

NRC Staff Questions/Comments on TSTF-508, Revision 1, for discussion at
July 15, 2010 Public Meeting

Comment 1

Per TSTF-508, Rev. 1, "Required Action B.2 states,

"Verify mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits." This wording is incorrect in that it refers to limits for chemical and smoke hazards but these hazards do not have quantifiable limits. The Required Action is revised to state, "Verify mitigating actions ensure CRE occupant radiological exposures will not exceed limits, and CRE occupants are protected from chemical and smoke hazards.""

The statement that there are no quantifiable limits is not entirely correct. Regulatory guides provide methods acceptable to the NRC staff for meeting the regulations. In this case Regulatory Guide 1.78, "Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," provides toxicity limits for meeting General Design Criterion 19 which is the basis for 3.7.10, "Control Room Emergency Ventilation System (CREVS)." How was this change justified in the Traveler given that there are chemical limits provided in RG 1.78?

Comment 2

The extension of the use of mitigating actions to modes 5 and 6 to restore the boundary to operable status does not seem adequately justified or warranted.

LCO 3.7.10 is unique in that it allows for a complete loss of control room boundary integrity, as defined in the design basis, and allows for undefined mitigative actions to restore the boundary to operable status. This is instead of the traditional required actions of "suspending fuel movement" or "shutting down the reactor."

When "One or more CREVS trains inoperable due to inoperable CRE boundary," this change would (a) enable meeting the LCO despite significant degradation of the CRE boundary, (b) permanently incorporate use of mitigating actions into the facility licensing basis to support CRE boundary operability, and (c) serve as a disincentive to maintain the CRE boundary in its design condition, and consequently weaken the effectiveness of the proposed CRE habitability administrative controls program specification.

While this is currently allowed for Modes 1-4, extension to Modes 5 and 6 may not be warranted. In the current specification an exception was made for modes 1-4. The traditional NRC position is that while we accept (footnote 1) the use of compensatory measures "to restore inoperable structures, systems, or components (SSCs) to an operable but degraded or nonconforming status," we do not accept (footnote 2) for this purpose the use of measures that "do not support the capability of an SSC to perform its specified safety function consistent with the current licensing and design basis acceptance criteria."

A special exception to this position was made for modes 1-4. The risk of shutdown could be greater than the risk of continued operations with a control room that did not meet its design basis, but by use of mitigating actions, could be shown to not "exceed limits." This is not the case with Modes 5 and 6. Despite the argument presented, the risk of suspending fuel movement is likely much smaller than the risk associated with the use of unspecified and seldom used mitigating actions such as potassium iodide or a self contained breathing apparatus.

As a follow-on question, why weren't specific compensatory measures or mitigating actions identified?

Footnote 1

NRC Regulatory Issue Summary 2005-20: Revision to Guidance Formerly Contained in NRC Generic Letter 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections On

Resolution of Degraded and Nonconforming Conditions and On Operability," September 26, 2005, Section 7.3, "Compensatory Measures." (ADAMS Accession No. ML052020424.).

Footnote 2

NRC letter dated January 30, 2004, from E. J. Leeds, NRC, to J. W. Davis, NEI, page 4 (ADAMS Accession No. ML040300694.)

Comment 3

TSTF-508, Rev. 1 states:

"The Control Room Envelope Habitability Program, paragraph d, requires pressure testing at a Frequency of [18] months on a STAGGERED TEST BASIS. The last sentence of the paragraph states, "The results shall be trended and used as part of the [18] month assessment of the CRE boundary." This statement is incorrect as the assessment being referenced is required by Regulatory Guide 1.197 to be performed every 36 months, not every 18 months. This error was identified shortly before the final approval of TSTF-448 and acknowledged by the NRC and the industry. The sentence is revised to state, "The results shall be trended and used as part of the periodic assessment of the CRE boundary.""

The current 3.7.10 uses an SR to verify operability every 18 months by using a delta p test. This is one of a multi-pronged approach to ensure habitability. The tracer gas test is only performed every 6 to 7.5 years. Shouldn't the assessment be performed every 18 months (following the delta p test) since it propagates what was previously done and is necessary to verify habitability between tracer gas tests? With this change licensees will no longer be required to assess the results every 18 months since the new "periodic" assessment that is referred to in the change is on a 36 month basis. Is this the intent of the change, or is there another interpretation? Is the justification based purely on RG 1.197?