March 7, 2011

Mr. Scott Head, Manager
Regulatory Affairs
STP Units 3 and 4
Nuclear Innovation North America, LLC
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 375 RELATED TO SRP SECTION 9.04.03 FOR THE NUCLEAR INNOVATION NORTH AMERICA, LLC COMBINED LICENSE APPLICATION

Dear Mr. Head:

By letter dated September 20, 2007, South Texas Project (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 301-415-5787 or by e-mail at Rocky.Foster@nrc.gov or you may contact George Wunder at 301-415-1494 or George.Wunder@nrc.gov.

Sincerely,

/RA/

Rocky D. Foster, Project Manager
BWR Projects Branch
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 52-012, 52-013

eRAI Tracking No. 5540

Enclosure:
Request for Additional Information

cc: William Mookhoek
James Agles
Loree Elton

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DATE	2/14/2011	2/14/2011	3/7/2011	2/17/2011	3/3/2011

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

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Request for Additional Information No. 5540 Revision 4

South Texas Project Units 3 and 4
Nuclear Innovation North America, LLC
Docket No. 52-012 and 52-013
SRP Section: 09.04.03 - Auxiliary and Radwaste Area Ventilation System
Application Section: 9.4.8

QUESTIONS for Containment and Ventilation Branch 2 (ESBWR/ABWR Projects) (SBCV)

09.04.03-2

Changing the Service Building HVAC System Charcoal-bed filter efficiency from 95% to 99%:

In Standard Review Plan (NUREG-0800) Section 15.0.3, the acceptance criterion for the radiological habitability design of the Technical Support Center (TSC) is the same as that for the control room, i.e., 5 rem (TEDE) for the duration of the design basis accident. RAI 13.03-73 (eRAI 3427) requested information on the radiological analysis for the TSC including the HEPA filter and charcoal adsorber fission product removal efficiencies used in the analysis. As a result of this RAI, an audit (ML102010690) was conducted by the staff on June 25, 2010 on the dose analysis. The audit showed that that the analysis assumed a 99% charcoal filter efficiency in order to meet the 5 rem (TEDE) post-accident dose limit inside the TSC. Consequently, the applicant increased the charcoal filter bed thickness from 5.1 cm to 10.2 cm under Item (6) of the departure STD DEP 9.4-3, in Subsection 9.4.8.2 of the STP Units 3&4 FSAR Revision 4. According to Reg Guide 1.140, the 10.2 cm bed thickness typically corresponds to 99% filter efficiency. The applicant also revised the description of standard departure STD DEP 9.4-3 in Chapter 3.0 of the departure report (Part 7), to include the following:

"Additionally, design upgrades are made to provide automatic start of the emergency filter train and increase efficiency of the charcoal filters ***from 95% to 99%****."*

However, in Table 2.15.5m of the ABWR DCD Tier 1 ITAAC, the acceptance criterion for the Service Building HVAC System emergency filtration unit efficiency is "***at least 95%***". The IBRed acceptance criterion of "at least 95%" in the Tier 1 ITAAC Table 2.15.5m is not consistent with the 99% charcoal filter efficiency required by the site-specific TSC dose analysis and the Tier 2 departure STD DEP 9.4-3 in Subsection 9.4.8.2. As the increase in filter efficiency in STD DEP 9.4-3 is proposed regardless of the ITAAC Item 4 in Table 2.15-5m, the intent of the ITAAC to verify the as-built design against the design requirements will not be met by the current application. Therefore, the applicant's evaluation of STD DEP 9.4-3 does not meet the requirements described in 10 CFR 52, Appendix A, Section VIII.B.5.a.

Provide a justification for the absence of a site-specific ITAAC to verify the 99% charcoal filter efficiency, and explain why a Tier 1 exemption under Part 52, Appendix A, Section VIII.A.4 is not appropriate. In the response, please address the current language in FSAR Tier 1 Section 2.15.5 and, where necessary, to ensure consistency between the design, construction, and licensing; provide assurance that the installed filtration system will meet the appropriate design requirements, supporting analyses, and commitments.

Enclosure

09.04.03-3

The charcoal filter efficiency design change from 95% to 99% in STD DEP 9.4-3 may be inherently site-specific, as it is predicated on a site-specific χ/Q used in the post-accident TSC dose analysis. Justify the classification of the departure STD DEP 9.4-3 as “standard”, and not as “site-specific”.