PMSTPCOL PEmails

From: Tai, Tom
Sent: Thursday, August 19, 2010 12:21 PM
To: Agles, James
Cc: STPCOL; Elton, Loree; Chappell, Coley
Subject: STP - Draft RAI 4971 (Ch 9.4.8)
Attachments: RAI 4971 09.04.01-x.doc

Jim,

Attached for your information is the draft RAI we discussed this morning about the filter efficiency of the SB HVAC system. This should be straight forward since your design and calculation all assume 99%.

Please let me know as soon as you can if you need clarification. I'd like to issue this tomorrow.

Regards

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Request for Additional Information No. 4971 Revision 3

South Texas Project Units 3 and 4
South Texas Project Nuclear Operating Co
Docket No. 52-012 and 52-013
SRP Section: 09.04.01 - Control Room Area Ventilation System
Application Section: 9.4.8 Service Building HVAC System

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

09.04.01-***

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. During the audit, it was learned that the analysis must assume a 99% charcoal filter efficiency in order to meet the 5 rem (TEDE) post-accident dose limit inside the TSC. 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%”. In addition, in Subsection 9.4.8.2 of the STP 3&4 FSAR where the departure STD DEP 9.4-3 is described, Item (6) refers to a 5.1 cm charcoal filter bed which, according to Reg Guide 1.140, is typically equivalent to about 95% efficiency. As such, the description in Subsection 9.4.8.2 is not consistent with the 99% charcoal filter efficiency required to support the dose analysis the staff audited. The applicant should correct the FSAR, where necessary, to ensure consistency between the design and licensing, and to provide assurance that the installed filtration system will meet the appropriate design requirements, supporting analysis, and commitments.