UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 14, 2011

Mr. Edward D. Halpin
President and Chief Executive Officer
STP Nuclear Operating Company
South Texas Project
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT, UNITS 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATION 3.7.7, "CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM" (TAC NOS. ME5074 AND ME5075)

Dear Mr. Halpin:

By letter dated November 22, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML103330172), STP Nuclear Operating Company (STPNOC) submitted a request for revision to Technical Specification (TS) 3.7.7, "Control Room Makeup and Cleanup Filtration System," for South Texas Project, Units 1 and 2. The change will correct a misapplication of the Configuration Risk Management Program that is currently allowed by the TS.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in your application and determined that additional information is required in order to complete its review. The NRC staff's request for additional information (RAI) is enclosed. The draft RAI was provided to Mr. Wayne Harrison of STPNOC on May 18, 2011, via e-mail and discussed with STPNOC staff on May 31, 2011. It was agreed that STPNOC will provide response to the RAI within 30 days from the date of this letter.

If you have any questions, please contact me at 301-415-3016 or balwant.singal@nrc.gov.

Sincerely,

Balwant K. Singal

Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
As stated

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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATION 3.7.7

CONTROL ROOM MAKEUP AND CLEANUP FILTRATION SYSTEM

STP NUCLEAR OPERATING COMPANY

SOUTH TEXAS PROJECT, UNITS 1 AND 2

DOCKET NOS. 50-498 AND 50-499

By letter dated November 22, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML103330172), STP Nuclear Operating Company (STPNOC) submitted a request for revision to Technical Specification (TS) 3.7.7, "Control Room Makeup and Cleanup Filtration System," for South Texas Project (STP), Units 1 and 2. The change will correct a misapplication of the Configuration Risk Management Program (CRMP) that is currently allowed by the TS.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided in your application and determined that the following additional information is required in order to complete its review. The request for additional information (RAI) also provides a background section to clarify the basis for the RAI.

**Background**

The TS changes previously approved* by Amendment Nos. 179 (STP, Unit 1) and 166 (STP, Unit 2) allow the use of the STP CRMP for calculating a risk-informed completion time for specified TS Limiting Conditions for Operation, including TS 3/4.7.7, "Control Room Makeup and Cleanup Filtration System." At the time of the amendments, STPNOC believed the dose mitigation function was independent of the cooling function and the CRMP could be applied to TS 3.7.7 for conditions where only the cooling function is affected. The "limited" basis approved in the license amendment allowed the CRMP to apply to conditions where only the cooling function of the Control Room Makeup and Cleanup Filtration System (referred to as CRHVAC) is affected in Modes 1 and 2, and STPNOC included wording to this effect in the TS Bases.

However, in its letter dated May 28, 2008 (ADAMS Accession No. ML081720133), STPNOC informed the NRC that two trains of CRHVAC pressurization fans with one train of cooling are adequate for the dose mitigation function based on maintaining the required control room envelope positive pressure and maintaining the relative humidity of the control room air below the 70-percent acceptance criterion required to support design basis assumptions for carbon filter efficiency. Based on this information, STPNOC placed an administrative restriction to prevent the use of Risk Managed Technical Specifications (RMTS) for certain TS actions in TS 3.7.7. STPNOC also stated that a license amendment request (LAR) to permit unrestricted

* Thadani, M. C., U.S. Nuclear Regulatory Commission, letter to James J. Sheppard, STP Nuclear Operating Company, "South Texas Project, Units 1 and 2 - Issuance of Amendments Re: Broad-Scope Risk-Informed Technical Specifications Amendments (TAC Nos. MD2341 and MD2342)," dated July 13, 2007 (ADAMS Accession No. ML071780168).

application of RMTS to TS 3.7.7 would be submitted at a later date. By letter dated November 22, 2010, STPNOC submitted an LAR to request the elimination of the self-imposed administrative restriction on the application of TS 3.7.7.

The CRHVAC at STP is comprised of three 50-percent systems (trains). The TS Bases state that the OPERABILITY of the system ensures that: (1) the ambient air temperature does not exceed the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by this system, and (2) the control room will remain habitable for operations personnel during and following most credible accident scenarios. Prior to the approval of TS changes related to the application of CRMP, an entire system (train) would have been declared inoperable, either due to a loss of dose mitigation function or due to a loss of cooling function. The NRC staff believes that a distinction between a dose mitigation function and a cooling function was first introduced into TS 3.7.7 by the application of the CRMP. The LAR dated November 22, 2010, describes how the CRMP would be applied to address the loss of cooling function of the CRHVAC, in view of STPNOC's determination that the operability of the dose mitigation function is also dependent on the cooling function of the CRHVAC. The LAR states that a single train of cooling is adequate for the dose mitigation function based on maintaining the required control room envelope positive pressure and maintaining the relative humidity of the control room air below the 70 percent. There was no information provided on the impact of a single train of cooling on control room temperature.

**RAI #1**

Please provide additional information to justify the proposed change by providing a discussion describing how a single 50-percent train of cooling is capable of maintaining the control room ambient temperature. In addition, please discuss the continuous-duty rating of all equipment and the habitability of the control room personnel.

**RAI #2**

The LAR proposes a new Action 'd' for the condition where two trains of CRHVAC (cooling function) are inoperable only due to unavailability of cooling. While this Action does not allow the application of the CRMP, it does extend the previous time to restore at least two systems to OPERABLE status from 72 hours to 7 days. The LAR states that this condition (i.e., Action 'd') is comparable to that allowed by Action 'a' where one CRHVAC train is inoperable for dose mitigation reasons. The NRC staff believes that the two conditions are not comparable for the following reasons:

- When in Action 'a' (one dose mitigation system inoperable), loss of an additional dose mitigation system would result in at least one 50-percent dose mitigation system still available together with at least two trains of cooling also available.

- When in proposed new Action 'd', loss of the only available cooling train would result in loss of all cooling to the control room together with complete loss of the dose mitigation function.

- Action 'a' is related to the inoperability of a post-accident dose mitigation system. Proposed new Action 'd' is related to the control room cooling system, which is modeled as an accident initiator in the Probabilistic Risk Assessment (PRA).

Based on the above, the proposed new Action 'd' could place the system in a less than desired state, in terms of readiness for post-accident operation, for a period longer than presently allowed by the TS. In addition, the proposed change is not related to the application of the CRMP, because Action 'a' is related to a post-accident mitigation system which is not in PRA, whereas proposed new Action 'd' is related to an accident initiator in the PRA. Please provide additional information to justify the request.

**RAI #3**

Please discuss the basis for concluding the change would not increase the probability or consequences of an accident and not reduce safety margins as described in the Updated Final Safety Analysis Report.

June 14, 2011

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Sincerely,
/RA/

Balwant K. Singal, Senior Project Manager
Plant Licensing Branch IV
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**ADAMS Accession No. ML111570123** * Memo dated 5/18/11

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