

July 1, 2003

Mr. Anthony Pietrangelo
Nuclear Energy Institute
1776 I Street, N. W.
Suite 400
Washington, DC 20006-3708

Dear Mr. Pietrangelo:

This is to inform you of our response to traveler TSTF-448 containing proposed changes to the improved Standard Technical Specifications (iSTS), initiated by the NEI Technical Specification Task Force (TSTF).

TSTF-448 proposed to revise the Required Action and Surveillance Requirements associated with the control room habitability and boundary integrity to STS 3.7.10 "Control Room Emergency Ventilation System (CREVS)" to NUREG-1430 Babcock & Wilcox (B&W) STS, STS 3.7.10 "Control Room Emergency Filtration System (CREFS)" to NUREG-1431 Westinghouse (W) STS, STS 3.7.11 "Control Room Emergency Air Cleanup System (CREACS)" to NUREG-1432 Combustion Engineering (CE) STS, STS 3.7.4 "Main Control Room Environmental Control (MCREC) System" to NUREG-1433 General Electric - BWR/4 STS, and STS 3.7.3 "Control Room Fresh Air (CRFA) System" to NUREG-1434 General Electric BWR/6 STS. The proposed change also revises STS 5.5 "Programs and Manuals" and STS 5.6 "Reporting Requirements" for all NUREGs to add a Control Room Integrity Program and associated reporting requirements. These changes are the TSTF's proposal to modify the STS consistent with Generic Letter (GL) 2003-01 "Control Room Habitability," and the guidance specified in RG 1.196 "Control Room Habitability at Nuclear Power Reactors".

Industry experience has shown that current Technical Specifications (TS) Surveillance Requirements (SR) for control room emergency ventilation systems do not effectively test the integrity of the control room envelope during emergency operation. Thirty-five percent of U.S. nuclear power reactor control rooms have been tested for unfiltered inleakage using ASTM E741-95. All but one of those tested failed, some by a large amount, to demonstrate that unfiltered inleakage was less than or equal to the value assumed in design analyses. In contrast to these test results of the thirty-five percent of the plants tested, those plants with an SR to verify control room envelope integrity by a pressurization test repeatedly passed the SR. Therefore, the staff concluded that the current SR to verify that one train of control room emergency ventilation can maintain a positive pressure relative to adjacent areas and thereby maintain unfiltered inleakage within assumed limits, was nonconservative.

NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety," describes the Staff's expectation that licensees correct TS that are found to "contain nonconservative values or specify incorrect actions." Because only one licensee has corrected their TS for this issue and because the staff and industry have been engaged in an interface to resolve this and other issues related to control room habitability,

TSTF-448 is the Owner's Group proposal to address this concern on a generic basis. The STS is based on a standard system and control room design and serves as a model only. Individual plants will need to ensure that their technical specifications reflect their ventilation systems, control room design and licensing basis.

The staff has reviewed traveler TSTF-448 and has the following comments:

1. A revised version of the Westinghouse Standard Technical Specification for W-STS 3.7.10 was included as Appendix B to RG 1.196 "Control Room Habitability at Light-Water Nuclear Power Reactors," dated May 2003. Except for some editorial wording differences, the staff's proposed changes differ from TSTF-448 in only two areas
 - a. The first area of difference is in the actions to be taken for an inoperable control room boundary. TSTF-448 specifies for an inoperable control room boundary that compensatory measures to protect the control room operators must be initiated immediately and the boundary must be restored to operable status within 14 days. If this can not be accomplished, a report must be submitted to the NRC within 90 days. We believe the TSTF-448 actions may be acceptable for an inoperable control room boundary determined by the actual performance and failure of W-STS SR 3.7.10.5 "Control Room Integrity Program Surveillance." This is based on the premise that the breaches in the control room boundary that result in the failure of W-STS SR 3.7.10.5 would be minor in nature and small in comparison to gross breaches or openings; i.e. open access panels, removed doors etc. The SR results can be compared directly to the value assumed in the licensee's design analyses. Therefore, the proposed STS would allow for timely corrective actions in the event of a failure to meet the unfiltered inleakage SR. For all other inoperable control room boundary conditions of a more substantial nature; i.e. open access panels, etc; a short completion time appears appropriate. The completion time of 24 hours for restoring control room boundary integrity in this case was established during the review and approval of TSTF-287.

