

January 7, 2010

Mr. Scott Head, Manager  
Regulatory Affairs  
STP Nuclear Operating Company  
P. O. Box 289  
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 308 RELATED TO  
SRP SECTIONS 12.02 and 12.05 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](mailto:Michael.Eudy@nrc.gov) or you may contact George Wunder at 301-415-1494 or by e-mail at [George.Wunder@nrc.gov](mailto: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. 4137, 4138 and 4151

Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Scot Stephens

S. Head

-2-

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](mailto:Michael.Eudy@nrc.gov) or you may contact George Wunder at 301-415-1494 or by e-mail at [George.Wunder@nrc.gov](mailto:George.Wunder@nrc.gov).

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**/RA/**

Michael Eudy, Project Manager  
ABWR Projects Branch  
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Docket Nos. 52-012  
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Enclosure:  
Request for Additional Information

cc: William Mookhoek  
Scot Stephens

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**ADAMS Accession No. ML100070313**

NRO-002

OFFICE	CHPB/TR	CHPB/TR	CHPB/BC	NGE2/PM	NGE2/L-PM
NAME	SWilliams	RKellner	ERoach	MEudy	GWunder
DATE	12/9/09	12/14/09	12/14/09	1/7/10	12/28/09

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

**OFFICIAL RECORD COPY**

**Request for Additional Information No. 4137 Revision 3**

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

**Docket No. 52-012 and 52-013**

**SRP Section: 12.02 - Radiation Sources**

**Application Section: 10 CFR 20.1302; 10 CFR 20, Appendix B, Table 2, Column 2; 10 CFR 50, Appendix I; 10 CFR 50.34a; 10 CFR 50, Appendix A, GDC 60; SRP 11.2**

QUESTIONS for Health Physics Branch (CHPB)

**12.02-15**

This RAI is related to the applicant's response to RAI 11.02-3. COL Tier 2 (Rev 3), Section 12.2, Table 12.2-22 presents calculated Average Annual Liquid Releases (MBq/yr) from some input design parameters and values in Tables 11.2-2 through Table 11.2-6 used in the BWR-GALE computer code. The resulting calculated annual liquid radionuclide releases are compared to 10 CFR 20 Appendix B liquid effluent concentration limits in Tables 12.2-22. Staff review indicates that a total departure was taken for the LWMS in STD DEP 11.2-1. The new design did not provide information to independently confirm the calculated annual liquid radionuclide releases for compliance with 10 CFR 20.1302; 10 CFR 20, Appendix B, Table 2, Column 2; 10 CFR 50, Appendix I; 10 CFR 50.34a; and 10 CFR 50, Appendix A, GDC 60.

The staff requests that the applicant address the following items and revise the COL to include this information:

1. Provide the basis for all values and assumptions used in the revised BWR-GALE code calculation of average annual liquid releases in Table 12.2-22. Include value derivations and references (e.g., pointer to applicable FSAR section, NUREG-0016, etc.).
2. Provide the BWR-GALE code input/output files used to calculate the average annual liquid radionuclide releases.

**Request for Additional Information No. 4138 Revision 3**

**South Texas Project Units 3 and 4  
South Texas Project Nuclear Operating Co  
Docket No. 52-012 and 52-013  
SRP Section: 12.02 - Radiation Sources**

**Application Section: 10 CFR 20.1302; 10 CFR 20, Appendix B, Table 2, Column 1; 10 CFR 50, Appendix I; 10 CFR 50.34a; 10 CFR 50, Appendix A, GDC 60; SRP 11.3**

QUESTIONS for Health Physics Branch (CHPB)

**12.02-16**

This RAI is related to the applicant's response to RAI 11.02-3. COL Tier 2 (Rev 3), Section 12.2, Table 12.2-20 presents calculated Average Annual Gaseous Releases (MBq/yr) from some input design parameters and values in Sections 11.2 and 11.3, Table 11.3-2 through Table 11.3-4 used in the BWR-GALE computer code. The resulting calculated annual gaseous radionuclide releases are compared to 10 CFR 20 Appendix B gaseous effluent concentration limits in Table 12.2-20. Staff review indicates that a partial departure was taken for the GWMS in STD DEP 11.3-1. The new design did not provide information to independently confirm the calculated annual airborne radionuclide releases for compliance with 10 CFR 20.1302; 10 CFR 20, Appendix B, Table 2, Column 1; 10 CFR 50, Appendix I; 10 CFR 50.34a; and 10 CFR 50, Appendix A, GDC 60.

The staff requests that the applicant address the following items and revise the COL to include this information:

1. Provide the basis for all values and assumptions used in the revised BWR-GALE code calculation of annual gaseous radioactive effluent releases. Include value derivations and references (e.g., pointer to applicable FSAR section, RG 1.109 table, etc.).
2. Provide the BWR-GALE code input/output files used to calculate the annual airborne radionuclide releases in Table 12.2-20.

**Request for Additional Information No. 4151 Revision 3**

**South Texas Project Units 3 and 4  
South Texas Project Nuclear Operating Co  
Docket No. 52-012 and 52-013  
SRP Section: 12.05 - Operational Radiation Protection Program  
Application Section: 12.5**

QUESTIONS for Health Physics Branch (CHPB)

**12.05-6**

FSAR Section 12.5.3.2 states, "STPNOC has approximately 14 portable high volume air samplers, 14 portable low volume air samplers, and 6 portable continuous air samplers. Procedures have been developed to measure the iodine activity entrained on the silver zeolite cartridges or carbon filter units. Personnel have been trained, and will continue to be trained, to operate this equipment." The staff requests for the applicant explain how this above statement is accurate given that the STP 3 and 4 radiation protection program is not yet in place, and equipment acquisition has not yet occurred. In addition, your response should include proposed FSAR revisions accordingly.