May 5, 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. 343 RELATED TO SRP SECTION 8.2 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 301-415-4093 or by e-mail at Adrian.Muniz@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Adrian Muñiz, Project Manager
ABWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012
52-013

eRAI Tracking No. 4649

Enclosure:
Request for Additional Information

cc: William Mookhoek

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DATE	4/16/10	4/21/10	5/5/10	4/30/10

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

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Request for Additional Information No. 4649 Revision 3

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 08.02 - Offsite Power System
Application Section: 8.2

QUESTIONS for Electrical Engineering Branch (EEB)

08.02-24

In response to RAI 8.2-23, Supplement 1, regarding implementing a program for inaccessible or underground power, control, and instrumentation cables, the applicant stated that low-voltage power (120 volt AC and 125 volt and 250 volt DC), control and instrument cables are not included in monitoring and testing programs consistent with STP Units 1 and 2. This is inconsistent with the requirements of 10 CFR 50.65(a)(1) which states that, "Each holder of a license to operate a nuclear plant … shall monitor the performance or condition of structures, systems, or components… in a manner sufficient to provide reasonable assurance that such structures, systems, and components… are capable of fulfilling their intended functions." Additionally, Standard Review Plan Section 8.2III.L, states, "Operating experience has shown that undetected degradation of underground …could result in multiple equipment failures. Underground or inaccessible power and control cable runs that are susceptible to protracted exposure to wetted environments or submergence… should be reviewed. Guidance on the selection of electric cable condition monitoring can be found in Sections 3 and 4.5 of NUREG/CR-7000.

Additionally, the applicant stated that the testing of medium voltage and 480 volt cables will be performed using a DC megger or other acceptable method based on the cable type/construction. The testing will be performed as part of routine preventive and corrective maintenance activities associated with the end device. The staff finds the applicant's response to be inadequate because DC megger test alone is not sufficient to identify incipient cable degradation that can lead to a cable failure during plant operations, thereby causing challenges to safety systems and systems important to safety. The megger test is not as sensitive to insulation degradation as other tests. EPRI studies for cable testing and condition monitoring support other tests in addition to megger test to detect incipient degradation in cables. Therefore, the staff believes that a combination of megger and other state-of-the-art tests are needed for cable condition monitoring program. In addition, the staff does not consider the megger testing including the end device as an acceptable method for cable condition monitoring program because the test results would be masked by the conditions of the end device insulation rather than revealing the condition of the cable insulation itself. Therefore, the staff requests that the applicant revise its response to provide an appropriate condition monitoring program for detecting incipient degradation in cables based on the industry (EPRI, IEEE and nuclear entities including regulatory bodies) recommended practices or provide justification for supporting its position.

Enclosure