

January 12, 2016

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING TRAVELER  
TSTF-454, REVISION 3, "EXTEND PCIV COMPLETION TIMES (NEDC-33046)"  
(TAC NO. ME8198)

Dear Members of the Technical Specifications Task Force:

By letter dated March 31, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15090A617), you submitted to the U.S. Nuclear Regulatory Commission (NRC) for review and approval Traveler TSTF-454, Revision 3, "Extend PCIV [Primary Containment Isolation Valve] Completion Times (NEDC-33046)."

Upon review of the information provided, the NRC staff has determined that additional information is needed to complete the review. On December 15, 2015, Brian Mann, Vice President of Industry Programs, EXCEL Services Corporation, and I agreed that the NRC staff will receive your response to the enclosed request for additional information (RAI) questions within 90 days of the date of this letter.

The review schedule provided in the acceptance letter, dated June 13, 2012 (ADAMS Accession No. ML12163A159), has been revised as follows:

MILESTONE	SCHEDULE DATE
Issue Draft Safety Evaluation	August 5, 2016
Issue Final Safety Evaluation	November 4, 2016

If you have any questions, please contact me at (301) 415-1774 or via e-mail to [Michelle.Honcharik@nrc.gov](mailto:Michelle.Honcharik@nrc.gov).

Sincerely,

*/RA/*

Michelle C. Honcharik, Senior Project Manager  
Licensing Processes Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

Project No. 753

cc: See next page

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING TRAVELER  
 TSTF-551, REVISION 1, "ADDRESS TRANSIENT SECONDARY  
 CONTAINMENT CONDITIONS" (TAC NO. MF5125)

Dear Members of the Technical Specifications Task Force:

By letter dated March 31, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15090A617), you submitted to the U.S. Nuclear Regulatory Commission (NRC) for review and approval Traveler TSTF-454, Revision 3, "Extend PCIV [Primary Containment Isolation Valve] Completion Times (NEDC-33046)."

Upon review of the information provided, the NRC staff has determined that additional information is needed to complete the review. On December 15, 2015, Brian Mann, Vice President of Industry Programs, EXCEL Services Corporation, and I agreed that the NRC staff will receive your response to the enclosed request for additional information (RAI) questions within 90 days of the date of this letter.

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MILESTONE	SCHEDULE DATE
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If you have any questions, please contact me at (301) 415-1774 or via e-mail to [Michelle.Honcharik@nrc.gov](mailto:Michelle.Honcharik@nrc.gov).

Sincerely,

*/RA/*

Michelle C. Honcharik, Senior Project Manager  
 Licensing Processes Branch  
 Division of Policy and Rulemaking  
 Office of Nuclear Reactor Regulation

Enclosure:  
 As stated

Project No. 753

cc: See next page

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ADAMS Accession No.: ML15322A270; \*concurring via e-mail; \*\*concurring via internal memo (ML15299A211)

NRR-106

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Technical Specifications Task Force

Project No. 753

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**OFFICE OF NUCLEAR REACTOR REGULATION**  
**REQUEST FOR ADDITIONAL INFORMATION**  
**TSTF-454, REVISION 3, "EXTEND PCIV COMPLETION TIMES (NEDC-33046)"**  
**(TAC NO. ME8198)**

By letter dated March 31, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15090A617), you submitted to the U.S. Nuclear Regulatory Commission (NRC) for review and approval Traveler TSTF-454, Revision 3, "Extend PCIV [Primary Containment Isolation Valve] Completion Times (NEDC-33046)." The submission of Revision 3 was in response to NRC staff request for additional information (RAI) letter dated October 19, 2012 (ADAMS Accession No. ML12279A134).

Traveler TSTF-454, Revision 3, proposes to extend the Completion Times for an inoperable PCIV from 4 hours and 72 hours to 7 days based on a risk analysis in the Topical Report NEDC-33046-A. TSTF-454 is applicable to NUREGs-1433 and -1434, Standard Technical Specifications (STS) for Boiling Water Reactor (BWR)/4 and BWR/6, respectively. The Traveler provides a markup to STS Revision 3.0 to reflect specific changes to BWR/4 and BWR/6 STS limiting condition for operation (LCO) 3.6.1.3, "Primary Containment Isolation Valves (PCIVs)."

