

August 30, 2012

TSTF-12-15  
PROJ0753Attn: Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001**SUBJECT:** Response to NRC Request for Additional Information Regarding TSTF-523, Revision 1, "Generic Letter 2008-01, Managing Gas Accumulation"**REFERENCE:** Letter from Michelle Honcharik (NRC) to Technical Specifications Task Force dated June 13, 2012, "Acceptance Review and Request for Additional Information Regarding Traveler TSTF-523, Revision 1, 'Generic Letter 2008-01, Managing Gas Accumulation' (TAC No. ME8308)"

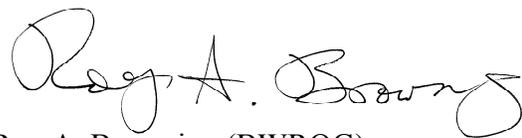
On March 29, 2012, The TSTF submitted Traveler TSTF-523, Revision 1, "Generic Letter 2008-01, Managing Gas Accumulation," to the Nuclear Regulatory Commission for review (ADAMS Accession No. ML12089A356).

In the referenced letter, the NRC requested additional information to enable the NRC staff to perform the requested review. The enclosure to this letter responds to that request.

Should you have any questions, please do not hesitate to contact us.



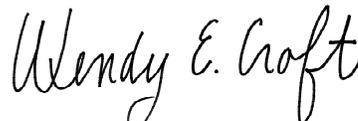
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Enclosure

cc: Robert Elliott, Technical Specifications Branch, NRC  
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**Response to NRC Request for Additional Information Regarding TSTF-523, Revision 1,  
"Generic Letter 2008-01, Managing Gas Accumulation"**

The NRC questions are repeated below, followed by the TSTF Response

"On March 29, 2012, the Technical Specifications Task Force (TSTF) submitted Revision 1 of TSTF-523 for U.S. Nuclear Regulatory Commission (NRC) review. The purpose of the Traveler is to update gas void considerations in NUREGs 1430 - 1434, the Standard Technical Specifications that will provide a basis for correction of inadequate technical specifications (TSs). This is to be accomplished while providing improved flexibility in surveillance requirements (SRs) by incorporation of a licensee-controlled document, the Surveillance Frequency Control Program (SFCP). This is the principal change associated with TSTF-523.

The NRC staff has determined that the overall approach described in TSTF-523 is acceptable, but additional information is needed and some details must be corrected. Please provide your plans for addressing the following items or, if addressing the item is straightforward, then provide your response:

- 1 Page 8 of TSTF-523, Revision 1, contains a brief discussion of the SFCP and a brief justification for applying the SFCP to the associated surveillance requirements (SRs). The staff requires a more detailed justification for the application of the SFCP to SRs associated with gas accumulation, given the unique phenomena involved."

TSTF Response

The Surveillance Frequency Control Program (SFCP) applies to all periodic Surveillance Frequencies in the Technical Specifications. The SFCP was proposed in TSTF-425, "Relocate Surveillance Frequencies to Licensee Control - RITSTF Initiative 5b," and the NRC-approved Notice of Availability was published in the Federal Register on July 6, 2009 (74 FR 31996).

As stated in the NRC model Safety Evaluation published in the Federal Register:

"All surveillance frequencies can be relocated except:

- Frequencies that reference other approved programs for the specific interval (such as the Inservice Testing Program or the Primary Containment Leakage Rate Testing Program),
- Frequencies that are purely event driven (e.g., 'Each time the control rod is withdrawn to the "full out" position').
- Frequencies that are event-driven but have a time component for performing the surveillance on a one-time basis once the event occurs (e.g., 'within 24 hours after thermal power reaching  $\geq 95\%$  RTP').

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- Frequencies that are related to specific conditions (e.g., battery degradation, age and capacity) or conditions for the performance of a surveillance requirement (e.g., 'drywell to suppression chamber differential pressure decrease')."

The Surveillance in the proposed change is a periodic test with a default Frequency of 31 days for plants without a SFCP and 31 days as the initial frequency for plants with a SFCP. The proposed Frequency does not correspond to any of the exceptions to relocation into the SFCP.

The evaluation of Surveillance Frequency changes under the SFCP is required to be performed in accordance with NEI 04-10, "Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies, Industry Guidance Document." The process is sufficiently broad and rigorous to be applicable to any type of periodic Surveillance, ranging from reactor physics parameters to pump testing, including Surveillances associated with gas accumulation. The gas accumulation Surveillances verify phenomena that are not associated with regulation-based program intervals nor are they one-time events associated with unique circumstances, rather they have elements of recurrence best suited to an individual licensee's specific plant operating experience. This is ideally suited to a SFCP to demonstrate the best Frequency for that plant and its specific systems. As of the date of this letter, approximately half of the U.S. plants have adopted a SFCP, and for those plants the existing Surveillances on gas accumulation already have a Frequency of "In accordance with the Surveillance Frequency Control Program." Thus, the proposed changes in TSTF-523 are consistent with those plant's existing licensing basis. Any future licensee seeking to adopt TSTF-425 would be required to propose this change as part of their license amendment request.

