 CFR 190.10 for members of the public. However, the COL FSAR does not contain the bases, models and assumptions used to calculate construction worker dose. The staff needs additional information to make a determination of reasonable assurance. Please provide the following bases information:

1. Specific construction activities and the number of workers used in construction worker dose calculations.
2. Bases for the values used to calculate dose from direct radiation, gaseous effluents, and liquid effluents.
3. Calculated annual person-Sievert dose for each unit.

Request for Additional Information No. 3195 Revision 2

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

**SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: FSAR 19.9.4**

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

19-27

With respect to STP 3 and 4 COL application FSAR, Tier 2, Revision 2, Section 19.9.4, "Confirmation of Seismic Capacities Beyond the Plant Design Basis", the applicant's statement that seismic capacity analysis will be completed prior to fuel loading and the PRA will be updated in accordance with 10 CFR 50.71(h)(1) lack the necessary detail to comply with the COL License Information Item 19.9.4. COL License Information described in Subsection 19.9.4 of the ABWR DCD calls for implementation of actions specified in Subsection 19H.5.1 including the need for an evaluation of the site-specific plant level HCLPF capacity. Discuss in detail and elaborate as to how items listed in 19H.5.1, Seismic Capacity of the ABWR DCD will be implemented.

Request for Additional Information No. 3200 Revision 2

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

**SRP Section: 19 - Probabilistic Risk Assessment and Severe Accident Evaluation
Application Section: 19.01.03**

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

19-24

Per STD DEP T1 2.15-1, the Radwaste Building Substructure is reclassified from Seismic Category I to Non-Seismic. Please confirm that its failure from seismic and tornado loadings will not impact the adjacent seismic category I buildings and equipment. Describe the physical separation of this building from seismic category I structure.

19-25

ABWR DCD Section 19H.5.1 requires that the soil liquefaction evaluation and slope stability analysis be performed for 1.67 times the site-specific SSE. Please confirm that this will be done or provide the basis for not performing the evaluation.