Question #1 is from the Technical Specification Branch. Questions 2 through 5 are from the PRA Licensing Branch. The Containment and Ventilation Branch had no additional questions.

**Question #1:**

- a. Traveler TSTF-454 is based on markups to Revision 3.0 of NUREG-1433 and NUREG-1434. Identify all travelers that impact TS 3.6.1.3, which were approved subsequent to Revision 3.0. An example of such a Traveler is TSTF-505, Revision 1, which extends Completion Times for selected LCOs Required Actions.
- b. Revise TSTF-454 (both technical justification and proposed mark-ups to the NUREGs) to reflect the travelers identified above.

**Regulatory Basis**

The regulations under 10 CFR 50.36 (c)(2)(i) state that LCOs are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.

**Question #2 (Follow up to Question #2 from 10/19/12 RAI Letter)**

Question #2 from the October 19, 2012, RAI letter requested clarification on how TSTF-454 would address operability of remaining PCIVs since confirming operability is broader than considering only the potential for common cause failure.

Enclosure

The response to the RAI states that it is unnecessary to take a specific action to confirm the operability of remaining PCIVs in the penetration flowpath outside of confirming there is no common cause failure, and cites LCO 3.0.1, LCO 3.0.2, and Surveillance Requirement (SR) 3.0.1 to support this conclusion.

However, Condition #5 in the NRC staff final safety evaluation of NEDC-33046 (ADAMS Package Accession No. ML042660101) states that the operability of the remaining PCIVs in the applicable penetration flow path be verified before entering the extended Completion Time for the inoperable PCIV. Revise TSTF-454 to verify the operability before applying an extended Completion Time of the remaining PCIVs consistent with NEDC-33046 safety evaluation.

**Question #3 (Follow up to Question #5 from 10/19/12 RAIs)**

Question #5 from the October 19, 2012, RAI letter questioned the content and level of detail to be included in the TSTF-454 model application. The response to several aspects of the RAI did not appear to be consistent with the NRC safety evaluation of the NEDC-33046. Address each part below for the TSTF-454 model application.

1. Section 3.3.2 of the NRC staff final safety evaluation of NEDC-33046 states:

For licensees adopting NEDC-33046, an evaluation should be performed to confirm that the conclusion of the LTR remain applicable to the licensee's plant.

The response to the RAI states:

TSTF-454, Revision 2, and the model application do not include additional risk-informed technical justification because TSTF-454, Revision 2, does not include plant-specific PCIV configurations and, therefore, a discussion of Tier 2 is not needed.

The proposed TSTF-454 model application does not mention Tier 2 consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

2. Section 3.3.3 of the NRC staff final safety evaluation of NEDC-33046 states, in part, "...each licensee adopting the LTR must furnish plant-specific Tier 3 information in their individual submittals."

The response to the RAI only re-stated what is in TSTF-454, Revision 2. The proposed TSTF-454 model application lacks sufficient detail to ensure that licensees adopting TSTF-454 will provide plant-specific Tier 3 information consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

3. Condition #1 in Section 3.4 of the NRC staff final safety evaluation of NEDC-33046 states:

Because not all penetrations have the same impact on CDF [Core Damage Frequency], LERF [Large Early Release Frequency], ICCDP [incremental conditional core damage probability], or ICLERP [incremental conditional large early release probability], a licensee's application verifies the applicability of NEDC-33046, including verification that the PCIV configurations for the specific plant match the LTR and the risk parameter values used in the LTR are bounding for the specific plant. Any additional PCIV configurations or non-bounding risk parameter values not evaluated by the LTR should be included in the licensee's plant-specific analysis. [Note that PCIV configurations or non-bounding risk parameter values outside the scope of the LTR will require staff review of the specific penetrations and related justifications for the proposed completion times.]

