

April 27, 2016

Technical Specifications Task Force
11921 Rockville Pike, Suite 100
Rockville, MD 20852

SUBJECT: ISSUE WITH TECHNICAL SPECIFICATIONS TASK FORCE TRAVELER
TSTF-490, REVISION 0, "DELETION OF E BAR DEFINITION AND REVISION
TO RCS SPECIFIC ACTIVITY TECH SPEC"

Dear Members of the Technical Specifications Task Force:

The purpose of this letter is to inform the Technical Specifications Task Force (TSTF) of a concern that the U.S. Nuclear Regulatory Commission (NRC) staff has recently identified during a review of plant-specific license amendment requesting adoption of the subject Traveler.

Traveler TSTF-490, Revision 0, "Deletion of E Bar Definition and Revision to RCS [reactor coolant system] Specific Activity Tech Spec [Technical Specification]," was approved on March 8, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML070250176) (72 FR 12838 dated March 19, 2007). Traveler TSTF-490 replaces the RCS gross specific activity limit for pressurized water reactors (PWRs) with an RCS noble gas activity limit. The noble gas activity limit is based on dose equivalent Xenon-133 (DEX), instead of the indicator known as E bar.

During the NRC's review of license amendments to adopt the subject Traveler, the NRC staff has identified a need for additional information. The NRC staff's concern relates to increasing the completion time for DEX, as stated below.

TSTF-490, in part, deleted Condition C requiring gross specific activity of the coolant less than or equal to $100/\bar{E}$ $\mu\text{Ci/gm}$ and replace it with DEX not within limit. Prior to the TSTF-490 approval, the Standard TS (STS) Limiting Condition for Operation (LCO) 3.4.16, when the gross specific activity of the coolant is greater than $100/\bar{E}$ $\mu\text{Ci/gm}$, the required action was to take immediate action to begin shutdown of the reactor (be in Mode 3 with T_{avg} less than 500°F) within 6 hours. TSTF-490 allows 48 hours to restore DEX within limits. If DEX cannot be restored TSTF-490 allows 6 hours to be in Mode 3 and 36 hours to be in Mode 5. TSTF-490, Revision 0, provided the following justification for this change:

The Completion Time for revised TS 3.4.16 Required Action B.1 will require restoration of Dose Equivalent Xe-133 to within limit in 48 hours. This is consistent with the Completion Time for current Required Action A.2 for Dose Equivalent I-131. The Completion Time of 48 hours for revised Required Action B.1 is acceptable since it is expected that, if there were a noble gas spike, the normal coolant noble gas concentration would be restored within this time period. Also, there is a low probability of an accident occurring during this time period.

While it is a correct statement that the proposed change makes the Completion Times of Required Action A.2 and B.1 in the PWR STS consistent, it is not clear to the NRC staff why the Completion Times should be consistent. The plant Conditions for these Required Actions are different. TS Required Action A.2 is required when the plant is in a condition analyzed in the design basis accident (DBA) analyses (reactor coolant dose equivalent I-131 is between 1 and 60 $\mu\text{Ci/gm}$). The new TS Required Action B.1 is required when the plant is in a condition not analyzed in the DBA analyses (DEX is greater than 280 $\mu\text{Ci/gm}$).

Typically, the Required Action for a condition not analyzed requires the plant to take immediate actions to begin shutdown of the plant. This action is consistent with the current required action for exceeding the gross specific activity of the reactor coolant, which requires the plant be in Mode 3 with T_{avg} less than 500°F within 6 hours. The change does not take immediate actions to begin shutdown of the plant, but allows 48 hours before the plant is required to begin shutting down. Therefore, additional justification for the change to increase the Completion Time of Required Action B.1 to 48 hours and why it is acceptable to be in an unanalyzed condition for 48 hours is needed.

The issue identified above should be included with the other previous requests for additional information (RAIs) identified for TSTF-490. When requesting to adopt this Traveler it is suggested that licensees include the additional justification for the issue stated above, or maintain their current completion time associated with current Condition C (6 hours).

The NRC staff would consider working with the industry in addressing the issue identified. Any further changes in acceptance or review of license amendments adopting this Traveler will be communicated. The NRC staff plans to discuss the issue with the TSTF within the next few weeks. If you have any questions, please contact Michelle Honcharik at 301-415-1774 or via e-mail at Michelle.Honcharik@nrc.gov.

Sincerely,

/RA/

Kevin Hsueh, Chief
Licensing Processes Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Project No. 753

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While it is a correct statement that the proposed change makes the Completion Times of Required Action A.2 and B.1 in the PWR STS consistent, it is not clear to the NRC staff why the Completion Times should be consistent. The plant Conditions for these Required Actions are different. TS Required Action A.2 is required when the plant is in a condition analyzed in the design basis accident (DBA) analyses (reactor coolant dose equivalent I-131 is between 1 and 60 $\mu\text{Ci/gm}$). The new TS Required Action B.1 is required when the plant is in a condition not analyzed in the DBA analyses (DEX is greater than 280 $\mu\text{Ci/gm}$).

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Sincerely,

/RA/

Kevin Hsueh, Chief
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Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

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Letter to Technical Specifications Task Force dated

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