- 2 "Startup from an outage is permitted with gas voids in the subject systems. This is not consistent with the water-solid condition required by the current licensing basis (CLB) for most plant safety related systems and associated supporting systems that contain water."

TSTF Response

The proposed Surveillance, which requires system locations susceptible to gas accumulation to be sufficiently filled with water, must be met prior to entering the Applicability of the associated LCO. As stated in SR 3.0.1:

"SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO."

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If the SR is not met, in accordance with SR 3.0.1 the LCO must be declared not met and the Actions entered.

If the LCO is not met, the licensee may be allowed to enter the Applicability utilizing the provisions of LCO 3.0.4, but the associated Required Actions are entered, limiting plant operation. This may be appropriate if it is intended to operate a system to dynamically flush entrained gas, especially in those cases where the Applicability must be entered in order to operate the system to perform the dynamic venting, such as steam-driven systems.

- 3 "There are many references to calculations to establish acceptable void criteria or to establish operability but none regarding how this may be acceptably accomplished. The Traveler should be supplemented to discuss how licensees will establish acceptable void criteria."

TSTF Response

As stated in the TSTF-523 justification:

"In order to utilize to the greatest extent possible the work that licensees and the NRC have performed in response to GL 2008-01, the proposed change is generic and can be adopted by licensees without plant-specific variations or plant-specific evaluations beyond those previously performed in response to the GL and reviewed by the NRC."

Licensee responses to NRC Generic Letter 2008-01 specifically addressed "Identification of acceptance criteria." The NRC has reviewed the licensee's Generic Letter responses and found them to be acceptable. Licensees will establish acceptable void criteria in the manner described in their GL 2008-01 response or using new methods determined to be acceptable by the NRC staff for use in establishing acceptance criteria for Surveillance Requirements. Through the inspection process (NRC Temporary Instruction (TI) 2515/177), the NRC has established an appropriate mechanism to verify, in part, that void criteria are being established appropriately. Accordingly, there is no need to address these issues in the traveler.

- 4 "Omission of 'Verify the containment spray piping is full of water to the [100] ft level in the containment spray header' from NUREG-1432 TS SR 3.6.6.4 is not acceptably justified."

TSTF Response

The containment spray header is a standpipe ending in spray nozzles open to the containment atmosphere. The accident analysis assumes a response time for the containment spray system based on the stand pipe being filled with water to the [100] ft level. The concern being addressed by SR 3.6.6A.4 and SR 3.6.6B.4 is not gas accumulation, but water level in the stand pipe less than the assumed [100] ft level. That concern would not be addressed by the proposed Surveillance on gas management.

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However, the proposed gas management Surveillance is added to NUREG-1432, LCO 3.6.6A and LCO 3.6.6B as SR 3.6.6A.5 and SR 3.6.6B.5. These SRs verify that containment spray locations susceptible to gas accumulation are sufficiently filled with water, including the containment spray header.

- 5 "Definition of 'accessible locations' must be provided."

TSTF Response

The description of a location as inaccessible is discussed in the proposed Bases:

"Monitoring may not be practical for locations that are inaccessible due to radiological or environmental conditions, the plant configuration, or personnel safety. For these locations alternative methods (e.g., operating parameters, remote monitoring) may be used to monitor the susceptible location." (Emphasis added.)

It is important to note that the discussion of inaccessible locations is a Bases discussion of acceptable methods of performing the Surveillance. The Bases recognize that performance of the Surveillance in inaccessible locations may require different methods of performance. However, there is no exception to performing the Surveillance in inaccessible locations. Any exception on performance would require a Note on the Surveillance itself.

- 6 "The technical discussion does not acceptably address voiding issues associated with exceeding the saturation temperature in residual heat removal systems."

TSTF Response

Gas accumulation due to voiding associated with exceeding the saturation temperature in residual heat removal systems is one of many potential gas accumulation mechanisms. The purpose of the Technical Specifications is to establish the Limiting Conditions for Operation (LCO), which in this case is to manage gas accumulation to ensure the system is Operable. The Technical Specifications do not address why a system is inoperable (e.g. the source of the gas), but establish limits on operability and the actions to be taken when a system is inoperable. Therefore, a specific discussion of one particular gas generation mechanism, out of many, would not be appropriate, as it would overemphasize it as compared to any other mechanism, all of which could cause the SR to not be met. It is our understanding that this particular gas generation mechanism is being addressed in industry gas management implementation documents, which are the appropriate vehicle.