The model application for TSTF-454 should verify that the PCIV configurations for the specific plant match the LTR and the risk parameter values used in the LTR are bounding for the specific plant. (Note that the TSTF-454, Revision 2, states that the LTR used bounding values such that the risk assessment was applicable to all BWR plants, it does not mention "representative or bounding" values.)

The response to the RAI only re-stated what is in TSTF-454, Revision 2. The proposed TSTF-454 model application lacks sufficient detail to ensure that licensees adopting TSTF-454 will provide the information consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

4. Condition #4 in Section 3.4 of the NRC staff final safety evaluation of NEDC-33046 states:

The license's application verifies that a penetration remains intact during maintenance activities, including corrective maintenance activities. Regarding maintenance activities where the pressure boundary would be broken, the licensee confirms that the assumptions and results of the LTR remain valid. This includes the assumption that maintenance on a PCIV will not break the pressure boundary for more than the currently allowed AOT [Allowed Outage Time].

The model application for TSTF-454 should verify that a penetration remains intact during maintenance activities, including corrective maintenance. However, the RAI response only mentioned the state of the PCIV pressure boundary and does not address information regarding potentially affected penetrations.

The proposed TSTF-454 model application lacks sufficient detail to ensure that licensees adopting TSTF-454 will provide the information consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

5. Condition #7 in Section 3.4 the NRC staff final safety evaluation of NEDC-33046 states:

The licensee shall verify that the plant specific PRA quality is acceptable for this application in accordance with the guidelines given in RG 1.174.

There is no mention of RG 1.174 which is important for PRA quality considerations, and other information for risk-informed considerations.

The response to the RAI only re-stated what is in TSTF-454, Revision 2. The proposed TSTF-454 model application lacks sufficient detail to ensure that licensees adopting TSTF-454 will provide the information consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

6. The regulatory commitment in Section 3.6 of the NRC safety evaluation for NEDC-33046-A states:

The RG 1.177 Tier 3 program ensures that while a PCIV is in an LCO condition, additional activities will not be performed that could further degrade the capabilities of the plant to respond to a condition the inoperable PCIV or system was designed to mitigate, and as a result, increase plant risk beyond that assumed by the LTR analysis. A licensee's implementation of RG 1.177 Tier 3 guidelines generally implies the assessment of risk with respect to CDF. However, the proposed PCIV AOT impacts containment isolation and consequently LERF as well as CDF. Therefore, a licensee's CRMP, including those implemented under the maintenance rule of 10 CFR 50.65(a)(4), must be enhanced to include a LERF assessment and must be documented in a licensee's plant-specific submittal.

The RAI response stated:

The model application requires a verification by the licensee that LERF and ICLERP will be assessed as part of the maintenance rule risk assessment when the PCIV extended Completion Time is used.

The proposed verification is different from the regulatory commitment. The proposed TSTF-454 model application lacks sufficient detail to ensure that licensees adopting TSTF-454 will meet the regulatory commitment consistent with the NRC safety evaluation of LTR NEDC-33046-A. Revise the TSTF-454 model application accordingly.

7. There is no mention that licensees adopting this Traveler must confirm plant-specific implementation and monitoring in accordance with the guidance in RG 1.174 and RG 1.177.

The NRC staff's regulatory guidance on implementation and monitoring for risk-informed TS is provided in RG 1.177. Provide acceptable information to be included in the TSTF-454 model application.

**Question #4**

TSTF-454, Revision 3, was provided as Enclosure 2. The revised TSTF-454 states that two commitments which licensees take regardless of TSTF-454 adoption are changed to verifications. Explain these changes.

**Question #5**

TSTF-454, Revision 3, contains references to TSTF-454, Revision 2 (e.g., Reviewer's Note on page B 3.6.1.3-6). Update these references so that they refer to the latest revision of the Traveler or provide an explanation for referring to a previous revision.