

February 4, 2016

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RE: TRAVELER TSTF-537,
REVISION 0, "INCREASE CIV COMPLETION TIME; UPDATE OF TSTF-373"
(TAC NO. ME8311)

Dear Members of the Technical Specifications Task Force:

By letter dated March 27, 2012 (Agencywide Documents Access and Management System Accession No. ML12087A274), the TSTF submitted for U.S. Nuclear Regulatory Commission (NRC) staff review Traveler TSTF-537, Revision 0, "Increase CIV [Containment Isolation Valve] Completion Time; Update of TSTF-373." The NRC staff provided a request for additional information (RAI) letter dated March 4, 2013 (ADAMS Accession No. ML13045A860). By letter dated June 23, 2014, the TSTF responded to the NRC staff RAI questions (ADAMS Accession No. ML14174A860).

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 RAI questions within 90 calendar days of the date of this letter.

The review schedule provided in the acceptance letter, dated October 19, 2012 (ADAMS Accession No. ML12279A277), has been revised as follows:

MILESTONE	SCHEDULE DATE
Issue Draft Safety Evaluation	September 30, 2016
Issue Final Safety Evaluation	December 2, 2016

TSTF

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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.

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

TSTF

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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.

Sincerely,

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Michelle C. Honcharik, Senior Project Manager
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As stated

Project No. 753

cc: See next page

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ADAMS Accession No.: ML15322A284; *concurrent via e-mail;

****concurrent via internal memo (ML15296A329)**

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-537, REVISION 0, "INCREASE CIV COMPLETION TIME; UPDATE OF TSTF-373"

(TAC NO. ME8311)

By letter dated March 27, 2012 (Agencywide Documents Access and Management System Accession No. ML12087A274), the TSTF submitted for U.S. Nuclear Regulatory Commission (NRC) staff review Traveler TSTF-537, Revision 0, "Increase CIV [containment isolation valve] Completion Time; Update of TSTF-373." The NRC staff provided a request for additional information (RAI) letter dated March 4, 2013 (ADAMS Accession No. ML13045A860). By letter dated June 23, 2014, the TSTF responded to the NRC staff RAI questions (ADAMS Accession No. ML14174A860).

Traveler TSTF-537, Revision 0, proposes to extend Completion Time for an inoperable CIV, from 4 hours or 72 hours to 7 days within the scope of the NRC-approved Topical Report CE NPSD-1168-A. TSTF-537 is applicable to NUREG-1432, Standard Technical Specifications (STS) for Combustion Engineering plants. The Traveler provides a markup to Standard Technical Specification (STS) Revision 3.0 to reflect specific changes to CE STS limiting condition for operation (LCO) 3.6.3, "Containment Isolation Valves (Atmospheric and Dual)."

Question #1 is from the Technical Specifications Branch. Questions #2 through #4 are from the Probabilistic Risk Assessment (PRA) Licensing Branch. The Containment and Ventilation Branch had no additional questions.

Question #1:

- a. Traveler TSTF-537 is based on markups to Revision 3.0 of NUREG-1432. Please 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. Please revise TSTF-537 (both technical justification and proposed mark-ups to the NUREGs) to reflect the travelers identified above.

Regulatory Basis

The regulations under 50.36 (c)(2)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR) 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 TSs until the condition can be met.

Enclosure

Question #2 (Follow up to Question #3 from the March 4, 2013, RAIs)

Question #3 from the March 4, 2013, RAI letter requested clarification on how TSTF-537 would ensure operability of the redundant CIVs for reasons other than common cause failure prior to entering the extended CT.

The United States Nuclear Regulatory Commission (NRC) staff safety evaluation (SE) for the joint applications report (JAR), Combustion Engineering (CE) CE NPSD-1168, stated in the conclusion section:

Concerns for common cause failures were not addressed in the JAR. Licensees should require verification of the operability of the remaining CIV(s) in a penetration flow path before entering the relaxed AOT [Allowed Outage Time] before corrective maintenance.

The NRC staff SE for the JAR, CE NPSD-1168, also stated in the background section:

The JAR does not address the case of both redundant CIVs in a penetration being inoperable which typically has an AOT of one hour.

In addition, the NRC model SE for TSTF-373 part (d) stated:

Plant specific implementation of this change includes verification of the operability of the remaining CIV(s) in a penetration flow path before entering the extended completion time for corrective maintenance.

The response to RAI 3 stated that the proposed Required Action to verify no common cause failure in combination with LCO 3.0.2 ensures the operability of redundant CIVs prior to entering the extended CT. It is not clear how TSTF-537 requires verifying operability of the remaining CIVs before entering the extended CT. The previous TSTF-373, Revision 2, had utilized a TS reviewers note ("INSERT 2"):

Licensees should require verification of the operability of the remaining CIV(s) in a penetration flow path before entering the extended Completion Time for corrective maintenance....

Please provide further discussion on how TSTF-537 would address operability of the remaining CIVs.

Question #3 (Follow up to Question #5 from the March 4, 2013, RAIs)

Question #5 from the March 4, 2013, RAI letter questioned the content and level of detail to be included in the TSTF-537 model application. The response to several aspects of the RAI did not appear to be consistent with the NRC-approved with the NRC SE on the JAR, CE NPSD-1168, which supports TSTF-537. Address each part of Question 5 below for the TSTF-537 model application.