Our proposed STS in Appendix B to RG 1.196 used breach size and circumstances of discovery to distinguish between Condition B and Condition C. However, following discussions at the workshop on June 17 and June 18, 2003, we have several concerns about both abuse of, and unintended consequences of, the new SR 3.7.10.5 and the associated condition C. First, SR 3.7.10.5 is not intended to place licensees in the 24 hour completion time associated with condition B for situations that would not have reasonably been discovered absent this new surveillance. Likewise, SR 3.7.10.5 should also not be used for avoiding entry into condition B for situations consistent with a more significant and readily identifiable boundary breach associated with current use of this action. The TSTF should work with the staff to ensure that the proposed changes and assorted bases are clear and unambiguous relative to use of this proposed new surveillance. We do not believe that resolution of these usage concerns will be difficult and thus should not be on the critical path to overall resolution of control room habitability concerns.

- b. The second area of difference is in the “Control Room Integrity Program” description in STS 5.5. TSTF-448 provides a generalized statement and elements description of what should be included in the program. We believe the program descriptions contained in STS 5.5 should contain sufficient detail to describe the program and specify those critical elements and/or criteria that the staff must review and find acceptable before any program changes or modifications can be made. Thus our version of the program specifies such details as the testing protocol and test frequency limits as specified in RG 1.197. The format, structure, and wording used in the staff’s program description is similar to the format, structure and wording used in other STS 5.5 programs in which the test frequencies and test protocols are specified in RG’s and industry standards, i.e., “Ventilation Filter Testing Program,” “Containment Leakage Rate Testing Program” and “Reactor Coolant Pump Flywheel Inspection Program.” In addition the program should specify that RG 1.197 is “Revision 0 dated May 2003.”
2. In the revised version of W-STC 3.7.10.5 discussed in comment 1 above the staff proposes a program that includes testing for control room integrity based upon a methodology and frequency provided in Regulatory Guide 1.197. The frequency of testing recommended in the RG is 3 or 6 years. STS SR 3.0.2 allows this frequency to be extended by 25% (or 1.5 years for a 6 year frequency), if an exception to SR 3.0.2 is not stated. Currently, very limited data concerning control room integrity exists. Only one facility has performed a repeat control room integrity test. Therefore, based upon lack of pertinent data to justify a 1.5 year surveillance extension, we believe SR 3.0.2 should not apply to the 3 or 6-year frequency between tests. Thus we propose that the staff’s and the TSTF’s program description in STS 5.5 be modified to include an additional statement as follows: “f. The provisions of SR 3.0.2 does not apply.” The format, structure and wording used in this statement is similar to the format, structure and wording used in other STS programs in which SR 3.0.2 is or is not applicable to the test frequencies, i.e. “Containment Leakage Rate Testing Program.”
3. The NUREG-1430 STS 3.7.10 Bases “Background” proposed in TSTF-448 is much different from the bases for corresponding SR’s in NUREGs- 1431, 1432, 1433, and 1434. We believe that the Bases section proposed for NUREG-1430 should be consistent with the other NUREGs. The statement that a single train will pressurize a control room with a 1.5 ft² leakage area to about 1/8 inch water gauge should be removed. No justification is provided for the leakage area and we believe this special leakage area cannot be justified for every plant. The number should be deleted.

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Please contact Stewart L. Magruder at (301) 415-0184 or slm1@nrc.gov or Robert L. Denning at (301) 415-1156 or rld@nrc.gov if you have any questions or need further information on these comments. We also look forward to the July 11, 2003 public meeting on this subject.

Sincerely,

/RA/

William D. Beckner, Program Director
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Office of Nuclear Reactor Regulation

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