- a. Regulatory Guide (RG) 1.174 for probabilistic risk assessment quality considerations, and other information for risk-informed considerations.

The response to the RAI question stated:

As CE NPSD-1168-A contained a bounding evaluation applicable to all CE plants and that evaluation was determined by the NRC to be consistent with RG 1.174, no plant-specific discussion of RG 1.174 quality considerations is needed in TSTF-537.

Section 3.2.4 of the approved TSTF-446 model application contains detailed RG 1.174 PRA quality information; however, such information is not requested in the TSTF-537 model application. The TSTF-446 model application requested this PRA quality information because it is related to Tier 3, which is also applicable to TSTF-537. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

- b. 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 position on implementation and monitoring for risk-informed TS is provided in RG 1.177. Section 3.2.6 of the approved TSTF-446 model application contains detailed information on plant-specific monitoring of CIV availability; however, such information is not requested in the TSTF-537 model application. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

- c. Plant-specific Tier 3 information must be provided in submittals

The NRC staff SE for CE NPSD-1168 states:

Due to lack of plant-specific data in CE NPSD-1168, licensees should furnish information in individual submittals on how Tier 3 will be implemented.

Section 3.2.3 of the approved TSTF-446 model application contains detailed information on how licensees are to perform Tier 3 evaluations; however, such information is not requested in the TSTF-537 model application. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

- d. The Tier 3 Configuration Risk Management Program (CRMP) enhancement to include large early release frequency (LERF) and Incremental Conditional Large Early Release Probability (ICLERP) is not mentioned; rather, line item Number 4 requests licensees to

commit to “implementing methodologies.” A licensee’s CRMP, including those implemented under the maintenance rule 10 CFR 50.65(a)(4), must be enhanced to include a LERF/ICLERP assessment. This assessment must be documented in a regulatory commitment in the plant-specific application.

The response to the RAI for part d only re-states what is in the TSTF-537 proposal. The TSTF-537 model application language differs significantly from regulatory commitment in the TSTF-446 model application. The TSTF-446 model application regulatory commitment states:

[LICENSEE] commits to implementing the capability to assess the effect on incremental large early release probability when using the extended completion times for CIVs in the program for managing risk in accordance with 10 CFR 50.65(a)(4) and the plant-specific CRMP.

The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

e. Plant-specific applicability of Tier 2 analysis

The TSTF-537 model application is not consistent with the TSTF-446 model application information requested for Tier 2. In the TSTF-446 model application, as well as in the NRC SE of the TR TSTF-446, the licensee confirms the generic Tier 2 conclusions of the TR. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

f. Evaluation of cumulative risk on a plant-specific basis consistent with RG 1.174.

Section 3.2.7 of the approved TSTF-446 model application requests licensees to consider the cumulative impact of previous plant license changes and applications still under review; however, such information is not requested in the TSTF-537 model application. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

In addition, the responses to the following parts require clarification for the TSTF-537 model application:

g. Licensees provide supporting information that verifies that a penetration remains intact during maintenance activities, including corrective maintenance

The NRC SE for CE NPSD-1168 states:

The JAR assumes that the penetrations remain physically intact so that their integrity is maintained. In instances where corrective or preventive maintenance activities would be performed on penetrations and CIVs while in modes requiring these valves to be operable, it will be necessary to monitor the activities and ensure that the integrity of the penetration is not compromised during the maintenance. Considerations should include, for example, the impact of physical removal of sealing material (packing) and removal of CIV components that would affect penetration integrity. Licensees should describe in their plant-specific applications how the affected penetration will remain physically intact, or state in their plant-specific applications that the penetration will be isolated so as not to permit a release to the outside environment.

Also, the TSTF-373 model SE states (in part (d)) that licensees should include in its application:

Plant-specific implementation of this change includes verification that the affected penetration will remain physically intact or be isolated so as to not permit a release to the outside environment.

However, the response to the RAI part g only mentions the state of the CIV pressure boundary and does not mention this information for potentially affected penetrations for a licensee's application. The TSTF-446 model application provides an acceptable example. Provide acceptable information to be included in the TSTF-537 model application.

- h. For external events, in performing the plant-specific analyses, credit for physical barrier integrity outside containment can only be given for seismically qualified piping

The NRC SE for CE NPSD-1168 states that:

For external events, in performing the plant-specific analyses, credit for physical barrier integrity outside containment can only be given for seismically qualified piping.

Therefore, based on the NRC SE, credit can only be given for seismically qualified piping systems outside containment. This would include piping associated with the analyzed pipe groups in the JAR. The response to the RAI part i appears to imply that this may not be the case. Please provide acceptable information in the TSTF-537 model application consistent with the NRC SE for CE NPSD-1168.

Question #4

TSTF-537, Section 3 states that, "the proposed change applies to those CIV penetration configurations that fall within the 14 containment penetration configurations considered in the JAR." Table 6.3-3 in the JAR (CE NPSD-1168) lists 14 containment penetration configurations. The NRC staff notes that the CIVs in the shutdown cooling suction line are listed in another table, Table 5.1-1, in the JAR, and are not listed in Table 6.3-3. The JAR did not provide a risk calculation for the shutdown cooling CIVs. Some analyses (e.g., Individual Plant Examinations) indicate that this line may be an important consideration for interfacing system loss-of-coolant accidents for CE plants. Clarify whether TSTF-537 is proposing to include, or to not include, the shutdown cooling CIVs within the 14 containment penetration configurations.